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PETROGRAPHIC AND CHEMICAL DATA ON CRETACEOUS GRANITIC ROCKS OF THE BIG DELTA QUADRANGLE, ALASKA

By

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Introduction

This report presents petrographic and chemical data on granitic rocks of known Cretaceous age and a few of probable Cretaceous age in the Big Delta Quadrangle (plate 1). The Big Delta Quadrangle is located in the central part of the Yukon-Tanana Upland in east-central Alaska. The Yukon-Tanana Upland is a maturely dissected terrane primarily composed of metamorphic and igneous rocks (Mertie, 1937; Weber and others, 1978). Plutons of Cretaceous and Tertiary age, which range from diorite to granite in composition, intrude metamorphic rocks having both igneous and sedimentary protoliths. The age of the protoliths are unknown but include Paleozoic and possibly Precambrian rocks. Metamorphic grade ranges from greenschist to amphibolite facies. The time or times of major regional metamorphism are not yet determined but were previous to intrusion of the Mesozoic granitic rocks. The most abundant metamorphic rock types are quartzite, quartz-biotite schist and gneiss, marble, amphibole schist, amphibole gneiss, and greenschist.

Unmetamorphosed granitic plutons of the Big Delta Quadrangle are considered to be of Cretaceous and Tertiary ages on the basis of K/Ar age determinations. Plutons of Triassic or Jurassic age have not been found in the Big Delta Quadrangle, although they occur to the east in the Eagle Quadrangle. In this paper only the plutons of granitic composition with Cretaceous K/Ar ages and a few plutons of probable Cretaceous age that have not yet been radiometrically dated are described.

Field data were collected mostly during the course of reconnaissance geologic mapping and geochemical sampling in the Big Delta Quadrangle for the Alaskan Mineral Resource Assessment Program from 1974 to 1977 (Foster and others, 1979). Most of the potassium-argon ages were determined by F. H. Wilson, but J. G. Smith and D. L. Turner also provided some radiometric age data (Foster and others, 1979).

The data presented in this paper are intended to supplement and to be used in conjunction with data on Mesozoic granitic rocks of the adjacent Eagle Quadrangle (Foster, Donato, and Yount, 1978). The largest granitic plutons of the Yukon-Tanana Upland are in the western and northern parts of the Eagle Quadrangle, and parts of these plutons probably extend westward into the Big Delta Quadrangle.

These data should help provide a basis for comparison of the Mesozoic granitic plutons of the Yukon-Tanana Upland with those elsewhere in Alaska and in Canada. Comparison of plutons on both sides of the Shaw Creek fault (Hudson and others, 1976; fig. 1) may aid in determining the time and sense of displacement along this major northeast-trending structure. Interpretation of the data is not included in this report.

Type and method of data presentation

Petrographic and chemical data are presented in three tables and one map. Petrographic data, radiometric ages, and modal analyses obtained by point counts on stained slabs and stained thin sections are given in table 1, whole-rock major-element chemical analyses for four samples are given in table 2, and semiquantitative spectrographic analyses for 70 samples (Foster, O'Leary, and others, 1978) are given in table 3. Localities for all thin sections and analyzed samples are shown on the map (plate 1).

The granitic rock samples were collected from 12 different plutons (plate 1). The plutons are differentiated primarily on the basis of map distribution. Because the plutons are not mapped in detail, some which appear spatially distinct may in fact be genetically related. Other plutons which are represented as single bodies may be composite.

A few plutons of uncertain age are included because they appear closely related to dated Cretaceous plutons, including some in the adjacent Eagle Quadrangle, and because knowledge of their petrography may be useful in future studies of the Shaw Creek fault (Hudson and others, 1976).

Nomenclatures and classification of the granitic rocks follows that of the I.U.G.S. Subcommission on the Systematics of Igneous Rocks (Streckeissen, 1973).

Chemical data

Three whole-rock major-element chemical analyses were made by the X-ray fluorescence method described by Fabbi and Elsheimer (1976). Analysis by the rapid rock method (Shapiro, 1967; Shapiro and Brannock, 1967) was done on a fourth sample.

CIPW norms (table 2) were calculated using the Nevada Bureau of Mines and Geology computer program "Petcal". The calculations are explained in the program description (Bingler and others, 1976).

Samples for semiquantitative spectrographic analysis (table 3) were collected as single grab samples as part of a reconnaissance geochemical sampling program for the Big Delta Quadrangle (Foster, O'Leary, and others, 1978). Most of the granitic rocks were obtained for background information. Analysis using a six-step semiquantitative method described by Grimes and Marranzino (1968) are reported for 26 elements. An atomic absorption spectrophotometric method described by Ward and others (1969) was used to more accurately determine the abundance of gold. For the semiquantitative spectrographic analyses, iron, magnesium, calcium, and titanium values are reported in percent and values for other elements are reported in parts per million (ppm). Results are given as the approximate midpoints of geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc. These midpoints are 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one reporting value at 68 percent confidence or two reporting values at 99 percent confidence. Samples collected in 1975 and 1977 were analyzed in the laboratories of the Branch of Exploration Research, U.S. Geological Survey, and the approximate visual lower limits of determination for the analyses are as follows:

Fe----0.05 percent	B-----10 ppm	La----20 ppm	Sn---10 ppm
Mg----0.02 percent	Ba----20 ppm	Mo---- 5 ppm	Sr--100 ppm
Ca----0.05 percent	Be---- 1 ppm	Nb----10 ppm	V----10 ppm
Ti----0.002 percent	Bi----10 ppm	Ni---- 5 ppm	W----50 ppm
Mn---10 ppm	Co---- 5 ppm	Pb----10 ppm	Y----10 ppm
Ag--- 0.5 ppm	Cr----10 ppm	Sb---100 ppm	Zn--200 ppm
As--200 ppm	Cu---- 5 ppm	Sc---- 5 ppm	Zr---10 ppm

Some samples collected in 1974 were analyzed by the Branch of Analytical Laboratories, U.S. Geological Survey. For these samples, the approximate visual lower limits of determination are slightly lower than those used by the Branch of Exploration Research for the following elements reported in parts per million: barium, 10; cobalt, 3; chromium, 1; molybdenum, 3; niobium, 7; lead, 7; tin, 5; and strontium, 5.

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Table 1

See attached 2 sheets

Table 2.--*Major element chemical analyses in weight percent and CIPW normative minerals for four Cretaceous granitic rocks of the Big Delta Quadrangle, Alaska.*

[Analysts: L. Espos and H. Smith. *, indicates rapid rock analyses, method described by Shapiro and Brannock (1967). Other analyses are by X-ray fluorescence, method described by Fabbi and Elsheimer (1976). ——, indicates sample not analyzed for element oxide or normative mineral concentration.]

Sample number	*74AFr613	75ASj538	75AFr2175	75AFr2184
Quadrangle	B-1	D-1	C-2	B-6
Latitude	64°20'37"	64°52'31"	64°40'50"	64°19'02"
Longitude	144°15'12"	144°03'44"	144°45'50"	146°33'06"
SiO_2	71.1	66.80	66.08	69.95
Al_2O_3	15.1	15.64	16.59	14.64
Fe_2O_3	.50	.77	.96	.77
FeO	2.0	3.39	2.78	2.27
MgO	.90	1.77	1.56	.89
CaO	3.0	4.22	3.99	2.52
Na_2O	3.0	2.94	3.15	3.18
K_2O	3.5	3.28	3.39	4.22
H_2O+	.68	.81	——	——
H_2O-	.32	.06	——	——
TiO_2	.32	.54	.51	.32
P_2O_5	.15	.09	.22	.17
MnO	.03	.09	.08	.07
CO_2	.08	.22	——	——
Sum	100.68	100.62	99.31	99.00
Q	31.64	23.74	22.88	27.63
C	1.28	——	1.01	.67
Or	20.68	19.47	20.03	24.94
Ab	25.38	24.99	26.65	26.91
An	13.90	19.88	18.36	11.39
Di	——	.46	——	——
Hy	5.03	9.09	7.50	5.35
Mt	.72	1.12	1.39	1.12
Il	.61	1.03	.97	.61
Ap	.35	.21	.51	.39
Sum	99.59	99.99	99.30	99.01

Table 3.--*Semiquantitative spectrographic analyses for Cretaceous granitic rocks of the Big Delta Quadrangle, Alaska.*

[Analysts: J. E. Abrams, N. M. Conklin, E. F. Cooley, G. L. Crenshaw, J. A. Criswell, G. W. Day, R. A. Havens, R. C. Karlson, J. W. McNamara, and R. M. O'Leary. S before an element indicates analysis by emission spectrography. AA indicates analysis by atomic absorption. Analysis given in parts per million (ppm) for all elements except Fe, Mg, Ca, and Ti which are given in percent. Zeros to right of decimal point may or may not be significant. N, element not detected; ——, sample was not analyzed for element; <, element detected in amount less than limit of determination.]

FIELD NUMBER	PLUTON NUMBER	QUAD	S-FE %	S-MG %	S-CA %	S-TI %	S-MN ppm	S-AG ppm	S-AS ppm	S-B ppm	S-BA ppm	S-BE ppm	S-BI ppm	S-CO ppm	S-CR ppm	S-CU ppm
75AFr 2177	1	D-1	3.00	.70	2.00	.200	500	N	N	15	700	3.0	N	5	10	<5
75AWr 371C	1	D-1	——	——	——	——	——	N	N	10	700	7.0	N	N	N	5
75AFr 2175	2	C-2	2.00	1.50	1.00	.150	300	N	N	10	500	3.0	N	5	10	N
75AWr 369	2	C-2	——	——	——	——	——	N	N	10	1000	3.0	N	20	10	10
77AFr 388	2	C-2	.50	.05	.20	.020	50	N	N	15	100	2.0	N	<5	<10	<5
77AFr 450B	2	C-2	2.00	.70	<.05	.2	100	N	N	30	700	1.5	N	10	100	15
77AFr 453	2	C-2	.50	.05	.30	.020	100	N	N	<10	30	1.0	N	<5	N	<5
77AFr 518	2	C-2	1.00	.10	.20	.050	150	N	N	15	1000	1.0	N	<5	N	<5
77AWr 327	2	C-2	2.00	.50	.70	.200	500	N	N	10	700	1.5	N	10	N	<5
77AWr 416	2	C-2	2.00	.50	5.00	.15	300	N	N	10	1000	1.0	N	10	N	<5
77AWr 422	2	C-2	3.00	.50	1.00	.200	500	N	N	<10	1000	1.0	N	10	<10	10
77AWr 423	2	C-2	3.00	.50	1.00	.200	500	N	N	<10	1000	2.0	N	10	<10	<5
74AFr 803	3	B-1	3.00	1.00	3.00	.300	700	N	N	N	500	<5.0	N	7	7	2
74AFr 2382	3	B-1	3.00	1.50	1.50	.300	500	N	N	N	1000	<5.0	N	7	10	2
74AFr 3220	3	B-1	3.00	1.50	.70	.300	700	N	N	N	1000	N	N	7	7	5
75AFr 176	3	B-2	——	——	——	——	——	N	N	<10	1000	1.0	N	10	N	5
75AFr 182B	3	B-2	——	——	——	——	——	N	N	<10	700	2.0	N	10	10	7
75AFr 191B	3	B-2	3.00	.70	2.00	.200	300	N	N	10	1500	1.0	N	10	N	——
75AFr 569	3	B-2	——	——	——	——	——	N	N	<10	700	1.0	N	20	10	20
75AFr 3091A	3	B-2	10.00	1.50	.05	.300	300	N	N	10	1000	N	N	5	70	30
75AFr 3093B	3	B-2	——	——	——	——	——	N	N	<10	500	1.0	N	15	70	30
75AFr 4092	3	C-1	——	——	——	——	——	N	N	<10	700	1.0	N	15	N	<5
74AFr 814	4	B-1	1.50	.300	1.00	.150	300	N	N	N	1500	<5.0	N	N	10	7
74AFr 815	4	B-1	1.50	.300	1.50	.150	700	N	N	N	1000	<5.0	N	N	30	15
74AFr 816	4	B-1	1.50	.300	1.50	.150	500	N	N	N	1000	<5.0	N	N	20	.5
74AFr 817	4	B-1	1.50	.300	.50	.150	300	N	N	<20	1500	<5.0	N	N	30	1.5
74AFr 3049	4	B-1	1.50	.300	1.00	.150	500	N	N	N	700	<5.0	N	N	20	N
74AFr 3052	4	B-1	3.00	.700	3.00	.300	700	N	N	N	1000	<5.0	N	N	3.0	1.0
74AFr 3133A	4	B-1	2.00	1.000	2.00	.200	700	N	N	N	700	<5.0	N	5	30	1.0
74AWr 180	4	B-1	1.50	.500	2.00	.150	500	N	N	N	700	<5.0	N	3	15	1.5
74AWr 185	4	B-1	3.00	1.500	5.00	.300	700	N	N	N	500	N	N	10	30	7.0
74AWr 189A	4	B-1	5.00	1.500	9.00	.300	700	N	N	N	1000	N	N	10	50	10.0
74AWr 195B	4	B-1	3.00	1.500	3.00	.300	700	N	N	N	700	N	N	7	50	3.0
77AFr 5	5	B-6	3.00	.20	.10	.200	300	N	N	10	500	2.0	N	10	30	<5
75AFr 3290	6	D-1	——	——	——	——	——	N	N	<10	1000	1.0	N	10	10	<5
75AFr 3309	6	D-1	——	——	——	——	——	N	N	500	1000	5.0	N	30	300	30
75AFr 3313	6	D-1	——	——	——	——	——	N	N	10	N	N	N	70	2000	5
75AWr 623	6	D-1	——	——	——	——	——	N	N	10	700	1.0	N	10	N	<5
77AFr 371A	6	D-1	1.00	.30	.70	.200	200	N	N	10	1000	2.0	N	<5	N	N

Table 3.--*Semiquantitative spectrographic analyses for Cretaceous granitic rocks of the Big Delta Quadrangle, Alaska*--Continued.

FIELD NUMBER	S-LA ppm	S-MO ppm	S-NB ppm	S-NI ppm	S-PB ppm	S-SB ppm	S-SC ppm	S-SN ppm	S-SR ppm	S-V ppm	S-W ppm	S-Y ppm	S-ZN ppm	S-ZR ppm	AA-AU ppm
75AFr 2177	N	100	N	10	30	N	5	<10	300	30	N	10	N	150	N
75AWr 371C	—	30	<20	5	70	N	—	20	200	30	N	—	N	50	N
75AFr 2175C	20	N	N	5	15	N	5	N	200	70	N	15	N	100	N
75AWr 369	—	N	<20	10	50	N	—	N	500	150	N	—	N	150	N
77AFr 388	50	N	<20	<5	30	N	N	N	N	<10	N	<10	N	20	N
77AFr 450B	70	10	<20	20	10	N	15	N	N	70	N	20	N	150	N
77AFr 453	<20	N	<20	<5	70	N	N	N	100	<10	N	10	N	20	N
77AFr 518	50	N	<20	<5	30	N	<5	N	100	N	N	<10	N	30	N
77AWr 327	70	N	<20	<5	30	N	7	N	300	70	N	15	N	100	N
77AWr 416	50	N	<20	5	20	N	7	N	200	30	N	20	N	100	N
77AWr 422	50	N	<20	<5	50	N	10	N	300	70	N	20	N	50	N
77AWr 423	50	N	<20	<5	50	N	10	N	300	70	N	20	N	50	N
74AFr 803	70	N	10	<5	20	N	15	N	300	100	N	20	N	100	N
74AFr 2382	30	N	7	5	7	N	15	N	200	100	N	20	N	200	N
74AFr 3220	20	N	N	<5	15	N	15	N	300	100	N	20	N	70	N
75AFr 176	—	5	20	N	20	N	—	N	150	70	N	—	N	200	N
75AFr 182B	—	N	<20	5	20	N	—	N	200	150	N	—	N	150	N
75AFr 191B	50	N	N	5	20	N	10	N	300	50	N	20	N	200	—
75AFr 569	—	N	N	10	20	N	—	N	300	150	N	—	N	150	N
75AFr 3091A	N	N	N	30	10	N	15	N	100	100	N	N	N	150	N
75AFr 3093B	—	N	<20	20	30	N	—	15	150	150	N	—	N	200	N
75AFr 4092	—	N	N	<5	10	N	—	N	200	70	N	—	N	100	N
74AFr 814	30	N	15	N	20	N	5	N	150	15	N	15	N	150	N
74AFr 815	70	N	15	N	20	N	7	N	150	30	N	20	N	200	N
74AFr 816	70	N	15	N	20	N	7	N	150	20	N	30	N	150	N
74AFr 817	50	5	10	N	30	N	7	7	150	15	N	30	N	150	N
74AFr 3049	70	N	10	N	20	N	7	N	150	30	N	15	N	150	N
74AFr 3052	30	N	10	N	20	N	15	N	300	70	N	15	N	150	N
74AFr 3133A	30	N	10	N	20	N	10	N	300	50	N	20	N	150	N
74AWr 180	N	N	7	N	20	N	10	N	200	30	N	30	N	100	N
74AWr 185	50	N	7	N	N	N	20	N	200	70	N	20	N	150	N
74AWr 189A	30	N	10	7	7	N	15	N	300	70	N	30	N	150	N
74AWr 195B	20	N	5	7	7	N	15	N	200	70	N	30	N	100	N
77AFr 5	70	N	<20	10	50	N	10	N	N	30	N	30	N	200	N
75AFr 3290	—	N	N	5	10	N	—	N	200	150	N	—	N	100	N
75AFr 3309	—	N	N	70	30	N	—	10	100	200	N	—	N	150	N
75AFr 3313	—	N	N	2000	N	N	—	N	N	70	N	—	N	N	N
75AWr 623	—	N	N	<5	10	N	—	N	200	70	N	—	N	100	N
77AFr 371	50	N	<20	<5	50	N	5	N	300	30	N	15	N	100	N

Table 3.--*Semiquantitative spectrographic analyses for Cretaceous granitic rocks of the Big Delta Quadrangle, Alaska*--Continued.

FIELD NUMBER	PLUTON NUMBER	QUAD	S-FE %	S-MG %	S-CA %	S-TI %	S-MN ppm	S-AG ppm	S-AS ppm	S-B ppm	S-BA ppm	S-BE ppm	S-BI ppm	S-CO ppm	S-CR ppm	S-CU ppm
75AFr 218B	7	C-2	—	—	—	—	—	N	N	20	700	3.0	N	10	10	<5
75AFr 220	7	C-2	—	—	—	—	—	N	N	20	500	2.0	N	5	20	30
75AFr 221A	7	C-2	—	—	—	—	—	N	N	<10	00	1.0	N	15	20	20
75AFr 222	7	C-2	—	—	—	—	—	N	N	<10	700	1.0	N	10	20	15
75A r 223C	7	C-2	—	—	—	—	—	N	N	<10	1000	1.0	N	15	20	10
75AFr 236A	8	C-2	—	—	—	—	—	N	N	<10	1000	1.0	N	10	10	5
75AFr 3144	8	C-2	—	—	—	—	—	N	N	<10	700	1.0	N	N	N	<5
77AFr 173	9	B-4	2.00	.15	<.05	.200	50	N	<200	50	200	2.0	N	<5	20	50
77AFr 233	9	B-4	1.00	.10	.50	.100	200	N	N	15	500	<1.0	N	<5	N	<5
77AFr 234A	9	B-4	1.00	.50	1.00	.100	200	N	N	50	1000	3.0	N	<5	N	<5
74AFr 586	10	B-1	1.50	.300	.700	.100	300	N	N	N	700	<5.0	N	N	1.0	N
74AFr 588	10	B-1	1.50	.200	2.000	.100	500	N	N	N	1500	<5.0	N	N	1.0	N
74AFr 589	10	B-1	1.50	.300	.700	.070	300	N	N	N	700	<5.0	N	N	3.0	1.5
74AFr 592	10	B-1	1.00	.700	2.000	.150	500	N	N	N	700	<5.0	N	3	2.0	.7
74AFr 593C	10	B-1	3.00	.700	3.000	.200	500	N	N	N	700	<5.0	N	7	7.0	1.5
74AFr 596	10	B-1	3.00	.700	3.000	.150	700	N	N	N	1500	<5.0	N	7	3.0	3.0
74AFr 597	10	B-1	2.00	.700	2.000	.150	300	N	N	N	1500	<5.0	N	3	10.0	150.0
74AFr 636	10	B-1	3.00	1.500	3.000	.300	700	N	N	N	1000	<5.0	N	7	7.0	15.0
74AFr 638A	10	B-1	2.00	.700	2.000	.300	500	N	N	N	1000	<5.0	N	5	3.0	1.5
74AFr 639A	10	B-1	1.50	.700	1.500	.150	300	N	N	1.0	1000	N	N	N	3.0	1.0
74AFr 640	10	B-1	3.00	.700	2.000	.150	500	N	N	N	1000	<5.0	N	3	5.0	1.0
74AFr 641	10	B-1	1.50	.300	.700	.150	200	N	N	N	700	<5.0	N	N	3.0	1.0
74AFr 3044A	10	B-1	2.00	.700	3.000	.150	700	N	N	N	1000	<5.0	N	5	3.0	2.0
74AFr 3045A	10	B-1	3.00	.700	3.000	.300	700	N	N	N	1500	<5.0	N	7	3.0	7.0
74AFr 3094B	10	A-1	3.00	1.000	3.000	.300	700	N	N	N	1500	<5.0	N	7	3.0	1.5
74AWr 169	10	B-1	1.00	.200	1.500	.100	300	N	N	N	700	N	N	N	1.5	N
75AFr 704A	11	C-1	.30	.10	1.00	.020	150	N	N	10	300	1.0	N	N	N	N
75AFr 754A	11	C-1	—	—	—	—	—	N	N	N	700	2.0	N	10	N	<5
75AFr 4041A	11	C-1	—	—	—	—	—	.5	N	30	300	7.0	15	N	10	<5
75AFr 4042	11	D-1	—	—	—	—	—	N	N	150	1000	3.0	N	5	10	15
75AFr 4048	11	D-1	—	—	—	—	—	N	N	10	1000	1.0	N	5	10	30

Table 3.--*Semiquantitative spectrographic analyses for Cretaceous granitic rocks of the Big Delta Quadrangle, Alaska*--Continued.

FIELD NUMBER	S-LA ppm	S-MO ppm	S-NB ppm	S-NI ppm	S-PB ppm	S-SB ppm	S-SC ppm	S-SN ppm	S-SR ppm	S-V ppm	S-W ppm	S-Y ppm	S-ZN ppm	S-ZR ppm	AA-AU ppm
75AFr 218B	—	N	<20	20	30	N	—	N	200	50	N	—	N	150	N
75AFr 220	—	N	50	20	20	N	—	N	200	100	N	—	N	150	N
75AFr 221A	—	N	<20	20	30	N	—	N	200	100	N	—	N	200	N
75AFr 222	—	N	<20	20	20	N	—	N	150	100	N	—	N	300	N
75AFr 223C	—	N	<20	20	20	N	—	N	200	100	N	—	N	200	N
75AFr 236A	—	N	<20	5	20	N	—	N	500	150	N	—	N	200	N
75AFr 3144	—	N	<20	5	20	N	—	N	200	50	N	—	N	150	N
77AFr 173	50	N	<20	<5	50	100	5	N	N	50	N	50	N	300	—
77AFr 233	50	N	<20	<5	50	N	N	N	100	<10	N	20	N	100	N
77AFr 234A	50	N	<20	<5	20	N	N	N	<100	<10	N	10	N	70	—
74AFr 586	30	N	10	N	30	N	5	N	150	10	N	20	N	150	N
74AFr 588	70	N	15	N	30	N	5	N	150	N	N	30	N	150	N
74AFr 589	30	N	10	N	30	N	7	N	150	20	N	30	N	70	N
74AFr 592	30	N	10	N	30	N	10	N	300	30	N	30	N	150	N
74AFr 593C	30	N	10	N	30	N	10	5	200	150	N	30	N	150	N
74AFr 596	50	N	15	N	30	N	10	N	300	70	N	20	N	150	N
74AFr 597	N	N	10	N	15	N	7	N	200	30	70	15	N	70	N
74AFr 636	30	N	10	5	20	N	15	N	300	150	N	30	N	150	N
74AFr 638A	70	N	15	<5	30	N	10	N	200	50	N	30	N	150	N
74AFr 639A	30	N	10	N	30	N	7	N	300	30	N	20	N	150	N
74AFr 640	70	N	10	N	20	N	10	N	300	70	N	30	N	150	N
74AFr 641	70	N	10	N	30	N	5	N	150	7	N	20	N	150	N
74AFr 3044A	20	N	15	N	30	N	7	5	200	70	N	20	N	150	N
74AFr 3045A	70	N	15	<5	30	N	15	7	300	100	N	20	N	150	N
74AFr 3094B	30	3	15	<5	15	N	10	N	300	100	N	30	N	150	N
74AWr 169	50	N	7	N	20	N	7	N	200	20	N	15	N	150	N
75AFr 704A	<20	N	N	N	<10	N	N	N	N	<10	N	70	N	70	N
75AFr 754A	—	N	N	N	10	N	—	N	200	30	N	—	N	150	N
75AFr 4041A	—	N	20	10	70	N	—	10	N	20	N	—	N	100	N
75AFr 4042	—	N	N	5	50	N	—	20	100	70	N	—	N	100	N
75AFr 4048	—	N	N	5	20	N	—	10	100	70	N	—	N	100	N