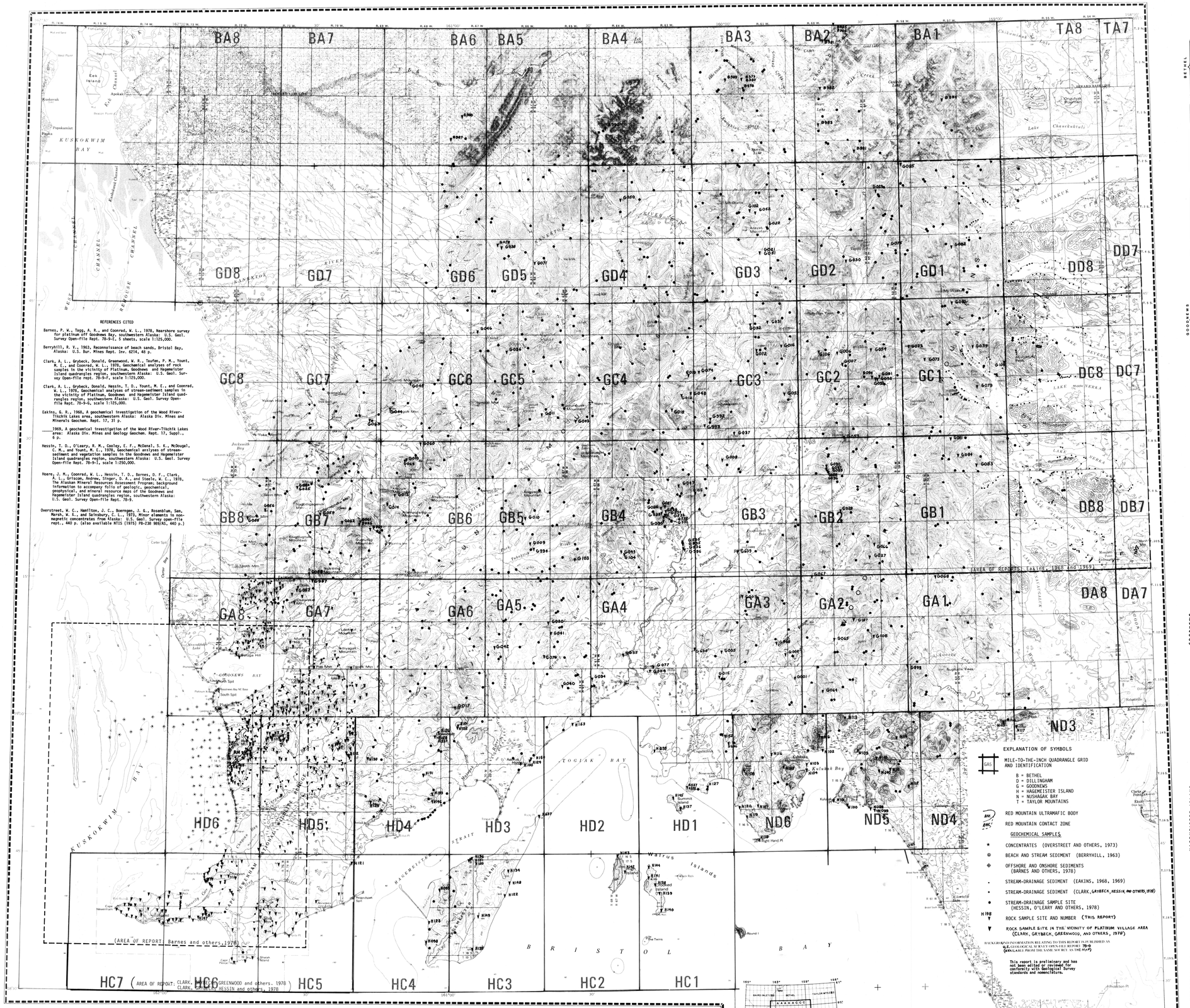
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

FOLIO OF THE
GOODNEWS AND HAGEMEISTER ISLAND QUADRANGLES REGION
OPEN FILE REPORT 78-9-H
COONRAD AND OTHERS--GEOCHEMICAL ANALYSES OF ROCKS



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EXPLANATION OF SYMBOLS

MILE-TO-THE-INCH QUADRANGLE GRID AND IDENTIFICATION

B = BETHEL
D = DILLINGHAM
G = GOODNEWS
H = HAGEMEISTER ISLAND
N = NUSHAGAK BAY
T = TAYLOR MOUNTAINS

RED MOUNTAIN ULTRAMAFIC BODY

RED MOUNTAIN CONTACT ZONE

GEOCHEMICAL SAMPLES

- CONCENTRATES (OVERSTREET AND OTHERS, 1973)
- BEACH AND STREAM SEDIMENT (BERRYHILL, 1963)
- OFFSHORE AND ONSHORE SEDIMENTS (BARNES AND OTHERS, 1978)
- STREAM-DRAINAGE SEDIMENT (EAKINS, 1968, 1969)
- STREAM-DRAINAGE SEDIMENT (CLARK, GRYBECK, HESSIN, AND OTHERS, 1978)
- STREAM-DRAINAGE SAMPLE SITE (HESSIN, O'LEARY AND OTHERS, 1978)
- H198 ROCK SAMPLE SITE AND NUMBER (THIS REPORT)
- ROCK SAMPLE SITE IN THE VICINITY OF PLATINUM VILLAGE AREA (CLARK, GRYBECK, GREENWOOD, AND OTHERS, 1978)

BACKGROUND INFORMATION RELATING TO THIS REPORT IS PUBLISHED AS U.S. GEOLOGICAL SURVEY OPEN-FILE REPORT 78-9 (AVAILABLE FROM THE SAME SOURCE AS THE MAP)

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

BASE MAP INDEX

Base compiled from U.S. Geological Survey 1:63,360 (A) and 1:250,000 (B) scale topographic series 1952-1957 and advance field completion material (C) 1976 by Nenlo Park Base Map Section

SCALE 1:250 000

CONTOUR INTERVALS 50, 100, AND 200 FEET
DATUM IS MEAN SEA LEVEL

GEOCHEMICAL ANALYSES OF ROCK SAMPLES IN THE GOODNEWS AND HAGEMEISTER ISLAND QUADRANGLES REGION, SOUTHWESTERN ALASKA

BY

W. L. COONRAD, J. M. HOARE, P. M. TAUFEN, AND T. D. HESSIN

1978

TABLE 1. -- ANALYSES OF ROCK SAMPLES

VALUES PLOTTED ON METALLIC ELEMENT MAPS EQUAL OR EXCEED

Field No.	Quad	Map No.	Tag No.	UTM Zone	UTM East	UTM North	Lat.	Long.	Al %	Ca %	Fe %	K %	Na %	Ti %	Ba ppm	Be ppm	Co ppm	Cr ppm	Cu ppm	La ppm	Mn ppm	Mo ppm	Nb ppm	Ni ppm	Pb ppm	Sc ppm	Sr ppm	V ppm	Y ppm	Zn ppm	Zr ppm	Comment	Rock Type
BETHEL																																	
47HH144A	BA3	B570	CCC	5	3	1.0	.3	700	*	.5	N	*	.7	10	1000	1	20	200	7	30	1000	20	50	200	100	20	7.0	150	30	100	n.	DIORITE
48HR 9L	BA3	B575	CCC	10	.3	.5	.7	1000	*	.5	N	*	.5	10	1000	1	20	200	10	20	700	200	20	7	50	20	1.0	100	30	100	n.	DIORITE
48HR9B	BA3	B580	CCC	7	.3	.5	.7	1000	*	.5	N	*	.5	10	500	1	L	30	7	30	L	1000	20	L	7	50	20	1.0	300	20	n.	APLITE
48HR7	BA2	B581	CCC	7	7	.7	.5	1000	*	.5	N	*	.5	10	300	L	10	70	15	30	500	20	20	7	50	20	2.0	200	30	70	n.	GRANITE
48HR7A2	BA2	B582	CCC	7	7	.7	.5	1000	*	.5	N	*	.5	10	300	L	50	200	15	30	500	20	20	7	50	20	2.0	200	30	70	n.	DIORITE
47HH1B4	BA1	B583	CCC	7	7	.5	.5	700	*	.5	N	*	.7	10	1000	1	50	1000	10	20	1000	20	30	200	100	20	1.0	150	30	100	n.	DIABASE
48HR1B	BA1	B584	CCC	7	7	.7	.5	1000	*	.5	N	*	.5	10	700	1	50	200	7	30	1000	20	30	200	100	20	1.0	150	30	100	n.	TUFF
48HR1B4A	BA1	B585	CCC	3	1	.3	.5	200	*	.5	N	*	.7	10	700	1	10	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	ARGILLITE
48HR1B4B	BA1	B586	CCC	3	1	.3	.5	200	*	.5	N	*	.7	10	700	1	10	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	GRANITE
48HR1B4C	BA1	B587	CCC	3	1	.3	.5	700	*	.5	N	*	.7	10	700	1	10	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	ARGILLITE
48HR1B4	BA1	B588	CCC	7	7	.5	.5	700	*	.5	N	*	.7	10	1000	1	10	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	ARGILLITE
48HR1B4	BA1	B589	CCC	7	7	.5	.5	700	*	.5	N	*	.7	10	1000	L	L	L	7	.5	L	100	20	L	7	50	20	1.0	100	30	n.	CHERT
48HR1B4	BA1	B590	CCC	7	7	.5	.5	300	*	.5	N	*	.7	10	500	L	L	L	7	.5	L	100	20	L	7	50	20	1.0	100	30	n.	BASALT
48HR1B4	BA1	B591	CCC	5	3	.5	.5	300	*	.5	N	*	.7	10	500	L	L	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	TUFF & DIKE
48HR1B4	BA1	B592	CCC	5	3	.5	.5	300	*	.5	N	*	.7	10	300	L	L	70	7	30	500	20	20	7	50	20	1.0	100	30	100	n.	TUFF
7HH8B4	BA3	B593	CCC	7	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	DIORITE
7HH8B4A	BA3	B594	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	DIORITE
7HH8B4B	BA3	B595	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	DIORITE
7HH8B4	BA3	B596	CCC	7	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GABBRO
7HH8B4A	BA3	B597	CCC	7	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B598	CCC	7	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B599	CCC	7	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B600	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B601	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B602	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B603	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B604	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B605	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B606	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B607	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B608	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B609	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B610	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B611	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B612	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B613	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B614	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B615	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B616	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B617	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B618	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B619	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B620	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B621	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B622	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B623	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B624	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B625	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B626	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B627	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B628	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B629	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B630	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B631	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B632	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B633	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B634	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B635	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B636	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B637	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B638	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B639	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B640	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B641	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B642	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B643	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B644	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B645	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B646	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B647	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B648	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B649	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B650	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B651	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B652	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B653	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B654	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B655	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B656	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B657	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B658	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B659	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B660	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B661	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B662	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B663	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B664	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B665	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B666	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B667	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B668	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200	1	50	200	7	30	500	20	30	200	100	20	1.0	150	30	100	n.	GRANODIORITE
7HH8B4A	BA3	B669	CCC	10	3	.3	.7	1000	*	.5	N	*	.7	10	200