APPENDIX A. URANIUM OCCURRENCES IN THE PORTLAND QUADRANGLE

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
1	Ruggles Mine	43°35'24"N, 071°59'40"W	NH Plutonic Series/2-mica pegmatite	Pegmatitic	a	This report
2	Orange	43°37'28"N, 071°58'14"W	NH Plutonic Series/ Pegmatite	Pegmatitic	a	This report
3	Grafton	43°33'37"N, 071°57'08"W	Concord Granite/Garnet pegmatite	Pegmatitic	a	This report
4	Fogg Hill	43°31'00"N, 071°57'20"W	NH Plutonic Series/2-mica granite	Orthomagmatic	a	This report
5	Horseshoe Pond	43°26'11"N, 071°48'21"W	Warner Fm.	Vein-type in meta. rock	a	This report
6	Gunstock Hill Rd.	43°32'35"N, 071°25'10"W	Littleton Fm.	Vein-type in meta. rock	a	This report
7	Walnut Hill	43°04'45"N, 071°19'00"W	Concord Granite/2-mica granite	Orthomagmatic	a	This report
8	Ayers Pond	43°15'17"N, 071°00'47"W	Quartz diorite/Pegmatite	Pegmatitic	a	This report
9	New Durham Ridge	43°24'22"N, 071°07'30"W	NH series pegmatite/ Grantoid-pegmatoid facies	Pegmatitic	a	This report
10	Alton	43°28'25"N, 071°13'35"W	NH series pegmatite/ Grantoid-pegmatoid facies	Pegmatitic	a	This report
11	North Wakefield	43°37'40"N, 071°03'44"W	Winnipesaukee Pluton/ 2-mica granite	Orthomagmatic	a	This report
12	Province Lake	43°40'09"N, 071°00'34"W	Winnipesaukee Pluton/ 2-mica granite	Orthomagmatic	a	This report
13	Hatch Molybdenum Prospect	43°39'03"N, 070°52'13"W	Biotite granodiorite	Magmatic-hydrothermal	a	This report

See footnote at end of table, p. A-6.

APPENDIX A. (CONTINUED)

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
14	Newfield	43°38'55"N, 070°50'46"W	Granitoid rocks	Magmatic-hydrothermal	a	This report
15	Symmes Pond	43°38'46"N, 070°52'29"W	Conway granite/aplitic dike	Pegmatitic	a	This report
16	North Shapleigh	43°36'23"N, 070°53'37"W	Undifferentiated alkalic rock/trachyte dikes	Magmatic-hydrothermal	a	This report
17	Emery's Corner	43°43'04"N, 070°45'38"W	Biotite granite	Orthomagmatic	a	This report
18	East Freedom	47°30'07"N, 070°59'45"W	Winnipesaukee Pluton/2-mica granite	Orthomagmatic	a	This report
19	Ossipee Valley	43°47'56"N, 071°11'10"W	Winnipesaukee Pluton/2-mica granite	Orthomagmatic	a	This report
20	Drake's Brook	43°56'10"N, 071°31'00"W	White Mountain Magma Series (WMMS)/Conway Granite	Orthomagmatic	a	This report
21	Acteon Ridge	43°55'12"N, 071°32'22"W	WMMS/Conway granite	Orthomagmatic	a	This report
22	Welch Mountain	43°54'50"N, 071°34'35"W	WMMS/Conway granite toplite	Orthomagmatic	a	This report
23	Dickey Notch	43°54'50"N, 071°35'42"W	WMMS/Conway granite	Orthomagmatic	a	This report
24	Woodstock	43°59'54"N, 071°40'71"W	Littleton Fm./Pegmatite	Pegmatitic	a	Moke, 1946
25	Hancock Hairpin	44°02'42"N, 071°31'12"W	WMMS/Conway granite	Magmatic-hydrothermal	a	This report
26	Graham Wangan	44°02'42"N, 071°31'12"W	WMMS/Conway granite	Magmatic-hydrothermal	a	This report
27	Mad River	43°59'09"N, 071°29'52"W	WMMS/Conway granite	Orthomagmatic	a	This report

See footnote at end of table, p. A-6.

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
28	Flume Trail	43°59'03"N, 071°29'52"W	WMMS/Conway Granite	Orthomagmatic	a	This report
29	Rob Brook	44°00'55"N, 071°21'20"W	WMMS/Conway Granite	Orthomagmatic	a	This report
30	Potash Mountain	43°59'00"N, 071°23'19"W	WMMS/Conway Granite	Orthomagmatic	a	This report
31	Passaconaway	43°59'26"N, 071°20'10"W	WMMS/Conway Granite	Orthomagmatic	a	This report
32	Champney Falls Trail	43°59'08"N, 071°17'33"W	WMMS/Conway Granite	Orthomagmatic	a	This report
33	Oliverian Brook Trail	43°57'15"N, 071°21'03"W	WMMS/Conway Granite	Orthomagmatic	a	This report
34	Mt. Osceola No.2	43°57'11"N, 071°18'28"W	WMMS/Conway Granite	Orthomagmatic	a	This report
35	Wonalancet Stock	43°55'25"N, 071°22'00"W	WMMS/Conway Granite	Orthomagmatic	a	Smith and others, 1939
36	Mt. Osceola No.1	43°55'57"N, 071°18'30"W	WMMS/Mt. Osceola Granite	Orthomagmatic	a	This report
37	Wonalancet	43°54'35"N, 071°19'51"W	WMMS/Conway Granite	Orthomagmatic	a	Smith and others, 1939
38	Lower Falls	44°00'55"N, 071°14'49"W	WMMS/Albany Syenite	Authigenic	a	This report
39	Nickerson Ledge	43°56'00"N, 071°14'35"W	WMMS/Conway Granite	Orthomagmatic	a	This report
40	Band M Ledge	43°57'13"N, 071°09'45"W	WMMS/Conway Granite	Orthomagmatic	a	This report
41	Chase Hill	43°58'24"N, 071°09'08"W	WMMS/2-mica Granite	Orthomagmatic	a	This report
42	Conway	44°00'09"N, 071°06'38"W	WMMS/Conway Granite	Magmatic-hydrothermal	a	Wilson, 1969

See footnote at end of table, p. A-6.

APPENDIX A. (CONTINUED)

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
43	Redstone Quarry Core	44°01'10"N, 071°05'51"W	WMMS/Conway Granite	Orthomagmatic	a	This report
44	Starks Mountain	44°00'28"N, 070°59'15"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
45	Haley Pond	43°59'14"N, 070°59'10"W	WMMS/Conway Granite	Pegmatitic	a	This report
46	Burnt Meadow Mountain No. 1	43°54'31"N, 070°53'08"W	Meta. rock /Pegmatite	Pegmatitic	a	This report
47	Great Falls	43°51'09"N, 070°47'50"W	Rindgemere Fm./Pegmatite	Pegmatitic	a	This report
48	Pleasant Mountain Creek	44°02'06"N, 070°50'46"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
49	Pleasant Mountain East No. 1	44°02'48"N, 070°48'48"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
50	Pleasant Mountain East No. 2	44°02'20"N, 070°48'12"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
51	East Denmark	43°59'16"N, 070°46'40"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
52	Perley Pond	43°57'44"N, 070°44'17"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
53	Peabody Pond	43°55'42"N, 070°41'38"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
54	Sebago	43°54'08"N, 070°42'23"W	Sebago Lake Pluton/Aplite in 2-mica granite	Pegmatitic	a	This report
55	Ward's Cove	43°49'47"N, 070°36'18"W	Sebago Lake Pluton/2-mica granite and pegmatite	Pegmatitic	a	This report

See footnote at end of table, p. A-6.

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
56	Rich Mill Pond	43°48'18"N, 070°34'05"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
57	Mast Cove	43°59'14"N, 070°38'46"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
58	Randall Hill	44°01'20"N, 070°37'08"W	Sebago Lake Pluton/ Biotite granite	Pegmatitic	a	This report
59	Parker Pond	43°59'56"N, 070°31'10"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
60	Thompson Lake	44°01'10"N, 070°29'18"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
61	Black Cat Mountain	44°00'28"N, 070°25'18"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
62	East Raymond	43°55'53"N, 070°26'31"W	Sebago Lake Pluton/ 2-mica granite	Pegmatitic	a	This report
63	Suckerville	43°55'17"N, 070°23'30"W	Sebago Lake Pluton/ Pegmatoid facie of 2-mica granite	Pegmatitic	a	This report
64	Pownal	43°54'15"N, 070°12'20"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
65	Tryon Mountain	43°54'34"N, 070°11'42"W	2-mica granite/granitoid-pegmatoid facies	Pegmatitic	a	This report
66	Pownal Center	43°53'54"N, 070°09'36"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
67	I-95	43°53'53"N, 070°04'43"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report

See footnote at end of table, p. A-6.

Occurrence no.	Name	Location	Host Rock Formation/Member	Deposit Class	Production[1]	Reference
68	Route 1	43°53'49"N, 070°04'03"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
69	Growstown	43°53'51"N, 070°00'00"W	Cushing/Pegmatite	Pegmatitic	a	This report
70	Flying Point Rd.	43°51'01"N, 070°02'12"W	Cushing Fm./Pegmatite	Pegmatitic	a	This report
71	Hunter Road	43°51'51"N, 070°09'51"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
72	Hodson Road	43°52'29"N, 070°11'55"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
73	The Ledges	43°50'37"N, 070°10'35"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report
74	Hadlock Road	43°45'55"N, 070°18'00"W	2-mica granite	Pegmatitic	a	This report
75	Pleasant Hill	43°42'19"N, 070°15'23"W	Berwick Fm./Pegmatite	Pegmatitic	a	This report

[1]Production categories: a. 0-20,000 lb. U_3O_8

APPENDIX B. TABLE OF CHEMICAL ANALYSES, MHM ROCK SAMPLES (IN PPM[1])

Sample Number (MHM)	001	002	003	004	005	006	007	008
U308 (F1[2])	5	150	103	31	6	28	110	11
AG	< 10	< 10	< 10	< 10	< 10	10	< 10	< 10
AL	70,000	60,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	200	< 200	< 200
B	< 10	< 10	< 10	< 10	10	10	< 10	< 10
BA	500	< 20	150	150	700	150	100	1,000
BE	30	150	20	30	15	30	20	7
CA	7,000	3,000	15,000	5,000	7,000	5,000	15,000	10,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	10
CR	20	10	20	10	20	10	10	30
CU	7	< 10	5	< 10	10	< 10	< 10	5
FE	10,000	7,000	30,000	15,000	10,000	15,000	30,000	20,000
LA	50	< 20	150	200	100	300	500	300
LI	< 10	< 10	200	100	100	< 10	100	< 10
MN	300	3,000	500	150	300	500	700	700
MO	< 10	< 10	50	5	< 10	5	< 10	< 10
NA	30,000	20,000	30,000	40,000	30,000	30,000	30,000	30,000
NB	< 20	< 20	150	150	< 20	70	300	< 20
NI	7	10	15	7	10	10	7	15
PB	100	50	70	100	70	70	100	150
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	5	< 10	< 10	5
SN	15	10	300	15	10	30	70	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	001	002	003	004	005	006	007	008
SR	300	<100	<100	<100	300	<100	<100	700
TI	1,000	100	2,000	1,000	2,000	1,000	1,500	3,000
V	10	<10	<10	<10	30	<10	<10	70
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	10	20	300	200	10	70	700	30
ZN	300	<200	300	<200	<200	<200	300	<200
ZR	50	70	70	1,000	200	200	700	700

APPENDIX B. TABLE OF CHEMICAL ANALYSES, MHM ROCK SAMPLES (IN PPM[1])

Sample Number (MHM)	009	010	011	012	013	014	015	016
U308 (FL[2])	6	13	17	12	1	20	23	15
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	60,000	70,000	60,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	700	150	70	150	200	20	50	50
BE	7	30	20	7	3	15	20	10
CA	10,000	3,000	2,000	1,500	30,000	1,500	3,000	3,000
CO	< 10	< 10	< 10	< 10	5	< 10	< 10	< 10
CR	10	10	10	10	30	10	< 10	< 10
CU	< 10	< 10	< 10	< 10	5	< 10	< 10	< 10
FE	20,000	15,000	15,000	7,000	15,000	15,000	7,000	10,000
LA	200	200	300	150	150	300	70	70
LI	< 10	< 10	< 10	< 10	200	< 10	100	< 10
MN	1,000	300	300	300	700	700	150	70
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	30,000	30,000	40,000	30,000	40,000	30,000	30,000	40,000
NB	50	30	70	10	< 20	30	< 20	10
NI	7	10	7	7	7	10	5	5
PB	70	70	70	70	30	70	50	30
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	15	< 10	< 10	< 10
SN	10	10	10	10	10	15	20	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	009	010	011	012	013	014	015	016
SR	300	< 100	< 100	< 100	500	< 100	< 100	< 100
TI	3,000	1,000	1,500	500	5,000	1,500	700	700
V	15	< 10	< 10	< 10	50	< 10	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	70	30	70	10	70	70	70	50
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	150	300	700	100	300	300	500	200

APPENDIX B. (CONTINUED)

Sample Number (MHM)	017	018	019	020	021	022	023	024
U308 (Fl^2)	14	30	26	18	16	14	13	7
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	20	70	20	20	70	< 20	300	70
BE	20	7	7	10	15	7	5	5
CA	3,000	2,000	1,500	3,000	5,000	2,000	5,000	2,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CU	< 10	< 10	< 10	< 10	< 10	< 10	5	< 10
FE	10,000	15,000	15,000	15,000	15,000	15,000	20,000	15,000
LA	100	70	70	100	200	100	300	70
LI	100	200	100	< 10	< 10	100	< 10	< 10
MN	200	200	300	300	500	300	300	200
MO	< 10	< 10	< 10	< 10	70	< 10	< 10	< 10
NA	30,000	30,000	30,000	30,000	40,000	30,000	30,000	30,000
NB	30	30	70	30	50	30	20	10
NI	7	5	5	7	7	7	7	7
PB	70	70	70	70	70	70	70	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
SN	< 10	10	< 10	10	10	< 10	20	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	017	018	019	020	021	022	023	024
SR	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
TI	700	500	700	500	1,000	700	1,500	1,000
V	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	100	70	70	70	150	70	70	30
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	500	70	150	150	300	100	200	300

APPENDIX B. (CONTINUED)

Sample Number (MHM)	025	026	027	028	029	030	031	032
U308 (F1[2])	13	27	3	130	47	3	50	50
AG	< 10	N	N	L	N	N	L	N
AL	70,000	70,000	70,000	60,000	70,000	60,000	70,000	70,000
AS	< 200	N	N	N	N	N	N	N
B	< 10	N	N	N	10	N	200	N
BA	200	1,000	700	20	20	100	50	700
BE	5	20	30	30	30	50	50	70
CA	5,000	7,000	7,000	2,000	5,000	3,000	7,000	10,000
CO	< 10	N	N	N	N	N	N	N
CR	< 10	10	10	10	10	10	10	10
CU	< 10	N	N	30	N	N	N	10
FE	20,000	10,000	10,000	70,000	2,000	15,000	10,000	10,000
LA	100	150	100	N	100	50	N	100
LI	100	100	100	N	100	100	500	100
MN	200	200	200	500	300	500	500	200
MO	< 10	N	N	N	N	N	N	N
NA	40,000	30,000	30,000	20,000	20,000	30,000	20,000	40,000
NB	10	10	10	10	50	20	20	10
NI	7	N	N	N	N	N	N	N
PB	70	70	70	70	50	50	50	100
SB	< 100	N	N	N	N	N	N	N
SC	< 10	5	5	N	15	N	15	N
SN	10	10	10	10	20	10	100	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	025	026	027	028	029	030	031	032
SR	< 100	200	100	100	100	100	100	300
TI	1,500	2,000	2,000	50	2,000	1,500	1,000	1,500
V	< 10	10	10	N	15	10	N	10
W	< 100	N	N	N	N	N	N	N
Y	30	10	10	N	70	10	10	10
ZN	< 200	N	N	N	N	N	N	N
ZR	200	100	200	N	50	50	N	70

APPENDIX B. (CONTINUED)

Sample Number (MHM)	033	034	035	036	038	039	040	041
U308 (Fl^2)	10	850	125	9	6	41	26	65
AG	N	N	N	N	N	N	N	N
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	N	N	N	N	N	N	N	N
B	N	N	N	N	N	10	N	10
BA	500	20	700	700	150	300	300	500
BE	50	150	20	30	70	150	150	150
CA	10,000	70,000	7,000	10,000	3,000	20,000	10,000	10,000
CO	N	5	5	N	N	5	5	10
CR	10	10	10	10	10	50	10	20
CU	L	15	N	N	N	15	50	10
FE	10,000	7,000	10,000	10,000	15,000	20,000	10,000	20,000
LA	100	150	100	100	100	50	150	300
LI	100	100	100	100	N	N	N	N
MN	300	1,000	200	200	300	3,000	300	300
MO	N	N	5	N	N	N	5	N
NA	40,000	20,000	30,000	40,000	30,000	50,000	40,000	40,000
NB	10	20	20	10	70	20	50	2,000
NI	N	N	N	N	N	5	N	N
PB	70	100	100	100	50	1,000	50	200
SB	N	N	N	N	N	N	N	N
SC	N	5	10	5	N	15	N	15
SN	20	30	10	15	20	150	10	100

APPENDIX B. (CONTINUED)

Sample Number (MHM)	033	034	035	036	038	039	040	041
SR	200	100	100	200	100	200	300	300
TI	1,000	500	2,000	1,500	1,000	3,000	1,000	3,000
V	10	L	10	10	N	30	L	20
W	N	N	N	N	N	N	N	N
Y	10	200G	50	10	20	G	150	G
ZN	N	N	N	N	N	1,000	N	300
ZR	70	300	300	200	200	200	300	G

APPENDIX B. (CONTINUED)

Sample Number (MHM)	042	043	044	045	046	048	049	050
U308 (Ft^2)	17	8	16	4	4	3	3	16
AG	N	N	N	N	N	N	< 1	N
AL	70,000	70,000	70,000	70,000	70,000	70,000	50,000	70,000
AS	N	N	N	N	N	N	N	N
B	10	20	10	10	10	20	10	10
BA	100	700	50	700	700	700	50	700
BE	150	30	150	150	50	15	700	100
CA	1,000	1,000	3,000	3,000	2,000	20,000	15,000	20,000
CO	N	15	N	10	10	20	N	15
CR	10	150	10	100	100	150	10	20
CU	L	70	5	70	50	100	15	70
FE	20,000	20,000	20,000	30,000	20,000	20,000	10,000	20,000
LA	500	150	500	100	100	100	100	700
LI	N	N	100	N	N	100	N	N
MN	500	300	500	300	300	500	5,000	1,000
MO	10	10	10	5	N	N	L	500
NA	50,000	30,000	50,000	40,000	20,000	40,000	40,000	50,000
NB	500	10	300	70	20	10	100	100
NI	N	30	N	20	15	30	N	N
PB	500	50	100	100	70	70	150	70
SB	N	N	N	N	N	N	N	N
SC	N	30	N	50	30	20	10	10
SN	70	15	70	10	L	N	15	30

APPENDIX B. (CONTINUED)

Sample Number (MHM)	042	043	044	045	046	048	049	050
SR	100	100	100	200	100	300	700	500
TI	1,000	3,000	1,500	5,000	5,000	2,000	3,000	3,000
V	10	50	N	100	30	50	15	20
W	N	N	N	N	N	N	N	N
Y	150	10	200	150	50	70	G	G
ZN	300	200	300	N	N	N	700	N
ZR	G	200	G	500	500	300	100	300

APPENDIX B. (CONTINUED)

Sample Number (MHM)	051	052	053	054	055	057	058	059
U308 ($F1^2$)	45	24	2	7	36	144	13	68
AG	N	L	N	N	N	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	20,000	70,000	70,000	70,000
AS	N	N	N	N	N	< 200	< 200	< 200
B	2,000	N	N	N	N	< 10	10	< 10
BA	150	700	700	700	300	500	70	500
BE	15	15	20	15	3	10	20	15
CA	7,000	7,000	7,000	70,000	500	7,000	10,000	7,000
CO	10	N	N	N	N	5	15	5
CR	30	20	10	10	10	10	150	10
CU	L	N	N	N	N	15	20	15
FE	15,000	7,000	10,000	15,000	3,000	10,000	50,000	10,000
LA	100	N	100	150	N	20	700	100
LI	N	N	100	100	N	100	< 10	< 10
MN	200	200	300	200	70	500	700	70
MO	N	N	N	N	N	< 10	< 10	< 10
NA	20,000	30,000	30,000	40,000	30,000	30,000	30,000	30,000
NB	10	L	10	10	N	10	50	20
NI	10	N	N	N	N	< 10	20	< 10
PB	50	150	100	70	300	70	50	70
SB	N	N	N	N	N	< 100	< 100	< 100
SC	10	N	N	5	N	5	20	10
SN	N	10	10	10	N	10	10	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	051	052	053	054	055	057	058	059
SR	100	100	200	100	200	100	100	100
TI	3,000	1,000	2,000	2,000	20	< 1	< 1	< 1
V	15	10	10	10	N	10	20	< 10
W	N	N	N	N	N	< 100	< 100	< 100
Y	50	200	10	10	N	20	150	70
ZN	N	N	N	N	N	< 200	< 200	< 200
ZR	300	300	100	300	N	20	200	100

APPENDIX B. (CONTINUED)

Sample Number (MHM)	060	061	062	063	064	065	066	067
U308 (Fl^2)	2	54	7	201	394	137	38	59
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 10
AL	70,000	70,000	60,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	10	10	< 10	70	70	15	< 10	< 10
BA	700	500	300	200	50	300	150	100
BE	70	70	10	15	15	7	15	3
CA	20,000	3,000	7,000	10,000	30,000	20,000	5,000	3,000
CO	15	5	< 10	< 10	5	< 10	< 10	< 10
CR	30	20	20	20	30	10	20	10
CU	50	15	< 10	5	7	7	7	< 10
FE	30,000	20,000	15,000	7,000	15,000	5,000	7,000	10,000
LA	300	300	50	50	50	100	20	< 20
LI	< 10	< 10	100	< 10	< 10	100	100	< 10
MN	700	100	700	700	700	300	500	5,000G
MO	200	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	40,000	40,000	30,000	30,000	40,000	30,000	30,000	30,000
NB	70	2,000G	10	10	10	< 20	20	< 20
NI	5	< 10	7	7	15	10	7	7
PB	70	70	100	150	150	150	100	100
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	10	10	5	5	20	< 10	5	< 10
SN	30	100	15	20	20	10	20	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	060	061	062	063	064	065	066	067
SR	700	100	100	200	200	200	100	100
TI	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
V	15	15	20	15	50	< 10	< 10	10
W	< 100	150	< 100	< 100	< 100	< 100	< 100	< 100
Y	100	200G	10	50	70	200	30	20
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	300	1,000G	70	70	200	70	100	100

APPENDIX B. (CONTINUED)

Sample Number (MHM)	068	069	070	071	072	073	074	075
U308 (FT^2)	19	150	282	8	100	7	54	29
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	60,000	70,000	50,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	100	15	< 10	< 10	< 10
BA	500	200	300	500	300	200	150	20
BE	7	2	7	2	7	5	5	20
CA	7,000	5,000	7,000	500	7,000	3,000	5,000	3,000
CO	5	5	< 10	5	< 10	< 10	< 10	< 10
CR	20	10	10	70	10	20	10	10
CU	5	< 10	7	30	< 10	< 10	< 10	< 10
FE	10,000	10,000	7,000	15,000	7,000	15,000	15,000	5,000
LA	70	50	50	70	< 20	150	70	< 20
LI	< 10	< 10	< 10	< 10	< 10	< 10	< 10	100
MN	300	200	200	500	150	100	1,000	200
MO	< 10	15	< 10	20	< 10	5	< 10	< 10
NA	40,000	30,000	30,000	10,000	20,000	30,000	30,000	40,000
NB	10	10	< 20	20	10	70	20	10
NI	7	7	7	20	7	5	7	15
PB	100	100	70	30	70	30	70	50
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	15	< 10	< 10	10	20	< 10	< 10	< 10
SN	20	10	< 10	< 10	10	15	20	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	068	069	070	071	072	073	074	075
SR	200	200	200	< 100	200	100	100	< 100
TI	< 1	< 1	< 1	2,000	1,500	1,500	1,000	500
V	15	10	10	100	< 10	10	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	20	10	70	30	70	70	50	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	200	50	100	300	100	500	70	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	076	077	078	079	080	081	082	083
U308 (Fl^2)	93	4	74	27	15	7	3	12
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	40,000	70,000	70,000	70,000	70,000	30,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	70	50	100	200	200	150	300	300
BE	1	7	2	7	2	1	3	7
CA	1,000	3,000	5,000	3,000	2,000	1,500	3,000	5,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	10	10	10	10	10	10	10	< 10
CU	< 10	< 10	10	5	< 10	< 10	< 10	< 10
FE	7,000	3,000	1,000	7,000	1,000	15,000	5,000	15,000
LA	< 20	< 20	< 20	< 20	50	20	< 20	100
LI	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
MN	500	1,000	300	100	150	300	100	300
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	20,000	20,000	20,000	40,000	30,000	30,000	40,000	30,000
NB	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
NI	15	15	15	10	7	7	10	5
PB	70	30	30	100	70	70	50	30
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	5	< 10	< 10	< 10	< 10	< 10	10
SN	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	076	077	078	079	080	081	082	083
SR	< 100	< 100	100	100	< 100	< 100	< 100	100
TI	500	500	700	1,000	700	700	700	3,000
V	15	10	30	< 10	< 10	20	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	< 10	< 10	< 10	10	50	< 10	10	70
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	20	20	20	20	70	70	50	300

APPENDIX B. (CONTINUED)

Sample Number (MHM)	084	085	086	087	088	089	090	091
U308 (FI^2)	19	9	19	23	22	8	123	54
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	20	150	20	20	150	100	500	300
BE	7	5	7	7	3	3	2	2
CA	2,000	2,000	3,000	3,000	3,000	3,000	3,000	5,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CU	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FE	10,000	20,000	15,000	20,000	15,000	15,000	15,000	20,000
LA	150	100	100	200	100	150	20	50
LI	100	100	< 10	< 10	< 10	100	< 10	< 10
MN	200	200	500	500	300	200	200	300
MO	< 10	< 10	< 10	< 10	< 10	< 10	10	< 10
NA	30,000	40,000	40,000	40,000	30,000	50,000	20,000	30,000
NB	10	20	20	30	10	20	< 20	< 20
NI	< 10	5	7	7	5	7	7	10
PB	50	70	50	20	30	50	70	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	< 10	< 10	5	15
SN	< 10	10	10	10	10	< 10	20	15

APPENDIX B. (CONTINUED)

Sample Number (MHM)	084	085	086	087	088	089	090	091
SR	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
TI	700	1,000	700	1,000	700	1,000	700	1,500
V	< 10	< 10	< 10	< 10	< 10	< 10	10	15
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	30	20	70	70	30	50	20	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	500	150	100	700	70	200	50	50

APPENDIX B. (CONTINUED)

Sample Number (MHM)	092	101	102	103	104	105	106	107
U308 (Fl^2)	5	17	57	83	30	23	180	17
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	60,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	10	< 10	< 10	< 10	< 10	10	10	< 10
BA	300	300	70	500	100	500	20	50
BE	2	15	15	10	15	10	30	70
CA	1,000	7,000	7,000	5,000	10,000	10,000	3,000	5,000
CO	15	< 10	< 10	< 10	< 10	10	< 10	< 10
CR	70	10	10	10	10	70	20	10
CU	50	15	15	5	7	20	20	20
FE	30,000	7,000	7,000	7,000	15,000	30,000	30,000	7,000
LA	50	< 20	100	300	500	300	100	50
LI	< 10	< 10	< 10	< 10	< 10	< 10	100	100
MN	500	500	70	100	100	300	5,000G	200
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	10,000	20,000	40,000	20,000	30,000	30,000	30,000	30,000
NB	< 20	10	10	10	10	30	100	30
NI	30	< 10	< 10	< 10	< 10	15	< 10	< 10
PB	30	150	100	70	100	150	70	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	15	5	5	5	5	20	30	5
SN	< 10	10	< 10	< 10	10	10	100	15

APPENDIX B. (CONTINUED)

Sample Number (MHM)	092	101	102	103	104	105	106	107
SR	< 100	< 100	< 100	100	< 100	< 100	< 100	< 100
TI	2,000	< 1	< 1	< 1	< 1	< 1	< 1	< 1
V	100	< 10	< 10	10	< 10	15	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	20	10	200	10	200	200G	150	20
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	70	70	200	50	50	100	50	100

APPENDIX B. (CONTINUED)

Sample Number (MHM)	110	111	301	302	303	304	305	306
U308 (Fl^2)	46	114	50	64	25	7	6	23
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	60,000	70,000	70,000	70,000	70,000	70,000	60,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	50	< 20	20	500	500	1,500	1,000	150
BE	15	3	20	15	5	5	3	15
CA	5,000	1,000	7,000	7,000	7,000	7,000	10,000	7,000
CO	< 10	10	< 10	< 10	5	5	5	< 10
CR	20	150	10	10	20	30	10	10
CU	< 10	30	10	7	15	10	< 10	< 10
FE	15,000	30,000	7,000	7,000	15,000	15,000	10,000	5,000
LA	150	20	< 20	150	100	150	200	20
LI	< 10	< 10	< 10	< 10	< 10	< 10	< 10	100
MN	1,500	3,000	100	100	G	300	200	700
MO	< 10	< 10	< 10	< 10	5	< 10	< 10	< 10
NA	40,000	10,000	40,000	30,000	30,000	40,000	30,000	30,000
NB	20	70	10	10	10	10	< 20	10
NI	7	30	< 10	< 10	5	7	7	5
PB	50	50	70	70	70	100	150	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	10	10	< 10	< 10	20	10	5	5
SN	20	20	10	< 10	< 10	10	30	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	110	111	301	302	303	304	305	306
SR	100	< 100	< 100	< 100	200	300	300	100
TI	2,000	3,000	< 1	< 1	< 1	< 1	< 1	< 1
V	20	70	< 10	< 10	15	50	20	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	150	50	10	200G	300	20	30	30
ZN	< 200	300	< 200	< 200	< 200	< 200	< 200	< 200
ZR	500	200	< 10	300	200	300	200	150

APPENDIX B. (CONTINUED)

Sample Number (MHM)	307	308	309	310	311	312	313	801
U308 (Ft^2)	17	11	67	11	17	187	32	4
AG	< 1	< 1	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	70,000	60,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	10	< 10	15	< 10	< 10
BA	150	300	300	300	500	70	500	1,000
BE	3	5	3	7	5	7	3	5
CA	3,000	5,000	5,000	7,000	3,000	500	2,000	5,000
CO	5	5	< 10	< 10	< 10	< 10	< 10	< 10
CR	10	10	10	10	20	50	20	20
CU	10	7	< 10	5	10	15	20	< 10
FE	3,000	3,000	7,000	30,000	15,000	7,000	10,000	10,000
LA	< 20	< 20	< 20	300	200	< 20	< 20	200
LI	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
MN	1,000	700	150	1,500	300	100	150	200
MO	< 10	< 10	< 10	< 10	50	< 10	< 10	< 10
NA	30,000	30,000	30,000	15,000	30,000	20,000	30,000	40,000
NB	< 20	< 20	< 20	200	70	< 20	< 20	10
NI	7	5	10	7	7	10	15	7
PB	100	100	150	30	50	100	50	100
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	5	< 10	< 10	< 10	< 10	< 10
SN	10	10	< 10	30	10	< 10	20	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	307	308	309	310	311	312	313	801
SR	< 100	100	200	200	200	<100	100	200
TI	< 1	< 1	700	1,000	1,000	200	1,000	3,000
V	< 10	< 10	< 10	<10	<10	70	30	30
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	< 10	10	20	100	50	<10	30	20
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	50	200	20	> 1,000	200	200	70	700

APPENDIX B. (CONTINUED)

Sample Number (MHM)	802	803	804	805	806	807	808	809
U308 (Fl^2)	8	10	2	10	19	28	32	22
AG	<10	<10	<10	<1	<10	1	<1	<10
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	200	700	200	200	200	100	70	100
BE	3	10	2	2	3	15	7	15
CA	3,000	7,000	3,000	2,000	5,000	3,000	3,000	3,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	20	20	<10	10	<10	<10	<10	<10
CU	<10	<10	<10	15	<10	5	<10	7
FE	5,000	10,000	3,000	10,000	15,000	15,000	15,000	15,000
LA	70	300	20	50	50	20	20	100
LI	<10	<10	<10	<10	<10	<10	<10	<10
MN	150	300	100	200	300	300	300	500
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	30,000	30,000	30,000	30,000	30,000	30,000	30,000	40,000
NB	<20	<20	<20	<20	<20	20	30	20
NI	7	10	7	7	7	10	15	15
PB	100	100	50	100	50	50	30	70
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	<10	5	<10	<10	<10	<10	<10	<10
SN	10	10	<10	<10	<10	10	10	15

APPENDIX B. (CONTINUED)

Sample Number (MHM)	802	803	804	805	806	807	808	809
SR	100	200	<100	<100	<100	<100	<100	<100
TI	700	3,000	700	700	1,500	1,000	700	700
V	<10	15	<10	<10	10	<10	<10	<10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	30	70	<10	10	<10	10	10	10
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	100	500	50	50	50	50	50	50

APPENDIX B. (CONTINUED)

Sample Number (MHM)	810	811	812	813	814	815	816	817
U308 (Fl^2)	22	24	30	23	37	22	24	4
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	60,000	70,000	70,000	70,000	70,000	70,000	60,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	100	70	150	< 20	< 20	100	70	200
BE	15	10	10	20	2	15	10	7
CA	3,000	2,000	3,000	700	70,000	5,000	2,000	7,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CU	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FE	10,000	10,000	10,000	15,000	7,000	15,000	7,000	20,000
LA	150	70	100	150	50	70	50	70
LI	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
MN	200	300	150	70	1,500	300	100	500
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	5
NA	40,000	30,000	40,000	40,000	40,000	40,000	40,000	40,000
NB	10	20	30	30	< 20	20	< 20	30
NI	7	7	7	7	7	10	7	5
PB	30	30	50	10	< 10	20	20	30
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	< 10	< 10	< 10	10
SN	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	810	811	812	813	814	815	816	817
SR	<100	<100	<100	<100	300	<100	<100	100
TI	1,000	700	1,000	1,500	200	1,000	300	2,000
V	<10	<10	<10	<10	<10	<10	<10	10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	30	20	50	30	<10	20	10	30
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	150	100	150	200	20	100	70	300

APPENDIX B. (CONTINUED)

Sample Number (MHM)	818	819	820	821	822	823	824	825
U308 (Fl^2)	18	6	11	< 1	5	26	1	11
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	60,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	150	< 10	< 10	< 10
BA	150	70	500	200	< 20	< 20	200	200
BE	1	3	5	1	15	5	1	1
CA	3,000	1,000	3,000	3,000	2,000	3,000	3,000	2,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	10	10	10	10	10	10	10	10
CU	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FE	10,000	3,000	20,000	20,000	3,000	2,000	15,000	10,000
LA	20	20	50	300	< 20	< 20	< 20	20
LI	< 10	< 10	100	< 10	< 10	100	< 10	< 10
MN	200	150	300	300	700	100	300	150
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	40,000	30,000	30,000	40,000	40,000	40,000	40,000	40,000
NB	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
NI	10	7	7	7	10	7	15	7
PB	50	30	70	30	70	50	50	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	15	10	< 10	< 10	< 10	< 10	< 10	< 10
SN	< 10	< 10	< 10	< 10	15	< 10	30	10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	818	819	820	821	822	823	824	825
SR	100	<100	100	< 100	<100	<100	100	100
TI	1,500	700	1,500	1,000	50	200	1,000	700
V	10	< 10	10	30	< 10	< 10	15	10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	< 10	< 10	10	10	< 10	20	20	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	20	< 10	50	50	< 10	< 10	20	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	826	827	828	829	830	831	832	833
U308 (Ft^2)	4	4	8	2	3	4	6	5
AG	<10	<10	<10	<10	<10	<10	<10	<10
AL	70,000	60,000	60,000	70,000	70,000	70,000	70,000	70,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	500	150	150	200	300	500	200	300
BE	4	5	5	7	10	7	3	3
CA	5,000	7,000	3,000	5,000	7,000	3,000	5,000	5,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	30	10	10	10	10	10	10	10
CU	<10	5	<10	<10	<10	<10	<10	<10
FE	15,000	5,000	20.000	10,000	10,000	15,000	10,000	7,000
LA	300	20	70	70	150	200	150	70
LI	<10	<10	<10	100	100	<10	<10	<10
MN	500	300	300	300	300	300	300	200
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	40,000	40,000	30,000	40,000	40,000	40,000	30,000	30,000
NB	10	<20	20	10	<20	<20	<20	<20
NI	20	10	10	15	10	15	10	10
PB	70	70	100	100	70	70	70	100
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	10	<10	<10	<10	<10	<10	<10	<10
SN	10	<10	<10	15	10	15	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	826	827	828	829	830	831	832	833
SR	200	100	100	100	100	100	<100	100
TI	1,500	300	2,000	700	1,500	1,500	700	700
V	30	<10	10	10	< 10	15	<10	< 10
W	< 100	<100	< 100	< 100	< 100	< 100	<100	< 100
Y	50	10	50	50	20	70	10	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	100	50	150	100	200	150	100	70

APPENDIX B. (CONTINUED)

Sample Number (MHM)	834	835	836	837	838	839	840	841
U308 (FI^2)	10	2	2	6	11	4	7	2
AG	<10	<10	<10	<10	<10	<10	<10	<10
AL	70,000	70,000	70,000	70,000	60,000	70,000	70,000	60,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	500	300	700	150	70	200	150	50
BE	2	10	7	3	7	5	5	10
CA	1,500	3,000	7,000	3,000	3,000	3,000	3,000	2,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	10	10	10	<10	<10	<10	<10	<10
CU	<10	<10	<10	<10	<10	<10	<10	<10
FE	15,000	10,000	15,000	15,000	10,000	7,000	1,000	1,500
LA	300	100	150	50	20	70	50	<20
LI	<10	100	<10	100	100	100	100	100
MN	150	300	300	300	300	300	300	150
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	30,000	30,000	30,000	30,000	30,000	3,000	3,000	3,000
NB	<20	<20	<20	<20	<20	<20	<20	<20
NI	7	7	10	10	7	5	7	7
PB	50	70	70	30	30	30	30	10
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	10	<10	<10	<10	<10	<10	<10	<10
SN	20	10	15	10	<10	<10	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	834	835	836	837	838	839	840	841
SR	100	<100	200	100	<100	<100	<100	<100
TI	5,000	1,000	1,500	1,500	700	700	700	150
V	50	15	30	20	<10	10	10	<10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	30	20	20	10	<10	<10	<10	<10
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	200	70	70	100	50	70	70	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	842	843	844	845	846	847	848	849
U308 (Fl[2])	13	4	3	13	8	4	25	6
AG	<10	<10	<10	<10	<10	<10	<10	<10
AL	70,000	70,000	70,000	70,000	70,000	70,000	40,000	60,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	200	150	300	200	150	150	100	100
BE	7	5	3	5	3	3	1	7
CA	3,000	3,000	3,000	3,000	3,000	3,000	700	3,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	<10	<10	<10	<10	10	<10	10	10
CU	<10	<10	<10	<10	<10	<10	<10	<10
FE	7,000	7,000	10,000	10,000	10,000	7,000	3,000	7,000
LA	70	50	50	70	70	50	20	20
LI	100	100	<10	<10	<10	<10	<10	100
MN	500	300	300	300	150	300	100	300
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	30,000	3,000	30,000	30,000	30,000	3,000	30,000	30,000
NB	<20	<20	<20	<20	<20	<20	<20	<20
NI	7	7	7	7	7	7	5	5
PB	30	30	30	50	50	30	70	30
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	<10	<10	<10	<10	<10	<10	<10	<10
SN	<10	<10	<10	<10	<10	<10	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	842	843	844	845	846	847	848	849
SR	100	<100	100	100	<100	100	<100	<100
TI	1,000	700	1,000	700	700	700	300	300
V	10	<10	15	10	10	<10	<10	<10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	20	<10	<10	10	10	10	10	10
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	100	50	100	20	50	50	20	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	850	851	852	853	854	855	856	857
U308 (FT^2)	11	5	4	6	7	7	11	5
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	60,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	300	70	300	100	20	150	100	50
BE	7	20	2	10	3	3	15	15
CA	5,000	3,000	3,000	3,000	7,000	3,000	3,000	3,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	< 10	< 10	< 10	10	< 10	< 10	10	< 10
CU	< 10	< 10	< 10	< 10	< 10	< 10	15	< 10
FE	15,000	5,000	15,000	5,000	7,000	5,000	5,000	2,000
LA	50	20	< 20	50	20	< 20	< 20	20
LI	< 10	100	< 10	100	< 10	< 10	100	100
MN	300	300	300	100	300	70	100	150
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	30,000	30,000	30,000	30,000	3,000	30,000	30,000	3,000
NB	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
NI	7	5	7	5	7	7	7	7
PB	50	30	30	30	10	30	70	10
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
SN	< 10	10	< 10	< 10	< 10	< 10	10	15

APPENDIX B. (CONTINUED)

Sample Number (MHM)	850	851	852	853	854	855	856	857
SR	200	<100	200	<100	100	100	<100	<100
TI	1,500	700	1,000	500	1,000	700	500	500
V	20	<10	30	<10	<10	<10	<10	<10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	10	10	<10	10	10	10	<10	10
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	70	50	50	70	20	20	20	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	858	859	860	861	862	863	864	865
U308 (Fl^2)	12	4	6	3	2	3	4	12
AG	< 10	< 10	< 10	< 10	< 10	< 10	7	< 10
AL	70,000	60,000	70,000	60,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	20	150	300	100	200	150	500	100
BE	7	3	3	5	3	10	10	3
CA	3,000	3,000	3,000	2,000	7,000	5,000	5,000	3,000
CO	< 10	< 10	< 10	< 10	5	< 10	< 10	< 10
CR	< 10	< 10	10	< 10	10	10	10	10
CU	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FE	3,000	5,000	7,000	2,000	15,000	5,000	15,000	10,000
LA	20	20	20	20	20	20	100	20
LI	100	< 10	< 10	< 10	100	< 10	100	100
MN	200	200	500	50	300	300	300	300
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	10
NA	30,000	30,000	30,000	3,000	30,000	30,000	30,000	30,000
NB	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
NI	7	7	7	< 10	15	10	10	7
PB	20	30	70	20	20	50	20	20
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	< 10	< 10	5	< 10	< 10	< 10
SN	10	< 10	10	< 10	< 10	< 10	10	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	858	859	860	861	862	863	864	865
SR	< 100	< 100	< 100	< 100	300	100	100	< 100
TI	300	700	1,500	300	1,500	700	1,500	1,000
V	< 10	< 10	10	< 10	70	< 10	20	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	< 10	< 10	< 10	< 10	< 10	30	10	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	20	20	100	20	50	70	100	70

APPENDIX B. (CONTINUED)

Sample Number (MHM)	866	867	868	869	870	871	872	873
U308 (FT^2)	6	8	1	4	4	5	3	9
AG	<10	<10	<10	<10	<10	<10	<10	<10
AL	70,000	60,000	60,000	70,000	60,000	70,000	70,000	70,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	200	300	300	300	300	300	500	300
BE	7	3	1	7	5	15	7	7
CA	3,000	2,000	7,000	7,000	1,500	7,000	7,000	3,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	10	10	20	10	10	10	20	10
CU	<10	<10	30	<10	<10	<10	7	<10
FE	10,000	7,000	15,000	10,000	1,500	20,000	20,000	15,000
LA	50	50	20	70	<20	150	<20	50
LI	100	<10	<10	100	<10	200	100	100
MN	300	150	300	300	100	700	300	300
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	30,000	30,000	20,000	30,000	30,000	40,000	40,000	40,000
NB	<20	<20	<20	<20	<20	<20	<20	<20
NI	7	5	15	7	7	7	10	10
PB	30	20	10	50	50	50	30	30
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	<10	<10	5	5	<10	5	<10	<10
SN	<10	<10	<10	<10	<10	10	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	866	867	868	869	870	871	872	873
SR	100	100	300	200	< 100	100	200	200
TI	1,500	700	1,500	2,000	150	2,000	1,000	1,000
V	< 10	10	50	15	< 10	20	30	15
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	10	< 10	< 10	10	< 10	20	< 10	10
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	70	50	70	100	20	200	20	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	874	875	876	877	878	879	880	881
U308 (Fl^2)	3	6	2	7	15	7	2	19
AG	<10	<10	<10	<10	<10	<10	<10	<10
AL	60,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	<200	<200	<200	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10	<10	<10	<10
BA	300	100	300	500	200	300	300	20
BE	5	15	7	5	7	7	7	5
CA	3,000	3,000	3,000	3,000	3,000	5,000	5,000	3,000
CO	<10	<10	<10	<10	<10	<10	<10	<10
CR	10	10	10	10	10	10	10	<10
CU	<10	10	30	5	<10	30	<10	<10
FE	10,000	15,000	10,000	10,000	10,000	10,000	7,000	15,000
LA	100	100	20	<20	<20	100	20	200
LI	100	100	100	100	100	100	100	<10
MN	200	500	200	150	300	200	300	300
MO	<10	<10	<10	<10	<10	<10	<10	<10
NA	40,000	40,000	30,000	30,000	30,000	30,000	30,000	20,000
NB	<20	<20	<20	<20	<20	<20	<20	30
NI	7	10	10	10	7	7	7	5
PB	30	50	70	70	30	50	30	30
SB	<100	<100	<100	<100	<100	<100	<100	<100
SC	<10	<10	<10	<10	<10	<10	<10	<10
SN	<10	10	<10	<10	15	<10	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	874	875	876	877	878	879	880	881
SR	100	<100	100	200	100	100	100	<100
TI	700	1,000	700	700	500	700	1,500	700
V	10	10	10	15	10	15	15	<10
W	<100	<100	<100	<100	<100	<100	<100	<100
Y	10	30	<10	20	<10	10	<10	30
ZN	<200	<200	<200	<200	<200	<200	<200	<200
ZR	100	70	100	50	50	150	70	300

APPENDIX B. (CONTINUED)

Sample Number (MHM)	882	883	884	885	886	887	888	889
U308 (FI^2)	18	16	5	9	4	4	27	19
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
BA	200	300	300	100	300	300	30	150
BE	7	7	2	7	3	3	15	3
CA	5,000	5,000	5,000	2,000	5,000	5,000	3,000	5,000
CO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
CR	< 10	< 10	< 10	< 10	< 10	10	10	10
CU	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
FE	30,000	15,000	10,000	15,000	15,000	15,000	10,000	20,000
LA	300	100	20	150	100	150	70	150
LI	< 100	100	< 10	< 10	100	< 10	100	< 10
MN	300	300	300	300	300	300	200	300
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	40,000	30,000	30,000	40,000	30,000	40,000	40,000	40,000
NB	70	< 20	< 20	20	10	10	50	10
NI	7	7	10	5	5	5	7	7
PB	70	70	150	70	30	30	70	70
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	< 10	5	< 10	< 10	10	< 10	< 10
SN	< 10	10	< 10	10	< 10	< 10	15	< 10

APPENDIX B. (CONTINUED)

Sample Number (MIM)	882	883	884	885	886	887	888	889
SR	< 100	<100	< 100	< 100	< 100	< 100	< 100	< 100
TI	2,000	2,000	1,000	1,500	700	2,000	700	1,000
V	< 10	20	10	< 10	10	< 10	< 10	< 10
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	100	10	20	30	10	70	70	50
ZN	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
ZR	200	150	70	70	50	300	100	100

APPENDIX B. (CONTINUED)

Sample Number (MHM)	890	891	892	893	901	902	951	952
U308 (Fl^2)	9	12	32	9	104	9	3	2
AG	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
AL	70,000	70,000	70,000	70,000	70,000	70,000	70,000	70,000
AS	< 200	< 200	< 200	< 200	< 200	< 200	< 200	< 200
B	< 10	< 10	< 10	< 10	1,500	15	< 10	< 10
BA	50	300	50	200	150	100	500	700
BE	5	10	7	3	1	7	1	2
CA	5,000	5,000	3,000	2,000	2,000	3,000	5,000	5,000
CO	< 10	< 10	< 10	< 10	30	< 10	< 10	< 10
CR	10	10	10	10	150	10	< 10	< 10
CU	< 10	< 10	< 10	< 10	70	10	< 10	< 10
FE	15,000	20,000	10,000	10,000	30,000	10,000	10,000	5,000
LA	70	150	100	70	50	20	20	< 20
LI	< 10	100	100	100	< 10	100	< 10	100
MN	500	500	200	300	500	150	150	100
MO	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
NA	30,000	50,000	30,000	30,000	10,000	30,000	30,000	30,000
NB	10	50	20	10	< 20	< 20	< 20	< 20
NI	7	7	7	5	50	10	5	5
PB	20	70	50	30	< 10	70	30	50
SB	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
SC	< 10	10	< 10	< 10	15	< 10	5	< 10
SN	< 10	15	10	< 10	15	< 10	15	< 10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	890	891	892	893	901	902	951	952
SR	< 100	100	< 100	< 100	< 100	< 100	< 100	200
TI	700	1,500	700	700	3,000	700	700	700
V	< 10	< 10	< 10	< 10	200	< 10	15	15
W	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
Y	20	70	70	30	10	< 10	10	50
ZN	< 200	< 200	< 200	< 200	200	< 200	< 200	< 200
ZR	50	300	150	70	100	20	70	50

APPENDIX B. (CONTINUED)

Sample Number (MHM)	953	954	955	956	957
U308 (FT^2)	3	37	4	10	17
AG	<10	<10	<10	<10	<10
AL	70,000	70,000	70,000	70,000	60,000
AS	<200	<200	<200	<200	<200
B	<10	<10	<10	<10	<10
BA	500	300	300	300	300
BE	1	7	7	7	3
CA	3,000	5,000	7,000	3,000	2,000
CO	<10	<10	<10	<10	<10
CR	<10	10	10	10	10
CU	<10	<10	<10	<10	<10
FE	15,000	15,000	15,000	7,000	15,000
LA	50	70	50	100	20
LI	100	100	<10	100	100
MN	200	300	300	200	300
MO	<10	<10	<10	<10	<10
NA	30,000	30,000	30,000	40,000	30,000
NB	<20	<20	<20	<20	<20
NI	7	7	10	7	7
PB	70	70	70	50	50
SB	<100	<100	<100	<100	<100
SC	<10	5	5	5	<10
SN	10	10	<10	<10	<10

APPENDIX B. (CONTINUED)

Sample Number (MHM)	953	954	955	956	957
SR	< 100	<100	< 100	< 100	<100
TI	1,000	1,000	1,500	1,500	700
V	<10	20	20	10	20
W	< 100	< 100	< 100	< 100	< 100
Y	< 10	30	10	20	< 10
ZN	< 200	< 200	< 200	< 200	< 200
ZR	50	50	100	100	50

APPENDIX B. TABLE OF CHEMICAL ANALYSES, MHL ROCK SAMPLES (IN PPM[1])

Sample Number (MHL)	208	214	215
U308 (FL[2])	16	703	205
AG	< 10	3	< 10
AL	70,000	20,000	40,000
AS	< 200	< 200	< 200
B	< 10	< 10	10
BA	50	20	20
BE	7	1	3
CA	10,000	< 500	< 500
CO	5	< 10	< 10
CR	10	10	10
CU	5	< 10	15
FE	15,000	700	7,000
LA	20	< 20	< 20
LI	100	< 10	< 10
MN	300	300	150
MO	< 10	< 10	< 10
NA	30,000	30,000	40,000
NB	10	< 20	10
NI	7	10	7
PB	50	300	100
SB	< 100	< 100	< 100
SC	15	< 10	< 10
SN	30	10	70

APPENDIX B. (CONTINUED)

Sample Number (MHL)	208	214	215
SR	< 100	< 100	< 100
TI	< 1	< 20	70
V	< 10	< 10	< 10
W	< 100	< 100	< 100
Y	100	< 10	< 10
ZN	< 200	< 200	< 200
ZR	< 10	< 10	< 10

APPENDIX B. TABLE OF CHEMICAL ANALYSES, MHM SOIL SAMPLES (IN PPM[1])

Sample Number (MHM)	037	047
U308 (FL[2])	15	75
AG	N	N
AL	70,000	70,000
AS	N	500
B	10	20
BA	100	1,000
BE	70	700
CA	3,000	15,000
CO	N	30
CR	10	100
CU	15	150
FE	20,000	30,000
LA	200	200
LI	N	N
MN	500	5,000
MO	N	L
NA	40,000	20,000
NB	700	50
NI	N	30
PB	70	150
SB	N	N
SC	5	20
SN	30	20

APPENDIX B. (CONTINUED)

Sample Number (MHM)	037	047
SR	10J	500
TI	2,000	2,000
V	10	30
W	N	N
Y	G	G
ZN	N	200
ZR	1,000G	300

APPENDIX B. TABLE OF CHEMICAL ANALYSES, MHM WATER SAMPLES (IN PPB)

Sample Number (MHM)	501	502	503	504	505	506	507	508
U308 (Fl^2)	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

APPENDIX B. (CONTINUED)

Sample Number (MHM)	509	510	511	512	513	514	515	516
U308 (Fl^2)	<1	2	<1	2	<1	<1	<1	<1

APPENDIX B. (CONTINUED)

Sample Number (MHM)	517	518	519	520	521	522	523	524	525
U308 (Fl[2])	1	<1	4	<1	<1	<1	<1	<1	<1

[1] N, not detectable; L, less than the detection limit; G, greater than the detection limit

[2] Fluorometric

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 1 >

Deposit Name A10 < Ruggles Mine >

Synonym Name(s) A11 < >

District or Area A30 < Grafton pegmatite district >

Country A40 < U, S > [U, S]

State New Hampshire

State Code A50 < 3, 3 > [3, 3]
(Enter code twice from List D)

County A60 < Grafton >

Position from Prominent Locality A82 < 16 km WSW of Newfound Lake, NH >

Field Checked G1 < 7, 9 | 1, 0 > By G2 < McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 3, 5 | 2, 4, N > Longitude A80 < 0, 7, 1 | 5, 9 | 4, 0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

Meridian A81 < > Altitude A107 < 463 m >

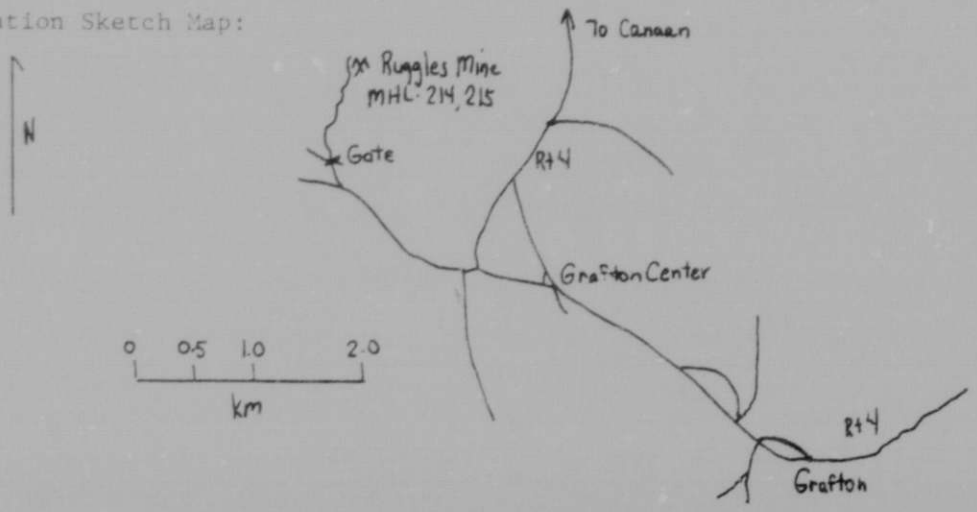
Quad Scale A91 < | | 6, 2, 5, 0, 0 >
(7½' or 15' quad)

Quad Name A92 < Cardigan >

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < From Rt. 4 (Grafton Center) west on road 2 km, right at gate up mine road 1 km (open for tourists) >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 1

Commodities Present:
C10 <U TH FLD MIC BE>

Commodities Produced:
MAJOR <MIC FLD BE> COPROD <>

MINOR <U> BYPROD <>

Potential Commodities:
POTEN <> OCCUR <>

Commodity Comments C50 <Still actively quarried for feldspar>

Status of Exploration and Development A20 < 3 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <sampling and drilling during 1978 (by U.S.G.S.?) reported by mine owner>

Property is (A21) (Active) A22 (Inactive) (Circle appropriate labels)

Workings are (M120) (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< large open pit with some tunnels>

Cumulative Uranium Production (PROD) (YES) NO (SML) MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U EST> G7A< > G7B<LB> G7C<1944-45> G7D< % U308>

Source of Information D9 < hearsay (owner)>

Production Comments D10 < minor amounts of U were handsorted out during WW II>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <>

Comments E8 < probably only in the tens of tons U_3O_8>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 1

Deposit Form/Shape M10 < dike or plug (intrusive) >

		FT/M	
Length	M40 < 180 >	M41 < M >	Size M15 (circle letter):
Width	M50 < 120 >	M51 < M >	1b U308
Thickness	M60 < 30 >	M61 < M >	(A) 0 - 20,000 B 20,000 - 200,000 C 200,000 - 2 million D 2 million - 20 million E More than 20 million
Strike	M70 < Unknown >		
Dip	M80 < Unknown >		

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < NE-trending faults and folds (Merrimack Synclinorium). >

Local Structures N70 < scattered NE-trending fractures >

Host-FM. Name U1 < NH Plutonic Series > Member U2 < 2-mica pegmatite >

Host Rock K1 < D,E,V, (Age) | white, coarse biotite-muscovite-microcline-albite- quartz-(garnet-tourmaline-beryl) pegmatite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < epizonal igneous environment >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < adjacent to Grafton pluton of 2-mica Concord granite type. Intrudes Littleton Fm. schists. >

Ore Minerals C30 < uraninite, gummite, autunite, torbernite, uranophane - some museum quality specimens. >

Gangue Minerals K4 < quartz, feldspar, micas, beryl >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 1

Alteration N75 < minor hematite stains >

Reductants U5 < minor sulfides (pyrite) >

Analytical Data (General) C43 < MHL 214, 703 ppm U_3O_8; MHL 215, 205 ppm U_3O_8 >

Radiometric Data (General) U6 < Most of quarry is 100-150 cps (BG=60); (No. times background and dimensions) radioactive zones: 600-9000 cps in 3m x 5m zone (MHL 214) on east wall; 1200-3500 cps in northern end of tunnel (MHL 215); Spectrometer measurements: MHL 214-K = 11.0%; * >

Ore Controls K5 < hydrothermal-magmatic (?) movement of U-rich fluids into micaceous zones and early fractures. Secondaries in east wall are concentrated along base of subhorizontal quartz-feldspar vein. In tunnel, radioactivity is associated with a thick, subvertical (?) zone of granular, muscovite-rich pegmatite, possibly a marginal facies >

Deposit Class C40 < pegmatite > Class No. U7 <3 2 10>

Comments on Geology N85 < If zoned, the pegmatite may contain larger uraniferous zones at depth >

URANIUM-OCCURRENCE REPORT

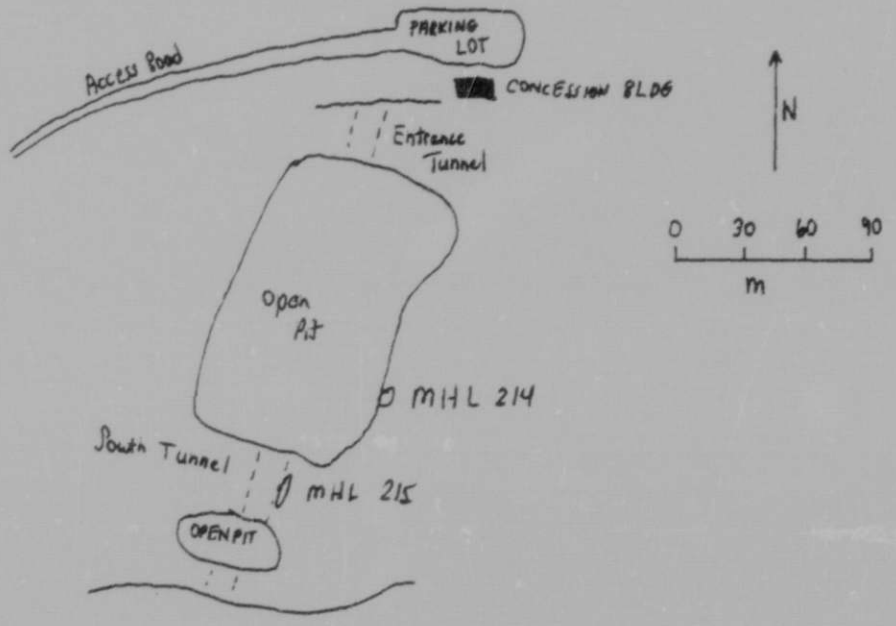
Quad Name Portland

Deposit No. 1

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHL 214	Chips along 5m long zone of U secondaries exposed along east wall, 50 m from south tunnel- mostly feldspar	704 ppm U_3O_8
MHL 215	6m channel in tunnel at south end of quarry, about 24m from north entrance, east side- micaceous pegmatite	205 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 1

Continuation from p. 1-5:

Label

U6 < U = 288 ppm; Th = 39.7 ppm; U/Th = 7.3; MHL 215-7.3%K, 309 ppm U, 26.3 ppm Th, U/Th = 11.8 >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 2 >

Deposit Name A10 < Orange anomaly >

Synonym Name(s) A11 < >

District or Area A30 < Grafton Pegmatite District >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < 16 km west of Newfound Lake >

Field Checked G1 < 7, 8 | 1, 1 > By G2 < McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 3 7 | 2 3 , N > Longitude A80 < 0, 7, 1 | 5, 3 | 1, 4, W >
Deg Min Sec Deg Min Sec

Township A77 < | | > Range A78 < | | > Section A79 < | >
N/S E/W

FT/M

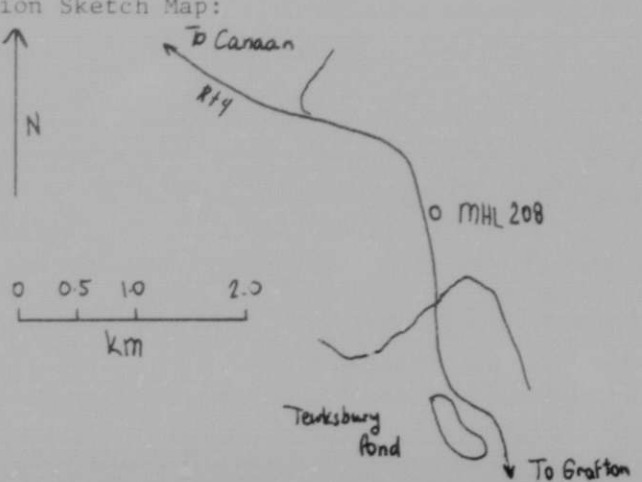
Meridian A81 < > Altitude A107 < 320 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Cardigan >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < New roadcuts 4.1 km east of intersection of Rts. 4 and 113, east side of Rt. 4, N-end of southern roadcut >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 2

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 2

Deposit Form/Shape M10 < dike >

Length M40 < 1.5 > M41 < M > (FT/M)

Width M50 < 1.5 > M51 < M >

Thickness M60 < 2.5 > M61 < M >

Strike M70 < N30E >

Dip M80 < 90 >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < NNE-trending folds and faults >

Local Structures N70 < NE-trending fractures >

Host-FM. Name U1 < NH Plutonic Series > Member U2 < pegmatite >

Host Rock K1 < DEV | M near-vertical pegmatite dike >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Intrudes Littleton schists. Border of a large Bethlehem gneiss body is within 0.4 km to the west. >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < muscovite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 2

Alteration N75 < minor iron oxide stains >

Reductants U5 < none observed >

Analytical Data (General) C43 < 16 ppm U_3O_8; 7 ppm Be; 50 ppm Ba; 50 ppm Pb; 10 ppm B; 20 ppm La; 100 ppm Y; 10 ppm Zr; eU/eTh = 7.4 (spectrometer); eU = 52 ppm, eTh = 7.1 ppm, eK = 6.0% >

Radiometric Data (General) U6 < 400-720 cps in 0.3 x 1m zone (BG = 60 cps)
(No. times background and dimensions)
along N side of pegmatite dike; adjacent pegmatites and schist are 60-120 cps >

Ore Controls K5 < Primary magmatic U minerals (?) - probably U-Th bearing silicates such as zircon and monazite. Possibly pitchblende or uraninite are present below the sampled surface, since the spectrometer indicates higher U and U/Th than the chemical analysis. >

Deposit Class C40 < pegmatite > Class No. U7 <3,2,0>

Comments on Geology N85 < 5 km NE of Ruggles Mine; the association with a 2-mica granite pluton to the east (Grafton pluton) may indicate a genetic source, since such granites are known to be high in Uranium (see Sunapee, Ruggles Mine U.O.R.'s) >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 2

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHL 208	Chips in anomalous zone	16 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 3 >

Deposit Name A10 < Grafton Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Ruggles Mine Area >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] (Enter code twice from List D) County A60 < Grafton >

Position from Prominent Locality A82 < From Grafton, NH travel west on Rte. 4, outcrop (on North side) has vertical control mark D50X 1973, on topo map designated as BM 837, outcrop opposite Sousa's BP station & 23m east of dirt road branching N >*

Field Checked G1 < 7, 8 (Yr) | 1, 1 (Mo) > By G2< Bruton and Poer (Last name), (First Initial) >

Latitude A70 < 4, 3 (Deg) | 3, 3 (Min) | 3, 7, N (Sec) > Longitude A80 < 0, 7, 1 (Deg) | 5, 7 (Min) | 0, 8, W (Sec) >

Township A77 < | | | > N/S Range A78 < | | | > E/W Section A79 < | >

FT/M

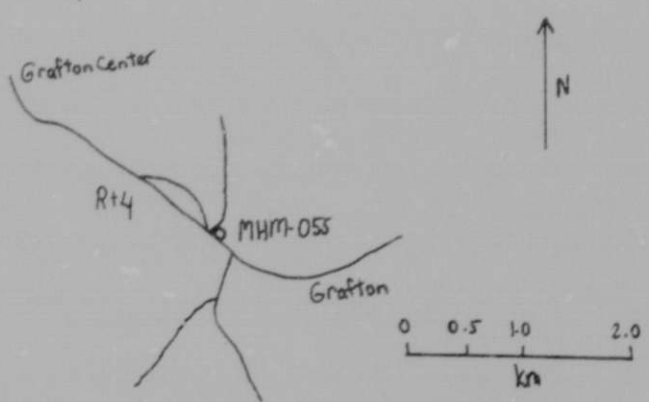
Meridian A81 < > Altitude A107 < 255 m >

Quad Scale A91 < 6 2 5 0 0 > (7½' or 15' quad) Quad Name A92 <Cardigan, NH >

Physiographic Province A63 < 0, 1 | New England > (List K)

Location Comments A83 < Hottest spot is 4.5 m from east end of outcrop in peomatite 2 m above ditch level, sample from 2 areas several meters to lower left of >*

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 3

Commodities Present:
C10 <U P B>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U P B>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< accuracy thousands of lb. > G7B<LB> G7C< years > G7D< grade % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< accuracy thousands of lb. > E1B<LB> E1C< year of est. > E1D< grade % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 3

Deposit Form/Shape M10 <Spot anomaly in pegmatite>

Length M40 < 1 > M41< M > (FT/M)

Width M50 < > M51< >

Thickness M60 < 2.5 > M61< M >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < >

Local Structures N70 < >

Host-FM. Name U1 <Concord granite> Member U2 < garnet pegmatite >

Host Rock K1 <DEV >Very coarse-grained garnet pegmatite of the NH
(Age) (Rock type, texture, composition, color,

plutonic series, discordant in Concord-type two-mica granite.
alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < This is a significant exposure relative to regional geology. We are at a contact between a good two-mica granite of the Concord type and the Kinsman Quartz Monzonite. The two-mica granite contains several large inclusions > *

Ore Minerals C30 < >

Gangue Minerals K4 < quartz, feldspar, garnet >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 3

Alteration N75 < Feldspars are stained red near points of maximum radioactivity. >

Reductants U5 < >

Analytical Data (General) C43 < 36 ppm U_3O_8; 300 ppm Pb >

Radiometric Data (General) U6 < BG 55, pegmatite 300-1700 cps; granite 100-200 cps.
(No. times background and dimensions)
standard situation: spot anomalies in pegmatite. There are two maxima - one 1700 and one 1200. Overall, the pegmatite has surface radioactivity (SR) 300-500 >*

Ore Controls K5 < Differentiation in siliceous water-rich magma. >

Deposit Class C40 < pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

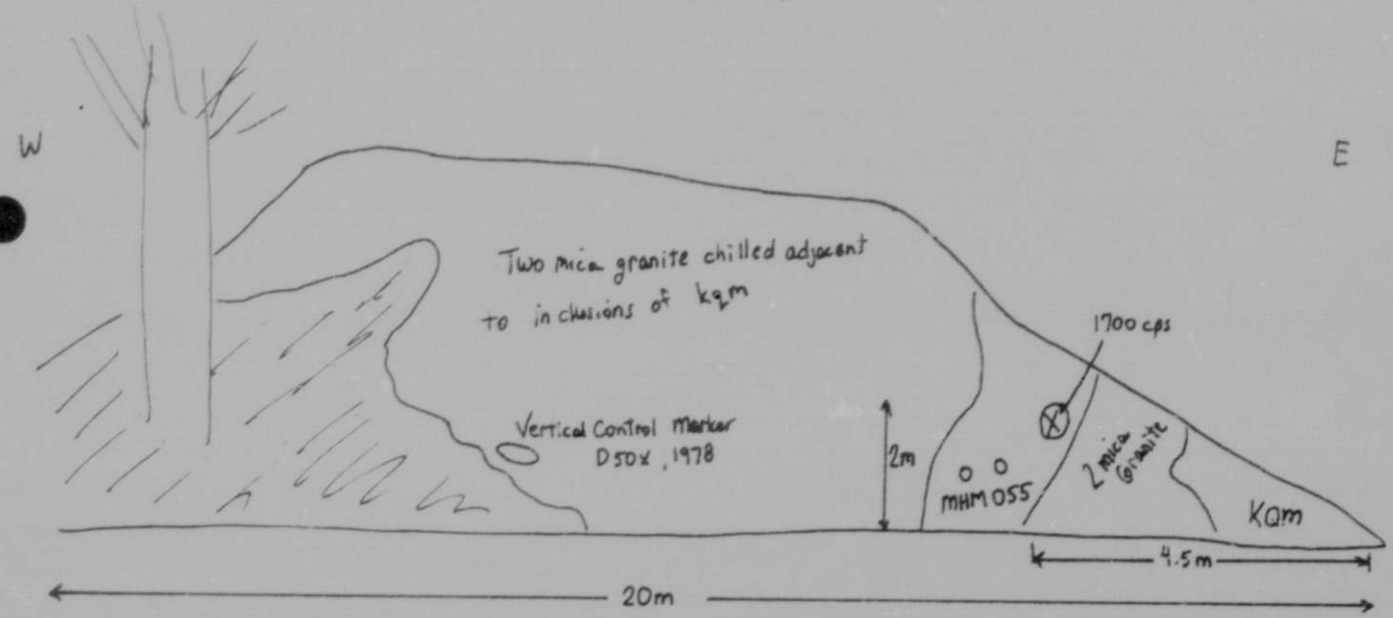
Quad Name Portland

Deposit No. 3

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 055	Grab sample at pegmatite	36 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 3

Continuation from p. 1-5:

Label

A82 < off Rte. 4 >

A83 < anomaly >

U4 < of KQM. The two-mica granite has been chilled around the inclusions to form the fine-grained gray two-mica granite that is common to the Sebago Lake pluton. The exposure is spectacular in petrologic scope, despite its relatively small size.>

U6 < including sampling points, which is considerably higher than normal. Size of 1700 spot, 0.6 m long, 0.4 m wide, in area of pink feldspar, sampled area 400-500 cps, 0.6 m long, 0.3 m wide. SR of two-mica granite 100-200.>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 4 >

Deposit Name A10 < Fogg Hill >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Sullivan >
(Enter code twice from List D)

Position from Prominent Locality A82 < Outcrop on SW flank Fogg Hill

>

Field Checked G1 < 7, 9 | 0, 6 > By G2< Bruton/DePietro , >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 4, 1 | 0, 0, N > Longitude A80 < 0, 7, 1 | 5, 7 | 2, 0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

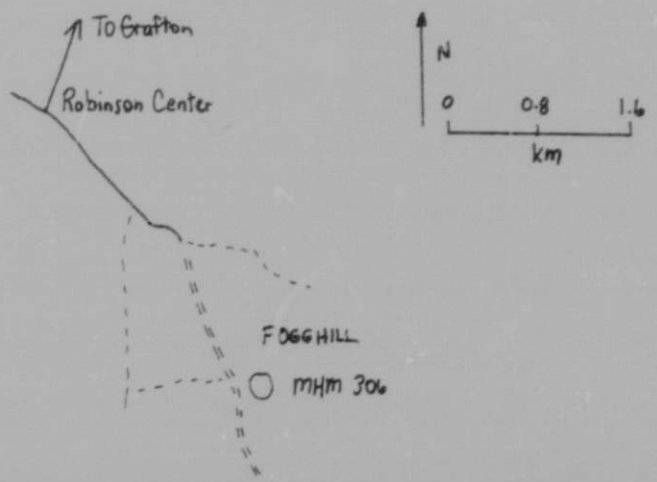
Meridian A81 < > Altitude A107 < 463 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Cardigan >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < on dirt road trending N-S along W flank of hill, it is the first visible outcrop on east side 35 m into woods - approximately 160 m past the > *

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 4

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7 < U > accuracy G7A < > thousands of lb. G7B<LB> G7C< > years G7D< > grade % U308>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
E1 < U > accuracy E1A < > thousands of lb. E1B<LB> E1C < > year of est. E1D< > grade % U308>

Source of Information E7 <

Comments E8 <

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 4

Deposit Form/Shape M10 < Area of anomalous radioactivity >

		FT/M	
Length	M40 < ________ >	M41 < ____ >	
Width	M50 < ________ >	M51 < ____ >	
Thickness	M60 < ________ >	M61 < ____ >	
Strike	M70 < ________ >		
Dip	M80 < ________ >		

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile belt >

Major Regional Structures N5 < Cardigan Pluton of Merrimack Synclinorium >

Local Structures N70 < >

Host-FM. Name U1 < NH Plutonic Series > Member U2 < Two-Mica Granite >

Host Rock K1 < ___________ (Age) | M Binary Granite, medium grained, with quartz-biotite-muscovite-feldspar-garnet, weathered
(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < pegmatite at upper contact of granite and biotite schist at lower contact of granite >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz, biotite, muscovite, feldspar, garnet >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 4

Alteration N75 < none observed >

Reductants U5 < >

Analytical Data (General) C43 < 23 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 60, 6-7 times BG (13 x 20 cm) >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < orthomagmatic > Class No. U7 < 3,1,0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

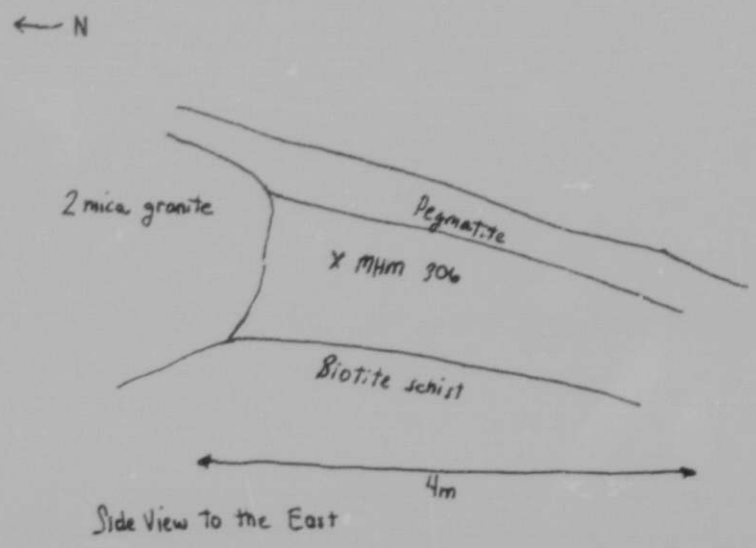
Quad Name Portland

Deposit No. 4

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 306	Chip sample from most radioactive area	23 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 4

Continuation from p. 1-5:

Label

A33 < dirt road branching off to the west. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0 >

Deposit No. B40 < 5 >

Deposit Name A10 < Horseshoe Pond Occurrence >

Synonym Name(s) A11 < >

District or Area 30 < Ragged Mountain >

Country A40 < U, S > | U, S | State New Hampshire

State Code A50 < 3, 3 > | 3, 3 | County A60 < Merrimack >
(Enter code twice from List D)

Position from Prominent Locality A82 < At intersection of Highways 4 and 11, east of Andover. >

Field Checked G1 < 7, 9 | 0, 6 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 2, 6 | 1, 1 N > Longitude A80 < 0, 7, 1 | 4, 8 | 2, 1 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

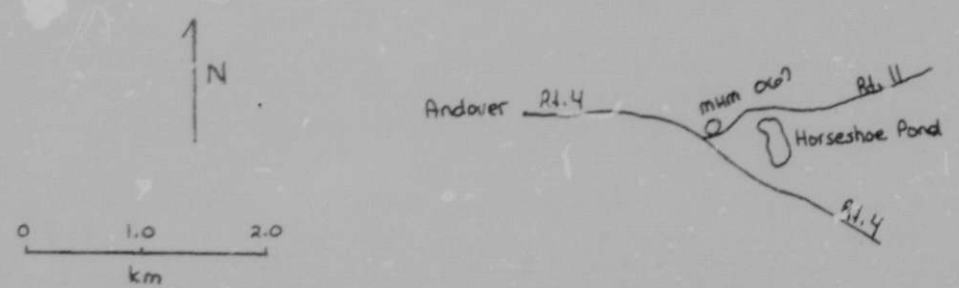
Meridian A81 < > Altitude A107 < 220 m >

Quad Scale A91 < | 6, 2, 5, 0, 0 > Quad Name A92 < Mt. Kearsarge >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 5

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 5

Deposit Form/Shape M10 < ______ >

			Size M15 (circle letter):
		FT/M	lb U308
Length	M40 < ______ >	M41 < ___ >	(A) 0 - 20,000
Width	M50 < ______ >	M51 < ___ >	B 20,000 - 200,000
Thickness	M60 < ______ >	M61 < ___ >	C 200,000 - 2 million
Strike	M70 < ______ >		D 2 million - 20 million
Dip	M80 < ______ >		E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < ______ >

Local Structures N70 < ______ >

Host-FM. Name U1 < Warner > Member U2 < ______ >

Host Rock K1 < ______ (Age) | | Appears to be mylonite produced from quartzite, or from adjacent quartz-pebble conglomerates >
(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < ______ >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < A careful search was made of all road cuts in this region in an attempt to locate similar mylonite zones - the search was totally without success. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < ______ >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 5

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 59 ppm U_3O_8 >

Radiometric Data (General) U6 < Micaceous quartz pebble conglomerate surface
(No. times background and dimensions)
radioactivity (SR) 125 cps >

Ore Controls K5 < >

Deposit Class C40 < Vein type in metamorphic rock > Class No. U7 < 1 7 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 5

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 067	Grab sample of mylonite. 300-400 cps	59 ppm U_3O_8
MHM 092	Grab sample of micaceous quartz-pebble conglomerate	5 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 6 >

Deposit Name A10 < Gunstock Hill Road >

Synonym Name(s) A11 < >

District or Area A30 < Laconia >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Belknap >
(Enter code twice from List D)

Position from Prominent Locality A82 < On north side of Rte. 11A, .32 km west of Jct. of Rte. 11A and Gunstock Hill Road. >

Field Checked G1 < 7,9 (Yr) 0,7 (Mo) > By G2 < Bruton (Last name), Keith (First) A. (Initial) >

Latitude A70 < 4,3 (Deg) 3,2 (Min) 3,5 (Sec) N > Longitude A80 < 0,7,1 (Deg) 2,5 (Min) 1,0 (Sec) W >

Township A77 < (N/S) > Range A78 < (E/W) > Section A79 < >

FT/M

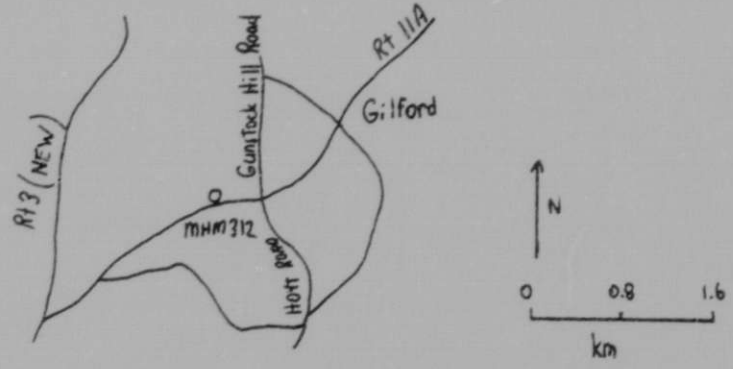
Meridian A81 < > Altitude A107 < 262 m >

Quad Scale A91 < 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Winnipesaukee >

Physiographic Province A63 < 0,1 (List K) New England >

Location Comments A83 < First outcrop west of Gunstock Hill Road on north side Rte. 11A. Anomaly is at ground level. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 6

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 6

Deposit Form/Shape M10 <>

FT/M

Length M40 <> M41 <>

Width M50 <> M51 <>

Thickness M60 <> M61 <>

Strike M70 <>

Dip M80 <>

Size M15 (circle letter): 1b U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile belt >

Major Regional Structures N5 <>

Local Structures N70 < Open fold, plunging S 55-60, 175 SE >

Host-FM. Name U1 < Littleton Fm. > Member U2 <>

Host Rock K1 < E D E V | Cream grey mylonite with small kinks >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Sillimanite zone, amphibolite facies >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < overlying mica schist (N80W, 45SW) has surface radioactivity (SR) of 150-450 cps probably due to underlying mylonite. Binary granite at west end of outcrop SR 80-150 cps. Garnet biotite quartzite SR 80-130 cps. >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < none observed >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 6

Alteration N75 < None observed >

Reductants U5 < None Observed >

Analytical Data (General) C43 < 137 ppm U_3O_8 >

Radiometric Data (General) U6 < BG-65 11 to 26 times BG (70 x 80 cm) >
(No. times background and dimensions)

6.2% eK, 176 ppm eU, 13 ppm eTh

Ore Controls K5 < Structural control in nose of open fold plunging 55-60S. Fold Axis 175 SE . Shearing is indicated. Mylonite is above and below garnet muscovite schist. >

Deposit Class C40 < Vein type deposit in metamorphic rocks > Class No. U7 < 7,2,0 >

Comments on Geology N85 < Muscovite schist has a higher count than the biotite schist on the eastern portion of the outcrop. >

URANIUM-OCCURRENCE REPORT

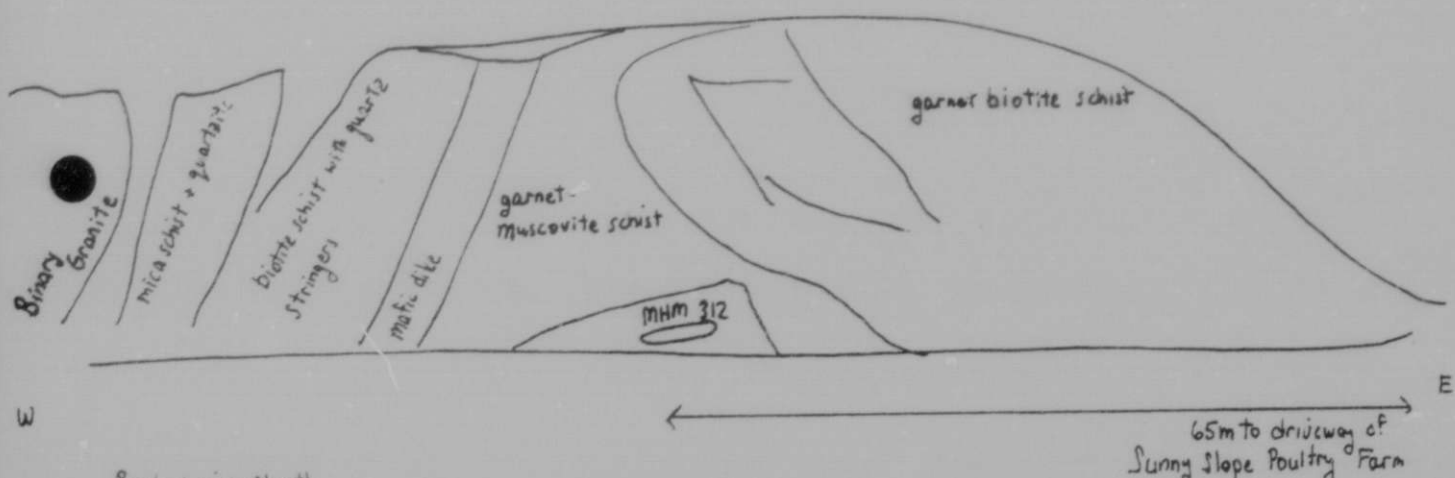
Quad Name Portland

Deposit No. 6

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 312	Chip sample from 700-1000 cps area	137 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



Roadcut view North

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1 , 2 5 0 0 0 0 >

Deposit No. B40< 7 >

Deposit Name A10 < Walnut Hill >

Synonym Name(s) A11 < >

District or Area A30 < Candia >

Country A40 < U , S > [U , S] State New Hampshire

State Code A50 < 3 3 > [3 3] County A60 < Rockingham >
(Enter code twice from List D)

Position from Prominent Locality A82 < At Candia Hill School, take Healy Road north 1 km, take left on dirt road, go west 1.2 km, outcrop 30 m on road west of driveway of house on north side of road. >

Field Checked G1 < 7 9 | 0 6 > By G2< Bruton , Keith A. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 0 4 | 4 5 N > Longitude A80 < 0 7 1 | 1 9 | 0 0 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

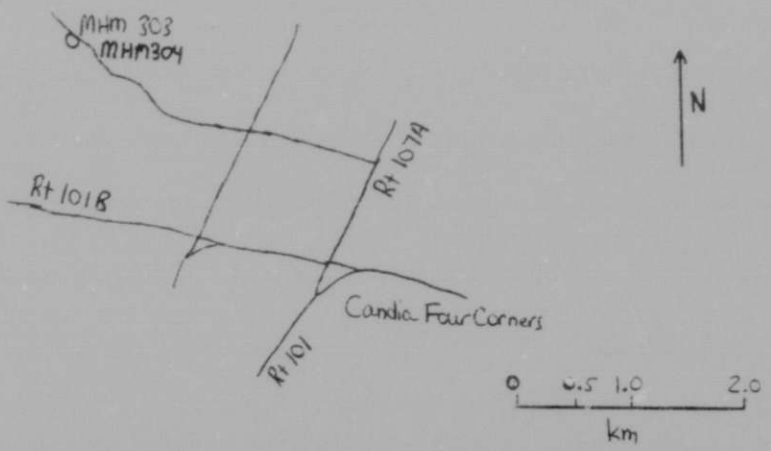
Meridian A81 < > Altitude A107 < 134 m >

Quad Scale A91 < 1 , 6 2 5 0 0 > Quad Name A92 < Suncook >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < MHM 303 outcrop on south side of road about 30 m from driveway to house that is on north side of dirt road, MHM-304 is 15m further west on road > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 7

Commodities Present:
C10 <U, M N>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U, M N>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 7

Deposit Form/Shape M10 < circular area of anomalous radioactivity >

		FT/M		
Length	M40 < >	M41 < >	Size M15 (circle letter):	
Width	M50 < >	M51 < >		1b U308
Thickness	M60 < >	M61 < >	(A)	0 - 20,000
Strike	M70 < >		B	20,000 - 200,000
Dip	M80 < >		C	200,000 - 2 million
			D	2 million - 20 million
			E	More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < Fitchburg Pluton >

Local Structures N70 <

Host-FM. Name U1 < Concord Granite > Member U2 < granitoid-pegmatoid > *

Host Rock K1 < D E V (Age) | MHM 303 concordant pegmatite with smokey (Rock type, texture, composition, color, quartz, muscovite, biotite and feldspar. MHM 304 is the pegmatoid-granitoid facies of alteration, attitude, geometry, structure, etc.)

the Concord 2-mica granite. >

Host-Rock Environment U3 < plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Concordant pegmatite is in biotite schist with feldspar and quartz augen. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < smokey quartz, feldspar, muscovite, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 7

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < Sample MHM 303-25 ppm U_3O_8, very high MN values; Sample MHM 304-7 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 60 cps, MHM 303 45 times BG (13 x 13 cm), (No. times background and dimensions) 17 times BG (26 x 26 cm), 8 to 16 times BG (50 x 50 cm); MHM 304 BG 60, 6 to 14 times BG. >

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3.1.0>

Comments on Geology N85 < The anomalous areas are pods of pegmatoid material enriched in biotite and muscovite. There are four anomalous areas (500-800 cps) surrounding MHM 304. >

URANIUM-OCCURRENCE REPORT

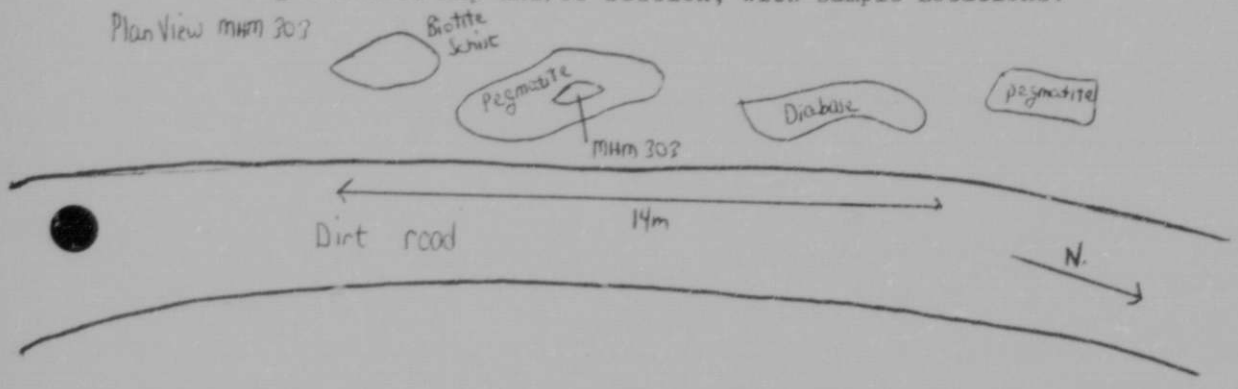
Quad Name Portland

Deposit No. 7

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 303	Chip sample at anomalous area	25 ppm
MHM 304	Chip sample off of fracture surface	7 ppm

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 7

Continuation from p. 1-5:

Label

A83 < and approximately 45 m into the woods on the south side of the road.>

U2 < facies of the two-mica granite.>

U6 < Spectrometer Counts- 2 minute, Gain setting 5.0

Tot	K	U	Th	eK	eUppm	eThppm	
157470	8667	9451	811	4.42	217.3	45.2	MHM303 01
157300	8943	9186	819	5.27	211.1	45.7	MHM303 02
25330	2476	846	371	3.90	14.0	15.9	MHM304 >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 8 >

Deposit Name A10 < Ayers Pond >

Synonym Name(s) A11 < >

District or Area A30 < Barrington Township >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Strafford >
(Enter code twice from List D)

Position from Prominent Locality A82 < turn west off Rt. 202 onto Pond Hill Rd., go 1.6 km and turn NE onto dirt rd., first sample location is 160 m up rd. on west side and in woods, second sample location is in third exposure 160 m up from first one > *

Field Checked G1 < 7,9 | 0,9 > By G2 < Poer , Anne T. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 1,5 | 1,7 N > Longitude A80 < 0,7,1 | 0,0 | 4,7 W >
Deg Min Sec Deg Min Sec

Township A77 < | | > Range A78 < | | > Section A79 < | >
N/S E/W

FT/M

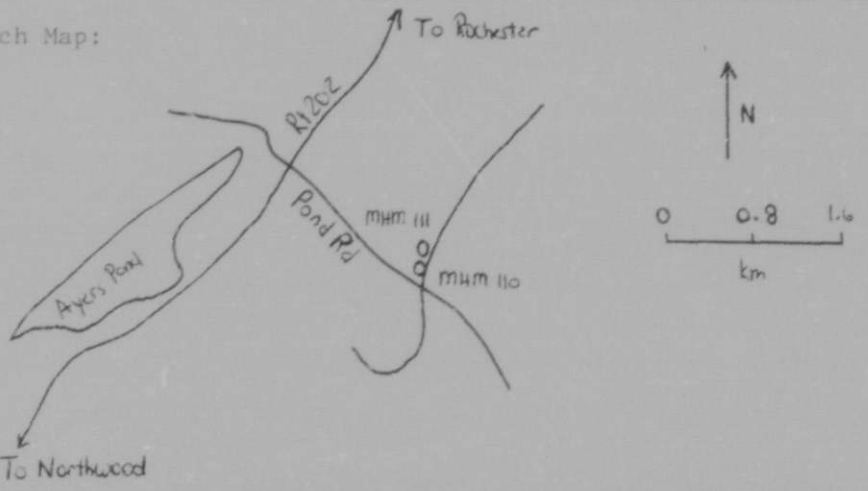
Meridian A81 < > Altitude A107 < 65 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Alton >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < for first sample location 160 m north of intersection, at utility pole 46S, walk back from it ⊥ to rd. 6 m, turn south at right angle and > *

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 8

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <>

Property is A21 (Active) [A22] (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<>

Cumulative Uranium Production PROD YES [NO] SML MED LGE (circle)

DH2
G7<U> accuracy G7A< > thousands of lb. G7B<LB> G7C< > years G7D< > grade % U308>

Source of Information D9 <>

Production Comments D10 <>

Reserves and Potential Resources

EH
E1<U> accuracy E1A< > thousands of lb. E1B<LB> E1C< > year of est. E1D< > grade % U308>

Source of Information E7 <>

Comments E8 <>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 3

Deposit Form/Shape M10 < chip samples across zone of anomalous radioactivity >

Length M40 < see N35 > M41 < > FT/M

Width M50 < see N85 > M51 < >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < north side of Fitchburg Pluton

>

Local Structures N70 <

>

Host-FM. Name U1 < quartz diorite > Member U2 < pegmatite >

Host Rock K1 < D E V | M medium-grained pegmatite; garnet, and stained
(Age) (Rock type, texture, composition, color,

muscovite in sample 1
alteration, attitude, geometry, structure, etc.)

>

Host-Rock Environment U3 < >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

>

Ore Minerals C30 < none observed

>

Gangue Minerals K4 < quartz, feldspar, muscovite, garnet

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 8

Alteration N75 < surface feldspar weathered out giving quartz a knobby effect, hematite-staining in muscovite >

Reductants U5 < >

Analytical Data (General) C43 < 46 ppm U_3O_8 in sample 1; 114 ppm U_3O_8 in sample 2 >

Radiometric Data (General) U6 < BG 30, chips from spots 7 to 30 x BG (see N35) >
(No. times background and dimensions)
for sample 1; sample 2 BG 70, chips 5 to 17 x BG >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3,2,0 >

Comments on Geology N85 < sample 1 - chip x^1 is rectangular area 2 m long, 1 m high, and 1 m wide, counts 300-850 cps and chips from 600 cps spots, hotter spots too massive; chip x^2 is irregularly shaped, 3 m long, 2 m wide, 1 m high, counts 300-2500 cps, chips from 2500 cps spot, highest readings at north end of zone, 2000 cps zone .3 m square; sample 2- chip x^3 is on side of exposure along driveway, > *

URANIUM-OCCURRENCE REPORT

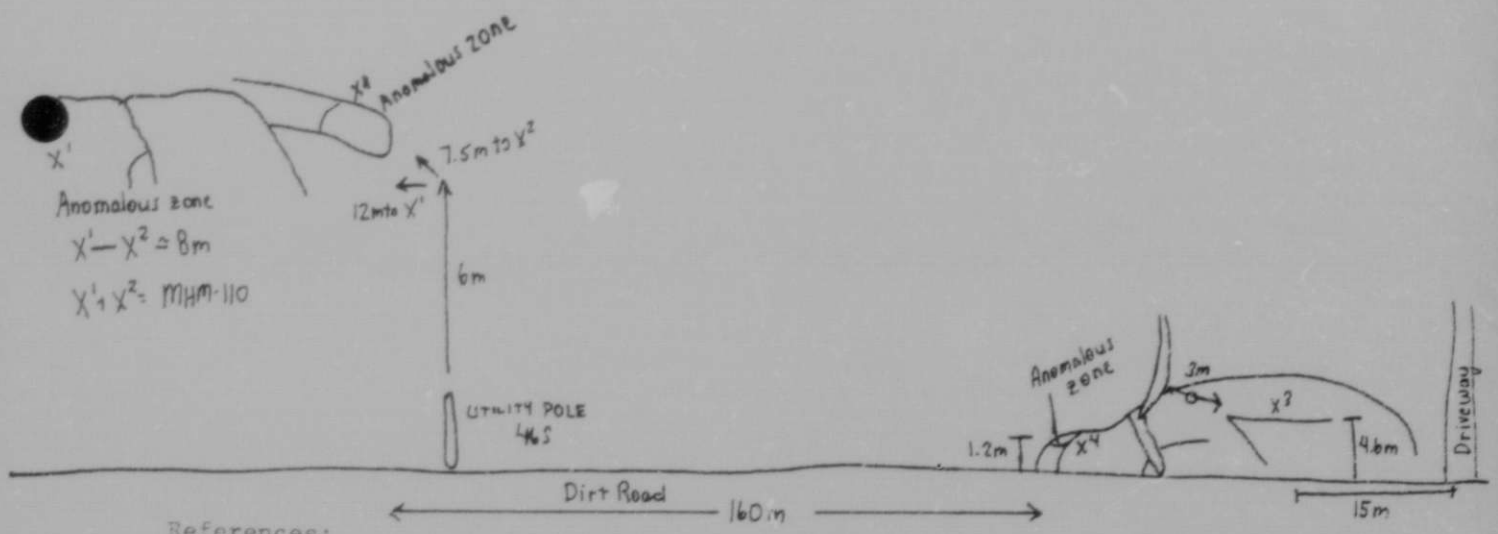
Quad Name Portland

Deposit No. 3

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 110	chips across 2 zones of anomalous radioactivity	46 ppm U_3O_8
MHM 111	chips across 2 zones of anomalous radioactivity	114 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No: 8

Continuation from p. I-5:

Label

A82 < on same side >

A83 < go 6 M, x^2 will be to west 4.6 m, go 6 m more along same path to x^1; for second sample location, 320 m north of intersection, southern end of exposure is 30 m from driveway, x^3 15 m south of driveway, and x^4 12 m farther south.>

N85 < is 4.6 m above ground, hottest spot (1000-1500 cps) is 0.5 m big, zone of 300-1500 cps is 2 m long and 1.5 m high, chip from 1200 spot, very weathered, less feldspar than other chips; chip x^4 is on road side of outcrop 1.2 m off ground, zone is 0.3 to 0.6 m wide, 1.5 m long, 300-200 cps, chips from 400-700 cps, lot of muscovite.>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0 >

Deposit No. B40 < 9 >

Deposit Name A10 < New Durham Ridge >

Synonym Name(s) A11 < >

District or Area A30 < Alton Pegmatite District >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Belknap >
(Enter code twice from List D)

Position from Prominent Locality A82 < On new Highway 11 NW of Farmington, first road cut in rock NW at road junction near BM 491. >

Field Checked G1 < 7,9 | 0,7 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 2,4 | 2,2, N > Longitude A80 < 0,7,1 | 0,7 | ?,0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | > N/S Range A78 < | | > E/W Section A79 < | >

FT/M

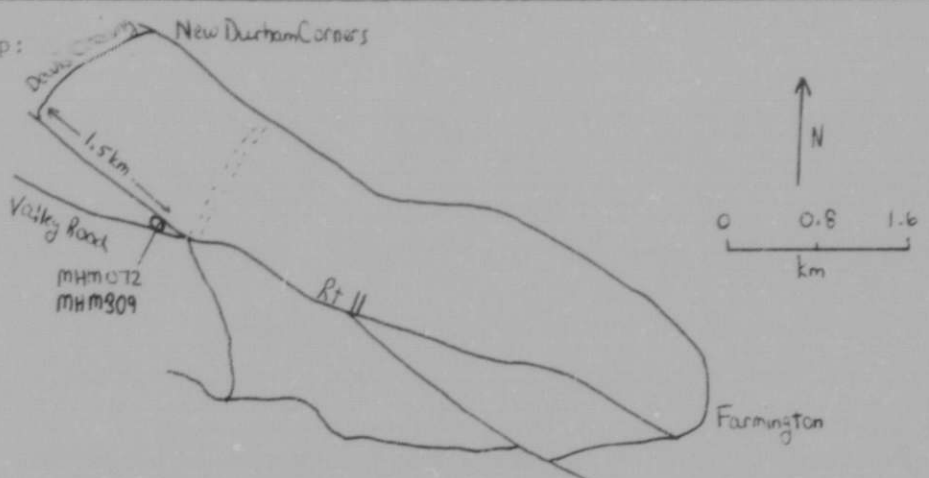
Meridian A81 < > Altitude A107 < 150 m >

Quad Scale A91 < 1,6,2,5,0,0 > Quad Name A92 < Alton >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Anomalous zone in concordant pegmatite in middle to upper part of central portion of cut. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 9

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 9

Deposit Form/Shape M10 < ______ >

Length M40 < 8 > M41< M > (FT/M)

Width M50 < ______ > M51< ______ >

Thickness M60 < 0.5 > M61< M >

Strike M70 < ______ >

Dip M80 < nearly horizontal >

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 [circled]
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile belt >

Major Regional Structures N5 < ______ >

Local Structures N70 < ______

Host-FM. Name U1 < NH series pegmatite > Member U2 < granitoid-pegmatoid facies

Host Rock K1 < ______ (Age) | M Concordant pegmatite of the NH series type contains zones of granitoid-pegmatoid rock with schlieren of muscovite and subordinate biotite. Discordant pegmatite is of the giant crystal type. >

(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Host rocks for the pegmatite are schists and quartzites of the Littleton formation. >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < Quartz-feldspar-muscovite-biotite-schorl-garnet >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 9

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < MHM 072 100 ppm U_3O_8, MHM 309 67 ppm U_3O_8 >

Radiometric Data (General) U6 <Surface radioactivity (SR) of schist around 120; of (No. times background and dimensions)
two-mica granite, 150; of discordant pegmatite, around 150; of concordant pegmatite, 150-700, with one anomaly of about 900 along a joint under an overhang (700 is >*

Ore Controls K5 < Differentiation in granitic magma. It is becoming clear that in the two-mica granites of the NH plutonic series, as certain portions of the melt become enriched in U, the U tends to be concentrated in pockets of highly fluid magma that crystallizes to form the pegmatoid facies of the granite. Some of this fluid is filtered (decanted?) or injected outward with pegmatite forming fluids to form the granitoid-pegmatoid facies of concordant syntectonic pegmatites. This process seems to be independent of the later early postmagmatic alteration >*

Deposit Class C40 < pegmatitic > Class No. U7 <1,2,0>

Comments on Geology N85 <Similar to the entire central NH region. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

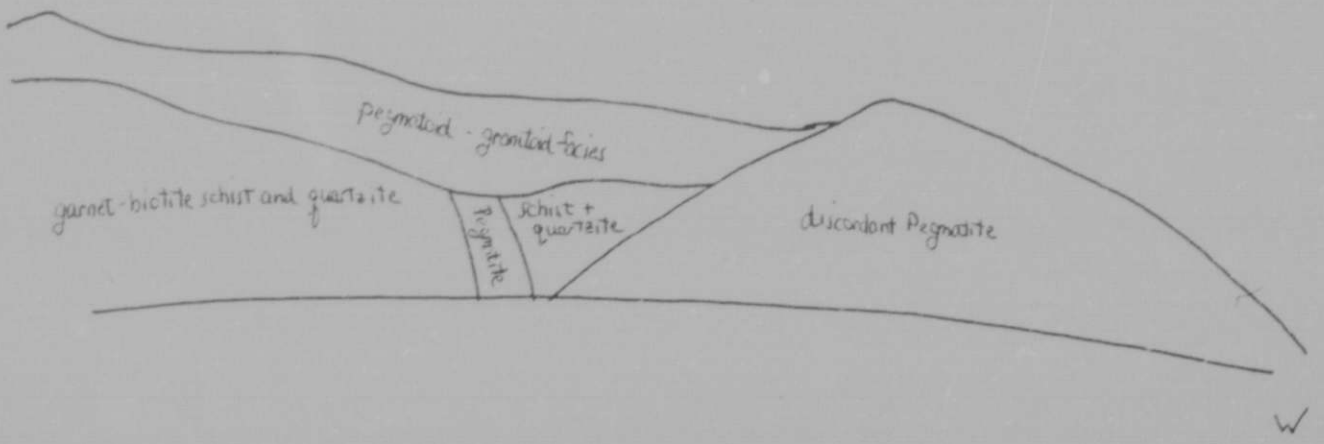
Deposit No. 9

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 072	Chip sample across anomalous zone of pegmatite	100 ppm U_3O_8
MHM 309	Chip sample across anomalous zone of pegmatite	67 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

Roadcut Side View



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 9

Continuation from p. 1--5:

Label

U6 < about 10 x BG). Chip specimens were taken across a zone in which SR ranged from 300-600. Highest SR occurs near schlieren, but zone is anomalous in absence of schlieren. Where the concordant pegmatite is anomalous, the anomalous zone is granitoid-pegmatoid rock.>

K5 < that causes hematization and U-Mo mineralization along internal fractures.>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 10 >

Deposit Name A10 < Alton >

Synonym Name(s) A11 < >

District or Area A30 < Alton Pegmatite District >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Belknap >
(Enter code twice from List D)

Position from Prominent Locality A82 < East side of Rte. 23, 160 m north of Jct. of Rte. 23 and Bay Hill Road, approximately 2.7 km north of circle at Jct. of Rte. 23 and Rte. 11. >

Field Checked G1 < 7, 9 | 0, 7 > By G2 < Bruton , Keith A. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 2, 3 | 2, 5, N > Longitude A80 < 0, 7, 1 | 1, 3 | 3, 5, W >
Deg Min Sec Deg Min Sec

Township A77 < , , , N/S > Range A78 < , , , E/W > Section A79 < , >

FT/M

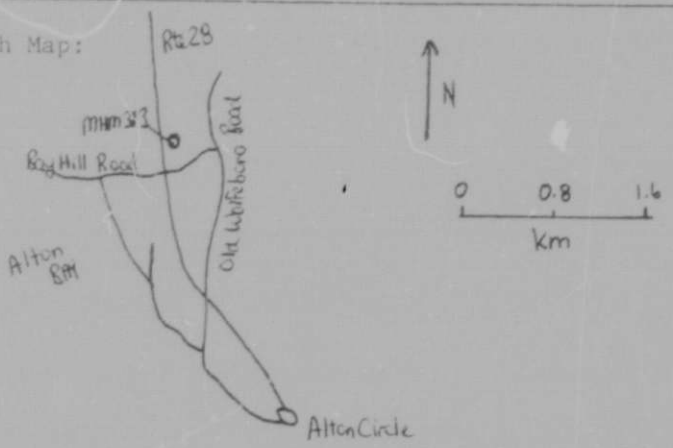
Meridian A81 < > Altitude A107 < 244 m >

Quad Scale A91 < , 6 2 5 0 0 > Quad Name A92 < Alton >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < sample 75 m from south end of exposure and 2 m up from ditch level. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 10

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) [A22] (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES [NO] SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 10

Deposit Form/Shape M10 < Spot anomaly >

	FT/M		FT/M
Length M40	< >	M41	< >
Width M50	< >	M51	< >
Thickness M60	< >	M61	< >
Strike M70	< >		
Dip M80	< >		

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <

Local Structures N70 <

Host-FM. Name U1 < NH Series Pegmatite > Member U2 < granitoid-pegmatoid facies >

Host Rock K1 < [D][E][V] (Age) [M] Concordant, with zones of granitoid-pegmatoid material with biotite and muscovite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < rusty, weathered biotite schist of the Littleton Formation is intruded by the pegmatite. >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < none observed >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 10

Alteration N75 < none observed >

Reductants U5 < >

Analytical Data (General) C43 < 32 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 70 (3 to 7 times BG) A spot anomaly of 700 cps along a fracture surface and two anomalies of 1000 cps along biotite segregations were found but not sampled. > *

(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

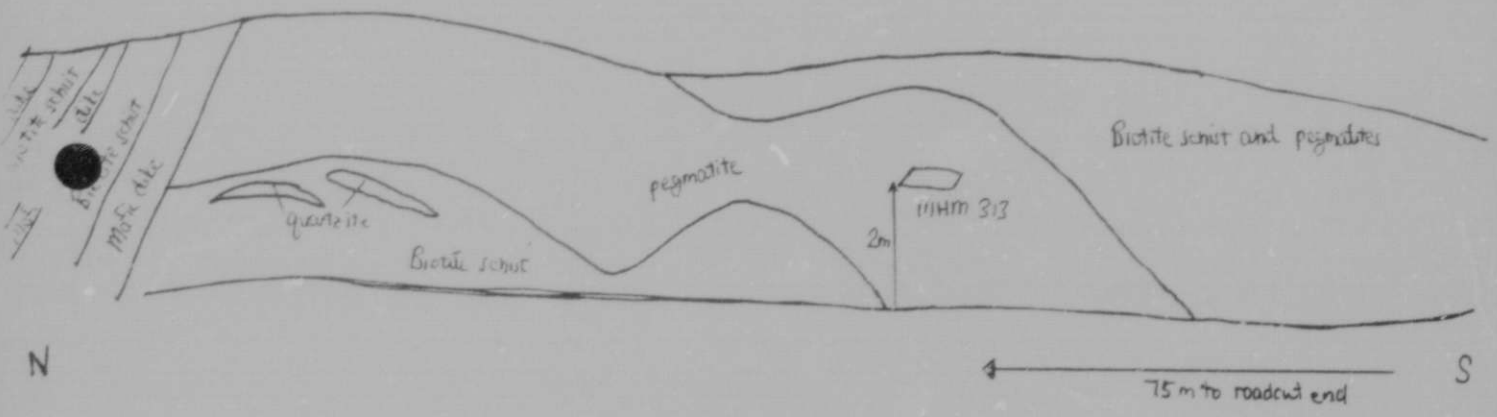
Deposit No. 10

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 313	Chip sample across anomalous area (400-500 cps)	32 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

East view of roadcut



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Occurrence No. 10

Continuation from p. 1-5:

Label

U6 < Spectrometer Counts 01,02, 2 minute counts; 03,1 minute count

	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	124300	7479	7472	332	6.23	176.30	18.13
02	99490	6425	5638	375	6.73	130.90	21.00
03	90250	5423	5449	288	8.93	256.10	34.4

Spectrometer count 01 taken at the 700 cps fracture surface. Count 02 and 03 were taken at the 1000 cps biotite segregations. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0,0 >

Deposit No. B40 < 11 >

Deposit Name A10 < North Wakefield >

Synonym Name(s) A11 < >

District or Area A30 < Wakefield >

Country A40 < U.S > [U.S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < 1.1 km south on road through North Wakefield from intersection with Rt. 16 >

Field Checked G1 < 7,9 | 1,0 > By G2 < Poer , Anne T. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 3,7 | 4,0 N > Longitude A80 < 0,7,1 | 0,3 | 4,4 W >
Deg Min Sec Deg Min Sec

Township A77 < | N/S Range A78 < | E/W Section A79 < >

FT/M

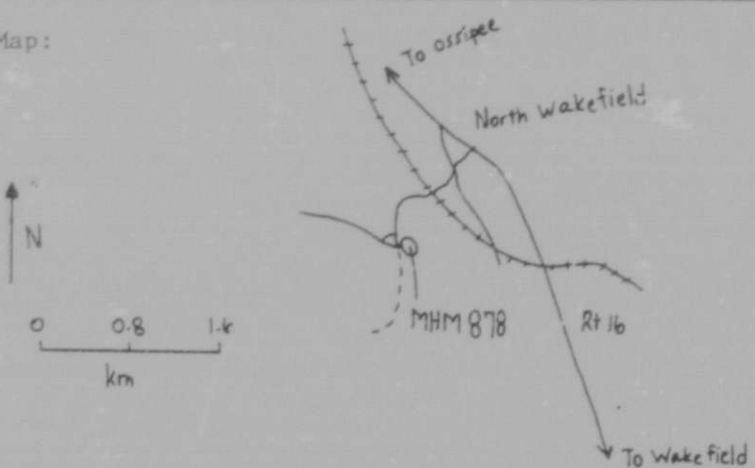
Meridian A81 < > Altitude A107 < 210 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Wolfeboro >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < sample in boulder in woods to west of intersection of two unused dirt roads, southeast of road from North Wakefield >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 11

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) [A22] (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES [NO] SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

DH3
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland '

Deposit No. 11

Deposit Form/Shape M10 < plutonic stock >

Length M40 <____> M41<____> FT/M

Width M50 <____> M51<____>

Thickness M60 <____> M61<____>

Strike M70 <____>

Dip M80 <____>

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < western section of Winnipesaukee Pluton in New Hampshire Plutonic Series >

Local Structures N70 <____>

Host-FM. Name U1 < Winnipesaukee Pluton > Member U2 < two-mica granite >

Host Rock K1 < L D E V | W biotite-muscovite medium-grained granite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <____>

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 11

Alteration N75 < none observed >

Reductants U5 < none observed >

Analytical Data (General) C43 < 15 ppm U_3O_3 >

Radiometric Data (General) U6 < rock 2 times BG(50), 100 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3,1,0 >

Comments on Geology N85 < boulder probably from Long Mtn. to south >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 11

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 878	granite grid sample from boulder	15 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2 5 0 0 0 0 >

Deposit No. B40 < 12 >

Deposit Name A10 < Province Lake >

Synonym Name(s) A11 < >

District or Area A30 < Wakefield >

Country A40 < U S > [U S]

State New Hampshire

State Code A50 < 3 3 > [3 3]
(Enter code twice from List D)

County A60 < Carroll >

Position from Prominent Locality A82 < 1.4 km west of Rt. 153 on south side of Province Lake, near top of mountain south of road and west of swamp >

Field Checked G1 < 7 9 (Yr) 1 0 (Mo) > By G2 < Poer (Last name), Anne T. (First · Initial) >

Latitude A70 < 4 3 (Deg) 4 0 (Min) 0 9 N (Sec) > Longitude A80 < 0 7 1 (Deg) 0 0 (Min) 3 4 W (Sec) >

Township A77 < > (N/S) Range A78 < > (E/W) Section A79 < >

FT/M

Meridian A81 < > Altitude A107 < 295 m >

Quad Scale A91 < 6 2 5 0 0 > (7½' or 15' quad) Quad Name A92 < Wolfeboro >

Physiographic Province A63 < 0 1 (List K) New England >

Location Comments A83 < went up mtn. from NE (from swamp) to very top which was being logged, sample to north of large outcrop of rock at extreme top >

Location Sketch Map:

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 12

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 12

Deposit Form/Shape M10 < plutonic stock >

Length M40 <___> M41<___> FT/M

Width M50 <___> M51<___>

Thickness M60 <___> M61<___>

Strike M70 <___>

Dip M80 <___>

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < eastern portion of Winnipesaukee Pluton >

Local Structures N70 <

Host-FM. Name U1 < Winnipesaukee Pluton > Member U2 < two-mica granite >

Host Rock K1 < L D E V (Age) biotite-muscovite medium-grained granite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 12

Alteration N75 < none observed >

Reductants U5 < none observed >

Analytical Data (General) C43 < 17 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 70 rock 2-3 times BG sample 150 cps, granite ranged from 100 to 200 cps >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3, 1, 0 >

Comments on Geology N85 < most of rock present a porphyritic quartz-syenite (?); not much two-mica granite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 12

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 957	grid sample	17 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 13 >

Deposit Name A10 < Hatch Molybdenum Prospect >

Synonym Name(s) A11 < >

District or Area A30 < Newfield >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < York >
(Enter code twice from List D)

Position from Prominent Locality A82 < 1.6 km ENE of Newfield >

Field Checked G1 < 7,8 | 1,1 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 3,9 | 0,3 N > Longitude A80 < 0,7,0 | 5,2 | 1,3 W >
Deg Min Sec Deg Min Sec

Township A77 < | | N/S > Range A78 < | | E/W > Section A79 < | >

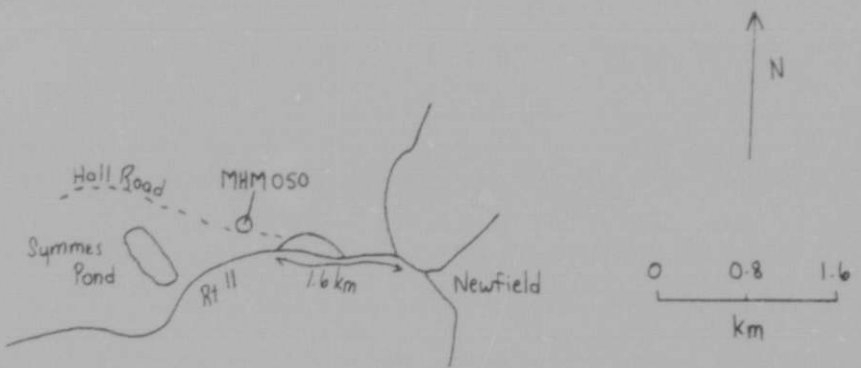
Meridian A81 < > Altitude A107 < 201 m > FT/M

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Newfield >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < From Newfield, take Highway 11 west to old loop in straightened highway. Take old loop to Hall Road. 0.4 km west on Hall Road is a > *

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Commodities Present:
C10 <U, MO>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN <MO, U> OCCUR < >

Commodity Comments C50 < Molybdenite deposit from which uranium might be recovered as a byproduct. >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Deposit Form/Shape M10 < Planar vein deposit >

Length M40 < 10+ > M41 < m > (FT/M)

Width M50 < 1.3+ > M51 < m >

Thickness M60 < 0.30 > M61 < m >

Strike M70 < 30 >

Dip M80 < 60 NW >

Size M15 (circle letter): 1b U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Merrimack synclinorium >

Local Structures N70 < Complex, with superimposed 30 deg. vein and fracture system >

Host-FM. Name U1 < Biotite granodiorite > Member U2 < >

Host Rock K1 < D,E,V, (Age) M Brecciated alkalic pegmatite, and biotite granodiorite that has a high color index. Both rock types have been silicified. Fractures and breccia interstices are filled with dark material, apparently siliceous. The principal radioactive vein in the exposure is filled with a biotite-metallic > *
(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic, synorogenic(?) stock >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Rocks in stone walls along the road are principally Conway Granite and alkalic pegmatite. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, molybdenite, silica >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Alteration N75 < Brecciation, silicification, probably other effects visible in thin section. >

Reductants U5 < >

Analytical Data (General) C43 < 16 ppm U_3O_8 &500 ppm Mo in vein; 700 ppm Ba; 700 ppm La; 1000 ppm Mn; 500 ppm Sr; very high Y >

Radiometric Data (General) U6 < BG 150 cps along road, the highest recorded outside (No. times background and dimensions) the mineralized zones in the Sebago Lake Pluton in the Lewiston Quadrangle. Along the principal sulfide-biotite vein, 3 anomalies of 1200-1600 cps were located. > *

Ore Controls K5 < Precipitation of sulfides and radioactive minerals in fractures associated with intrusion of alkalic felsic rocks. The association of sulfides and radioactivity along the principal fracture seems direct, but sulfides (MoS) have been deposited in considerable quantity in biotite-rich granodiorite one or two meters away from the principal vein, and in such rock the surface radioactivity (SR) is relatively low. >

Deposit Class C40 < Magmatic-hydrothermal > Class No. U7 <3 3 0>

Comments on Geology N85 < Relations between the melanocratic granite, numerous dark inclusions in the granite aphanitic and aplitic dikes, pegmatite and leucocratic granitoid rock are quite complex. A zone of multiple injections is suggested. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 050	Two grab samples of brecciated and silicified wall	
	rock at points of maximum radioactivity make up	
	this specimen.	16 ppm U_3O_8
MHM 060	Molybdenum-rich diorite, low radioactivity	2 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Continuation from p. 1-5:

Label

A83 < sharp little ridgecrest. About 60 m north of the road on the crest is a quarried bedrock exposure (visible from road in winter)

U6 Radioactivity of 500-1000 cps occurs in the vein and in a zone about 0.3 m thick sporadically along its flanks. Brecciated areas (about fist-size) in the wall rock are highly radioactive. Biotite in the vein is not anomalous. A bag full of it collected on a return visit registers nothing above background.

A broad zone in fractured pegmatite near the base of the exposure (the quarried portion), and blocks in the small block pile have a surface radioactivity of 300-500 cps. >

K1 < sulfide mixture, and is about 2½ cm wide. >

U6 < Hatch Molybdenite Prospect

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	45710	2423	2060	1518	-2.20	53.63	198.40
02	41160	2187	1384	2013	3.42	5.68	264.40
03	60890	2485	2169	3300	-11.89	5.05	436.00
04	69420	2577	2583	3920	-16.46	6.49	518.66
05	30500	1908	1098	1232	0.237	15.35	160.27
06	97190	3577	3307	5251	-20.34	1.56	696.13
07	(1)41460*	5336	5407	8076	-33.416	18.56	1072.8
08	36020	3377	3098	5036	-19.56	-2.13	667.47
09	(1)20340*	4316	4455	7095	-30.59	1.79	942.0
10	45910	1763	1968	2715	-12.54	12.94	358.0
11	(1) 5227*	5483	5615	8925	-37.96	3.03	1186.0

* The (1) indicates an overload in the channel. This does not affect the results of the count taken.

Station 01 is in diorite at the lower workings.

Station 02 is in the upper eastern workings.

Station 03 is on a pegmatite on the NE slope. >*

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 13

Continuation from p. 1-5:

Label

U6 < Stations 04,05,and06 are along the anomalous pegmatite on the NE slope. Station 07 is on the hilltop along a N45E fracture. Stations 08 through 011 are on the hilltop along the NW slope in diorite and pegmatite. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 14 >

Deposit Name A10 < Newfield >

Synonym Name(s) A11 < >

District or Area A30 < Newfield >

Country A40 < U, S > |U, S| State Maine

State Code A50 < 2, 3 > |2, 3| County A60 < York >
(Enter code twice from List D)

Position from Prominent Locality A82 < In Newfield Village, 160 m E of junction of Highway 11 and road to Ross Corner >

Field Checked G1 < 7, 8 | 1, 1 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 3, 8 | 5, 5, N > Longitude A80 < 0 7 0 | 5 0 | 4, 6, W >
Deg Min Sec Deg Min Sec

Township A77 < | | > Range A78 < | | > Section A79 < | >
N/S E/W

FT/M

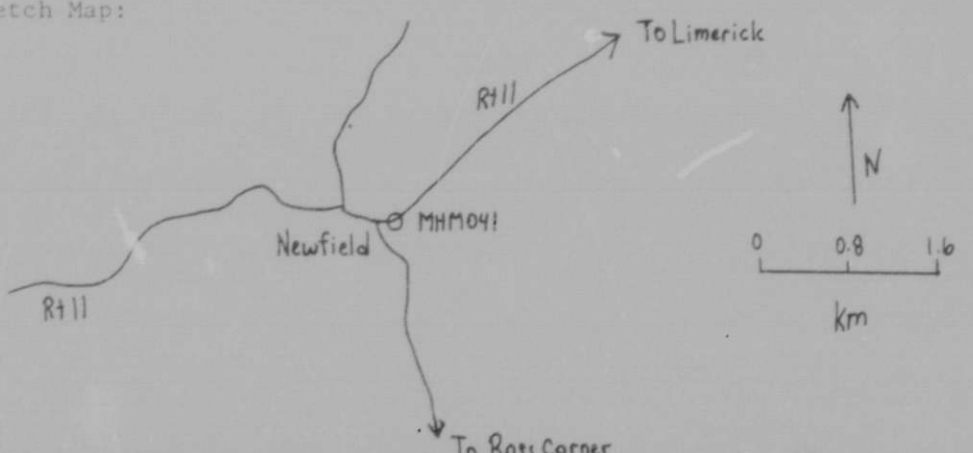
Meridian A81 < > Altitude A107 < 120 m >

Quad Scale A91 < | | 6, 2, 5, 0, 0 > Quad Name A92 < Newfield >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Anomalies are in blasted portions of ledge on N side of Highway 11, directly in sharp curve. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 14

Commodities Present:
C10 <U N,B Y,T Z,R B,A>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U N,B B,A> *

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 14

Deposit Form/Shape M10 < Zone containing parallel planar veinlets >

Length	M40 < 60 >	M41 < m > (FT/M)	
Width	M50 < >	M51 < >	
Thickness	M60 < 34 >	M61 < m >	
Strike	M70 < N32E >		
Dip	M80 < 90 >		

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 [circled]
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < Merrimack synclinorium >

Local Structures N70 < Dikes and fractures have a strongly dominant trend of about 30 (N30E) >

Host-FM. Name U1 < Granitoid Rocks > Member U2 < >

Host Rock K1 < | | | | | | | | | | | | | |W| Host rock for veinlets is biotite pegmatite that
(Age) (Rock type, texture, composition, color,
appears to be alkalic, and granitoid rock of the Kinsman type. Veinlets are up to
alteration, attitude, geometry, structure, etc.)
about 2 cm thick, and appear to be crushed and recrystallized host rock. Veinlets contain tiny globular black opaque grains having conchoidal fracture. Veinlets > *

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Coarse-grained gneissoid rocks have surface radiation (SR) of 100-150. >

Ore Minerals C30 <Uraninite?See K1. Probably thorite. >

Gangue Minerals K' < quartz, feldspar, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 14

Alteration N75 < No significant wall-rock alteration is apparent in hand specimen. >

Reductants U5 < >

Analytical Data (General) C43 < 65 ppm U_3O_8; 500 ppm Ba; 2000 ppm Nb; Y very high; Zr very high. >

Radiometric Data (General) U6 < Anomalous radioactivity is traceable precisely along (No. times background and dimensions) veinlets, and is fairly consistent. Along the bedrock surface, counts of 500-1000 cps were found; larger anomalies (up to 1600 cps) occur along ledge faces split > *

Ore Controls K5 < Fracture system trending 30 (N30E). >

Deposit Class C40 < Magmatic-hydrothermal > Class No. U7 < 3 3 0 >

Comments on Geology N85 < Alkalic pegmatite and granite of the Kinsman Quartz Monzonite type have intruded gneissoid rocks discordantly and concordantly, as observed in boulders in river bed. >

URANIUM-OCCURRENCE REPORT

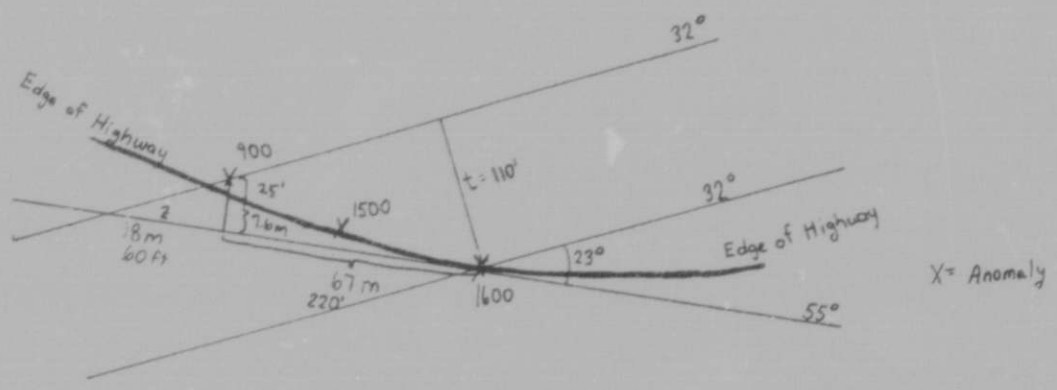
Quad Name Portland

Deposit No. 14

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 041	Grab sample of pegmatite about 5 cm thick between	
	two veinlets, so that a veinlet occurs along	
	either side of a tabular specimen . The veinlets	
	are 2 to 3 mm thick.	65 ppm U_3O_8
MHM 061	Sample of coarsely porphyritic adamellite of Kinsman	
	type with 1.5 cm pink silicified vein.	54 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



$\tan 23° = \frac{25}{Z}$

$.42 = \frac{25}{Z}$

$Z = \frac{25}{.42} = 60\ Ft$

$\sin 23° = \frac{t}{280'}$ $\quad t = .391(280) = 110\ Ft$

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 14

Continuation from p. 1-5:

Label

K1 < are vertical, parallel to anastamosing, and strike N32E. The veinlets are commonly paralleled by multiple fractures, and incipient brecciation. >

C10 < OCCUR < Y ZR > >

U6 < parallel to veinlets. >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2 5 0 0 0 0 >

Deposit No. B40< 15 >

Deposit Name A10 < Symmes Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Newfield >

Country A40 < U S > [U S] State Maine

State Code A50 < 3 3 > [3 3] (Enter code twice from List D) County A60 < York >

Position from Prominent Locality A82 < At Symmes Pond on Highway 11 west of Newfield. >

Field Checked G1 < 7 3 [1 1 > (Yr Mo) By G2< Wagener (Last name), H. (First) D. (Initial) >

Latitude A70 < 4 3 [3 3 [4 6 N > (Deg Min Sec) Longitude A80 < 0 7 0 [5 2 [2 9 W > (Deg Min Sec)

Township A77 < [|] > (N/S) Range A78 < [|] > (E/W) Section A79 < [ ] >

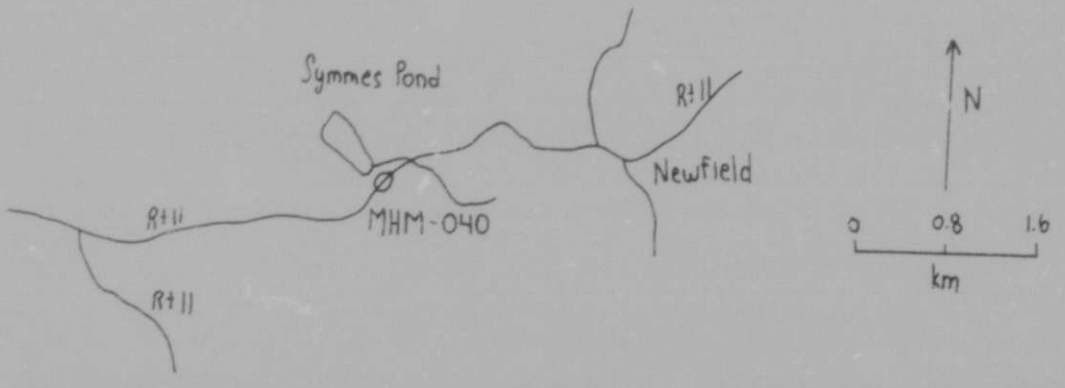
Meridian A81 < > Altitude A107 < 150 m > FT/M

Quad Scale A91 < [6 2 5 0 0 > (7½' or 15' quad) Quad Name A92 < Newfield >

Physiographic Province A63 < 0 1 [New England > (List K)

Location Comments A83 < Boulders lie north of the highway between lake and highway not far from dam, and on hillside southeast of highway. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 15

Commodities Present:
C10 <U B E >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U B E >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 15

Deposit Form/Shape M10 < Tabular (dike) >

Length M40 <____> M41<____> FT/M

Width M50 <____> M51<____>

Thickness M60 <____> M61<____>

Strike M70 <____>

Dip M80 <____>

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < Merrimack Synclinorium >

Local Structures N70 < Dikes of fine-grained granite in a small stock (?) of Conway Granite >

Host-FM. Name U1 < Conway Granite > Member U2 < aplitic dike >

Host Rock K1 < [X] aplitic dike in biotite granite (Conway) >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Hypabyssal, postorogenic stock >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Large boulders of coarse-grained Conway Granite and a fine-grained facies of the granite have a surface radiation (SR) of 200 - 350 cps. >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz and feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 15

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 26 ppm U_3O_8 (see radiometric data, below). 150 ppm BE >

Radiometric Data (General) U6 < One large boulder near the lake has a 20 cm (No. times background and dimensions) aplite dike with surface radioactivity (SR) up to 700 cps. For this dike, spectrometer indicated approximately 2:1 ratio,U:Th. A boulder of aplite in a rock wall >

Ore Controls K5 < Igneous differentiation >

Deposit Class 240 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < West of the specimen locality, backgrounds are low and boulders of Conway Granite are not common. At the locality, BG is 100 and Conway boulders are the predominant rock type. Some Conway bedrock is exposed on the new Highway 11, on the first hill east of Symmes Pond. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 15

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 040	Grab sample of aplite (leached)	26 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 < Nelson, J.M., and Narten, P.F., 1951, Reconnaissance of the Radioactive Rocks of Maine: U.S. Geol. Survey TEI-68, 44 p., issued by U.S. Atomic Energy Comm. >*

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 15

Continuation from p. 1-5:

Label

U6 < (sampled) had SR up to 900 cps . The sampled boulder was weathered - leaching of U possibly a large factor. >

F1 < Tech. Inf. Service Ext ., Oak Ridge, Tenn. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 16 >

Deposit Name A10 < North Shapleigh Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Newfield >

Country A40 < U , S > [U , S] State Maine

State Code A50 < 2, 3 > [2, 3] County A60 < York >
(Enter code twice from List D)

Position from Prominent Locality A82 < At North Shapleigh, in deep roadcut in rock on new straight portion of Highway 11 on north side of Ossipee River. >

Field Checked G1 < 7, 8, 1, 1 > (Yr Mo) By G2 < Wagener (Last name), H. (First) D. (Initial) >

Latitude A70 < 4, 3 (Deg) 3, 6 (Min) 2, 3 (Sec) N > Longitude A80 < 0, 7, 0 (Deg) 5, 3 (Min) 3, 7 (Sec) W >

Township A77 < , , (N/S) > Range A78 < , , (E/W) > Section A79 < , >

FT/M

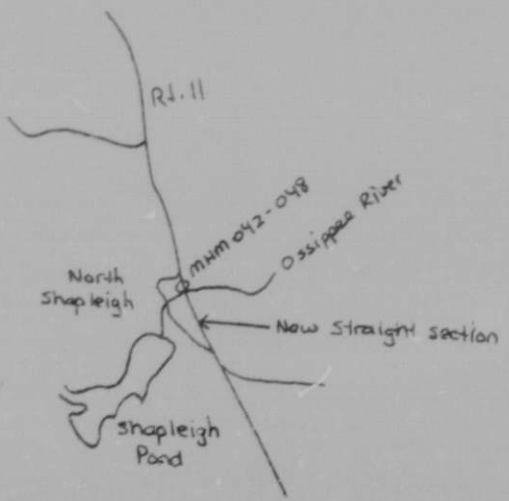
Meridian A81 < > Altitude A107 < 165 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Newfield >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < See A82 and below >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 16

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

Comments E8 <

BLE 236
2/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 16

Deposit Form/Shape M10 < Anomalous zones parallel to contacts in dikes. >

		FT/M		
Length	M40 < >	M41 < >	Size M15 (circle letter):	
Width	M50 < >	M51 < >		1b U308
Thickness	M60 < .2- .8 >	M61 < m >	(A)	0 - 20,000
Strike	M70 < 30 >		B	20,000 - 200,000
Dip	M80 < 90 >		C	200,000 - 2 million
			D	2 million - 20 million
			E	More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Merrimack synclinorium

>

Local Structures N70 < Dikes strike 25-30 deg., dip 90 deg., one radioactive crushed rock seam 2 cm thick strikes 15 deg., dips 40 deg. NW. Joints not measured. >

Host-FM. Name U1 < Undifferentiated alkalic > * Member U2 < Trachyte dikes >

Host Rock K1 < M,E,S, | Pink felsic dikes, probably trachyte >
(Age) (Rock type, texture, composition, color,

have zones parallel to the contacts that are anomalous. The rock is typical of
alteration, attitude, geometry, structure, etc.)

those dikes throughout this part of New England that are correlated with the Mesozoic alkalic plutonic series. The only other type of anomaly in this road > *

Host-Rock Environment U3 < Hypabyssal, postorogenic sills. >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on
Associated Rocks U4 < Schistose gneisses have surface radioactivities (SR) around 175 cps >

Ore Minerals C30 < None observed. >

Gangue Minerals K4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 16

Alteration N75 < Wallrock alteration not observed. Anomalous silicified seam in pegmatite is highly sulfidic >

Reductants U5 < >

Analytical Data (General) C43 < 16 and 17 ppm U_3O_8 in two dikes sampled. Wall rocks and contact zones outside the dikes contain little U_3O_8. Soil weathered out of silicified seam has 75 ppm U, but was rich in Th (several thousand cps). > *

Radiometric Data (General) U6 < Nonanomalous dikes have surface radioactivities (No. times background and dimensions) around 200 cps (twice the unusually high BG in this roadcut). Radioactivities of anomalous dikes are commonly 300-500 cps and up to 800 cps. One joint > *

Ore Controls K5 < Differentiation in trachytic magma and magmatic-hydrothermal segregation along fractures. >

Deposit Class C40 < Magmatic-hydrothermal > Class No. U7 < 3 3 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

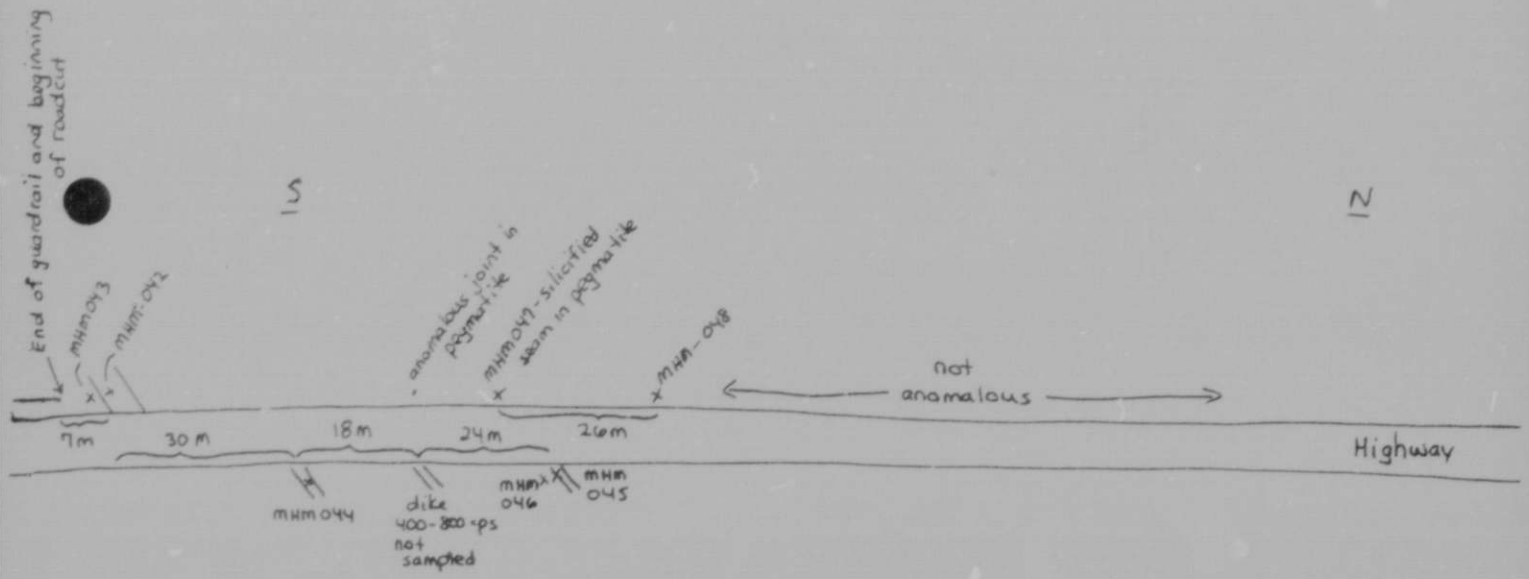
Quad Name Portland

Deposit No. 16

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 042	Chip sample across anomalous zone in dike	17 ppm U_3O_8
MHM 043	Schist adjacent to contact of 042 zone	8 ppm U_3O_8
MHM 044	Chip sample across thin dike	16 ppm U_3O_8
MHM 045	Pegmatoid gneiss (600 cps) adjacent to dike	4 ppm U_3O_8
MHM 046	Chip sample across 2 m contact zone in mica gneiss	4 ppm U_3O_8
MHM 047	Soil & rock fragments from weathered seam	75 ppm U_3O_8
MHM 048	Background sample of schistose gneiss, 175 cps	3 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



PLAN VIEW OF ROAD CUT

References:

F1 <

F2 <

F3 <

F4 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 16

Continuation from p. 1-5:

Label

K1 < cut is an anomalous, crushed, silicified, sulfidic seam about 2 cm thick in pegmatite. For attitudes of dikes and seam, see N 70, p. 3.

The anomalous and nonanomalous zones in the dikes have both sharp and gradational boundaries. There are subtle differences in the lithologies of the anomalous and nonanomalous zones. Anomalous zones are pink or purplish; nonanomalous zones are gray to light gray or nearly white, and are more sulfidic. Dikes in schist are more anomalous than dikes in pegmatite. Along the contact of one of the larger dikes, where schist is adjacent to the dike, an anomalous zone adjoins the contact. Where the same contact is adjacent to pegmatite, the anomalous zone is abruptly displaced toward the center of the dike. Some of the smaller dark gray dikes are anomalous from one side to the other. >

U6 < in pegmatite registered up to 1500 cps. The silicified seam in pegmatite is anomalous in relation to height above the base of the cut. The seam has been largely weathered out, and the residue collects toward the base of the cut. By digging away radioactive, black, clay-rich soil from the base of the cut directly adjacent to the soil-filled seam, a maximum radioactivity of 8500 cps was obtained. A bag of this soil (mixed with nonanomalous rock chips) had a surface radioactivity of 1500 cps (specimen MHM 048). >

C43 < The dikes contain 500 ppm La; 10 ppm Mo; 500 and 300 ppm Nb; 500 and 100 ppm Pb; 150 and 200 ppm Y; 300 ppm Zn; and very high Zr. Soil from the silicified seam contained 500 ppm As; 1000 ppm Ba; 700 ppm Be; 150 ppm Cu; 5000 ppm Mn; and very high Y. >

U1 < rocks. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2 5 0 0 0 0 >

Deposit No. B40 < 17 >

Deposit Name A10 < Emerys Corner Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U S > [U S] State Maine

State Code A50 < 2 3 > [2 3] County A60 < York >
(Enter code twice from List D)

Position from Prominent Locality A82 < 0.87 km south of Emerys Corner at intersection of Emerys Corner Road and Coffin Hill Road, east of intersection 65 m along stone wall to old granite quarry and sample. >

Field Checked G1 < 7 9 > < 0 5 > By G2 < Poer , Anne T. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 > < 4 3 > < 0 4 N > Longitude A80 < 0 7 0 > < 4 5 > < 3 3 W >
Deg Min Sec Deg Min Sec

Township A77 < > Range A78 < > Section A79 < >
N/S E/W

FT/M

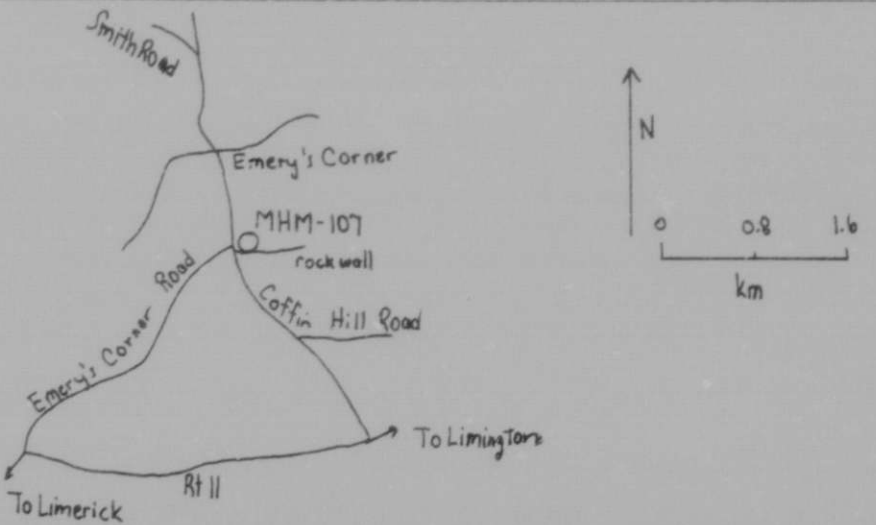
Meridian A81 < > Altitude A107 < 160 m >

Quad Scale A91 < 6 2 5 0 0 > Quad Name A92 < Newfield >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 > [New England]
(List K)

Location Comments A83 < at intersection of Emerys Corner Road and Coffin Hill Road go east 65 m along stone wall, sample in ledge trending N 22 W 4.5 m N of wall >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 17

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

Comments E8 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 17

Deposit Form/Shape M10 < irregular area of anomalous radioactivity >

Length M40 < * > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < (ledge) N22 W >

Dip M80 < >

Size M15 (circle letter): 1b U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < southwest of Sebago Lake Pluton >

Local Structures N70 <

Host-FM. Name U1 < > Member U2 < granite >

Host Rock K1 < D, E, V, | Yf fine-grained biotite granite >
(Age) (Rock type, texture, composition, color,

alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < plutonic, synorogenic? >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz, feldspar, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 17

Alteration N75 < none observed >

Reductants U5 < >

Analytical Data (General) C43 < 17 ppm U_3O_8 >

Radiometric Data (General) U6 < 2-2.3 x BG(90) over all 3 chip areas >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < orthomagmatic > Class No. U7 <3,1,0>

Comments on Geology N85 < bridge at mill in Limerick Mills made of granite from old quarry at this site >

URANIUM-OCCURRENCE REPORT

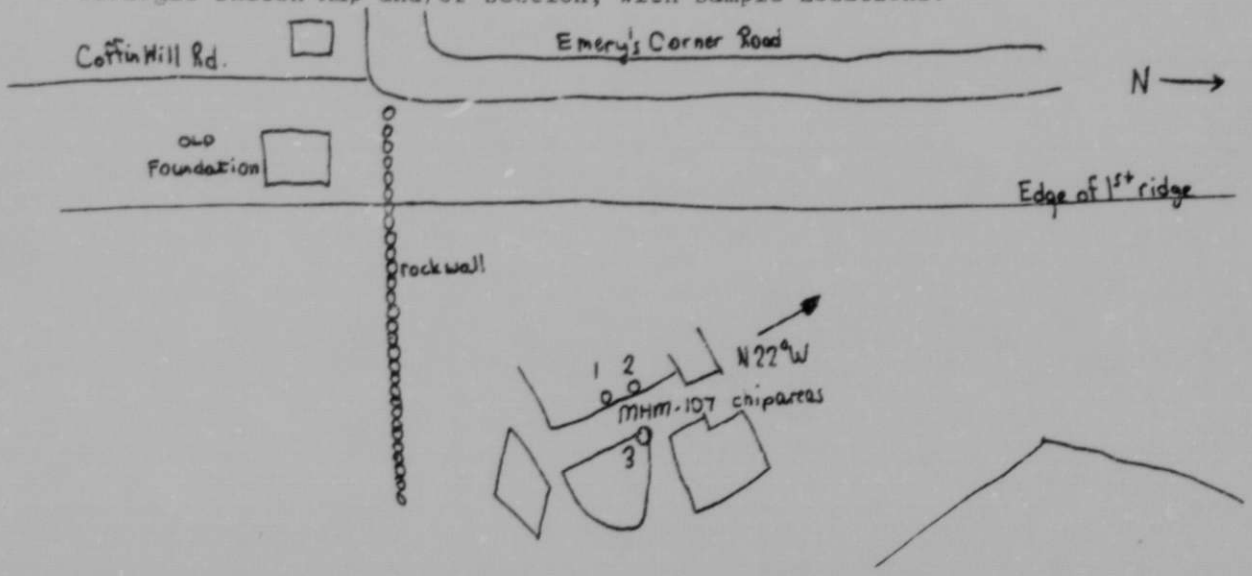
Quad Name Portland

Deposit No. 17

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 107	chips of area of anomalous radioactivity	17 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 17

Continuation from p. 1-5:

Label

M40 < Sample taken from 3 spots, each very small: No. 1/length 10 cm, width 12 cm, depth 5 cm; No. 2/length 10 cm, width 7½ cm, depth 5 cm; No. 3/length 7½ cm, width 7½ cm, depth 5 cm, with readings of 200-210 cps, nonanomalous granite averaged 150 cps.

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 18 >

Deposit Name A10 < East Freedom Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U , S > | U , S |

State New Hampshire

State Code A50 < 3, 3 > | 3, 3 |
(Enter code twice from List D)

County A60 < Carroll >

Position from Prominent Locality A82 < First road cut in rock on Highway 25 west of road intersection at BM 410, near western edge of map. >

Field Checked G1 < 7, 9 | 0, 6 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 7 | 3, 0 | 0, 7, N > Longitude A80 < 0, 7, 0 | 5, 9 | 4, 5, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

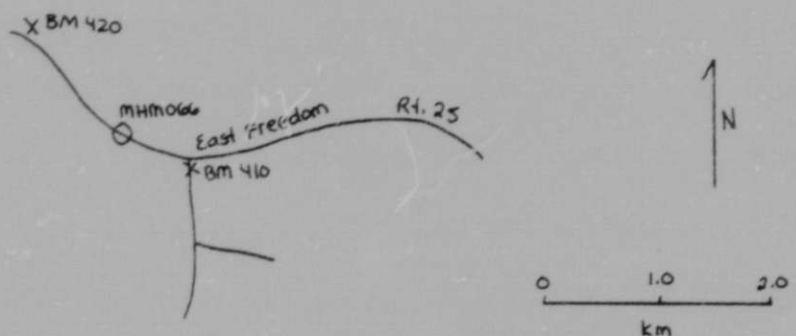
Meridian A81 < > Altitude A107 < 122 m >

Quad Scale A91 < | , ,2,4,0,0,0 > Quad Name A92 < Kezar Falls >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Specimen taken from mid-portion of cut. N side of highway >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 18

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 18

Deposit Form/Shape M10 < Not determinable >

Length M40 < > M41< > FT/M

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < >

Local Structures N70 < >

Host-FM. Name U1 < Winnipesaukee pluton > Member U2 < Two-mica granite >

Host Rock K1 < L D E V W Medium-grained, porphyritic, leucocratic two-mica granite, similar to leucocratic facies of Sebago Lake granite. Segregations of biotite pegmatite or pegmatoid rock are prominent; there are suggestions of aplitic phases. >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Inclusions of or contact with meta-arenite exposed at west end of cut >

Ore Minerals C30 < No uranium minerals observed >

Gangue Minerals K4 < Biotite, muscovite, quartz >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 18

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 38 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of granite at east end
(No. times background and dimensions)
of cut 150-200; increases to 200-400 in central part of cut; decreases to around 200 at west end. Note: BG is high in this region, due to till (eastern fringe of White >

Ore Controls K5 < Differentiation in siliceous magma. >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 18

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 066	Grab sample of granite near point of maximum radioactivity	38 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 18

Continuation from p. 1-5:

Label

U6 < Mountain effect?) >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0,0 >

Deposit No. B40 < 19 >

Deposit Name A10 < Ossipee Valley >

Synonym Name(s) A11 < >

District or Area A30 < Ossipee >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < on Newman Drew Rd., 0.49 km NE of intersection with Rts. 16 and 25, 4.9 km N of Center Ossipee and W of Ossipee Lake. >

Field Checked G1 < 7,9 | 1,0 > By G2 < Poer , Anne T. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 1,7 | 5,6, N > Longitude A80 < 0,7,1 | 1,1 | 1,0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

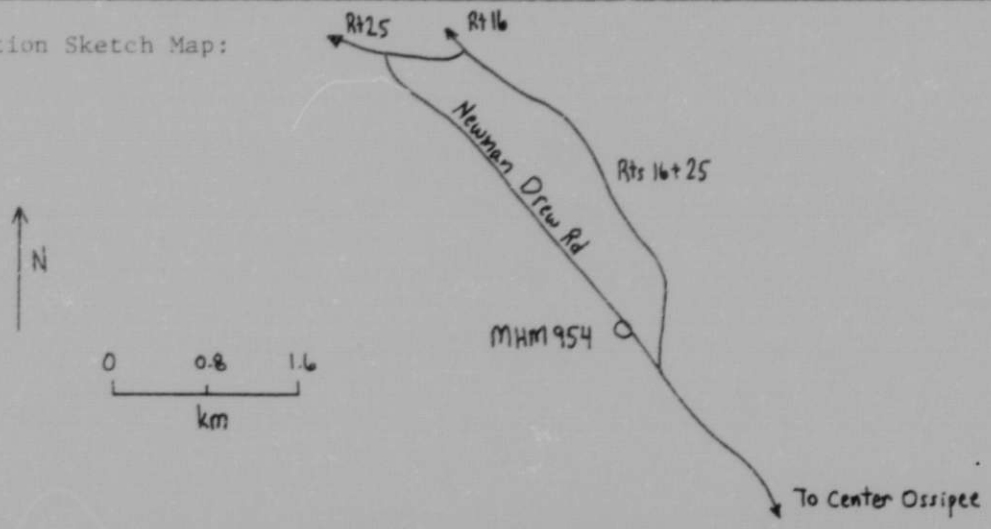
Meridian A81 < > Altitude A107 < 138 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Ossipee Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < sample from outcrop on SW side of Newman Drew Road, across from house and road, in ditch. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 19

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 19

Deposit Form/Shape M10 < plutonic stock >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < Northern section of Winnipesaukee Pluton in New Hampshire Plutonic Series >

Local Structures N70 <

Host-FM. Name U1 < Winnipesaukee Pluton > Member U2 < two-mica granite >

Host Rock K1 < L D E V (Age) biotite-muscovite, medium-grained granite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < none observed >

Gangue Minerals K4 < quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 19

Alteration N75 < none observed >

Reductants U5 < none observed >

Analytical Data (General) C43 < 37 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 60 rock 3 times BG, granite 200 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 19

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 954	granite grid sample	37 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 20 >

Deposit Name A10 < Drake's Brook Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A20 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Waterville Valley proceed SW on road towards Campton Upper Village for approximately 3 km. Road crosses Drake's Brook before sample site >

Field Checked G1 < 7,9 | 0,9 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,6 | 1,0 N > Longitude A80 < 0,7,1 | 3,1 | 0,0 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

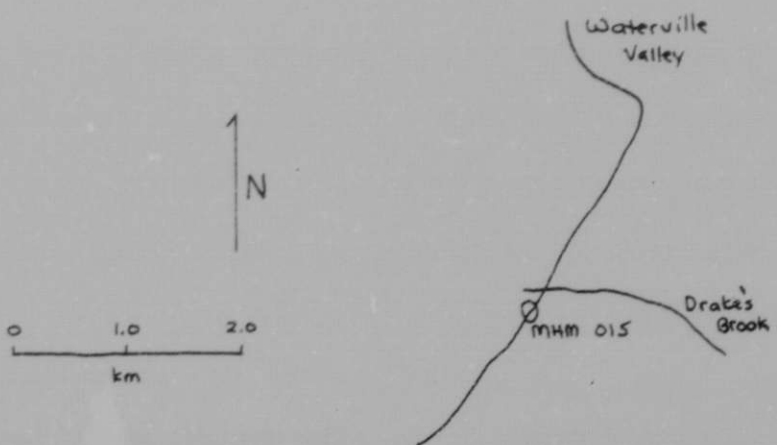
Meridian A81 < > Altitude A107 < 435 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Plymouth >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 20

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< accuracy > G7B< thousands of 1b. LB > G7C< years > G7D< grade % U308 >

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< accuracy > E1B< thousands of 1b. LB > E1C< year of est. > E1D< grade % U308 >

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 20

Deposit Form/Shape M10 < Plutonic Stock >

		FT/M
Length	M40 < >	M41 < >
Width	M50 < >	M51 < >
Thickness	M60 < >	M61 < >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 [circled]
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola batholith >

Local Structures N70 < >

Host-FM. Name U1 < White Mountains Magma Ser > Member U2 < Conway Granite >

Host Rock K1 < (Age) | M | Biotite granite

(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 20

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 23 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface Radioactivity 400 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3,1,0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 20

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 015	Granite Grid sample	23 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 21 >

Deposit Name A10 < Acteon Ridge >

Synonym Name(s) A11 < >

District or Area A30 <White Mountains >

Country A40 <U,S> [U,S] State New Hampshire

State Code A50 <3,3> [3,3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 <From Campton Upper Village, proceed up road that follows trend of Mad River and leads NE to Waterville Valley >

Field Checked G1 <7,9|1,0> By C2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 <4,3|5,5|1,2,N> Longitude A80 <0,7,1|3,2|2,2,W>
Deg Min Sec Deg Min Sec

Township A77 < | | | > N/S Range A78 < | | | > E/W Section A79 < | >

FT/M

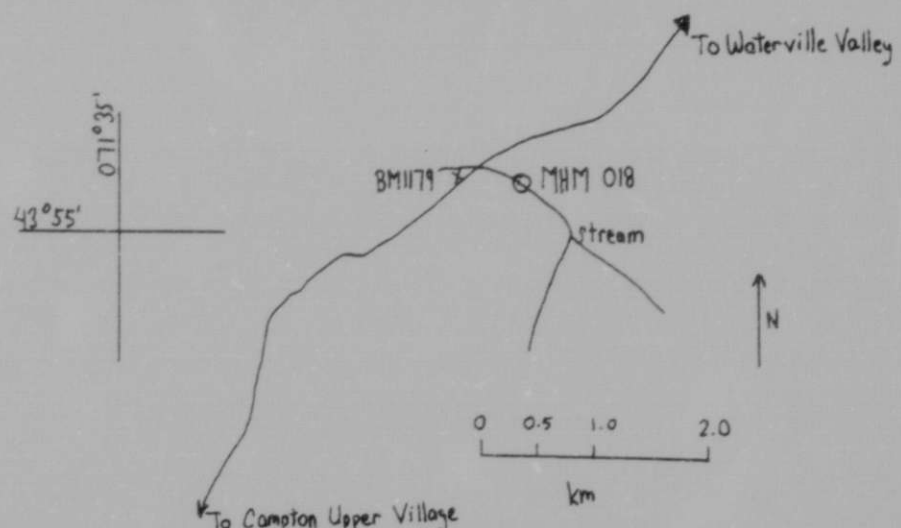
Meridian A81 < > Altitude A107 <410 m >

Quad Scale A91 <1,62500> Quad Name A92 <Plymouth >
(7½' or 15' quad)

Physiographic Province A63 <01| New England >
(List K)

Location Comments A83 < Continue past BM-1179 approximately .2 km when stream will intersect road. Follow stream SE uphill approximately 0.3 km. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 21

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 21

Deposit Form/Shape M10 < Plutonic stock >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < > FT/M

Thickness M60 < > M61 < > FT/M

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <

Local Structures N70 < Mad River Stock of White Mountain Magma Series >

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway Granite >

Host Rock K1 < E J U R | | | | | M medium-coarse grained, buff porphyritic biotite granite >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < igneous >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < no Uranium minerals observed >

Gangue Minerals K4 < none observed >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 21

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 30 ppm U_3O_8 >

Radiometric Data (General) U6 < BG varies 90-150 depending on presence of outcrop,
(No. times background and dimensions)
surface radioactivity (SR) 300-400 cps, mass effects boosts SR to 600. >

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3 1 0>

Comments on Geology N85 < This sample is part of a series of grid samples taken in the White Mountain Magma Series. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 21

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 018	Granite Grid Sample	30 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0 >

Deposit No. B40< 22 >

Deposit Name A10 < Welch Mountain Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 <U, S> |U, S| State New Hampshire

State Code A50 <3, 3> |3, 3| (Enter code twice from List D) County A60 < Grafton >

Position from Prominent Locality A82 < From Campton Upper Village proceed NE on road to Waterville Valley. Take turnoff to Six Mile Bridge. Approximately 0.25 km past bridge take trail leading to Welch Mountain Summit. >

Field Checked G1 <7, 9 | 0, 9> (Yr, Mo) By G2< Wagener (Last name), H. (First), D. (Initial) >

Latitude A70 <4, 3 | 5, 4 | 5, 0, N> (Deg, Min, Sec) Longitude A80 <0 7 1 | 3 4 | 3 6, W> (Deg, Min, Sec)

Township A77 < | , , | > (N/S) Range A78 < | , , | > (E/W) Section A79 < , >

FT/M

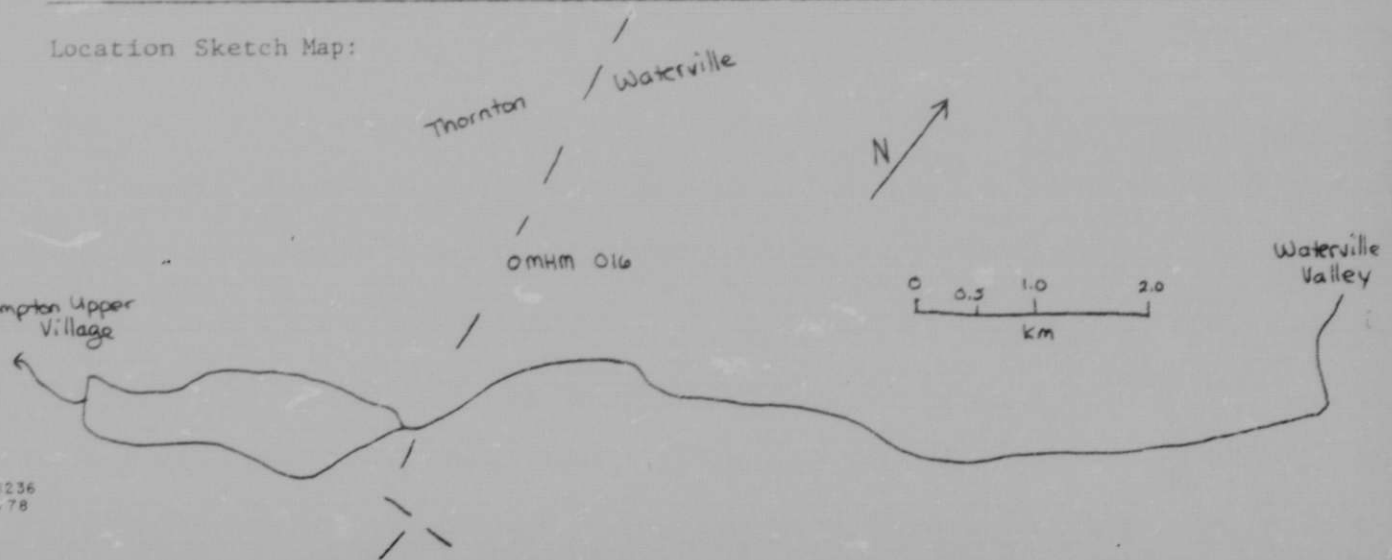
Meridian A81 < > Altitude A107 < 564 m >

Quad Scale A91 < | , 6 2 5 0 0 > (7½' or 15' quad) Quad Name A92 < Plymouth >

Physiographic Province A63 <0, 1> |New England (List K)

Location Comments A83 < >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 22

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 22

Deposit Form/Shape M10 < Plutonic Stock >

		FT/M
Length	M40 < >	M41< >
Width	M50 < >	M51< >
Thickness	M60 < >	M61< >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <Conway-Mt. Osceola batholith >

Local Structures N70 < >

Host-FM. Name U1 <White Mountain Magma Ser.> Member U2 <Conway granite & aplite>

Host Rock K1 < (Age) M Biotite granite and aplite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic > (Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 22

Alteration N75 < None observed >

Reductants U5 <

Analytical Data (General) C43 < 15 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of extensive bedrock
(No. times background and dimensions)
175-200 cps. At some points of water seepage, SR goes up to 400 cps. Swarms of aplite dikes (biotite aplite or fine-grained biotite granite) occur at the higher > *

Ore Controls K5 <

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3,1,0 >

Comments on Geology N85 <

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 22

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM C16	Granite grid sample - sample was ½ granite and ½ aplite from a point having surface radioactivity 400-500 cps	15 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 22

Continuation from p. 1-5:

Label

U6 < elevations, and have SR 300 to 500 cps. Anomalies of 500-1000 cps occur sporadically along strike in the dikes. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 23 >

Deposit Name A10 < Dickey Notch Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U, S > [U, S]

State New Hampshire

State Code A50 < 3 3 > [3 3]
(Enter code twice from List D)

County A60 < Grafton >

Position from Prominent Locality A82 < From Campton Upper Village proceed up road that follows trend of Mad River and that leads to Waterville Valley. >

Field Checked G1 < 7 9 | 1, 0 > By G2 < Wagener , L. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 4 | 5, 0, N > Longitude A80 < 0 7 1 | 3 5 | 4 2, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

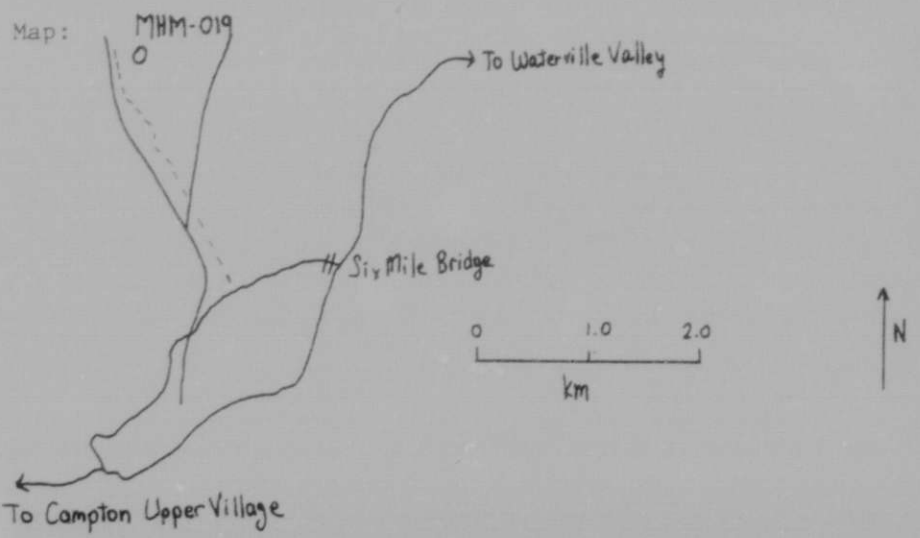
Meridian A81 < > Altitude A107 < 457 m >

Quad Scale A91 < 1, 6, 2, 5, 0, 0 > Quad Name A92 < Plymouth >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Take turnoff to Six Mile Bridge, cross bridge, and go 1 km further. Take dirt road trending NW for 1 km, then take trail for .3 km and then > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 23

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 23

Deposit Form/Shape M10 < plutonic stock >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 < White Mountains >

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Conway granite >

Host Rock K1 < E J U R | | | | | Ø Coarse-grained, light buff biotite granite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < no Uranium minerals observed >

Gangue Minerals K4 < none observed >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 23

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 26 ppm U308 >

Radiometric Data (General) U6 <BG varies 90-150 cps, surface radioactivity (SR)
(No. times background and dimensions)
300 to 375 cps >

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < This sample is part of a sampling grid >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 23

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 019	Grab sample from granite grid	26 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 23

Continuation from p. 1-5:

Label

A83 < head N to 457 m >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 24 >

Deposit Name A10 < Woodstock occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < I-93, 3.2 km north of Woodstock, New Hampshire >

Field Checked G1 < 7, 9 | 0, 8 > By G2 < McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 9 | 5, 4, N > Longitude A80 < 0, 7, 1 | 1, 0 | 7, 1, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

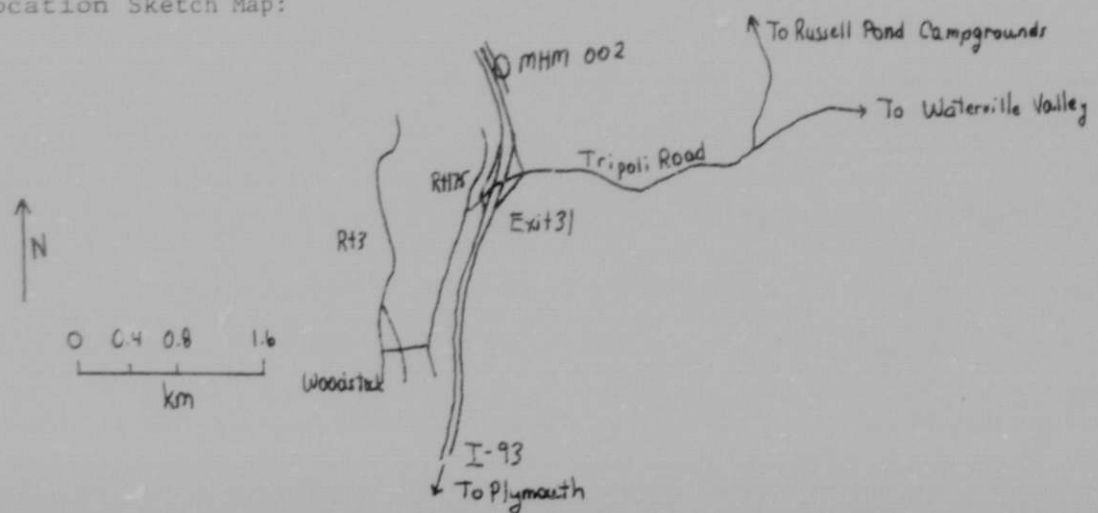
Meridian A81 < > Altitude A107 < 260 m >

Quad Scale A91 < 1, 6, 2, 5, 0, 0 > Quad Name A92 < Plymouth >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < 0.95 km north of Exit 31, north lane, east side, garnet-rich layer near pegmatite base >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 24

Commodities Present:
C10 <U T H B E G A R >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U B E >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 24

Deposit Form/Shape M10 < Thin, tabular sill at base of pegmatite >

Length M40 < 75 > M41 < FT/M > < M >

Width M50 < 15 > M51 < M >

Thickness M60 < .09 > M61 < M >

Strike M70 < NE(varies) >

Dip M80 < 10-20 >

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < mobile belt >

Major Regional Structures N5 <

Local Structures N70 <

Host-FM. Name U1 < Littleton > Member U2 < pegmatite >

Host Rock K1 < D E V (Age) | Multiple dike or sill of white (Rock type, texture, composition, color,

muscovite-quartz-microcline pegmatite with layers or zones of garnet and alteration, attitude, geometry, structure, etc.)

feldspars. Basal garnet layer (gravity cumulate?) is radioactive. >

Host-Rock Environment U3 < igneous intrusive >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Intrudes Littleton fm. shists >

Ore Minerals C30 < none observed >

Gangue Minerals K4 < garnet, quartz, muscovite, microcline >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 24

Alteration N75 < iron staining >

Reductants U5 < iron oxides >

Analytical Data (General) C43 < 150 ppm U_3O_8; 150 ppm Be >

Radiometric Data (General) U6 < 550-650cps (BG = 60) along 10 cm thick layer; 180 cps below (Littleton schist) and 150 cps above it (pegmatite). >
(No. times background and dimensions)

Ore Controls K5 < apparently gravity or flowage segregation involving radioactive minerals along with garnet >

Deposit Class C40 < pegmatite > Class No. U7 < 3 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

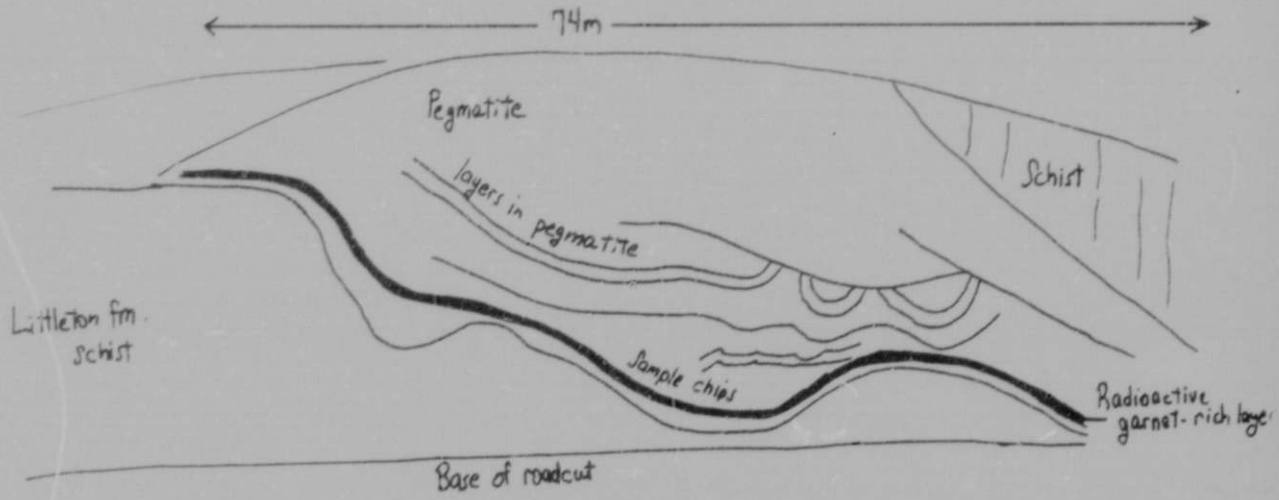
Quad Name Portland

Deposit No. 24

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 002	Chips along 10 cm thick zone (over 12 m)	150 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 < Moke, C. B., 1946, The Geology of the Plymouth Quadrangle, New Hampshire: Concord, NH Plan. Dev. Comm., 1:62,500. >

F2 < >

F3 < >

F4 < >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0,0 >

Deposit No. B40 < 25 >

Deposit Name A10 < Hancock Hairpin occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U,S > |U,S|

State New Hampshire

State Code A50 < 3,3 > |3,3|
(Enter code twice from List D)

County A60 < Grafton >

Position from Prominent Locality A82 < 14 km east of Lincoln, NH on Rt. 112 (Kancamagus Highway). >

Field Checked G1 < 7,9 | 0,8 > (Yr, Mo)

By G2 < McHone (Last name) J. Gregory (First Initial) >

Latitude A70 < 4,4 | 0,2 | 4,2 N > (Deg, Min, Sec)

Longitude A80 < 0,7,1 | 3,1 | 1,2 W > (Deg, Min, Sec)

Township A77 < | | | > N/S

Range A78 < | | | > E/W

Section A79 < | >

FT/M

Meridian A81 < >

Altitude A107 < 700 m >

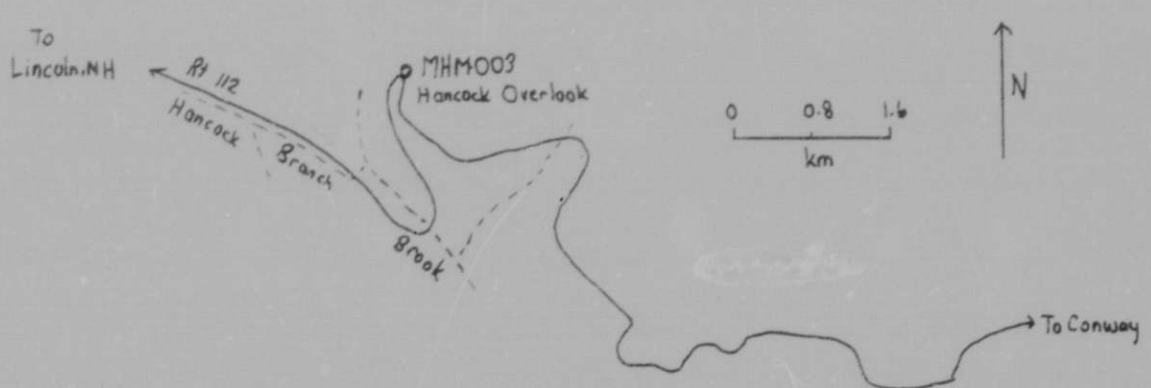
Quad Scale A91 < | | 2,4,0,0,0 > (7½' or 15' quad)

Quad Name A92 < Mt. Osceola >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Comments A83 < Road cut at Hancock Overlook, zone 1-2½m above ground about 32m from NW end of exposure. >

Location Sketch Map:



BFE 1236
4/19/78

Mt Osceola

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 25

Commodities Present:
C10 <U T H>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 25

Deposit Form/Shape M10 < Discontinuous lamellae and pods >

		FT/M	
Length	M40 < 1.2 >	M41 < M >	Size M15 (circle letter):
Width	M50 < 1 >	M51 < M >	1b U3O8
Thickness	M60 < 1 >	M61 < M >	(A) 0 - 20,000
Strike	M70 < 5 >		B 20,000 - 200,000
Dip	M80 < 35 W >		C 200,000 - 2 million
			D 2 million - 20 million
			E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < 40 deg and 90 deg fractures, major NE-trending structures outside of igneous bodies >

Local Structures N70 < 30 deg and 90 deg fractures in massive granite, many fractures 15 deg at Graham Wangan a few miles east of the Hairpin anomaly. >

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway Granite >

Host Rock K1 < E J U R (Age) | Medium to coarse, pink biotite granite, unfoliated (Rock type, texture, composition, color, with coarse biotite-rich zones, pods and thin lamellae which are more radioactive. alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < epizonal granite >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < The Conway granite near this anomaly is more radioactive than normal (see p.4). >

Ore Minerals C30 < biotite, allanite, zircon >

Gangue Minerals K4 < Quartz, microcline, opaques, fluorite (minor). >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 25

Alteration N75 < Some pinkish hydrothermal alteration (related to biotite enrichment) >

Reductants U5 < Minor sulfides and iron oxides. >

Analytical Data (General) C43 < Anomaly: 103 ppm U_3O_8, 150 ppm Ba; 150 ppm La; 300 ppm Y; 50 ppm Mo >

Radiometric Data (General) U6 < Anomaly:1000-1200 cps in 0.9-1.2m zone, drops rapidly to 350 cps (also Graham Wangan value). BG = 90-120 cps. Other biotite lamellae 1000-1500 cps over 2.5-7.5 cm veins. >
(No. times background and dimensions)

Ore Controls K5 < The correspondence of U and biotite supports a primary magmatic-hydrothermal fluid-rich phase, concentrating into late-magmatic pods and veins. >

Deposit Class C40 < Magmatic-Hydrothermal > Class No. U7 <3,3,0>

Comments on Geology N85 < The Conway biotite granite is the latest phase of the White Mountain magma series of alkalic magmas. It has been compared with the Bokan Mtn. granite. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 25

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 003	Chips along biotite-rich zone (1.2m long)	103 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2,5,0,0,0,0 >

Deposit No. B40 < 26 >

Deposit Name A10 < Graham Wangan Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < 14 km east of Lincoln, NH on Rte. 112 (Kancamagus Highway) >

Field Checked G1 < 7,9 | 0,9 > By G2 < McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4,4 | 0,7 | 4,2 N > Longitude A80 < 0,7,1 | 3,1 | 1,2 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

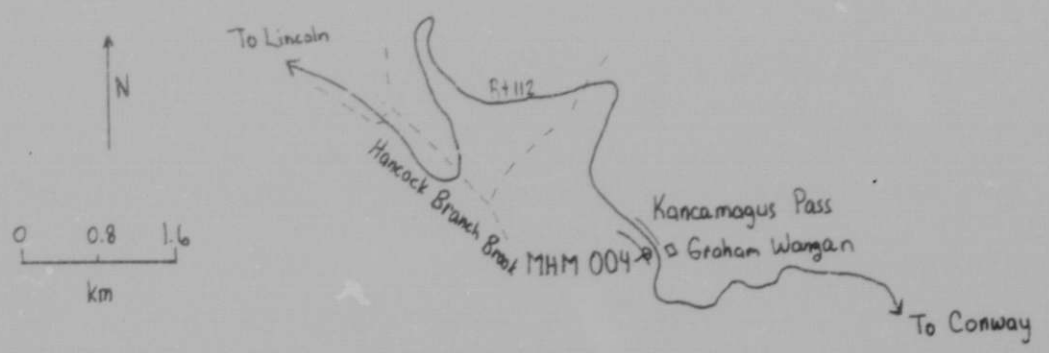
Meridian A81 < > Altitude A107 < 700 m >

Quad Scale A91 < , ,6,2,5,0,0 > Quad Name A92 < Crawford Notch >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < roadcut across from Graham Wangan just south of the Kancamagus Pass on the south side of the road. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 26

Commodities Present:
C10 <U TH>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 26

Deposit Form/Shape M10 < Discontinuous lamellae and pods. >

		FT/M		
Length	M40 < 1.2 >	M41 < M >	Size M15 (circle letter):	lb U308
Width	M50 < 1 >	M51 < M >		
Thickness	M60 < 1? >	M61 < M >	(A) 0 - 20,000	
Strike	M70 < 5 >		B 20,000 - 200,000	
Dip	M80 < 35W >		C 200,000 - 2 million	
			D 2 million - 20 million	
			E More than 20 million	

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < 40 deg. and 90 deg. fractures, major NE-trending structures outside of igneous bodies >

Local Structures N70 < 30 deg. and 90. deg. fractures in massive granite, many fractures 15 deg. >

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Conway granite >

Host Rock K1 < E J U P (Age) | Medium to coarse pink biotite granite, unfoliated, (Rock type, texture, composition, color, with coarse biotite-rich zones, pods and thin lamellae which are more radioactive. alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < epizonal granite >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < The Conway granite near this anomaly is more radioactive than normal >

Ore Minerals C30 < Biotite, allanite, zircon >

Gangue Minerals K4 < Quartz, microcline, opaques, fluorite (minor) >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 26

Alteration N75 < Some pinkish hydrothermal alteration (related to biotite enrichment)

Reductants U5 < Minor sulfides and iron oxides

Analytical Data (General) C43 < 31 ppm U_3O_8; 150 ppm Ba; 200 ppm La; 200 ppm Y; 1,000 ppm Zr.

Radiometric Data (General) U6 < 1000-1200 cps in .9-1.2m zone, drops rapidly to
(No. times background and dimensions)
350 cps, B6 90-120 cps, other biotite lamellae 1000-1500 cps over 2.5-7.5 cm veins.

Ore Controls K5 < The correspondence of U and biotite supports a primary magmatic-hydrothermal fluid-rich phase, concentrating into late-magmatic pods and veins.

Deposit Class C40 < Magmatic-Hydrothermal > Class No. U7 < 3,3,0 >

Comments on Geology N85 < The Conway biotite granite is the latest phase of the White Mountain Magma Series of alkalic magmas. It has been compared with the Bokan Mountain granite.

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 26

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 004	Chips along 9 m section of roadcut	31 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1 , 2 5 0 0 0 0 >

Deposit No. B40< 27 >

Deposit Name A10 < Mad River Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U S > [U S] State New Hampshire

State Code A50 < 3 3 > [3 3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Waterville Valley, travel east on the Livermore Rd.. After passing two houses, take the road heading north to Flume Brook. Follow the road until it turns to a trail. >

Field Checked G1 < 7 9 | 1 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 5 9 | 0 9 N > Longitude A80 < 0 7 1 | 2 9 | 5 2 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

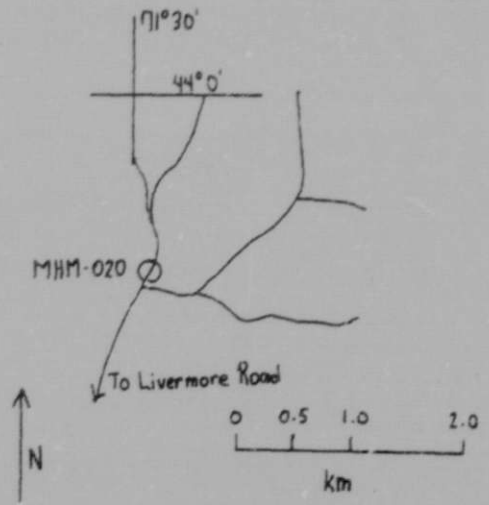
Meridian A81 < > Altitude A107 < 550 m >

Quad Scale A91 < 1 : 6 2 5 0 0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < Take the northern trail to the Mad River >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 27

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 27

Deposit Form/Shape M10 < Plutonic stock >

	FT/M		FT/M
Length M40	< >	M41	< >
Width M50	< >	M51	< >
Thickness M60	< >	M61	< >
Strike M70	< >		
Dip M80	< >		

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway - Mt. Osceola Batholith >

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser? > Member U2 < Conway Granite >

Host Rock K1 < E J U R | | | | | M Fine grained, light pink, porphyritic >
(Age) (Rock type, texture, composition, color,

biotite granite - low Color Index
alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 27

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 18 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 250 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 27

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 020	Grab sample for granite sampling grid	18 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 28 >

Deposit Name A10 < Flume Trail Occurrence >

Synonym Name(s) A11 < >

District or Area A?0 < >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Waterville Valley travel east on the Livermore Rd. After passing two houses take the road leading north to Flume Brook. Follow the road until it turns to the Flume Trail. >

Field Checked G1 < 7, 9 | 1, 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 9 | 0, 3, N > Longitude A80 < 0, 7, 1 | 2, 9 | 5, 2, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

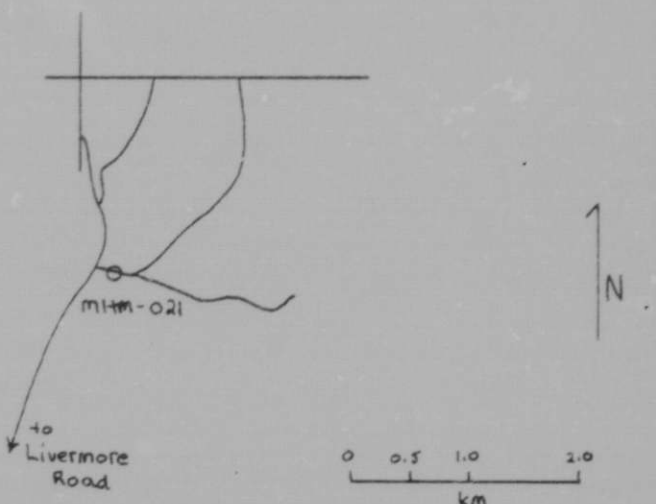
Meridian A81 < > Altitude A107 < 550 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 28

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

Comments E8 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 28

Deposit Form/Shape M10 < Plutonic stock >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway - Mt. Osceola Batholith >

Local Structures N70 < >

Host-FM. Name U1 < White Mountain Magma Ser? > Member U2 < Conway Granite >

Host Rock K1 < E J U R | M Medium to coarse grained blue porphyritic alkalic granite >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic >

(Sed. dep. environ., metamorphic facies, ign environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 23

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 16 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 250 cps.
(No. times background and dimensions) >

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3,1,0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 28

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 021	Grab sample for Conway Granite sampling grid	16 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 29 >

Deposit Name A10 < Rob Brook Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] (Enter code twice from List D) County A60 < Carroll >

Position from Prominent Locality A82 < Go 1.4 km north on Bear Notch Rd. from the intersection with the Kancamagus Highway, then turn NE on to Birch Hill Rd. Travel 3.4 km until road crosses stream. >

Field Checked G1 < 7,9 | 1,0 > (Yr, Mo) By G2 < Stone (Last name), Tom (First Initial) >

Latitude A70 < 4,4 (Deg) | 0,0 (Min) | 5,5, N (Sec) > Longitude A80 < 0,7,1 (Deg) | 2,1 (Min) | 2,0, W (Sec) >

Township A77 < | | (N/S) > Range A78 < | | (E/W) > Section A79 < | >

FT/M

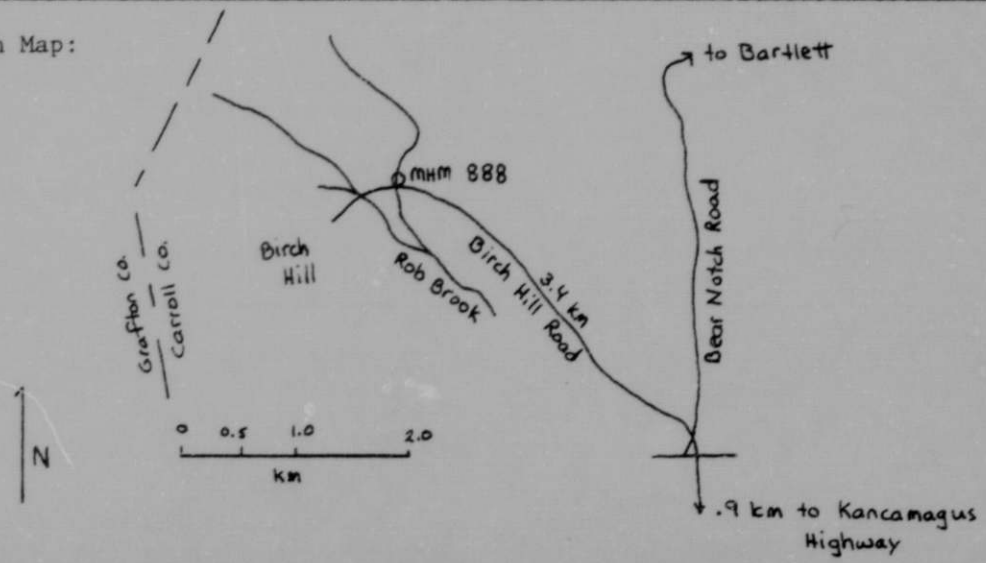
Meridian A81 < > Altitude A107 < 400 m >

Quad Scale A91 < 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Crawford Notch >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Comments A83 < On north side of road in stream bed there are exfoliation slabs. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 29

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 29

Deposit Form/Shape M10 < Plutonic stock >

		FT/M
Length	M40 < >	M41 < >
Width	M50 < >	M51 < >
Thickness	M60 < >	M61 < >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway - Mt. Osceola Batholith >

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser> Member U2 < Conway Granite >

Host Rock K1 < JURB Medium grained buff biotite granite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 29

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 27 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 325 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3.1.0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 29

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 388	Granite sample for Conway Granite sampling grid	27 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 30 >

Deposit Name A10 < Potash Mountain Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Grafton >
(Enter code twice from List D)

Position from Prominent Locality A82 < Traveling west on the Kancamagus Highway, go through Passaconaway and continue approximately 2.6 km to Downe's Brook. Potash Mountain is to the SW of the intersection of the Kancamagus > *

Field Checked G1 < 7,9 | 1,0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,9 | 0,0 | N > Longitude A80 < 0,7,1 | 2,3 | 1,9 | W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

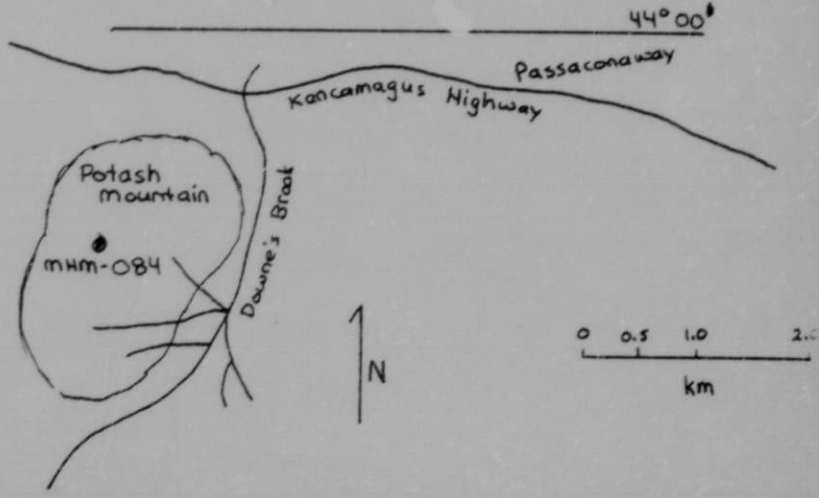
Meridian A81 < > Altitude A107 < 732 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < MHM 084 is directly N of the mountain peak on the north slope at 732 m elevation >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 30

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 30

Deposit Form/Shape M10 < Plutonic stock >

	FT/M		FT/M
Length M40	< >	M41	< >
Width M50	< >	M51	< >
Thickness M60	< >	M61	< >
Strike M70	< >		
Dip M80	< >		

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway - Mt. Osceola Batholith >

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser? > Member U2 < Conway Granite >

Host Rock K1 < E J U R | | | | | Ø | Medium to coarse grained buff porphyritic biotite granite >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 30

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 19 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 450 to 600 cps, BG 150 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3,1,0>

Comments on Geology N85 < >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 30

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MH1 084	Grab sample as part of sampling grid of Conway	
	Granite	19 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 30

Continuation from p. 1-5:

Label

A82 < Highway and of Downe's Brook. >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 31 >

Deposit Name A10 < Passaconaway Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains National Forest >

Country A40 <U,S> [U,S] State < New Hampshire >

State Code A50 <3,3> [3,3] (Enter code twice from List D) County A60 < Carroll >

Position from Prominent Locality A82 < South of Passaconaway, off of the Kancamagus Highway approximately 16 km west of Conway >

Field Checked G1 <7,9|1,0> (Yr Mo) By G2< Stone (Last name), Tom (First Initial) >

Latitude A70 <4,3|5,9|2,6,N> (Deg Min Sec) Longitude A80 <0,7,1|2,0|1,0,W> (Deg Min Sec)

Township A77 < | | | > (N/S) Range A78 < | | | > (E/W) Section A79 < | | >

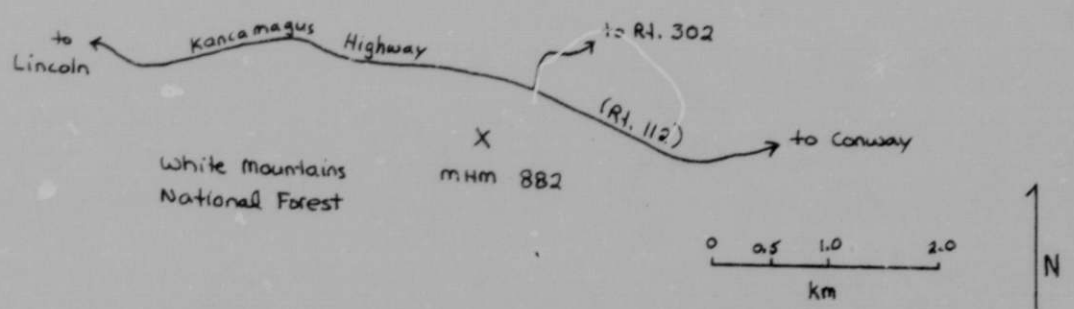
Meridian A81 < > Altitude A107 < 294 m > FT/M

Quad Scale A91 <1,6,2,5,0,0> (7½' or 15' quad) Quad Name A92 < Mt. Chocorua >

Physiographic Province A6? <0,1| New England > (List K)

Location Comments A83 < South on dirt road 0.55 km west of Bear Notch Road and the Kancamagus Highway intersection; ledge with sample locality 0.39 km south on >*

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 31

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 31

Deposit Form/Shape M10 < Plutonic stock >

Length M40 <____> M41 <____> FT/M

Width M50 <____> M51 <____>

Thickness M60 <____> M61 <____>

Strike M70 <____>

Dip M80 <____>

Size M15 (circle letter): 1b U308

A 0 - 20,000
B 20,000 - 200.000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway- Mt. Osceola batholith >

Local Structures N70 <____>

Host-FM. Name U1 <White Mountain Magma Ser.> Member U2 <Conway granite >

Host Rock K1 <JURA | Coarse to very coarse grained, buff colored
(Age) (Rock type, texture, composition, color,

biotite granite
alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <____>

Ore Minerals C30 < None observed >

Gangue Minerals K4 <Smoky quartz, apatite, biotite, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 31

Alteration N75 < Slightly weathered >

Reductants U5 < Iron sulfides >

Analytical Data (General) C43 < 18 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 90-100 cps; granite two times BG; sample site 225 cps; surrounding rock 185-250 cps >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Orthomagmatic > Class No. U7 <3,1,0>

Comments on Geology N85 <Ledge drilled and blasted, sample taken near cored area >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 31

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 882	Granite grid sample	18 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 31

Continuation from p. 1-5:

Label

A83 < dirt road and to SW of road >

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 32 >

Deposit Name A10 < Champney Falls Trail Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains National Forest >

Country A40 <U, S> |U, S| State New Hampshire

State Code A50 <3, 3> |3, 3| County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < South of the Kancamagus Highway about 14km west of Conway, on the Champney Falls Trail >

Field Checked G1 <7, 9 | 1, 0> By G2< Stone , Tom >
Yr Mo Last name First Initial

Latitude A70 <4, 3 - 5, 9 - 0, 8, N> Longitude A80 <0, 7, 1 - 1, 7 - 3, 3, W>
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

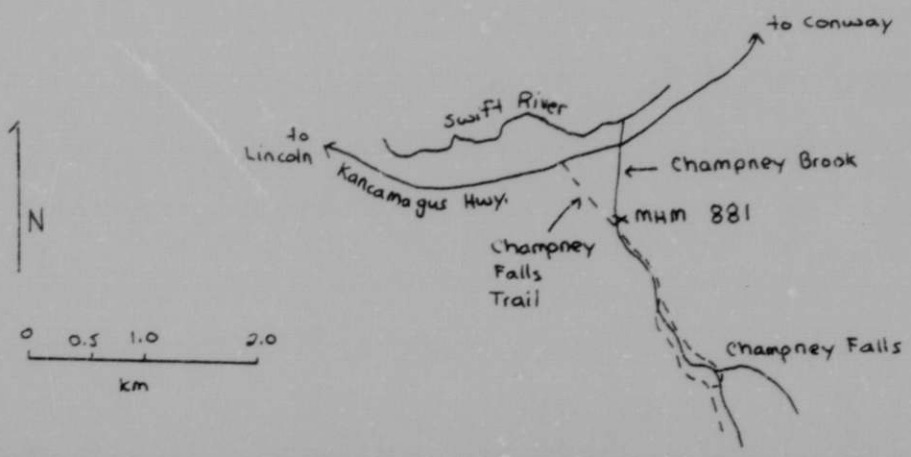
Meridian A81 < > Altitude A107 < 420 m >

Quad Scale A91 < | , 6, 2, 5, 0, 0> Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 <0, 1 | New England >
(List K)

Location Comments A83 < 0.7 km south on Champney Falls Trail to Champney Brook, sample taken from low bedrock exposure that crosses brook >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 32

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 32

Deposit Form/Shape M10 < Plutonic stock >

Length M40 <_____> M41 (FT/M) <____>

Width M50 <_____> M51 <____>

Thickness M60 <_____> M61 <____>

Strike M70 <_____>

Dip M80 <_____>

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola Batholith >

Local Structures N70 <_____>

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway Granite >

Host Rock K1 < E J U R | | | | | M Coarse grained, buff colored, biotite granite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <_____>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Smoky quartz, biotite, greenish feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 32

Alteration N75 < Slightly weathered >

Reductants U5 < Iron sulfides >

Analytical Data (General) C43 < 19 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 225 to 250 cps, one reading of 400 cps probably due to mass effect >
(No. times background and dimensions)

Ore Controls K5 <>

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 <>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 32

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 881	Granite grid sample	19 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 33 >

Deposit Name A10 < Oliverian Brook Trail >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3 3 > [3 3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < Approximately 0.8 km west of Passaconaway on the Kancamagus Highway, take the Oliverian Brook Trail south. Go past the Passaconaway cut-off and continue approximately 2.0 km. >

Field Checked G1 < 7 9 | 1 0 > By G2< Stone , Tom >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 5 7 | 1 5 | N > Longitude A80 < 0 7 1 | 2 1 | 0 8 | W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

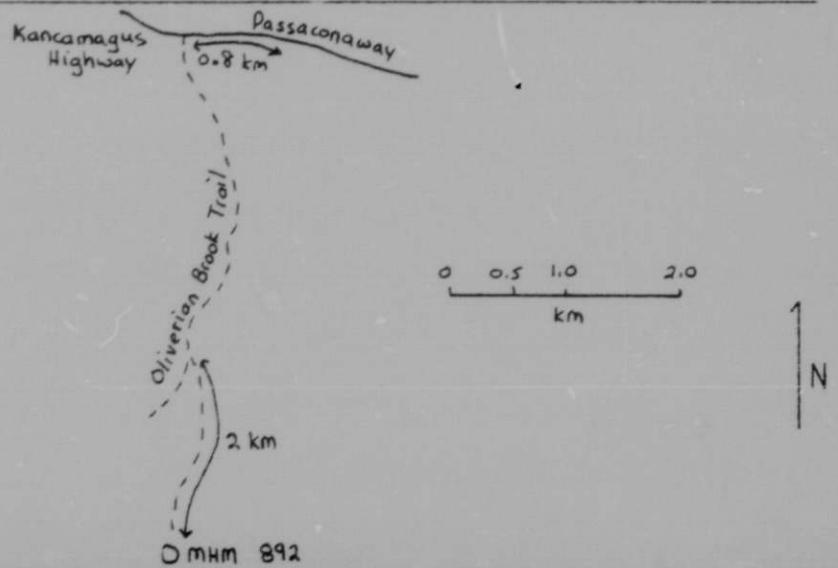
Meridian A81 < > Altitude A107 < 520 m >

Quad Scale A91 < 6 2 5 0 0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < Outcrop is in the center of the brook >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 33

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) A22 (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES NO SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 33

Deposit Form/Shape M10 < Plutonic stock >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

A 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < White Mountains

>

Local Structures N70 <

>

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway granite >

Host Rock K1 < E J U R | B Fractured, coarse to pegmatoid, red biotite granite >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

>

Host-Rock Environment U3 < Plutonic >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks J4 <

>

Ore Minerals C30 < None observed

>

Gangue Minerals K4 < Quartz, feldspar, biotite

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 33

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 32 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity 375-500cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3.1.0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 33

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 892	Sample from Conway grid sampling	32 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1 , 2 5 0 0 0 0 >

Deposit No. B40< 34 >

Deposit Name A10 < Mount Osceola #2 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains National Forest >

Country A40 < U , S > U , S

State New Hampshire

State Code A50 < 3 3 > 3 3
(Enter code twice from List D)

County A60 < Carroll >

Position from Prominent Locality A82 < Take Route 113A west from Wonalancet; then take Chocorua Lake Road north about 1.1 km, and then take dirt road north to Paugus Mill. >

Field Checked G1 < 7 9 | 1 0 > By G2< Wagener , H.D. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 5 7 | 1 1 , N > Longitude A80 < 0 7 1 | 1 3 | 2 3 , W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

Meridian A81 < > Altitude A107 < 480 m >

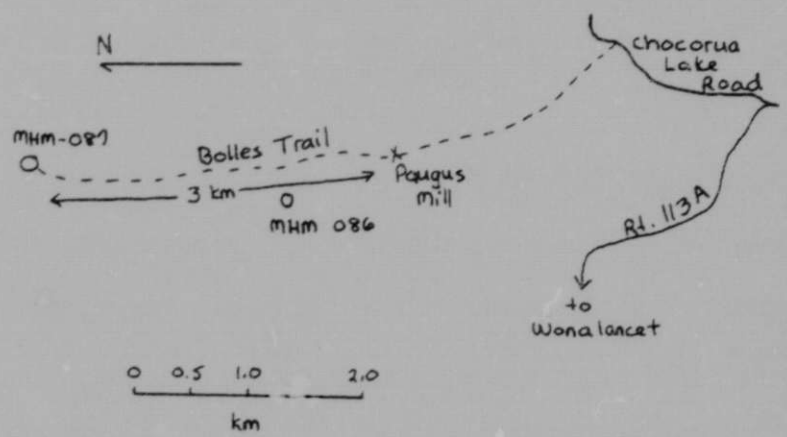
Quad Scale A91 < | | 6 2 5 0 0 >
(7½' or 15' quad)

Quad Name A92 < Mt. Chocorua >

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < From Paugus Mill Road take the Bolles Trail north approximately 3 km >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 34

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 34

Deposit Form/Shape M10 < Plutonic stock >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < White Mountains

>

Local Structures N70 <

>

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Mt. Osceola granite >

Host Rock K1 < E J U R (Age) | K | Medium to coarse grained, homogeneous alkalic granite with light brown feldspar, little quartz and a greenish tinge around the weathering rind. (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Feldspar, quartz >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 34

Alteration N75 < Weathered, with a greenish tinge around the weathering rind. >

Reductants U5 < >

Analytical Data (General) C43 < 23 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) = 300 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3.1.0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 34

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 310	Grab sample from granite exposure	23 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 35 >

Deposit Name A10 < Wonalancet Stock >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < About 24 km north of Lake Winnipesaukee >

Field Checked G1 < 7,9 | 0,8 > By G2 < McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,5 | 2,5 N > Longitude A80 < 0,7,1 | 2,2 | 0,0 W >
Deg Min Sec Deg Min Sec

Township A77 < | N/S Range A78 < | E/W Section A79 < >

FT/M

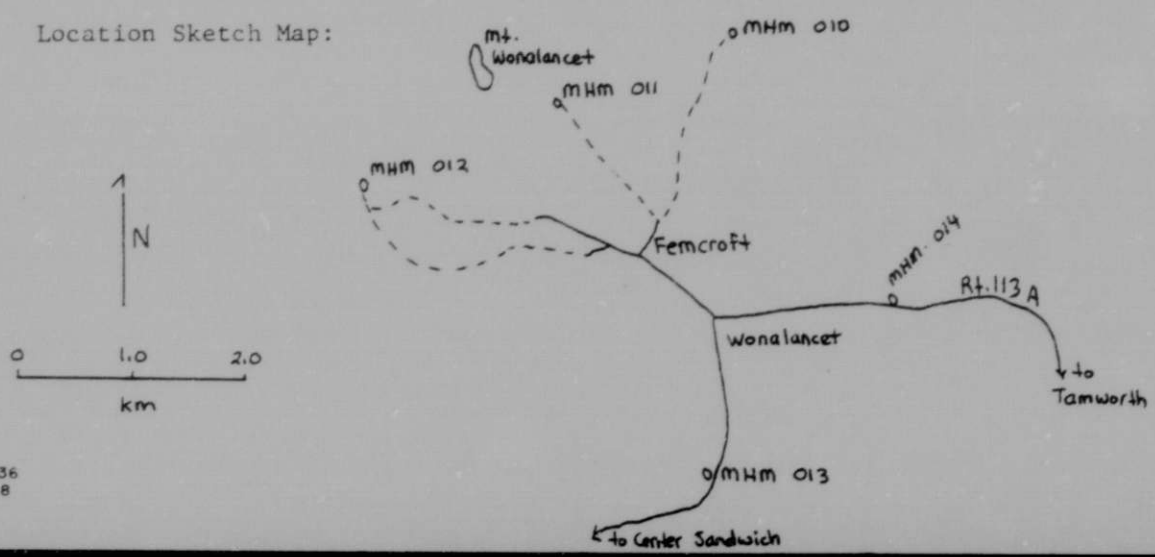
Meridian A81 < > Altitude A107 < 540 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Five samples taken within the Wonalancet stock of Conway granite - see map. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 35

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

Comments E8 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 35

Deposit Form/Shape M10 < Plutonic Stock >

		FT/M		
Length	M40 < 7.60 >	M41	< km >	Size M15 (circle letter): 1b U308
Width	M50 < 5.50 >	M51	< km >	
Thickness	M60 < >	M61	< >	(A) 0 - 20,000 B 20,000 - 200,000 C 200,000 - 2 million D 2 million - 20 million E More than 20 million
Strike	M70 < >			
Dip	M80 < >			

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola batholith

>

Local Structures N70 <

>

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway Granite >

Host Rock K1 < E J U R | M | Medium grained pinkish biotite granite >
(Age) (Rock type, texture, composition, color,

alteration, attitude, geometry, structure, etc.)

>

Host-Rock Environment U3 < Igneous (epizonal plutonic) >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on
Associated Rocks U4 < Surrounded by Mt. Osceola hornblende granite, Passaconaway syenite, and Littleton Fm. schists

>

Ore Minerals C30 < Biotite(?); allanite(?)

>

Gangue Minerals K4 < Biotite, quartz, microcline

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No. 35

Alteration N75 < Minor hematitic staining; MHM 010 slightly weathered >

Reductants U5 < Minor sulfides >

Analytical Data (General) C43 < >

Radiometric Data (General) U6 < 150-280 cps (BG = 80 - 100 cps); varies mainly by
(No. times background and dimensions)
presence or absence of nearby outcrops >

Ore Controls K5 < Primary igneous processes (hydrothermal concentrations of biotite and/or other uranium-bearing minerals) >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3,1,0>

Comments on Geology N85 < Surprisingly uraniferous considering only moderate radioactivity (for Conway granite). Variance of analyses suggests zoning of uranium, unless weathering has lowered it in some samples (MHM 010?) - note that the two streambed exposures (freshest rock?) are highest in uranium. >

URANIUM-OCCURRENCE REPORT

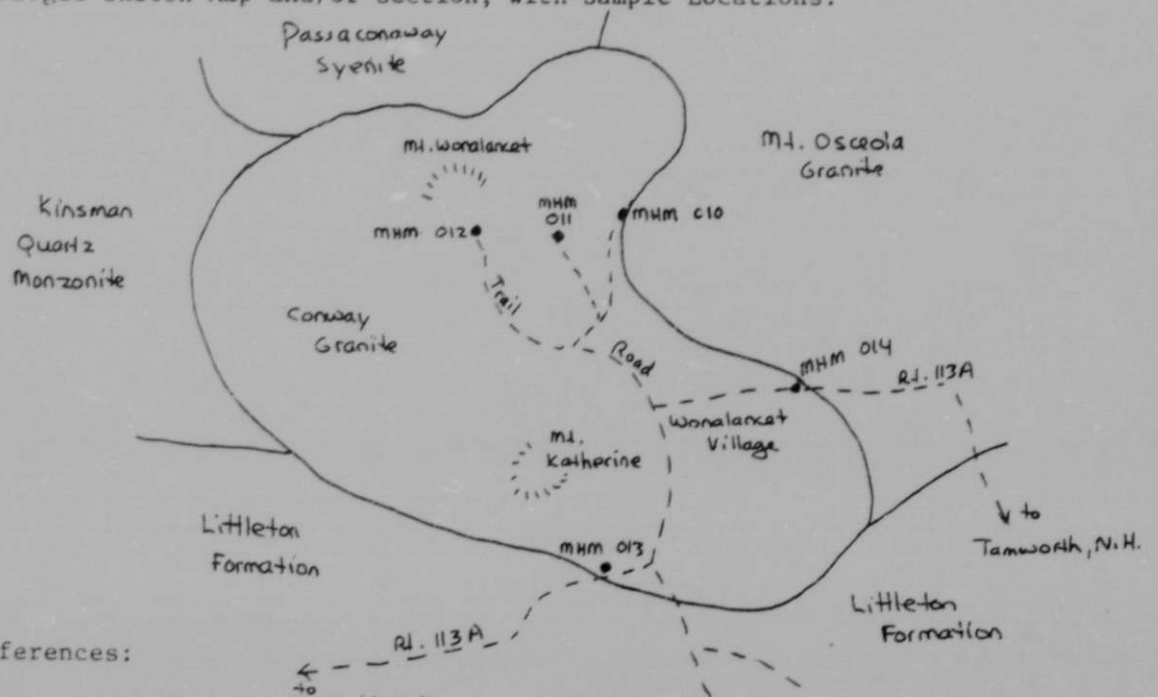
Quad Name Portland

Deposit No. 35

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 010	Detrital boulders in roadcut, SW borders	13 ppm U_3O_8
MHM 011	Streambed exposure, NE border	17 ppm U_3O_8
MHM 012	Trail ledge in woods, east-central	12 ppm U_3O_8
MHM 013	Trail ledge in woods, north-central	1 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 < Smith, A. P., Kingsley, Louise, and Quinn, A. W., 1939, Geology of the Mt. Chocorua quadrangle, New Hampshire: N.H. Plan. and Devel. Comm., Concord.>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 36 >

Deposit Name A10 < Mt. Osceola #1 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < Take Rte. 113A east from Wonalancet then take Chocorua Lake Road North about 1.1 km. Then take dirt road north to Paugus Mill. >

Field Checked G1 < 7, 9 | 1, 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 5 | 5, 7, N > Longitude A80 < 0, 7, 1 | 1, 8 | 3, 0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

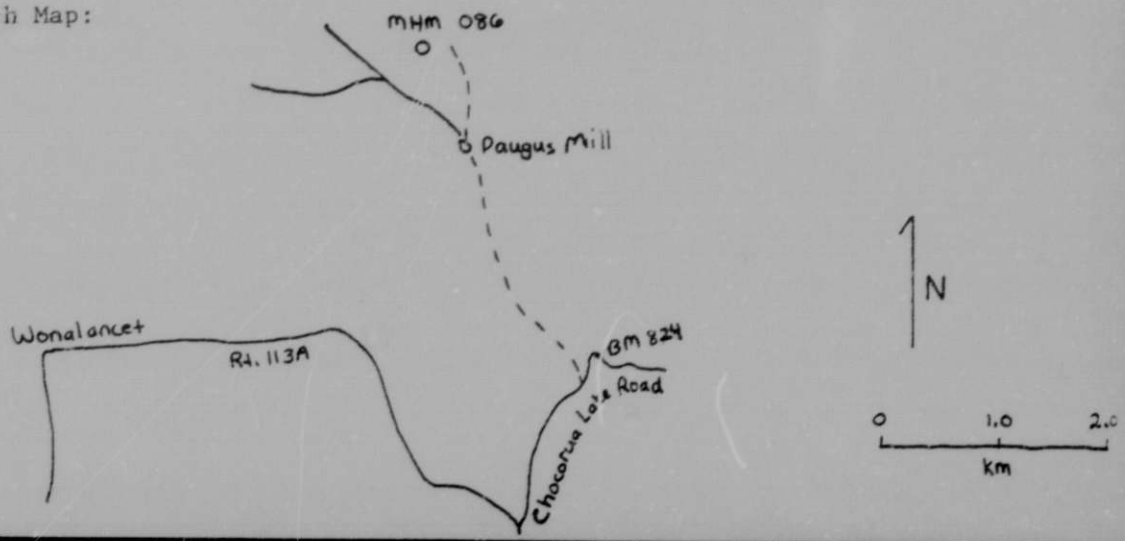
Meridian A81 < > Altitude A107 < 455 m >

Quad Scale A91 < 6, 2, 5, 0, 0 > Quad Name A92 < Mount Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < From Paugus Mill head due NNW up small knoll that is SW of Mount Paugus >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 36

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 36

Deposit Form/Shape M10 < Plutonic stock >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < > FT/M

Thickness M60 < > M61 < > FT/M

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola batholith >

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Mount Osceola Granite >

Host Rock K1 < E,J,U,R (Age) | M Medium-coarse grained homogeneous (Rock type, texture, composition, color, alkalic granite with brown feldspar and smoky quartz alceration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Feldspar, smoky quartz >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 36

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < >

Radiometric Data (General) U6 < Surface radioactivity (SR) 300 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 36

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 036	Grab sample of sampling grid of Mount Osceola Granite	19 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0 >

Deposit No. B40< 37 >

Deposit Name A10 < Wonalancet Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U,S > |U,S| State New Hampshire

State Code A50 < 3,3 > |3,3| County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 <About 24km north of Lake Winnipesaukee

>

Field Checked G1 < 7,9 | 0,8 > By G2< McHone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,4 | 3,5 , N > Longitude A80 < 0,7,1 | 1,9 | 5,1 , W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

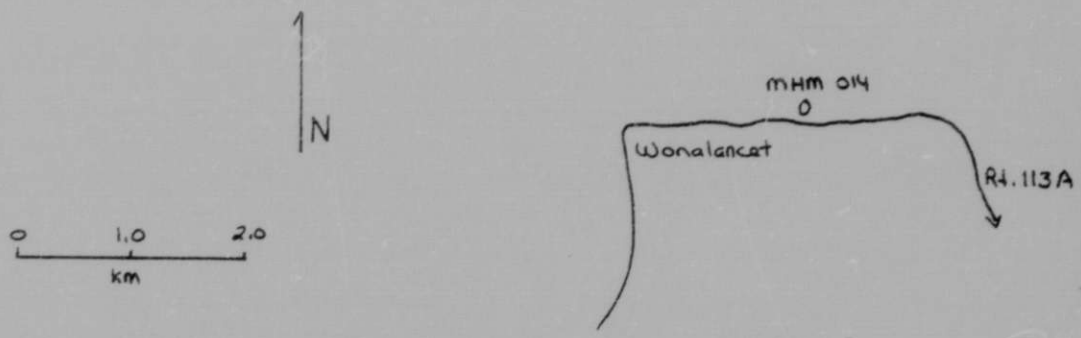
Meridian A81 < > Altitude A107 < 360 m >

Quad Scale A91 < | | 6,2,5,0,0 > Quad Name A92 < Mt. Chocorua >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Stream bed exposure east of Wonalancet on north side of Rte 113A. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 37

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 37

Deposit Form/Shape M10 < Plutonic stock >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola batholith >

Local Structures N70 < >

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway Granite >

Host Rock K1 < E J U R | M | Medium grained, pinkish biotite granite
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Igneous (epizonal pluton) >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < Biotite(?) Allanite(?) >

Gangue Minerals K4 < Biotite, quartz, microcline >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 37

Alteration N75 < Minor hematite staining >

Reductants U5 < >

Analytical Data (General) C43 < 20 ppm U_3O_8 >

Radiometric Data (General) U6 < 150-280 cps BG 80-100 cps >
(No. times background and dimensions)

Ore Controls K5 < Primary igneous process (hydrothermal concentrations of biotite and/or other uranium bearing minerals) >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 37

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 014	Streambed exposure	20 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 < Smith, A. P., Kingsley, Louise and Quinn, A. W., 1939, Geology of the Mt. Chocorua Quadrangle, New Hampshire: New Hampshire Planning and Development > *

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 37

Continuation from p. 1-5:

Label

Fl < Commission, Concord. >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100 < 2 5 0 0 0 0 >

Deposit No. B40< 38 >

Deposit Name A10 < Lower Falls Occurrence >

Synonym Name(s) A11 < >

District or Area A30 <White Mountain National Forest >

Country A40 < U S > U S

State New Hampshire

State Code A50 < 3 3 > 3 3 (Enter code twice from List D)

County A60 < Carroll >

Position from Prominent Locality A82 < About 10 km WNW of Conway, N.H. >

Field Checked G1 < 7 9 0 8 > (Yr Mo) By G2< McHone , J. Gregory > (Last name, First Initial)

Latitude A70 < 4 4 0 0 5 5 N > (Deg Min Sec)

Longitude A80 < 0 7 1 1 4 4 9 W > (Deg Min Sec)

Township A77 < | N/S

Range A78 < | E/W

Section A79 < >

Meridian A81 < > Altitude A107 < 300 m > FT/M

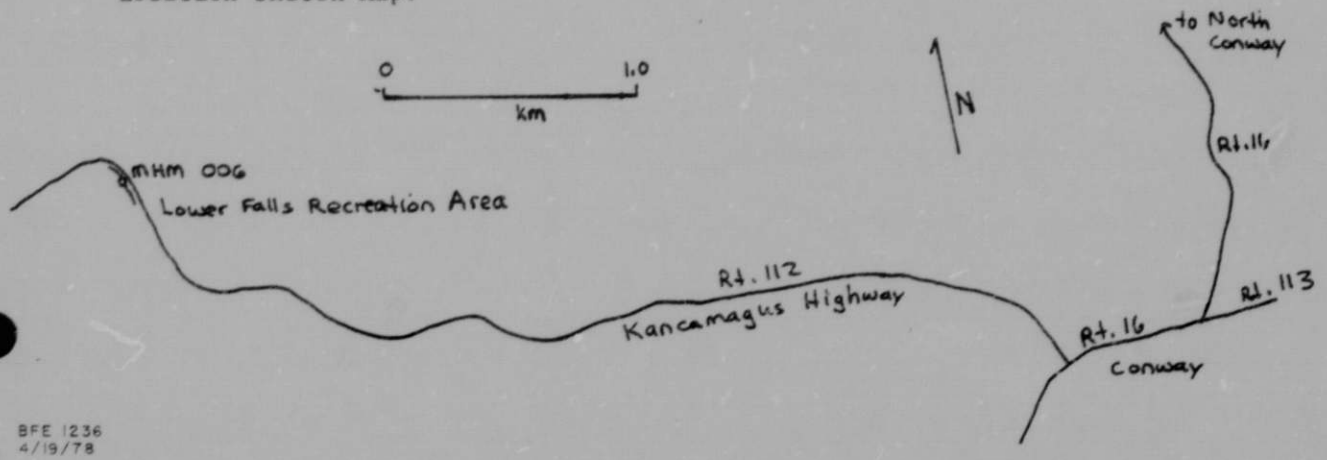
Quad Scale A91 < 6 2 5 0 0 > (7½' or 15' quad)

Quad Name A92 < North Conway >

Physiographic Province A63 < 01 | New England > (List K)

Location Comments A83 < Sampled in chips along roadcut west of parking lot, Lower Falls Recreation Area >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 38

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 38

Deposit Form/Shape M10 < Discordant Pluton >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Northeasterly faults, fractures, and folds (the Merrimack synclinorium). >

Local Structures N70 < Northeasterly fractures >

Host-FM. Name U1 < White Mountain Magma Ser. Member U2 < Albany syenite >

Host Rock K1 < E J U R | | | | | | M Pink medium-grained porphyritic quartz-biotite-orthoclase syenite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Epizonal Plutonic (igneous) >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Mount Osceola and Conway granite plutons are less than 3.1 km west and northwest of the sample site. The site is in the southeast part of the White Mountain batholith. >

Ore Minerals C30 < >

Gangue Minerals K4 < >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 38

Alteration N75 < Minor iron staining >

Reductants U5 < Minor primary sulfides >

Analytical Data (General) C43 < 28 ppm U_3O_8; 300 ppm La; 5 ppm Mo; 70 ppm Y; 200 ppm Zr. >

Radiometric Data (General) U6 < The roadcut is uniformly 350-400 cps (BG = 110) (No. times background and dimensions) over a 60m length. >

Ore Controls K5 < Probably authigenic (primary) uranium-bearing minerals (allanite, biotite, zircon). Visible fractures had no influence on the radioactivity, nor are there any pods or veins of radioactive biotite as in the Conway granite. >

Deposit Class C40 < Authigenic > Class No. U7 <3 6 0>

Comments on Geology N85 < The highly uraniferous nature of this syenite makes it a good candidate for allogenic deposits, despite the lack of any such occurrences in this outcrop. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 38

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 006	Chips along 15m length of 60m roadcut	28 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 39 >

Deposit Name A10 < Nickerson Ledge Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains National Forest >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < 9 km west of Conway on Rt. 16, west on Piper Trail 1.6 km, sample from uppermost portion of Nickerson Ledge 90 m NE of Piper Trail. >

Field Checked G1 < 7, 9 | 1, 0 > By G2 < Stone , Tom >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 6 | 0, 0, N > Longitude A80 < 0, 7, 1 | 1, 4 | 3, 5, W >
Deg Min Sec Deg Min Sec

Township A77 < | , , | > N/S Range A78 < | , , | > E/W Section A79 < | , >

FT/M

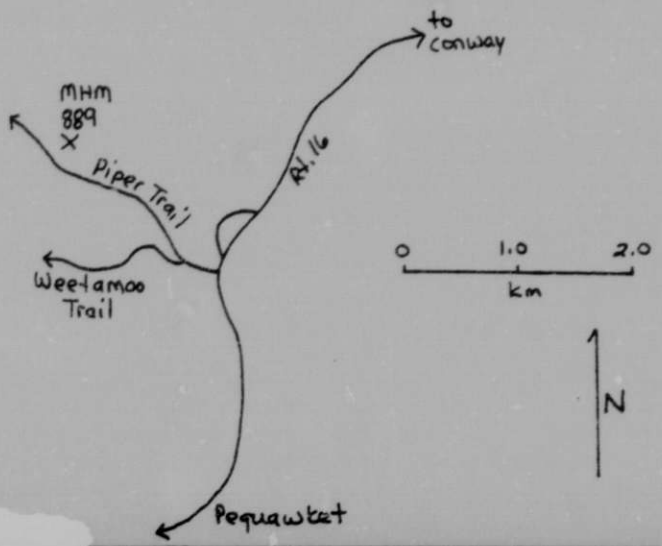
Meridian A81 < > Altitude A107 < 365 m >

Quad Scale A91 < | , , 6, 2, 5, 0, 0 > Quad Name A92 < Ossipee Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Sample from slabby outcrop 90 m NE of Piper Trail >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 39

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPRCD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> accuracy G7A< > thousands of lb. G7B<LB> G7C< > years G7D< > grade % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
E1<U> accuracy E1A< > thousands of lb. E1B<LB> E1C< > year of est. E1D< > grade % U308>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No. 39

Deposit Form/Shape M10 < Plutonic stock >

		FT/M
Length	M40 < >	M41< >
Width	M50 < >	M51< >
Thickness	M60 < >	M61< >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 (circled)
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola batholith >

Local Structures N70 < >

Host-FM. Name U1 <White Mountain Magma Ser> Member U2 < Conway Granite >

Host Rock K1 <E J U R | | | | | |M| Coarse-grained buff granite
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, quartz, feldspar >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 39

Alteration N75 < None observed >

Reductants U5 < None observed >

Analytical Data (General) C43 < 19 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 100-125 cps rocks 250-320, 400 cps >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3.1.0 >

Comments on Geology N85 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 39

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 889	Grab sample as part of sampling grid of Conway Granite	19 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 40 >

Deposit Name A10 < Band M Ledge Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U , S > | U , S | State New Hampshire

State Code A50 < 3 3 > | 3 3 | County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < On Rte. 16 west of Albany take quarry road and then take trail leading due S. MHM 088 is in small quarry on small knoll to the east of the quarry. >

Field Checked G1 < 7 9 | 1 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 5 7 | 1 8 N > Longitude A80 < 0 7 1 | 0 9 | 4 5 W >
Deg Min Sec Deg Min Sec

Township A77 < | , , | > Range A78 < | , , | > Section A79 < | , >
N/S E/W

FT/M

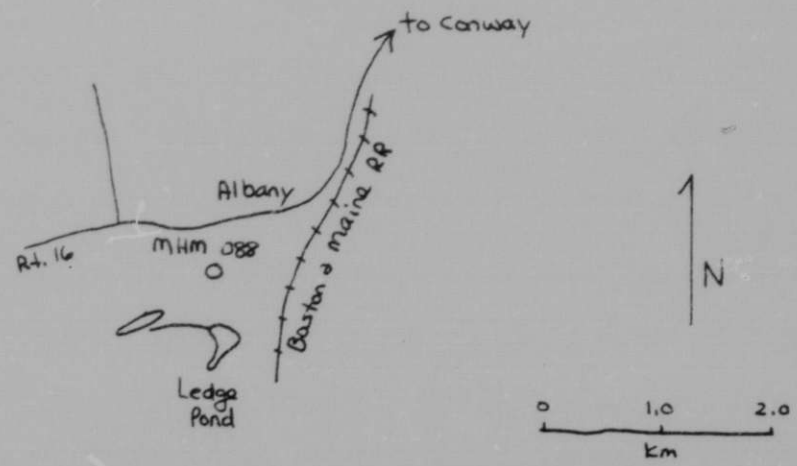
Meridian A81 < > Altitude A107 < 190 m >

Quad Scale A91 < | , , 6, 2, 5, 0, 0 > Quad Name A92 < Ossipee Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 40

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 < >

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> accuracy G7A< > thousands of lb. G7B<LB> G7C< > years G7D< > grade % U308

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
E1<U> accuracy E1A< > thousands of lb. E1B<LB> E1C< > year of est. E1D< > grade % U308

Source of Information D7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 40

Deposit Form/Shape M10 < Plutonic Stock >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U_3O_8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Conway-Mt. Osceola Batholith >

Local Structures N70 < >

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Conway Granite >

Host Rock K1 < E J U R | b Coarse-grained homogeneous light pinkish buff biotite granite

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < None observed >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 40

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 22 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) in quarry 400-500, in larger
(No. times background and dimensions)
quarry to the west SR 300-450 except for SR 550 along one zone enriched in quartz
and this rock is a deeper pink than at 088 quarry. >

Ore Controls K5 < >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3,1,0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 40

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 088	Grab sample as part of Conway granite sampling grid	22 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 41 >

Deposit Name A10 < Chase Hill Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Conway >

Country A40 < U, S > [U, S] State New Hampshire

State Code A50 < 3, 3 > [3, 3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < South side of Bald Hill Road, 1.2 km west of intersection with Rts. 16 and 113, west of Conway >

Field Checked G1 < 7, 9 | 1, 0 > By G2< Stone , Tom >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 8 | 2, 4, N > Longitude A80 < 0, 7, 1 | 0, 9 | 0, 8, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

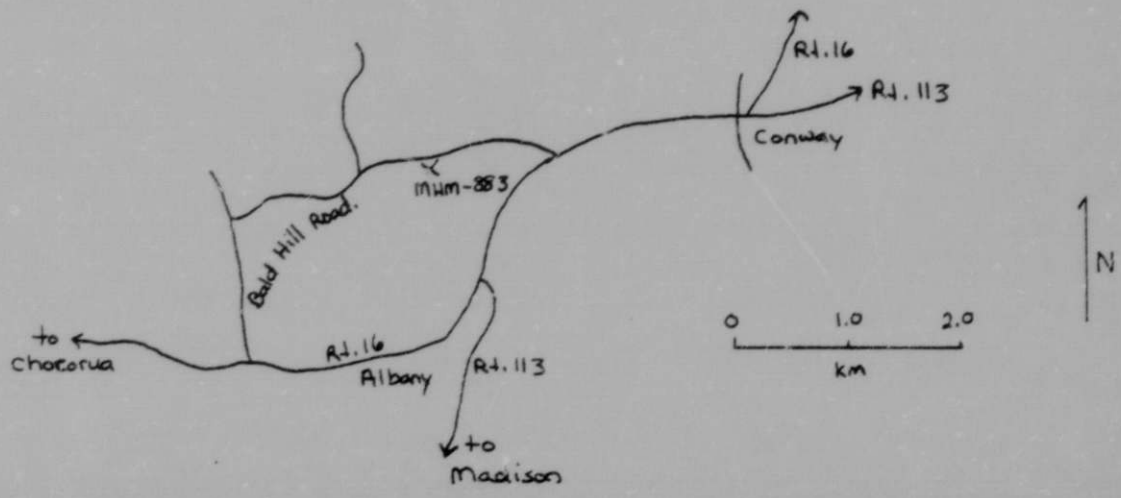
Meridian A81 < > Altitude A107 < 216 m >

Quad Scale A91 < 6, 2, 5, 0, 0 > Ouad Name A92 < Ossipee Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Sample from roadcut on south side of Bald Hill Road, exposure on both sides of it but majority is on south side. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 41

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <>

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7 <U> accuracy G7A < > thousands of lb. G7B<LB> G7C< > years G7D< > grade % U3O8

Source of Information D9 <>

Production Comments D10 <>

Reserves and Potential Resources

EH
E1 <U> accuracy E1A < > thousands of lb. E1B<LB> E1C < > year of est. E1D< > grade % U3O8

Source of Information E7 <>

Comments E8 <>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 41

Deposit Form/Shape M10 < Plutonic stock >

Length M40 < > FT/M M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <

Local Structures N70 <

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Two-mica granite >

Host Rock K1 < L D E V M Coarse-grained biotite-muscovite granite >
(Age) (Rock type, texture, composition, color,

alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Igneous >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, biotite, feldspar, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 41

Alteration N75 < None observed >

Reductants U5 < None observed >

Analytical Data (General) C43 < 16 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 125 cps, rocks up to twice BG, rocks 225-270 cps >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 1 0 >

Comments on Geology N85 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 41

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 883	Granite grid sample	16 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 42 >

Deposit Name A10 < Conway Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < White Mountains >

Country A40 < U,S > [U,S] State New Hampshire

State Code A50 < 3,3 > [3,3] County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < North of Conway, NH >

Field Checked G1 < 7 9 | 0 8 > By G2< McIlone , J. Gregory >
Yr Mo Last name First Initial

Latitude A70 < 4 4 | 0 0 | 0 4 N > Longitude A80 < 0 7 1 | 0 6 | 3 8 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

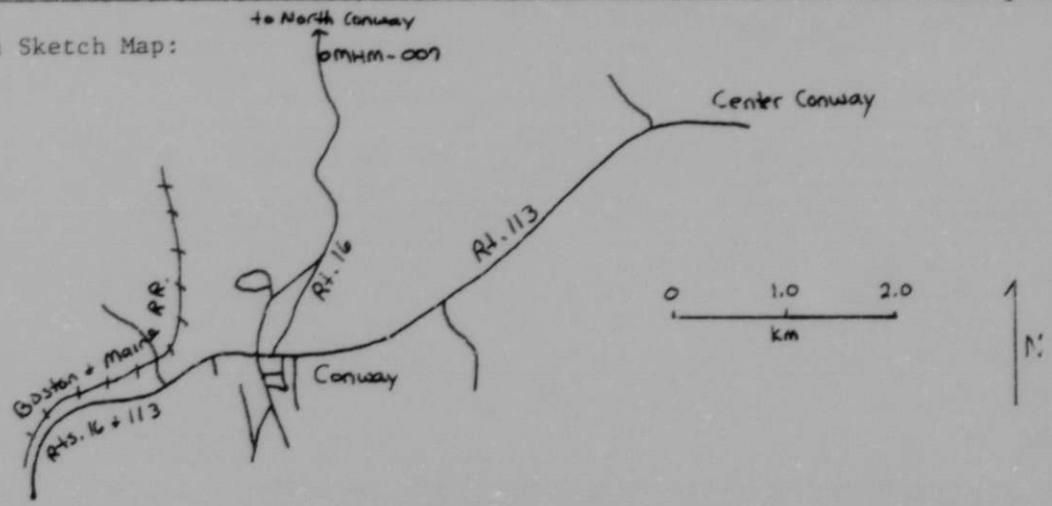
Meridian A81 < > Altitude A107 < 150 m >

Quad Scale A91 < 6 2 5 0 0 > Quad Name A92 < North Conway >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < East side of Rt. 16, 2.8 km north of intersection with 113 in Conway, NH. Northernmost of 3 outcrops in roadcut adjacent to Hitching Post >*

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 42

Commodities Present:
C10 ◁ U | TH | NB | LA | Y | | | | ▷

Commodities Produced:
MAJOR ◁ | | | ▷ COPROD ◁ | | ▷

MINOR ◁ | | | ▷ BYPROD ◁ | | ▷

Potential Commodities:
POTEN ◁ | | ▷ OCCUR ◁ U | LA | NB ▷ *

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2

G7◁ U | accuracy ▷ G7A◁ thousands of lb. ▷ G7B<LB> G7C< years > G7D< grade % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH

E1◁ U | accuracy ▷ E1A◁ thousands of lb. ▷ E1B<LB> E1C◁ year of est. ▷ E1D< grade % U308>

Source of Information E7 < >

Comments E8 < >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 42

Deposit Form/Shape M10 <

Length M40 < 1 > M41 < m > (FT/M)

Width M50 < 0.3 > M51 < m >

Thickness M60 < 1 > M61 < m >

Strike M70 < 90 >

Dip M80 < 47 S >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Occurrence within the Merrimack Synclinorium, northeasterly faults, fractures and folds are pervasive in the region >

Local Structures N70 < Scattered 30 deg and 90 deg fractures in massive granite >

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Conway granite >

Host Rock K1 < E,J,U,R, , , , , , W Medium to coarse-grained pink biotite granite; black shear or lamellae is radioactive, contains quartz, biotite (?) >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Epizonal granite >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Wilson (1969) shows a small Devonian 2-mica granite pluton just east of this occurrence. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, biotite, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 42

Alteration N75 < Minor hematitic staining >

Reductants U5 < None observed >

Analytical Data (General) C43 < 110 ppm U_3O_8, 500 ppm LA, 300 ppm NB, 700 ppm Y, 700 ppm ZR, 10 ppm MO >

Radiometric Data (General) U6 < Granite 300 cps, surface radioactivity (SR) to (No. times background and dimensions) 550 cps over a 3 cm band; traceable only across 0.6 m x 0.75 m dimension of outcrop >

Ore Controls K5 < Infilling silicified fracture; late degassing (F,CL,H2O) of granite may be responsible for U/Th migration into fracture >

Deposit Class C40 <Magmatic-hydrothermal > Class No. U7 <3,3,0>

Comments on Geology N85 < Silicified vein, probably with disseminated pitchblende, in a high uranium type A granite (often compared with Bokan Mountain). May also qualify as class 350 or class 360. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 42

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 007	Chips along zone, containing dark band and 2cm - 8cm of adjacent rock	110 ppm U_3O_8

Geologic Sk[illegible] Map and/or Section, with Sample Locations:

References:

F1 < Wilson, J.R., 1969, The geology of the Ossipee Lake quadrangle, New Hampshire: N.H. Dept. Res. Econ. Dev., Bull.3, 115 p. >

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name Portland

Deposit No. 42

Continuation from p. 1-5:

Label

A83 < Motel. >

C10 < OCCUR < TH Y > >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 43 >

Deposit Name A10 < Redstone Quarry Core >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U , S > | U , S | State New Hampshire

State Code A50 < 3 3 > | 3 , 3 | County A60 < Carroll >
(Enter code twice from List D)

Position from Prominent Locality A82 < South of N. Conway, N.H., east on Rt. 302 to Redstone and Redstone Quarry (0.62 km), cores taken from this quarry >

Field Checked G1 < 7 9 | 0 9 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 4 | 0 1 | 1 0 N > Longitude A80 < 0 7 1 | 0 5 | 5 1 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

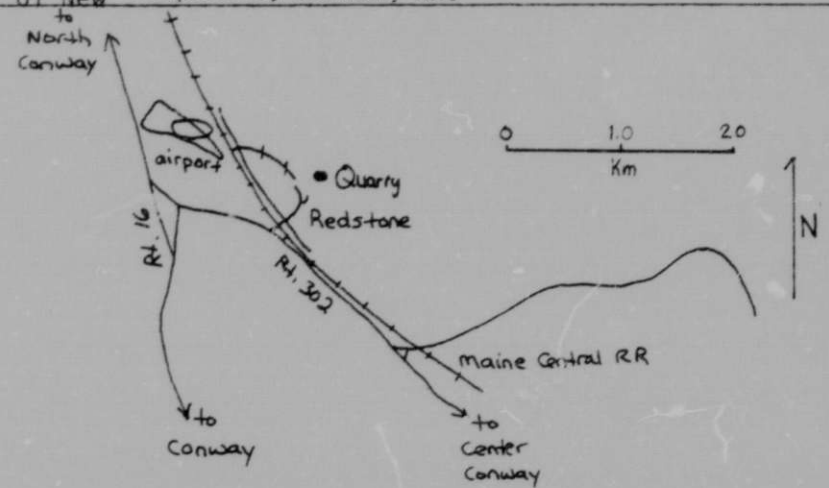
Meridian A81 < > Altitude A107 < 195 m >

Quad Scale A91 < | , 6, 2, 5, 0, 0 > Quad Name A92 < North Conway >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < The 900 m core is stored at the Department of Earth Sciences, the University of New Hampshire, Durham, NH. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 43

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 43

Deposit Form/Shape M10 < 10 core samples >

		FT/M
Length	M40 < >	M41 < >
Width	M50 < >	M51 < >
Thickness	M60 < >	M61 < >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter):

lb U3O8

- (A) 0 - 20,000 (circled)
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Southern edge of White Mountain Batholith >

Local Structures N70 < Steeply dipping quartz-filled fractures and breccia zones in granite. >

Host-FM. Name U1 < White Mountain Magma Ser > Member U2 < Conway Granite >

Host Rock K1 < E J U R | | | | | | | M see page 6
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) > *

Host-Rock Environment U3 < Plutonic >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, muscovite, biotite, epidote, calcite, chlorite >

BFE 1256
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 43

Alteration M75 < Deuteric or later hydrothermal alteration has produced vuggy (miarolitic) zones of sericiticized feldspar, in which epidote and chlorite replace mafic minerals, and calcite replaces quartz. >

Reductants U5 <

Analytical Data (General) C43 < Samples MHM 807 to 817 range from 3 ppm U_3O_8 and 22 ppm U_3O_8 to 37 ppm U_3O_8, see page 5 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of granite in Redstone Quarry 400 to 550 cps >
(No. times background and dimensions)

Ore Controls K5 < Magmatic differentiation and hydrothermal alteration along steeply dipping tensile fractures. >

Deposit Class C40 < Orthomagmatic > Class No. U7 <3 1 0>

Comments on Geology N85 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 43

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 807	Core sample *	28 ppm U_3O_8
MHM 808	Core sample *	32 ppm U_3O_8
MHM 809	Core sample *	22 ppm U_3O_8
MHM 810	Core sample *	22 ppm U_3O_8
MHM 811	Core sample *	23 ppm U_3O_8
MHM 812	Core sample *	25 ppm U_3O_8
MHM 813	Core sample *	23 ppm U_3O_8
MHM 814	Core sample *	37 ppm U_3O_8
MHM 815	Core sample *	22 ppm U_3O_8
MHM 816	Core sample *	24 ppm U_3O_8
MHM 817	Core sample *	3 ppm U_3O_8

*See p.6

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

F2 <

F3 <

F4 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 43

Continuation from p. 1-5:

Label

K1 <

Sample	Length	Position In Core	Petrography
MHM 807	9 cm	355.25 m	Coarse-grained gray-white biotite granite
MHM 808	9 cm	364.55 m	Coarse-grained gray-white biotite granite with vuggy segregations of partly graphic pegmatoid rock. Euhedra of quartz, feldspar and epidote (?) project into the vugs and are partly coated with chlorite (?). Feldspar in graphic intergrowths is pinkish.
MHM 809	10 cm	417.15 m	Altered coarse-grained biotite or biotite-hornblende granite with pinkish buff feldspars. Mafic minerals altered to chlorite (?). Thin seam of pink feldspar with minor quartz cuts one corner of specimen. There may be a good bit of epidote.
MHM 810	7.6 cm	422.32 m	Coarse-grained buff biotite granite.
MHM 811	7.6 cm	472.86 m	Altered coarse-grained light buff biotite granite with minute vugs along steeply dipping fractures. Biotite altered to chlorite. Vugs may be a function of drilling (removal of chlorite and sericite from fractures).
MHM 812	7.6 cm	531.40 m	Coarse-grained "red" biotite granite. Feldspar is precisely salmon pink. The coloration does not appear to be the result of alteration. Microfractures are filled with black or dark green material.
MHM 813	7.6 cm	538.42 m	Altered coarse-grained biotite granite. Feldspars are pink to buff and appear to have been argillized or sericitized. Mafic minerals have gone to epidote, and epidote-like staining occurs as spots in the feldspars. Small vugs occur here and there, and appear to be solution cavities, rather than miaroles.
MHM 814	7.6 cm	541.36 m	Thoroughly altered coarse-grained granite, full of vugs that appear to be both solution pits and miarolitic cavities. Epidote and calcite are prominent secondary minerals. Calcite has replaced much of the quartz. Feldspar is buff-pink.
MHM 815	7.6 cm	580.87 m	Coarse-grained, pink, quartz-rich biotite granite.
MHM 816	7.6 cm	666.55 m	Coarse-grained gray-white biotite granite.
MHM 817	7.6 m	915.31 m	Altered medium to fine-grained pink-and-white granite or adamellite. Sulphidic and stained with limonite. Flakes of molybdenite (?) observed. Green staining mixed with the brown. Minute quartz-filled fractures. >

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 44 >

Deposit Name A10 < Starks Mountain Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Fryeburg >

Country A40 < U , S > | U , S |

State Maine

State Code A50 < 2, 3 > 2 3 |
(Enter code twice from List D)

County A60 < Oxford >

Position from Prominent Locality A82 < 0.8km NE of intersection of Highway 302 and road to Tibbets Mountain (in Brownfield Quadrangle), east of Highway 302 in railroad cut (Maine Central RR). >

Field Checked G1 < 7, 8 | 1, 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 4 | 0, 0 | 2, 8, N > Longitude A80 < 0, 7, 0 | 5, 9 | 1, 5, W >
Deg Min Sec Deg Min Sec

Township A77 < | , , | > Range A78 < | , , | > Section A79 < , | >
N/S E/W

FT/M

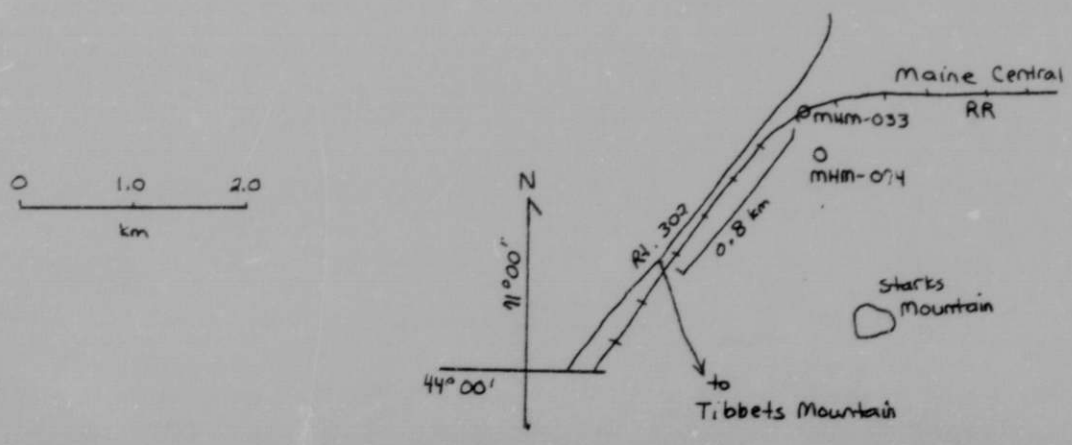
Meridian A81 < > Altitude A107 < 140m >

Quad Scale A91 < , , 2, 4, 0, 0, 0 > Quad Name A92 < Fryeburg >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Cut in bedrock in curve of railroad around N end of Starks Mountain is immediately adjacent to parking lot of Northland Shoe Company, inside > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 44

Commodities Present:
C10 <U M N>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U M N>

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< accuracy thousands of 1b. > G7B<LB> G7C< years > G7D< grade % U308>

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
E1< U > E1A< accuracy thousands of 1b. > E1B<LB> E1C< year of est. > E1D< grade % U308>

Source of Information E7 <

Comments E8 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 44

Deposit Form/Shape M10 < _______________ >

		FT/M
Length	M40 < ______ >	M41< ___ >
Width	M50 < ______ >	M51< ___ >
Thickness	M60 < ______ >	M61< ___ >
Strike	M70 < ______ >	
Dip	M80 < ______ >	

Size M15 (circle letter):

lb U308

(A) 0 - 20,000 [circled]
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake batholithic sheet >

Local Structures N70 < Pegmatite dikes in granite are vertical to horizontal >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V | M Medium-coarse-grained gray two-mica granite
(Age) (Rock type, texture, composition, color,
cut by pegmatite and basaltic dikes. (Pink spots occur at 500 cps anomalies in
alteration, attitude, geometry, structure, etc.)
ledges sampled for specimen MHM 074 >

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < _______________ >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 44

Alteration N75 < None observed at MHM 033; hematitic staining of feldspars occurs at MHM 074. >

Reductants U5 < >

Analytical Data (General) C43 < 10 ppm U_3O_8 for sample MHM 033 and 54 ppm U_3O_8 for sample MHM 074, 1000 ppm MN for sample MHM 074 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of blasted bedrock 150 to 350 cps; 275 cps at collection point. (SR at 074 300-500 cps; BG 150 over bedrock and 75 in woods). >
(No. times background and dimensions)

Ore Controls K5 < Igneous differentiation >

Deposit Class C40 < Orthomagmatic > Class No. U7 < 3 4 0 >

Comments on Geology N85 < This specimen was collected outside of the Portland Quadrangle because of the scarcity of rock exposures in the Saco River Valley. Most roadcuts in this region are in sand. NOTE: Uphill from the RR cut, on the northwestern slopes of Starks Mountain, granite and pegmatite are profusely exposed as flat rock and quarried ledges. Well-defined variations of radioactivity and > *

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 44

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 033	Grab sample of granite	10 ppm U_3O_8
MHM 074	Chip sample along edges of ledges having SR 300-500	54 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 44

Continuation from p. 1-5:

Label

N85 < lithology are exposed. Horizons having the lower radioactivities have surface radioactivities of around 150 cps, and consist of medium-grained, gray-white, two-mica granite. The more radioactive horizons are coarser-grained, pinkish, and sparkle in sunlight because of a greater abundance of muscovite. Surface radioactivities in these horizons vary commonly from 150 to 325 cps. One ledge along a small quarried face had 300 to 500 cps. In another ledge, a spot anomaly of 300 to 550 cps about 0.5m across was associated with, but not restricted to, biotite-rich schlieren. Horizontal gradational changes in radioactivity occur within the more radioactive horizons. As usually within these horizons, radioactivities decrease abruptly in pegmatite.

The contact between the more and less radioactive phases was exposed near the top of one quarried face (the one closest to the block pile below a bunker of some sort with pipe lines in it), but I failed to study it. As I recall, it was a fairly sharp contact. We may be dealing with multiple intrusions, rather than repetitive vertically differentiated layers.

The top of Starks Mountain consists of a thick horizontal pegmatite at background. BG = app .

Specimen MHM 074 taken from the quarried ledge. This little quarry is immediately N of an underground pipeline vault. Dirt road (trail) leads up the mountain to this vault, from the place where the dashed road east of 033 RR cut used to cross the RR. Sighting on the 135 deg azimuth from the quarry to the dirt road, one finds exposed bedrock in ditch beside road, and in just the right place (on the azimuth), the SR of the bedrock increases from 200 to 300 cps. BG is 150 on bedrock and 75 in woods. >

A83 < Fryeburg town limit. Specimen came from central portion of cut. >

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 45 >

Deposit Name A10 < Haley Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Fryeburg >

Country A40 < U , S > | U , S | State Maine

State Code A50 < 2 3 > | 2 3 | County A60 < Oxford >
(Enter code twice from List D)

Position from Prominent Locality A82 < 2km south of intersection with Highway 302, on Tibbetts Mountain Road >

Field Checked G1 < 7 8 | 1 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 3 | 5 9 | 1 4 N > Longitude A80 < 0 7 0 | 5 9 | 1 0 W >
Deg Min Sec Deg Min Sec

Township A77 < | , , | > Range A78 < | , , | > Section A79 < , >
N/S E/W

FT/M

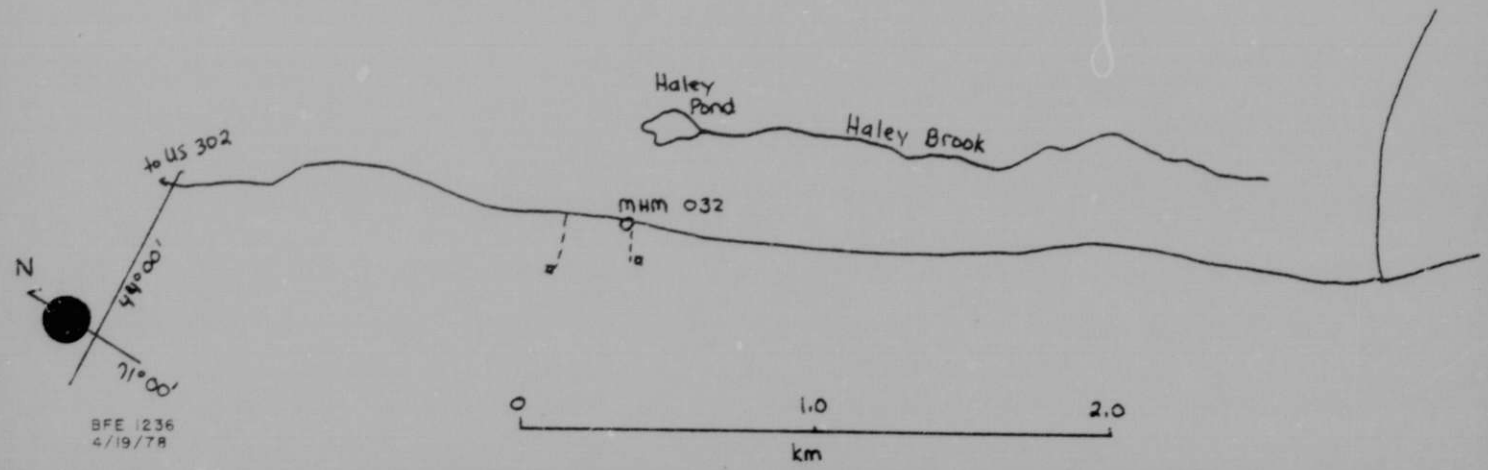
Meridian A81 < > Altitude A107 < 175m >

Quad Scale A91 < , , 2, 4, 0, 0, 0 > Quad Name A92 < Brownfield >
(7½' or 15' quad)

Physiographic Province A63 < 0 1 | New England >
(List K)

Location Comments A83 < Specimen taken from one of the larger boulders in rock wall along west side of paved road about 30m north of dirt road >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 45

Commodities Present:
C10 <U, B, A, >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U, B, A, >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 45

Deposit Form/Shape M10 < Elongated radioactive zone in boulder (small) >

		FT/M
Length	M40 < >	M41 < >
Width	M50 < >	M51 < >
Thickness	M60 < >	M61 < >
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Merrimack Synclinorium

>

Local Structures N70 <

>

Host-FM. Name U1 < White Mountain Magma Ser. > Member U2 < Conway granite >

Host Rock K1 < M E S (Age) Coarse-grained pink alkalic granite with (Rock type, texture, composition, color,

somewhat porphyritic texture and smoky gray quartz. Specimen has a weathered alteration, attitude, geometry, structure, etc.)

rind 1.5 cm thick. NOTE: The specimen is a two-mica granite; muscovite occurs as large thin books (late phenocrysts). >

Host-Rock Environment U3 < Not known >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Admixed boulders of two-mica Sebago Lake granite, mafic and salic volcanic rocks, and Sebago Lake pegmatite. No exposures of any significance in this area. >

Ore Minerals C30 < None observed.

>

Gangue Minerals K4 < Muscovite, biotite, feldspars, quartz

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 45

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 50 ppm U_3O_8; 700 ppm BA >

Radiometric Data (General) U6 < Surface radioactivity of boulder 150-250 cps, except
(No. times background and dimensions)
up to 500 cps in elongated area about 25 cm wide. Quartz in the more radioactive area is very dark gray. BG 90 cps here and northward into Haley Pond Valley. >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < Along this road, from the Brownfield-Fryeburg town line to the sampling site, boulders of two-mica Sebago Lake Granite are mixed with boulders of coarse -grained Conway granite. The latter generally predominate. Surface radioactivities of both types of boulders vary generally from 100 to 250 cps. At the sampling site, till in the road cut has surface radioactivity of 120 cps. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 45

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 032	Grab sample of granite	50 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 46 >

Deposit Name A10 < Burnt Meadow Mountains #1 Occurrence >

Synonym Name(s) A11 < Durgin Brook >

District or Area A30 < Brownfield >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] (Enter code twice from List D) County A60 < Oxford >

Position from Prominent Locality A82 < 0.51 km N of road intersection 445 (intersection of Highway 160 and jeep trail). >

Field Checked G1 < 7,8 | 1,0 > (Yr, Mo) By G2< Wagener (Last name), H. (First), D. (Initial) >

Latitude A70 < 4,3 | 5,4 | 3,1,N > (Deg, Min, Sec) Longitude A80 < 0,7,0 | 5,3 | 0,8,W > (Deg, Min, Sec)

Township A77 < | | | > (N/S) Range A78 < | | | > (E/W) Section A79 < | >

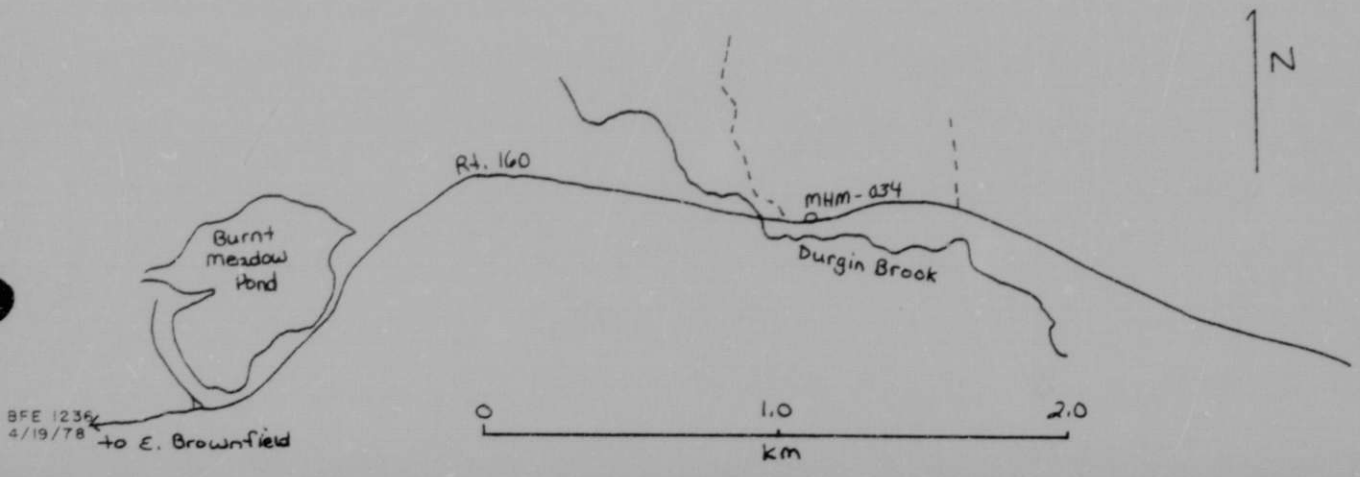
Meridian A81 < > Altitude A107 < 140 m FT/M >

Quad Scale A91 < | | 2,4,0,0,0 > (7½' or 15' quad) Quad Name A92 < Brownfield >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Comments A83 < Roadcut in rock on east side of highway on hill above Durgin Brook. Specimens are from the only anomalous pegmatite. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 46

Commodities Present:
C10 <U MN YT BE >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN <U > OCCUR <MN YT BE >

Commodity Comments C50 <Average surface radioactivity of 3 sampling points was 1030 cps. U_3O_8 content of mixed chip specimens was 850 ppm. Surface radioactivity > *

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 46

Deposit Form/Shape M10 < Tabular (?) anomalous zone in pegmatite >

Length M40 < 2.5 > M41 < FT/M m > Size M15 (circle letter):

Width M50 < 0.6 > M51 < m > 1b U3O8

Thickness M60 < 0.6 > M61 < m >

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Strike M70 < Due north >

Dip M80 < ? >

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Merrimack synclinorium >

Local Structures N70 < Concordant and discordant pegmatites in vertical schists. >

Host-FM. Name U1 < Metamorphic rocks > Member U2 < Pegmatite in schist >

Host Rock K1 < D E V (Age) | Muscovite pegmatite with tourmaline and (Rock type, texture, composition, color,

graphic texture, and pods of smoky quartz and smoky quartz plus pink potassium alteration, attitude, geometry, structure, etc.)

feldspar. Coatings of torbernite(?) observed along a weathered schlieren. >

Host-Rock Environment U3 < Metamorphic, sillimanite facies >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Coarse-grained sulfidic schists have surface radioactivities of 100-150 cps >

Ore Minerals C30 < Torbernite(?) >

Gangue Minerals K4 < Smoky quartz-feldspar-muscovite-tourmaline >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 46

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 850 ppm U_3O_8; 150 ppm Be; 1000 ppm Mn; greater than 200 ppm YT. >

Radiometric Data (General) U6 < Anomalies of 300, 500, 800 and 1300 cps (No. times background and dimensions) occur, and the remainder of the zone has surface radioactivities (SR) of around 200 cps. > *

Ore Controls K5 < Differentiation in pegmatite magma. The anomalous zone follows a discordant contact with contorted schist. >

Deposit Class C40 < Pegmatitic > Class No. U7 <3 2 0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 46

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 034	3 "chip" pieces from anomalies of 800, 1000, and	850 ppm U_3O_8
	1300 cps along strike of central portion of anom-	
	alous zone	

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 46

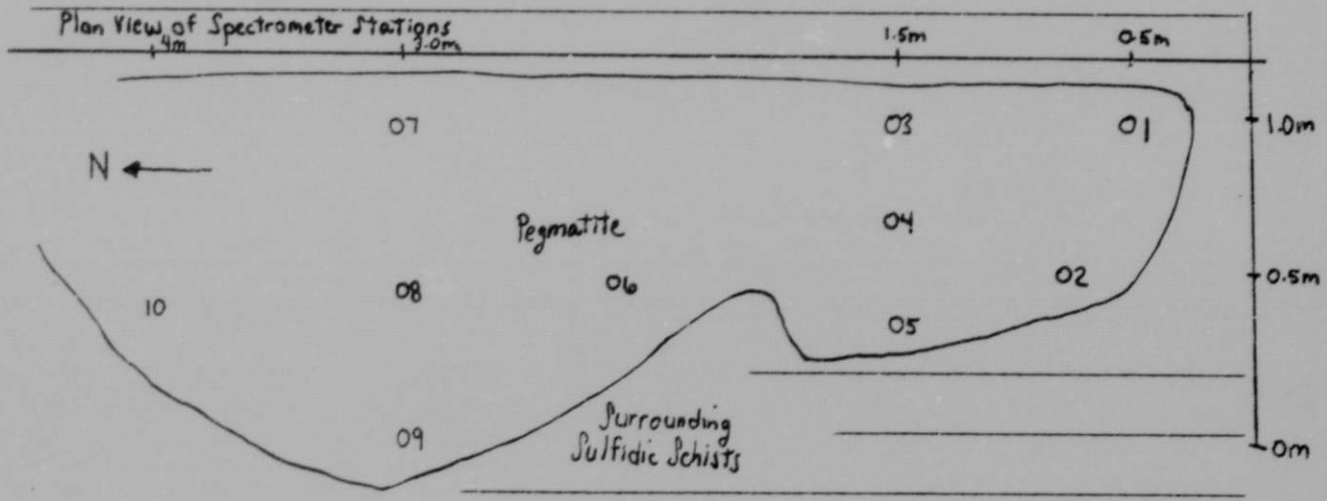
Continuation from p. 1-5:

Label

C50 < of anomalous zone in pegmatite between anomalous points was around 200 cps. Using the direct ratio of 850 ppm U_3O_8 per 1030 cps the anomalous zone could average greater than 100 ppm U_3O_8. >

U6 < One-minute Spectrometer Counts MHM 034

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	8870	900	265	93	3.51	9.17	8.40
02	47520	3066	2680	151	6.59	125.22	16.13
03	27390	1911	1344	122	5.15	60.92	12.27
04	19080	1408	919	94	3.91	41.04	8.53
05	10660	1104	337	78	4.59	13.13	6.40
06	11890	1417	370	67	6.54	15.08	4.93
07	22380	1746	1089	110	5.27	48.85	10.67
08	23110	1736	1168	130	4.75	52.10	13.33
09	9920	966	343	74	3.70	13.55	5.87
10	10180	1062	318	83	4.38	12.05	7.07



>

BFE 1236
4/19/78

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 47 >

Deposit Name A10 < Great Falls Occurrence >

Synonym Name(s) A11 < Hiram Falls >

District or Area A30 < Hiram >

Country A40 < U,S > |U,S|

State Maine

State Code A50 < 2,3 > |2,3|
(Enter code twice from List D)

County A60 < Oxford >

Position from Prominent Locality A82 < At the dam on the Saco River NW of West Baldwin, at Great Falls. >

Field Checked G1 < 7,8 | 1,0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,1 | 0,9 N > Longitude A80 < 0,7,0 | 4,7 | 5,0 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

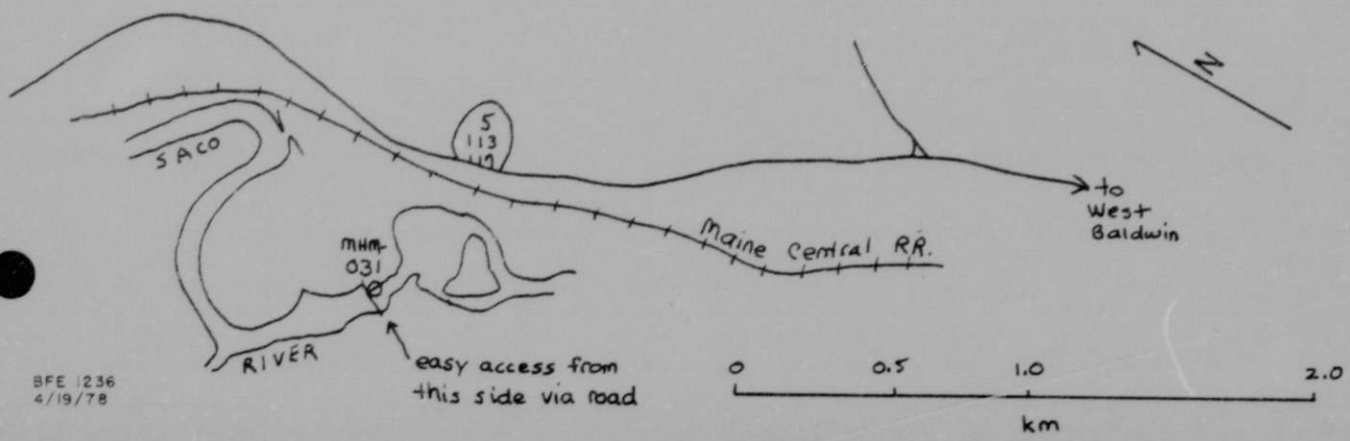
Meridian A81 < > Altitude A107 < 95 m >

Quad Scale A91 < | | 2,4,0,0,0 > Quad Name A92 < Cornish, Maine >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Specimen came from spillway directly below NE end of dam. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 47

Commodities Present:
C10 < U B LI SN >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U B LI > *

Commodity Comments C50 < ______ >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < ______ >

Property is A21 (Active) **(A22)** (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< ______ >

Cumulative Uranium Production PROD YES **(NO)** SML MED LGE (circle)

DH2 accuracy thousands of lb. years grade
G7< U > < > G7A< > G7B<LB> G7C< ______ > G7D< ______ % U308>

Source of Information D9 < ______ >

Production Comments D10 < ______ >

Reserves and Potential Resources

EH accuracy thousands of lb. year of est. grade
E1< U > < > E1A< > E1B<LB> E1C< > E1D< ______ % U308>

Source of Information E7 < ______ >

Comments E8 < ______ >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 47

Deposit Form/Shape M10 < Anomalously radioactive zone in very large dike, ill > *

Length M40 < 30 > M41 < m > (FT/M)

Width M50 < 3+ > M51 < m >

Thickness M60 < 6 > M61 < m >

Strike M70 < 20 >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Merrimack synclinorium

>

Local Structures N70 < Discordant pegmatite in steeply dipping gneisses and schists with ptygmatic veining.

>

Host-FM. Name U1 < Lower Rindgemere > Member U2 < Pegmatite >

Host Rock K1 < D,E,V, | Ø | Tourmaline pegmatite of the Sebago Lake type
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

>

Host-Rock Environment U3 < Pegmatite dike in mica gneiss and schist >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Exquisite display of basaltic dikes, none of which appear to be related to any anomalous radioactivity

>

Ore Minerals C30 < None observed

>

Gangue Minerals K4 < Black tourmaline, quartz, feldspar, muscovite, biotite, red garnet >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 47

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 50 ppm U_3O_8; 200 ppm B; 500 ppm Li; 100 ppm Sr >

Radiometric Data (General) U6 < Of the several acres of pegmatite in the spillway, only portions of two of the larger dikes have surface radioactivities (SR) in excess of 100 cps. The large pegmatite adjacent to the NE end of the spillway > *
(No. times background and dimensions)

Ore Controls K5 < Differentiation within pegmatite magma. >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3,2,0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

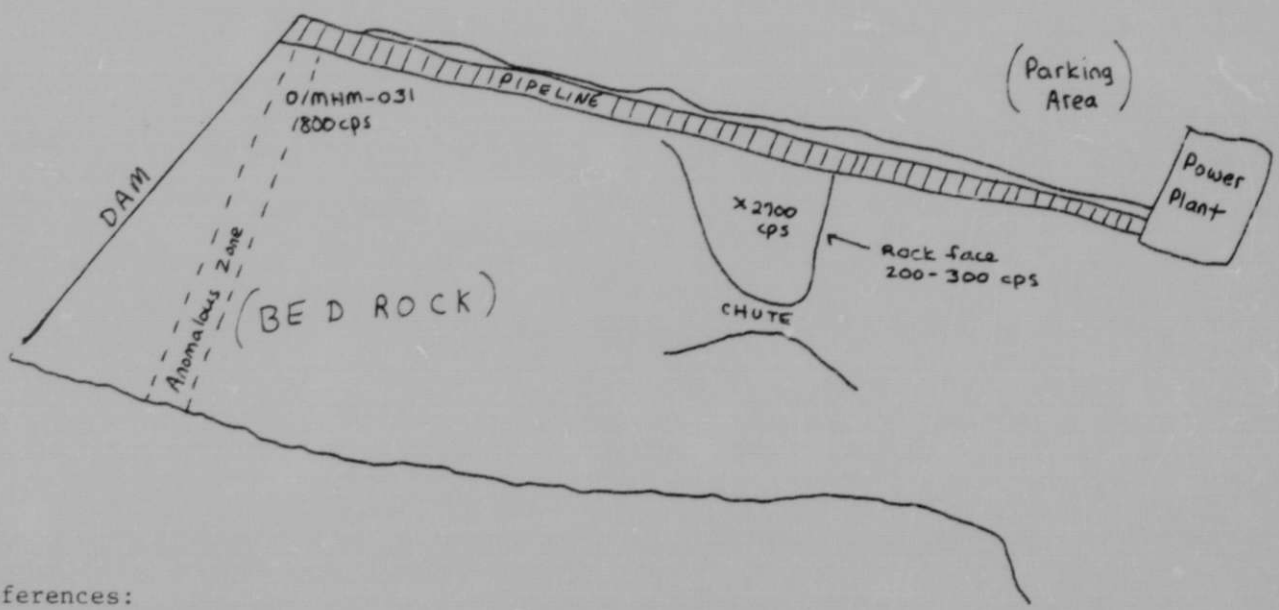
Quad Name Portland

Deposit No. 47

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 031	Grab smaple of pegmatite	50 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 47

Continuation from p. 1-5:

Label

C10 < OCCUR < SN >>

M10 < defined. >

U6 < has the anomalous zone defined at the top of page 3. The surface radioactivity in this zone runs generally 150-250 cps. Four or five spot anomalies of 500 to 1000 cps and several of 300 to 500 cps were located. The only samplable anomaly was in a mica-rich pod, and had a maximum of 800 cps. At the point of collection, the count was 500.

In proceeding up the spillway from the turbine building, the first large pegmatite is exposed in a vertical face 1.6 to 2 m high. The face has remarkably uniform surface radioactivity of 200-300 cps. The flat rock surface above this face contains several small anomalies, and one of 2700 cps. The large one occurs in a small pothole-like depression, but can be traced for 1 to 1.3 m northeastward. None of these anomalies are samplable. The radioactivity of this dike decreases southwestward, so that on the SW side of the spillway it is barely anomalous. >*

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 47

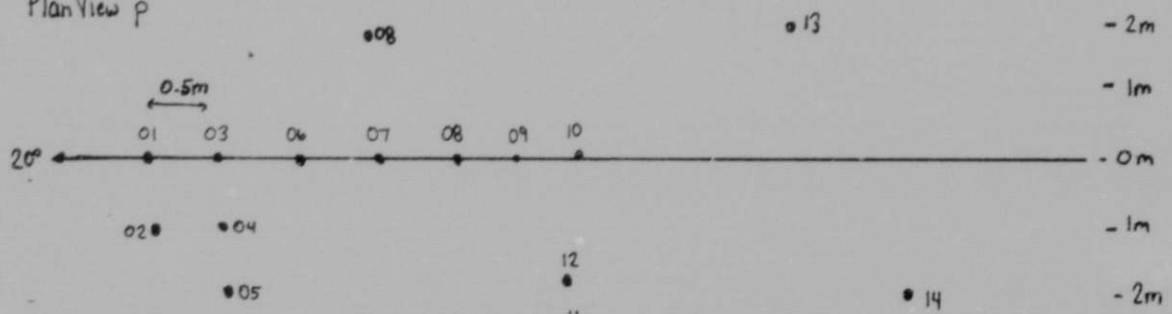
Continuation from p. 6

Label

U6 < p^1 Pegmatite Adjacent to Dam - One Minute Spectrometer Counts

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
p^1 01	10000	1282	255	46	6.32	10.10	2.13
02	12130	1241	420	52	5.26	17.97	2.93
03	10590	1179	342	34	5.29	14.71	0.53
04	17680	1508	784	58	5.35	35.54	3.73
05	15890	1506	697	47	5.78	31.63	2.27
06	45810	2929	2578	136	6.24	120.69	14.13
07	12650	1378	463	32	6.07	20.67	0.27
08	14310	1315	621	61	4.80	27.50	4.13
09	10490	826	496	27	2.36	22.43	-0.40
10	9090	1132	259	24	5.41	10.96	-0.80
11	32670	2205	1793	85	5.28	83.95	7.33
12	7280	789	223	26	3.33	9.14	-0.53
13	14090	1228	659	27	4.25	30.38	-0.40
14	8630	1025	174	99	4.69	4.55	9.20

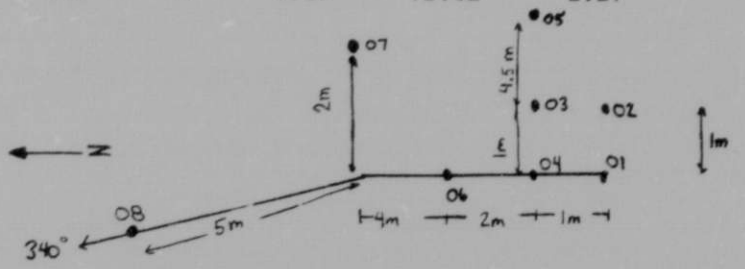
Plan View p'



p^2 Power Plant Pegmatite

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	83480	4629	5011	286	5.73	234.84	34.13
02	17090	1175	850	61	2.88	38.67	4.13
03	16680	1527	733	45	5.77	33.45	2.00
04	26440	1662	1482	89	3.10	68.65	7.87
05	18720	1062	1065	66	1.17	49.01	4.80
06	9760	1035	345	54	4.24	14.25	3.20
07	13190	1136	498	59	4.19	21.56	3.87
08	10900	1323	295	47	6.37	12.02	2.27

Plan View p^2



URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0,0 >

Deposit No. B40 < 48 >

Deposit Name A10 < Pleasant Mountain Creek Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Pleasant Mountain >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Oxford >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Road Junction 461 on Highway 302 west of West Bridgton, proceed southward to junction with trail up Pleasant Mtn. to lookout tower. Anomalous zones are on either side of the wooden bridge across Pleasant >*

Field Checked G1 < 7,9 | 0,6 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 4 | 0 2 | 0 6 , N > Longitude A80 < 0,7,0 | 5,0 | 4,6 , W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

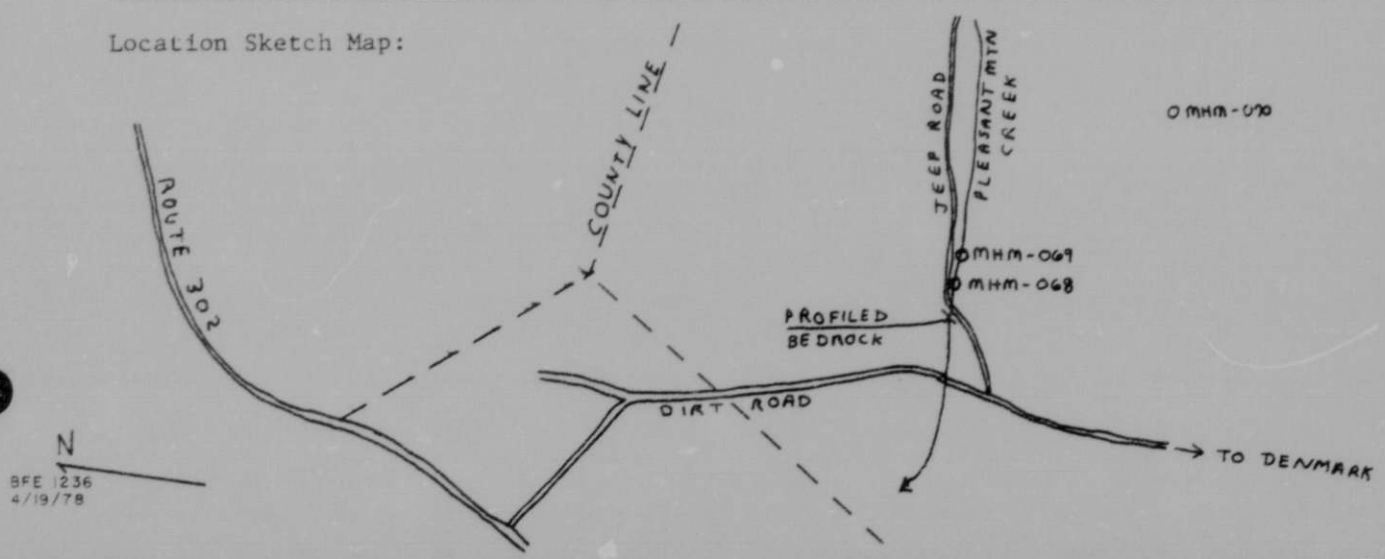
Meridian A81 < > Altitude A107 < 180 m >

Quad Scale A91 < | | 2,4,0,0,0 > Quad Name A92 < Pleasant Mountain >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 48

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 43

Deposit Form/Shape M10 <>

FT/M

Length M40 <> M41 <>

Width M50 <> M51 <>

Thickness M60 <> M61 <>

Strike M70 <>

Dip M80 <>

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Pluton >

Local Structures N70 <>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V | Inhomogeneous, pink to buff two-mica granite >
(Age) (Rock type, texture, composition, color, with large poikilitic muscovite phenocrysts of the flake (not book) type; pheno-
alteration, attitude, geometry, structure, etc.)
crysts are of feldspar also; pegmatoid segregations are common, and some are enriched in muscovite. Along zones of alteration, feldspar is deep pink or red, and > *

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Dikes of mafic hypabyssal rock crosscut the zones of alteration, but are not related to the alteration, despite the occurrence of pink feldspar in granite immediately adjacent to the borders of some dikes. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, alkali feldspar, hematite, molybdenite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 48

Alteration N75 < Red stains in feldspars, partial replacement of micas and feldspar by hematite. Introduction of flakes of molybdenite. Feldspathization of granite. >

Reductants U5 < >

Analytical Data (General) C43 < MHM 068 19 ppm U_3O_8; MHM 069 150 ppm U_3O_8; MHM 070 282 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 150, 2 to 13 times BG >
(No. times background and dimensions)

Ore Controls K5 < Differentiation within granitic magma, and concentration of urarium along fractures in the more uraniferous portions of the melt. >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < This type of mineralization has been observed around the base of Pleasant Mountain on the west, south and east sides. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 48

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 068	Sample of five chips from Zone C, where bedrock has surface radioactivity of 275-400 cps,(weathered)	19 ppm U_3O_8
MHM 069	Five chips from Zone E, at points where SR varied from 700-1300 cps (weathered)	150 ppm U_3O_8
MHM 070	From corner of detached bedrock slab, SR at collection point 1500 (grab sample)(weathered)	282 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 48

Continuation from p. 1-5:

Label

A82 < Mountain Creek (not named on map) on this trail, directly upstream from BM 477. >

K1 < en echelon open fractures are filled with quartz. The uraniferous zone in bedrock on the west side of the bridge was profiled spectrometrically. A sketch of the zone and profiles is attached on p. 7, and the spectrometric data are tabulated below. >

U6 < Table of Spectrometric Data
Profiles on bedrock immediately west of bridge

	eK,%	eU,ppm	eTh, ppm		eK,%	eU,ppm	eTh,ppm
P^1_1	2.8	56	30	P^2_1	3.7	103	43
P^1_2	5.0	107	44	P^2_2	5.5	130	34
P^1_3	4.0	173	40	P^2_3	3.1	47	37
P^1_4	3.4	92	34	P^2_4	3.5	38	36
P^1_5	3.7	111	36	P^2_5	2.8	29	31
P^1_6	2.8	110	36	P^2_6	3.3	48	32

	eK,%	eU,ppm	eTh,ppm
P^3_1(B)	3.2	522	79
P^3_2	6.5	113	30
P^3_3	3.8	115	28
P^3_4	6.4	257	44
P^3_5	4.0	135	39
P^3_6	5.0	129	29
Anomaly A	5.4	285	45

Average of (P^1_1 - P^1_6) + (P^2_1 - P^2_3) + (P^3_1 - P^3_6) + (Anomaly A)

eK,%	eU,ppm	eTh,ppm
4.3	155	39

MHM 068 Locality (19 ppm eU)

eK,%	eU,ppm	eTh,ppm
6.7	18.5	31

>*

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 48

Continuation from p. 6:

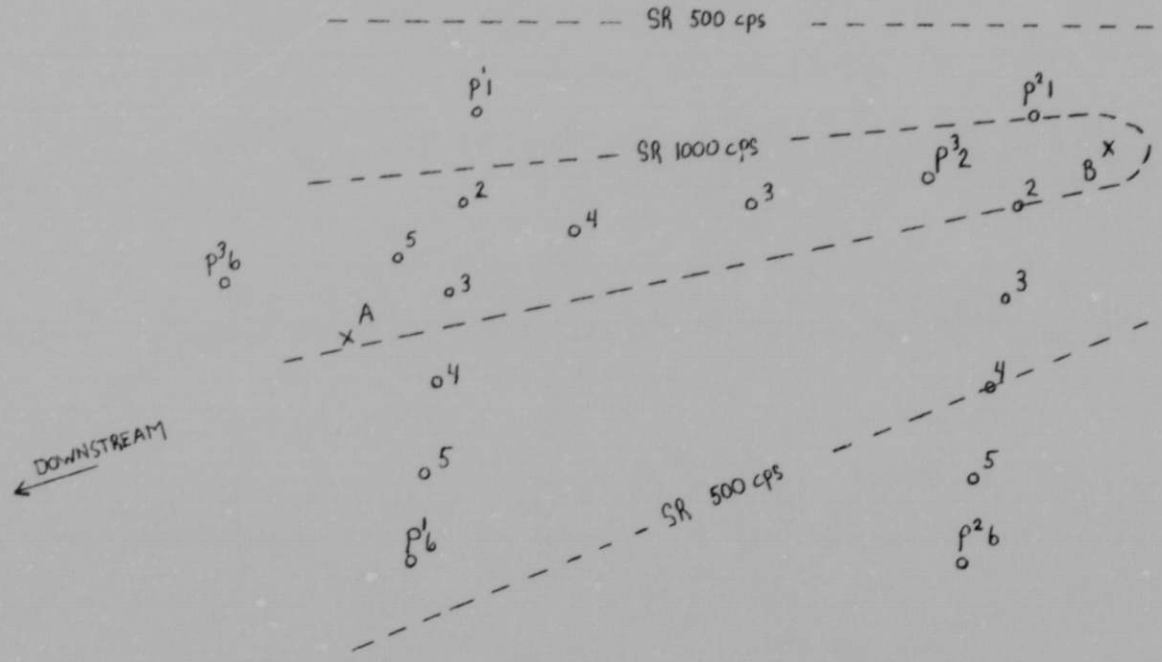
Label

U6 <

MHM 069 Locality (5 chip samples, 150 ppm eU)

	eK,%	eU,ppm	eTh,ppm
1	8.2	90	21
2	7.7	133	29
3	8.7	160	31
4	8.5	193	35
5	8.5	114	17
Average	8.3	138	27
Anomaly C	6.0	269	40

>



SCALE: 2.54cm = 1m
SR = Surface Radioactivity

PLAN OF PROFILES P', P², AND P³, AND ANOMALIES A AND B, ON BEDROCK WEST OF JEEP TRAIL BRIDGE OVER PLEASANT MOUNTAIN CREEK

Quad Portland
Deposit 48

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 49 >

Deposit Name A10 < Pleasant Mountain East #1 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Rte. 302, take road south to Pleasant Mountain Ski Area. Pass ski area and continue south for 3.1 km. >

Field Checked G1 < 7,9 | 1,0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,4 | 0,2 | 4,8 N > Longitude A80 < 0,7,0 | 4,8 | 4,8 W >
Deg Min Sec Deg Min Sec

Township A77 < | N/S Range A78 < | E/W Section A79 < >

FT/M

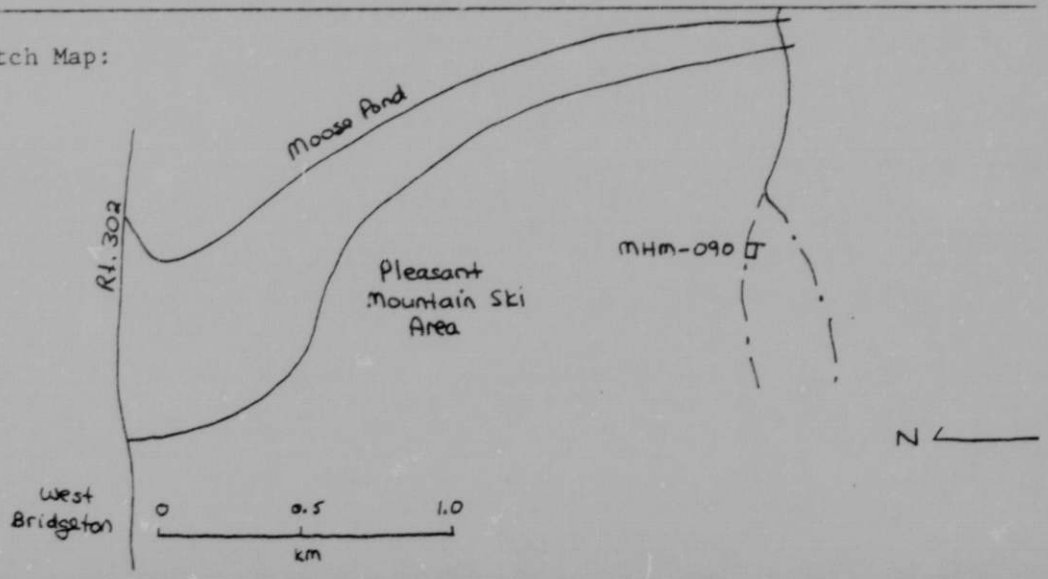
Meridian A81 < > Altitude A107 < 330 m >

Quad Scale A91 < 2,4,0,0,0 > Quad Name A92 < Pleasant Mountain >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Follow stream west uphill approximately 0.6 km >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 49

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 49

Deposit Form/Shape M10 <>

Length M40 <> FT/M M41 <>

Width M50 <> M51 <>

Thickness M60 <> M61 <>

Strike M70 <>

Dip M80 <>

Size M15 (circle letter)

lb U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Batholithic sheet >

Local Structures N70 <>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V (Age) | Medium-grained pink porphyritic biotite - muscovite granite with phenocrysts of feldspar and muscovite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, muscovite, feldspar, quartz >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 49

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 123 ppm U_3O_8; 500 ppm BA >

Radiometric Data (General) U6 < Sample surface radioactivity (SR) 700 cps,
(No. times background and dimensions)
rocks SR is generally 300. There are indistinct zones that range SR 300-SR 700 cps in which anomalies SR 3200 cps were observed. >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3.2.1.0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 49

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 090	Grab sample as part of granite sampling	123 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 50 >

Deposit Name A10 < Pleasant Mountain East #2 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U,S > U,S State Maine

State Code A50 < 2,3 > 2,3 County A60 < Oxford >
(Enter code twice from List D)

Position from Prominent Locality A82 < Take road to Pleasant Mountain Ski Area south off of Rte. 302. Take this road about 3.9 km. Sample site is on quarried ledge on west side of road. >

Field Checked G1 < 7,9 | 1,0 > By G2< Wagener , N. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,4 | 0,2 | 2,0 N > Longitude A80 < 0,7,0 | 4,8 | 1,2 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

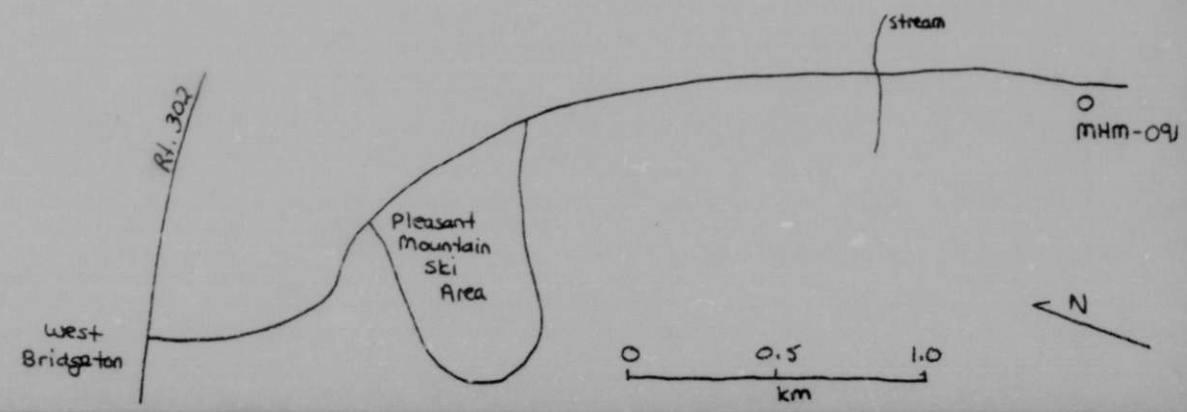
Meridian A81 < > Altitude A107 < 150m >

Quad Scale A91 < 2,4,0,0,0 > Quad Name A92 < Pleasant Mountain >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 50

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 50

Deposit Form/Shape M10 <>

Length M40 <> M41 <> FT/M

Width M50 <> M51 <> FT/M

Thickness M60 <> M61 <> FT/M

Strike M70 <>

Dip M80 <>

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake batholithic sheet >

Local Structures N70 <>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V (Age) | Medium-coarse grained porphyritic pink (Rock type, texture, composition, color, biotite-muscovite granite with phenocryst of feldspar and muscovite alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic synorogenic sheet batholith > (Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < None observed >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 50

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 54 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) 400-500 >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 13210 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 50

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 091	Grab sample from anomalous ledge	54 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 51 >

Deposit Name A10 < East Denmark Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Pleasant Mountain District >

Country A40 < U , S > | U , S | State Maine

State Code A50 < 2 , 3 > 2 , 3 | (Enter code twice from List D) County A60 < Oxford >

Position from Prominent Locality A82 < 0.2 km west of East Denmark on Rt. 117.

>

Field Checked G1 < 7 , 9 | 0 , 5 > (Yr Mo) By G2< Wagener (Last name), H. (First) D. (Initial) >

Latitude A70 < 4 , 3 (Deg) | 5 , 9 (Min) | 1 , 6 , N (Sec) > Longitude A80 < 0 , 7 , 0 (Deg) | 4 , 6 (Min) | 4 , 0 , W (Sec) >

Township A77 < | , , | (N/S) Range A78 < | , , | (E/W) Section A79 < , >

FT/M

Meridian A81 < > Altitude A107 < 230 m >

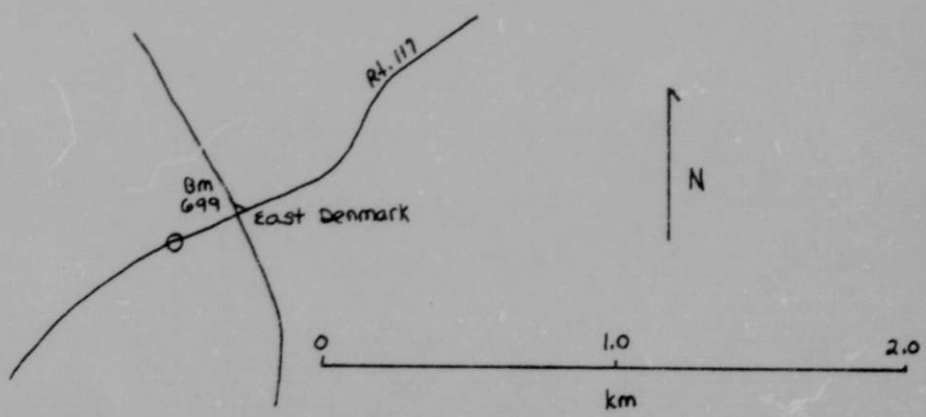
Quad Scale A91 < , , 2 , 4 , 0 , 0 , 0 > (7½' or 15' quad) Quad Name A92 < Hiram >

Physiographic Province A63 < 0 , 1 | New England > (List K)

Location Comments A83 < >

>

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 51

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 51

Deposit Form/Shape M10 <>

	FT/M	
Length M40 <>	M41 <>	
Width M50 <>	M51 <>	
Thickness M60 <>	M61 <>	
Strike M70 <>		
Dip M80 <>		

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <>

Local Structures N70 <>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D,E,V, (Age) | Medium to coarse-grained biotite-muscovite granite. Texture inhomogeneous and partly pegmatoid. Phenocrysts of white feldspar and large late-forming flakes of muscovite. Color is gray-white, except for scattered pink spots in feldspars. > (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith > (Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, muscovite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 51

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 68 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of boulder 300 to 600 cps
(No. times background and dimensions)
(BG 80) and 500-600 at sampling point. >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < Boulders not in place - source unknown >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 51

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 059	Grab sample of split boulder in rock wall	68 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 52 >

Deposit Name A10 < Perley Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From West Sebago proceed north for 1.9 km. >

Field Checked G1 < 7,9 | 0,5 > By G2 < Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,7 | 4,4 N > Longitude A80 < 0,7,0 | 4,4 | 1,7 W >
Deg Min Sec Deg Min Sec

Township A77 < | > N/S Range A78 < | > E/W Section A79 < >

FT/M

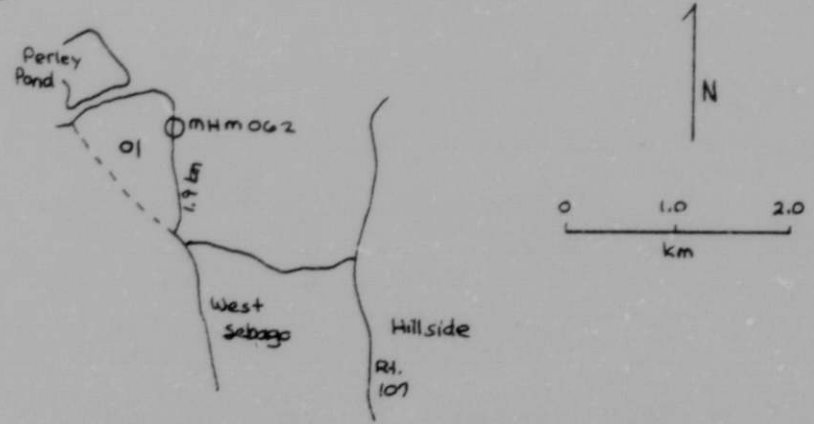
Meridian A81 < > Altitude A107 < 165 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Specimen came from central portion of long road cut in rock on west side of road. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 52

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 52

Deposit Form/Shape M10 <>

		FT/M
Length	M40 <>	M41 <>
Width	M50 <>	M51 <>
Thickness	M60 <>	M61 <>
Strike	M70 < >	
Dip	M80 < >	

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Pluton

Local Structures N70 <

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V (Age) | Ø Medium-grained gray two-mica granite with (Rock type, texture, composition, color,

irregular pods and dikes of pegmatite.
alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on
Associated Rocks U4 <

Ore Minerals C30 < None observed

Gangue Minerals K4 < Biotite, muscovite, quartz

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 52

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 7 ppm U_3O_8 >

Radiometric Data (General) U6 < Surface radioactivity (SR) of bedrock 150-200 cps; at collection point, 200 cps >
(No. times background and dimensions)

*

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <320>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

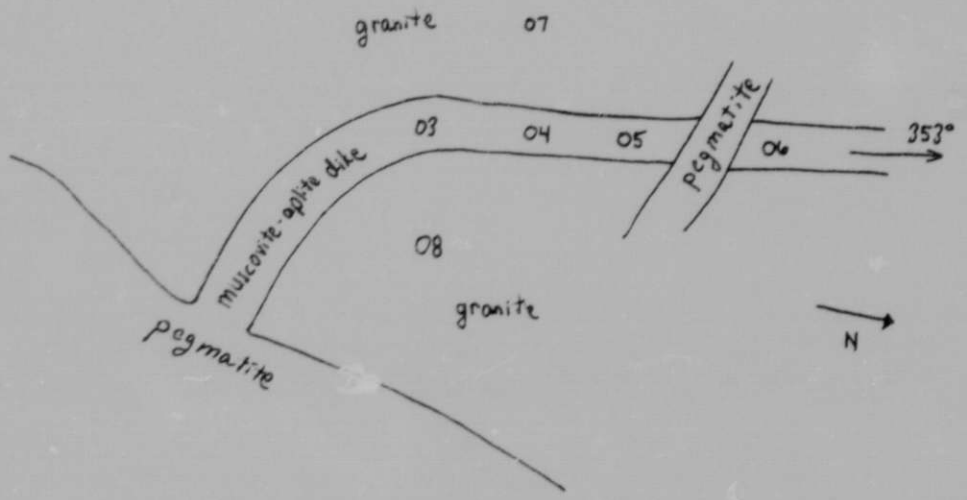
Deposit No. 52

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 062	Homogeneous two-mica granite (grab sample)	7 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

Plan view - Upper dike : Spectrometer Stations



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 52

Continuation from p. 1-5:

Label

U6 < One Minute Spectrometer Counts, Gain 4.90, Counts taken at (01) on Location Sketch Map

Location	Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
1700 cps Anomaly	01	52170	3323	2988	311	6.04	135.00	37.46
	02	27460	2079	1450	194	5.40	64.00	21.80
Upper Dike	03	26950	1886	1434	106	4.68	65.80	10.13
	04	24170	1771	1266	99	4.71	57.81	9.20
	05	26360	1897	1341	121	5.08	60.81	12.13
	06	14840	1309	649	94	4.46	27.87	8.53
	07	11980	1105	446	87	4.07	18.18	7.60
	08	10910	1097	388	101	4.20	14.92	9.46
Lower Dike	09	37150	2447	2110	171	4.98	96.80	18.30
	10	27760	1826	1476	141	3.91	66.79	14.80
Quartz Pods	11	19330	1642	849	93	5.74	37.35	8.40
	12	75110	862	190	84	3.64	5.78	7.20

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 53 >

Deposit Name A10 < Peabody Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < 1.75km down dirt road from its intersection with Rte. 107. Intersection is 3.4km north of Sebago Village also on Rte. 107. >

Field Checked G1 < 7,9 | 0,9 > (Yr, Mo) By G2< Stone (Last name), Thomas (First) A. (Initial) >

Latitude A70 < 4,3 | 5,5 | 4,2 N > (Deg, Min, Sec) Longitude A80 < 0,7,0 | 4,1 | 3,8 W > (Deg, Min, Sec)

Township A77 < | | | > (N/S) Range A78 < | | | > (E/W) Section A79 < | >

FT/M

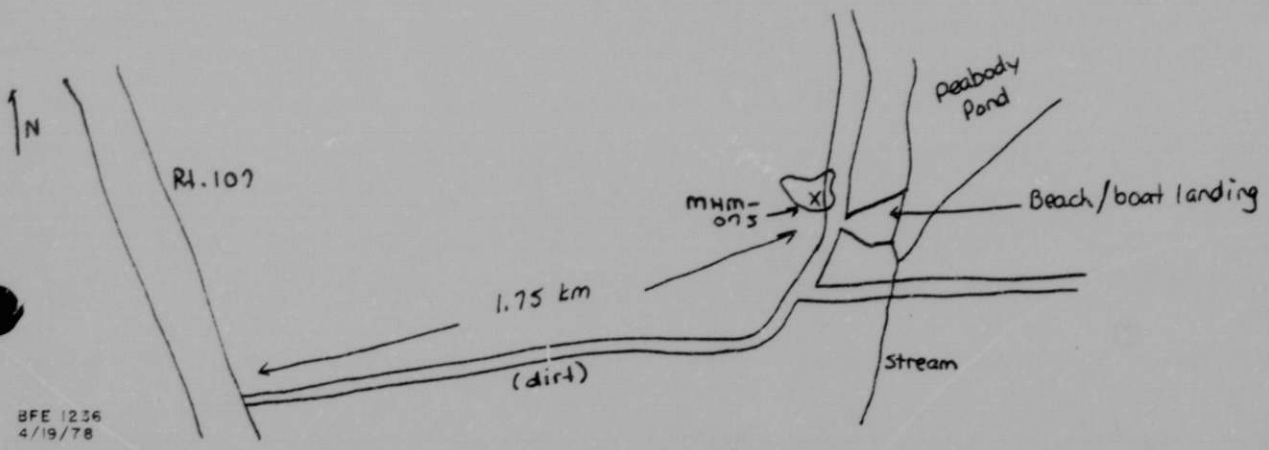
Meridian A81 < > Altitude A107 < 159 m >

Quad Scale A91 < | | 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Sebago Lake >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Comments A83 < Sample location directly opposite short dirt road that leads to beach and boat landing on Peabody Pond >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 53

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 53

Deposit Form/Shape M10 < Circular area of anomalous radioactivity >

Length M40 < 0.30 > M41 < m > (FT/M)

Width M50 < 0.30 > M51 < m >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Western side of Sebago Lake Pluton >

Local Structures N70 <

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < DEV (Age) Medium-coarse grained granite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Pegmatite dikes common in ledge to west of anomalous spot. Small aplitic dikes common, sample MHM 841 taken from same outcrop >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, muscovite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 53

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 93 ppm U_3O_8 >

Radiometric Data (General) U6 < Modal surface radioactivity (SR) 125-185 cps throughout whole ledge. Anomalous spot had value of 400 cps. Background 90 cps. >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3.2.0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

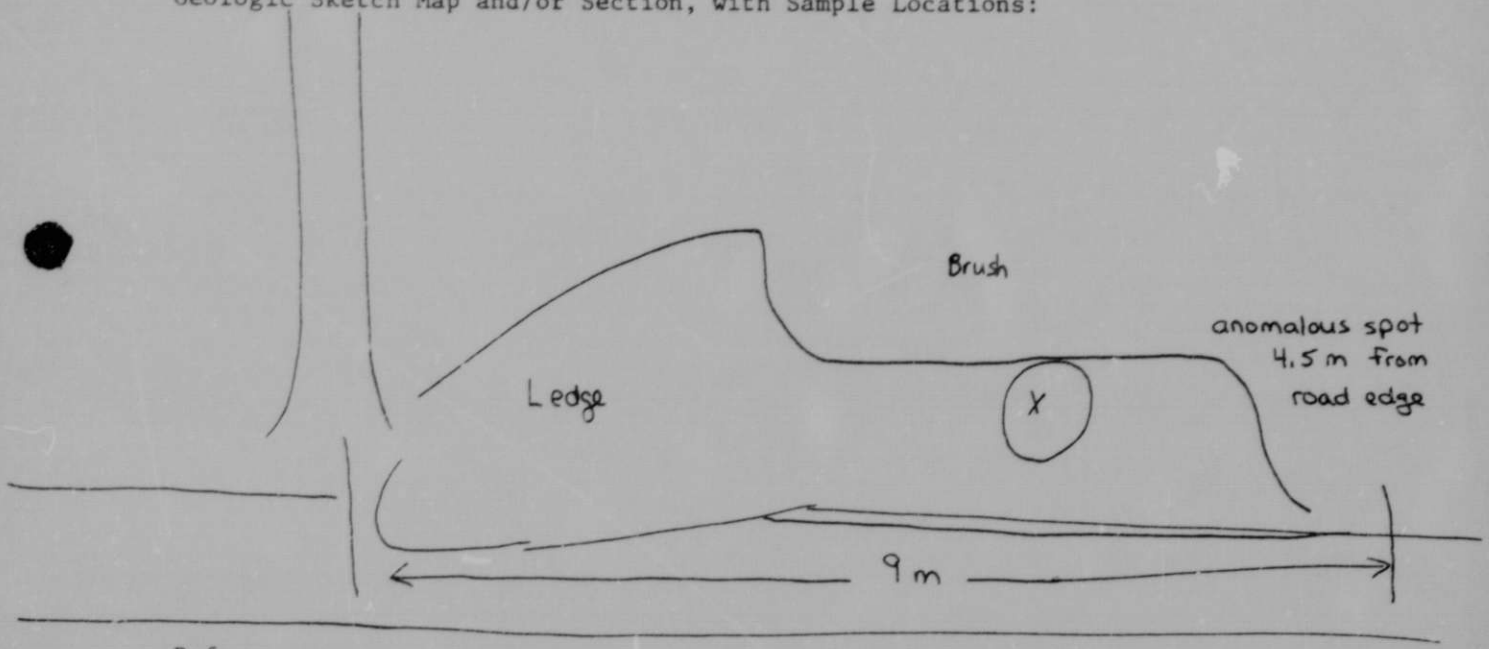
Quad Name Portland

Deposit No. 53

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 075	Chip sample from point having SR 400 cps	93 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 54 >

Deposit Name A10 < Sebago Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U , S > | U , S | State Maine

State Code A50 < 2 3 > | 2, 3 | County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < At the intersection of Highway 107 and the road to Peaked Mountain, NW of Sebago. >

Field Checked G1 < 7, 8 | 1, 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 4 | 0, 8, N > Longitude A80 < 0, 7, 0 | 4, 2 | 2, 3, W >
Deg Min Sec Deg Min Sec

Township A77 < | , , , | > Range A78 < | , , , | > Section A79 < | , | >
N/S E/W

FT/M

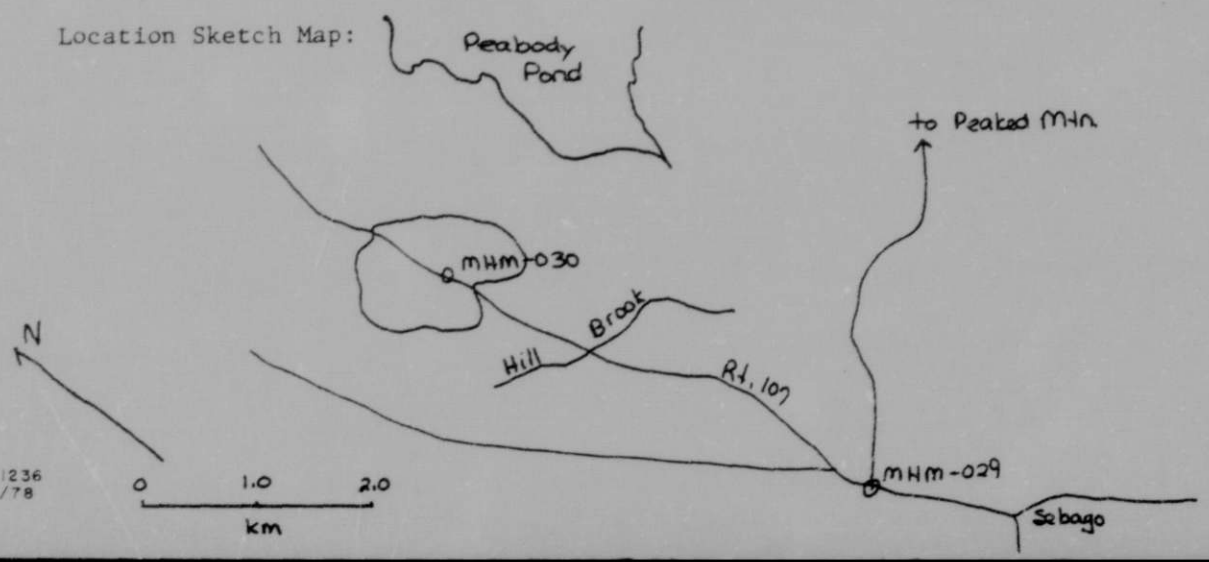
Meridian A81 < > Altitude A107 < 175 m >

Quad Scale A91 < | , , 6, 2, 5, 0, 0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Specimen taken from base of central portion of prominent cut in rock on E side of road just NW of intersection. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 54

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 54

Deposit Form/Shape M10 < Dike >

Length M40 < > FT/M M41< >

Width M50 < > M51< >

Thickness M60 < 2 > M61< m >

Strike M70 < 105 >

Dip M80 < 30 N >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake batholithic sheet >

Local Structures N70 < Schlieren in aplite strike 105, dip 30 N. Contact with granite has similar attitude >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Aplite in 2-mica granite

Host Rock K1 < D E V (Age) | M Muscovite aplite bordered by pegmatite, intrusive into two-mica granite. (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Two-mica granite, aplite and pegmatite are cut by basaltic dikes. >

Ore Minerals C30 < None observed. >

Gangue Minerals K4 < Quartz, feldspar, muscovite, biotite. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 54

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 47 ppm U_3O_8 in aplite >

Radiometric Data (General) U6 < Surface radioactivity (SR) of granite and pegmatite and weathered aplite at top of cut 150-200 cps. A zone in blasted aplite at the base of the cut has 300-450 cps. BG 85 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < The dike occurs near the southern contact of the batholith. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 54

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 029	Grab sample of aplite from radioactive zone	47 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 55 >

Deposit Name A10 < Wards Cove Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U, S > | U, S | State Maine

State Code A50 < 2, 3 > | 2, 3 | County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < 0.24 km southeast of south entrance to Wards Cove (near BM 275), on Highway 114 in long road cut in rock. >

Field Checked G1 < 7, 8 | 1, 0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 4, 9 | 4, 7, N > Longitude A80 < 0, 7, 0 | 3, 6 | 1, 8, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

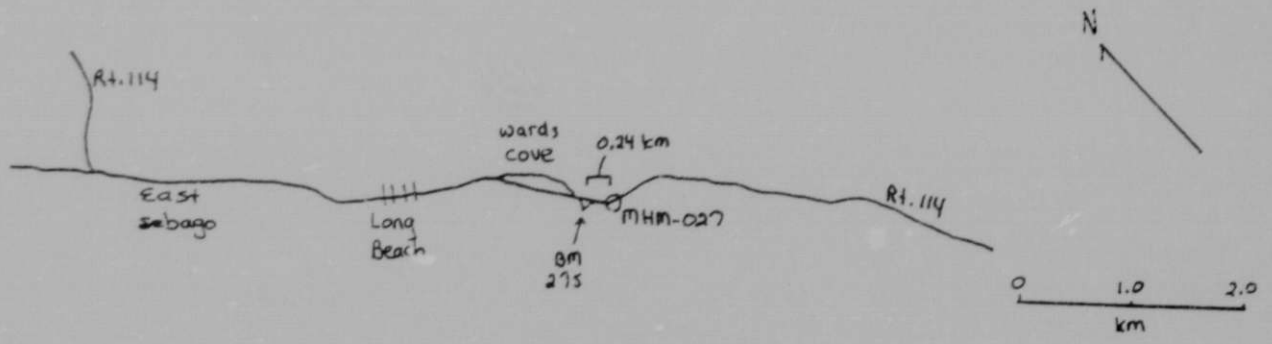
Meridian A81 < > Altitude A107 < 90 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Specimen MHM 027 taken from blasted crevasse about 9 m east of basaltic dike that cuts through mid-portion of road cut, northside of road. > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 55

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 55

Deposit Form/Shape M10 < See K1 for MHM 027; MHM 028 is from spot anomaly >

Length M40 < > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Batholithic Sheet >

Local Structures N70 < Steeply dipping planar micaceous partings strike approximately 135 deg. Dikes of granitic rock in this area have similar attitudes. >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite and > *

Host Rock K1 < D E V (Age) | B Medium-coarse-grained two-mica granite, (Rock type, texture, composition, color, apparently slightly altered along ill-defined zones, where feldspars have brown alteration, attitude, geometry, structure, etc.) spots. Pegmatite is muscovite-biotite pegmatite with granitoid texture. Specimen taken from one arm of a splay of dikes. >

Host-Rock Environment U3 < Plutonic, synorogenic, sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Associated pegmatite is of the type common to the Sebago Lake pluton. Other pegmatite dikes in this roadcut are not anomalous. >

Ore Minerals C30 < None observed. >

Gangue Minerals K4 < Muscovite-biotite-feldspar-quartz >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 55

Alteration N75 < In certain ill-defined zones, feldspars have brown spots. >

Reductants U5 < >

Analytical Data (General) C43 < 130 ppm U_3O_8 at spot anomaly in pegmatite (MHM 028) Granite from zone of brown spotting has 3 ppm U_3O_8 (MHM 027) and 8 ppm U (H. D. Wagener, unpublished data). >

Radiometric Data (General) U6 < Surface radioactivity (SR) of unaltered granite, (No. times background and dimensions) 150-200 cps. Altered granite has common surface radioactivity of around 225 cps. In the altered zone near collection point (in the crevasse), surface radioacti-> *

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 1 2 1 0 >

Comments on Geology N85 < Other pegmatite dikes in this roadcut are not anomalous >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 55

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 027	Grab sample of granite	3 ppm U_3O_8
MHM 028	Grab sample of pegmatite dike	130 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 55

Continuation from p. 1-5:

Label

A83 < Specimen MHM 028 taken from pegmatite in central portion of SW side of road cut, in blast crevasse. >

U6 < vities are around 300 cps. BG in woods above road cut 70 cps. Maximum radioactivity on pegmatite 800 cps in crevasse, or 8 x BG of 100 cps. >

U2 < pegmatite >

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 56 >

Deposit Name A10 < Rich Mill Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < Immediately north of the grade crossing of the Maine Central Railroad on Highway 114 (northeast of town of Sebago Lake), a dirt road leads northeastward to the lake. Sample came from this road. >

Field Checked G1 < 7,8 | 1,0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 4,8 | 1,8 N > Longitude A80 < 0,7,0 | 3,4 | 0,5 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

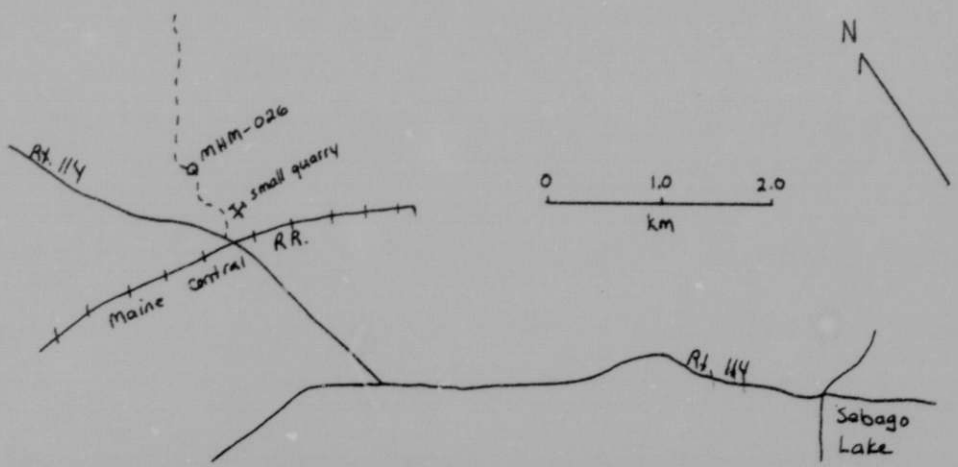
Meridian A81 < > Altitude A107 < 120 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 56

Commodities Present:
C10 < U B A >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U B A >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< accuracy > G7B<LB> thousands of lb. G7C< years > G7D< grade % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1< U > E1A< accuracy > E1B<LB> thousands of lb. E1C< year of est. > E1D< grade % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 56

Deposit Form/Shape M10 <>

FT/M

Length M40 < 0.40 > M41< m >

Width M50 < 0.20 > M51< m >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake batholithic sheet >

Local Structures N70 < Steeply dipping planar micaceous partings strike (135 deg) (see N85, p. 4) >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V | Two-mica granite, medium-coarse-grained, gray-white with large late poikilitic phenocrysts of muscovite, and segregations of pegmatite. >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic, synorogenic, sheet batholith >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <>

Ore Minerals C30 < No U minerals observed. >

Gangue Minerals K4 < Quartz, feldspar, muscovite, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 56

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < U_3O_8, 27 ppm; Ba, 1000 ppm. >

Radiometric Data (General) U6 < Bedrock ledges have surface radioacitivity (SR) of
(No. times background and dimensions)
150 to 250 cps in gradational zones. Blasted boulders scattered profusely about in woods commonly have surface radioactivity of 200-250 cps. Specimen is from > *

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 <At the first cut in rock on Highway 114 north of the Maine Central RR crossings, sills of medium-coarse-grained granite in fine-grained granite strike 135 , dip steeply west. Surface radioactivity 150-250 cps, higher especially in fine-grained granite and along some contacts. Pegmatite is at BG. >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 56

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 026	Grab sample from blasted boulder (sappy)	23 ppm U 27 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 56

Continuation from p. 1-5:

Label

U6 < one such boulder having surface radioactivity of up to 275 near collection point. Small elongated spot anomaly in ledge in granite of up to 575 cps could not be sampled (anomaly is about 60 m SE of the road). Background along road over boulders 95 cps. >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 57 >

Deposit Name A10 < Mast Cove Occurence >

Synonym Name(s) A11 < Naples, North >

District or Area A30 < Long Lake >

Country A40 < U,S > U,S State Maine

State Code A50 < 2,3 > 2,3 County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < 160 m west of the intersection at BM 359, where the road to South Bridgton intersects Highway 302, NW of Naples. >

Field Checked G1 < 7,8 | 1,0 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,9 | 1,4 N > Longitude A80 < 0,7,0 | 3,8 | 4,6 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

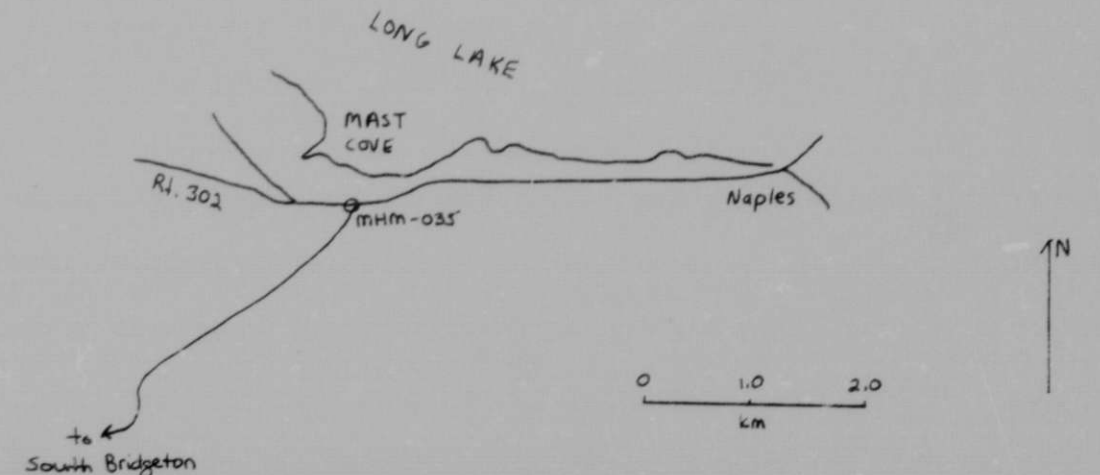
Meridian A81 < > Altitude A107 < 100 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < The anomaly is in a low bedrock ledge just above the ditch on the west side of Highway 302. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Commodities Present:
C10 <U B A>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U B A>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Deposit Form/Shape M10 <>

Length M40 < 1 + > M41 < m > (FT/M)

Width M50 < > M51 < >

Thickness M60 < appx .20 > M61 < m >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile belt >

Major Regional Structures N5 < Sebago Lake batholithic sheet

>

Local Structures N70 < Gently dipping biotite-muscovite schlieren in granite.

>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < 2-mica granite >

Host Rock K1 < D E V (Age) Ø Medium-grained two-mica granite, gray and pink. (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Varies to coarse-grained pink granite and tends to be porphyritic. Biotite is the dominant mica, but muscovite occurs, partly as late poikilitic phenocrysts. Schlieren are of coarse-grained biotite and muscovite. Pink of feldspars is a > *

Host-Rock Environment U3 < Plutonic, synorogenic, sheet batholith. (Sed. dep. environ., metamorphic facies, ign. environ.) >

Comments on Associated Rocks U4 < Fine-grained granitic rock, possibly granodiorite, may be intrusive into the two-mica granite.

>

Ore Minerals C30 < None observed.

>

Gangue Minerals K4 < Quartz, feldspars, biotite, muscovite, hematite

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Alteration N75 < Feldspars have been subjected to intense hematite staining, approaching partial replacement of some grains. >

Reductants U5 < >

Analytical Data (General) C43 < 125 ppm U_3O_8; 5 ppm Mo; 700 ppm Ba >

Radiometric Data (General) U6 < Maximum measured radioactivity (1700 cps) occurs (No. times background and dimensions) in association with the most intense hematite staining. Biotite schlieren that intersects the deep pink spot also is anomalous. Surface radioactivity (SR) > *

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < 0.48 km NW of this locality, a road leads northward from Highway 302 toward lake shore properties; 0.32 km up this road is a bridge over a creek. Weathered bedrock and boulders in this stream are of medium to coarse-grained two-mica granite. The coarser grained phases tend to be pink, and have late phenocrysts of muscovite and pegmatoid segregations. SR of bedrock and > *

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 035	Grab sample of altered granite	106 ppm U 125 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Continuation from p. 1-5:

Label

K1 < function of hematite staining. At one point in the exposure, hematite staining of feldspars is intense, so that some grains are brick red. Yellowish coatings along sheet fractures may indicate leaching of uranium. >

N85 < megaboulders varies generally from 150 to 325 cps. The higher radioactivities are in the coarser grained rock, except in the pegmatoid segregations, which have the same SR or lower SR than the surrounding rock. In one megaboulder adjacent to the main stream about 60 m downstream from the bridge, an elongated spot anomaly of 500 cps seems to follow a very thin quartz-rich segregation or discolored joint in the boulder face. No specimen could be obtained. NOTE: In weathered boulders along the shore of the south end of Long Lake, beginning at the drawbridge (at Naples), at low water due to draught, the same relations between rock and radioactivity were observed (up to 500 cps in coarse-grained granite). BG over the boulders at waist height 125 cps. >

U6 < of sampling point approximately 1000 cps BG 95 cps. > *

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

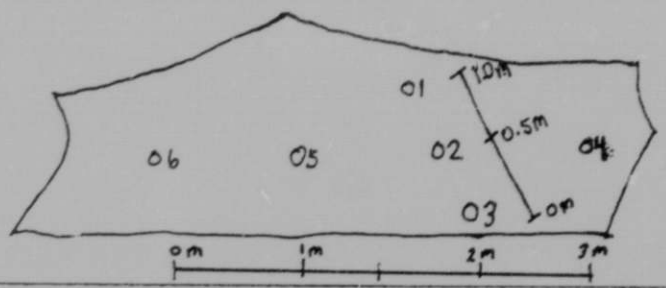
Continuation from p. 6

Label

U6 < Sample Site, One Minute Spectrometer Counts (using GR-410)

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	49070	3194	2591	590	5.46	107.60	74.67
02	24640	1915	983	534	4.55	30.35	67.20
03	17210	1480	516	507	3.94	8.89	63.60
04	21430	1729	740	560	4.28	18.21	70.67
05	22690	1894	702	759	4.44	10.34	97.20
06	18060	1464	636	482	3.44	15.50	60.27

Spectrometer Stations - Sample Site



One Minute Spectrometer Counts of Anomalous Mega-Boulders in Creek (using GR-410)

Megaboulder	SR(cps)	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	500	28100	1894	1325	432	3.46	50.62	53.60
02	250	13520	1157	533	185	3.50	19.46	20.57
03	500	28970	2103	1479	337	4.64	61.01	40.93 > *

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 57

Continuation from p. 7

Label

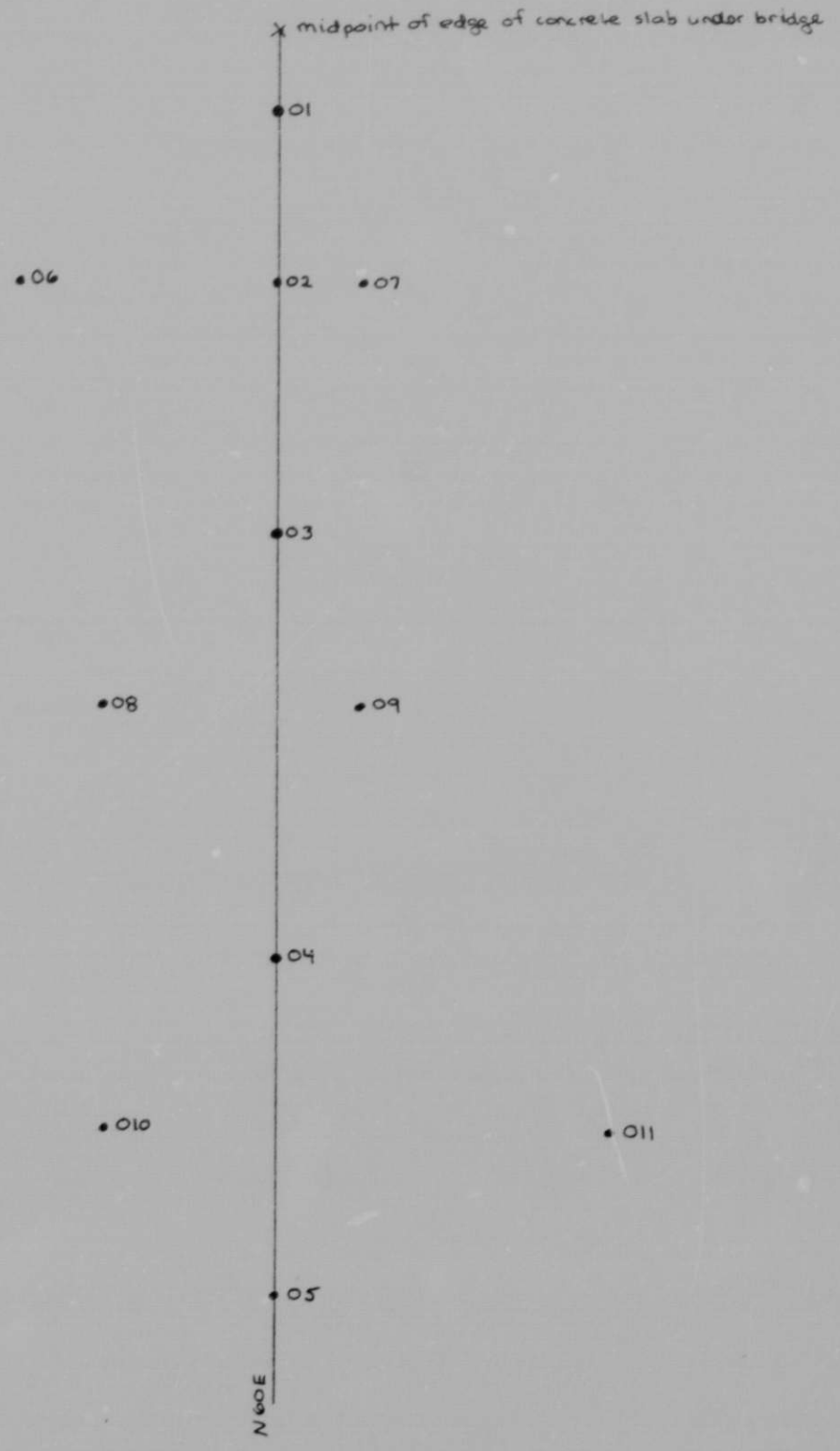
U6 <

One Minute Spectrometer Counts, Bedrock in Creek

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm	
01	16550	1322	490	539	2.85	6.65	67.87	
02	13540	1407	390	343	4.90	7.70	41.73	
03	11950	1266	312	251	4.83	6.68	29.47	
04	7730	954	132	128	4.26	1.62	13.07	
05	15040	1243	557	364	2.99	15.22	44.53	
06	18090	1508	567	579	3.50	9.20	73.20	
07	17150	1417	506	549	3.34	7.13	69.20	
08	17990	1588	530	496	4.63	9.90	62.13	
09	10560	1000	309	248	3.13	6.63	29.07	
010	11450	1126	390	128	4.23	14.21	13.07	
011	10220	1001	279	188	3.59	6.98	21.07	> *

(Diagram on page 9.)

Portland
Deposit 57



URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< | | 2,5,0,0,0,0 >

Deposit No. B40< 58 >

Deposit Name A10 < Randall Hill Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U,S > | U,S | State Maine

State Code A50 < 2,3 > | 2,3 | (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < Road cut on west side of Route 35 160 m north of town boundary between Naples and Harrison >

Field Checked G1 < 7,9 | 1,0 > By G2< Stone , Thomas A. >
Yr Mo Last name First Initial

Latitude A70 < 4,4 | 0,1 | 2,0 N > Longitude A80 < 0,7,0 | 3,7 | 0,8 W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

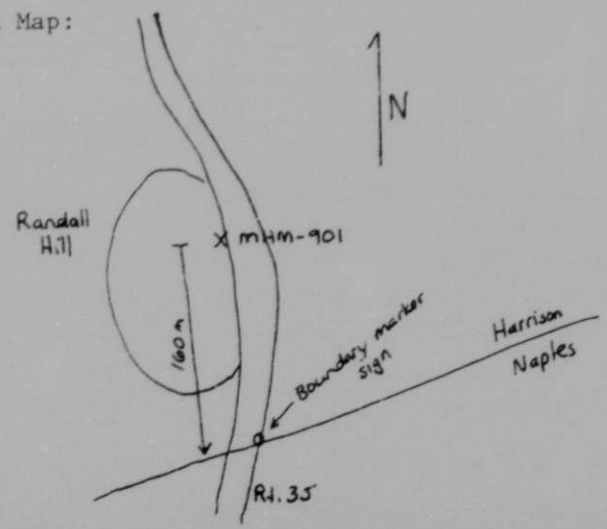
Meridian A81 < > Altitude A107 < 177 m >

Quad Scale A91 < | | 6,2,5,0,0 > Quad Name A92 < Norway >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 58

Commodities Present:
C10 <U | B | CR | T L >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U | > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U | > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 58

Deposit Form/Shape M10 <>

Length M40 < 1 > M41 < FT/M m >

Width M50 < 0.30 > M51 < m >

Thickness M60 < > M61 < >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Central Portion Sebago Pluton >

Local Structures N70 < At least two large (1.5 m thick) basaltic dikes striking N13E with at least one thinner dike colinear with above. Gneiss and Schist present. >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Biotite granite >

Host Rock K1 < DEV (Age) | Massive weathered biotite segregation in quartz monzonite surrounded by rusty and sulfidic schist/gneiss near contact of small metamorphic zone and local quartz monzonite. (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith > (Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < North and south portion of outcrop consists of medium to coarse grained quartz monzonite. Garnetoid pegmatite observed in south center portion of outcrop. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 58

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 104 ppm U_3O_8; 1500 ppm B; 150 ppm Cr; 3000 ppm TI >

Radiometric Data (General) U6 < Surface radioactivity (SR) 625 cps to 755 cps, background 85 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < MHM 846 taken from same outcrop at non-anomalous location, found to have 8 ppm U_3O_8 >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

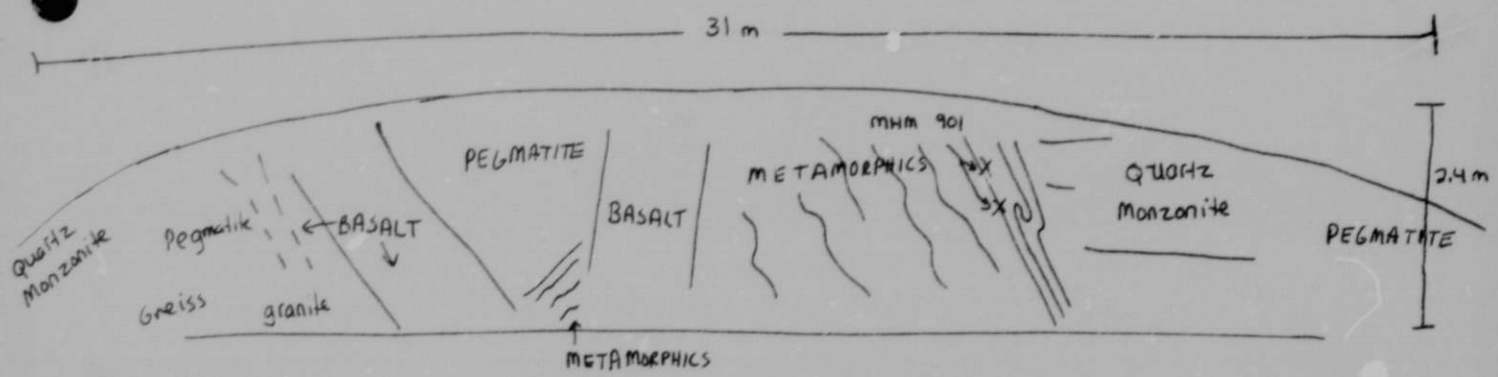
Deposit No. 58

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 901	Granite grid sample	104 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

Drawing made looking west at road cut from highway marker. More outcrop is to the north and on opposite side of road.



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 59 >

Deposit Name A10 < Parker Pond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U, S > | U, S | State Maine

State Code A50 < 2, 3 > | 2, 3 | County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From intersection of Rte. 21 and Rte. 11 go north on Rte. 121 for 2.25 km >

Field Checked G1 < 7, 9 | 0, 5 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 9 | 5, 6, N > Longitude A80 < 0, 7, 0 | 3, 1 | 1, 0, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > N/S Range A78 < | | | > E/W Section A79 < | >

FT/M

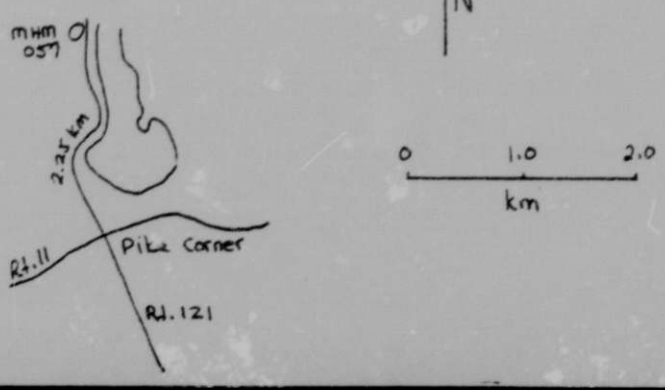
Meridian A81 < > Altitude A107 < 134 m >

Quad Scale A91 < | , 6, 2, 5, 0, 0 > Quad Name A92 < Sebago Lake >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 <Within about 20 m of the N end of the long cut in rock on Highway 121 beside Parker Pond at the N edge of the map, a basaltic dike about > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 59

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 59

Deposit Form/Shape M10 < Not determined. Appears to follow foliation. >

FT/M

Length M40 < 10 > M41 < m >

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 < NNE >

Dip M80 < gentle >

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <

>

Local Structures N70 < Banding and folia in gneissoid granite dip gently towards the road, and are undulatory. Aplitic dikes strike N60E, and are vertical. >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 < D E V | Coarse-grained, inhomogeneous leucocratic
(Age) (Rock type, texture, composition, color,

granite with phenocrysts of muscovite and pink feldspar. The feldspar phenocrysts
alteration, attitude, geometry, structure, etc.)

are of various sizes and are distributed irregularly. Folia rich in biotite produce black bands in the rock. >

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on
Associated Rocks U4 < The central portion of the cut contains much medium-grained muscovite aplite. The southern portion consists of more normal Sebago Lake-type two-mica granite with segregations of pegmatoid muscovite granite. >

Ore Minerals C30 < None observed

>

Gangue Minerals K4 < Biotite, muscovite, feldspar, quartz

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 59

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < U_3O_8 - MHM 076 93 ppm, 077 4ppm, 078 74ppm, 079 27 ppm, 080 15ppm, 081 7 ppm, 082 3ppm. >

Radiometric Data (General) U6 < BG 75 cps. Surface radioactivity (SR) of coarse-grained muscovite-rich granite near north end of cut 200-400 cps, with average probably a little less than 300. One anomalous zone of 300-500 cps lies in a > *
(No. times background and dimensions)

Ore Controls K5 < Differentiation within a granite magma, and separation of late uraniferous fluids. >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

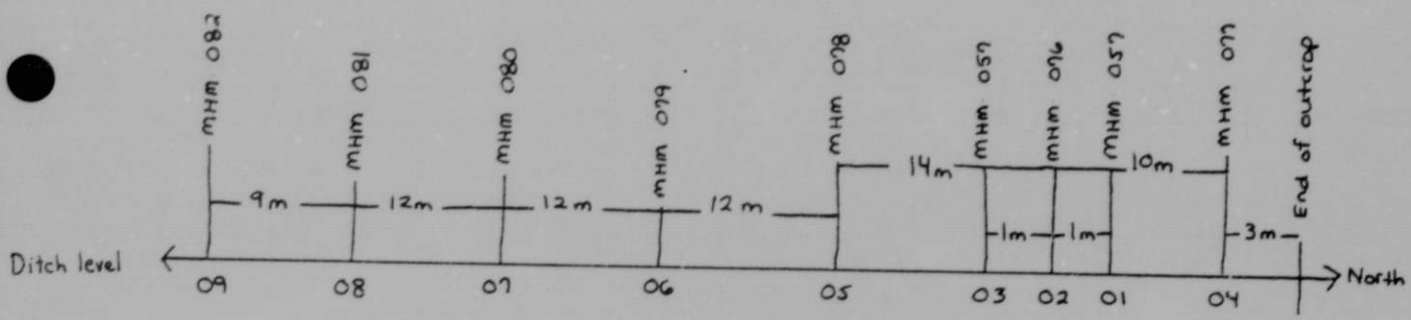
Quad Name Portland

Deposit No. 59

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 057	3 chips from point having SR about 400 cps; two chips from points having SR about 300 cps	144 ppm U_3O_8
MHM 076	Granite, SR 400 cps	93 ppm U_3O_8
MHM 077	Weathered granite, SR 130 cps	4 ppm U_3O_8
MHM 078	Granite, SR 280 cps	74 ppm U_3O_8
MHM 079	Granite, SR 300 cps	27 ppm U_3O_8
MHM 080	Aplite, SR 200 cps	15 ppm U_3O_8
MHM 081	Aplite, SR 230 cps	7 ppm U_3O_8
MHM 082	Granite, SR 140 cps	3 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 59

Continuation from p. 1-5:

Label

A83 < 2 m thick strikes out of the roadcut. The anomalous zone principally lies north of this dike. >

U6 < zone about 20 cm thick containing clusters of muscovite. This anomaly is near the north side of a 2 m basaltic dike. The SR of biotite schlieren and bands is the same as that of enclosing rock. The aplite and the more normal two-mica granite toward the south end of the cut have SR around 175 cps. Pegmatoid segregations within the two-mica granite are gray-white, and are not anomalous.

One-Minute Spectrometer Counts, Gain 4.96

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	22230	2104	990	79	8.20	44.96	6.53
02	24750	2023	1132	133	6.76	50.25	13.73
03	26450	1961	1280	187	5.41	55.84	20.93
04	7840	829	234	83	3.24	7.96	7.10
05	19080	1626	829	165	5.34	34.50	18.00
06	15940	1553	628	149	5.34	25.18	15.86
07	14110	1388	446	256	5.00	13.07	10.13
	15400	1394	487	385	3.54	11.16	47.33
08	14450	1329	447	408	3.79	8.52	50.40
09	11650	1379	260	251	5.79	4.15	29.47 >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 60 >

Deposit Name A10 < Thompson Lake Grid Sample >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U, S > [U, S] State Maine

State Code A50 < 2, 3 > [2, 3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < 1.4 km west of bridge over southern end of Thompson Lake on Mayberry Hill Road, west of Rt. 11 >

Field Checked G1 < 7, 9 | 0, 9 > By G2 < Stone , Tom >
Yr Mo Last name First Initial

Latitude A70 < 4, 4 | 0, 1 | 1, 0, N > Longitude A80 < 0, 7, 0 | 2, 9 | 1, 8, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > N/S Range A78 < | | | > E/W Section A79 < | >

FT/M

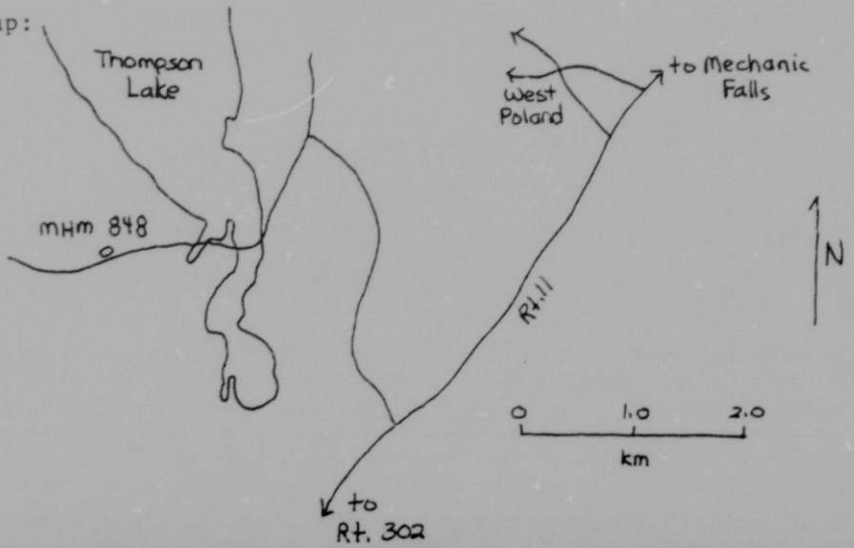
Meridian A81 < > Altitude A107 < 170 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Poland >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 60

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>
accuracy thousands of lb. years grade

Source of Information D9 <

Production Comments D10 <

Reserves and Potential Resources

EH
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

Comments E8 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 60

Deposit Form/Shape M10 < >

Length M40 < > M41< > FT/M

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Pluton >

Local Structures N70 < >

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < 2-mica granite >

Host Rock K1 < D E V | M (Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic, synorogenic, sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 60

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 25 ppm U_3O_8 >

Radiometric Data (General) U6 < >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 60

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 848	Chip across granite, grid sample	25 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 61 >

Deposit Name A10 < Black Cat Mountain Grid Sample >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U, S > [U, S] State Maine

State Code A50 < 2, 3 > [2, 3] County A60 < Androscoggin >
(Enter code twice from List D)

Position from Prominent Locality A82 < From West Poland, go SE until you intersect Rte. 11. (This point is 2.7 km north of the Androscoggin-Cumberland County line on Rte 11). Cross Rte. 11 and take dirt road for 0.8 km and then > *

Field Checked G1 < 7, 9 | 1, 0 > (Yr, Mo) By G2< Stone (Last name), T. (First Initial) >

Latitude A70 < 4, 4 | 0, 0 | 2, 8, N > (Deg, Min, Sec) Longitude A80 < 0, 7, 0 | 2, 5 | 1, 8, W > (Deg, Min, Sec)

Township A77 < | | N/S > Range A78 < | | E/W > Section A79 < | >

FT/M

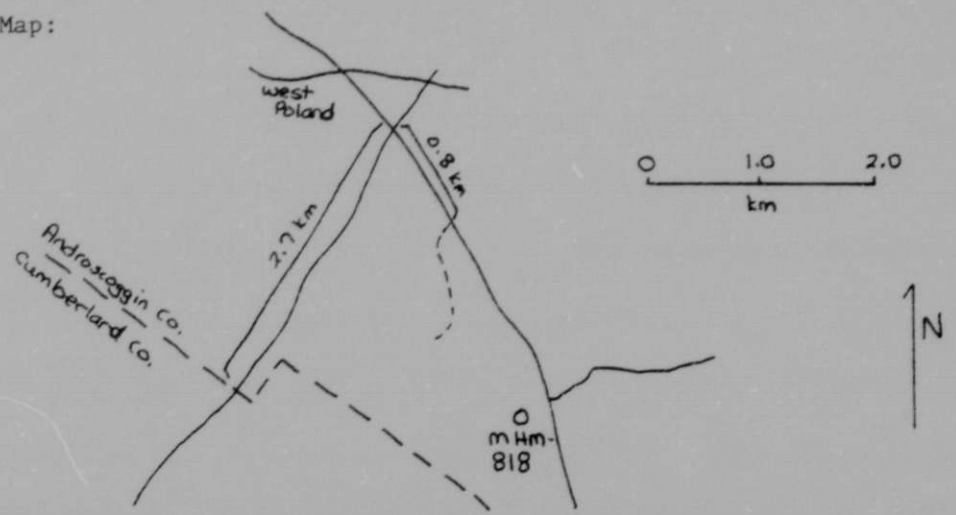
Meridian A81 < > Altitude A107 < 180 m >

Quad Scale A91 < 1 | 6, 2, 5, 0, 0 > (7½' or 15' quad) Quad Name A92 < Poland >

Physiographic Province A63 < 0, 1 | New England > (List K)

Location Comments A83 < At the first fork in the jeep trail go SE, then at second fork go 230° ESE to a ledge where sample was taken. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 61

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 <1>
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 61

Deposit Form/Shape M10 <_____>

Length M40 <_____> M41<____> FT/M

Width M50 <_____> M51<____>

Thickness M60 <_____> M61<____>

Strike M70 <_____>

Dip M80 <_____>

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Sheet Batholith >

Local Structures N70 <_____>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Two-mica granite >

Host Rock K1 <D,E,V, (Age) | Ø | Rusty, coarse-grained biotite-muscovite granite (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)>

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <_____>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite, muscovite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 61

Alteration N75 <

>

Reductants U5 <

>

Analytical Data (General) C43 < 18 ppm U_3O_8

>

Radiometric Data (General) U6 < BG is high, 115 to 125 cps, sample is 1 to 2 x BG
(No. times background and dimensions)

Boulders of granite and pegmatite average 250 cps

>

Ore Controls K5 <

>

Deposit Class C40 <Pegmatitic> Class No. U7 <3 2 0>

Comments on Geology N85 < This sample is part of a sampling grid of the Sebago Lake Sheet Batholith.

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 61

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 018	Chip sample of ledge	18 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 61

Continuation from p. 1-5:

Label

A82 < take the jeep trail that heads S to SW. >

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < , 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 62 >

Deposit Name A10 < East Raymond Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U, S > [U, S] State Maine

State Code A50 < 2, 3 > [2, 3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From East Raymond, proceed south on Rte. 85 for 0.6 km and take dirt road heading west for 0.4 km. >

Field Checked G1 < 7, 9 (Yr) | 0, 8 (Mo) > By G2 < Plano (Last name), J. (First) A. (Initial) >

Latitude A70 < 4, 3 (Deg) | 5, 5 (Min) | 5, 3 (Sec) N > Longitude A80 < 0, 7, 0 (Deg) | 2, 6 (Min) | 3, 1 (Sec) W >

Township A77 < | N/S > Range A78 < | E/W > Section A79 < >

FT/M

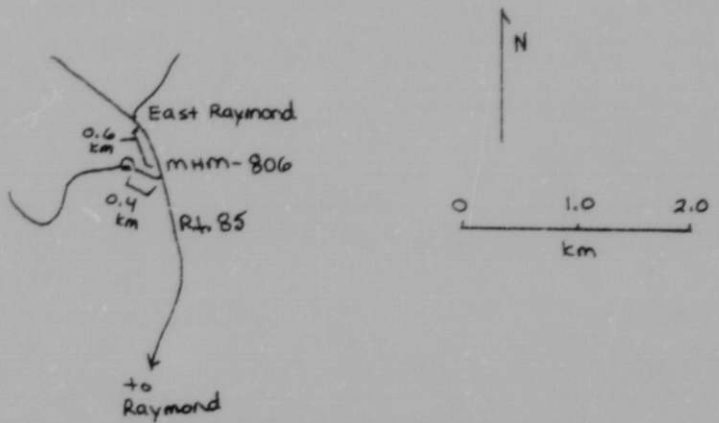
Meridian A81 < > Altitude A107 < 155 m >

Quad Scale A91 < , , 6, 2, 5, 0, 0 > Quad Name A92 < Gray >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Outcrop is on north side of the woods >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 62

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<Li> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 62

Deposit Form/Shape M10 < Plutonic stock >

FT/M

Length M40 < > M41< >

Width M50 < > M51< >

Thickness M60 < > M61< >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Sheet Batholith >

Local Structures N70 <

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < 2-mica granite >

Host Rock K1 < D E V Pl > Biotite muscovite granite

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic synorogenic sheet batholith >

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Biotite, muscovite, quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 62

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 19 ppm U_3O_8 >

Radiometric Data (General) U6 < >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3.2.0>

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 62

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 806	Granite grid sample	19 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 63 >

Deposit Name A10 < Suckerville Grid Sample >

Synonym Name(s) A11 < >

District or Area A30 < Sebago Lake >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Suckerville take dirt road SSW for 0.6 km. Head west 25 m. >

Field Checked G1 < 7,9 | 1,0 > By G2< Stone , T. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,5 | 1,7 | N > Longitude A80 < 0,7,0 | 2,3 | 3,0 | W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

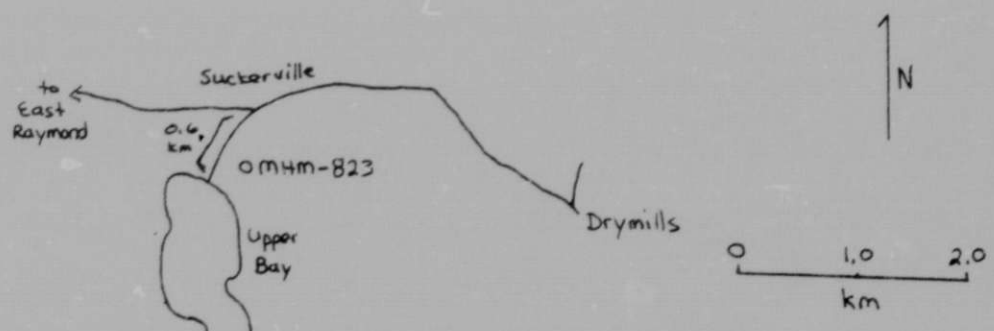
Meridian A81 < > Altitude A107 < 120 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Gray >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 63

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 63

Deposit Form/Shape M10 <

Length M40 < > M41 < > FT/M

Width M50 < > M51 < >

Thickness M60 < > M61 < >

Strike M70 <

Dip M80 <

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Sheet Batholith

Local Structures N70 <

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Pegmatoid facies >

Host Rock K1 < D E V | ¥ |
(Age) (Rock type, texture, composition, color,

alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic, synorogenic, sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed

Gangue Minerals K4 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 63

Alteration N75 <

Reductants U5 <

Analytical Data (General) C43 < 26 ppm U_3O_8

Radiometric Data (General) U6 < Pegmatite 85 cps, granite 250 cps, averaging
(No. times background and dimensions)
125-175 cps

Ore Controls K5 <

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < This sample is a member of the Sebago Lake Pluton sample grid.

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 63

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 823	Chip sample of granite	26 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 64 >

Deposit Name A10 < Pownal Occurrence >

Synonym Name(s) A11 < >

District or Area A30 <Bradbury-Brunswick Pegmatite District >

Country A40 <U,S> [U,S] State Maine

State Code A50 <2,3> [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Pownal Center, go NW on road 2.1 km to next intersection, go north 160 m to small bank on west side of road, sample is from boulder in bank. >

Field Checked G1 <7,9 | 0,4> By G2< Poer , Anne T. >
Yr Mo — Last name — First Initial

Latitude A70 <4,3 | 5,4 | 1,5, N> Longitude A80 <0,7,0 | 1,2 | 2,0, W>
Deg Min Sec — Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S — E/W

FT/M

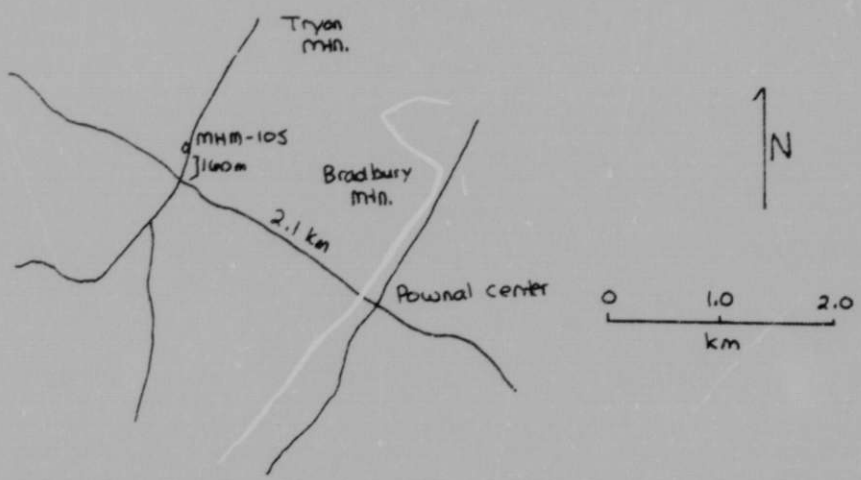
Meridian A81 < > Altitude A107 < 55 m >

Quad Scale A91 < | 6,2,5,0,0 > Quad Name A92 < Freeport >
(7½' or 15' quad)

Physiographic Province A63 <0,1 | New England >
(List K)

Location Comments A83 <Boulder is on west side of road at north end of bank with 0.3 m x 0.3 m section exposed, is 6 m from road >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 64

Commodities Present:
C10 <U YT>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U YT>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 64

Deposit Form/Shape M10 < Irregular area of anomalous radioactivity in boulder >

FT/M

Length M40 < 0.25 > M41 < m >

Width M50 < 0.12 > M51 < m >

Thickness M60 < 0.12 > M61 < m >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Bradbury-Brunswick Pegmatite District >

Local Structures N70 <

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < W Pegmatite with books of biotite >

(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 <

(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 64

Alteration N75 < Discoloration >

Reductants U5 < Boulder partially buried in bank >

Analytical Data (General) C43 < 23 ppm U_3O_8; greater than 200 ppm YT >

Radiometric Data (General) U6 < 16-20 x BG (50) in a .25 m x .12 m x .12 m area >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Pegmatitic > Class No. U7 < 3, 2, 0 >

Comments on Geology N85 <

URANIUM-OCCURRENCE REPORT

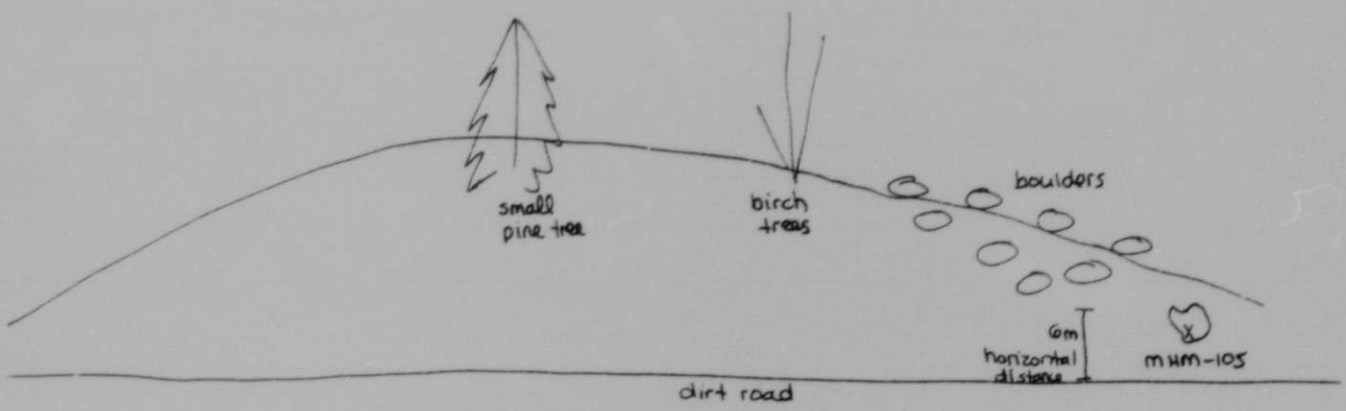
Quad Name Portland

Deposit No. 64

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 105	Chip of boulder	23 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1,2,5,0,0,0 >

Deposit No. B40 < 65 >

Deposit Name A10 < Tryon Mountain Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < From Pownal Center take Pownal Road west 2.0 km to intersection, go north 1.6 km to an old dirt road on the east side with cable across front of it, walk road to top and go straight past fork to left in > *

Field Checked G1 < 7,9 (Yr) 0,4 (Mo) > By G2 < Poer (Last name), Anne (First) T. (Initial) >

Latitude A70 < 4,3 (Deg) 5,4 (Min) 3,4 (Sec) N > Longitude A80 < 0,7,0 (Deg) 1,1 (Min) 4,2 (Sec) W >

Township A77 < (N/S) > Range A78 < (E/W) > Section A79 <

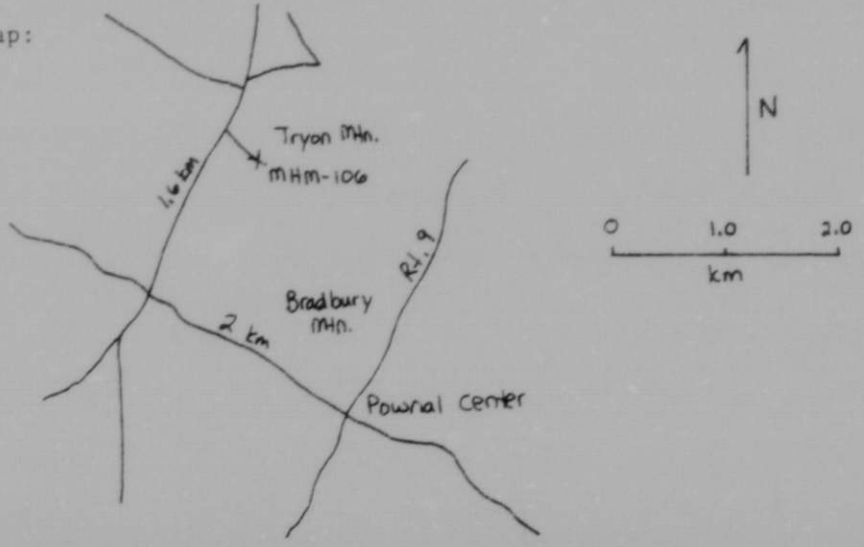
Meridian A81 < > Altitude A107 < 35 m (FT/M) >

Quad Scale A91 < 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Freeport >

Physiographic Province A63 < 0,1 > [New England] (List K)

Location Comments A83 < Facing small half-circle shaped quarry, hot spot is 2 m from right side, 1 m up from ground (tailings). >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 65

Commodities Present:
C10 <U M N >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U M N >

Commodity Comments C50 < >

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2 accuracy thousands of lb. years grade
G7<U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH accuracy thousands of lb. year of est. grade
E1<U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 < >

Comments E8 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 65

Deposit Form/Shape M10 < Irregular area of anomalous radioactivity >

			FT/M	
Length	M40 < 0.3 >	M41 < m >		
Width	M50 < 0.2 >	M51 < m >		
Thickness	M60 < 0.05 >	M61 < m >		
Strike	M70 < >			
Dip	M80 < >			

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 (circled)
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Pluton >

Local Structures N70 < >

Host-FM. Name U1 < Two-mica granite > Member U2 <Pegmatoid-granitoid > *

Host Rock K1 < (Age) | M Medium grained granitic rock similar to Sebago Lake granite. Pegmatoid pods and segregations are numerous. >
(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Feldspar, muscovite, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 65

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 180 ppm U_3O_8, 65000 ppm Mn >

Radiometric Data (General) U6 < 14 to 20 times BG (70) in a 30 cm x 20 cm x 5 cm area.
(No. times background and dimensions)
One-half acre pavement exposure has surface radioactivity (SR) 200-400 cps. Anomalous zones trending roughly N-S have SR 600-1000 cps. Gneissoid banding occurs in > *

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 <This mountain is covered with quarries which are in giant-crystal muscovite-biotite graphic granite. SR of this rock is low but rare anomalies of up to 2100 cps occur in large clusters of books of muscovite. Biotite clusters are rarely mildly anomalous. >

URANIUM-OCCURRENCE REPORT

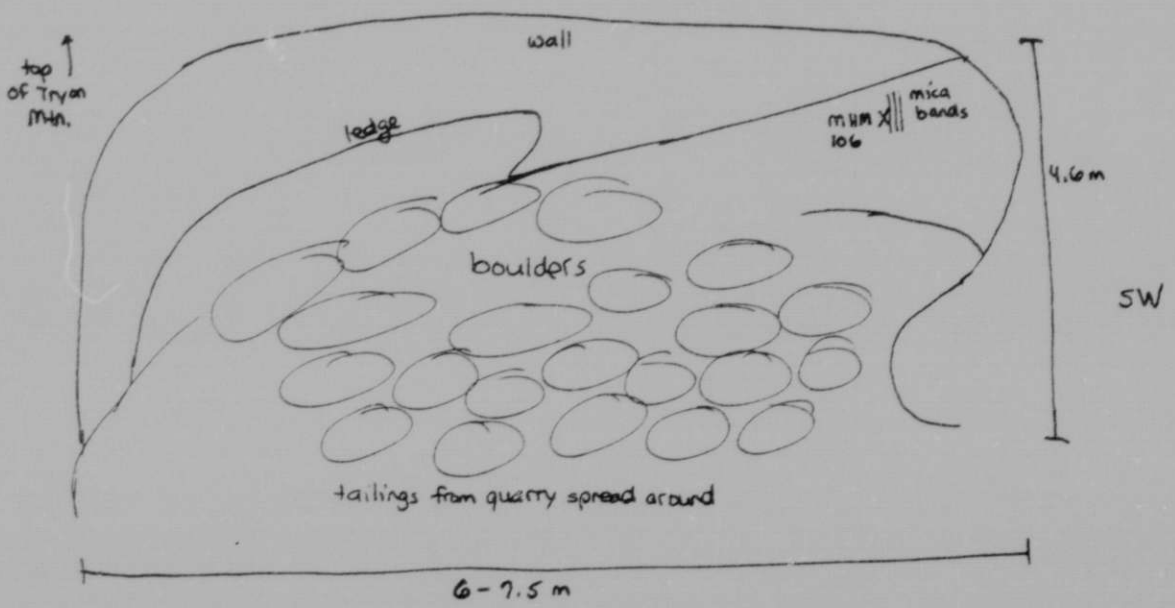
Quad Name Portland

Deposit No. 65

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 106	Chip in area of anomalous radioactivity	180 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 65

Continuation from p. 1-5:

Label

U6 < the southeastern exposure. Banding trends 150-160 deg. Anomalies occur in a zone about 1 m wide that follows the foliation of banding and has SR generally of 300-500 cps. This zone can be traced for at least 30 m. The 2100 cps anomaly occurs in humus-covered bedrock immeidately NW of the northern-most dump pile of the small quarry at MHM 106.

One-Minute Spectrometer Counts Gain 5·14

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	18960	1431	696	270	4.09	24.84	32
02	14490	1127	482	308	2.87	13.25	37.07
03	28650	1888	1374	457	3.06	52.25	56.93
04	17580	1355	655	344	3.39	20.60	41.87
05	28400	1978	1217	624	3.44	39.55	79.20
06	42280	2635	2186	558	3.80	88.81	70.4
07	41980	2714	2097	551	4.73	84.68	69.47
08	37500	2266	1672	829	2.19	55.54	106.53
09	42080	2655	2153	476	4.50	89.68	59.47 >

A82 < clearing, back in woods is small quarry pit to left of trail from which sample was taken, tailings all over area. >

U2 < facies >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 66 >

Deposit Name A10 < Pownal Center Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U, S > | U, S | State Maine

State Code A50 < 2, 3 > | 2, 3 | County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < 0.9 km east of Pownal Center, on Pownal Road go northeast on dirt road to intersection of 3 used dirt roads and 1 old dirt road to west, sample from outcrop in ridge 90 m west down old dirt road. >

Field Checked G1 < 7, 9 | 0, 4 > By G2< Poer , Anne I. >
Yr Mo Last name First Initial

Latitude A70 < 4, 3 | 5, 3 | 5, 4, N > Longitude A80 < 0, 7, 0 | 0, 9 | 3, 6, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

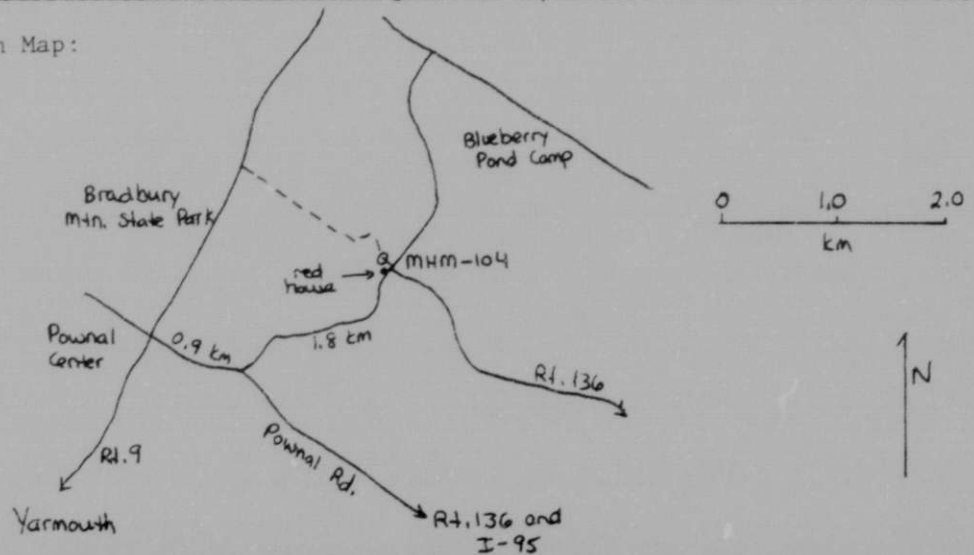
Meridian A81 < > Altitude A107 < 110 m >

Quad Scale A91 < | | 6, 2, 5, 0, 0 > Quad Name A92 < Freeport >
(7½' or 15' quad)

Physiographic Province A63 < 0, 1 | New England >
(List K)

Location Comments A83 < Sample is 90 m west of dirt road, north of red house, in second ridge which is 25 m from first ridge. Both parallel main dirt rd. to east. >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 66

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7 <U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1 <U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 66

Deposit Form/Shape M10 < Circular area of anomalous radioactivity >

Length M40 < 0.3 > M41 < m > (FT/M)

Width M50 < 0.15 > M51 < m >

Thickness M60 < 0.05 > M61 < m >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Bradbury-Brunswick Pegmatite District >

Local Structures N70 <

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < Pegmatite in biotite schist >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Metamorphic, sillimanite facies >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 66

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 30 ppm U_3O_8 >

Radiometric Data (General) U6 < 12 to 16 times BG (50) in a 0.3 m x 0.15 m x 0.05 m area >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

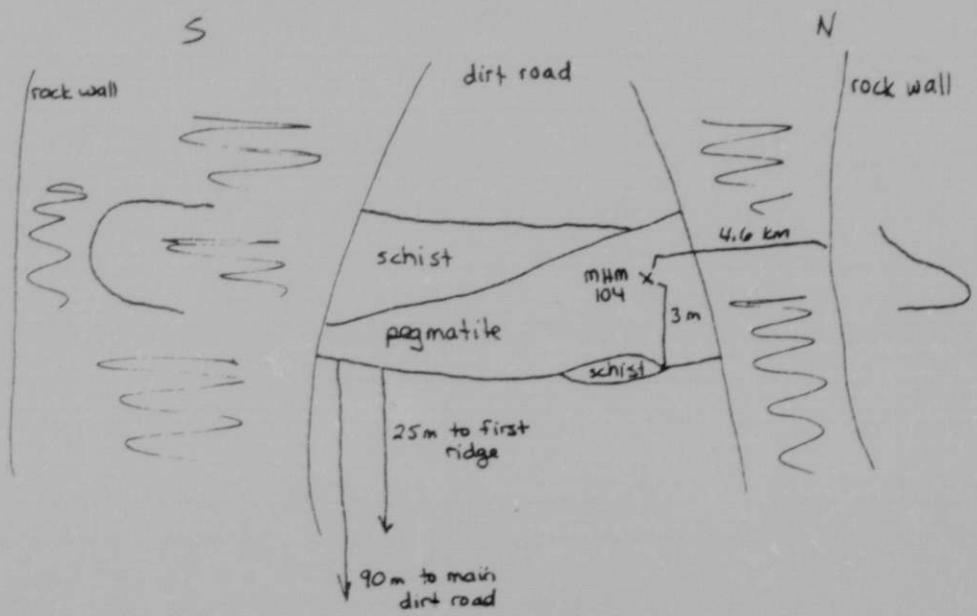
Quad Name Portland

Deposit No. 66

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 104	Chip across area of anomalous radioactivity	30 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40 < 67 >

Deposit Name A10 < I-95 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U, S > [U, S] State Maine

State Code A50 < 2, 3 > [2, 3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < On west side of southbound lane and east side of northbound lane of I-95, 6.5 km south of Rte. 1 exit and 2.4 km north of northbound exit off I-95 to Brunswick. >

Field Checked G1 < 7, 9 | 0, 4 > (Yr, Mo) By G2 < Poer and Wagener , > (Last name, First, Initial)

Latitude A70 < 4, 3 | 5, 3 | 5, 8, N > (Deg, Min, Sec) Longitude A80 < 0, 7, 0 | 0, 4 | 4, 3, W > (Deg, Min, Sec)

Township A77 < | | N/S > Range A78 < | | E/W > Section A79 < | >

FT/M

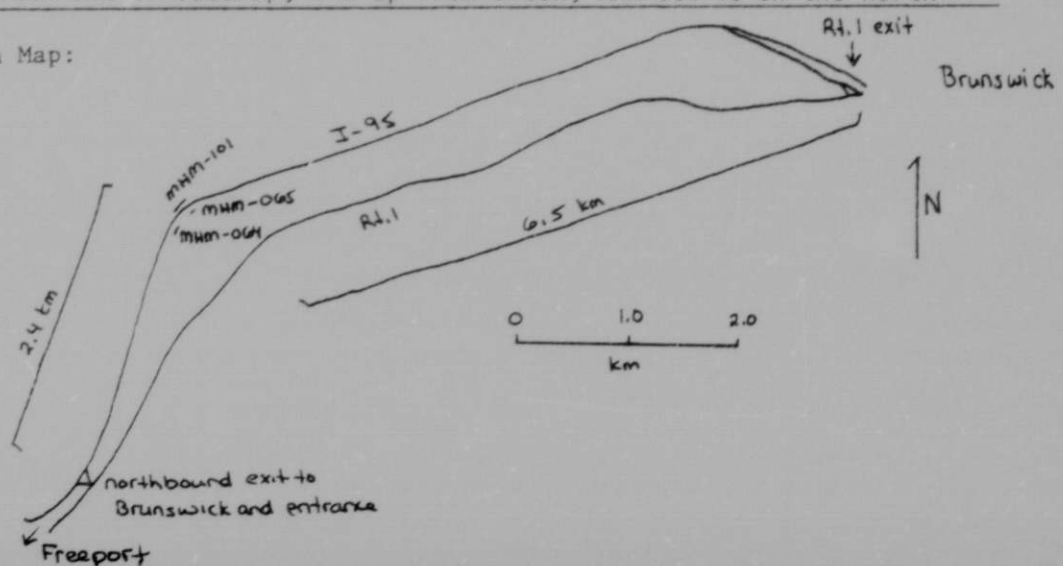
Meridian A81 < > Altitude A107 < 55 m >

Quad Scale A91 < 1 | 6, 2, 5, 0, 0 > (7½' or 15' quad) Quad Name A92 < Freeport, Maine >

Physiographic Province A63 < 0, 1 | New England > (List K)

Location Comments A83 < MHM 101 is 56 m north of culvert at south end of outcrop and 37 m from south end of outcrop, 1 m up from ditch; MHM 064 is on the north- > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 67

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7<U> accuracy G7A< > thousands of 1b. G7B<LB> G7C< > years G7D< > grade % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1<U> accuracy E1A< > thousands of 1b. E1B<LB> E1C< > year of est. E1D< > grade % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 67

Deposit Form/Shape M10 < Irregular zone of anomalous radioactivity in a pegmatite >

Length M40 < 0.10 > M41 < m > (FT/M)

Width M50 < 0.3 > M51 < m >

Thickness M60 < 0.15 > M61 < m >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 <

Local Structures N70 < Profusion of sills and dikes of pegmatite in folded metamorphic rocks. Some sills wrap around fold noses. >

Host-FM. Name U1 < Berwick > Member U2 < Pegmatite >

Host Rock K1 < | | Pegmatite of the Sebago Lake granite. >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Biotite-garnet pegmatite with zones of granitoid-pegmatoid rock. Generally concordant.

Host-Rock Environment U3 < >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Country Rock is massive granitoid metagraywacke (?) and amphibolite. >

Ore Minerals C30 < None observed. >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 67

Alteration N75 < None >

Reductants U5 < >

Analytical Data (General) C43 < 17 to 394 ppm U_3O_8 >

Radiometric Data (General) U6 < MHM 101 is a spot anomaly in otherwise non-
(No. times background and dimensions)
anomalous pegmatite (maximum surface radioactivity (SR) 500 cps). At locality MHM 064, surface radioactivity (SR) of pegmatite is generally 300 to 500 cps > *

Ore Controls K5 < Differentiation in granitic magma, and separation of uraniferous pegamtite-forming fluids. >

Deposit Class C40 < Pegmatitic > Class No. U7 <3 2 0>

Comments on Geology N85 < >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

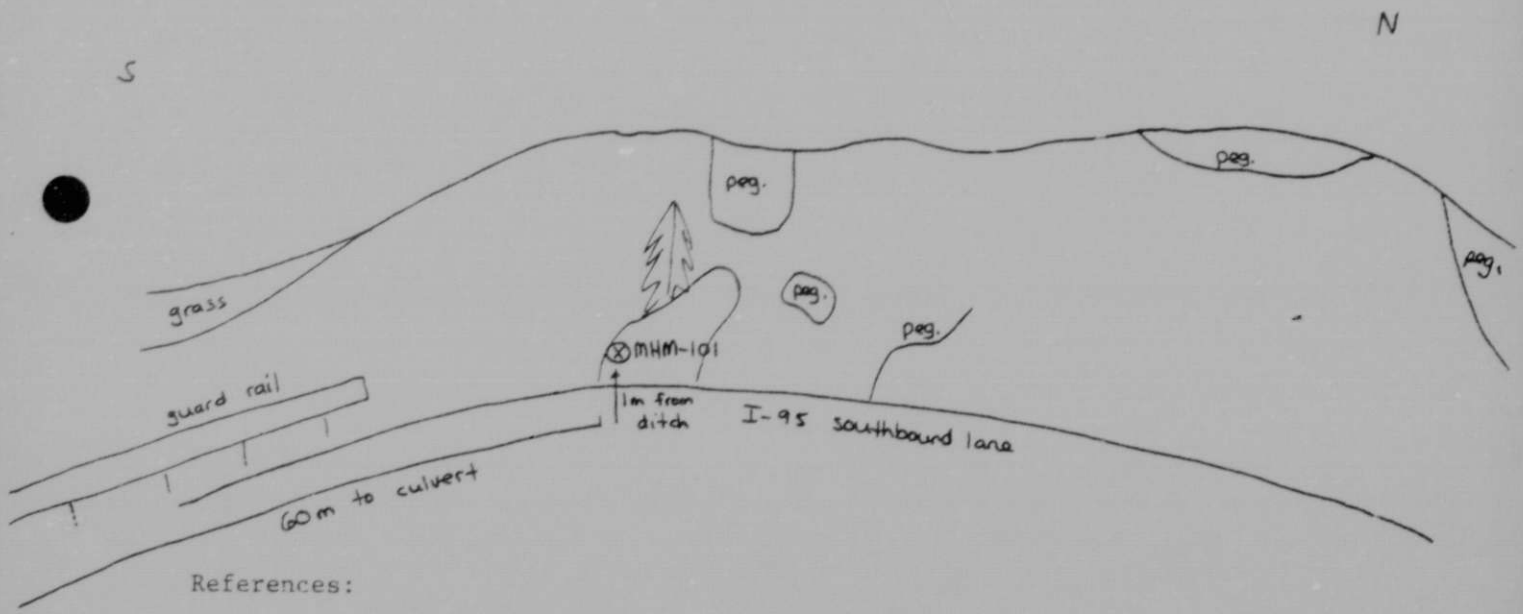
Quad Name Portland

Deposit No. 67

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 101	Chip from area of anomalous radioactivity (500 cps)	17 ppm U_3O_8
MHM 064	Sample taken from area of maximum radioactivity (1800 cps)	394 ppm U_3O_8
MHM 065	Chip samples from anomalous zone (400-900 cps)	137 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 67

Continuation from p. 1-5:

Label

A83 < bound lane of I-95, 0.50 km south of the Freeport-Brunswick town line. MHM 064 was taken 57 m north of the southern end of the exposure. MHM 065 is 40 m north of MHM 064. >

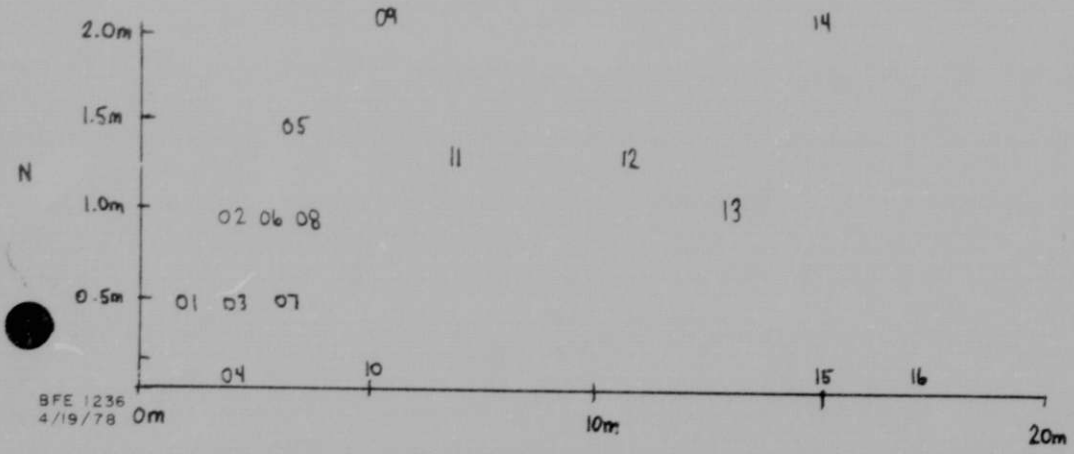
U6 < with spot anomalies of 800 and 1800 cps; at locality MHM 065, pegmatite has SR 200-400 cps, except near its northern contact, where a zone about 3 m long has SR 400-900 cps. These readings taken against BG of 80 cps.

One-Minute Spectrometer Counts

MHM 064

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	17950	1642	786	79	6.10	35.01	6.53
02	49650	2825	2875	153	4.16	134.67	16.40
03	30190	2115	1616	92	5.44	75.10	8.27
04	24320	1698	1253	95	4.32	57.30	8.67
05	28340	2254	1366	101	6.27	58.88	9.47
06	2738	2002	1454	107	7.36	62.45	10.27
07	25850	1791	1377	106	5.35	66.68	10.13
08	24840	2229	1191	104	7.99	54.01	9.87
09	30250	2278	1553	113	6.66	71.39	11.07
10	18090	1652	736	59	6.49	33.17	3.87
11	12420	1230	454	55	5.02	19.54	3.33
12	21220	1927	934	117	7.09	41.08	11.60
13	45120	3139	2217	159	9.07	102.39	17.20
14	15970	1397	716	86	4.78	31.38	7.47
15	20150	1624	909	79	5.44	41.00	6.53
16	19780	1705	909	94	5.89	40.55	8.53

Spectrometer Stations normal to strike of surrounding gneisses and schists



>*

URANIUM-OCCURRENCE REPORT

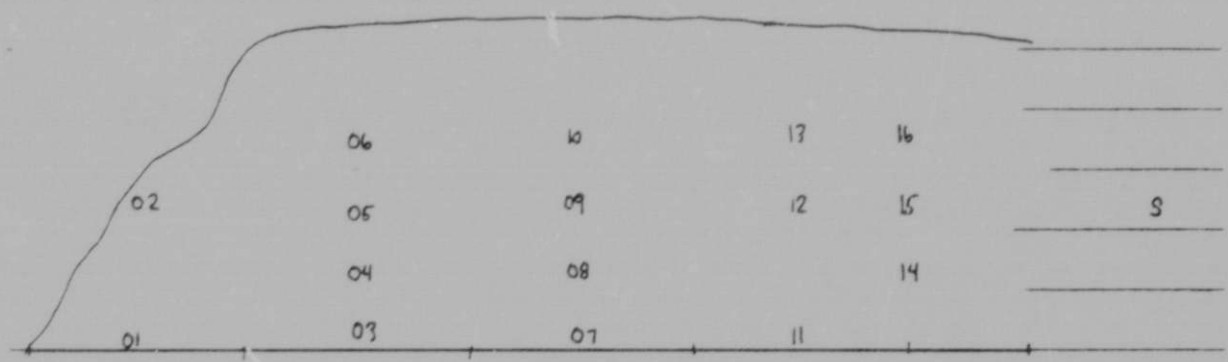
Quad Name Portland

Deposit No. 67

Continuation from p. 6:

Label

U6 < Spectrometer Station MHM065



MHM 065

One-Minute Spectrometer Counts

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	25690	1956	1256	152	5.67	55.72	16.27
02	33720	2609	1715	182	7.70	77.11	20.67
03	32360	2465	1642	136	7.36	75.04	14.13
04	27190	2096	1332	148	6.27	59.55	15.73
05	24920	2145	1199	148	7.17	53.06	15.73
06	25950	2211	1267	165	7.21	55.87	18.00
07	41000	3286	3210	421	4.23	142.91	52.13
08	39920	2904	2167	179	7.66	99.35	19.87
09	30380	2095	1579	135	5.24	71.99	14.00
10	27530	1855	1491	158	3.95	67.01	17.07
11	20930	1964	901	106	7.54	39.80	10.13
12	26320	2013	1341	126	5.81	60.66	12.80
13	29280	2199	1455	140	6.44	65.79	14.67
14	21110	1482	944	216	3.63	38.57	24.80
15	29280	1740	1599	218	2.40	70.46	25.07
16	21450	1481	1021	159	3.59	44.05	17.20

>*

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No 67

Continuation from p. 7:

Label

U6 < MHM 101 One-Minute Spectrometer Counts

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
Sample Site	26110	2024	1328	160	5.75	58.99	17.33
1 m north of Sample Site	23350	1967	1069	136	6.65	47.09	14.13
1 m below Sample Site	26730	2175	1312	163	6.79	58.12	17.73

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1, 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 68 >

Deposit Name A10 < Route 1 Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U, S > [U, S] State Maine

State Code A50 < 2, 3 > [2, 3] (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < Outcrop is in ridge on west side of Rt. 1 0.25 km south of Freeport-Brunswick Town Line, 0.3 km north of dirt road to west across from antique store. Ridge is 60 m behind white mobile home trimmed in red. >

Field Checked G1 < 7 9 (Yr) 0, 4 (Mo) > By G2< Poer (Last name), Anne (First) T. (Initial) >

Latitude A70 < 4, 3 (Deg) 5, 3 (Min) 4, 9 (Sec) N > Longitude A80 < 0, 7, 0 (Deg) 0, 4 (Min) 0, 3 (Sec) W >

Township A77 < (N/S) > Range A78 < (E/W) > Section A79 < >

FT/M

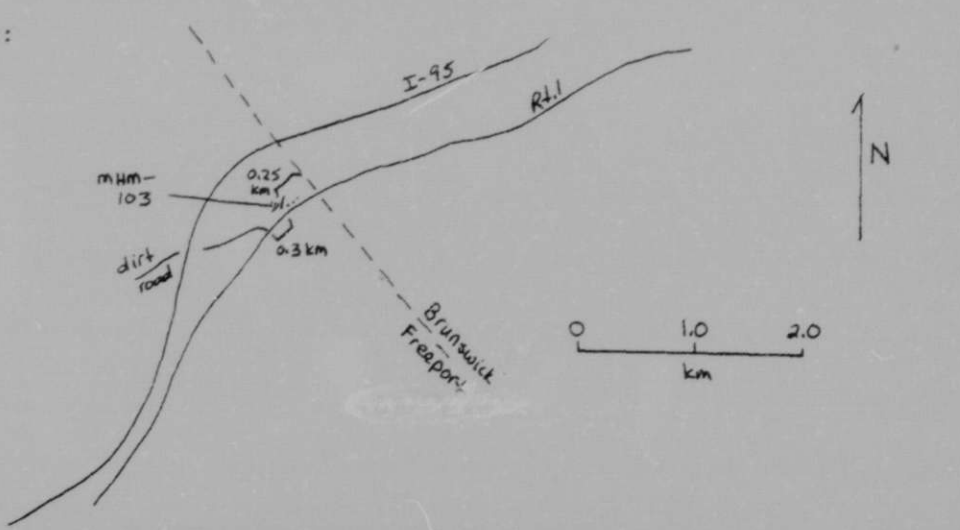
Meridian A81 < > Altitude A107 < 55 m >

Quad Scale A91 < 6, 2, 5, 0, 0 > (7½' or 15' quad) Quad Name A92 < Freeport >

Physiographic Province A63 < 0, 1 (List K) | New England >

Location Comments A83 <Sample is 40 m from treehouse behind trailer in N80W line and 1.5 m from old road or trail >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 68

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No.: 68

Deposit Form/Shape M10 < Circular area of anomalous radioactivity >

FT/M

Length M40 < 0.6 > M41 < m >

Width M50 < 0.3 > M51 < m >

Thickness M60 < 0.09 > M61 < m >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter): 1b U3O8

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Bradbury-Brunswick Pegmatite District >

Local Structures N70 <

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < | Pegmatite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 <
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 68

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 83 ppm U_3O_8 >

Radiometric Data (General) U6 < 20 to 40 times BG (50) in a 0.65 x 0.30 x 0.10 m area >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

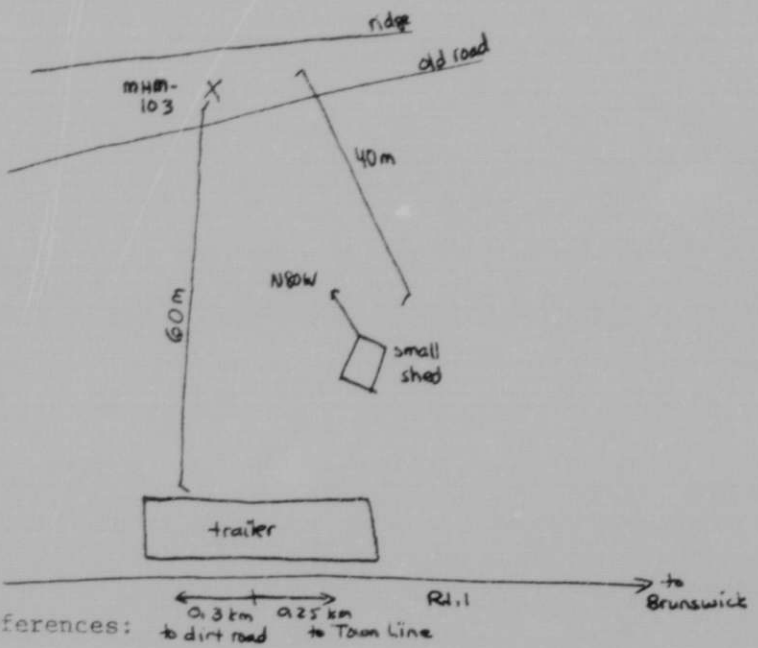
Quad Name Portland

Deposit No. 68

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 103	Chip across area of anomalous radioactivity	83 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



enlargement of exposed area on ridge from which sample was taken

References:

R1 <

>

R2 <

>

R3 <

>

R4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 69 >

Deposit Name A10 < Growstown Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 <U,S> |U,S| State Maine

State Code A50 <2,3> |2,3| County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < Outcrop is in Growstown, south of Brunswick, on east side of Church Road 0.4 km north of intersection with Raymond Road and 160 m south of intersection with road to east >

Field Checked G1 <7,9|0,4> By G2< Poer , Anne T. >
Yr Mo Last name First Initial

Latitude A70 <4,3|5,3|5,1,N> Longitude A80 <0,7,0|0,0|0,0,W>
Deg Min Sec Deg Min Sec

Township A77 <| | |> Range A78 <| | |> Section A79 <| |>
N/S E/W

FT/M

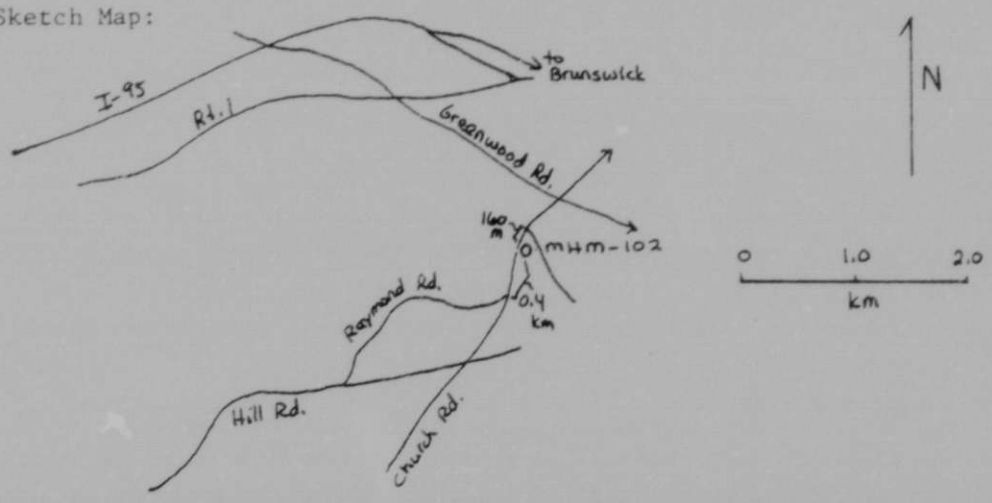
Meridian A81 < > Altitude A107 < 42 m >

Quad Scale A91 <1,62500> Quad Name A92 < Freeport >
(7½' or 15' quad)

Physiographic Province A63 <0,1| New England >
(List K)

Location Comments A83 < Sample is 0.5 m to right of telephone pole, 1.5 m up from road level, 3 - 5 m off of road (horiz. distance), 17 m south of large block of >*

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 69

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 69

Deposit Form/Shape M10 < circular area of anomalous radioactivity >

		FT/M	
Length	M40 < 0.2 >	M41< M >	
Width	M50 < 0.25 >	M51< M >	
Thickness	M60 < 0.04 >	M61< M >	
Strike	M70 < >		
Dip	M80 < >		

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000 (circled)
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Bradbury-Brunswick Pegmatite District >

Local Structures N70 < >

Host-FM. Name U1 < Cushing Fm. > Member U2 < Pegmatite >

Host Rock K1 <| | | | | | | | | | | |M| pegmatite with segregated band of biotite located
(Age) (Rock type, texture, composition, color,

above hottest spot (2500 cps) and to left of sampled spot (700-2000 cps)
alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 69

Alteration N75 < None observed >

Reductants U5 < Outcrop partially covered by shallow soil vegetation >

Analytical Data (General) C43 < 57 ppm U_3O_8 >

Radiometric Data (General) U6 < 14 to 40 times BG (50) in 0.25 m x 0.2 m x 0.04 m area >
(No. times background and dimensions)

Ore Controls K5 <

Deposit Class C40 < Pegmatitic > Class No. U7 < 3,2,0 >

Comments on Geology N85 <

>

URANIUM--OCCURRENCE REPORT

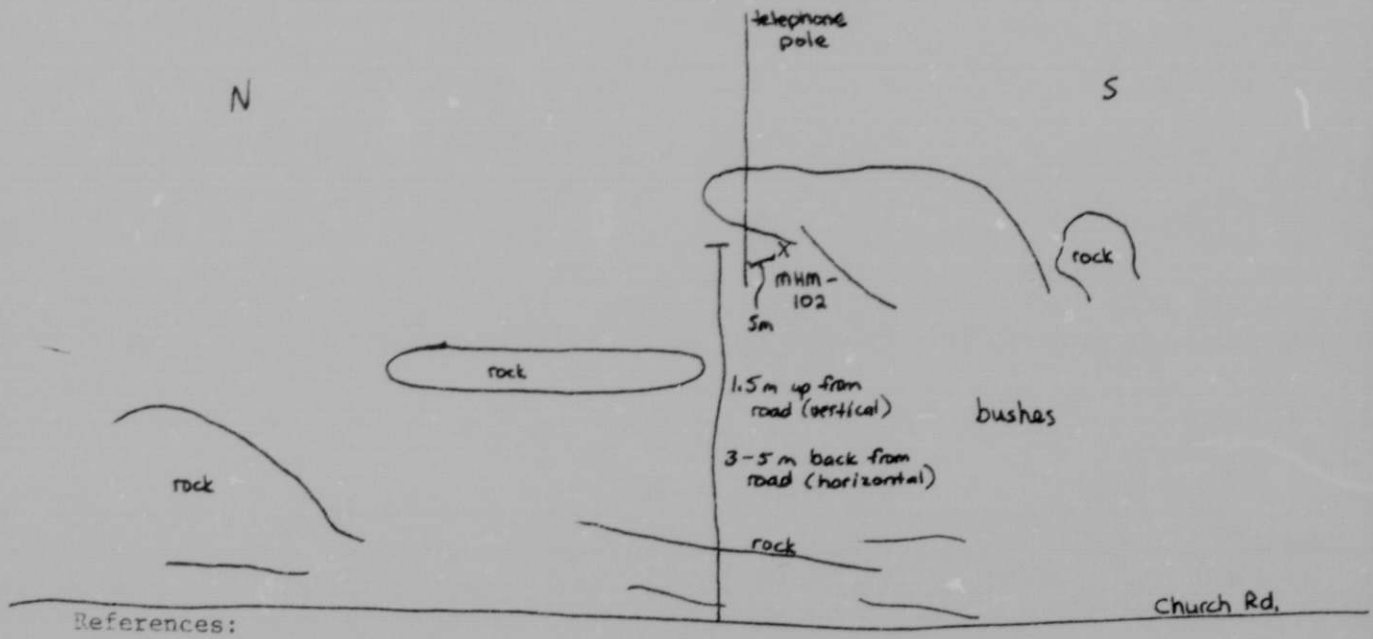
Quad Name Portland

Deposit No. 69

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 102	Chip from area of anomalous radioactivity	57 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 69

Continuation from p. 1-5:

Label

A83 < rock at north end of outcrop. >

BFE 1236
4/19/78

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 70 >

Deposit Name A10 < Flying Point Road Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U,S > |U,S| State Maine

State Code A50 < 2,3 > 2,3 (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < 2 km south of intersection at Bunganuc Landing. 2.1 km north of intersection with road leading to Flying Point Neck >

Field Checked G1 < 7,9 | 0,4 > (Yr, Mo) By G2< Bruton (Last name), Keith (First) A. (Initial) >

Latitude A70 < 4,3 | 5,1 | 0,1, N > (Deg, Min, Sec) Longitude A80 < 0,7,0 | 0,2 | 1,2, W > (Deg, Min, Sec)

Township A77 < | | | > (N/S) Range A78 < | | | > (E/W) Section A79 < | >

FT/M

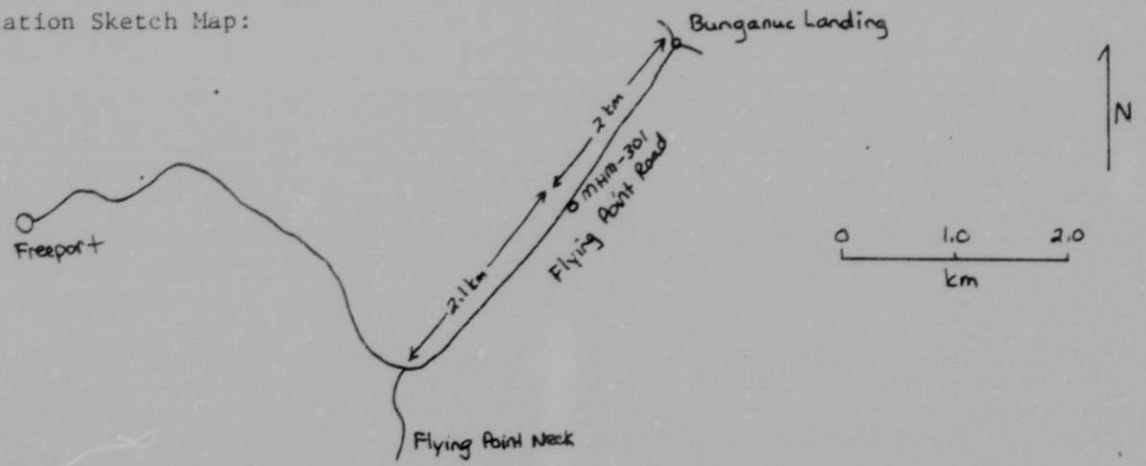
Meridian A81 < > Altitude A107 < 24 m >

Quad Scale A91 < | | 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Freeport >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Commencs A83 < Outcrop on east side of Flying Point Road, 2.1 km north of intersection with road to Flying Point Neck, or 2 km south of Bunganuc > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 70

Commodities Present:
C10 <U>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7<U> G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1<U> E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 70

Deposit Form/Shape M10 < Area of anomalous radioactivity >

		FT/M		
Length	M40 < >	M41 < >	Size M15 (circle letter):	
Width	M50 < >	M51 < >	1b U308	
Thickness	M60 < >	M61 < >	(A)	0 - 20,000
Strike	M70 < >		B	20,000 - 200,000
Dip	M80 < >		C	200,000 - 2 million
			D	2 million - 20 million
			E	More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < East flank of Cushing Anticline of the Casco Bay Group >

Local Structures N70 <

Host-FM. Name U1 < Cushing Fm > Member U2 < Pegmatite >

Host Rock K1 < (Age) | 61 Coarse grained, iron stained, pegmatite composed (Rock type, texture, composition, color,

of clear to smoky quartz, biotite and feldspar alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < > (Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Pegmatite is injected into biotite gneiss with a strike of N39E and a dip of 45-60 SE >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 70

Alteration N75 < Hematite-staining in pegmatite >

Reductants U5 < >

Analytical Data (General) C43 < 50 ppm U_3O_8 >

Radiometric Data (General) U6 < BG 50-60 cps, biotite gneiss 50-120 cps, pegmatite
(No. times background and dimensions)
is 27 times BG (25 x 30 cm), pegmatite averages 200-400 cps > *

Ore Controls K5 < >

Deposit Class C40 < Pegmatite > Class No. U7 < 13210 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

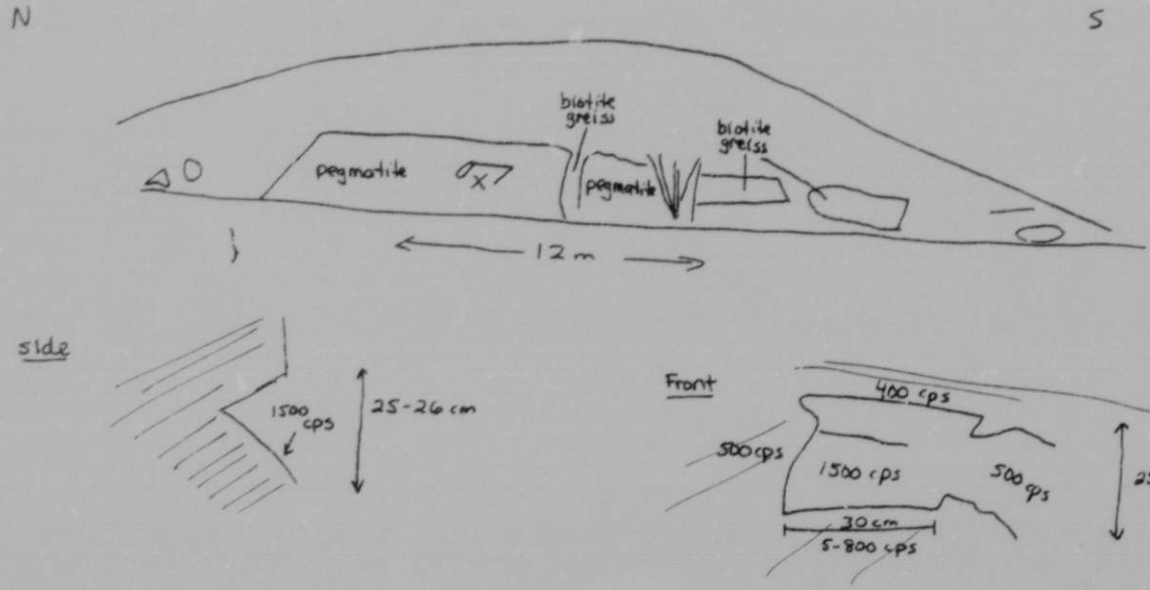
Quad Name Portland

Deposit No. 70

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 301	Chip sample from most radioactive spot	50 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 70

Continuation from p. 1-5:

Label

A83 < Landing. >

U6 < 2.0 minute spectrometer count, detector 0.6 m from anomaly

Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
16320	1321	547	134	2.05	10.37	4.93

>

URANIUM-OCCURRENCE REPORT

Quad Name A90 < Portland >

Quad Scale A100 < 2,5,0,0,0,0 >

Deposit No. B40 < 71 >

Deposit Name A10 < Hunter Road Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] (Enter code twice from List D) County A60 < Cumberland >

Position from Prominent Locality A82 < 150 m east of intersection of Webster Rd. and Hunter Rd., north side of Hunter Rd., west of Freeport, Me. >

Field Checked G1 < 7,8 | 1,0 > (Yr, Mo) By G2 < Bruton and Poer , > (Last name, First Initial)

Latitude A70 < 4,3 | 5,1 | 5,1 N > (Deg, Min, Sec) Longitude A80 < 0,7,0 | 0,9 | 5,1 W > (Deg, Min, Sec)

Township A77 < | | | > (N/S) Range A78 < | | | > (E/W) Section A79 < | >

FT/M

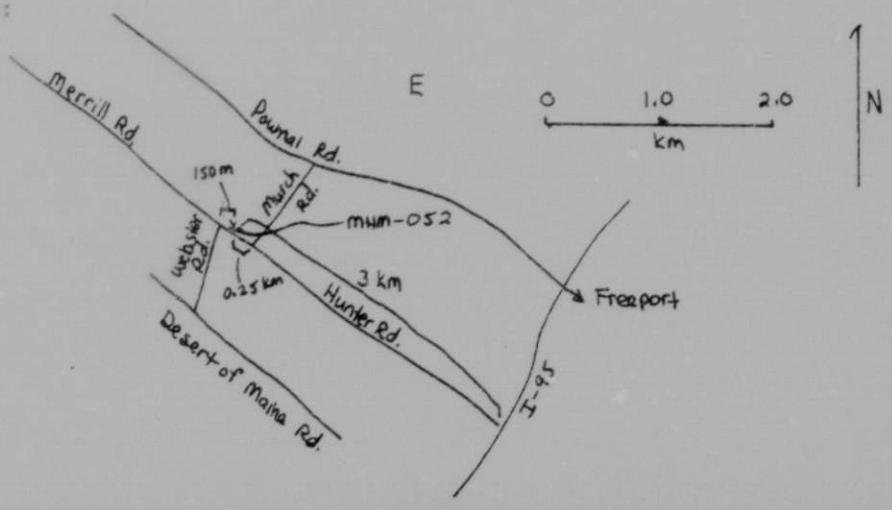
Meridian A81 < > Altitude A107 < 60 m >

Quad Scale A91 < | | 6,2,5,0,0 > (7½' or 15' quad) Quad Name A92 < Freeport >

Physiographic Province A63 < 0,1 | New England > (List K)

Location Comments A83 < Sampled area 8 m east of west end of outcrop 1 m up from ditch >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 71

Commodities Present:
C10 <U B A>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U B A>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U308>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U308>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name Portland

Deposit No. 71

Deposit Form/Shape M10 < Irregular disemination >

Length M40 < 0.3 > M41 < M > (FT/M)

Width M50 < 0.15 > M51 < M >

Thickness M60 < 0.20 > M61 < M >

Strike M70 < >

Dip M80 < >

Size M15 (circle letter):

lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Bradbury-Brunswick Pegmatite District >

Local Structures N70 < >

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < (Age) | Pegmatite
(Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Pegmatite injected into granite >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Pegmatite dike located in granite, also present in outcrop are quartzite, calcareous metasedimentary rocks and biotite schist >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Quartz, feldspar >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 71

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 24 ppm U_3O_8, 700 ppm BA >

Radiometric Data (General) U6 < BG 70, rock 200-600 cps, sampled area 400 cps >
(No. times background and dimensions)

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3 2 0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

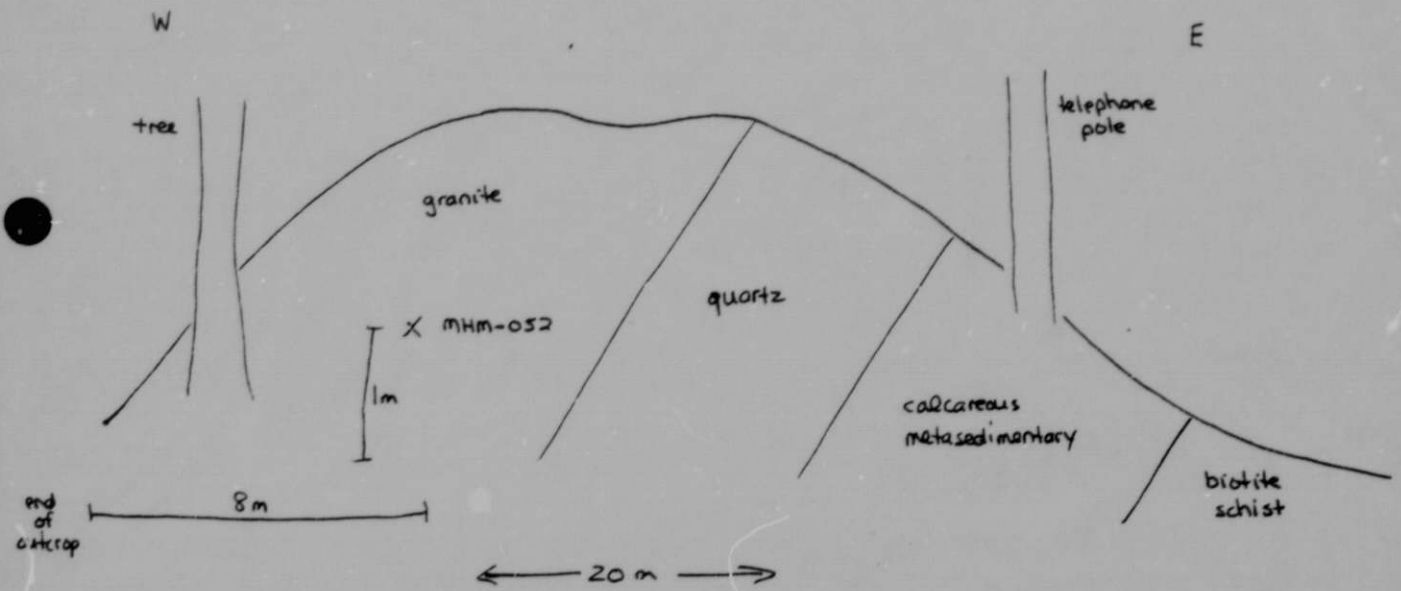
Quad Name Portland

Deposit No. 71

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 052	Chip of pegmatite	24 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 72 >

Deposit Name A10 < Hodson Road Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < From Pownal Center travel east on Pownal Road, take Hodson Road south off of Pownal Road, go .56km south on Hodson Road after junction with Merrill Road >

Field Checked G1 < 7,9 | 0,4 > By G2< Bruton , Keith A. >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,2 | 2,9, N > Longitude A80 < 0,7,0 | 1,1 | 5,5, W >
Deg Min Sec Deg Min Sec

Township A77 < | | | > Range A78 < | | | > Section A79 < | >
N/S E/W

FT/M

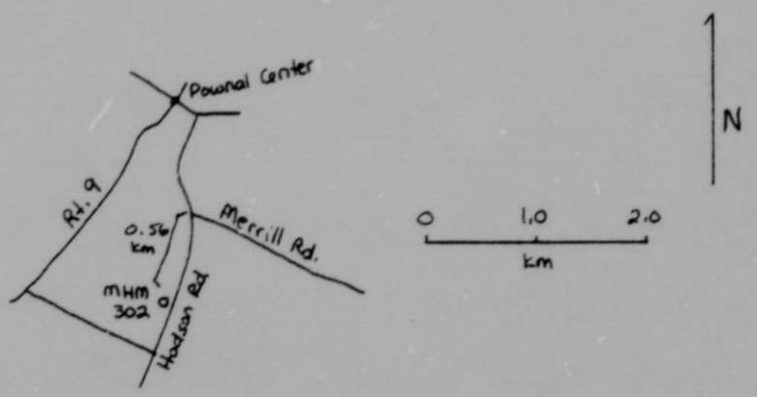
Meridian A81 < > Altitude A107 < 49 m >

Quad Scale A91 < | | 6,2,5,0,0 > Quad Name A92 < Freeport >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Outcrop on west side of Hodson Road .56 km south of intersection with Merrill Road, outcrop in pulloff in front of green house with > *

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 72

Commodities Present:
C10 < U, Y, T, >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U, Y, T, >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7 < U > G7A < > G7B<LB> G7C< > G7D< % U308>
accuracy thousands of lb. years grade

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1 < U > E1A < > E1B<LB> E1C < > E1D< % U308>
accuracy thousands of lb. year of est. grade

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 72

Deposit Form/Shape M10 < Circular area of anomalous radioactivity >

FT/M

Length M40 <_____> M41<___>

Width M50 <_____> M51<___>

Thickness M60 <_____> M61<___>

Strike M70 <_____>

Dip M80 <_____>

Size M15 (circle letter):

lb U308

(A) 0 - 20,000 (circled)
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < West flank Cushing anticline >

Local Structures N70 <_____>

Host-FM. Name U1 <_____> Member U2 < Pegmatite >

Host Rock K1 < | | | | | | | | | | | |M Pegmatite of smoky quartz, feldspar,
(Age) (Rock type, texture, composition, color,
biotite, scattered garnets and muscovite, very weathered and iron-stained
alteration, attitude, geometry, structure, etc.) >

Host-Rock Environment U3 < Plutonic dike >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <_____>

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Garnet, muscovite, quartz, feldspar, biotite >

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 72

Alteration N75 < Hematite-staining >

Reductants U5 < >

Analytical Data (General) C43 < 64 ppm U_3O_8; greater than 200 ppm YT >

Radiometric Data (General) U6 < BG 55 cps 14 to 17 times BG (300 cm^2) >
(No. times background and dimensions)

Average 200 cps

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3.2.0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 72

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 302	Chip sample across most radioactive part	64 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:

References:

F1 <_____

_____>

F2 <_____

_____>

F3 <_____

_____>

F4 <_____

_____>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 72

Continuation from p. 1-5:

Label

A83 < black shingles. >

U6 < 2.0 Minute Spectrometer Count

Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
21040	1368	827	358	2.64	28.56	43.73 >

URANIUM-OCCURRENCE REPORT

Quad Name A90< Portland >

Quad Scale A100< 2,5,0,0,0,0 >

Deposit No. B40< 73 >

Deposit Name A10 < The Ledges Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Bradbury-Brunswick Pegmatite District >

Country A40 < U,S > [U,S] State Maine

State Code A50 < 2,3 > [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < 240 m west of the ledges on Royal Road in North Yarmouth about 150 m into the woods on the south side of Royal Road (on county map Royal Road = Town Line Road) >

Field Checked G1 < 7,8 | 1,0 > By G2< Bruton and Poer , >
Yr Mo Last name First Initial

Latitude A70 < 4,3 | 5,0 | 3,7 | N > Longitude A80 < 0,7,0 | 1,0 | 3,5 | W >
Deg Min Sec Deg Min Sec

Township A77 < | N/S Range A78 < | E/W Section A79 < >

FT/M

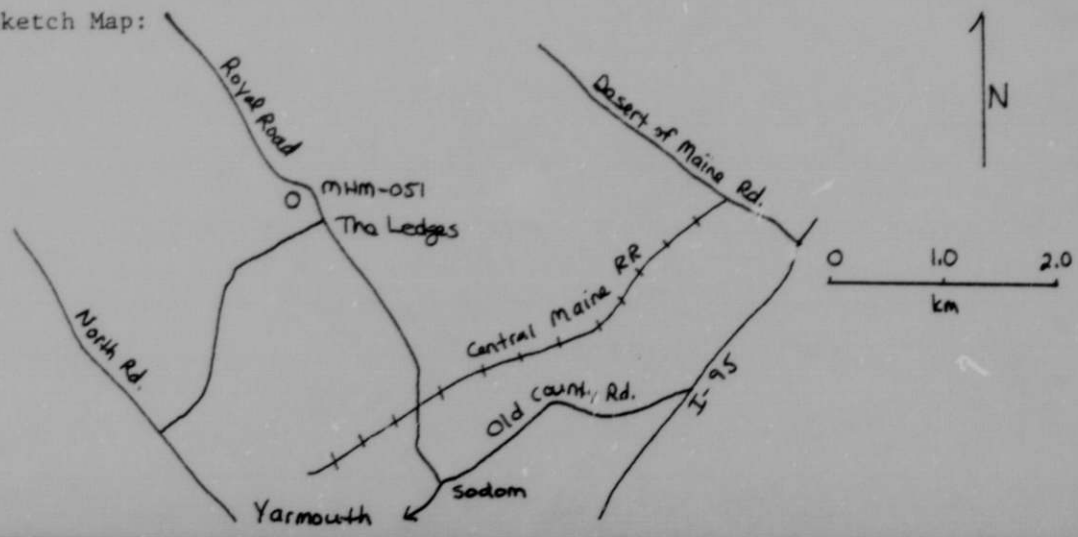
Meridian A81 < > Altitude A107 < 67 m >

Quad Scale A91 < 6,2,5,0,0 > Quad Name A92 < Freeport >
(7½' or 15' quad)

Physiographic Province A63 < 0,1 | New England >
(List K)

Location Comments A83 < Filled in quarry adjacent to road behind which is large outcrop about 150 m from the road >

Location Sketch Map:



BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 73

Commodities Present:
C10 <U B>

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U B>

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
accuracy thousands of lb. years grade
G7< U > G7A< > G7B<LB> G7C< > G7D< % U3O8>

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
accuracy thousands of lb. year of est. grade
E1< U > E1A< > E1B<LB> E1C< > E1D< % U3O8>

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 73

Deposit Form/Shape M10 < Spot occurrence in pegmatite >

Length M40 <_____> M41 <____> FT/M

Width M50 <_____> M51 <____> FT/M

Thickness M60 <_____> M61 <____> FT/M

Strike M70 <_____>

Dip M80 <_____>

Size M15 (circle letter): lb U308

(A) 0 - 20,000
B 20,000 - 200,000
C 200,000 - 2 million
D 2 million - 20 million
E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Sheet batholith and associated pegmatites >

Local Structures N70 <_____>

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < Y Very weathered muscovite, biotite pegmatite >
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 <_____>
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 < Host rock for pegmatite is fine-grained biotite gneiss in probable sillimanite zone. >

Ore Minerals C30 < None observed >

Gangue Minerals K4 < Schorl, quartz, feldspar, muscovite, biotite >

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 73

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < 45 ppm U_3O_8; 2000 ppm B >

Radiometric Data (General) U6 < BG 90 5 to 7 times BG in a 15 cm x 5 cm x 2.5 cm
(No. times background and dimensions)
area, outcrop's surface radioactivity (SR) is 200-600 cps >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < Probable pegmatoid-granitoid facies of Sebago Lake granite >

URANIUM-OCCURRENCE REPORT

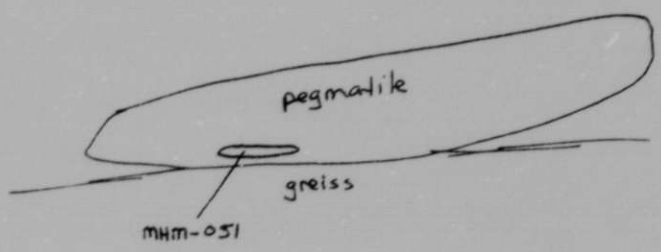
Quad Name Portland

Deposit No. 73

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 051	Chip sample across most radioactive layer of peg-	
	matite	45 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

>

F2 <

>

F3 <

>

F4 <

>

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< | , 2, 5, 0, 0, 0, 0 >

Deposit No. B40< 74 >

Deposit Name A10 < Hadlock Road Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < >

Country A40 < U , S > | U , S | State Maine

State Code A50 < 2 , 3 > | 2 , 3 | County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < Anomaly on Highway 26 and 100, 0.5 km south of Hadlock Road, 1 km north of power lines crossing highway, and 2.2 km north of Mountain Road >

Field Checked G1 < 7 , 9 | 0 , 8 > By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 < 4 , 3 | 4 , 5 | 5 , 5 , N > Longitude A80 < 0 , 7 , 0 | 1 , 8 | 0 , 0 , W >
Deg Min Sec Deg Min Sec

Township A77 < | , , | > N/S Range A78 < | , , | > E/W Section A79 < | , > FT/M

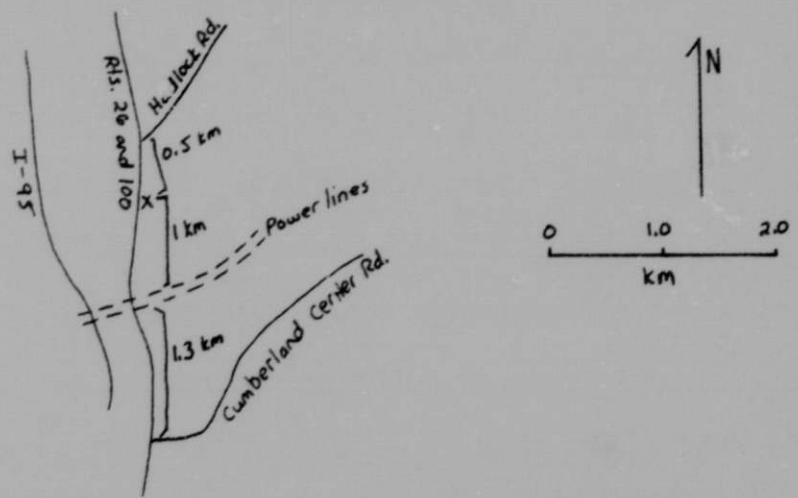
Meridian A81 < > Altitude A107 < 55 m >

Quad Scale A91 < | , 6 , 2 , 5 , 0 , 0 > Quad Name A92 < Gray >
(7½' or 15' quad)

Physiographic Province A63 < 0 , 1 | New England >
(List K)

Location Comments A83 < Anomaly is in low bedrock ledge on east side of highway, and is adjacent to logging road leading to the east. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 74

Commodities Present:
C10 <U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR <U >

Commodity Comments C50 < >

Status of Exploration and Development A20 <1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 < >

Property is A21 (Active) **(A22 circled)** (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220< >

Cumulative Uranium Production PROD YES **(NO circled)** SML MED LGE (circle)

DH2

G7<U> accuracy < > G7A< thousands of lb. > G7B<LB> G7C< years > G7D< grade % U308>

Source of Information D9 < >

Production Comments D10 < >

Reserves and Potential Resources

EH

E1<U> accuracy < > E1A< thousands of lb. > E1B<LB> E1C< year of est. > E1D< grade % U308>

Source of Information E7 < >

Comments E8 < >

BFE 1236
4/19/78

URANIUM-OCCURRENCE

REPORT

Quad Name Portland

Deposit No. 74

Deposit Form/Shape M10 < Anomaly #1 - Paralleling lineation, surficial feature > *

Length M40 <Anomaly 1,1>*M41< m > (FT/M)

Width M50 <Anomaly 1,1>*M51< m >

Thickness M60 <______> M61<___>

Strike M70 <Anomaly 1 - N55E >

Dip M80 <______>

Size M15 (circle letter):

lb U308

- (A) 0 - 20,000
- B 20,000 - 200,000
- C 200,000 - 2 million
- D 2 million - 20 million
- E More than 20 million

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < Sebago Lake Pluton >

Local Structures N70 <______>

Host-FM. Name U1 < Sebago Lake Pluton > Member U2 < Granite >

Host Rock K1 <D E V | | | | | | | | | 6>
(Age) (Rock type, texture, composition, color, alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 <Plutonic, synorogenic sheet batholith >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <______>

Ore Minerals C30 <______>

Gangue Minerals K4 <______>

BFE 1236
4/19/78

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 74

Alteration N75 < None observed >

Reductants U5 < >

Analytical Data (General) C43 < >

Radiometric Data (General) U6 < BG 70 cps Anomaly #1 4.5 - 22 times BG (No. times background and dimensions) (1.5 m x 1 m); Anomaly #2 4 - 7 times BG (2 m x 10 m) >

Ore Controls K5 < >

Deposit Class C40 < Pegmatitic > Class No. U7 < 3,2,0 >

Comments on Geology N85 < >

URANIUM-OCCURRENCE REPORT

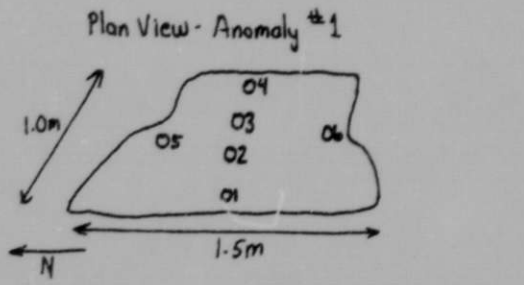
Quad Name Portland

Deposit No. 74

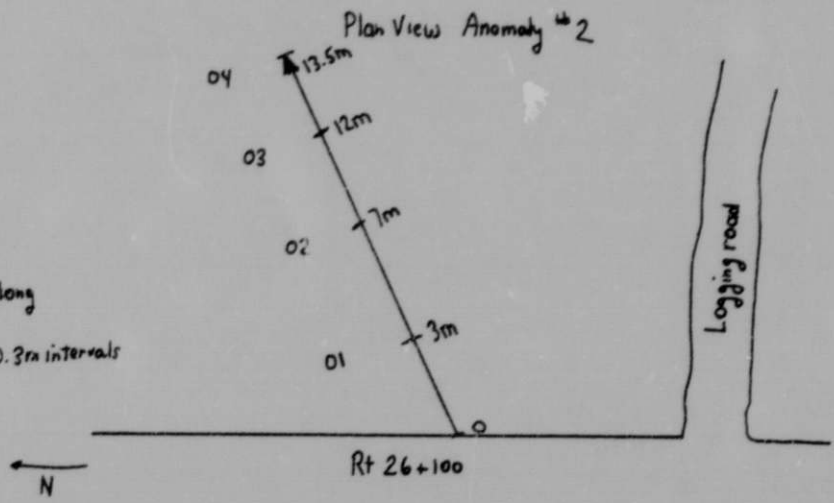
Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
	No samples taken	

Geologic Sketch Map and/or Section, with Sample Locations:
Spectrometer Stations



01 to 04 at 0.5m intervals along 55° azimuth
05-06 normal to 55° at 0.3m intervals



References:

F1 <

F2 <

F3 <

F4 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 74

Continuation from p. 1-5:

Label

M10 < Anomaly 2 - elongated area of anomalous radioactivity >

M40 < Anomaly 2 = 10 >

M50 < Anomaly 2 = 2 >

U6 < Anomaly #1 One Minute Spectrometer Counts, Gain 5.0

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	2994	2112	1659	185	4.73	74.38	20.67
02	45390	2951	2592	212	5.91	119.03	24.27
03	63530	4021	3676	299	7.60	169.33	35.87
04	60340	3790	3408	325	7.15	155.47	39.33
05	59930	3786	3484	273	7.06	160.75	32.40
06	19260	1620	857	144	5.29	36.50	15.20

Anomaly #2 One Minute Spectrometer Counts, Gain 5.0

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	31640	2445	1561	167	7.42	70.15	18.27
02	29830	1847	1567	168	3.50	70.41	18.40
03	30930	2301	1609	189	6.15	71.82	21.20
04	41210	2678	2176	299	5.50	96.16	35.87 >

URANIUM-OCCURRENCE

REPORT

Quad Name A90< Portland >

Quad Scale A100< 1,2,5,0,0,0,0 >

Deposit No. B40< 75 >

Deposit Name A10 < Pleasant Hill Occurrence >

Synonym Name(s) A11 < >

District or Area A30 < Southern limit, or south of Bradbury-Brunswick pegmatite > *

Country A40 <U,S> [U,S] State Maine

State Code A50 <2,3> [2,3] County A60 < Cumberland >
(Enter code twice from List D)

Position from Prominent Locality A82 < Come out of Portland on I-295. First large road cut in rock is on I-295, North of exit for Falmouth and US 1. Anomaly is in main body of roadcut near south end, 0.97 km south of bridge over >*

Field Checked G1 <7,9|0,6> By G2< Wagener , H. D. >
Yr Mo Last name First Initial

Latitude A70 <4,3|4,2|1,9,N> Longitude A80 <0,7,0|1,5|2,3,W>
Deg Min Sec Deg Min Sec

Township A77 < | N/S Range A78 < | E/W Section A79 < |

FT/M

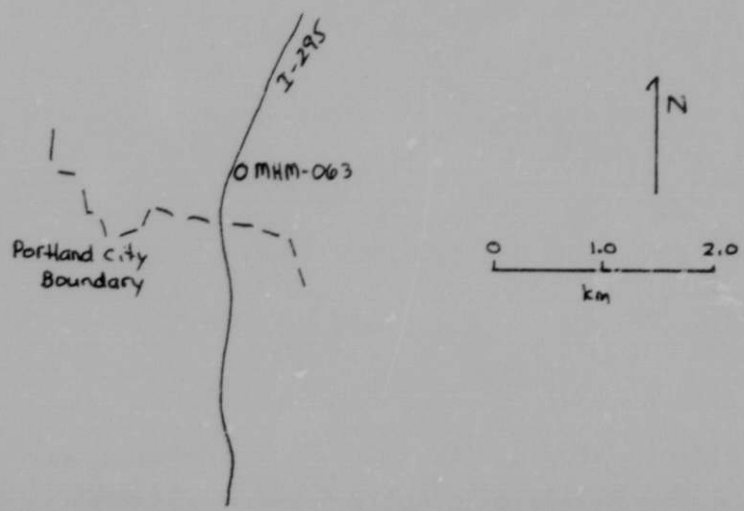
Meridian A81 < > Altitude A107 < 18 m >

Quad Scale A91 <,,6,2,5,0,0> Quad Name A92 < Portland >
(7½' or 15' quad)

Physiographic Province A63 <0,1> | New England >
(List K)

Location Comments A83 < Long road cut in rock on east side of northbound lane. Anomalies are near base and central portion of cut near south end. >

Location Sketch Map:



URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 75

Commodities Present:
C10 < U >

Commodities Produced:
MAJOR < > COPROD < >

MINOR < > BYPROD < >

Potential Commodities:
POTEN < > OCCUR < U >

Commodity Comments C50 <

>

Status of Exploration and Development A20 < 1 >
(1 = occurrence, 2 = raw prospect, 3 = developed prospect, 4 = producer)

Comments on Exploration and Development L110 <

>

Property is A21 (Active) (A22) (Inactive) (Circle appropriate labels)

Workings are M120 (Surface) M130 (Underground) M140 (Both)

Description of Workings M220<

>

Cumulative Uranium Production PROD YES (NO) SML MED LGE (circle)

DH2
G7 < U > G7A < > G7B<LB> G7C< > G7D< % U3O8>
(accuracy; thousands of lb.; years; grade)

Source of Information D9 <

>

Production Comments D10 <

>

Reserves and Potential Resources

EH
E1 < U > E1A < > E1B<LB> E1C < > E1D< % U3O8>
(accuracy; thousands of lb.; year of est.; grade)

Source of Information E7 <

>

Comments E8 <

>

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 75

Deposit Form/Shape M10 < Sill >

		FT/M		FT/M
Length	M40 < 3 >	M41 < m >	Size M15 (circle letter):	lb U308
Width	M50 < 2+ >	M51 < m >		
Thickness	M60 < 2 >	M61 < m >	(A) 0 - 20,000	
Strike	M70 < N43E >		B 20,000 - 200,000	
Dip	M80 < 65 >		C 200,000 - 2 million	
			D 2 million - 20 million	
			E More than 20 million	

Tectonic Setting N15 < Mobile Belt >

Major Regional Structures N5 < South of Bradbury-Brunswick Pegmatite District

>

Local Structures N70 <

>

Host-FM. Name U1 < Berwick Fm. > Member U2 < Pegmatite >

Host Rock K1 < (Age) Sills of tourmaline-garnet pegmatite in (Rock type, texture, composition, color, banded gneissoid and schistose rocks, including pebble-bearing horizons. Every-thing seems to be on one limb of a large fold. Schistose layers have intrafolial isoclinal folds. Much of the pegmatite is coarse-grained granitoid-pegmatoid > *

alteration, attitude, geometry, structure, etc.)

Host-Rock Environment U3 < Plutonic sill >
(Sed. dep. environ., metamorphic facies, ign. environ.)

Comments on Associated Rocks U4 <

>

Ore Minerals C30 < None observed

>

Gangue Minerals K4 < Feldspar-quartz-black tourmaline-red garnet-muscovite.

>

URANIUM-OCCURRENCE REPORT

Quad Name: Portland

Deposit No. 75

Alteration N75 < None observed, other than a small concentration of radioactivity along a joint on the weathered top of the exposure. >

Reductants U5 < >

Analytical Data (General) C43 < 201 ppm U_3O_8 >

Radiometric Data (General) U6 < Four or five spot anomalies of 300-1300 cps(up to 16 x BG) the largest being about one meter in diameter. Surface radiation (SR) of remainder of pegmatite 200-300 cps. Radioactivity confined to pegmatite. BG >*
(No. times background and dimensions)

Ore Controls K5 < Differentiation in magmatic fluids parental to pegmatite sills. >

Deposit Class C40 < Pegmatitic > Class No. U7 <3,2,0>

Comments on Geology N85 < Typical of relationships between pegmatites, schists and gneisses in Bradbury-Brunswick pegmatite district. >

URANIUM-OCCURRENCE REPORT

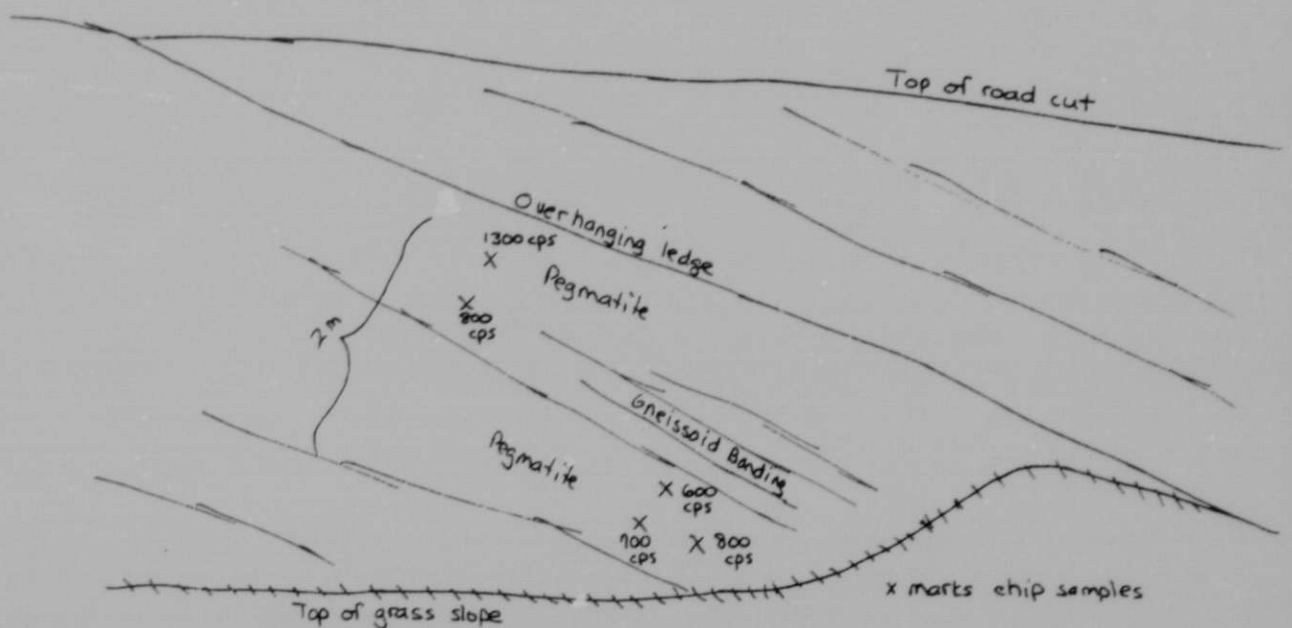
Quad Name Portland

Deposit No. 75

Uranium Analyses:

Sample No.	Sample Description	Uranium Analysis
MHM 063	5 fist-size chip samples from near point of maximum radioactivity. All chips have SR of about 150 cps (2 x BG).	201 ppm U_3O_8

Geologic Sketch Map and/or Section, with Sample Locations:



References:

F1 <

F2 <

F3 <

F4 <

URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 75

Continuation from p. 1-5:

Label

A82 < Presumpscot River.>

A30 < district. >

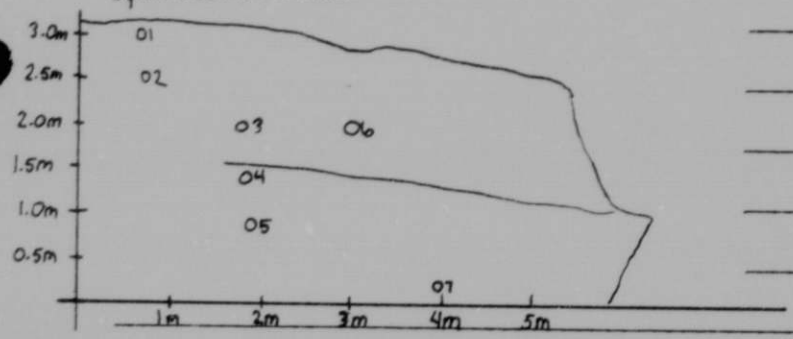
K1 < rock. >

U6 < 80 cps.

One-Minute Spectrometer Counts

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm
01	69200	4526	3925	310	9.72	181.41	37.33
02	67590	4685	3750	245	11.88	174.57	28.66
03	11470	1268	354	130	5.31	12.39	13.33
04	23770	1834	1112	120	5.69	49.67	12.00
05	25870	1849	1288	170	4.74	56.74	18.67
06	34690	2252	1793	165	5.15	81.53	18.00
07	30820	2172	1702	134	5.20	78.03	13.87

Spectrometric Stations



Small Outcrop South of MHM 063

One-Minute Spectrometer Counts, Gain 4.85

Station	Tot_{ct}	K_{ct}	U_{ct}	Th_{ct}	%eK	eUppm	eThppm	
01	10830	996	331	136	3.60	11.08	14.13	
02	42110	2938	2227	299	6.97	98.64	35.86	
03	37790	2570	1951	248	6.07	86.72	29.07	
04	33970	2571	1714	235	7.19	75.56	27.33	
05	17050	1521	748	100	5.37	32.51	9.33	
06	88510	5001	5361	399	5.98	248.50	49.20	
07	11190	1206	341	164	4.77	10.73	17.87	>*

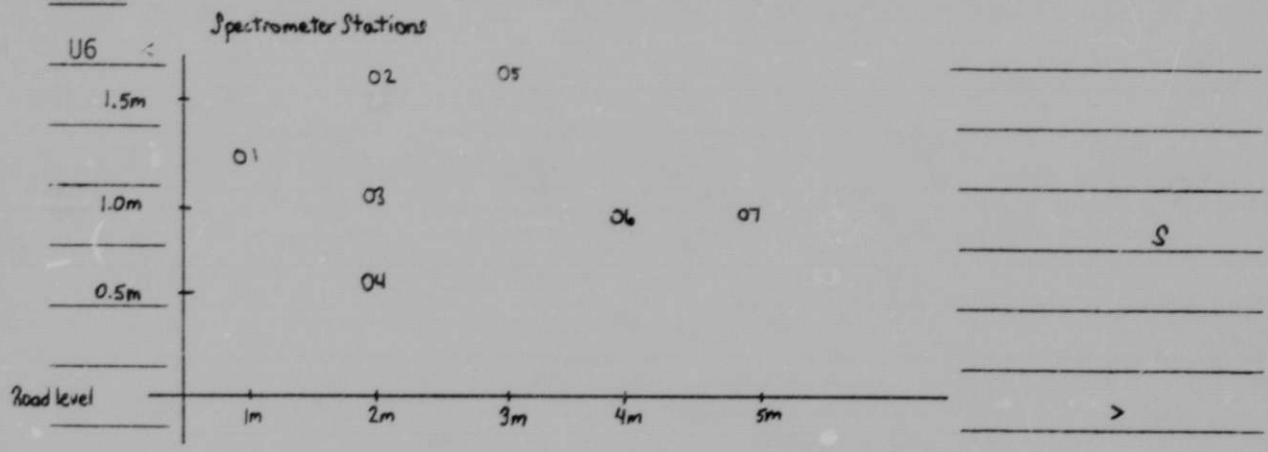
URANIUM-OCCURRENCE REPORT

Quad Name Portland

Deposit No. 75

Continuation from p. 6:

Label



APPENDIX D. RESULTS OF CHEMICAL ANALYSES OF ROCK SAMPLES FROM URANIUM OCCURRENCES

Uranium Occurrence	Chemical Sample Number	U308 (ppm)	Uranium Occurrence	Chemical Sample Number	U308 (ppm)
1	MHL 214	704	16	MHM 042	17
	MHL 215	205		MHM 043	8
2	MHL 208	16		MHM 044	16
3	MHM 055	36		MHM 045	4
4	MHM 306	23		MHM 046	4
5	MHM 067	59		MHM 047	75
	MHM 092	5		MHM 048	3
6	MHM 312	187	17	MHM 107	17
7	MHM 303	25	18	MHM 066	38
	MHM 304	7	19	MHM 954	37
8	MHM 110	46	20	MHM 015	23
	MHM 111	114	21	MHM 018	30
9	MHM 072	100	22	MHM 016	15
	MHM 309	67	23	MHM 019	26
10	MHM 313	32	24	MHM 002	150
11	MHM 878	15	25	MHM 003	103
12	MHM 957	17	26	MHM 004	31
13	MHM 050	16	27	MHM 020	18
	MHM 060	2	28	MHM 021	16
14	MHM 041	65	29	MHM 888	27
	MHM 061	54	30	MHM 084	19
15	MHM 040	26	31	MHM 882	18

APPENDIX D. (CONTINUED)

Uranium Occurrence	Chemical Sample Number	U308 (ppm)	Uranium Occurrence	Chemical Sample Number	U308 (ppm)
32	MHM 881	19		MHM 816	24
33	MHM 892	32		MHM 817	3
34	MHM 310	23	44	MHM 033	10
35	MHM 010	13		MHM 074	54
	MHM 011	17	45	MHM 032	50
	MHM 012	12	46	MHM 034	850
	MHM 013	1	47	MHM 031	50
36	MHM 086	19	48	MHM 068	19
37	MHM 014	20		MHM 069	150
38	MHM 006	28		MHM 070	282
39	MHM 889	19	49	MHM 090	123
40	MHM 088	22	50	MHM 091	54
41	MHM 883	16	51	MHM 059	68
42	MHM 007	110	52	MHM 062	7
43	MHM 807	28	53	MHM 075	93
	MHM 808	32	54	MHM 029	47
	MHM 809	22	55	MHM 027	3
	MHM 810	22		MHM 028	130
	MHM 811	23	56	MHM 026	27
	MHM 812	25	57	MHM 035	125
	MHM 813	23	58	MHM 901	104
	MHM 814	37	59	MHM 057	144
	MHM 815	22		MHM 076	93

APPENDIX D. (CONTINUED)

Uranium Occurrence	Chemical Sample Number	U308 (ppm)	Uranium Occurrence	Chemical Sample Number	U308 (ppm)
59	MHM 077	4	73	MHM 051	45
	MHM 078	74	75	MHM 063	201
	MHM 079	27			
	MHM 080	15			
	MHM 081	7			
	MHM 082	3			
60	MHM 848	25			
61	MHM 018	18			
62	MHM 806	19			
63	MHM 823	26			
64	MHM 105	23			
65	MHM 106	180			
66	MHM 104	30			
67	MHM 101	17			
	MHM 064	394			
	MHM 065	137			
68	MHM 103	83			
69	MHM 102	57			
70	MHM 301	50			
71	MHM 052	24			
72	MHM 302	64			

APPENDIX E. BUREAU OF MINES MEMORANDUM REGARDING CONWAY GRANITE

United States Department of the Interior
BUREAU OF MINES
TUSCALOOSA METALLURGY RESEARCH LABORATORY
P. O. BOX L
UNIVERSITY, ALABAMA 35486

October 22, 1976

Memorandum

To: G. V. Sullivan, Research Supervisor, Tuscaloosa Metallurgy Research Center

From: Metallurgist, Tuscaloosa Metallurgy Research Center

Subject: Progress Report on Processing New Hampshire Granite

SUMMARY

Four samples of granite from the Conway Granite in New Hampshire were received for characterization and beneficiation studies. Mineralogical and chemical analyses showed the presence of trace amounts of uranium in addition to feldspar and quartz as the only potential values present in the samples. Beneficiation studies showed that it was possible to produce a glass sand meeting industry specifications. However, feldspar concentrates contained excess iron for most uses. The studies also revealed that the uranium tended to concentrate in the biotite product. Samples of biotite concentrate were prepared and submitted to the Salt Lake City Metallurgy Research Center for preliminary uranium extraction studies.

INTRODUCTION

New Hampshire produces dimension stone which are mainly used for building and memorial purposes. Generally, recovery of usable stone amounts to less than 50 percent of the rock quarried. This waste stone may be a result of the rock imperfection, such as overlying strata or blocks of quarried stone that contained cracks, veins and knots[1]. Waste stone is also generated during the wire sawing and polishing required to make the final marketable product[2]. Most of the stone produced in New Hampshire comes from the Conway

[1] Barton, William R. Dimension Stone. BuMines I. C. 8391, 1968, p. 147.
[2] Fitch, R. W. Special Report, Wire Sawing--An Operation Guide (Part I). Stone Magazine, February 1968, pp. 16-18.

Memo to G. V. Sullivan Subj.: Progress Report on Processing New Hampshire Granite

Granite which is exposed over an area of about 300 square miles[3]. Reports indicate that the Conway granite analyzes 0.001 - 0.003 percent U_3O_8 and is estimated to contain about 7.5 million tons of U_3O_8. It also has been suggested that the Conway granite also contains minor amounts of tin, lead, zinc, tantalum, tungsten, columbium, and beryllium.

Considering the large tonnage of waste granite being produced together with the existence of huge granite deposits in the state of New Hampshire it was proposed that metallurgical procedures for processing granite be developed. The proposal for the investigation was submitted to the Federal Bureau of Mines by the New Hampshire Governor's Mineral and Energy Resources Council. The investigation was initiated under Authorization 9365, Component 2C, Processing New Hampshire Granite. The purpose of this investigation was to initiate characterization, liberation, and beneficiation studies of New Hampshire granite samples and to develop a fully integrated system for the separation and recovery of all economic minerals. This report summarizes the progress made in the first year of the investigation.

SAMPLE DESCRIPTION

Four Conway granite samples were submitted by the New Hampshire State Geologist through the Liaison Officer--New Hampshire, for characterization and beneficiation studies. Data in table 1 show the designation, quarry, and geographical location of each of the samples.

TABLE 1. - New Hampshire granite samples

Sample designation	Source (quarry)	Location
A. Conway pink	Gumb	Madison
B. Conway pink	Redstone	North Conway
C. Conway rottenstone	Government pit	Albany
D. Conway green	Greenstone	North Conway

Samples A, B, and D were massive pieces which were taken from waste piles at inactive granite quarries, and C was taken at random points across the face of an active "rottenstone" gravel pit.

The samples were earth crushed to pass a 10-mesh screen, thoroughly mixed and representative portions riffled out for chemical, spectrographic, and mineralogical analyses and preliminary beneficiation studies. Chemical analysis of the four samples are shown in table 2.

[3] Finch, W.I., A. P. Butlerdn, F. C. Armstrong, A. E. Weissenborn, M.H. Staatz, and J. C. Olsen, Nuclear Fuels, Chapter in United States Mineral Resources, U. S. Geological Survey Prof. Paper 820, p. 465.

Memo to G. V. Sullivan Subj.: Progress Report on Processing New Hampshire Granite

TABLE 2. - Chemical analysis of Conway granite samples

Sample identification	Analyses, Percent of Total Sample As Received						
	CaO	Fe_2O_3	K_2O	Na_2O	SiO_2	Al_2O_3	LOI
A	0.62	1.6	5.2	4.0	74.69	12.43	0.42
B	0.69	1.8	5.2	4.4	72.59	13.73	0.42
C	0.76	2.1	5.2	3.8	72.88	12.59	0.79
D	0.94	2.5	5.6	3.9	71.54	13.18	0.39

The uranium content of the samples was determined at the Salt Lake City Metallurgy Research Center using a spectrophotometric method and the results are shown in table 3.

TABLE 3. - Uranium analyses of Conway granite samples*

Sample	U_3O_8, percent
A	0.0030
B	0.0020
C	0.0015
D	0.0015

* The Uranium results are in the same range normally reported for the Conway granite materials from the New Hampshire area.

Semi-quantitative spectrographic analyses detected Be, Cb, Sn, Pb, and Zn in an estimated range of 0.003 - 0.03 percent.

Preliminary microscopic examination of the four samples showed that they had about the same general mineralogical composition, mainly potassium and sodium feldspar, quartz, and biotite.

The preliminary examination showed that significant liberation of the major minerals was obtained at 35-mesh. Therefore, a representative portion of each was ground to pass 35 mesh for detailed mineralogical study. Heavy liquid separations were made at specific gravities of 2.68 and 3.30 to separate the major mineral components and to concentrate any heavy minerals present. The weight percentages in the gravity fractions was almost identical for the four samples. The float at 2.68 principally contained feldspar and quartz

and represented about 94 percent of the total weight. The float fraction at 3.30, mainly biotite, represented 5 percent of the weight while the sink fraction (3.30) was about 1.0 percent of the total weight. Examination of sized fractions of the float 2.68 products showed essentially complete liberation of the feldspars and quartz in the minus 48-mesh fractions. Some locking of feldspar with biotite was noted even in the very fine sizes. Mineralogical determination of the sink fraction of each sample at specific gravity of 3.3, revealed that they contained principally amphibole, minor amounts of epidote and fluorite, some garnet, and traces of zircon and sphalerite. Minerals containing Sn, W, Cb, Ta, Pb, U or Th were not identified in any of these sink fractions. Beryllium minerals were not identified in any of the specific gravity fractions examined.

BENEFICIATION STUDIES

Preliminary flotation tests were made to determine the feasibility of producing specification grade feldspar and glass sand concentrates from these materials. Each granite sample was stage ground in a pebble mill to pass a 48-mesh screen (mineral liberation size). The ground pulp was blunged with sodium hydroxide and deslimed at 400-mesh. The deslimed pulp was conditioned with sulfuric acid, tallow amine acetate, kerosene and methyl isobutyl carbinol. A biotite product was then floated. The biotite tailing was then thickened to 35 percent solids and conditioned with hydrofluoric acid, tallow amine acetate, fuel oil, and pine oil, and a feldspar concentrate floated. Both the feldspar concentrate and tailing (sand) from each sample were treated by wet high intensity magnetic separation to lower the iron content. Analyses of the nonmagnetic products from a typical test on each of the four samples are shown in table 4.

TABLE 4. - Nonmagnetic feldspar concentrates and tailings (sand) for Conway granite samples

Sample	Product	Weight-percent	Analysis, percent					
			CaO	Fe_2O_3	K_2O	Na_2O_3	SiO_2	Al_2O_3
A	feldspar conc.	47.2	0.42	0.13	7.00	6.00	67.14	18.70
	quartz	24.2	0.03	0.04	0.12	0.09	98.28	1.42
B	feldspar conc.	46.3	0.48	0.17	6.40	6.10	67.09	19.35
	quartz	16.1	0.06	0.05	0.44	0.34	97.62	1.86
C	feldspar conc.	45.8	0.54	0.19	7.40	5.30	67.01	18.41
	quartz	20.0	0.04	0.06	0.25	0.16	97.78	1.35
D	feldspar conc.	40.8	0.52	0.35	7.40	5.00	67.17	18.82
	quartz	15.7	0.05	0.08	0.24	0.17	98.54	0.80

Memo to G. V. Sullivan Subj.: Progress Report on Processing New Hampshire Granite

Data in the table show that the iron content of all of the feldspar concentrates is in excess of the 0.10 percent Fe_2O_3 specifications for most uses. Microscopic examination of the feldspar concentrates showed locking of biotite with some of the feldspar; however, the biotite particles were not large enough to cause the particles to react as magnetic. The quartz, on feldspar tailings, contained small amounts of alumina in the form of feldspar which would have to be removed to meet Al_2O_3 specifications for glass sand. Microscopic examination indicated that the feldspar and quartz appeared to be liberated. The use of more collector or longer flotation times in the feldspar step should lower the Al_2O_3 content of the quartz product. Rational analyses of the feldspar concentrates showed them to contain 94 to 89 percent feldspar, additional quartz would not be detrimental in this product.

Although the feldspar products obtained in these tests were already finer than the 20-mesh product desired by the glass industry, the effect of finer grinding was studied in an attempt to meet iron specifications. Therefore, additional flotation tests were made in which the granite samples were ground to minus 65-mesh and deslimed at 400-mesh. All other test variables, such as conditioning and flotation time, pulp pH, and amount of reagents remained constant. Evaluation of feldspar and quartz products from these tests showed only minor improvement in the Fe_2O_3 content of the products.

John K. Frye[4] reported that the biotite in the Conway granites contained uranium; therefore, the biotite rougher flotation concentrates obtained from the four granite samples were submitted for spectrophotometric analyses to determine if any concentration occurred. The results are presented in table 5.

TABLE 5. - Uranium analyses and distribution on biotite rougher concentrates from Conway Granite samples

Sample	Head, U_3O_8 analysis, percent	Biotite Product		
		Weight-percent	U_3O_8 Analysis, percent	U_3O_8 Distribution, percent
A	0.0030	6.5	0.038	83.3
B	0.0020	5.0	0.037	90.0
C	0.0015	6.0	0.017	66.6
D	0.0015	7.5	0.012	60.0

The data in table 5 indicate that the biotite concentrates from samples A and B contained, respectively, 83.3 and 90.0 percent of the total U_3O_8, and this represents concentration ratios of 12.7 and 18.5:1.

[4] Composition and Crystallization History of the Conway Granite of New Hampshire, Ph.D. Thesis, Penn. State University, 1965, 130 pp.

PORTLAND

Memo to G. V. Sullivan Subj.: Progress Report on Processing New Hampshire Granite

Flotation tests were made on the two granite samples having the highest U_3O_8 analyses (samples A and B) to produce a sufficient quantity of biotite concentrate for uranium extraction studies. The samples were forwarded to Salt Lake City Metallurgy Research Center. As a result of this work, all the Conway granite samples on hand have been exhausted. However, a fifth sample of Conway granite was received late in the fiscal year. Characterization studies on this material are currently underway.

Thomas O. Llewellyn
Metallurgist