

APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA

Sample	Latitude	Longitude	SiO ₂	Al ₂ O ₃	FeTO ₃	MgO	CaO	K ₂ O	Na ₂ O	TiO ₂	P ₂ O ₅	MnO	LOI	FeO	H ₂ O+	H ₂ O-	CO ₂	As	Au	Ba	Ce	Co	Cr	Cs	Cu
Method:			WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	PT	wt/heat loss	wt/heat loss	CT	ICP-MS	INAA	INAA	INAA	INAA	INAA	INAA	ICP- AES
Units:			wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
90ADW70A	59°36'24"	151°6'37"	38.9	15.6	11.4	5.04	5.09	3.16	2.36	2.24	0.93	0.27	14.8	9.52	2.08	0.37	13.5	59.3	22	250	75.4	27	64.3	7.4	17
92ADW186C	59°36'37"	151°4'59"	49.5	16	6.94	8.64	8.69	0.62	1.84	0.83	0.13	0.13	6.7	5.49	4.06	0.12	3.47	15	<4.00	690	13	33	351	4.73	60
90ADW68A	59°36'24"	151°6'37"	50.1	16.6	7.87	8.17	5.91	0.46	2.71	0.79	0.14	0.15	7.17	6.08	4.68	0.51	2.72	12	<5.00	290	15.1	35.7	452	4.78	49
90ADW36A	59°36'24"	151°6'37"	51.6	13	6.9	9.7	7.45	0.31	1.26	0.52	0.12	0.16	8.65	5.18	4.96	0.43	4.27	2.4	<4.00	290	14	37	658	3.1	21
92AD83M	59°22'18"	151°51'29"	51.7	14.3	14.3	4.09	7.61	0.44	3.3	1.1	0.16	0.22	2.62	10.4	3.47	0.23	0.07	<0.900	<6.00	170	6.6	36.6	19	<0.220	90
92ATI116B1	59°31'24"	150°37'14"	52.3	16.4	6.4	5.36	6.67	1.76	2.5	0.6	0.15	0.12	7.3	5.13	3.98	0.13	4.22	31	12	580	22	24.6	263	3.54	42
92ADW150A	59°35'16"	150°51'12"	53	14.4	6.74	8.67	6.42	0.36	2.24	0.5	0.12	0.14	7.61	5.39	3.89	0.22	4.08	6.7	<5.00	610	15.9	29.6	433	1.6	
92ADW46A	59°32'56"	150°57'53"	53	12.3	7.38	11.6	6.21	0.97	1.43	0.54	0.11	0.14	5.67	5.74	4.21	0.5	1.72	6.5	5	769	17.1	40.8	899	2	62
92TD144A	59°20'16"	151°37'14"	53.4	17.2	6.78	7.11	6.05	0.84	3.94	0.84	0.2	0.13	3.78	4.74	3.03	0.45	<0.01	<0.800	<6.00	420	21.1	29.1	244	0.83	17
92DW131A	59°9'29"	151°44'29"	54.4	15.8	7.16	8.12	6.7	1.07	3.28	0.82	0.15	0.13	1.71	5.3	3.04	0.11	<0.01	7.6	<5.00	602	18.4	29.8	322	0.53	30
92ATI116B2	59°31'24"	150°37'14"	54.5	17.9	6.63	4.88	4.79	1.31	3.63	0.58	0.13	0.11	5.03	5.28	3.76	0.1	2.36	10	<5.00	450	21.7	16.9	40.4	2.7	23
89ADW156	59°27'11"	151°29'35"	54.6	16.2	5.99	6.71	6.3	0.58	2.67	0.62	0.18	0.11	6.12	4.61	3.03	0.26	3.47	3.3	<5.00	732	19.8	25.7	259	3.15	34
91ADW14B	59°28'58"	150°30'17"	55	17	7.13	5.56	5.25	0.46	3.79	0.69	0.15	0.13	4.21	5.68	4.08	0.07	1.22	10	<6.00	530	22.4	27.2	185	0.85	22
90ADW18A	59°36'24"	151°6'37"	55.2	14.9	6.83	7.38	4.94	0.65	4.86	0.67	0.13	0.15	5	5.38	2.93	0.38	1.42	13	<7.00	680	14	30.1	390	0.7	39
91SK201A	59°20'20"	150°51'15"	55.2	17.4	6.59	4.93	6.75	1.26	3.37	0.68	0.15	0.12	3.58	5.27	3.54	0.09	0.17	10	<5.00	460	21.6	24.2	106	0.52	45
92AKU243A	59°35'0"	151°16'6"	56.5	17.7	6.11	4.77	6.2	1.25	3.86	0.82	0.15	0.1	2.39	4.01	1.57	0.8	0.12	13	<8.00	840	19.6	21.5	114	0.38	33
89ADW146	59°25'47"	151°19'27"	57.4	15.4	6	8.21	5.18	1.06	2.33	0.49	0.14	0.11	3.46	4.46	3.45	0.35	0.19	5.4	<5.00	833	18.5	29.5	365	0.54	36
91SK228A	59°43'27"	151°1'28"	57.4	16	5.91	4.39	5.5	0.81	3.96	0.53	0.16	0.11	4.87	4.7	2.79	0.26	2.08	7	<5.00	913	20.3	16.8	117	0.96	14
90ADW809A	59°22'8"	151°31'54"	58.9	17.2	5.36	4.71	4.82	1.23	4.48	0.63	0.17	0.1	2.38	3.96	2.5	0.27	0.12	4.3	<10.0	1060	20.8	18.1	109	1.6	16
92ADW95A	59°59'46"	150°17'14"	58.9	16.6	6.69	7.8	3.16	0.72	1.56	0.43	0.14	0.13	3.46	5.5	4.18	0.13	<0.01	14	<4.00	110	21.7	21.6	346	2.1	<1
92AKU238A	59°40'28"	151°6'20"	59.1	16.1	6.64	4.35	6.28	1.75	2.78	0.49	0.13	0.13	1.97	5.36	2.27	0.12	0.51	7.4	<5.00	710	21.9	19.2	107	3.07	36
92AKU237A	59°40'20"	151°6'16"	59.8	15.3	5.55	5.33	6.44	1.07	2.52	0.45	0.13	0.11	3.15	4.48	2.31	0.14	1.21	19	12	600	24.7	20.9	275	3.8	36
92PH415C	59°26'40"	151°2'1"	59.8	18.2	4.86	2.08	5.37	1.36	4.4	0.59	0.2	0.1	2.62	3.52	2.68	0.17	<0.01	2.3	<4.00	803	24.1	10.4	10	0.49	2
92ATI120A	59°30'40"	150°29'30"	60.3	17.3	6.06	1.91	6.09	0.72	4.13	0.86	0.18	0.11	1.92	4.28	2.57	0.06	<0.01	18	<5.00	570	31	10.9	3.5	0.49	15
92ADW157A	59°26'21"	151°8'59"	60.6	14	5.18	6.98	3.42	1.63	3.52	0.41	0.12	0.11	3.39	3.74	2.7	0.54	0.2	8.4	<5.00	1670	19	25.7	425	0.35	45
90ADW402A	59°41'53"	150°55'	60.8	16.1	4.61	1.14	4.15	2.38	3.06	0.31	0.15	0.1	6.3	3.64	2.16	0.26	4.58	7.3	<5.00	1150	23.7	6.92	6.6	21.5	6
89ADW155A	59°27'54"	151°21'13"	60.9	18.6	4.64	2.35	3.57	2.1	4.69	0.52	0.19	0.09	2.66	3.42	2.32	0.21	0.04	2.6	<8.00	1000	26.9	10.2	14	1.1	3
92ADW220A	59°40'34"	151°3'14"	61.1	17.7	5.43	2.93	5.54	0.7	3.31	0.53	0.19	0.11	1.97	4.26	2.14	0.09	0.43	22	<4.00	440	24.4	13.3	58.6	1.2	21

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APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA (CONTINUED)

Sample	Latitude	Longitude	SiO ₂	Al ₂ O ₃	FeTO ₃	MgO	CaO	K ₂ O	Na ₂ O	TiO ₂	P ₂ O ₅	MnO	LOI	FeO	H ₂ O+	H ₂ O-	CO ₂	As	Au	Ba	Ce	Co	Cr	Cs	Cu
Method:			WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	PT	wt/heat loss	wt/heat loss	CT	ICP-MS	INAA	INAA	INAA	INAA	INAA	INAA	ICP- AES
Units:			wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
89ADW142B	59°28'7"	151°24'39"	61.3	18.9	4.8	1.85	5.01	1.52	3.79	0.46	0.19	0.09	1.62	3.63	1.9	0.17	0.09	1.4	<5.00	1160	26.9	7.93	14	1.3	8
90ADW404A	59°41'53"	150°55'	61.4	16.6	4.1	0.99	4.12	2.33	3.5	0.3	0.15	0.09	6.33	3.2	2	0.29	4.47	4.9	<4.00	1100	25.9	4.77	6.7	19.7	10
92ADW216A	59°44'48"	151°1'7"	61.4	16.9	4.64	2.72	3.39	2.09	4.45	0.55	0.23	0.09	4.07	3.68	2.3	0.13	1.05	25.3	<5.00	1410	32.5	12.7	55.1	1	25
89ADW151	59°29'44"	151°22'23"	61.8	18.6	4.72	1.76	5.07	1.83	3.72	0.45	0.19	0.09	1.4	3.42	1.67	0.17	0.1	2.1	<5.00	850	26	7.13	12	1	6
92PH106B	59°33'9"	150°35'29"	62.3	18	4.64	3.62	1	2.07	4.37	0.52	0.15	0.07	2.94	3.6	3.16	0.07	0.49	14	9.9	360	23.5	14	113	2.75	3
92ATI115A	59°30'41"	150°32'16"	62.4	15.9	3.27	1.47	6.37	1.72	3.47	0.28	0.11	0.07	4.32	2.45	2.22	<0.05	2.78	3.7	<5.00	739	27	7.59	22.7	3.24	70
92ADW153A	59°34'13"	151°4'18"	63	19.2	2.48	2.92	4.64	0.54	5.04	0.15	0.07	0.05	1.7	1.74	1.83	0.09	0.12	<0.800	<4.00	300	4.7	10.4	41.6	0.65	4
92AKU206A	59°27'59"	151°38'50"	63.3	14.8	2.18	1.27	5.51	2.04	3.47	0.25	0.1	0.08	6.62	1.5	1.99	0.21	4.25	1.5	<7.00	340	21.3	4.82	15.8	3.48	11
90ADW407A	59°41'53"	150°55'	63.5	16.1	3.64	0.73	4.31	2.46	2.85	0.23	0.16	0.08	5.64	2.43	2.42	0.55	3.12	4.5	<6.00	985	29	3.2	9.4	13.6	8
90ADW406A	59°41'53"	150°55'	63.7	17.7	4.53	1.05	3.86	1.47	4.05	0.33	0.17	0.08	2.5	3.52	1.99	0.15	0.87	1.9	<6.00	986	28.3	5.58	14	6.05	7
92TD49B	59°32'32"	150°51'46"	64.5	16.1	4.26	0.53	2.99	2.48	3.94	0.28	0.2	0.09	4.13	3.04	2.04	0.16	2.21	<0.600	<11.0	900	44	3.5	<2.00	2.85	6
90ADW421A	59°41'53"	150°55'	64.6	15.7	3.23	1.67	3.59	2.37	4.28	0.44	0.18	0.05	3.11	2.24	1.71	0.17	1.75	2	<7.00	1280	44.9	6.97	54.1	1.4	5
90ADW418A	59°41'53"	150°55'	64.9	15.7	3.2	1.66	3.57	2.3	4.21	0.45	0.17	0.05	3.08	1.83	1.56	0.12	1.8	<0.700	<10.0	1480	44.4	7.11	46.5	1.7	3
92ADW221B	59°34'48"	151°10'22"	65.3	16.2	2.7	1.89	2.03	2.98	5.24	0.43	0.18	0.04	2.39	1.85	1.6	0.15	0.83	1.3	<4.00	849	36	8.28	28.3	0.97	11
91SK213A*	59°44'19"	150°38'54"	65.5	16.2	2.22	1.4	3.59	1.78	3.83	0.25	0.09	0.04	4.86	1.7	2.06	0.09	2.59	218	18	410	18.7	5.27	14.1	3.25	20
92PH319C	59°33'22"	151°3'15"	65.6	15.9	2.26	1.41	3.24	2.19	4.43	0.36	0.15	0.04	3.7	1.52	1.65	0.18	1.92	2	6.3	937	34.8	5.53	20.9	2.26	<1
92AKU52A*	59°39'57"	151°3'49"	65.7	16.8	4.04	1.87	4.49	2.01	3.59	0.49	0.14	0.08	0.54	3.11	0.74	<0.05	<0.01	6	<5.00	676	28.5	9.26	27.7	4.77	9
92AKU144A	59°31'58"	151°3'54"	65.8	16.3	4	1.09	3.31	2.26	3.94	0.46	0.22	0.08	1.4	3.16	1.39	0.11	0.2	0.86	<8.00	1180	41.6	6.17	3.7	1.8	5
90ADW530A	59°30'30"	151°1'1"	66.1	16.4	3.56	1.78	3.27	2.07	4.31	0.37	0.17	0.06	1.72	2.72	1.65	0.07	0.4	<0.800	<5.00	838	38.4	7.48	43.2	0.8	11
90ADW410A	59°41'53"	150°55'	66.4	16.7	3.7	0.61	2.53	1.41	5.11	0.24	0.17	0.07	2.3	2.87	1.69	0.11	1.06	7.6	<4.00	665	31.6	3.15	12.8	1.7	4
92ADW106A	59°42'38"	150°51'15"	66.6	15.6	3.21	2.09	2.4	1.37	4.55	0.47	0.17	0.04	2.95	2.35	2.11	0.08	1.19	15	<5.00	438	35.6	8.61	49.2	0.8	5
90ADW428A	59°41'53"	150°55'	66.9	16.5	2.85	1.58	3.12	2.92	3.57	0.27	0.11	0.09	1.6	2.06	1.54	0.12	0.29	8	<5.00	690	35	7.1	35.7	2.9	89
90ADW826A	59°11'54"	151°31'48"	67.1	16.1	2.17	1.49	3.12	1.54	4.57	0.28	0.11	0.04	3.2	1.6	1.79	0.06	1.77	4.7	<4.00	380	23	5.72	24.2	2.4	14
92ADW142A*	59°31'57"	150°18'55"	67.3	16.5	3.21	1.74	3.58	1.92	4.09	0.39	0.14	0.06	0.79	2.54	0.7	0.07	<0.01	<0.700	<4.00	631	30.1	8.53	34.4	3.49	2
92PH322C	59°41'59"	150°54'33"	67.3	16.7	2.57	1.63	3.07	2.59	3.92	0.27	0.11	0.08	1.35	1.87	1.39	0.09	0.06	19	<4.00	708	36.2	6.66	20.4	1.71	24
90ADW425A	59°41'53"	150°55'	67.4	16.9	3.49	0.59	2.29	2.58	4.09	0.21	0.17	0.07	2.79	2.82	1.53	0.1	0.19	7.3	<9.00	2300	31.6	2.5	11	1.73	2
92PH496B	59°21'21"	151°17'38"	67.6	16.2	2.1	1.5	2.65	1.82	4.51	0.28	0.11	0.04	2.7	1.59	1.46	0.11	0.94	1.3	<4.00	1400	19.8	5.45	16.7	1.63	1
90ADW426A	59°41'53"	150°55'	67.7	16.9	3.6	0.55	2.95	2.09	4.16	0.22	0.16	0.07	1.93	2.76	1.35	0.09	0.23	2.8	<8.00	1290	32.1	2.75	16.7	1.4	1
89ADW148	59°30'13"	151°26'44"	67.8	14.9	1.7	1.3	3.18	0.64	4.77	0.19	0.08	0.03	5.34	1.24	1.73	0.67	2.83	<0.700	<5.00	160	6.3	6.09	33	2.03	1
92ADW67A	59°22'57"	151°21'9"	67.9	16.5	1.99	1.24	2.49	1.88	5.02	0.28	0.11	0.04	1.88	1.44	1.43	0.12	0.62	1	<4.00	595	28.6	4.84	13.3	1.2	<1

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APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA (CONTINUED)

Sample	Latitude	Longitude	SiO ₂	Al ₂ O ₃	FeTO ₃	MgO	CaO	K ₂ O	Na ₂ O	TiO ₂	P ₂ O ₅	MnO	LOI	FeO	H ₂ O+	H ₂ O-	CO ₂	As	Au	Ba	Ce	Co	Cr	Cs	Cu
Method:			WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	WD XRF	PT	wt/heat loss	wt/heat loss	CT	ICP-MS	INAA	INAA	INAA	INAA	INAA	INAA	ICP- AES
Units:			wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm
92PH435B	59°45'6"	150°53'59"	67.9	14.6	1.94	1.16	3.45	1.12	4.74	0.28	0.11	0.03	4.27	1.44	1.57	0.13	2.51	<0.700	<4.00	398	25.4	6.12	14.8	1.71	<1
91ADW40A	59°17'47"	151°16'20"	68.3	16.2	2	1.14	2.34	1.7	4.76	0.31	0.14	0.03	3.23	1.34	1.51	0.05	1.18	150	<4.00	420	27.2	4.21	18.3	1.92	5
92PH437B	59°45'16"	150°54'54"	68.5	15.5	1.97	1.18	2.94	1.24	4.86	0.3	0.12	0.03	3.01	1.44	1.45	0.13	1.52	<0.700	<5.00	370	26.7	5.62	14.7	1.51	2
92PH320C	59°39'57"	151°1'21"	68.6	15.6	3.1	0.91	2.38	2.49	4.05	0.31	0.15	0.07	1.94	2.45	1.39	0.1	0.59	2.5	<10.0	916	42.2	4.86	11	1.43	9
92AKU227B*	59°46'19"	150°32'56"	68.7	16.6	2.58	1.37	3.29	1.74	3.59	0.34	0.14	0.03	1.8	1.7	1.18	0.12	<0.01	7.7	<4.00	470	33.4	1.9	16.3	3.58	99
92ADW192A*	59°46'31"	150°2'23"	69.3	14.8	3.82	1.56	2.91	2.86	3.32	0.5	0.15	0.07	0.2	3.01	0.67	0.07	<0.01	1.5	<5.00	786	36.7	8.84	38.3	3.83	23
92PH393C	59°12'8"	151°39'19"	69.3	15.1	1.92	1.27	2.27	1.57	4.35	0.27	0.11	0.03	3.36	1.43	1.71	0.13	1.58	0.74	<5.00	399	19.9	4.92	17.5	4.71	<1
92ADW74A	59°33'21"	151°15'58"	69.4	15.5	2.7	0.64	2.01	2.56	4.39	0.23	0.13	0.07	2.4	2.07	1.17	0.09	0.45	12	<6.00	1100	32.6	2.88	5.8	4.15	3
92ADW225A	59°21'52"	151°19'27"	70	15.6	2.29	1.04	2.52	1.05	4.69	0.25	0.1	0.04	1.45	1.33	1.44	0.09	0.8	2	<4.00	1070	19.6	5.21	12	1.1	1
92TD138A	59°20'6"	151°22'58"	70	15.9	1.68	1.18	2.22	1.52	5.2	0.23	0.1	0.03	1.54	1.27	1.24	0.15	0.26	<1.40	<3.00	380	22.7	4.56	19.1	0.55	1
90ADW24A	59°36'24"	151°6'37"	70.5	15.5	2.11	1.06	2.64	0.99	5	0.28	0.11	0.04	1.71	1.64	1.32	0.05	0.64	<1.00	<4.00	310	23	11	22.8	1.4	1
92ATI322B*	59°30'45"	150°15'48"	70.5	15.2	2.98	1.24	2.82	2.19	4.01	0.35	0.12	0.05	0	2.15	0.7	<0.05	<0.01	1.2	<5.00	640	37.6	6.62	23.8	2.8	2
89ADW154A	59°28'15"	151°21'20"	70.8	14.7	2.58	0.27	1.79	2.94	3.93	0.16	0.09	0.05	2.57	1.95	1.35	0.13	1.31	2.8	<5.00	1010	54	1.6	9.8	2.25	4
92ADW127A*	59°10'33"	151°34'8"	71	15	2.46	1.21	1.51	0.93	5.04	0.28	0.09	0.04	1.71	1.85	1.55	<0.05	0.6	22	<10.0	240	21.1	3.1	16	0.93	3
91ADW55F*	59°52'58"	150°27'23"	71.4	15.2	2.08	0.82	2.49	1.82	4.57	0.29	0.13	0.03	0.16	1.54	0.55	<0.05	<0.01	<0.800	<4.00	551	39.4	4.47	7.2	1.99	2
90ADW419A	59°41'53"	150°55'	71.7	14.7	1.78	0.1	1.16	3.68	3.53	0.07	0.06	0.04	2.28	1.21	1.2	0.16	1.32	3.3	<6.00	2150	42	0.64	31	2.34	10
89ADW145A	59°27'14"	151°23'11"	71.8	16.3	1.5	0.4	2.04	1.95	4.81	0.12	0.1	0.03	0.77	1.07	0.98	0.08	0.01	4.5	8.9	960	18	0.858	18	1.2	3
92ADW35A	59°12'40"	151°47'45"	71.9	13.6	3.15	1.63	2.01	1.57	3.41	0.33	0.16	0.08	1.3	2.31	1.45	0.1	<0.01	15	<5.00	1140	23.6	5.73	16.9	1.24	10
92ATI320A*	59°33'25"	150°14'18"	72.1	14.7	2.38	0.89	2.36	2.22	4.1	0.28	0.11	0.05	0.26	1.87	0.65	<0.05	<0.01	1.5	<5.00	520	34.6	5.1	16	3.62	2
92ATI321B*	59°32'15"	150°16'3"	72.4	14.7	2.51	0.89	2.25	2.52	3.97	0.28	0.11	0.06	0	1.78	0.64	<0.05	<0.01	<0.800	<4.00	546	27.9	4.9	17	3.32	1
92PH398B*	59°45'29"	150°1'28"	73.4	13.5	1.83	0.83	1.65	3.91	2.69	0.36	0.13	0.05	1.11	0.95	0.75	0.2	<0.01	52	41	823	35.1	1.84	24.5	5.09	320
92AKU201A	59°28'39"	151°36'32"	73.9	14.1	1.59	1.07	0.67	1.93	5.43	0.25	0.14	0.02	0.6	1.12	0.93	<0.05	0.01	<1.60	<4.00	700	18.8	3.62	15	0.58	1
91ADW5A	59°44'38"	150°5'24"	74.1	14.5	0.99	<0.10	0.19	4.23	4.42	0.05	0.47	0.12	0.21	0.44	0.13	0.05	<0.01	36	<4.00	<11.0	2.1	0.047	1.2	4.85	2
92ADW211D	59°37'19"	150°40'33"	76.2	12.8	1.36	0.22	1.03	1.6	4.52	0.1	0.07	0.03	0.91	0.34	0.94	<0.05	0.72	2760	140	340	33	0.942	0.62	1.87	2
90ADW403A	59°41'53"	150°55'	76.9	12.4	1.9	0.17	0.81	1.52	4.09	0.06	0.06	0.04	1.73	1.35	0.98	0.18	1.17	3.1	<6.00	551	35.2	0.62	34.9	4.03	6
92ATI104A	59°34'1"	150°34'54"	78.1	12.2	0.96	0.16	0.77	2.16	3.88	0.1	0.06	0.04	0.67	0.42	0.72	<0.05	0.38	1110	210	662	26.5	0.901	<0.600	1.2	1

(continued)

APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA (CONTINUED)

Sample	Latitude	Longitude	Eu	Ga	Hf	La	Li	Lu	Nb	Nd	Ni	Pb	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	U	V	Y	Yb	Zn	Zr
Method:			INAA	ICP-AES	INAA	INAA	ICP-AES	INAA	ICP-AES	INAA	ICP-AES	ICP-AES	INAA	INAA	INAA	INAA	ICP-AES	INAA	INAA	INAA	INAA	ICP-AES	ICP-AES	INAA	INAA	ED XRF
Units:			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
90ADW70A	59°36'24"	151°6'37"	2.35	22	6.33	37.4	5	0.38	23	39	34	<4	92.1	4.53	15.4	8.84	330	3.61	1.09	4.1	1.3	130	22	3	79	305
92ADW186C	59°36'37"	151°4'59"	0.847	15	1.98	5.6	80	0.26	5	8.1	180	<4	21	0.59	23.6	2.47	430	0.18	0.48	1.1	0.51	150	15	1.7	61	86
90ADW68A	59°36'24"	151°6'37"	0.785	16	2.2	6.3	85	0.27	5	10	150	5	13	0.59	29.3	2.81	630	0.24	0.5	1.4	0.89	170	15	2.1	51	102
90ADW36A	59°36'24"	151°6'37"	0.64	13	1.7	6	140	0.18	<4	7.7	230	8	9.3	0.94	23.3	2.03	340	0.22	0.32	1.6	0.81	130	10	1.2	48	74
92AD83M	59°22'18"	151°51'29"	0.95	18	1.1	3	11	0.38	<4	6.5	11	<4	7.2	0.38	48.7	2.36	190	<0.110	0.54	0.49	0.19	450	21	2.6	100	42
92ATI116B1	59°31'24"	150°37'14"	0.78	16	2.24	11	97	0.25	5	11	58	8	64	2.5	25.2	2.83	310	0.34	0.43	3.03	1.3	150	13	1.7	68.4	91
92ADW150A	59°35'16"	150°51'12"	0.62	15	1.9	7.77	82	0.23	4	8.7	120	8	10	0.84	28.2	2.12	420	0.26	0.35	2.14	1.1	170	11	1.3	60	84
92ADW46A	59°32'56"	150°57'53"	0.66	14	1.9	8.04	73	0.2	4	7.7	230	6	27	0.63	27.1	2.16	370	0.27	0.36	2.2	1	230	12	1.4	59	79
92TD144A	59°20'16"	151°37'14"	1.12	16	2.77	9.5	24	0.27	5	11	140	<4	22	0.59	20.3	3.29	450	0.31	0.55	1.76	0.75	130	16	2	59	134
92DW131A	59°9'29"	151°44'29"	0.912	15	2.4	8.6	47	0.24	<4	11	160	<4	28	0.25	26.1	2.97	430	0.23	0.48	2	1	160	15	1.6	51	112
92ATI116B2	59°31'24"	150°37'14"	0.59	14	2.2	10.7	86	0.26	5	11	7	5	42	0.89	24.9	2.86	480	0.35	0.43	3.1	1.4	100	14	1.6	63	95
89ADW156	59°27'11"	151°29'35"	0.84	14	2.6	9.07	85	0.22	5	11	150	15	12	1.6	17.4	2.78	710	0.3	0.41	2.13	1.2	100	13	1.6	51	122
91ADW14B	59°28'58"	150°30'17"	0.847	17	2.62	10.9	100	0.27	5	11	15	5	12	3.08	26.2	3.1	900	0.4	0.51	3.2	1.3	140	16	2	62.8	126
90ADW18A	59°36'24"	151°6'37"	0.65	15	2.13	6.1	50	0.24	4	11	120	7	15	0.58	25.7	2.4	820	0.21	0.42	1.5	0.87	150	16	1.7	46	92
91SK201A	59°20'20"	150°51'15"	0.877	15	2.59	11.1	33	0.26	6	11	29	5	34	0.6	23.1	3	400	0.36	0.48	2.99	1.3	100	16	1.8	63	108
92AKU243A	59°35'0"	151°16'6"	0.921	18	2.6	9.24	15	0.291	6	12	56	7	26	1.2	21.4	3.13	350	0.32	0.53	2.52	1.2	120	19	2.1	57	114
89ADW146	59°25'47"	151°19'27"	0.686	14	2.1	9.5	85	0.21	5	11	180	16	22	1.4	21.6	2.43	500	0.28	0.36	2.48	1.2	130	13	1.5	48	95
91SK228A	59°43'27"	151°1'28"	0.75	15	2.29	10.1	32	0.22	6	9.8	16	13	20	0.43	21.3	2.5	700	0.34	0.36	2.78	1.2	130	12	1.5	57	112
90ADW809A	59°22'8"	151°31'54"	0.868	17	2.9	10	38	0.24	4	11	68	8	35	0.29	13	2.8	620	0.31	0.417	2.56	1.1	75	14	1.5	56	138
92ADW95A	59°59'46"	150°17'14"	0.842	18	2.27	11.5	100	0.198	5	10	160	8	36	<0.110	24.5	2.34	310	0.34	0.33	3.14	1.5	140	13	1.3	149	95
92AKU238A	59°40'28"	151°6'20"	0.66	17	2.11	11.2	63	0.22	4	11	15	5	40	1.9	27.5	2.45	320	0.34	0.35	3.53	1.8	130	13	1.5	65	84
92AKU237A	59°40'20"	151°6'16"	0.66	17	2.5	12.8	48	0.21	7	12	51	11	33	1.3	22.2	2.61	290	0.43	0.35	4.54	2.22	110	13	1.3	59	89
92PH415C	59°26'40"	151°2'1"	0.934	17	3.31	11.8	38	0.301	5	14	5	11	36	0.26	9.59	3.27	710	0.36	0.53	2.85	1.5	37	15	2.18	58	160
92ATI120A	59°30'40"	150°29'30"	1	16	3.2	15.9	29	0.32	7	15	4	11	14	1.1	20.1	3.94	610	0.55	0.61	4.54	1.9	40	19	2.2	73	138
92ADW157A	59°26'21"	151°8'59"	0.45	14	1.9	10.1	57	0.17	7	7.9	160	18	30	0.79	18.5	2.43	1700	0.29	0.32	3.27	1.9	110	10	1.2	58	120
90ADW402A	59°41'53"	150°55'	0.766	15	2.45	12.3	61	0.13	<4	12	<2	23	75.1	23.3	4.7	2.46	330	0.42	0.28	4.22	1.9	<2	7	0.91	47	104
89ADW155A	59°27'54"	151°21'13"	0.836	17	2.9	14	51	0.23	5	13	4	17	59	0.27	9.33	2.86	790	0.43	0.4	3.89	2.2	29	14	1.7	53	128
92ADW220A	59°40'34"	151°3'14"	0.82	18	2.92	12.7	47	0.22	6	11	42	15	23	0.68	12.3	2.69	420	0.39	0.37	3.45	1.7	70	13	1.6	70.2	130

(continued)

APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA (CONTINUED)

Sample Method:	Latitude	Longitude	Eu INAA	Ga ICP- AES	Hf INAA	La INAA	Li ICP- AES	Lu INAA	Nb ICP- AES	Nd INAA	Ni ICP- AES	Pb ICP- AES	Rb INAA	Sb INAA	Sc INAA	Sm INAA	Sr ICP- AES	Ta INAA	Tb INAA	Th INAA	U INAA	V ICP- AES	Y ICP- AES	Yb INAA	Zn INAA	Zr ED XRF
Units:			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
89ADW142B	59°28'7"	151°24'39"	0.861	18	2.9	14	52	0.21	6	12	3	21	47	0.24	10.4	2.92	520	0.43	0.39	4.01	1.9	14	12	1.6	65	124
90ADW404A	59°41'53"	150°55'	0.623	15	2.55	13.9	40	0.13	<4	11	<2	28	72	3.21	4.52	2.2	310	0.445	0.26	4.41	2.1	<2	7	1	58.7	114
92ADW216A	59°44'48"	151°1'7"	0.952	17	3.01	17.2	53	0.212	5	16	33	30	59.7	1.37	11.2	3.58	710	0.4	0.41	4.66	2.4	58	14	1.48	67.7	138
89ADW151	59°29'44"	151°22'23"	0.777	17	2.88	13.7	63	0.21	6	12	<2	19	55	0.25	9.57	2.82	600	0.42	0.37	3.93	1.8	12	13	1.4	60	130
92PH106B	59°33'9"	150°35'29"	0.312	18	2.47	11.8	62	0.18	<4	10	49	<4	73.8	0.55	14.3	2.53	430	0.39	0.348	3.82	2	78	9	1.2	51	106
92AT1115A	59°30'41"	150°32'16"	0.55	19	2.44	14.1	32	0.11	6	12	11	24	50	1.1	8.01	2.61	440	0.543	0.29	4.96	2.2	29	7	0.8	55	95
92ADW153A	59°34'13"	151°4'18"	0.27	14	1.44	2.1	47	0.045	<4	2.4	47	<4	11	0.41	3.64	0.616	550	0.074	0.081	0.53	0.27	15	<2	0.33	19	67
92AKU206A	59°27'59"	151°38'50"	0.54	16	2.64	9.82	17	0.073	<4	10	14	5	67.4	1.51	3.93	2.11	240	0.17	0.2	2.79	1.3	26	3	0.52	54.3	100
90ADW407A	59°41'53"	150°55'	0.679	14	2.62	15.9	44	0.074	5	13	<2	26	73	2.6	2.53	2.28	430	0.47	0.19	5.03	2.3	2	4	0.55	56	110
90ADW406A	59°41'53"	150°55'	0.716	16	2.79	15.2	55	0.15	6	12	<2	26	47	0.36	5.26	2.51	560	0.464	0.279	4.72	2.2	2	9	1	61.1	118
92TD49B	59°32'32"	150°51'46"	0.942	16	5.28	22.3	29	0.4	4	20	<2	21	84	1.5	3.86	4.39	270	0.67	0.61	7.09	3.2	<2	16	2.7	65	225
90ADW421A	59°41'53"	150°55'	1.03	18	3.88	24.3	42	0.15	8	20	17	36	52	3.47	6.71	4.08	1400	0.624	0.34	12.4	8.35	49	10	1.2	24	164
90ADW418A	59°41'53"	150°55'	1.03	18	3.98	23.6	42	0.16	4	20	16	34	52	4.21	6.78	4	1200	0.63	0.36	12.4	8.02	45	11	1.3	23	166
92ADW221B	59°34'48"	151°10'22"	0.787	20	3.54	17.8	23	0.1	<4	18	17	6	63	0.23	6.02	3.28	780	0.27	0.26	6.72	2.3	47	6	0.63	27	156
91SK213A*	59°44'19"	150°38'54"	0.414	14	2.72	10.4	26	0.12	<4	8	10	31	61.1	2.11	4.71	1.82	370	0.45	0.24	6.23	2	22	6	0.86	21	97
92PH319C	59°33'22"	151°3'15"	0.692	17	3.38	18.4	16	0.076	<4	14	11	6	59.6	0.58	4.59	2.67	730	0.24	0.21	8.9	2.8	32	5	0.58	40.2	152
92AKU52A*	59°39'57"	151°3'49"	0.81	16	3.34	15	39	0.23	5	13	11	14	66	0.39	9.6	2.83	290	0.53	0.39	5	2.3	41	14	1.6	52.1	118
92AKU144A	59°31'58"	151°3'54"	0.957	18	3.55	21.5	29	0.24	8	18	3	19	68.1	0.47	8.65	4.54	330	0.624	0.51	6.71	2.5	11	13	1.7	71	142
90ADW530A	59°30'30"	151°1'1"	0.859	17	3.6	19.9	29	0.15	6	17	26	24	61.3	0.45	7.23	3.56	740	0.47	0.33	6.3	2.2	41	7	1	59	138
90ADW410A	59°41'53"	150°55'	0.632	15	2.88	17.2	38	0.066	5	13	<2	30	39	0.27	2.27	2.29	910	0.48	0.217	5.53	2.3	<2	5	0.56	60.8	128
92ADW106A	59°42'38"	150°51'15"	0.723	22	4.09	17.2	54	0.1	5	17	50	6	31	6.33	5.49	3.6	610	0.35	0.32	4.29	1.5	45	4	0.73	38	190
90ADW428A	59°41'53"	150°55'	0.616	19	3.72	18.6	31	0.13	8	14	24	13	100	0.41	4.58	2.66	290	0.684	0.24	7.7	3.2	21	7	0.96	167	144
90ADW826A	59°11'54"	151°31'48"	0.541	17	2.77	11.6	46	0.067	<4	11	9	21	51.2	0.68	4.64	2.12	510	0.16	0.19	3.82	1.8	25	3	0.52	36	114
92ADW142A*	59°31'57"	150°18'55"	0.702	19	3.14	16.1	38	0.16	4	13	18	8	66.6	<0.150	7.87	2.87	290	0.48	0.31	6.19	1.2	52	6	1.1	39	120
92PH322C	59°41'59"	150°54'33"	0.729	17	3.57	19.7	23	0.12	8	14	24	6	69.1	0.38	4.56	2.67	270	0.686	0.25	7.51	3.1	21	7	0.92	357	144
90ADW425A	59°41'53"	150°55'	0.652	16	2.89	17.3	45	0.045	5	12	<2	30	69.5	0.26	1.9	2.27	1100	0.476	0.19	5.61	2.3	<2	5	0.46	62	136
92PH496B	59°21'21"	151°17'38"	0.574	15	2.69	10.1	29	0.081	<4	9.5	16	9	44.8	0.46	4.8	2.06	620	0.24	0.21	3.4	2.2	24	6	0.53	25	116
90ADW426A	59°41'53"	150°55'	0.68	16	2.91	17.7	33	0.039	5	14	<2	31	64	0.54	1.87	2.36	650	0.54	0.2	5.74	2.4	<2	4	0.37	60.2	130
89ADW148	59°30'13"	151°26'44"	0.276	15	2.1	3.1	33	0.056	<4	4	32	4	13	0.15	3.46	0.951	410	0.099	0.14	0.81	0.4	21	2	0.46	14	81

(continued)

APPENDIX TABLE DR1. GEOLOGIC SIGNATURE OF EARLY TERTIARY RIDGE SUBDUCTION IN ALASKA (CONTINUED)

Sample	Latitude	Longitude	Eu	Ga	Hf	La	Li	Lu	Nb	Nd	Ni	Pb	Rb	Sb	Sc	Sm	Sr	Ta	Tb	Th	U	V	Y	Yb	Zn	Zr
Method:			INAA	ICP-AES	INAA	INAA	ICP-AES	INAA	ICP-AES	INAA	ICP-AES	ICP-AES	INAA	INAA	INAA	INAA	ICP-AES	INAA	INAA	INAA	INAA	ICP-AES	ICP-AES	INAA	INAA	ED XRF
Units:			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
92ADW67A	59°22'57"	151°21'9"	0.59	16	3.08	15.6	36	0.07	<4	12	10	6	54.3	0.39	3.82	2.46	520	0.3	0.21	5.32	2.3	22	5	0.47	20	118
92PH435B	59°45'6"	150°53'59"	0.664	16	2.99	12.9	32	0.056	<4	12	16	<4	34	1	2.91	2.37	280	0.18	0.19	3.61	1.3	18	3	0.41	13	126
91ADW40A	59°17'47"	151°16'20"	0.664	17	2.9	13.6	19	0.06	<4	13	9	8	45.8	1.1	3.98	2.46	490	0.17	0.2	4	1.8	20	4	0.46	40.4	126
92PH437B	59°45'16"	150°54'54"	0.641	16	3.17	13	23	0.064	<4	12	15	5	34	1.28	3.07	2.43	370	0.19	0.21	3.79	1.2	18	4	0.45	14	132
92PH320C	59°39'57"	151°1'21"	0.818	15	3.44	22.4	28	0.19	6	19	7	17	72.3	0.39	5.15	4.04	350	0.58	0.41	7.44	3.1	20	12	1.3	59.3	138
92AKU227B*	59°46'19"	150°32'56"	0.74	18	3.64	17.3	35	0.15	4	14	4	<4	83.1	0.2	5.53	2.74	350	0.57	0.28	9.27	2.1	30	8	1	13	132
92ADW192A*	59°46'31"	150°2'23"	0.844	17	4.81	18.1	28	0.41	7	17	16	12	97.7	0.087	9.5	4.49	170	0.811	0.72	8.2	3.49	71	13	2.77	56	166
92PH393C	59°12'8"	151°39'19"	0.485	15	2.96	9.93	22	0.071	<4	9.1	11	<4	38	0.95	3.89	2.08	280	0.18	0.21	2.48	1.5	20	4	0.5	28	118
92ADW74A	59°33'21"	151°15'58"	0.67	13	3.13	17.5	45	0.18	<4	13	2	20	79.1	0.51	3.73	2.7	330	0.629	0.34	5.86	3.2	7	13	1.2	51.3	130
92ADW225A	59°21'52"	151°19'27"	0.493	17	3.06	9.3	39	0.066	<4	10	11	<4	29	0.77	3.69	2.25	550	0.21	0.2	3.16	1.6	20	3	0.54	15	128
92TD138A	59°20'6"	151°22'58"	0.529	17	3.08	11.5	20	0.057	<4	9.5	19	7	36	0.21	3.03	2.15	490	0.17	0.18	3.9	1.9	16	4	0.41	18.7	126
90ADW24A	59°36'24"	151°6'37"	0.526	16	3.1	11.2	35	0.075	<4	10	7	9	26	0.2	3.62	2.1	450	0.18	0.2	2.21	1.2	18	3	0.57	20	134
92ATI322B*	59°30'45"	150°15'48"	0.7	17	3.99	19.2	33	0.26	4	16	13	6	61.4	<0.100	6.65	3.73	230	0.62	0.493	7.09	2.1	37	10	1.8	27	126
89ADW154A	59°28'15"	151°21'20"	0.778	16	4.06	29	23	0.24	<4	24	<2	26	94	0.45	4.53	5.07	170	0.59	0.574	10.1	3.3	<2	16	1.8	49	150
92ADW127A*	59°10'33"	151°34'8"	0.514	14	2.96	10	19	0.072	<4	10	13	4	30	0.21	3.95	2.08	460	0.2	0.18	2.6	1.2	22	3	0.54	37	126
91ADW55F*	59°52'58"	150°27'23"	0.61	16	3.97	21.7	15	0.17	<4	15	5	4	56	<0.0800	3.87	3.02	200	0.4	0.35	11.4	2.2	17	7	1.1	16	152
90ADW419A	59°41'53"	150°55'	0.49	17	2.44	22.1	22	<0.0160	5	18	<2	34	97	13.7	1.91	4.58	290	0.775	0.32	7.88	3.8	<2	3	<0.220	49	73
89ADW145A	59°27'14"	151°23'11"	0.538	16	1.6	10	34	0.013	6	8.1	2	25	53.3	0.13	1.19	1.53	800	0.365	0.096	2.63	1.8	4	<2	0.17	29	63
92ADW35A	59°12'40"	151°47'45"	0.368	16	2.67	12.3	39	0.13	5	9	14	24	46.7	0.42	4.79	2.05	490	0.42	0.236	4.07	2	35	8	0.9	55.3	99
92ATI320A*	59°33'25"	150°14'18"	0.584	17	3.75	18.3	41	0.27	7	15	11	10	84.5	<0.140	5.73	3.41	200	0.9	0.46	7.75	2	28	7	1.8	22	120
92ATI321B*	59°32'15"	150°16'3"	0.552	15	2.84	14.8	38	0.24	4	12	9	8	84.1	0.13	5.48	2.85	180	0.654	0.4	6.18	1.6	23	7	1.7	25	85
92PH398B*	59°45'29"	150°1'28"	0.628	14	3.78	17.4	41	0.34	4	16	3	17	137	0.21	6.16	3.99	150	0.892	0.65	8.3	5.82	40	15	2.48	22	136
92AKU201A	59°28'39"	151°36'32"	0.38	13	2.74	8.6	11	0.084	<4	9.3	10	<4	35	0.1	3.8	2.16	430	0.24	0.21	3.25	1.9	17	6	0.61	15	110
91ADW5A	59°44'38"	150°5'24"	<0.0160	16	1.63	0.69	11	0.04	<4	1.4	<2	4	328	<0.0900	8.75	0.52		0.571	0.11	1.14	13.6	<2	<2	0.34	51	21
92ADW211D	59°37'19"	150°40'33"	0.29	13	2.45	17	9	0.17	<4	14	<2	16	56.1	4.22	3.6	3.16	210	0.43	0.37	7.41	3.3	<2	12	1.2	17	69
90ADW403A	59°41'53"	150°55'	0.43	12	2.12	18.1	23	<0.0170	5	17	2	33	49	5.24	1.57	3.84	180	0.68	0.28	6.51	3.1	<2	3	<0.270	47	61
92ATI104A	59°34'1"	150°34'54"	0.15	14	2.12	13.7	14	0.14	<4	10	<2	8	59	2.95	3.34	2.52	190	0.36	0.304	6.55	2.9	<2	10	1	11	64

Note: Geochemical analytical data for near-trench intrusive rocks, Seldovia quadrangle, Alaska. Asterisk in sample number denotes granitic plutonic rock; other samples are from mafic, intermediate, and felsic dikes. Analyses by U.S. Geological Survey laboratories, Denver, Colorado, and Reston, Virginia, 1990-1994. For discussion of analytical methods used during this era by the U.S. Geological Survey, see Baedecker, P.A., editor, 1987, Methods of geochemical analysis: U.S. Geological Survey Bulletin 1770.