DR2011018
Table DR1

Sample List, Tatoosh Intrusive Suite.

No.	locality	Latitude	Longitude	chem	t.s.	p.s.	slab	Ref	Zirc	Pltn	Description
Collected by CR Bacon and colleagues, 1993:											
93T-001	Snow Lake	46.7552	-121.6996	X	X		X			S	Granite, oc SW of lake S of Snow Lake
93T-002	Snow Lake	46.7552	-121.6996	X	X			X		in S	Enclave blob in granite #1
93T-003	Unicorn Creek	46.7528	-121.7038	X	X		X			S	Granite (porph), base of cliff SE of Snow Lake
93T-004	Unicorn Creek	46.7515	-121.7050					X		in S	Dike: aplite, top of Unicorn Creek chute
93T-005	Unicorn Creek	46.7515	-121.7050		X					in S	Enclave with bt amygdules, #4 loc
93T-006	Unicorn Creek	46.7515	-121.7050					X		in S	Mineralized jt surface, #4 loc
93T-007	Unicorn Creek	46.7515	-121.7050	X	X		X			S	Granite, #4 loc
93T-008	Unicorn Creek	46.7498	-121.7070	X	X		X			S-alt	Mirolitic granite, SW Unicorn Ck cirque
93T-009	Unicorn Creek	46.7504	-121.7090	X	X		X			S-alt	Granite, SW head of Unicorn Ck cirque
93T-010	Snow Lake	46.7602	-121.7110	X	X		X			S	Granite, ridge W of Snow Lake
93T-011	Nisqually Glacier	46.8013	-121.7424	X	X		X			G	Granodiorite, highest oc in Nisqually valley, TWS
93T-012	Mazama Ridge	46.7881	-121.7083	X	X		X			in S, MIS-agmatite matrix	Diorite? matrix in MR agmatite, E end MR
93T-013	Mazama Ridge	46.7881	-121.7083					X		in S	Amph? vein in #12
93T-014	Mazama Ridge	46.7892	-121.7049	X	X		X			S	Granite, bench below E end Mazama Ridge
93T-015	Mazama Ridge	46.7892	-121.7050	X	X		X			S	Granite, below cliffs, E end Mazama Ridge
93T-016	Mazama Ridge	46.7892	-121.7050					X		in S	Amph? veins + ep + qz? in #15
93T-017	Mazama Ridge	46.7864	-121.7042	X	X		X			S	Granite, below cliffs, E end Mazama Ridge
93T-018	Mazama Ridge	46.7848	-121.7032	X	X	X	X			S	Granite, below cliffs, E end Mazama Ridge
93T-019	Maz R/Stevens Ck	46.7800	-121.7031	X	X		X			S	Granite, W of Stevens Ck, S of Mazama Ridge
93T-020	Nisqually River	46.7908	-121.7513					X		in N	Amph + mt + qz veins in talus block, 1 km above bridge
93T-021	Nisqually River	46.7908	-121.7513	X	X		X			N	Granodiorite, base of cliffs, 1 km above bridge
93T-022	Nisqually River	46.7908	-121.7513	X	X					in N	Dike: aplite, #21 loc
93T-023	Nisqually River	46.7908	-121.7513					X		in N	Vein, #21 loc
93T-024	Nisqually River	46.7908	-121.7513					X		in N	Amph vein, below #21 loc
93T-025	Nisqually River	46.7908	-121.7513	X	X			X		in N	Enclave from talus block, below # 21 loc
93T-026	Nisqually Mines	46.7647	-121.7876	X	X	X	X			R	Granodiorite (typical), oc at upper adit
93T-027	Nisqually Mines	46.7647	-121.7876					X		in R	Granodiorite (altered), oc at upper adit
93T-028	Nisqually Mines	46.7647	-121.7876					X		in R	Vein in fine gr. granite, tailings, upper adit
93T-029	Nisqually Mines	46.7647	-121.7876					X		in R	Granite, dk shears, tailings, upper adit
93T-030	Nisqually Mines	46.7647	-121.7876					X		in R	Dike: aplite(?), tailings, upper adit
93T-031	Nisqually Mines	46.7647	-121.7876					X		in R	Vein in granodiorite, roof of upper adit
93T-032	Nisqually Mines	46.7647	-121.7876					X		in R	Vein w/ sulfides & amph? in granite, tailings, upper adit
93T-033	Nisqually Mines	46.7647	-121.7876					X		in R	Bt vein in granite, tailings, upper adit
93T-034	Nisqually River	46.7827	-121.7614	X	X		X			N	Granodiorite, oc N of bridge
93T-035	Nisqually River	46.7827	-121.7614	X	X		X			in N	Dike: aplite(?), oc N of bridge
93T-036	Comet Falls	46.7943	-121.7777					X		in N	Granodiorite, below Comet Falls (PEW)
93T-037	Comet Falls	46.7931	-121.7781	X	X		X			in N, MIS-atypical gd	Granodiorite, Van Trump Creek (PEW)
93T-038	Comet Falls	46.7924	-121.7792	X	X		X			N	Granodiorite, trail (PEW)
93T-039	S of Pyramid Peak	46.7989	-121.8100	X	X		X			P	Quartz diorite, ~10 m below contact on ridge crest
93T-040	S of Pyramid Peak	46.7988	-121.8100		X						Country rock at contact (PEW)
93T-041	S of Pyramid Peak	46.7990	-121.8101		X						Country rock 10-12' above contact (PEW)
93T-042	S of Pyramid Peak	46.7991	-121.8103		X						Country rock ~40' above contact (PEW)
93T-043	S of Pyramid Peak	46.7992	-121.8103		X						Country rock ~60' above contact (PEW)
93T-044	S of Pyramid Peak	46.7993	-121.8103		X						Country rock ~100' above contact (PEW)
93T-045	S of Pyramid Peak	46.7992	-121.8099					X			Veins in quartz diorite N and down from #40
93T-046	S of Pyramid Peak	46.7993	-121.8101					X		in P	Veins in hornfels adj to contact
93T-047	S of Pyramid Peak	46.7971	-121.8103	X	X		X			P	Quartz diorite, hill 5568', 300 m S of #39-46
93T-048	S of Pyramid Peak	46.7843	-121.8123								Hornfelsed lava?, Fishers Hornpipe Ck
93T-049	Pinnacle Peak trail	46.7562	-121.7342	X	X		X			in S, MIS-contaminated at roof	Granite (porph), Pinnacle Peak pass; contaminated by roof
93T-050	Pinnacle Peak trail	46.7562	-121.7342	X	X					in S	Enclave, same block as #49
93T-051	Pinnacle Peak trail	46.7562	-121.7342					X		in S	Vein, NE side of pass
93T-052	Pinnacle Peak trail	46.7583	-121.7347	X	X		X			S	Granite (porph)100+m N of pass
93T-053	Pinnacle Peak trail	46.7577	-121.7345					X		in S	Contact of dike and granite, switchback above #54&55
93T-054	Pinnacle Peak trail	46.7580	-121.7348	X	X					in S	Dike: below #52&53
93T-055	Pinnacle Peak trail	46.7580	-121.7348					X		in S	Amph? vein in dike #54
93T-056	Pinnacle Peak trail	46.7621	-121.7329	X	X		X			R	Granodiorite (Refl Lks) ~600m N of pass
93T-057	Pinnacle Peak trail	46.7625	-121.7309	X	X		X			R	Granite, N end of cliff ENE of #56
93T-058	Pinnacle Peak trail	46.7625	-121.7309					X		in S	Amph + bt veis in granite talus block, #57 loc
93T-059	Pinnacle Peak trail	46.7663	-121.7318	X	X	X	X		X	R	Granodiorite (Refl Lks), knob S of Reflection Lakes
93T-060	Pinnacle Peak trail	46.7663	-121.7318					X		in R	Amph vein, #59 loc
93T-061	Reflection Lake W cut	46.7699	-121.7358	X	X		X			N	Granodiorite from block, base of cut near W end
93T-062	Reflection Lake W cut	46.7699	-121.7341	X	X		X			N	Granodiorite from E end low roadcut oc
93T-063	Reflection Lake W cut	46.7698	-121.7351					X		in N	Veis, E end big oc; sulfide + ep?
93T-064	Reflection Lake W cut	46.7699	-121.7341					X		in N	Vein, W end 2m block low roadcut oc; sulfide?
93T-065	Reflection Lake W cut	46.7699	-121.7341					X		in N	Veis, E end block of #64; sulfide
93T-066	Mazama R breccia Hill	46.7895	-121.7138	X	X					in R?	Dike: Hb an, top Mazama Ridge breccia hill; post mineralization
93T-067	Mazama R br hill E	46.7895	-121.7134					X		in S	Fillings in breccia, from boulder
93T-068	Mazama R br hill E	46.7895	-121.7134					X		in S	Coarse fillings in breccia, from boulder
93T-069	Mazama R br hill E	46.7895	-121.7134					X		in S	Open (weathered out?) cavity in breccia, from boulder
93T-070	Mazama R br hill E	46.7895	-121.7134					X		in S	Dike: margin against breccia, from boulder
93T-071	Mazama R br hill E	46.7895	-121.7134					X		in S	Amph-cored breccia fillings, from boulder
93T-072	Mazama R br hill E	46.7895	-121.7134					X		in S	Coarse white ± ox .ssulfide filling, from boulder
93T-073	Mazama R br hill E	46.7895	-121.7134		X			X		in S	Agmatite matrix, from boulder
93T-074	Mazama R br hill E	46.7895	-121.7134					X		in S	Left vein in Kd16, #73 boulder
93T-075	Mazama R br hill E	46.7895	-121.7134					X		in S	Right vein in Kd16, #73 boulder
93T-076	Mazama R br hill SE	46.7887	-121.7124		X			X		in S?	Dike: dark, 30 cm in from S margin, SE of hill
93T-077	Mazama R br hill SE	46.7887	-121.7124					X		in S?	Veins at Kd 19, #76 loc
93T-078	Mazama R br hill SE	46.7887	-121.7124	X				X		in S?	Dike: N margin, #76 loc
93T-079	Mazama R br hill W	46.7894	-121.7144					X		in S	Radiating scapolite? etc. W base of hill
93T-080	Mazama R br hill W	46.7894	-121.7144					X		in S	Large piece with everything, W base of hill
93T-081	Unicorn cirque wall	46.7471	-121.7080					X		in S	Granite, saddle in cirque wall above Unicorn Ck
93T-082	Unicorn cirque wall	46.7449	-121.7054		X						Roof rock, contact 400m SE of saddle
93T-083	Unicorn cirque wall	46.7449	-121.7054					X		in S	Altered granite, contact 400m SE of saddle
93T-084	Unicorn cirque wall	46.7449	-121.7054	X	X		X			S	Sugary granite, 6-7 m below contact 400m SE of saddle
93T-085	Unicorn Peak	46.7454	-121.6997					X			Ep vugs along qz vein in lava, summit Unicorn Pk 6970'
93T-086	Unicorn Peak	46.7454	-121.6997		X						Porphyritic lava, summit Unicorn Pk 6970'
93T-087	Unicorn Peak	46.7446	-121.6992					X			Ep + others fracture surface SE Unicorn Pk ~6900'
93T-088	Unicorn Peak	46.7446	-121.6992		X						Lava with ep veins at #87 loc
93T-089	Unicorn Peak	46.7441	-121.7009		X						Porphyritic lava with veins SW Unicorn PK ~6760'
93T-090	Unicorn Peak	46.7440	-121.6994		X						Upper lava? unit, cave, S Unicorn Pk ~6720'
93T-091	Unicorn Peak	46.7440	-121.6994		X						Lower tuff? unit, cave, S Unicorn Pk ~6720'
93T-092	Unicorn Peak	46.7435	-121.6993		X						Porph lava?, base of cliff S Unicorn Pk ~6655'
93T-093	Unicorn Peak	46.7435	-121.6993					X			Amph + ep frac surf, base of cliff S Unicorn Pk ~6655'
93T-094	Unicorn Peak	46.7446	-121.7019		X						Porph lava? 10 m N of col, WSW Unicorn Pk ~ 6620'
93T-095	Unicorn Peak	46.7454	-121.7021		X					in S?	Porph sill? with amph? vein, W Unicorn PK ~6480'
93T-096	Unicorn Peak	46.7458	-121.7022		X						Flow banded? lava?, WNW Unicorn Pk ~6420'
93T-097	Unicorn Peak	46.7468	-121.7023					X		in S	Contact breccia w/ granite and roof rock, NW Unicorn Pk
93T-098	Unicorn Peak	46.7468	-121.7023		X						Roof rock from 2m above #97
93T-099	Paradise Valley	46.7934	-121.7272					X		in S?	Granite, top of cliff on S of hill N of one-way road
93T-100	Paradise Valley	46.7934	-121.7272					X		in S?	Amph + ep vn in granite, S top of hill N of one-way road
93T-101	Paradise Valley	46.7956	-121.7252	X	X		X			in S?, MIS-atypical fine mafic gd	Granite, NE side of stream E of hill N of one-way road
93T-102	Paradise Valley	46.7947	-121.7260					X		in S?	Aplitic gran cut by Rfl Lks gr cut by veins, E hill N one-way road
93T-103	Paradise Valley	46.7944	-121.7262	X	X		X			R	Gd (Rfl Lks), block at base of cliff, E hill N one-one way road
93T-104	Eagle Peak trail	46.7545	-121.7781		X						Breccia, ~25' above saddle S of Eagle Pk at ~5760' (PEW)
93T-105	Eagle Peak trail	46.7541	-121.7779		X						Breccia with felsic jt coating, S Eagle Pk at ~5680' (PEW)
93T-106	Eagle Peak trail	46.7537	-121.7778		X						Breccia, S Eagle Pk at ~5580' (PEW)
93T-107	Eagle Peak trail	46.7533	-121.7783		X						Felsic lava or dike, S Eagle Pk at ~5480' (PEW)
93T-108	Eagle Peak trail	46.7513	-121.7795					X			Welded tuff?, S Eagle Pk at ~5320' (PEW)
93T-109	Eagle Peak trail	46.7491	-121.7910		X						Sandstone or conglomerate, SW Eagle Pk at ~4460' (PEW)
93T-110	Eagle Peak trail	46.7491	-121.7910		X						Dike: dark cutting rock at #109 loc (PEW)
93T-111	Eagle Peak trail	46.7476	-121.7929		X						Sandy breccia, SW Eagle Pk at ~4040' (PEW)
93T-112	Eagle Peak trail	46.7459	-121.7945		X						Sandstone? or basalt?, SW Eagle Pk at ~3940' (PEW)
93T-113	Eagle Peak trail	46.7462	-121.7949					X			Felsite, SW Eagle Peak at ~3850's
93T-114	Rampart Ridge	46.7781	-121.7885	X	X		X			R	Granodiorite, base of cliff oc 800m WSW of Christine Falls
93T-115	Rampart Ridge	46.7776	-121.7873	X	X		X			R	Gd (fresher than #114) from talus block below #114 loc
93T-116	Rampart Ridge	46.7776	-121.7873	X	X		X			R	Mafic granodiorite from talus block below #114 loc
93T-117	Paradise Valley	46.7900	-121.7296					X		in N	Ep vein in gd, 100m S of Edith Ck on one-way road
93T-118	Paradise Valley	46.7900	-121.7296					X		in N	Amph vein, #118 loc
93T-119	Paradise Valley	46.7896	-121.7237	X	X					in S?	Dike: cut by amph and qz veins, NE corner of Paradise V
93T-120	Paradise Valley	46.7922	-121.7255					X		in S?	Early amph vein cutting granite, creek W of Paradise R
93T-121	Paradise Valley	46.7922	-121.7255					X		in N?	Late amph vein cutting granite and granodiorite, #120 loc
93T-122	Paradise Valley	46.7922	-121.7255					X		in N	Dike: granodiorite in granite, #120 loc
93T-123	Paradise Valley	46.7914	-121.7276	X	X	X	X			N	Granodiorite, roadcut at N corner of one-way road
93T-124	Paradise Valley	46.7914	-121.7276	X	X		X			in N, MIS-atypical mafic gd	Mafic granodiorite, #123 loc
93T-125	Paradise Valley	46.7914	-121.7276					X		in N	Amph vein in granodiorite, #123 loc
93T-126	Stevens Creek	46.7757	-121.7011	X	X		X			S	Granite, S of W pier Stevens Creek bridge
93T-127	Stevens Canyon road	46.7709	-121.6881	X	X		X			S	Gr, block in cut midway between Stevens Ck and E contact
93T-128	Stevens Canyon road	46.7709	-121.6881	X				X		in S	Dike: margin of aplite, block at #127 loc
93T-129	Stevens Canyon road	46.7709	-121.6881	X	X					in S	Enclave, 10 cm, w/ qz amygdules?, block at #127 loc (PEW)
93T-130	Stevens Canyon road	46.7709	-121.6881	X	X					in S	Enclave, 7 cm, zoned, pos bt amygdules, block at #127 loc (PEW)
93T-131	Stevens Canyon road	46.7709	-121.6881		X					in S	Enclave, sm piece has 7mm bt filled vug, block at #127 loc (PEW)
93T-132	Stevens Canyon road	46.7709	-121.6881					X		in S	Enclaves, small (<6 cm), one w/ bt filled vug, block at #127 loc (PEW)
93T-133	Stevens Canyon road	46.7709	-121.6881	X	X					in S	Enclave, 15 cm, pos vugs, block at #127 loc (PEW)
93T-134	Stevens Canyon road	46.7709	-121.6881		X					in S	Enclave, 6cm, bt filled vugs, aplite dike, block at #127 loc (PEW)
93T-135	Stevens Canyon road	46.7709	-121.6881					X		in S	Enclave, 3cm, w/ bt filled vug, block at #127 loc (PEW)
93T-136	Stevens Canyon road	46.7709	-121.6881		X					in S	Enclave, 5-8cm, bt filled, block at #127 loc (PEW)
93T-137	Stevens Canyon road	46.7709	-121.6881					X		in S	Enclave, 3 small <5cm, with felsic rims, block at #127 loc (PEW)
93T-138	Stevens Canyon road	46.7709	-121.6881					X		in S	Enclave, zoned, w/ bt filled vugs, block @ 127 loc (PEW)
93T-139	Stevens Canyon road	46.7709	-121.6881					X		in S	Veis, subtle, block at #127 loc
93T-140	Stevens Canyon road	46.7709	-121.6881					X		in S	Amph vein, block at #127 loc
93T-141	Stevens Canyon road	46.7676	-121.6699		X						Tuff? in contact gulch at ~3680'
93T-142	Stevens Canyon road	46.7676	-121.6699		X						Breccia 2m below #141
93T-143	Stevens Canyon road	46.7669	-121.6702	X	X					in S?	Dike: cuts porphyry #144, contact gulch just above road
93T-144	Stevens Canyon road	46.7669	-121.6702	X	X					in S?	Dike: porphyry immediately W of #143
93T-145	Stevens Canyon road	46.7669	-121.6706					X		in S?	Porphyry ~30m W on road from #143 loc
93T-146	Stevens Canyon road	46.7669	-121.6706	X	X					in S?	Enclave, biotite rich
93T-147	Stevens Canyon road	46.7669	-121.6706					X		in S?	Amph veins in same rock as #146 a few m W on road
93T-148	Stevens Canyon road	46.7670	-121.6709	X	X		X			S	Dike: granite cutting #146-type rock a few m to W
93T-149	Stevens Canyon road	46.7670	-121.6709					X		in S	Amph vein on W side of dike #148
93T-150	Stevens Canyon road	46.7672	-121.6722					X		in S	Dike: aplite, cuts agmatite
93T-151	Stevens Canyon road	46.7672	-121.6722		X					in S	Agmatite with bt amygdules? in Enclaves and granite matrix
93T-152	Stevens Canyon road	46.7678	-121.6725	X	X		X			in S, MIS-atypical mafic, contaminated gd	Granite ~100m W of #151 loc, Tatoosh border phase
93T-153	Stevens Canyon road	46.7678	-121.6725					X		in S	Vein in #152
93T-154	Stevens Canyon road	46.7637	-121.6637		X						Ignimbrite ~100m W of tunnel, 550m ESE of contact
93T-155	Stevens Canyon road	46.7632	-121.6601		X						Ignimbrite ~130m E of tunnel, 900m ESE of contact
93T-156	Stevens Canyon road	46.7612	-121.6516		X						Ignimbrite 1550m ESE of contact
93T-157	Stevens Canyon road	46.7595	-121.6467		X						Ignimbrite 1950m ESE of contact
93T-158	Stevens Canyon road	46.7589	-121.6455		X						Ignimbrite 220m ESE of contact
93T-159	Stevens Ridge	46.7759	-121.6885	X	X					in S?	Dike: basaltic andesite W hill 5648' at 5100'
93T-160	Stevens Ridge	46.7766	-121.6836	X	X		X			S	Granite, talus block <10m below W end of hill 5648'
93T-161	Stevens Ridge	46.7746	-121.6730	X	X		X			S	Altered granite 10-15m W of contact, oc S side of ridge
93T-162	Stevens Ridge	46.7746	-121.6725		X						Hornfels ~5m E of contact, oc S side of ridge
93T-163	Stevens Ridge	46.7748	-121.6710		X						Hornfels, W end of hill 5561' ~100m E of contact on ridge
93T-164	Stevens Ridge	46.7727	-121.6682		X						Porph lava or sill, 5210' 380m ESE of contact on ridge
93T-165	Stevens Ridge	46.7721	-121.6654		X						Ignimbrite, 5080' 630m ESE of contact on ridge
93T-166	Stevens Ridge	46.7706	-121.6621		X						Fine gr. tuff?, 4960' 930m ESE of contact on ridge
93T-167	Stevens Ridge	46.7687	-121.6569		X						Porph microdiorite sill?
93T-168	Stevens Ridge	46.7658	-121.6521		X						Feldspathic sandstone?
93T-169	Stevens Ridge	46.7629	-121.6444		X						Ignimbrite, 3920' 2530m ESE of contact on ridge
93T-170	Stevens Ridge	46.7627	-121.6403		X						Silicified tuff? 3400' 2800m ESE of contact on ridge
93T-171	Nisqually Mines	46.7635	-121.7892					X		in R?	Coarse bt vein in fine grained granite, ~80' above river
93T-172	Nisqually Mines	46.7635	-121.7892					X		in R?	Dark, bt veins in fine grained gr with, ~150' above river
93T-173	Nisqually Mines	46.7644	-121.7890	X	X		X			in R?, MIS-atypical altered gd	Fine gr. gr 8m downstream from contact with grd, river oc
93T-174	Nisqually Mines	46.7644	-121.7890	X	X		X			R	Gd 10m upstream from contact with gran, river oc
93T-175	Nisqually Mines	46.7644	-121.7890					X		in R?	Bt vein that cuts granite only, river oc
93T-176	Nisqually Mines	46.7644	-121.7890					X		in R	Amph vein that cuts all units, river oc
93T-177	Paradise Valley	46.7899	-121.7247	X	X		X			R	Gr from top ctr of exp in cut on 1-way road E of Paradise R
93T-178	Paradise Valley	46.7899	-121.7247					X		in R	Ap plus amph + subtle sulfide veins in lg block, #177
93T-179	Paradise Valley	46.7899	-121.7247					X		in R	Amph vein, #177 cut
93T-180	Paradise Valley	46.7899	-121.7247					X		in R	Sulfide coated fracture surfaces, #177 cut
93T-181	Paradise Valley	46.7899	-121.7247					X		in R	Sulfide vein, #177 cut
93T-182	Paradise Valley	46.7899	-121.7247					X		in R	Ep vein cut by aplite, #177 cut
93T-183	Paradise Valley	46.7899	-121.7247					X		in R	Molybdenite? scraped from granite in #177 cut
93T-184	Paradise Valley	46.7792	-121.7380					X		in N	Sulfide-bearing vein in granodiorite, Paradise road intersection
93T-185	Paradise Valley	46.7792	-121.7380					X		in N	Amph + ep ± sulfide vein in gd, Paradise road intersection
RE160	Stevens Canyon	46.7651	-121.6751		X						Wall rock, Sylvia Falls (TWS)
RE161	Stevens Canyon	46.7638	-121.6708		X						Wall rock, 400m downstream from Sylvia Falls (TWS)
Collected by EA du Bray and colleagues, 2005:											
203000	Christine Falls	46.7802	-121.7787	X	X	X			X	N	Tatoosh pluton
203001	S of Nisqually R Bridge	46.7753	-121.7671			X				in N	tourmaline vein w/ selvedge
203002	one way road	46.7832	-121.7263	X	X		X			N	Tatoosh pluton
203003	one way road	46.7907	-121.7298	X	X		X			N	Tatoosh pluton
203004	one way road	46.7774	-121.7343	X	X	X	X		X	N	Tatoosh pluton
203005	Carter Falls	46.7644	-121.7670	X	X	X	X			R	Tatoosh pluton
203006	S of Louise Lake	46.7666	-121.7163	X	X		X			S	Tatoosh pluton
203007	Inspiration Pt	46.7732	-121.7436	X	X		X			N	Tatoosh pluton
203008	below Narada Falls	46.7727	-121.7489	X	X		X			N	Tatoosh pluton
203009	E of Louise Lake	46.7689	-121.7105	X	X	X	X			S	Tatoosh pluton
203010	3700' Stevens Ridge Rd	46.7704	-121.6801	X	X	X	X		X	S	Tatoosh pluton
203011	3700' Stevens Ridge Rd	46.7704	-121.6801	X	X					in S?	Dike: w/ miaroles in Tatoosh pluton
203012A	NE end Mazama Ridge	46.7886	-121.7129		X					in S	Tatoosh pluton agmatite matrix
203012B	NE end Mazama Ridge	46.7886	-121.7129	X	X					in S	Enclave agmatite
203013A	NE end Mazama Ridge	46.7891	-121.7128		X					in S	Tatoosh pluton agmatite matrix
203013B	NE end Mazama Ridge	46.7891	-121.7128	X	X					in S	Enclave agmatite
203013C	NE end Mazama Ridge	46.7891	-121.7128					X		in S	Tatoosh pluton agmatite hydrothermal breccia
203014	E side Nisqually River	46.7921	-121.7457								Sill intruding Tatoosh pluton
203015	E side Nisqually River	46.7922	-121.7456	X	X	X	X			N	Tatoosh pluton
203016	S of Reflection Lake	46.7687	-121.7467	X	X		X			N	Tatoosh pluton
203017	NE of Snow Lake	46.7585	-121.6957	X	X		X			S	Tatoosh pluton
203018	N of Cliff lake	46.7571	-121.7476	X	X		X			S	Tatoosh pluton
203019	E of Castle Peak	46.7576	-121.7218	X	X		X			S-alt	Tatoosh pluton
203020	btwn Christine&Comet	46.7863	-121.7827	X	X		X			N	Tatoosh pluton
203021	below Chinook Pass	46.8687	-121.5361	X	X						sill
203022	White River	46.8938	-121.6092	X	X		X			W	Tatoosh pluton- White River qd
203023	Sunrise Ridge	46.9174	-121.5885	X	X		X			SU	Tatoosh pluton- Sunrise Pt qtn
Collected by EA du Bray and colleagues, 2006:											
203075	E end Reflection Lake	46.7688	-121.7260	X	X		X			R	Reflec Lk
203076	N of Faraway rock @ bs	46.7790	-121.7139	X	X		X			R	good gray plag rock
203077	S of Plummer Pk	46.7517	-121.7373	X	X		X			S-alt	Tatoosh, deuteric alteration?
203078	S of Denman Pk	46.7547	-121.7419	X	X		X			S	good sample of Tatoosh
203079	S rdg Pyramid Pk	46.7906	-121.8073	X	X		X			P	Pyramid Pk
203080	S rdg Pyramid Pk	46.7954	-121.8093	X	X	X	X		X	P	Pyramid Pk
203081	float in Kautz Cr	46.7922	-121.7930	X	X		X			N	Nisqually from isolated mass in Kautz Cr
203082	Mazama Ridge	46.7882	-121.7111	X	X		X			in S, MIS-atypical, granophyre	Quenched Stevens from head of Mazama R
203083	below Sluiskin Falls	46.7925	-121.7195	X	X		X			S	silicic Tatoosh
203084	head of Paradise Valley	46.7923	-121.7212	X	X		X			S	Tatoosh
203085	head of Sunbeam Creek	46.7633	-121.7195	X	X	X	X		X	S	Tatoosh
203086	head of Glacier Basin	46.8864	-121.7165	X	X		X			W	White River intrusion
203087	Glacier Camp	46.8900	-121.7016	X	X		X			W	White River intrusion
068RN10	N side Carbon River	47.0039	-121.8819	X	X	X	X		X	C	Carbon River stock
068RN11	SW side Carbon River	46.9953	-121.8524	X	X		X			C	Carbon River stock
93T-021	Nisqually River	46.7908	-121.7513	X	X		X			N	Granodiorite, base of cliffs, 1 km above bridge
93T-034	Nisqually River	46.7827	-121.7614	X	X		X			N	Granodiorite, oc N of bridge
93T-038	Comet Falls	46.7924	-121.7792	X	X		X			N	Granodiorite, trail (PEW)
93T-061	Reflection Lake W cut	46.7699	-121.7358	X	X		X			N	Granodiorite from block, base of cut near W end
93T-062	Reflection Lake W cut	46.7699	-121.7341	X	X		X			N	Granodiorite from E end low roadcut oc
93T-123	Paradise Valley	46.7914	-121.7276	X	X	X	X			N	Granodiorite, roadcut at N corner of one-way road
203000	Christine Falls	46.7802	-121.7787	X	X	X			X	N	Tatoosh pluton
203002	one way road	46.7832	-121.7263	X	X		X			N	Tatoosh pluton
203003	one way road	46.7907	-121.7298	X	X		X			N	Tatoosh pluton
203004	one way road	46.7774	-121.7343	X	X	X	X		X	N	Tatoosh pluton
203007	Inspiration Pt	46.7732	-121.7436	X	X		X			N	Tatoosh pluton
203008	below Narada Falls	46.7727	-121.7489	X	X		X			N	Tatoosh pluton
203015	E side Nisqually River	46.7922	-121.7456	X	X	X	X			N	Tatoosh pluton
203016	S of Reflection Lake	46.7687	-121.7467	X	X		X			N	Tatoosh pluton
203020	btwn Christine&Comet	46.7863	-121.7827	X	X		X			N	Tatoosh pluton
203081	float in Kautz Cr	46.7922	-121.7930	X	X		X			N	Nisqually from isolated mass in Kautz Cr
93T-039	S of Pyramid Peak	46.7989	-121.8100	X	X		X			P	Quartz diorite, ~10 m below contact on ridge crest
93T-047	S of Pyramid Peak	46.7971	-121.8103	X	X		X			P	Quartz diorite, hill 5568', 300 m S of #39-46
203079	S rdg Pyramid Pk	46.7906	-121.8073	X	X		X			P	Pyramid Pk
203080	S rdg Pyramid Pk	46.7954	-121.8093	X	X	X	X		X	P	Pyramid Pk
93T-026	Nisqually Mines	46.7647	-121.7876	X	X	X	X			R	Granodiorite (typical), oc at upper adit
93T-057	Pinnacle Peak trail	46.7625	-121.7309	X	X		X			R	Granite, N end of cliff ENE of #56
93T-059	Pinnacle Peak trail	46.7663	-121.7318	X	X	X	X		X	R	Granodiorite (Refl Lks), knob S of Reflection Lakes
93T-103	Paradise Valley	46.7944	-121.7262	X	X		X			R	Gd (Rfl Lks), block at base of cliff, E hill N one-one way road
93T-114	Rampart Ridge	46.7781	-121.7885	X	X		X			R	Granodiorite, base of cliff oc 800m WSW of Christine Falls
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Table D02

Whole-rock Geochemical Data. Compositions of samples of Tatooshi Intrusive Suite plutons; major oxides compositions recalculated to 100%, volatile free.

No.	Nd	Nd	Pr	Pr	Pb	Pb	Rb	Rb	Sc	Sc	Sm	Sm	Sr	Sr	Ta	Ta	Th	Th	Tl	Tl	Tm	Tm	U	U	V	V	W	W	Y	Y	Yb	Yb	Zr	Zr
sample	Field No.																																	
7-Mar-01	19.8971	17.71429	5.2475	5.9425	1.6	34.6709	1.375	0.55912	4.375	1.5175	0.2388125	1.628125	79.8125	6.1375	<0.5	0.2388125	1.5175	0.9125	<0.5	0.3146125	0.2388125	1.6091375	17.3125	3.878125	5.9125	1.25	2.9625	0.6075	<0.5	21.6875	<0.5	0.2625	87.50
8-Apr-01	14.8	14.0982	7.05536	53.90134	10.83236	8.51946	2.5	25.61514	0.75164	0.76921	10.76154	2.7846923	89.6923	1.4846154	<0.5	0.6923077	0.9846154	0.6923077	<0.5	0.3846154	<0.5	0.3846154	2.3076923	1.1846154	2.7846154	1.4	0.76538462	0.4846154	<0.5	23.12308	2.6538462	0.7384615	146.7615
10-Jun-01	27.44615	19.6	14.07692	7.05538	53.90154	10.83236	8.51946	2.5	25.61514	0.76164	0.76921	10.76154	2.7846923	89.6923	1.4846154	<0.5	0.6923077	0.9846154	0.6923077	<0.5	0.3846154	<0.5	0.3846154	<0.5	2.3076923	1.1846154	2.7846154	1.4	0.76538462	0.4846154	<0.5	23.12308	2.6538462	0.7384615	146.7615
10-Jul-01	28.2	19.8	15.2	7.9	3.2	33.9	4.8	1.5	4.6	0.7	0.7	0.7	93.7	1.1	<0.5	0.7	0.7	0.7	<0.5	0.7	0.7	<0.5	0.7	<0.5	2.3	1.1	2.8	1.4	0.8	23.1	2.6	0.8	0.7	146.7
8-Aug-01	14.1	14.0	7.0	53.9	10.8	8.5	2.5	25.6	0.7	0.7	10.7	2.8	89.6	1.4	<0.5	0.6	0.9	0.6	<0.5	0.3	<0.5	0.3	2.3	<0.5	2.3	1.1	2.7	1.4	0.7	23.1	2.6	0.7	0.7	146.7
9-Sep-01	19.8	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
10-Oct-01	27.4	19.6	14.1	7.0	53.9	10.8	8.5	2.5	25.6	0.7	0.7	10.7	2.8	89.6	1.4	<0.5	0.6	0.9	<0.5	0.3	<0.5	0.3	2.3	<0.5	2.3	1.1	2.7	1.4	0.7	23.1	2.6	0.7	0.7	146.7
11-Nov-01	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
12-Dec-01	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
13-Jan-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
14-Feb-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
15-Mar-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
16-Apr-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
17-May-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
18-Jun-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
19-Jul-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
20-Aug-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
21-Sep-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
22-Oct-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
23-Nov-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
24-Dec-02	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
25-Jan-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
26-Feb-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
27-Mar-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
28-Apr-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
29-May-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
30-Jun-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
31-Jul-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
32-Aug-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
33-Sep-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
34-Oct-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
35-Nov-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
36-Dec-03	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
37-Jan-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
38-Feb-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
39-Mar-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
40-Apr-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
41-May-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
42-Jun-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
43-Jul-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
44-Aug-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
45-Sep-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
46-Oct-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
47-Nov-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
48-Dec-04	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
49-Jan-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
50-Feb-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
51-Mar-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
52-Apr-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
53-May-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
54-Jun-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
55-Jul-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
56-Aug-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
57-Sep-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
58-Oct-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
59-Nov-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
60-Dec-05	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
61-Jan-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
62-Feb-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
63-Mar-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
64-Apr-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
65-May-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
66-Jun-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
67-Jul-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
68-Aug-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
69-Sep-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
70-Oct-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
71-Nov-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
72-Dec-06	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
73-Jan-07	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
74-Feb-07	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
75-Mar-07	19.9	17.7	5.2	5.9	1.6	34.7	1.4	0.6	4.4	1.5	0.2	1.6	79.8	6.1	<0.5	0.2	1.5	0.9	<0.5	0.3	0.2	1.6	17.3	3.9	5.9	1.2	2.9	0.6	<0.5	21.7	<0.5	0.3	0.2	87.5
76-Apr-07	19.9	17.7	5.2	5.9	1.6	34.7

METHODS

Representative samples were collected across the discontinuously exposed TTIS plutons (Fig. 1). Whole-rock chemical analyses (85 samples) were conducted by SGS Minerals. Major oxide abundances (recalculated to 100%, volatile-free) were determined by wavelength dispersive X-ray fluorescence spectrometry. Trace element abundances were determined by a combination of inductively coupled plasma-atomic emission and inductively coupled plasma-mass spectrometry. Analytical methods (Taggart, 2002) are described at http://minerals.cr.usgs.gov/projects/analytical_chem/references.html. Compositions of representative plagioclase in each of the TTIS plutons were determined for four (samples 203004, Nisqually; 203080, Pyramid; 203085, Stevens; and 93T059, Reflection) of the six geochronologically analyzed samples using a JEOL 8900 electron microprobe. A 5 µm spot, with 15 kV accelerating voltage and 10 nA beam current, was used to make three to eight analyses each on cores, interiors, and rims of representative plagioclase crystals. Radiogenic isotope data (Sr, Nd, and Pb) were produced by V.J.M Salters in the National High Magnet Field Laboratory, Tallahassee, Florida. Chemical separations and mass-spectrometric measurements were done at the Geochemistry Division of the National High Magnetic Field Laboratory at Florida State University. For chemical separations we used standard techniques for Sr, Nd, and Pb (Stracke et al., 2003). Sr isotopic determinations were done with the Finnegan MAT 262 TIMS. $^{87}Sr/^{86}Sr$ was normalized to $^{86}Sr/^{88}Sr = 0.1194$ for fractionation and to $^{87}Sr/^{86}Sr = 0.70800$ for E&A Sr standard. Long-term reproducibility of the Sr and Nd standard is better than 20 ppm. Nd and Pb isotopes were determined using a multi collector ICP-MS (ThermoFisher NEPTUNE). $^{143}Nd/^{144}Nd$ was normalized to $^{146}Nd/^{144}Nd = 0.7219$, and to $^{143}Nd/^{144}Nd = 0.511850$ for the La Jolla Nd standard. Pb isotopic measurements are corrected for mass fractionation using $^{203}Tl/^{205}Tl = 0.418922$. Reproducibility of the standard NBS 981 is better than 100 ppm for $^{206}Pb/^{204}Pb$, $^{207}Pb/^{204}Pb$ and $^{208}Pb/^{204}Pb$. Pb isotope values are reported relative to the values for NBS 981 reported by (Todt et al., 1996). Whole-rock oxygen isotope analyses were performed in the U.S. Geological Survey stable isotope lab, Denver, Colorado using techniques described by Clayton and Mayeda (1963); analyses have a precision of 0.2 ‰. Relative abundances of minerals were determined in 76 samples by counting at least 1000 points on stained slabs (Laniz et al., 1964) under a binocular microscope; additional tabulated observations were made using a standard petrographic microscope. Reflected light microscopy of thirteen representative samples was used to characterize Fe-Ti oxide minerals in the least altered parts of the three plutons. Petrographic characteristics of hydrothermal alteration were compiled for all analyzed samples. In addition, outcrop-scale characteristics of sparse, widely distributed veins were documented and the petrography of representative vein samples studied. Petrographic characteristics of fluid inclusions in crystals (principally quartz) were derived by microscopic examination of standard 30 µm-thick thin sections of the chemically analyzed TTIS samples. Geologic mapping by Wright (1961) and Thompson (1983), although slightly modified in some places, served as the primary geologic base.

Zircon for U–Pb geochronology was concentrated by standard heavy mineral separation processes, selected grains mounted on glass slides, cast in 25 mm diameter epoxy disks, ground to expose internal structure, and polished. Grains were imaged with reflected light and with cathodoluminescence (CL) to identify internal structure, inclusions, and physical defects. Grainmounts were washed with a saturated EDTA solution, rinsed in distilled water, dried in a vacuum oven, and coated with Au. Zircon was analyzed with the Sensitive High-Resolution Ion

MicroProbe with Reverse Geometry (SHRIMP RG) at the USGS–Stanford laboratory at Stanford University. Secondary ions were generated from the target spot with a ~5–6 nA O_2^- primary ion beam. The beam was rastered for 140 seconds over the area to be analyzed before data were collected. Analysis spots typically had a diameter of ~26 by 30 μm and depth of a few μm. Counts on nineteen peaks were collected sequentially with a single EDP electron multiplier: $^{90}Zr_2{}^{16}O$ (2 s), ^{204}Pb (8 s), background (8 s at 0.050 mass units above ^{204}Pb), ^{206}Pb (30 s), ^{207}Pb (20 s), ^{208}Pb (8 s), ^{238}U (6 s), $^{232}Th^{16}O$ (3 s), $^{238}U^{16}O$ (3 s), and ^{139}La (2 s); ^{140}Ce, ^{146}Nd, ^{147}Sm, ^{153}Eu, ^{155}Gd, $^{163}Dy^{16}O$, $^{166}Er^{16}O$, $^{172}Yb^{16}O$, and $^{180}Hf^{16}O$ were counted for 1 s each. Subsets of analyses were obtained without the REE or in a routine dedicated to analysis for a greater variety of trace elements; neither of these data sets was incorporated in the reported U–Pb geochronology results. Autocentering on selected peaks and on guide peaks for low or variable abundance peaks (e.g., $^{94}Zr_2{}^{16}O$ 0.165 mass unit below ^{204}Pb) was used to improve the reliability of locating peak centers. Seven scans through the peak sequence were used for unknowns and five scans for standards. Measurements were made at mass resolution of ~9500 (10% peak height), which eliminates all interfering atomic species. Concentrations were calibrated against zircon standard CZ3 (550 ppm U) or in-house MAD-green zircon from Madagascar; ages were calculated by calibration against zircon standard R33 (419 Ma, quartz diorite of Braintree complex, Vermont, Black et al., 2004) which were analyzed repeatedly throughout the duration of the analytical sessions. Data reduction followed the methods described by Williams (1997) and Ireland and Williams (2003), and used the Squid and Isoplot programs of Ludwig (2001, 2003).

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Table DR3

Petrographic Data. Petrographic data for samples of Tatoosh Intrusive Suite plutons.

| Sample | Unit | Felsic, % of rock | | | Mafic, % of rock | | | Ext frac | Tiny modal chg | Average grain size (mm) | | | | Grain size | Texture | Inclusions | Crystallinity | | | |

The Fe-Ti oxides display variable subsolidus exsolution effects. Many titanomagnetite crystals are partly exsolved to hematite lamellae with a skeletal martite texture. In other samples, titanomagnetite includes ilmenite exsolution lamellae and (or) ilmenite rims. Magnetite in more strongly altered samples is irregularly oxidized to hematite along crystal margins and fractures. Most ilmenite crystals are relatively homogeneous, but may include zones (commonly crystal cores) of exsolved hematite; some samples contain well-developed hematite lamellae. Most ilmenite in the Pyramid phase is homogeneous and unexsolved. The absence of magnetite and the presence of pyrrhotite in the Pyramid phase suggests a lower oxidation state relative to other TTIS plutons, in which magnetite is abundant and crystallized early. However, the lack of magmatic titanite in most samples of the Stevens and Nisqually plutons and Reflection phase, indicates that only moderately oxidizing conditions prevailed during their solidification.

In most TTIS samples liquid-rich (type 1) inclusions are the least abundant type. Type 2 inclusions often have negative crystal shapes and are the most abundant inclusion type in many samples. Relative volumes of liquid, vapor and daughter crystals vary widely in type 3 (high salinity inclusions), but most vapor bubbles are <25 vol. %. Some samples of the Reflection phase and Nisqually pluton contain high salinity inclusions with very small liquid and vapor contents; these inclusions are inferred to have very high salinities (>60 wt. % NaCl equivalent). Type 3 inclusion shapes vary from negative crystals to highly irregular, are often larger (up to 25 µm in some samples) than type 1 and 2 inclusions, and vary in abundance from absent to the most abundant type of inclusion.

Figure DR1

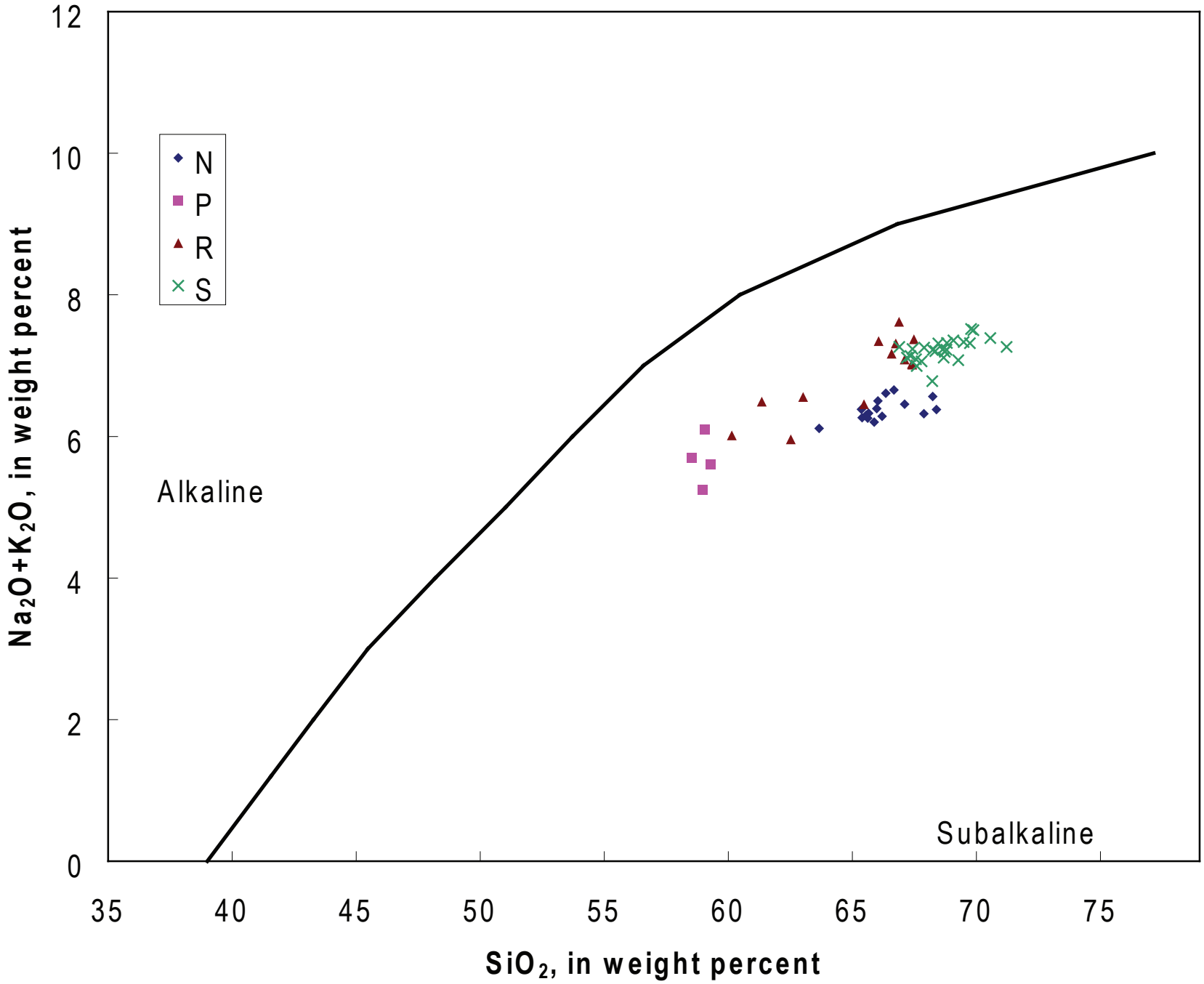

12
10
8
6
4
2
0
35
40
45
50
55
60
65
70
75
N
P
R
S
Alkaline
Subalkaline
Na_2O+K_2O, in weight percent
SiO_2, in weight percent

Figure DR2

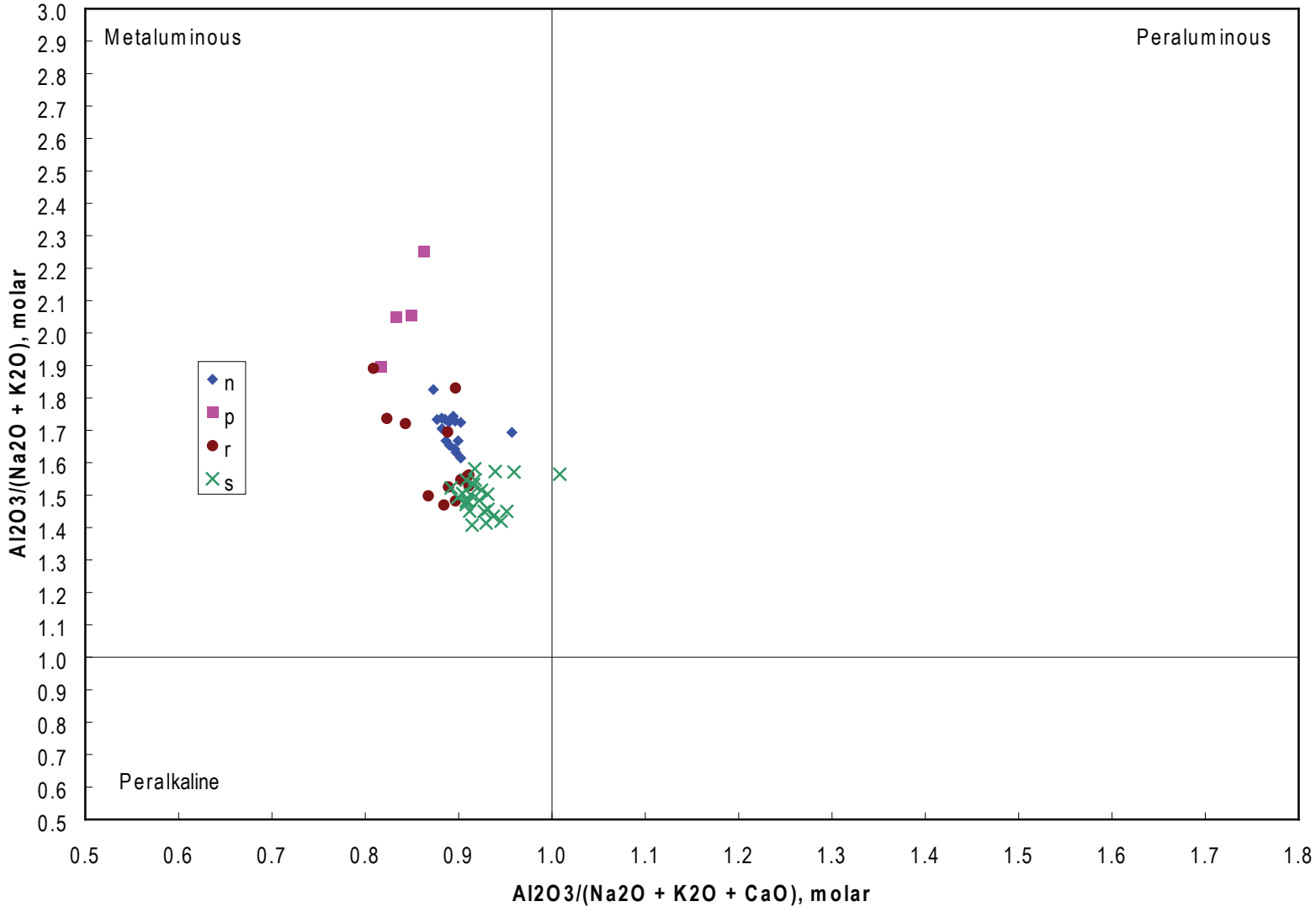

Metaluminous
Peraluminous
Peralkaline
n
p
r
s
Al2O3/(Na2O + K2O), molar
Al2O3/(Na2O + K2O + CaO), molar
3.0
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8

Figure DR3

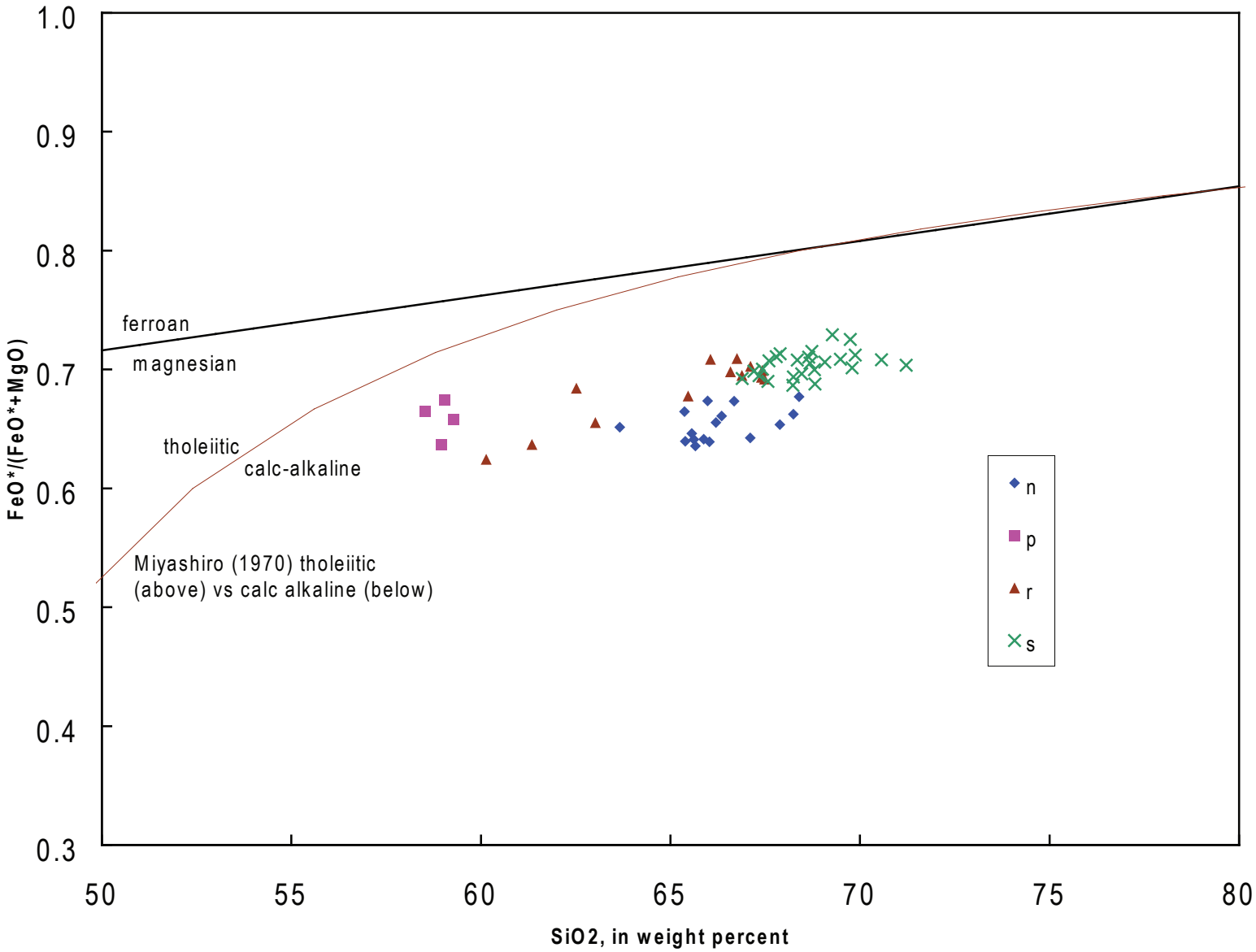

1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
FeO*/(FeO*+MgO)
50
55
60
65
70
75
80
SiO2, in weight percent
ferroan
magnesian
tholeiitic
calc-alkaline
Miyashiro (1970) tholeiitic
(above) vs calc alkaline (below)
n
p
r
s

Figure DR4

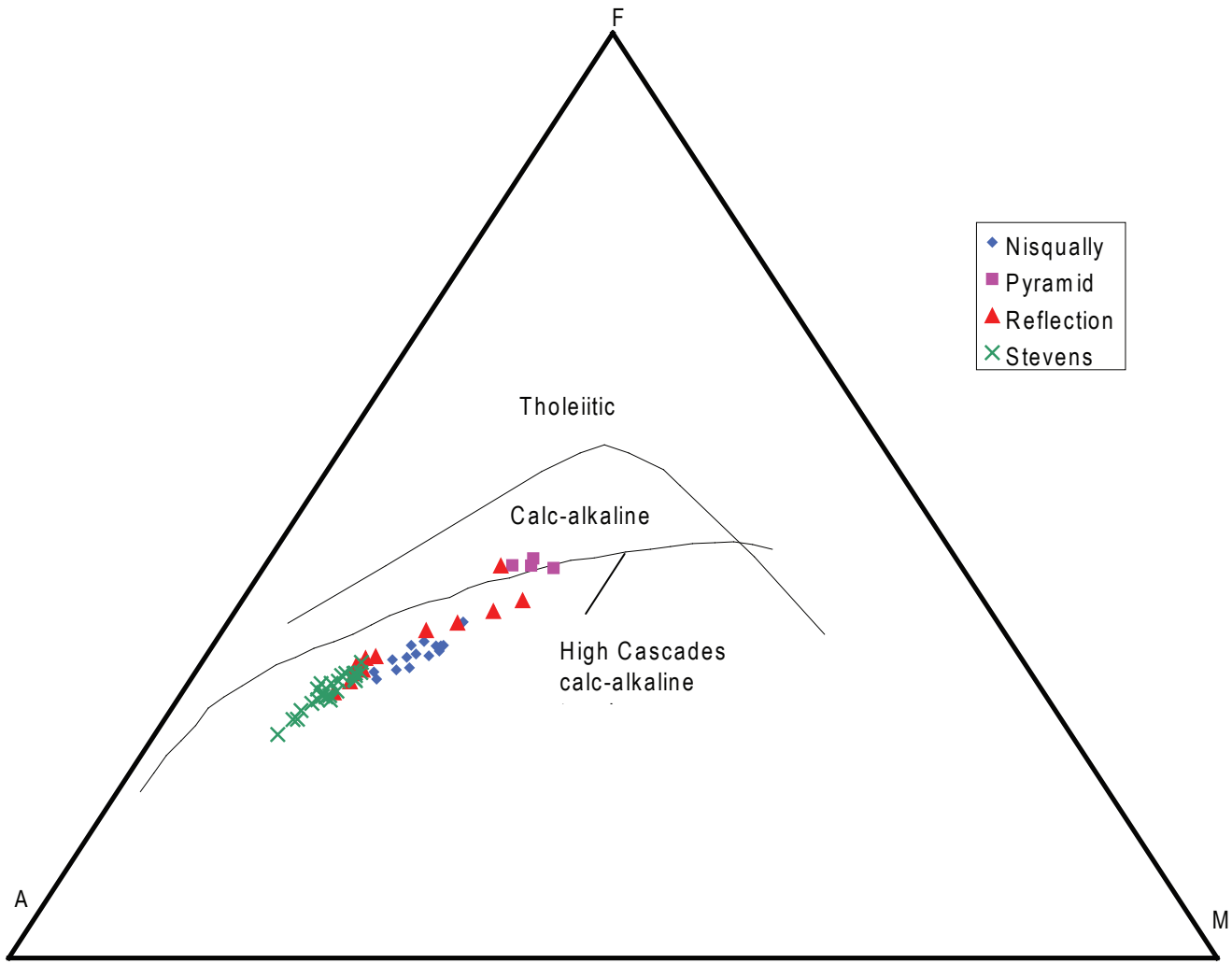

F
A
M
Nisqually
Pyramid
Reflection
Stevens
Tholeiitic
Calc-alkaline
High Cascades
calc-alkaline

Figure DR5

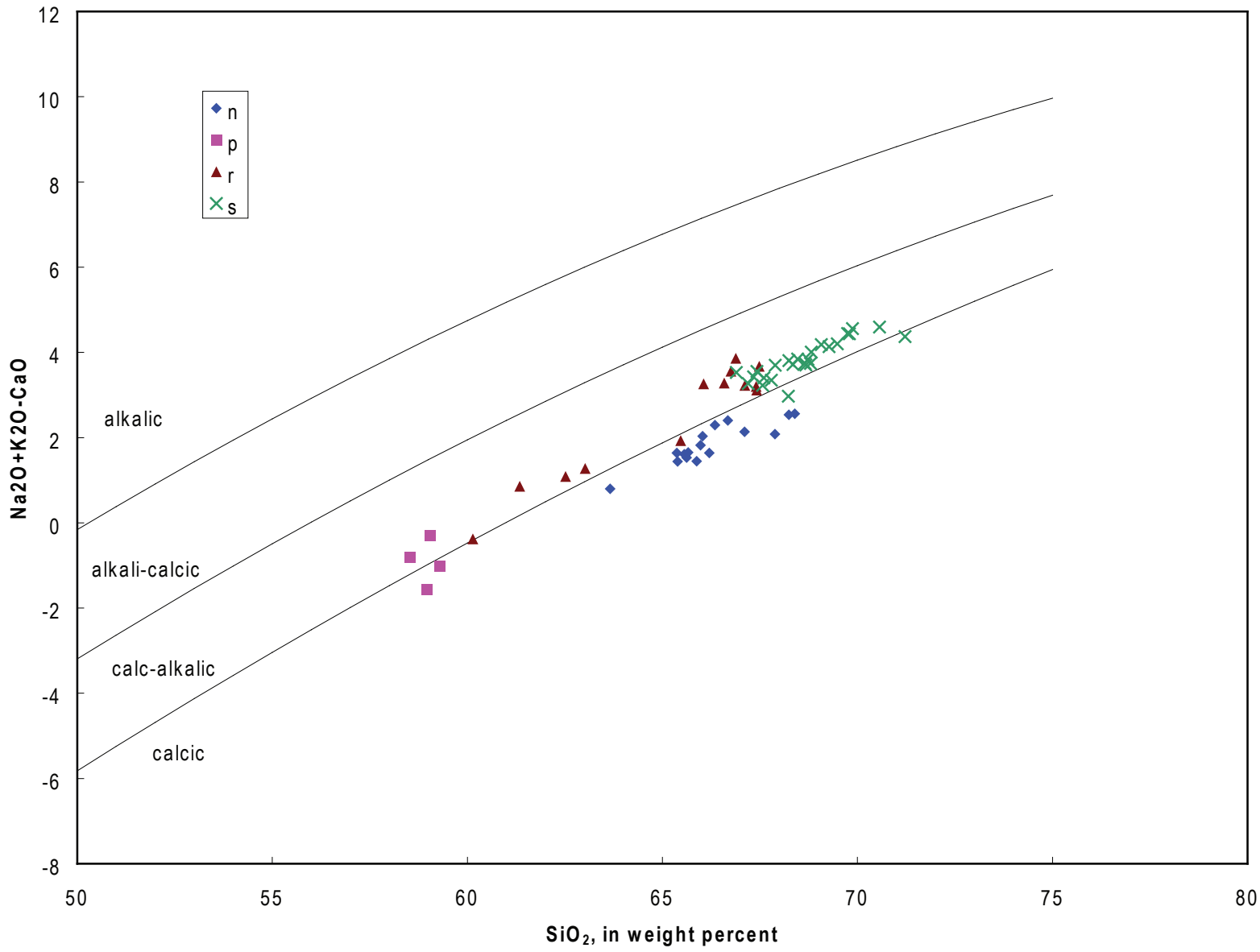
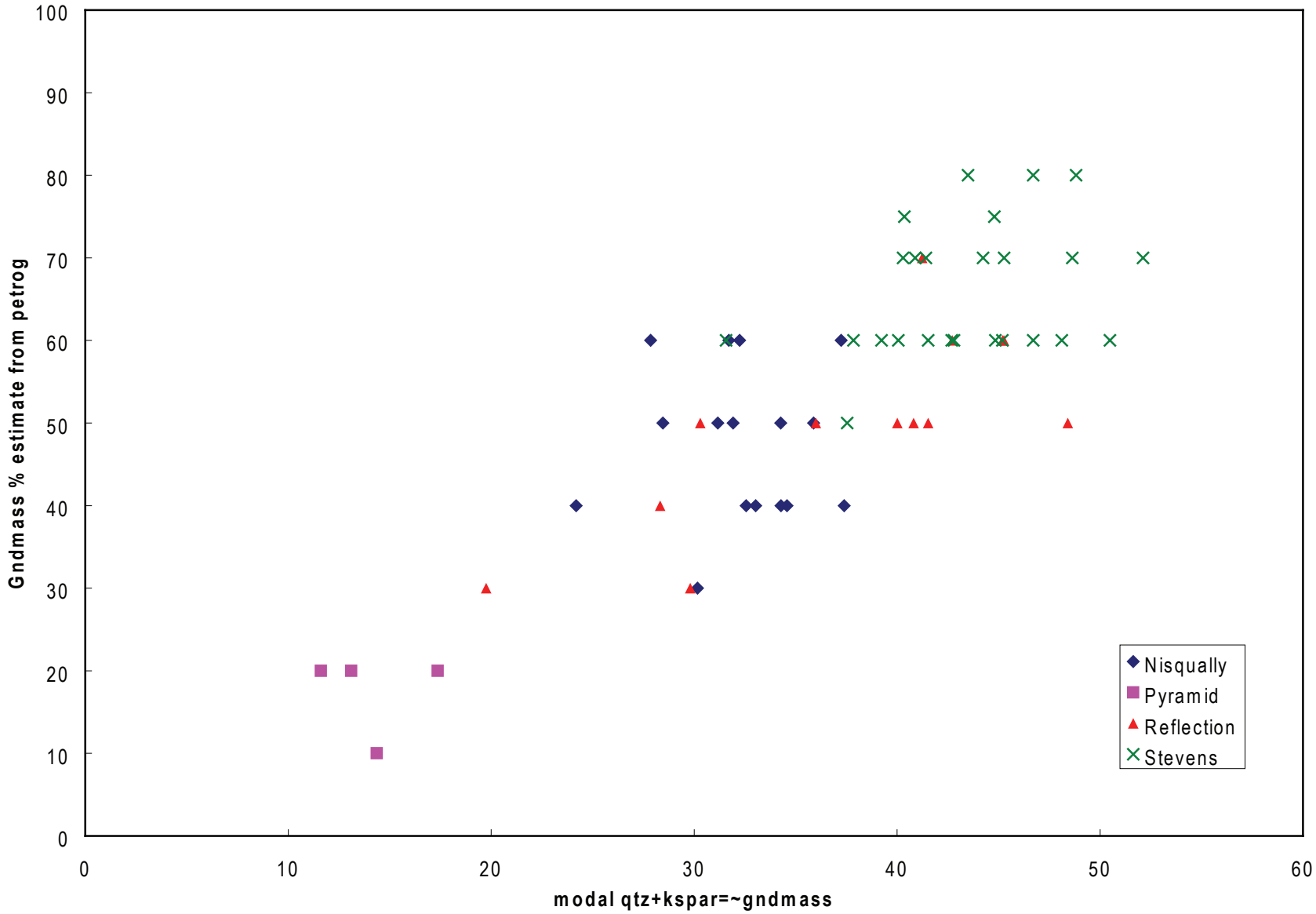

n
p
r
s
alkalic
alkali-calcic
calc-alkalic
calcic
Na2O+K2O-CaO
SiO2, in weight percent
12
10
8
6
4
2
0
-2
-4
-6
-8
50
55
60
65
70
75
80

Figure DR6


Gndmass % estimate from petrog
modal qtz+kspar=~gndmass
0
10
20
30
40
50
60
70
80
90
100
Nisqually
Pyramid
Reflection
Stevens

PLAGIOCLASE COMPOSITIONS

A reconnaissance electron microprobe investigation of plagioclase suggests that its composition is relatively distinct in each of the three TTIS plutons; however, these analyses also document considerable within-sample plagioclase compositional variation (Data Repository file, PlagData.PDF). Individual plagioclase grains can be zoned from labradorite to albite (Data Repository file, AnAbOr.PDF). Plagioclase cores and interiors (zones between cores and rims) in the Stevens pluton (median composition is andesine) and Pyramid phase (median composition is labradorite) define broad, indistinguishable compositional arrays). In the Nisqually pluton, plagioclase cores and interiors (median composition is andesine) define weak reverse zoning; interiors are about ten mole percent An enriched. In contrast, plagioclase rim compositions (median composition for all TTIS plutons is oligoclase) in the Nisqually and Stevens plutons and Pyramid phase cluster and are distinctly more sodic (18-38% more Ab end member) than core and interior compositions. In the Reflection phase, interior (median, An28) and rim (median, An21) plagioclase (oligoclase) are compositionally akin, whereas cores (median composition is andesine) are distinctly more calcic (median, An48). Descending median core An end member contents for constituents of the TTIS are:
Pyramid(52)>Reflection(48)>Nisqually(43)>Stevens(36). The associated between-pluton plagioclase composition differences suggest distinct populations in each of the three TTIS plutons. Relative Fe, Ba, and Sr concentrations in plagioclase are not diagnostic of particular TTIS plutons. However, as is consistent with crystallization from progressively more evolved interstitial silicate liquids, most TTIS pluton plagioclase rims have lower Sr contents than their associated interiors and cores (Data Repository files, FeBaSr.PDF and BaSr.PDF).

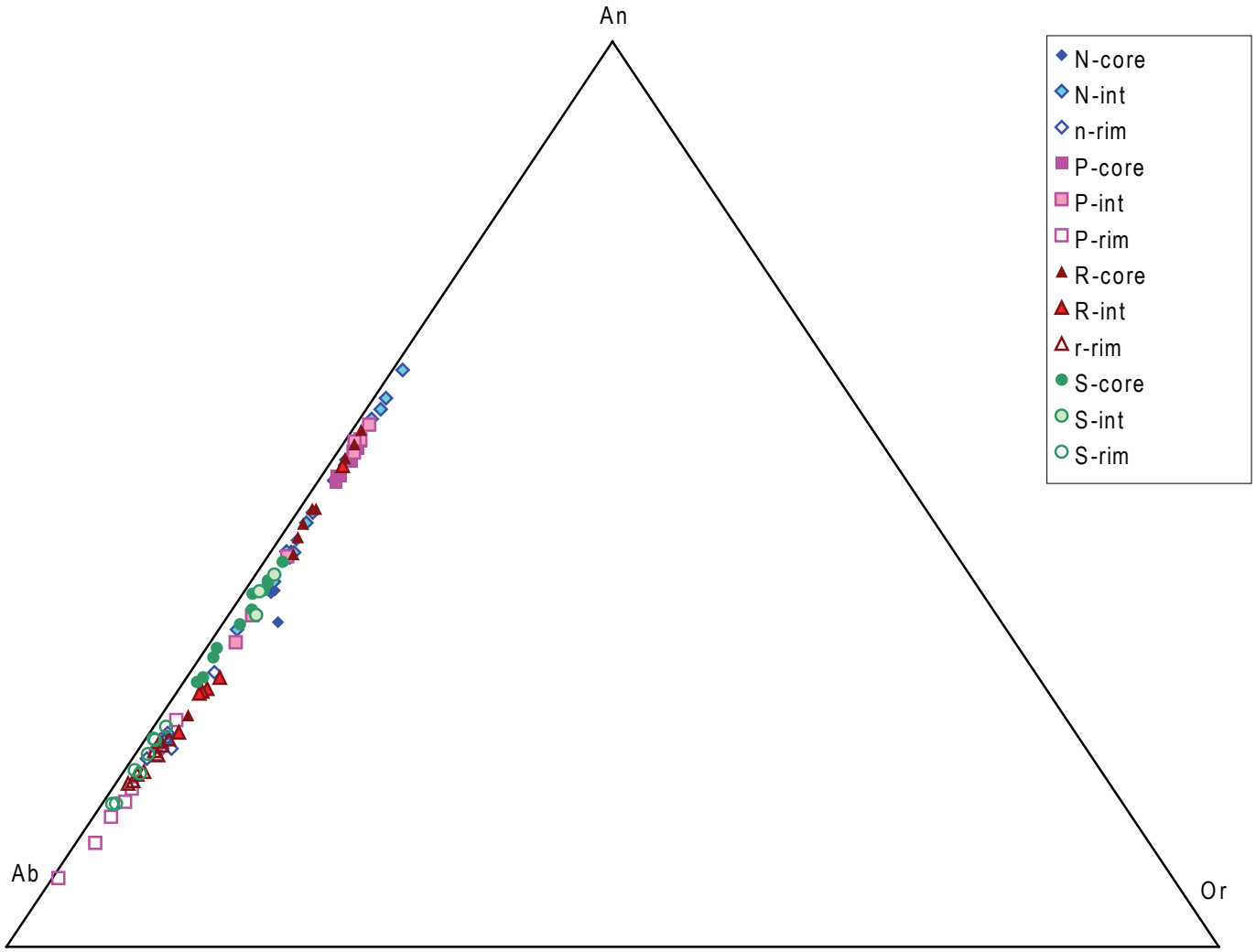
Table 2354

Plagioclase Compositions. Electron microprobe compositions of plagioclase in representative samples of Tatoosh Intrusive Suite plutons.

No.	Point	Sample	Position	SiO2	Al2O3	FeTiO3	MgO	CaO	Na2O	K2O	Sr-Ba-Fe	Rest	Ca/(Ca+Na)	An/(An+Ab)	Ab/(An+Ab)	Or/(An+Ab)	Sr ppm	Ba ppm	Ba/(Sr+Ba)
1	20304 p4.1c	hepatic	core	56.109	27.841	0.289	0.01	10.827	4.49	0.285	0.001	3.984	0.905	53.7	46.3	1.7	135	270	0.667
2	20304 p4.1d	hepatic	core	56.113	27.841	0.289	0.01	10.827	4.49	0.285	0.001	3.984	0.905	53.7	46.3	1.7	135	270	0.667
3	20304 p4.1e	hepatic	core	57.022	26.601	0.181	0.014	9.73	4.966	0.276	0.001	3.991	0.813	43.8	56.2	1.6	140	0	0
4	20304 p4.1f	hepatic	core	57.022	26.601	0.181	0.014	9.73	4.966	0.276	0.001	3.991	0.813	43.8	56.2	1.6	140	0	0
5	20304 p4.1i	hepatic	core	56.199	25.747	0.291	0.019	8.171	6.475	0.429	0.001	3.991	0.693	34.2	65.8	2.5	190	0	0
6	20304 p4.1j	hepatic	core	56.199	25.747	0.291	0.019	8.171	6.475	0.429	0.001	3.991	0.693	34.2	65.8	2.5	190	0	0
7	20304 p4.2a	hepatic	core	56.402	25.248	0.249	0.03	7.73	6.737	0.389	0.001	3.991	0.672	32.1	67.9	2.3	180	440	0.71
8	20304 p4.2b	hepatic	core	56.402	25.248	0.249	0.03	7.73	6.737	0.389	0.001	3.991	0.672	32.1	67.9	2.3	180	440	0.71
9	20304 p4.2c	hepatic	core	57.737	29.82	0.38	0.022	13.346	4.014	0.145	0.001	3.996	0.923	61.7	38.3	0.9	120	0	0
10	20304 p4.2d	hepatic	core	57.737	29.82	0.38	0.022	13.346	4.014	0.145	0.001	3.996	0.923	61.7	38.3	0.9	120	0	0
11	20304 p4.3a	hepatic	interior	56.807	29.231	0.359	0.019	12.256	4.609	0.205	0.001	3.995	0.894	59.4	40.6	1.2	170	420	0.71
12	20304 p4.3b	hepatic	interior	56.807	29.231	0.359	0.019	12.256	4.609	0.205	0.001	3.995	0.894	59.4	40.6	1.2	170	420	0.71
13	20304 p4.3c	hepatic	interior	54.664	28.161	0.337	0.016	11.039	5.153	0.197	0.001	3.995	0.866	53.8	46.2	1.1	160	0	0
14	20304 p4.3d	hepatic	interior	54.664	28.161	0.337	0.016	11.039	5.153	0.197	0.001	3.995	0.866	53.8	46.2	1.1	160	0	0
15	20304 p4.4a	hepatic	interior	56.835	27.189	0.228	0.001	9.915	5.795	0.222	0.001	3.995	0.813	46.0	50.7	1.3	140	710	0.83
16	20304 p4.4b	hepatic	interior	56.835	27.189	0.228	0.001	9.915	5.795	0.222	0.001	3.995	0.813	46.0	50.7	1.3	140	710	0.83
17	20304 p4.5a	hepatic	interior	57.191	26.603	0.209	0.017	9.319	6.42	0.229	0.001	3.995	0.793	43.9	55.6	1.3	130	560	0.81
18	20304 p4.5b	hepatic	interior	57.191	26.603	0.209	0.017	9.319	6.42	0.229	0.001	3.995	0.793	43.9	55.6	1.3	130	560	0.81
19	20304 p4.6a	hepatic	interior	57.099	25.996	0.214	0.019	8.161	6.117	0.34	0.001	3.995	0.793	43.6	54.5	1.9	180	630	0.78
20	20304 p4.6b	hepatic	interior	57.099	25.996	0.214	0.019	8.161	6.117	0.34	0.001	3.995	0.793	43.6	54.5	1.9	180	630	0.78
21	20304 p4.2c	hepatic	core	56.358	25.819	0.248	0.011	8.396	6.421	0.329	0.001	3.991	0.797	41.7	57.8	1.9	180	110	0.38
22	20304 p4.2d	hepatic	core	56.358	25.819	0.248	0.011	8.396	6.421	0.329	0.001	3.991	0.797	41.7	57.8	1.9	180	110	0.38
23	20304 p4.1a	hepatic	core	59.236	24.982	0.24	0.006	7.272	7.376	0.267	0.001	3.989	0.714	35.2	63.4	1.5	150	670	0.82
24	20304 p4.1b	hepatic	core	59.236	24.982	0.24	0.006	7.272	7.376	0.267	0.001	3.989	0.714	35.2	63.4	1.5	150	670	0.82
25	20304 p4.1g	hepatic	rim	62.485	23.148	0.196	0	4.661	8.658	0.28	0.001	3.996	0.561	23.6	74.6	1.5	120	0	0
26	20304 p4.1h	hepatic	rim	62.485	23.148	0.196	0	4.661	8.658	0.28	0.001	3.996	0.561	23.6	74.6	1.5	120	0	0
27	20304 p4.4c	hepatic	rim	62.592	23.047	0.219	0.007	4.895	8.867	0.307	0.001	3.996	0.547	22.8	75.5	1.7	70	640	0.9
28	20304 p4.4d	hepatic	rim	62.592	23.047	0.219	0.007	4.895	8.867	0.307	0.001	3.996	0.547	22.8	75.5	1.7	70	640	0.9
29	20304 p4.5e	hepatic	rim	62.548	22.791	0.17	0.005	4.468	8.861	0.334	0.001	3.996	0.523	21.3	76.4	1.5	120	0	0
30	20304 p4.5f	hepatic	rim	62.548	22.791	0.17	0.005	4.468	8.861	0.334	0.001	3.996	0.523	21.3	76.4	1.5	120	0	0
31	20304 p4.6c	hepatic	rim	62.82	22.419	0.17	0.007	4.602	9.249	0.314	0.001	3.996	0.508	20.8	76.7	1.7	140	470	0.77
32	20304 p4.6d	hepatic	rim	62.82	22.419	0.17	0.007	4.602	9.249	0.314	0.001	3.996	0.508	20.8	76.7	1.7	140	470	0.77
33	20380 p1.1a	pyroxenite	core	54.564	28.596	0.443	0.037	11.907	4.913	0.225	0.001	3.991	0.906	55.8	42.6	1.5	160	40	0.2
34	20380 p1.1b	pyroxenite	core	54.564	28.596	0.443	0.037	11.907	4.913	0.225	0.001	3.991	0.906	55.8	42.6	1.5	160	40	0.2
35	20380 p1.2a	pyroxenite	core	54.44	27.998	0.389	0.016	11.126	5.115	0.259	0.001	3.991	0.885	53.6	44.3	1.7	610	0	0
36	20380 p1.2b	pyroxenite	core	54.44	27.998	0.389	0.016	11.126	5.115	0.259	0.001	3.991	0.885	53.6	44.3	1.7	610	0	0
37	20380 p1.3a	pyroxenite	core	55.043	28.031	0.467	0.016	10.614	5.378	0.233	0.001	3.991	0.872	51.2	48.8	1.3	160	200	0.56
38	20380 p1.3b	pyroxenite	core	55.043	28.031	0.467	0.016	10.614	5.378	0.233	0.001	3.991	0.872	51.2	48.8	1.3	160	200	0.56
39	20380 p1.4a	pyroxenite	core	54.866	27.611	0.35	0.012	10.719	5.439	0.241	0.001	3.991	0.869	51.4	47.2	1.5	150	530	0.78
40	20380 p1.4b	pyroxenite	core	54.866	27.611	0.35	0.012	10.719	5.439	0.241	0.001	3.991	0.869	51.4	47.2	1.5	150	530	0.78
41	20380 p1.5a	pyroxenite	grossiteschist	55.447	28.509	0.158	0.007	11.718	4.711	0.192	0.001	3.991	0.904	57.4	41.2	1.1	140	640	0.82
42	20380 p1.5b	pyroxenite	grossiteschist	55.447	28.509	0.158	0.007	11.718	4.711	0.192	0.001	3.991	0.904	57.4	41.2	1.1	140	640	0.82
43	20380 p1.6a	pyroxenite	core	54.465	29.047	0.239	0.006	11.794	4.484	0.197	0.001	3.991	0.919	56.3	43.4	0.8	100	450	0.82
44	20380 p1.6b	pyroxenite	core	54.465	29.047	0.239	0.006	11.794	4.484	0.197	0.001	3.991	0.919	56.3	43.4	0.8	100	450	0.82
45	20380 p1.7a	pyroxenite	core	54.579	27.942	0.603	0.02	11.23	5.464	0.224	0.112	3.991	0.862	51.2	48.2	0.6	740	480	0.39
46	20380 p1.7b	pyroxenite	core	54.579	27.942	0.603	0.02	11.23	5.464	0.224	0.112	3.991	0.862	51.2	48.2	0.6	740	480	0.39
47	20380 p1.8a	pyroxenite	interior	57.225	26.219	0.417	0.013	9.121	6.451	0.367	0.112	3.991	0.738	38.2	61.3	1.6	170	110	0.39
48	20380 p1.8b	pyroxenite	interior	57.225	26.219	0.417	0.013	9.121	6.451	0.367	0.112	3.991	0.738	38.2	61.3	1.6	170	110	0.39
49	20380 p1.9a	pyroxenite	interior	58.743	24.842	0.329	0.02	7.295	6.365	0.32	0.001	3.991	0.642	32.1	67.9	2.1	190	590	0.76
50	20380 p1.9b	pyroxenite	interior	58.743	24.842	0.329	0.02	7.295	6.365	0.32	0.001	3.991	0.642	32.1	67.9	2.1	190	590	0.76
51	20380 p1.10a	pyroxenite	rim	62.889	22.946	0.21	0.004	4.54	9.075	0.301	0.001	3.993	0.502	20.1	79.9	1.8	110	70	0.39
52	20380 p1.10b	pyroxenite	rim	62.889	22.946	0.21	0.004	4.54	9.075	0.301	0.001	3.993	0.502	20.1	79.9	1.8	110	70	0.39
53	20380 p1.11a	pyroxenite	rim	64.679	21.941	0.057	0.01	3.419	9.574	0.324	0.001	3.993	0.371	16.5	82.2	1.8	210	190	0.48
54	20380 p1.11b	pyroxenite	rim	64.679	21.941	0.057	0.01	3.419	9.574	0.324	0.001	3.993	0.371	16.5	82.2	1.8	210	190	0.48
55	20380 p1.12a	pyroxenite	rim	65.174	21.203	0.08	0.01	2.98	10.014	0.264	0.006	3.993	0.321	14.4	85.4	1.6	280	0	0
56	20380 p1.12b	pyroxenite	rim	65.174	21.203	0.08	0.01	2.98	10.014	0.264	0.006	3.993	0.321	14.4	85.4	1.6	280	0	0
57	20380 p1.13a	pyroxenite	rim	67.169	20.906	0.371	0.053	1.862	11.152	0.096	0.045	3.993	0.152	8.1	91.9	0.5	190	170	0.47
58	20380 p1.13b	pyroxenite	rim	67.169	20.906	0.371	0.053	1.862	11.152	0.096	0.045	3.993	0.152	8.1	91.9	0.5	190	170	0.47
59	20285 p2.1c	Sieves	core	57.811	26.459	0.23	0.004	8.505	6.782	0.254	0.088	3.995	0.782	40.5	58.2	1.3	260	90	0.26
60	20285 p2.1d	Sieves	core	57.811	26.459	0.23	0.004	8.505	6.782	0.254	0.088	3.995	0.782	40.5	58.2	1.3	260	90	0.26
61	20285 p2.1e	Sieves	core	57.643	25.677	0.306	0.009	7.993	6.953	0.279	0.107	3.994	0.761	37.3	61.1	1.6	150	60	0.29
62	20285 p2.1f	Sieves	core	57.643	25.677	0.306	0.009	7.993	6.953	0.279	0.107	3.994	0.761	37.3	61.1	1.6	150	60	0.29
63	20285 p2.1g	Sieves	core	58.996	25.14	0.258	0.007	7.59	7.061	0.287	0.51	3.994	0.729	34.1	61.1	1.6	1420	820	0.61
64	20285 p2.1h	Sieves	core	58.996	25.14	0.258	0.007	7.59	7.061	0.287	0.51	3.994	0.729	34.1	61.1	1.6	1420	820	0.61
65	20285 p2.2a	Sieves	core	59.504	24.507	0.228	0.007	6.661	7.668	0.151	0.118	3.991	0.687	30.4	66.1	0.6	740	480	0.39
66	20285 p2.2b	Sieves	core	59.504	24.507	0.228	0.007	6.661	7.668	0.151	0.118	3.991	0.687	30.4	66.1	0.6	740	480	0.39
67	20285 p2.3a	Sieves	core	60.482	24.275	0.264	0.013	6.181	8.067	0.238	0.109	3.991	0.658	28.9	69.9	1.1	650	170	0.21
68	20285 p2.3b	Sieves	core	60.482	24.275	0.264	0.013	6.181	8.067	0.238	0.109	3.991	0.658	28.9	69.9	1.1	650	170	0.21
69	20285 p2.4a	Sieves	core	59.134	23.861	0.271	0.003	6.044	7.468	0.195	0.056	3.997	0.660	29.3	69.4	1.1	500	860	0.63
70	20285 p2.4b	Sieves	core	59.134	23.861	0.271	0.003	6.044	7.468	0.195	0.056	3.997	0.660	29.3	69.4	1.1	500	860	0.63
71	20285 p2.5a	Sieves	interior	58.108	25.797	0.229	0.002	8.05	6.766	0.217	0.141	3.997	0.696	39.3	59.5	1.3	840	110	0.11
72	20285 p2.5b	Sieves	interior	58.108	25.797	0.229	0.002	8.05	6.766	0.217	0.141	3.997	0.696	39.3	59.5	1.3	840	110	0.11
73	20285 p2.6a	Sieves	rim	62.129	23.47	0.156	0	5.119	8.67	0.181	0.062	3.996	0.591	24.3	74.7	1.0	590	300	0.34
74	20285 p2.6b	Sieves	rim	62.129	23.47	0.156	0	5.119	8.67	0.181	0.062	3.996	0.591	24.3	74.7	1.0	590	300	0.34
75	20285 p2.7a	Sieves	core	61.186	23.076	0.12	0	4.684	9.019	0.164	0.062	3.996	0.572	23.2	76.5	0.9	250	530	0.68
76	20285 p2.7b	Sieves	core	61.186	23.076	0.12	0	4.684	9.019	0.164	0.062	3.996	0.572	23.2	76.5	0.9	250	530	0.68
77	20285 p2.8a	Sieves	rim	61.376	22.662	0.11	0	4.101	9.243	0.181	0.066	3.996	0.503	20.7	77.8	1.5	270	530	0.66
78	20285 p2.8b	Sieves	rim	61.376	22.662	0.11	0	4.101	9.243	0.181	0.066	3.996	0.503	20.7	77.8	1.5	270	530	0.66
79	20285 p2.9a	Sieves	core	61.429	21.498	0.117	0.006	5.343	9.752	0.204	0.097	3.996	0.544	26.4	71.1	2.1	370	270	0.42
80	20285 p2.9b	Sieves	core	61.429	21.498	0.117	0.006	5.343	9.752	0.204	0.097	3.996	0.544	26.4	71.1	2.1	370	270	0.42
81	20285 p2.10a	Sieves	rim	62.129	21.81	0.229	0.01	3.996	9.797	0.153	0.081	3.997	0.447	19.8	79.4	0.9	460	60	0.12
82	20285 p2.10b	Sieves	rim	62.129	21.81	0.229	0.01	3.996	9.797	0.153	0.081	3.997	0.447	19.8	79.4	0.9	460	60	0.12
83	91759 p4.1a	Reflection	core	54.508	28.545	0.383	0.011	11.656	5.025	0.165	0.157	3.129	0.9	56.5	45.5	0.9	1096	0	0
84	91759 p4.1b	Reflection	core	54.508	28.545	0.383	0.011	11.656	5.025	0.165	0.157	3.129	0.9	56.5	45.5	0.9	1096	0	0
85	91759 p4.1c	Reflection	core	55.394	27.284	0.344	0.006	10.079	5.782	0.234	0.154	3.125	0.03	49.4	50.3	1.3	1960	270	0.11
86	91759 p4.1d	Reflection	core	55.394	27.284	0.344	0.006	10.079	5.782	0.234	0.154	3.125	0.03	49.4	50.3	1.3	1960	270	0.11
87	91759 p4.1e	Reflection	core	56.275	27.247	0.259	0.015	9.953	6.138	0.195	0.147	3.118	0.025	48.6	52.2	1.1	1060	220	0.17
88	91759 p4.1f	Reflection	core	56.275	27.247	0.259	0.015	9.953	6.138	0.195	0.147	3.118	0.025	48.6	52.2	1.1	1060	220	0.17
89	91759 p4.1g	Reflection	core	57.363	26.534	0.303	0.01	9.607	6.269	0.347	0.17	3.145	0.067	46.8	51.3	2.0	1190	310	0.21
90	91759 p4.1h	Reflection	core	57.363	26.534	0.303	0.01	9.607	6.269	0.347	0.17	3.145	0.067	46.8	51.3	2.0	1190	310	0.21
91	91759 p4.2c	Reflection	core	60.441	18.084	0.074	0	0.181	11.364	0.062	0.064	3.196	0.016	1.6	98.4	0.0	360	580	0.62
92	91759 p4.2d	Reflection	core	60.441	18.084	0.074	0	0.181	11.364	0.062	0.064	3.196	0.016	1.6	98.4	0.0	360	580	0.62
93	91759 p4.3a	Reflection	groundmass	64.287	18.201	0.149	0.08	0.041	15.344	0.049	0.097	3.196	0.003	0.2	99.8	0.1	870	2900	0.77
94	91759 p4.3b	Reflection	groundmass	64.287	18.201	0.149	0.08	0.041	15.344	0.049	0.097	3.196	0.003	0.2	99.8	0.1	870	2900	0.77
95	91759 p4.4a	Reflection	core	56.117	18.188	0.014	0.002	0.5	15.681	0.039	0.05	3.196	0.027	2.5	97.5	0.0	40	2420	0.98
96	91759 p4.4b	Reflection	core	56.117	18.188	0.014	0.002	0.5	15.681	0.039	0.05	3.196	0.027	2.5	97.5	0.0	40	2420	0.98
97	91759 p4.5a	Reflection	interior	60.053	24.043	0.356	0.004	6.587	7.863	0.48	0.141	3.196	0.337	32.7	65.2	2.1	930	1000	0.52
98	91759 p4.5b	Reflection	interior	60.053	24.043	0.356	0.004	6.587	7.863	0.48	0.141	3.196	0.337	32.7	65.2	2.1	930	1000	0.52
99	91759 p4.6a	Reflection	interior	61.143	23.699	0.217	0	5.988	8.117	0.363	0.137	3.195	0.295	29.2	69.7	2.0	890	540	0.38
100	91759 p4.6b	Reflection	interior	61.143	23.699	0.217	0	5.988	8.117	0.363	0.137	3.195	0.295	29.2	69.7	2.0	890	540	0.38
101	91759 p4.7a	Reflection	interior	62.422	23.14	0.246	0	5.05	8.72	0.47	0.03	3.195	0.252	24.6	74.6	2.4	0	320	1
102	91759 p4.7b	Reflection	interior	62.422	23.14	0.246	0	5.05	8.72	0.47	0.03	3.195	0.252	24.6	74.6	2.4	0	320	1
103	91759 p4.8a	Reflection	rim	63.113	23.041	0.154	0	4.798	8.799	0.227	0.04	3.195	0.241	23.7	75.7	1.3	370	0	0
104	91759 p4.8b	Reflection	rim	63.113	23.041	0.154	0	4.798	8.799	0.227	0.04	3.195	0.241	23.7	75.7	1.3	370	0	0
105	91759 p4.9a	Reflection	rim	62.658	22.947	0.158	0.011	4.727	8.775	0.241	0.041	3.196	0.241	23.8	75.6	1.7	70	160	0.69
106	91759 p4.9b	Reflection	rim	62.658	22.947	0.158	0.011	4.727	8.775	0.241	0.041	3.196	0.241	23.8	75.6	1.7	70	160	0.69
107	91759 p4.10a	Reflection	rim	63.045	22.52	0.154	0.013	4.132	9.344	0.077	0.04	3.196	0.209	20.7	79.0	1.3	240	0	0
108	91759 p4.10b	Reflection	rim	63.045	22.52	0.154	0.013	4.132	9.344	0.077	0.04	3.196	0.209	20.7	79.0	1.3	240	0	0
109	91759 p4.11a	Reflection	rim	63.343	22.398	0.181	0.009	4.022	9.295	0.223	0.068	3.196	0.202	19.1	79.7	1.3	210	430	0.67
110	91759 p4.11b	Reflection	rim	63.343	22.398	0.181	0.009	4.022	9.295	0.223	0.068	3.196	0.202	19.1	79.7	1.3	210	430	0.67
111	91759 p4.12a	Reflection	rim	64.274	21.548	0.149	0.006	3.883	9.501	0.18	0.067	3.194	0.195	18.6	80.9	0.5	290	290	0.5
112	91759 p4.12b	Reflection	rim	64.274	21.548	0.149	0.006	3.883	9.501	0.18	0.067	3.194	0.195	18.6	80.9	0.5	290	290	0.5
113	91759 p4.2b	Reflection	rim	60.262	17.893	0.129	0	0.703	10.713	0.093	0.055	3.199	0.034	3.4	96.6	0.0	0	320	1
114	91759 p4.2f	Reflection	rim	60.262	17.893	0.129	0	0.703	10.713	0.093	0.055	3.199	0.034	3.4	96.6	0.0	0	320	1

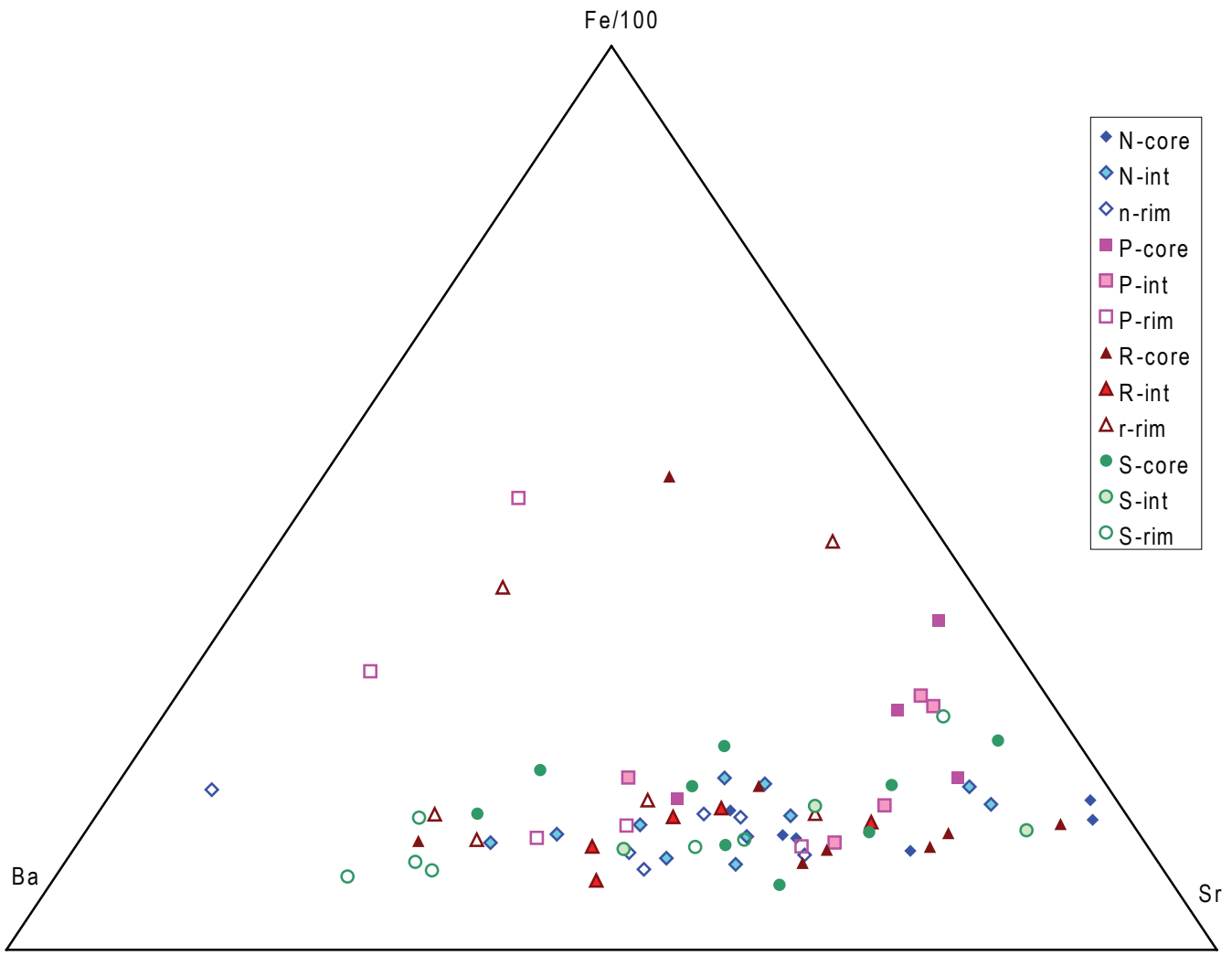
No.	Point	Sample	Position	Cations K	Cations Na	Cations Sr	Cations Ba	Cations Fe	Cations Mg	Cations Mn	Cations Al	Cations Si	Cations Ti	Cations Cr	Cations Ni	Cations Cu	Cations Zn	Cations K	Cations Na
115	20304 p4.1c	hepatic	core	0.016	0.033	0.001	0.001	3.984	1.005	0.016	0.108	0.062	0.001	0.000	0.000	0.000	0.000	0.524	4.461
116	20304 p4.1d	hepatic	core	0.016	0.033	0.001	0.001	3.984	1.005	0.016	0.108	0.062	0.001	0.000	0.000	0.000	0.000	0.524	4.461
117	20304 p4.1e	hepatic	core	0.016	0.064	0.004	0.000	2.991	1.011	0.011	0.148	0	0.000	0.000	0.000	0.000	0.000	0.441	4.559
118	20304 p4.1f	hepatic	core	0.016	0.064	0.004	0.000	2.991	1.011	0.011	0.148	0	0.000	0.000	0.000	0.000	0.000	0.441	4.559
119	20304 p4.1i	hepatic	core	0.020	0.041	0.001	0.001	3.991	1.009	0.009	0.153	0.083	0.000	0.000	0.000	0.000	0.000	0.364	4.636
120	20304 p4.1j	hepatic	core	0.020	0.041	0.001	0.001	3.991	1.009	0.009	0.153	0.083	0.000	0.000	0.000	0.000	0.000	0.364	4.636
121	20304 p4.2a	hepatic	core	0.018	0.037	0.001	0.001	3.991	1.009	0.009	0.138	0.049	0.000	0.000	0.000	0.000	0.000	0.361	4.639
122	20304 p4.2b	hepatic	core	0.018	0.037	0.001	0.001	3.991	1.009	0.009	0.138	0.049	0.000	0.000	0.000	0.000	0.000	0.361	4.639
123	20304 p4.3a	hepatic	interior	0.013	0.031	0.001	0.001	3.996	1.023	0.007	0.126	0.037	0.000	0.000	0.000	0.000	0.000	0.649	4.351
124	20304 p4.3b	hepatic	interior	0.013	0.031	0.001	0.001	3.996	1.023	0.007	0.126	0.037	0.000	0.000	0.000	0.000	0.000	0.649	4.351
125	20304 p4.4a	hepatic	interior	0.011	0.025	0.001	0.001	3.996	1.004	0.006	0.115	0.023	0.000	0.000	0.000	0.000	0.000	0.536	4.464
126	20304 p4.4b	hepatic	interior	0.011	0.025	0.001	0.001	3.996	1.004	0.006	0.115	0.023	0.000	0.000	0.000	0.000	0.000	0.536	4.464
127	20304 p4.5c	hepatic	interior	0.013	0.028	0.001	0.001	3.996	1.007	0.006	0.118	0.026	0.000	0.000	0.000	0.000	0.000	0.480	4.520
128	20304 p4.5d	hepatic	interior	0.013	0.028	0.001	0.001	3.996	1.007	0.006	0.118	0.026	0.000	0.000	0.000	0.000	0.000	0.480	4.520
129	20304 p4.6a	hepatic	interior	0.013	0.027	0.001	0.001	3.995	1.008	0.006	0.117	0.025	0.000	0.000	0.000	0.000	0.000	0.453	4.547
130	20304 p4.6b	hepatic	interior	0.013	0.027	0.001	0.001	3.995	1.008	0.006	0.117	0.025	0.000	0.000	0.000	0.000	0.000	0.453	4.547
131	20304 p4.3c	hepatic	core	0.010	0.021	0.001	0.001	3.995	1.015	0.006	0.113	0.019	0.000	0.000	0.000	0.000	0.000	0.364	4.636
132	20304 p4.3d	hepatic	core	0.010	0.021	0.001	0.001	3.995	1.015	0.006	0.113	0.019	0.000	0.000	0.000	0.000	0.000	0.364	4.636
133	20380 p1.1a	pyroxenite	core	0.043	0.047	0.016	0.014	5.378	0.233	0.166	0.137	0.027	0.000	0.000	0.000	0.000	0.000	0.523	4.477
134	20380 p1.1b	pyroxenite	core	0.043	0.047	0.016	0.014	5.378	0.233	0.166	0.137	0.027	0.000	0.000	0.000	0.000	0.000	0.523	4.477
135	20380 p1.2c	pyroxenite	core	0.012	0.025	0.001	0

Figure DR7



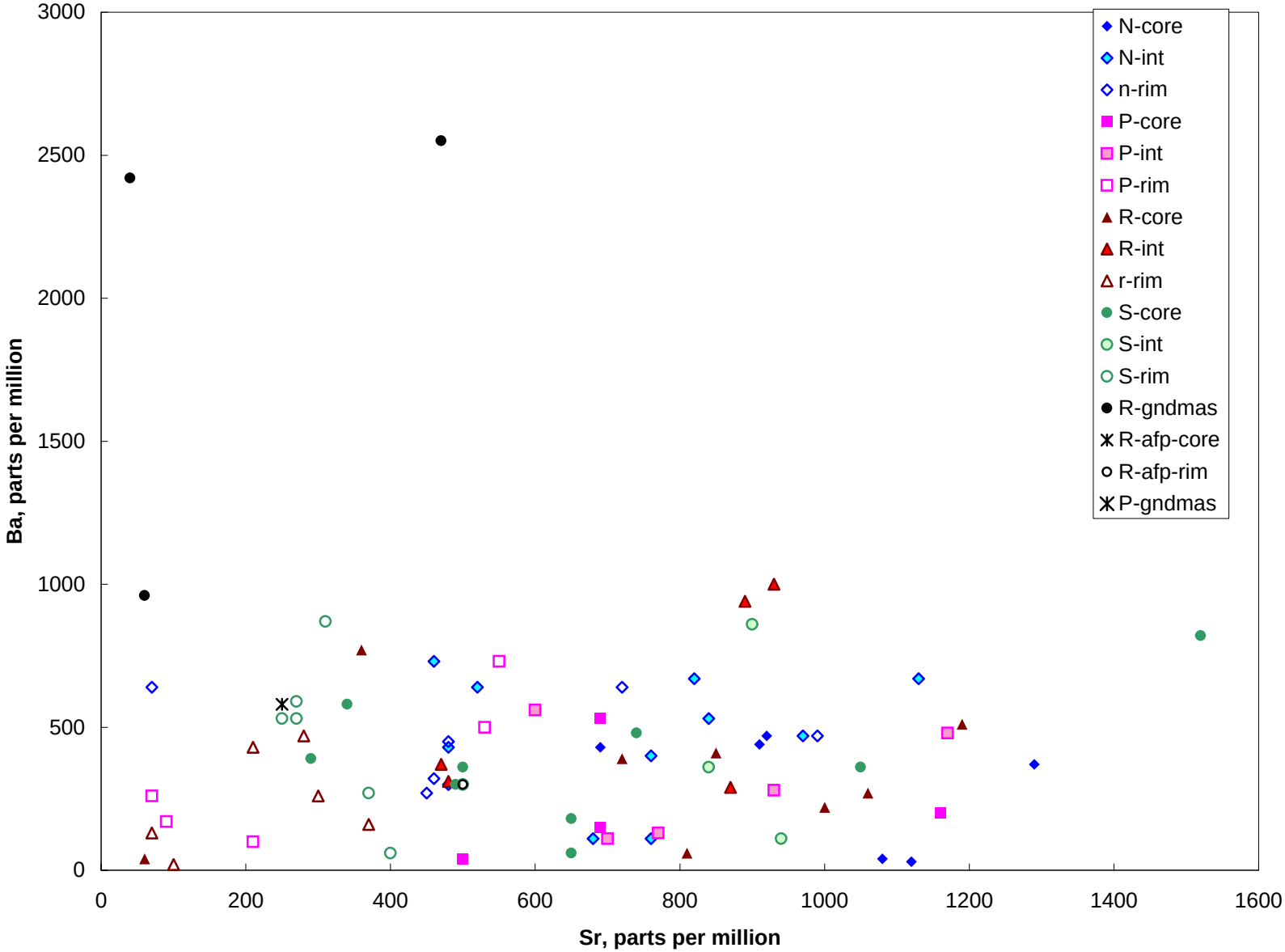
Compositions of plagioclase in plutons of the Tatoosh Intrusive Suite, Washington

Figure DR8



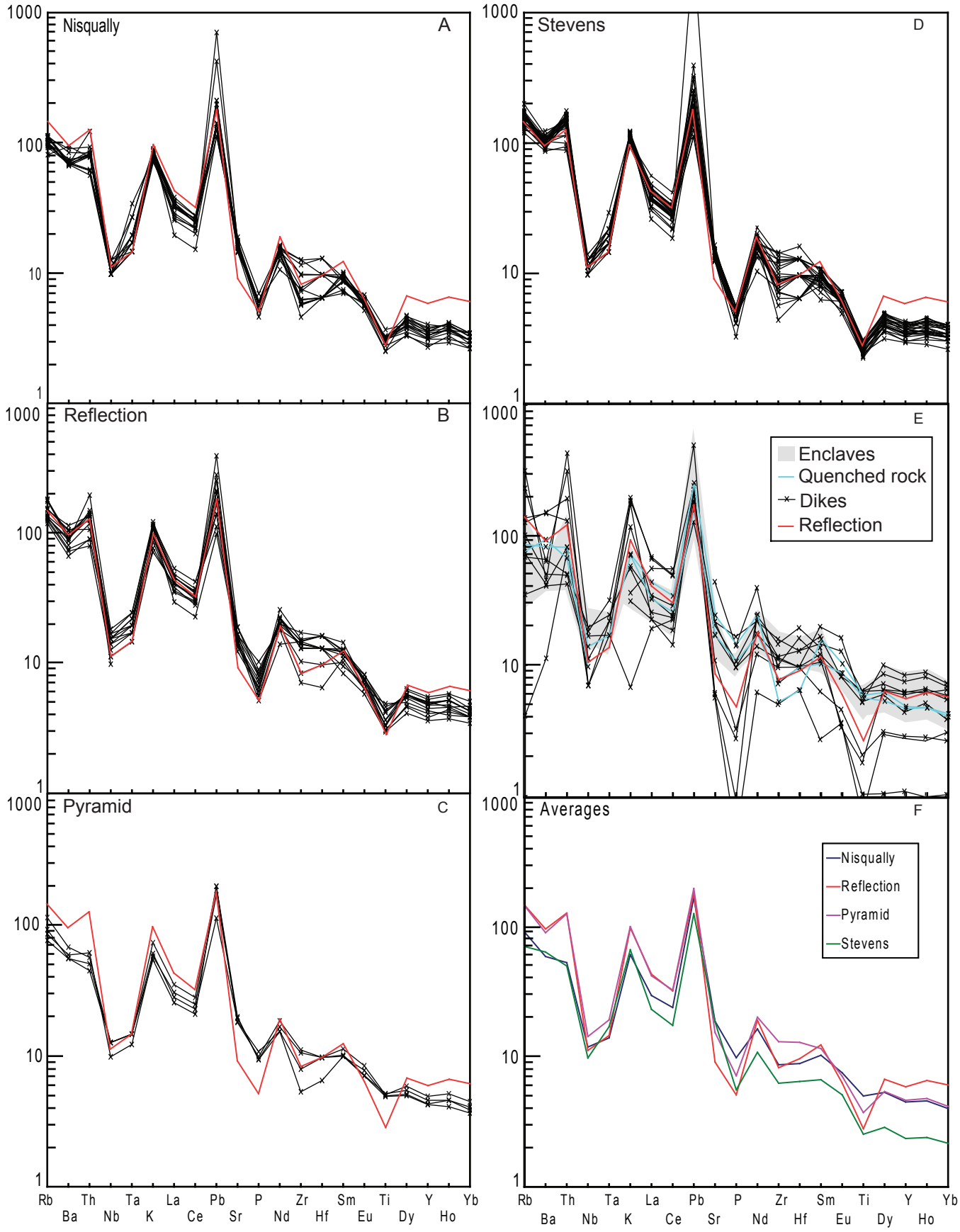
Relative trace element contents of plagiolclase in plutons of the Tatoosh Intrusive Suite, Washington

Figure DR9


3000
2500
2000
1500
1000
500
0
Ba, parts per million
0
200
400
600
800
1000
1200
1400
1600
Sr, parts per million
N-core
N-int
n-rim
P-core
P-int
P-rim
R-core
R-int
r-rim
S-core
S-int
S-rim
R-gndmas
R-afp-core
R-afp-rim
P-gndmas

Primitive mantle-normalized extended trace element patterns for plutons of the TTIS have high large-ion lithophile element (LILE) abundances and low high-field-strength element (HFSE) abundances common among moderately differentiated arc magmas. Extended trace element diagrams suggest systematic but relatively limited geochemical variation within TTIS plutons; within each pluton, patterns are essentially parallel, clustered (Data Repository file, ExtndTEplot.PDF), and represent consistent operation of reservoir-wide petrogenetic processes. These characteristics are consistent with primary control on trace element abundance variations resulting from variable melt extraction, as implied by REE abundance variations. Large negative Nb-Ta anomalies, diagnostic of subduction-related magmatism (Wood et al., 1979; Gill, 1981; Pearce et al., 1984), are consistent with magma genesis within the ancestral Cascades arc.

Figure DR10



du Bray et al Figure 12

Figure DR11

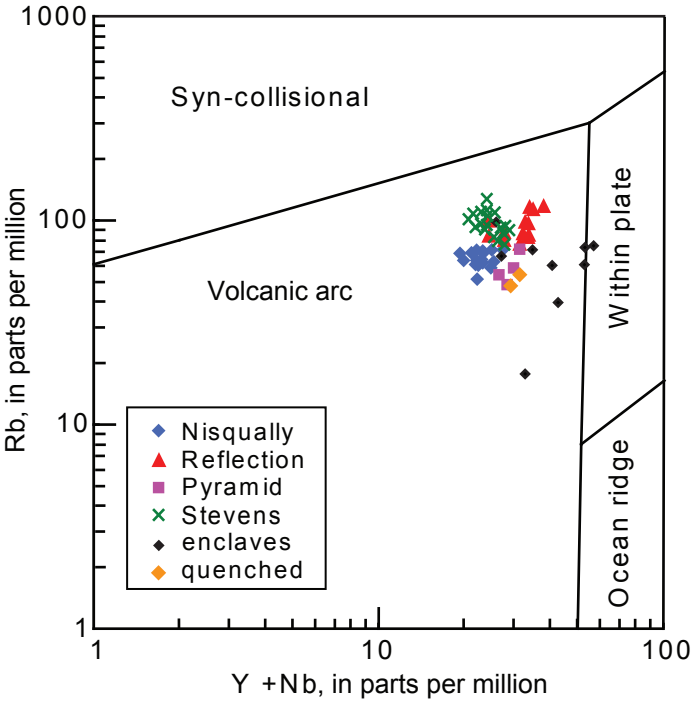

1000
100
10
1
Rb, in parts per million
Syn-collisional
Volcanic arc
Within plate
Ocean ridge
Nisqually
Reflection
Pyramid
Stevens
enclaves
quenched
1
10
100
Y +Nb, in parts per million

Figure DR12

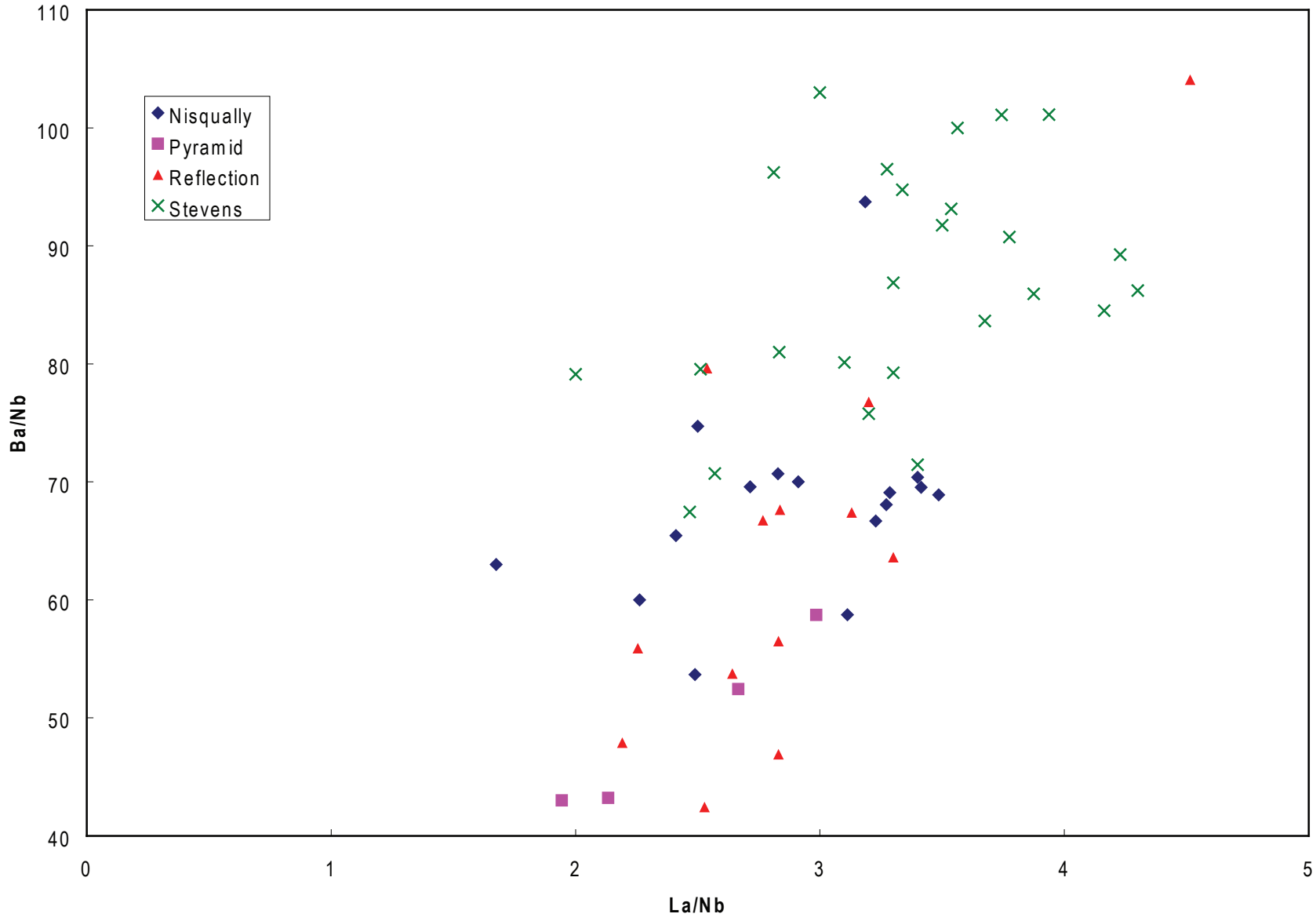

Nisqually
Pyramid
Reflection
Stevens
Ba/Nb
La/Nb
110
100
90
80
70
60
50
40
0
1
2
3
4
5

Figure DR13

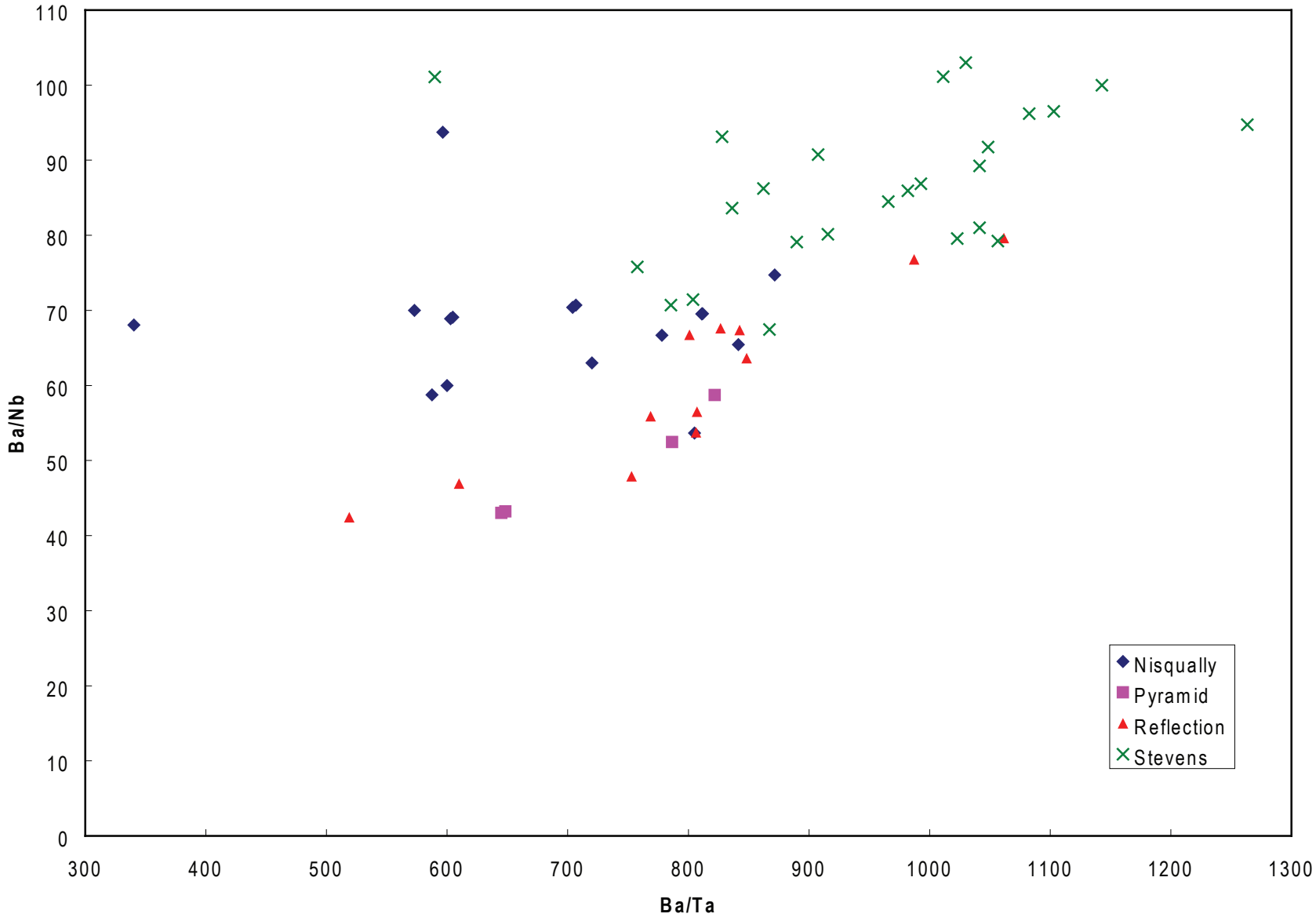

110
100
90
80
70
60
50
40
30
20
10
0
Ba/Nb
300
400
500
600
700
800
900
1000
1100
1200
1300
Ba/Ta
Nisqually
Pyramid
Reflection
Stevens

Figure DR14

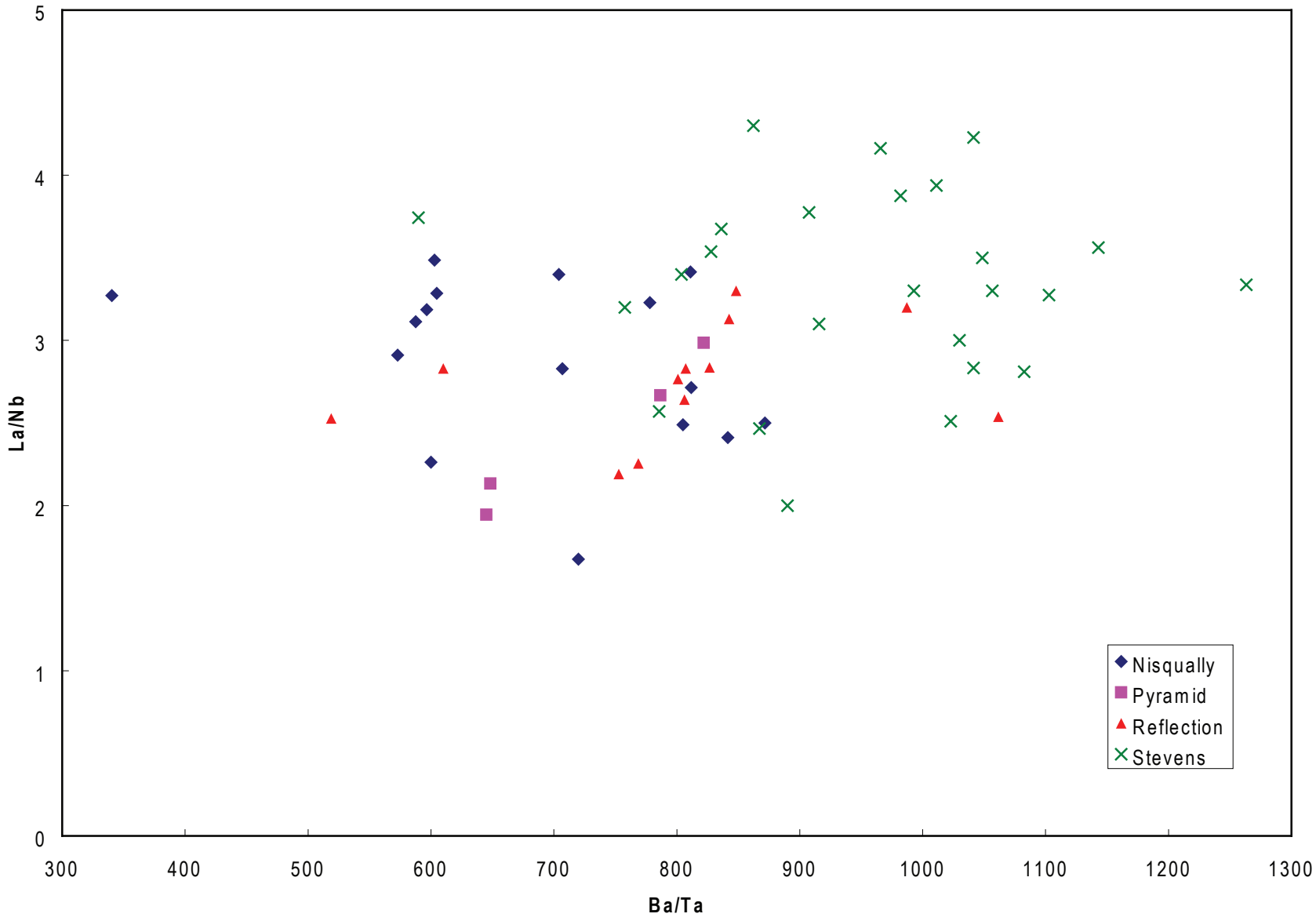

5
4
3
2
1
0
La/Nb
300
400
500
600
700
800
900
1000
1100
1200
1300
Ba/Ta
Nisqually
Pyramid
Reflection
Stevens

Figure DR15

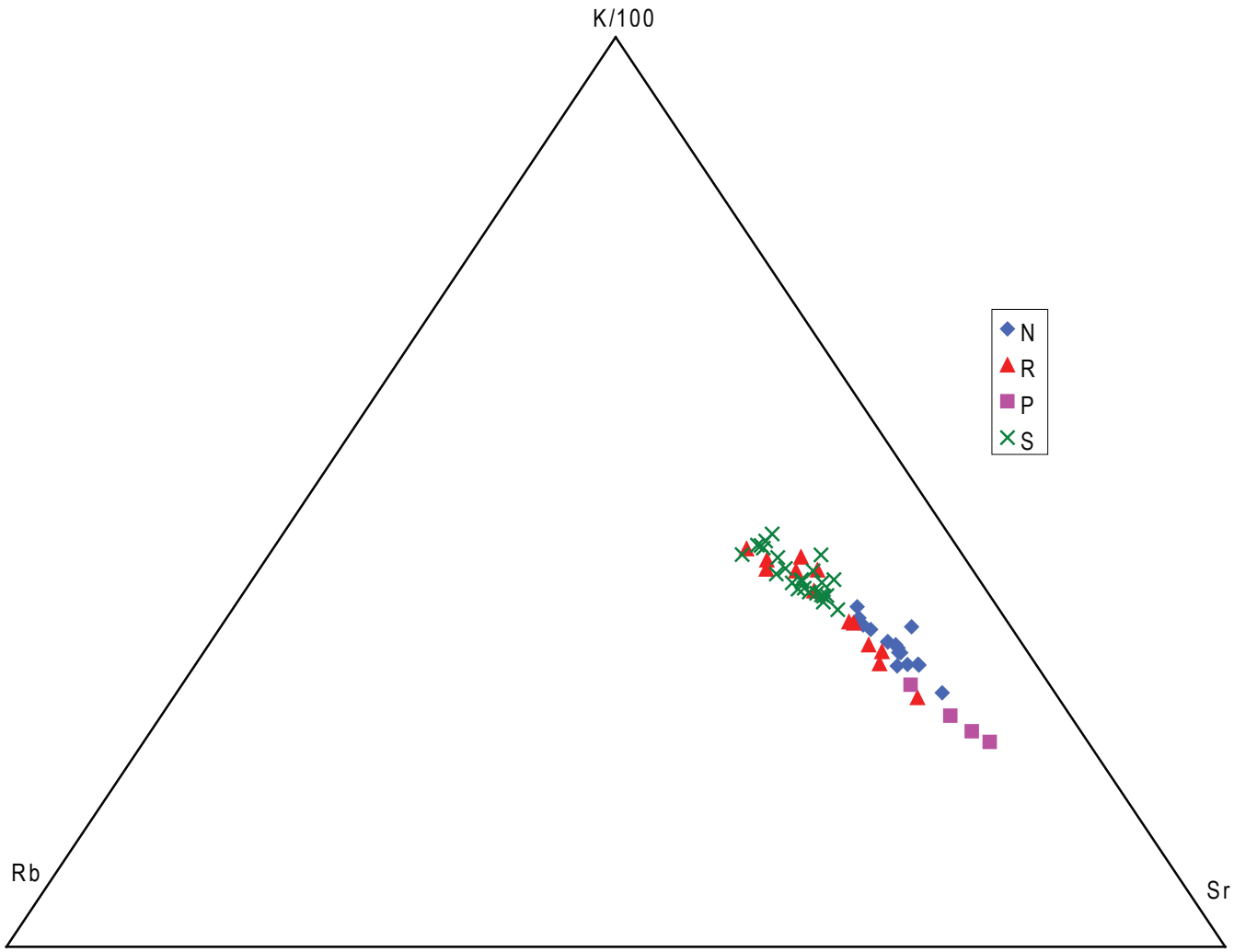


Figure DR16

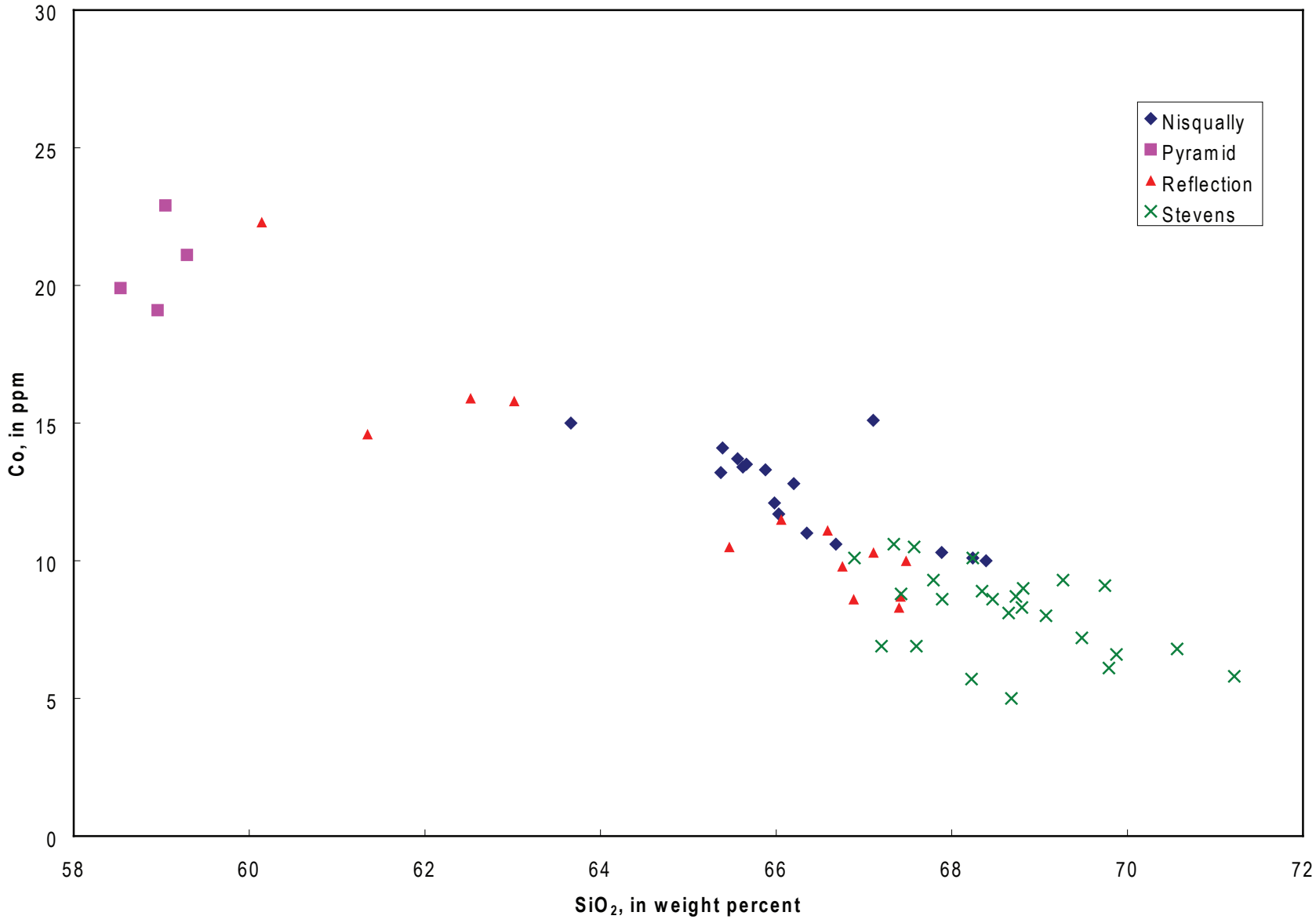

Nisqually
Pyramid
Reflection
Stevens
Co, in ppm
SiO2, in weight percent
0
5
10
15
20
25
30
58
60
62
64
66
68
70
72

Figure DR17

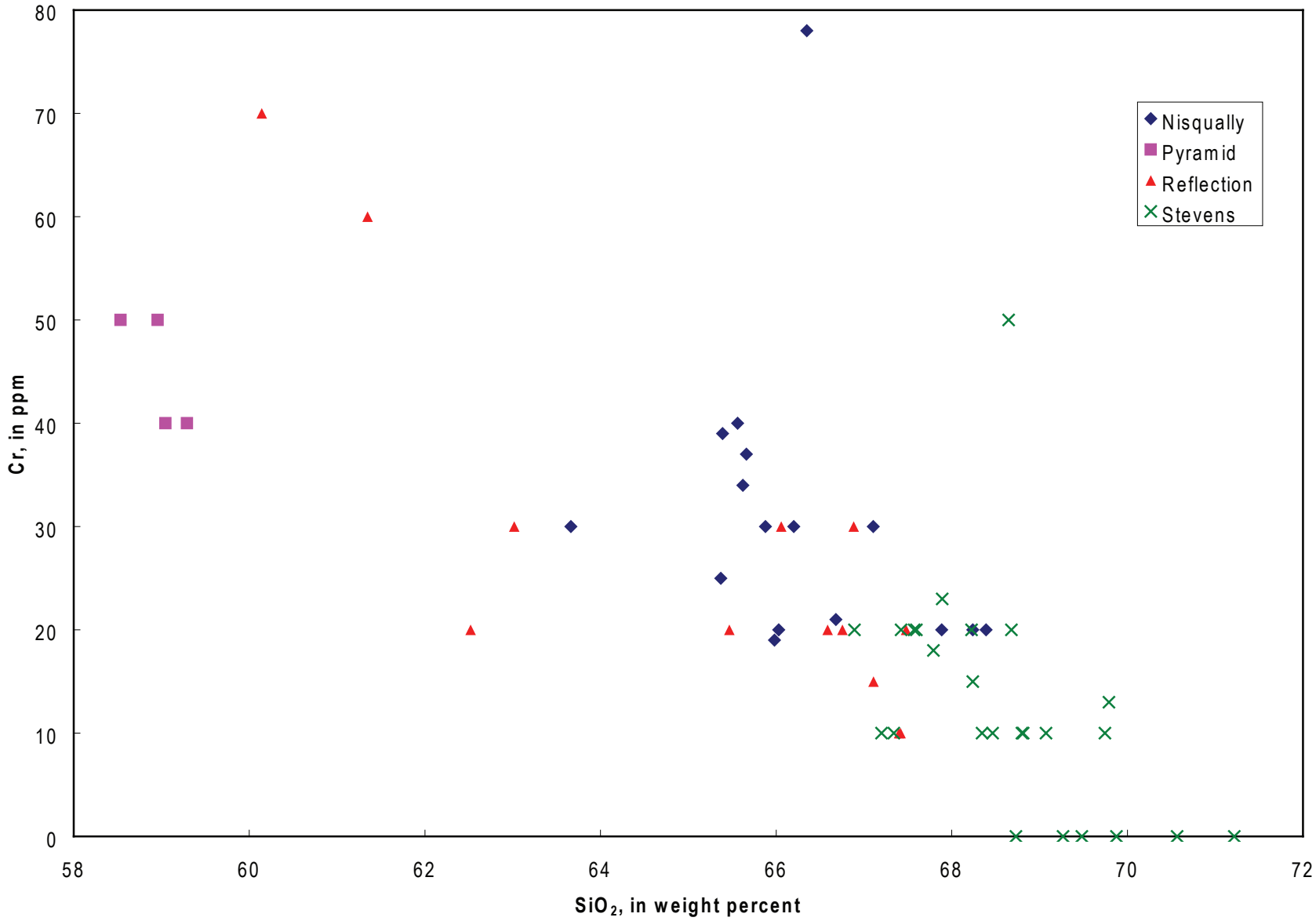

Nisqually
Pyramid
Reflection
Stevens
Cr, in ppm
SiO2, in weight percent
0
10
20
30
40
50
60
70
80
58
60
62
64
66
68
70
72

Figure DR18

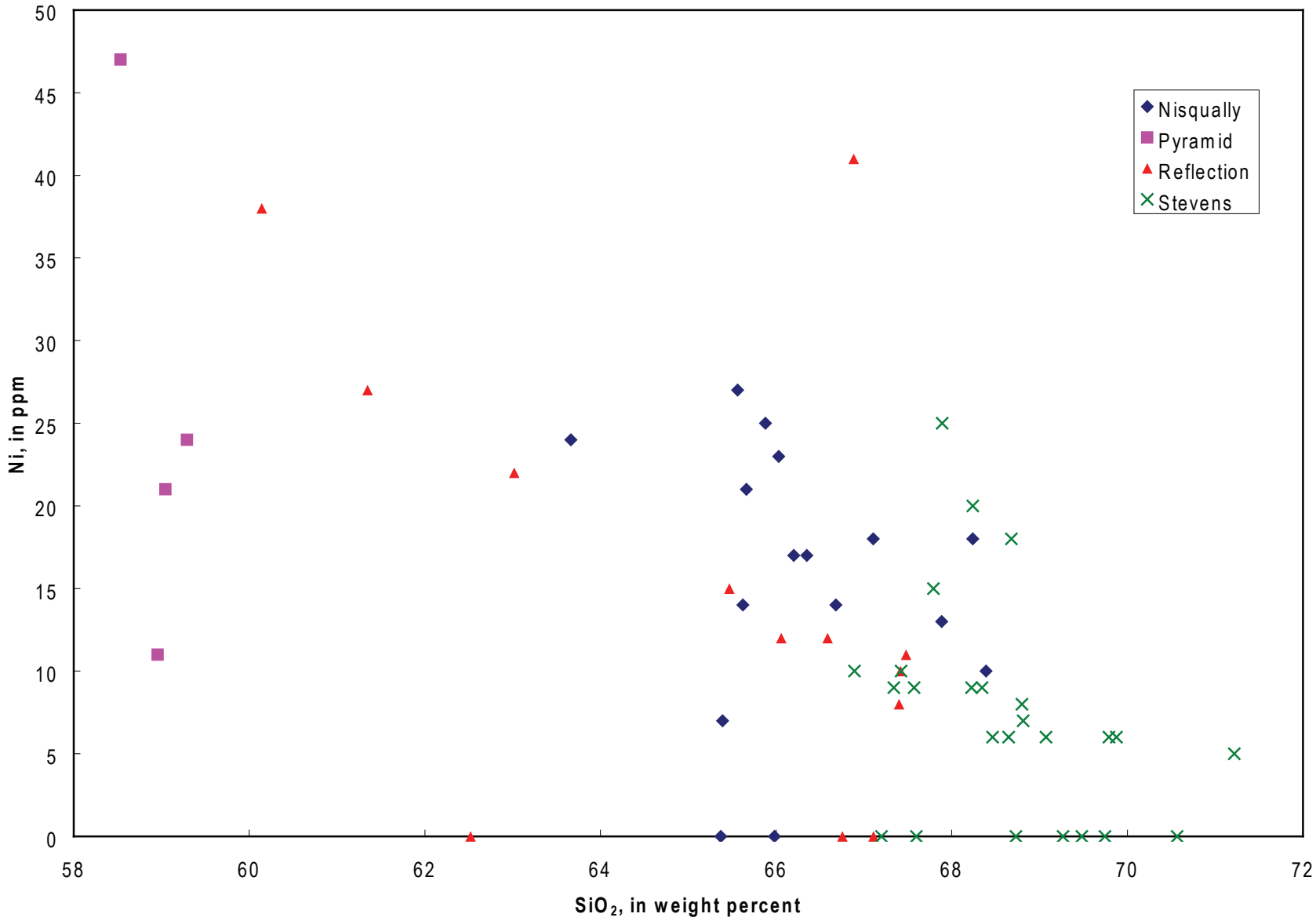

Nisqually
Pyramid
Reflection
Stevens
Ni, in ppm
SiO2, in weight percent
0
5
10
15
20
25
30
35
40
45
50
58
60
62
64
66
68
70
72

Figure DR19

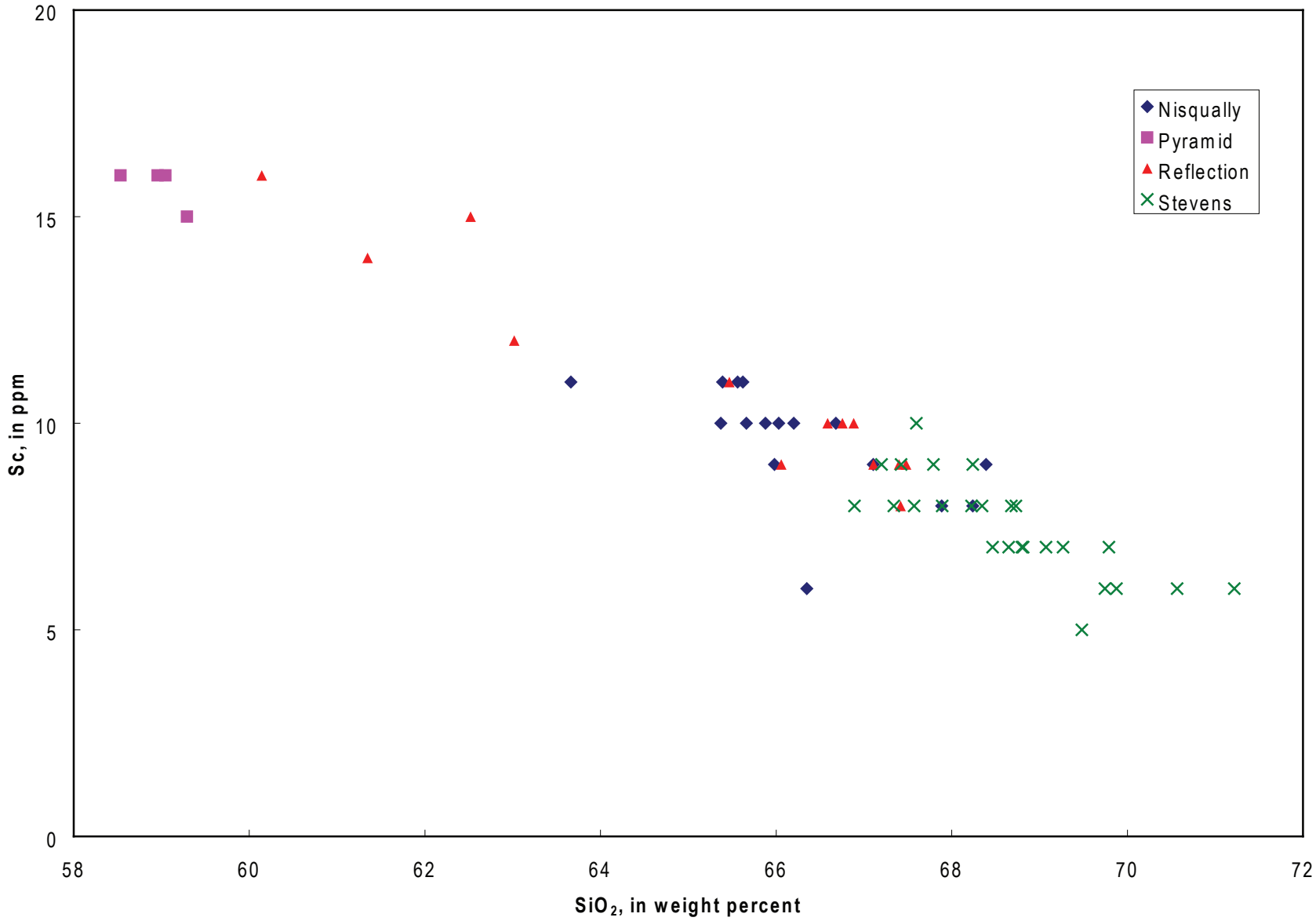

Nisqually
Pyramid
Reflection
Stevens
Sc, in ppm
SiO2, in weight percent
0
5
10
15
20
58
60
62
64
66
68
70
72

Figure DR20

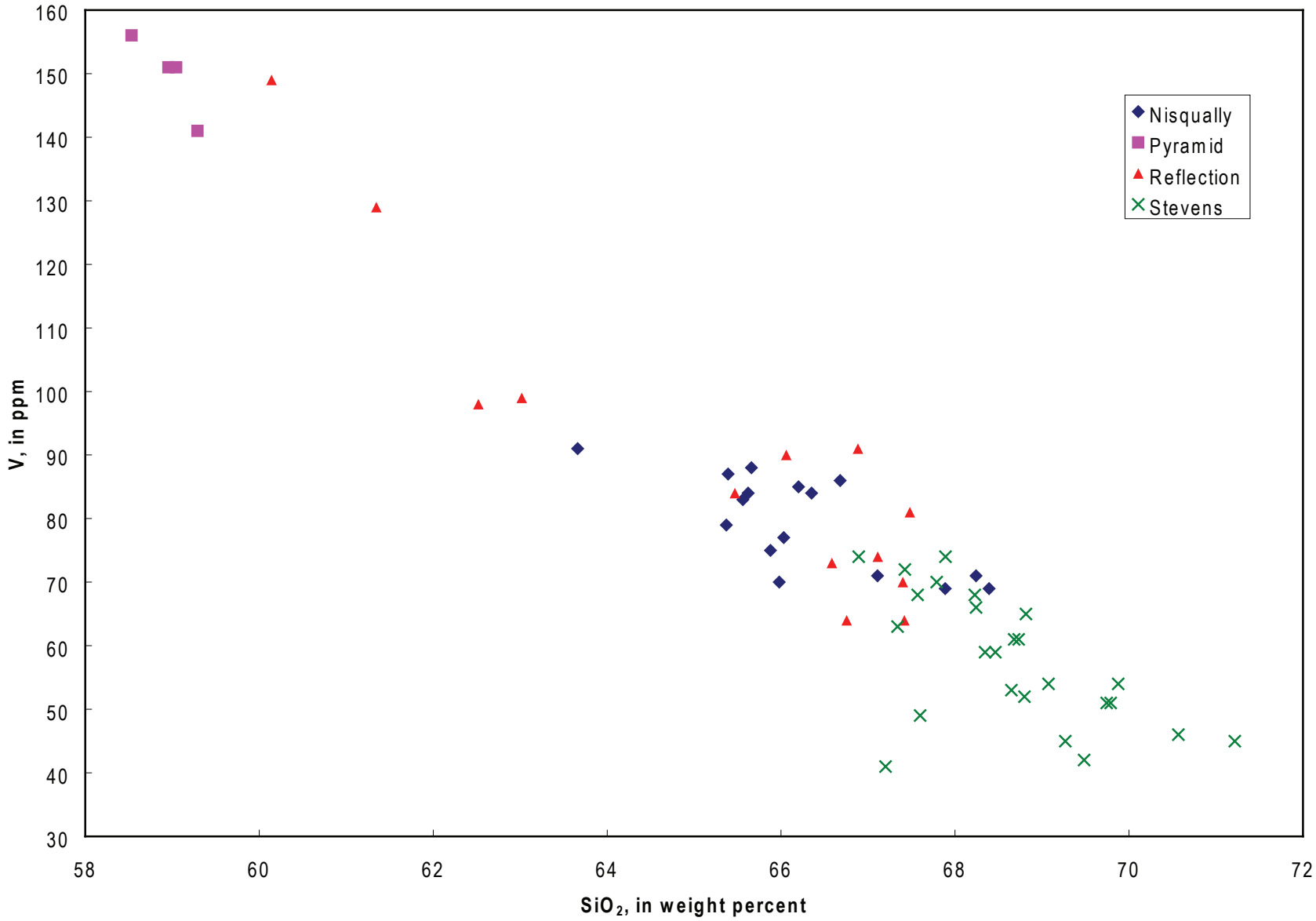

160
150
140
130
120
110
100
90
80
70
60
50
40
30
V, in ppm
58
60
62
64
66
68
70
72
SiO2, in weight percent
Nisqually
Pyramid
Reflection
Stevens

Figure DR21

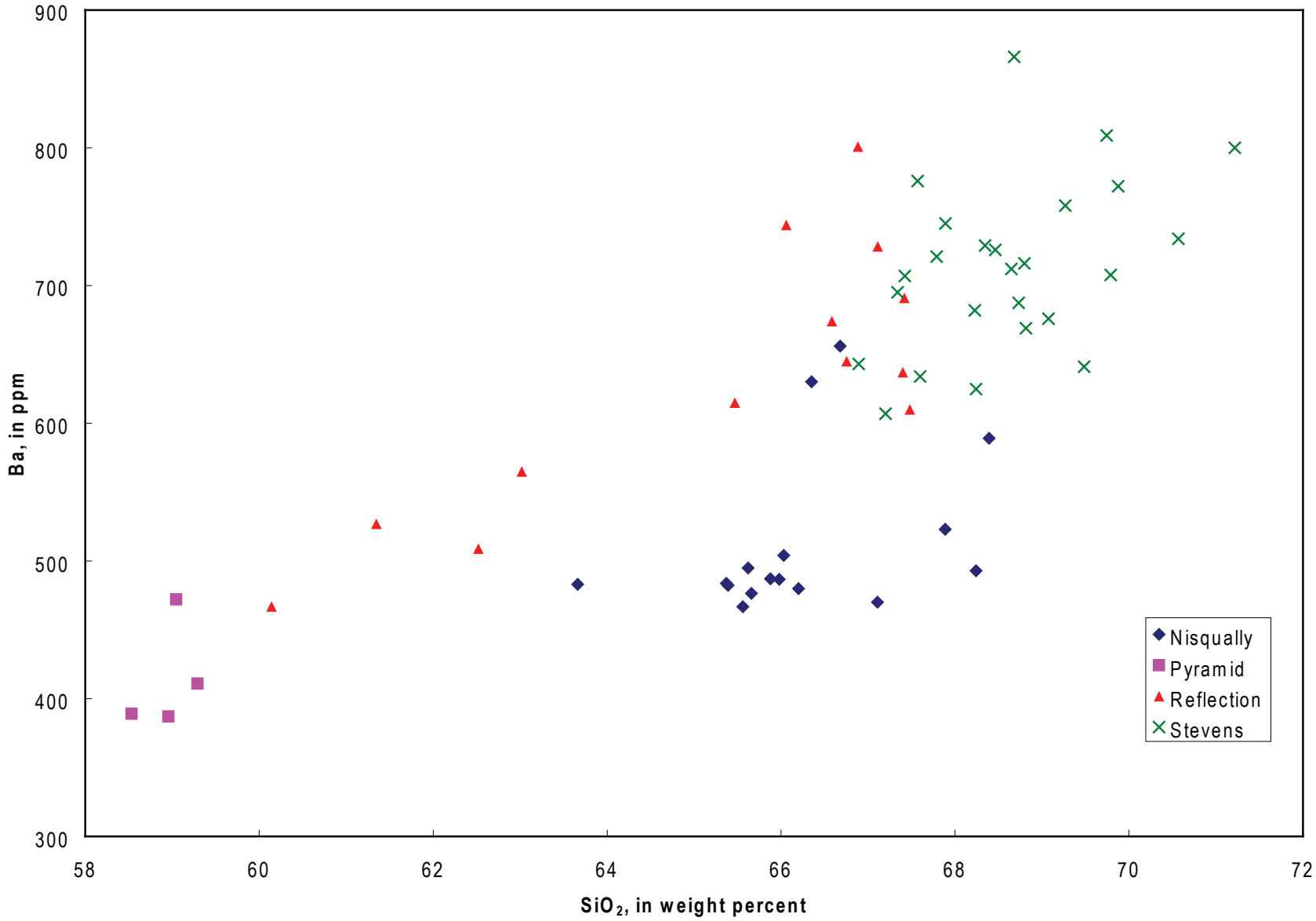

900
800
700
600
500
400
300
Ba, in ppm
58
60
62
64
66
68
70
72
SiO2, in weight percent
Nisqually
Pyramid
Reflection
Stevens

Figure DR22

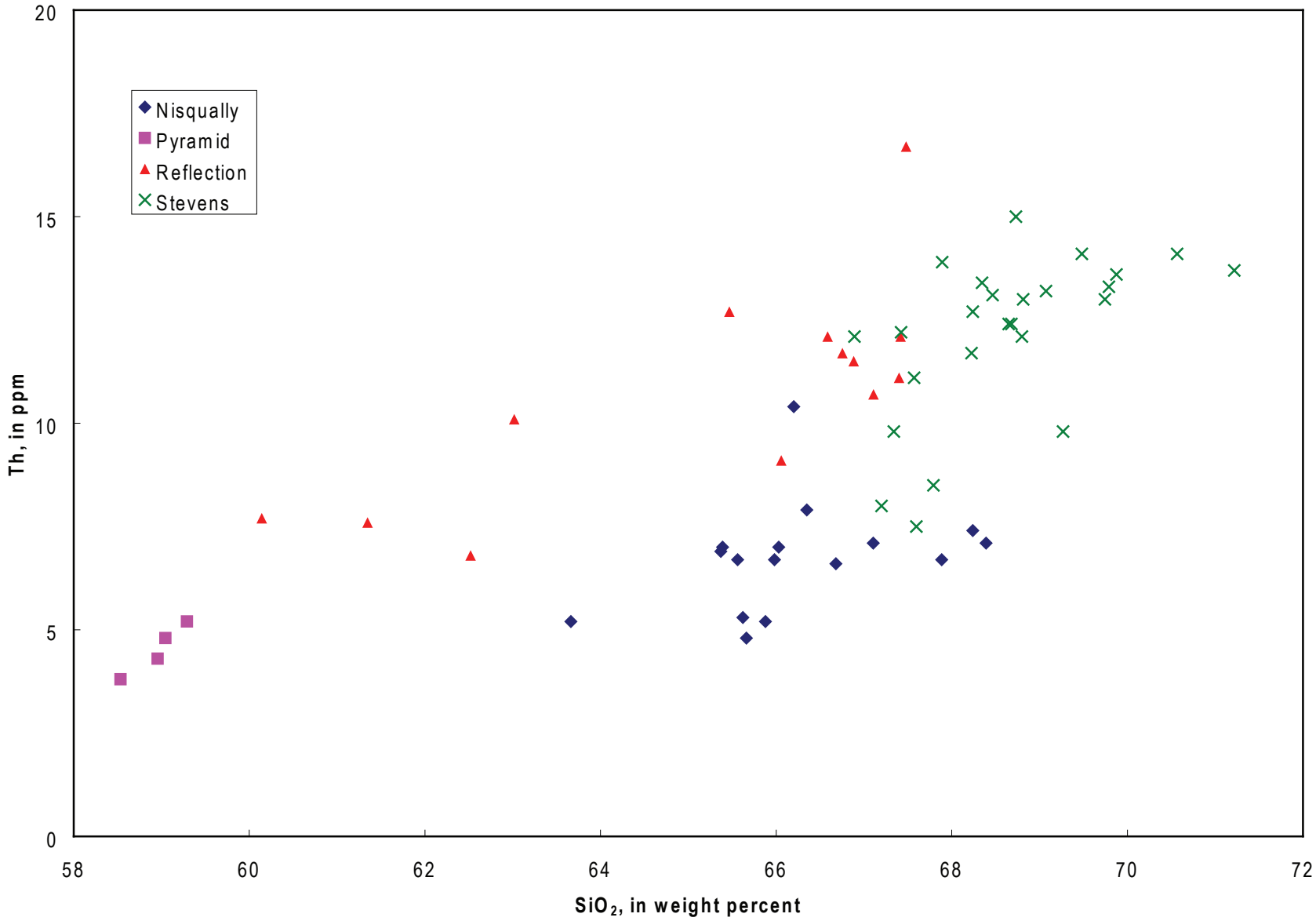
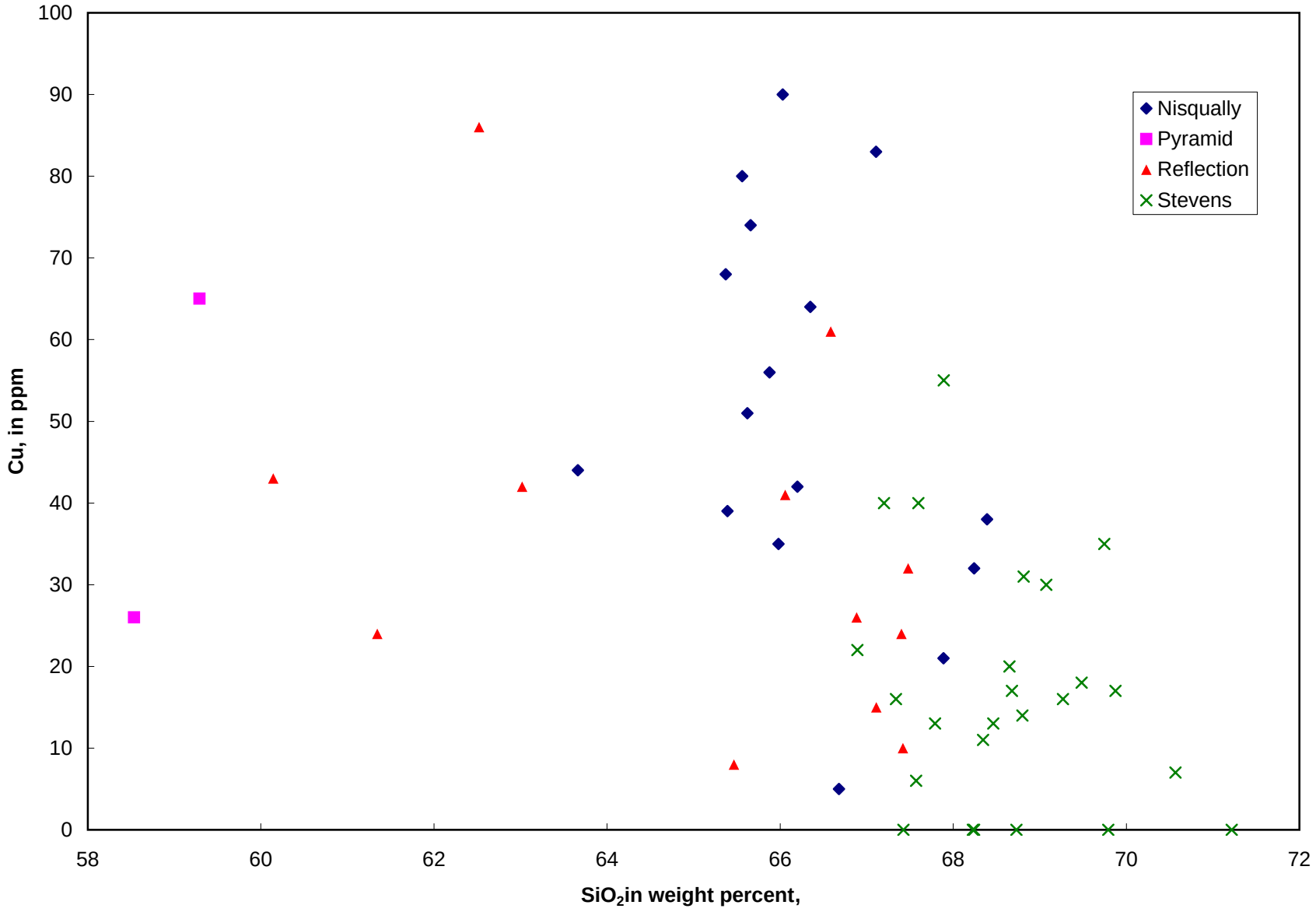

Nisqually
Pyramid
Reflection
Stevens
Th, in ppm
SiO2, in weight percent
0
5
10
15
20
58
60
62
64
66
68
70
72

Figure DR23


Nisqually
Pyramid
Reflection
Stevens
Cu, in ppm
SiO2in weight percent,
0
10
20
30
40
50
60
70
80
90
100
58
60
62
64
66
68
70
72

One sample of the Stevens pluton has distinctly low LREE abundances and a small positive Eu anomaly and another has low HREE abundances. These samples are from near wall- and roof-rock contacts, respectively, and contain unusual amounts of small mafic enclaves as well as small xenolithic inclusions that may be partly responsible for their slightly unusual REE abundances. Relative to other Nisqually rocks, one sample has somewhat depleted LREE abundances, possibly due to deuteric alteration responsible for growth of secondary titanite and epidote. A single sample of the Reflection phase also has somewhat low LREE abundances that may reflect localized allanite fractionation.

Table DR5

STATISTICAL COMPARISON OF REE ABUNDANCES IN TATOOSH INTRUSIVE SUITE PLUTONS, MT. RAINIER NATIONAL PARK, WA.

Pluton	N=	Mean total REE, ppm	Standard deviation total REE	Mean Eu/Eu*	Standard deviation Eu/Eu*	Mean La_N/Yb_N	Standard deviation La_N/Yb_N
Nisqually	16	106	12	0.79	0.09	9.52	1.61
Pyramid	4	112	12	0.83	0.03	6.94	0.50
Reflection	13	144	20	0.71	0.08	9.49	1.11
Stevens	25	126	18	0.80	0.09	10.74	1.61

Figure DR24

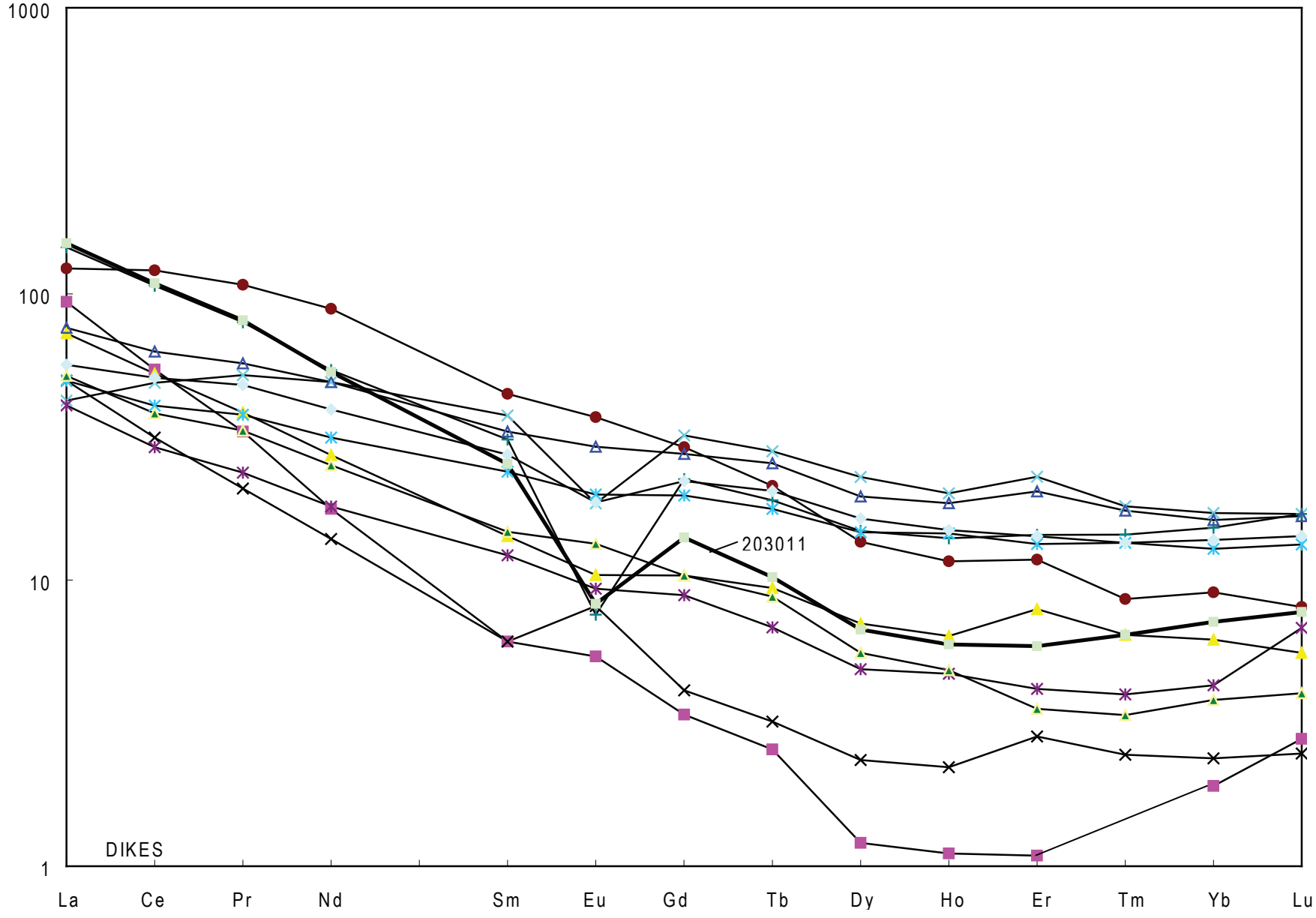


Figure DR25

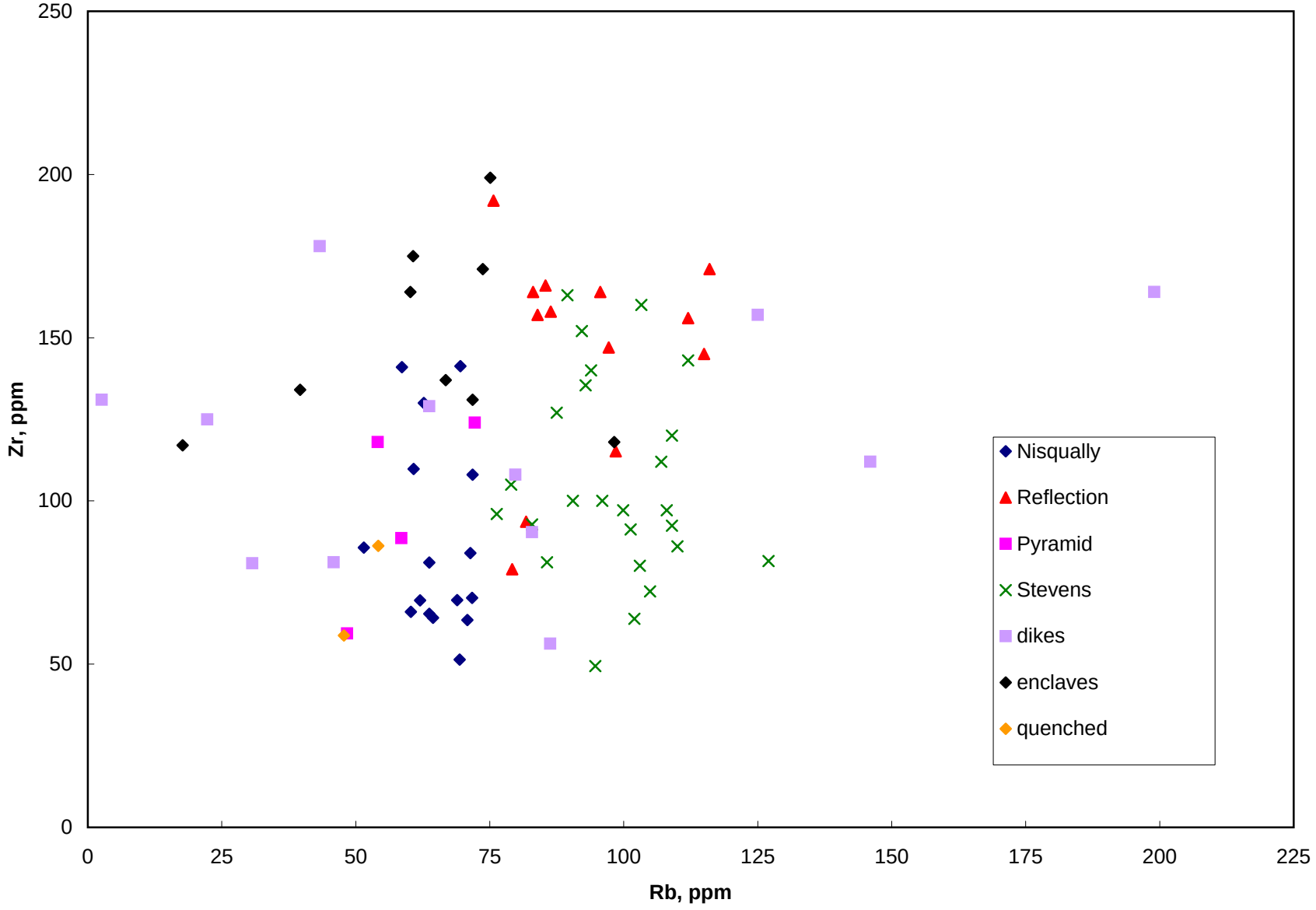

250
200
150
100
50
0
Zr, ppm
0
25
50
75
100
125
150
175
200
225
Rb, ppm
Nisqually
Reflection
Pyramid
Stevens
dikes
enclaves
quenched

Figure DR26

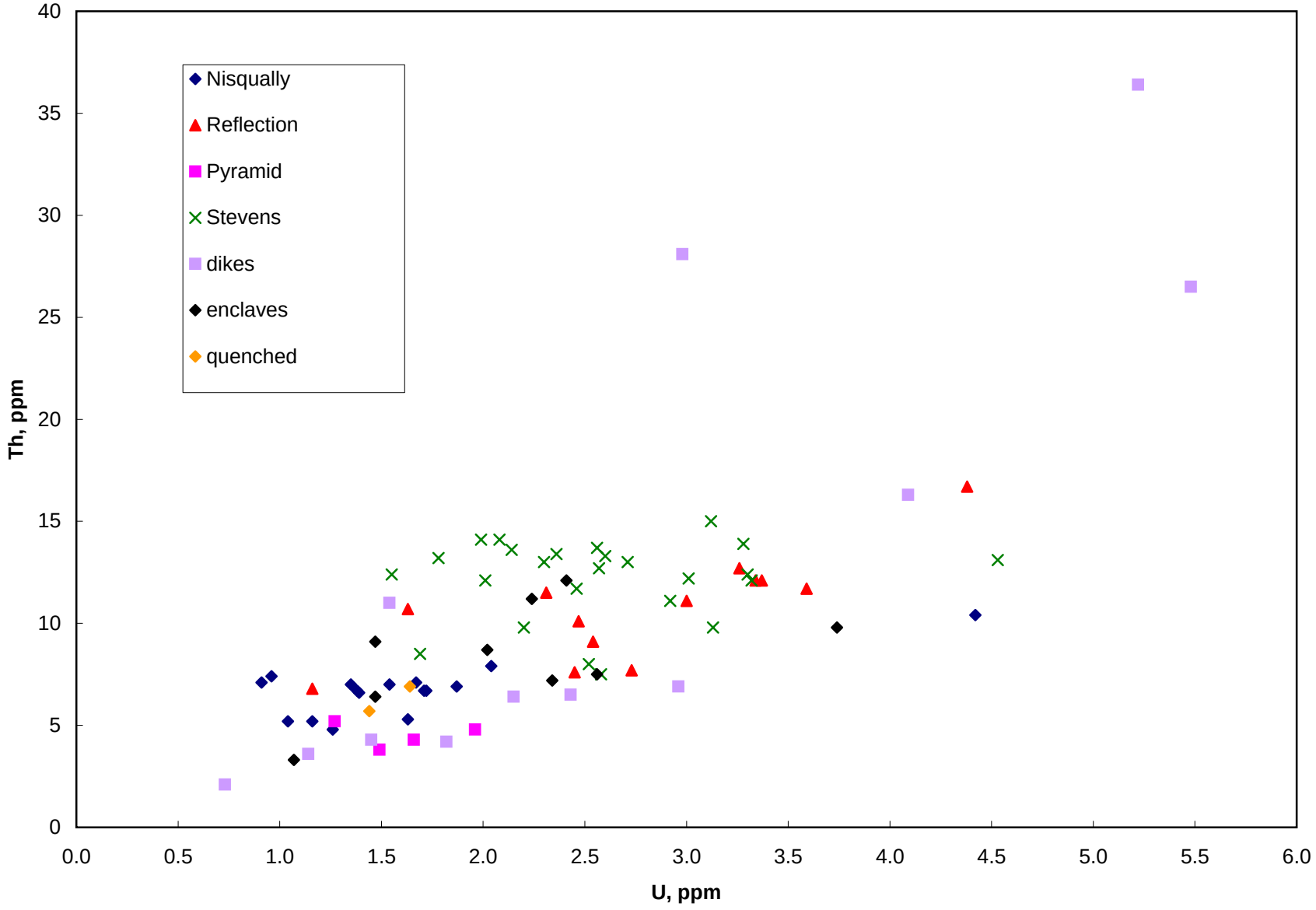

Nisqually
Reflection
Pyramid
Stevens
dikes
enclaves
quenched
Th, ppm
U, ppm
0
5
10
15
20
25
30
35
40
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0

Figure DR27

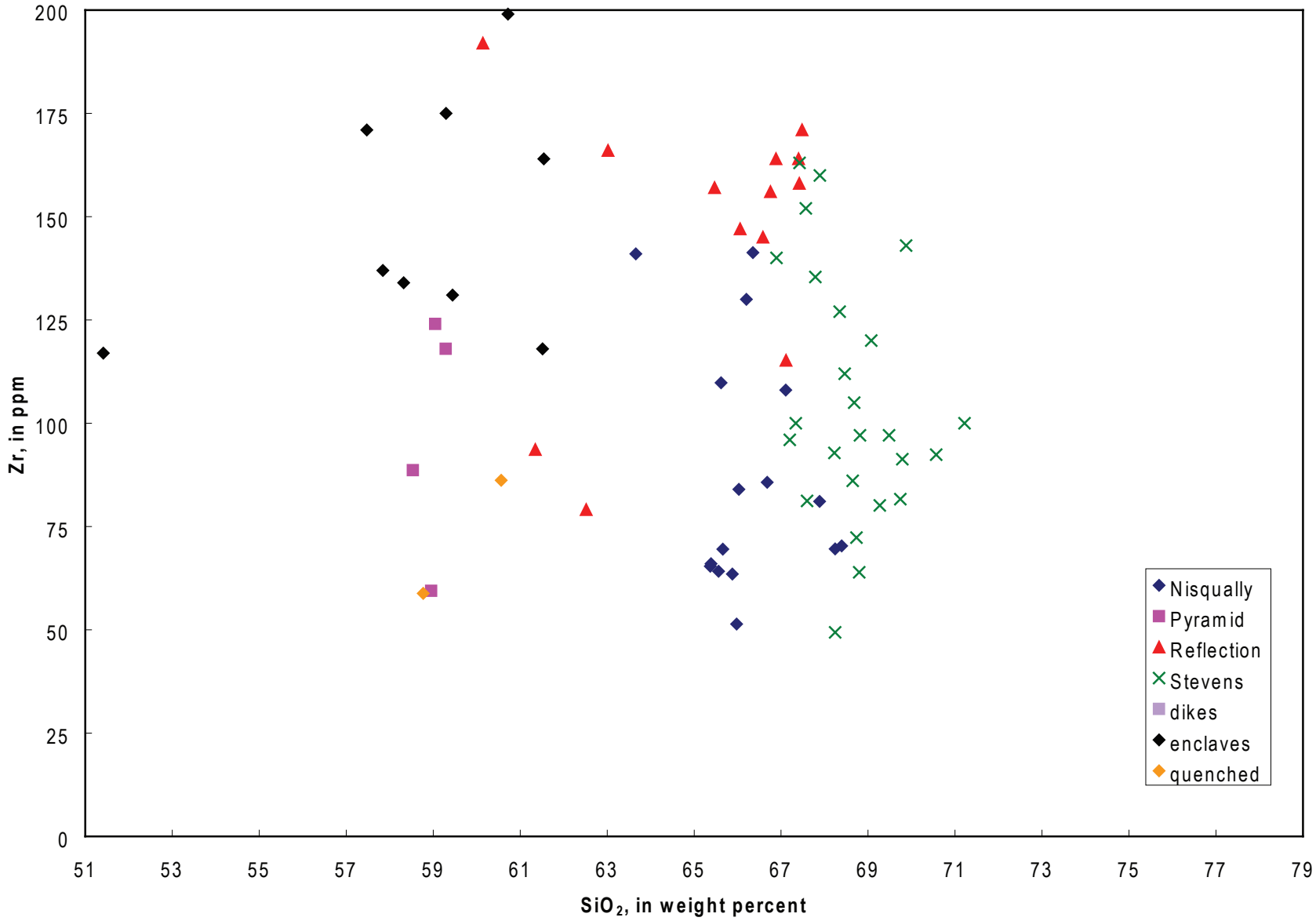

200
175
150
125
100
75
50
25
0
Zr, in ppm
51
53
55
57
59
61
63
65
67
69
71
73
75
77
79
SiO2, in weight percent
Nisqually
Pyramid
Reflection
Stevens
dikes
enclaves
quenched

Figure DR28

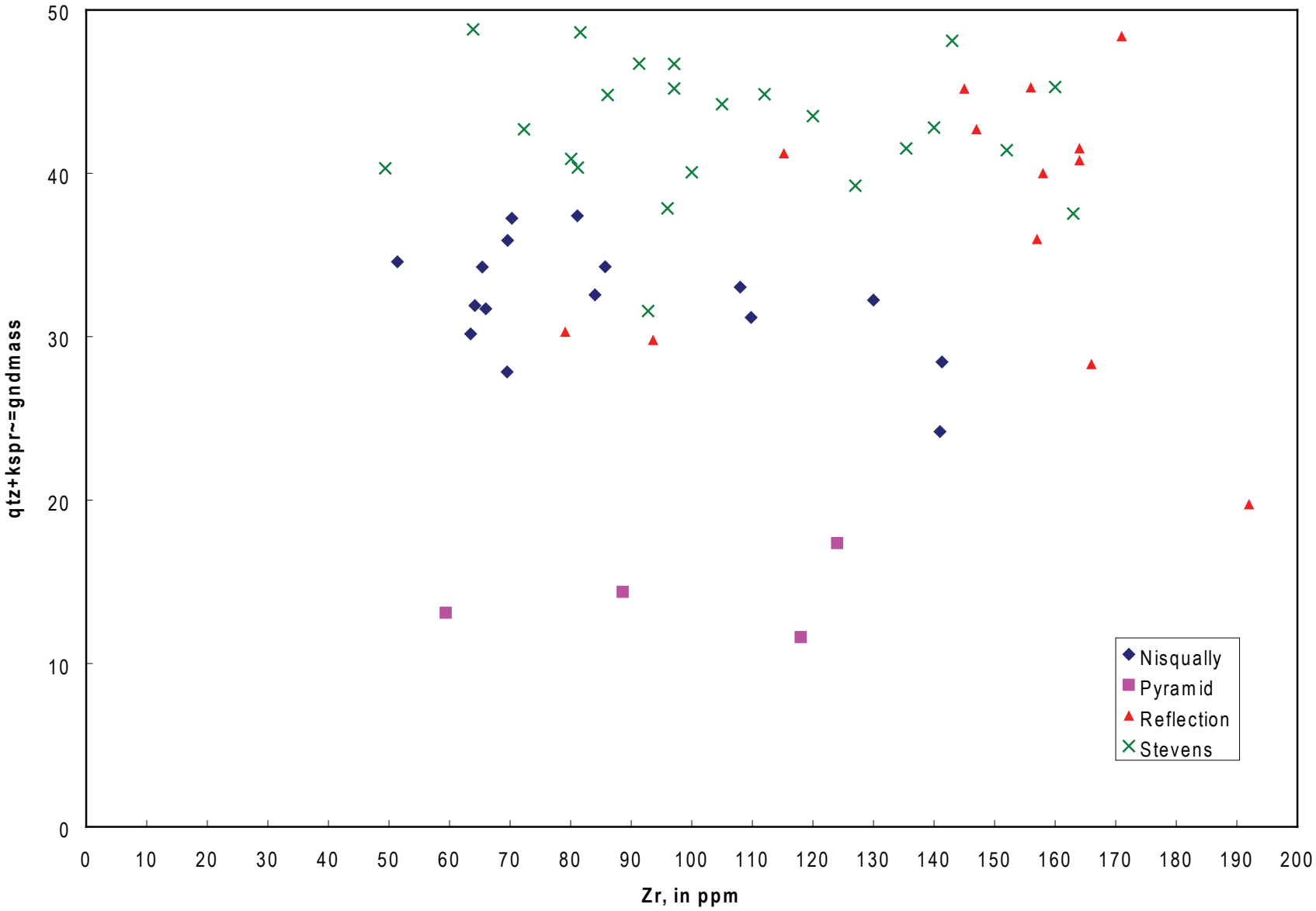

qtz+kspr~=gndmass
Zr, in ppm
0
10
20
30
40
50
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
Nisqually
Pyramid
Reflection
Stevens

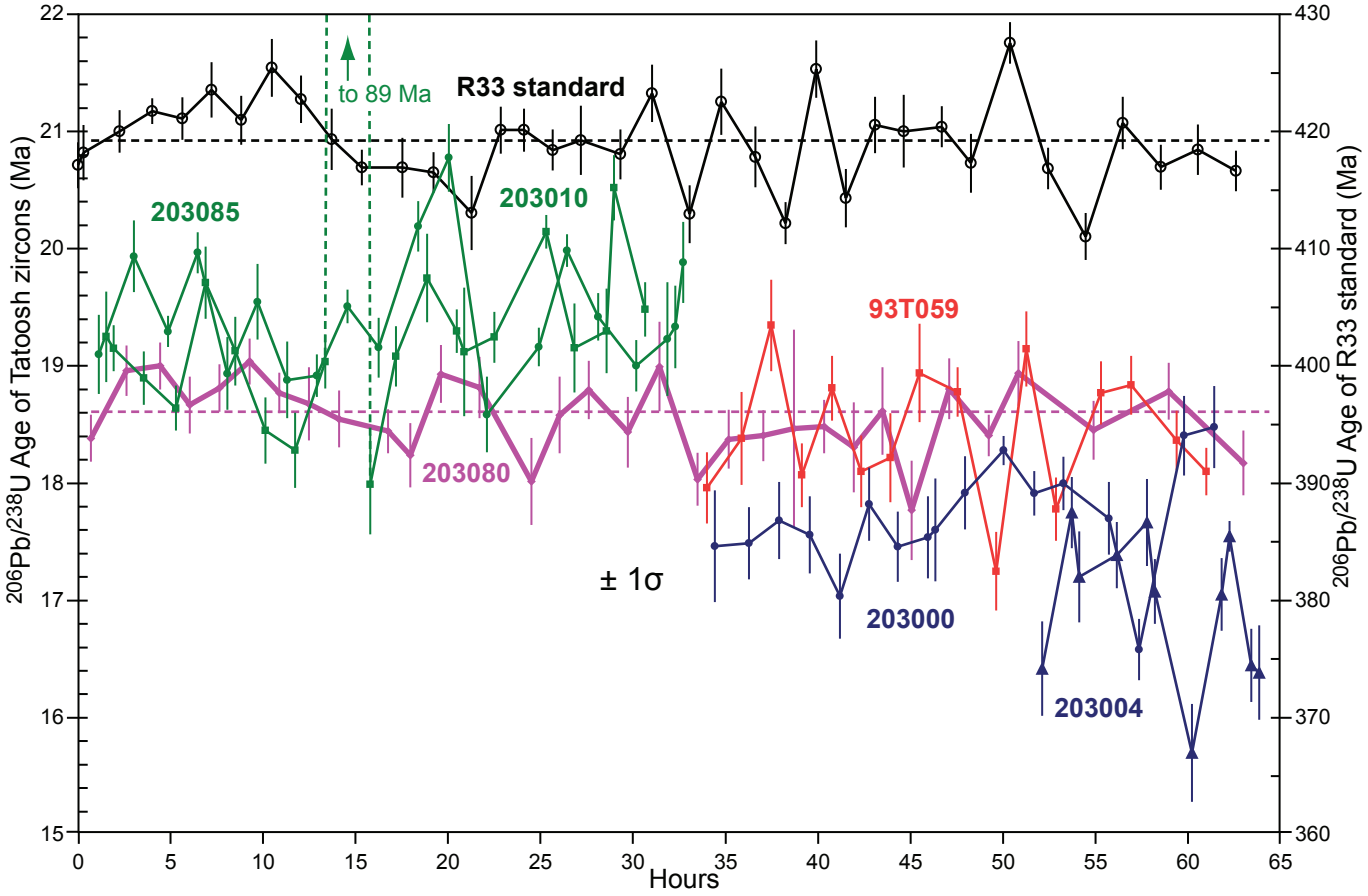
Table DR6

Zircon UPb. SHRIMP-RG geochronology data and calculated 206Pb/238U ages for zircon from the Tatoosh pluton.

Sample	Spot Name	Date/Time	Hours at start	position	WR ppm U	1σ err %	WR ppm Th	1σ err %	WR Th/U	1σ err	zircon ppm U	zircon ppm Th	zircon 232Th /238U	204Pb/ 206Pb	1σ err %	207Pb/ 206Pb	1σ err %	%206Pb common	207corr 206Pbr /238U	1σ err	207corr 206Pb /238U Age	1σ err	U–Th corr 206Pbr /238U	1σ err	U–Th corr 206Pb /238U Age	1σ err
203000	000-101.1	28 Mar, 2008 02:59	34.43	c	2.04	8	7.9	9	3.87	0.47	69	37	0.55	0.0001	41	.056	12.9	1.16	0.00270	0.00007	17.37	0.48	0.00271	0.00007	17.46	0.48
203000	000-102.1	28 Mar, 2008 04:50	36.28	rc	2.04	8	7.9	9	3.87	0.47	174	132	0.78	–	–	.058	8.2	1.43	0.00270	0.00005	17.40	0.31	0.00272	0.00005	17.49	0.31
203000	000-103.1	28 Mar, 2008 06:27	37.91	c	2.04	8	7.9	9	3.87	0.47	152	124	0.84	–	–	.051	9.2	0.55	0.00273	0.00005	17.60	0.33	0.00275	0.00005	17.68	0.33
203000	000-104.1	28 Mar, 2008 08:06	39.55	rc	2.04	8	7.9	9	3.87	0.47	163	139	0.88	–	–	.051	10.9	0.60	0.00271	0.00005	17.48	0.33	0.00273	0.00005	17.56	0.33
203000	000-105.1	28 Mar, 2008 09:44	41.18	rc	2.04	8	7.9	9	3.87	0.47	121	95	0.81	–	–	.059	9.7	1.62	0.00263	0.00006	16.95	0.36	0.00265	0.00006	17.04	0.36
203000	000-106.1	28 Mar, 2008 11:19	42.77	rc	2.04	8	7.9	9	3.87	0.47	174	157	0.94	–	–	.048	8.8	0.24	0.00276	0.00005	17.74	0.31	0.00277	0.00005	17.82	0.31
203000	000-107.1	28 Mar, 2008 12:51	44.31	c	2.04	8	7.9	9	3.87	0.47	186	138	0.77	0.0008	41	.052	9.2	0.73	0.00270	0.00005	17.37	0.30	0.00271	0.00005	17.46	0.30
203000	000-108.1	28 Mar, 2008 14:30	45.95	rc	2.04	8	7.9	9	3.87	0.47	133	103	0.80	–	–	.049	11.8	0.27	0.00271	0.00005	17.45	0.35	0.00272	0.00005	17.54	0.35
203000	000-108.2	28 Mar, 2008 14:54	46.35	r	2.04	8	7.9	9	3.87	0.47	85	46	0.56	–	–	.057	11.7	1.38	0.00272	0.00007	17.51	0.44	0.00273	0.00007	17.60	0.44
203000	000-109.1	28 Mar, 2008 16:30	47.96	i	2.04	8	7.9	9	3.87	0.47	148	120	0.84	0.0014	41	.043	9.3	–	0.00277	0.00005	17.83	0.31	0.00278	0.00005	17.92	0.31
203000	000-110.1	28 Mar, 2008 18:35	50.04	rc	2.04	8	7.9	9	3.87	0.47	2230	1970	0.91	–	–	.046	2.3	–	0.00283	0.00002	18.20	0.13	0.00284	0.00002	18.28	0.13
203000	000-111.1	28 Mar, 2008 20:14	51.68	rc	2.04	8	7.9	9	3.87	0.47	552	852	1.59	–	–	.048	4.9	0.20	0.00277	0.00003	17.85	0.19	0.00278	0.00003	17.91	0.19
203000	000-112.1	28 Mar, 2008 21:49	53.28	i	2.04	8	7.9	9	3.87	0.47	314	383	1.26	–	–	.045	9.1	–	0.00278	0.00004	17.92	0.23	0.00280	0.00004	18.00	0.23
203000	000-113.1	29 Mar, 2008 00:17	55.73	rc	2.04	8	7.9	9	3.87	0.47	130	105	0.83	0.0020	52	.051	8.6	0.55	0.00274	0.00005	17.61	0.31	0.00275	0.00005	17.70	0.31
203000	000-114.1	29 Mar, 2008 01:55	57.36	rc	2.04	8	7.9	9	3.87	0.47	202	182	0.93	0.0036	38	.052	7.3	0.66	0.00256	0.00004	16.50	0.26	0.00258	0.00004	16.58	0.26
203000	000-115.1	29 Mar, 2008 04:20	59.80	rc	2.04	8	7.9	9	3.87	0.47	111	78	0.72	–	–	.042	10.0	–	0.00285	0.00005	18.32	0.34	0.00286	0.00005	18.41	0.34
203000	000-116.1	29 Mar, 2008 05:57	61.41	i	2.04	8	7.9	9	3.87	0.47	105	79	0.77	–	–	.044	10.1	–	0.00286	0.00005	18.39	0.35	0.00287	0.00005	18.48	0.35
203004	004-101.1	28 Mar, 2008 20:40	52.11	i	1.54	8	7.0	9	4.55	0.55	82	65	0.81	0.0098	35	.074	9.9	3.49	0.00254	0.00006	16.33	0.40	0.00255	0.00006	16.42	0.40
203004	004-102.1	28 Mar, 2008 22:16	53.72	rc	1.54	8	7.0	9	4.55	0.55	146	143	1.01	0.0049	36	.051	8.4	0.65	0.00274	0.00005	17.66	0.30	0.00276	0.00005	17.75	0.30
203004	004-103.1	28 Mar, 2008 22:40	54.12	i	1.54	8	7.0	9	4.55	0.55	80	45	0.58	0.0024	41	.052	11.4	0.73	0.00266	0.00006	17.10	0.39	0.00267	0.00006	17.20	0.39
203004	004-104.1	29 Mar, 2008 00:41	56.15	rc	1.54	8	7.0	9	4.55	0.55	156	155	1.03	0.0017	42	.056	7.6	1.17	0.00269	0.00004	17.30	0.28	0.00270	0.00004	17.39	0.28
203004	004-105.1	29 Mar, 2008 02:20	57.79	i	1.54	8	7.0	9	4.55	0.55	91	73	0.83	–	–	.053	10.1	0.84	0.00273	0.00006	17.57	0.37	0.00274	0.00006	17.66	0.37
203004	004-106.1	29 Mar, 2008 02:45	58.20	c	1.54	8	7.0	9	4.55	0.55	175	187	1.10	0.0029	53	.056	7.3	1.26	0.00264	0.00004	16.99	0.27	0.00265	0.00004	17.08	0.27
203004	004-107.1	29 Mar, 2008 04:46	60.22	i	1.54	8	7.0	9	4.55	0.55	62	49	0.81	0.0009	45	.052	13.3	0.66	0.00242	0.00006	15.61	0.42	0.00244	0.00006	15.70	0.42
203004	004-108.1	29 Mar, 2008 06:22	61.82	rc	1.54	8	7.0	9	4.55	0.55	127	108	0.88	0.0016	41	.048	9.1	0.24	0.00263	0.00005	16.96	0.31	0.00265	0.00005	17.05	0.31
203004	004-109.1	29 Mar, 2008 06:48	62.25	o	1.54	8	7.0	9	4.55	0.55	1345	75	0.06	0.0002	41	.049	2.8	0.27	0.00271	0.00002	17.44	0.13	0.00273	0.00002	17.55	0.13
203004	004-110.1	29 Mar, 2008 07:57	63.41	rc	1.54	8	7.0	9	4.55	0.55	118	62	0.55	–	–	.050	9.6	0.46	0.00254	0.00005	16.35	0.31	0.00255	0.00005	16.45	0.31
203004	004-111.1	29 Mar, 2008 08:24	63.85	i	1.54	8	7.0	9	4.55	0.55	71	56	0.82	–	–	.054	11.7	1.00	0.00253	0.00006	16.29	0.40	0.00254	0.00006	16.38	0.40
203010	010-101.1	26 Mar, 2008 18:04	1.51	r	1.69	8	8.5	9	5.03	0.61	105	63	0.62	–	–	.055	9.6	1.10	0.00298	0.00006	19.15	0.39	0.00299	0.00006	19.25	0.39
203010	010-101.2	26 Mar, 2008 18:28	1.92	rc	1.69	8	8.5	9	5.03	0.61	529	622	1.22	0.0000	62	.049	4.5	0.32	0.00296	0.00003	19.07	0.20	0.00298	0.00003	19.15	0.20
203010	010-102.1	26 Mar, 2008 20:07	3.56	rc	1.69	8	8.5	9	5.03	0.61	319	209	0.68	0.0002	55	.048	5.7	0.26	0.00292	0.00004	18.80	0.23	0.00294	0.00004	18.90	0.23
203010	010-103.1	26 Mar, 2008 21:50	5.29	i	1.69	8	8.5	9	5.03	0.61	507	686	1.40	0.0001	44	.049	4.6	0.32	0.00288	0.00003	18.56	0.19	0.00290	0.00003	18.64	0.19
203010	010-104.1	26 Mar, 2008 23:26	6.88	i	1.69	8	8.5	9	5.03	0.61	165	59	0.37	0.0015	38	.050	7.7	0.39	0.00305	0.00005	19.61	0.31	0.00306	0.00005	19.71	0.31
203010	010-105.1	27 Mar, 2008 01:02	8.49	c	1.69	8	8.5	9	5.03	0.61	180	110	0.63	–	–	.048	7.5	0.23	0.00296	0.00005	19.03	0.29	0.00297	0.00005	19.13	0.29
203010	010-106.1	27 Mar, 2008 02:41	10.13	i	1.69	8	8.5	9	5.03	0.61	185	106	0.59	–	–	.053	7.2	0.88	0.00285	0.00004	18.35	0.28	0.00287	0.00004	18.45	0.28
203010	010-107.1	27 Mar, 2008 04:16	11.72	c	1.69	8	8.5	9	5.03	0.61	138	123	0.92	–	–	.052	8.5	0.68	0.00283	0.00005	18.19	0.32	0.00284	0.00005	18.28	0.32
203010	010-108.1	27 Mar, 2008 05:55	13.36	rc	1.69	8	8.5	9	5.03	0.61	323	219	0.70	–	–	.050	5.7	0.40	0.00294	0.00004	18.94	0.23	0.00296	0.00004	19.04	0.23
203010	010-109.1	27 Mar, 2008 07:33	15.01	rc	1.69	8	8.5	9	5.03	0.61	604	231	0.39	–	–	.050	1.8	0.31	0.01389	0.00011	88.92	0.71	0.01390	0.00011	89.02	0.71
203010	010-109.2	27 Mar, 2008 08:21	15.81	r	1.69	8	8.5	9	5.03	0.61	375	539	1.48	0.0110	14	.200	6.7	19.41	0.00278	0.00007	17.91	0.42	0.00279	0.00007	17.99	0.42
203010	010-110.1	27 Mar, 2008 09:45	17.20	c	1.69	8	8.5	9	5.03	0.61	183	136	0.77	–	–	.046	6.6	–	0.00295	0.00004	18.99	0.26	0.00296	0.00004	19.08	0.26
203010	010-111.1	27 Mar, 2008 11:25	18.88	c	1.69	8	8.5	9	5.03	0.61	93	57	0.63	0.0020	62	.040	9.9	–	0.00305	0.00006	19.65	0.38	0.00307	0.00006	19.75	0.38
203010	010-112.1	27 Mar, 2008 13:01	20.48	rc	1.69	8	8.5	9	5.03	0.61	628	717	1.18	0.0004	41	.049	4.4	0.35	0.00298	0.00003	19.21	0.18	0.00300	0.00003	19.30	0.18
203010	010-112.2	27 Mar, 2008 13:25	20.87	r	1.69	8	8.5	9	5.03	0.61	107	60	0.58	0.0021	57	.087	17.7	5.15	0.00296	0.00008	19.02	0.55	0.00297	0.00008	19.12	0.55
203010	010-113.1	27 Mar, 2008 15:03	22.51	rc	1.69	8	8.5	9	5.03	0.61	434	448	1.07	–	–	.056	4.8	1.20	0.00298	0.00003	19.16	0.22	0.00299	0.00003	19.25	0.22
203010	010-114.1	27 Mar, 2008 17:52	25.32	rc	1.69	8	8.5	9	5.03	0.61	1818	2902	1.65	0.0002	53	.046	2.5	–	0.00312	0.00002	20.07	0.14	0.00313	0.00002	20.14	0.14
203010	010-115.1	27 Mar, 2008 19:23	26.84	c	1.69	8	8.5	9	5.03	0.61	105	101	0.99	–	–	.036	11.7	–	0.00296	0.00006	19.07	0.38	0.00298	0.00006	19.15	0.38
203010	010-116.1	27 Mar, 2008 21:07	28.57	rc	1.69	8	8.5	9	5.03	0.61	134	95	0.73	–	–	.053	8.8	0.85	0.00298	0.00006	19.21	0.36	0.00300	0.00006	19.30	0.36
203010	010-116.2	27 Mar, 2008 21:31	28.97	r	1.69	8	8.5	9	5.03	0.61	267	145	0.56	0.0004	42	.054	6.6	0.90	0.00317	0.00004	20.42	0.28	0.00319	0.00004	20.52	0.28
203010	010-117.1	27 Mar, 2008 23:13	30.67	rc	1.69	8	8.5	9	5.03	0.61	394	382	1.00	–	–	.043	7.4	–	0.00301	0.00004	19.39	0.23	0.00303	0.00004	19.48	0.23
93T-059	059-101.1	28 Mar, 2008 02:32	33.99	i	3.34	8	12.1	9	3.62	0.44	193	183	0.98	0.0032	38	.055	7.8	1.03	0.00278	0.00005	17.88	0.30	0.00279	0.00005	17.96	0.30
93T-059	059-102.1	28 Mar, 2008 04:25	35.87	i	3.34	8	12.1	9	3.62	0.44	110	93	0.88	–	–	.050	10.8	0.41	0.00284	0.00006	18.30	0.40	0.00286	0.00006	18.38	0.40
93T-059	059-103.1	28 Mar, 2008 06:01	37.48	rc	3.34	8	12.1	9	3.62	0.44	114	107	0.97	0.0006	54	.039	11.5	–	0.00299	0.00006	19.27	0.39	0.00301	0.00006	19.35	0.39
93T-059	059-104.1	28 Mar, 2008 07:41	39.14	i	3.34	8	12.1	9	3.62	0.44	241	265	1.14	–	–	.046	7.5	–	0.00279	0.00004	17.99	0.27	0.00281	0.00004	18.07	0.27
93T-059	059-105.1	28 Mar, 2008 09:18	40.75	c	3.34	8	12.1	9	3.62	0.44	247	162	0.68	–	–	.050	7.1	0.43	0.00291	0.00004	18.72	0.28	0.00292	0.00004	18.81	0.28
93T-059	059-106.1	28 Mar, 2008 10:53	42.34	rc	3.34	8	12.1	9	3.62	0.44	180	155	0.89	0.0001	42	.043	9.0	–	0.00280	0.00005	18.02	0.31	0.00281	0.00005	18.10	0.31
93T-059	059-107.1	28 Mar, 2008 12:27	43.91	c	3.34	8	12.1	9	3.62	0.44	116	101	0.89	–	–	.055	9.9	1.15	0.00282	0.00006	18.13	0.38	0.00283	0.00006	18.22	0.38
93T-059	059-108.1	28 Mar, 2008 14:02	45.50	c	3.34	8	12.1	9	3.62	0.44	97	87	0.93	0.0032	38	.045	11.7	–	0.00293	0.00006	18.86	0.42	0.00294	0.00006	18.94	0.42
93T-059	059-109.1	28 Mar, 2008 16:05	47.53	i	3.34	8	12.1	9	3.62	0.44	492	629	1.32	–	–	.048	5.2	0.18	0.00291	0.00003	18.71	0.21	0.00292	0.00003	18.78	0.21
93T-059	059-110.1	28 Mar, 2008 18:10	49.62	rc	3.34	8	12.1	9	3.62	0.44	128	128	1.04	–	–	.053	10.2	0.78	0.00267	0.00005	17.17	0.34	0.00268	0.00005	17.25	0.34
93T-059	059-111.1	28 Mar, 2008 19:48	51.25	rc	3.34	8	12.1	9	3.62	0.44	151	126	0.86	–	–	.041	9.2	–	0.00296	0.00005	19.06	0.32	0.00297	0.00005	19.15	0.32
93T-059	059-112.1	28 Mar, 2008 21:25	52.87	rc	3.34	8	12.1	9	3.62	0.44	188	184	1.01	0.0006	41	.051	7.4	0.54	0.00275	0.00004	17.70	0.27	0.00276	0.00004	17.78	0.27
93T-059	059-113.1	28 Mar, 2008 23:51	55.30	rc	3.34	8	12.1	9	3.62	0.44	192	200	1.08	0.0003	41	.042	7.4	-0.54	0.00290	0.00004	18.69	0.27	0.00292	0.00004	18.77	0.27
93T-059	059-114.1	29 Mar, 2008 01:28	56.93	i	3.34	8	12.1	9	3.62	0.44	234	222	0.98	–	–	.046	6.6	–	0.00291	0.00004	18.76	0.25	0.00293	0.00004	18.84	0.25
93T-059	059-115.1	29 Mar, 2008 03:55	59.38	rc	3.34	8	12.1	9	3.62	0.44	221	203	0.95	0.0006	52	.052	6.4	0.72	0.00284	0.00004	18.28	0.25	0.00285	0.00004	18.36	0.25
93T-059	059-116.1	29 Mar, 2008 05:31	60.98	i	3.34	8	12.1	9	3.62	0.44	385	445	1.20	0.0009	42	.046	5.3	–	0.00280	0.00003	18.03	0.20	0.00281	0.00003	18.10	0.20
203080	080-101.1	26 Mar, 2008 17:15	0.70	i	1.49	8	3.8	9	2.55	0.31	450	379	0.87	–	–	.050	4.9	0.42	0.00284	0.00003	18.31	0.20	0.00286	0.00003	18.38	0.20
203080	080-102.1	26 Mar, 2008 19:10	2.63	i	1.49	8	3.8	9	2.55	0.31	383	217	0.58	–	–	.046	5.5	–	0.00293	0.00003	18.87	0.22	0.00295	0.00003	18.96	0.22
203080	080-103.1	26 Mar, 2008 20:59	4.44	i	1.49	8	3.8	9	2.55	0.31	464	389	0.87	–	–	.045	4.9	–	0.00294	0.00003	18.93	0.20	0.00295	0.00003	19.00	0.20
203080	080-104.1	26 Mar, 2008 22:35	6.04	r	1.49	8	3.8	9	2.55	0.31	288	155	0.56	0.0004	41	.045	7.3	–	0.00289	0.00004	18.58	0.24	0.00290	0.00004	18.67	0.24
203080	080-105.1	27 Mar, 2008 00:11	7.64	r	1.49	8	3.8	9	2.55	0.31	449	378	0.87	0.0005	41	.046	5.0	–	0.00291	0.00003	18.74	0.20	0.00292	0.00003	18.81	0.20
203080	080-106.1	27 Mar, 2008 01:49	9.27	i	1.49	8	3.8	9	2.55	0.31	530	502	0.98	–	–	.046	5.6	–	0.00295	0.00003	18.97	0.19	0.00296	0.00003	19.04	0.19
203080	080-107.1	27 Mar, 2008 03:25	10.88	i	1.49	8	3.8	9	2.55	0.31	667	312	0.48	–	–	.049	3.9	0.32	0.00290	0.00003	18.68	0.17	0.00292	0.00003	18.77	0.17
203080	080-108.1	27 Mar, 2008 05:01	12.47	i	1.49	8	3.8	9	2.55	0.31	146	117	0.82	–	–	.045	8.7	–	0.00289	0.00005	18.60	0.31	0.00290	0.00005	18.68	0.31
203080	080-109.1	27 Mar, 2008 06:39	14.11	i	1.49	8	3.8	9	2.55	0.31	261	230	0.91	–	–	.049	6.2	0.39	0.00287	0.00004	18.48	0.24	0.00288	0.00004	18.55	0.24
203080	080-110.1	27 Mar, 2008 09:18	16.75	r	1.49	8	3.8	9	2.55	0.31	384	291	0.78	0.0002	51	.044	4.7	–	0.00285	0.00003	18.37	0.19	0.00287	0.00003	18.44	0.19
203080	080-111.1	27 Mar, 2008 10:30	17.95	i	1.49	8	3.8	9	2.55	0.31	149	114	0.79	–	–	.048	8.1	0.24	0.00282	0.00004	18.16	0.27	0.00283	0.00004	18.24	0.27
203080	080-112.1	27 Mar, 2008 12:10	19.62	i	1.49	8	3.8	9	2.55	0.31	245	202	0.85	0.0007	45	.052	6.1	0.65	0.00293	0.00004	18.86	0.25	0.00294	0.00004	18.93	0.25
203080	080-113.1	27 Mar, 2008 14:14	21.69	i	1.49	8	3.8	9	2.55	0.31	251	224	0.92	–	–	.040	7.4	–	0.00291	0.00004	18.74	0.26	0.00292	0.00004	18.81	0.26
203080	080-114.1	27 Mar, 2008 17:04	24.52	c	1.49	8	3.8	9	2.55	0.31	153	120	0.81	0.0012	38	.086	14.6	5.06	0.00279	0.00006	17.94	0.37	0.00280	0.00006	18.01	0.37
203080	080-115.1	27 Mar, 2008 18:35	26.04	i	1.49	8	3.8	9	2.55	0.31	314	343	1.13	–	–	.051	8.7	0.52	0.00288	0.00005	18.52	0.33	0.00289	0.00005	18.58	0.33
203080	080-116.1	27 Mar, 2008 20:09	27.60	i	1.49	8	3.8	9	2.55	0.31	306	291	0.98	–	–	.046	6.6	–	0.00291	0.00004	18.73	0.25	0.00292	0.00004	18.80	0.25
203080	080-117.1	27 Mar, 2008 22:17	29.73	i	1.49	8	3.8	9	2.55	0.31	180	137	0.79	0.0007	41	.042	8.8	–	0.00285	0.00005	18.36	0.30	0.00286	0.00005	18.43	0.30
203080	080-118.1	27 Mar, 2008 23:58	31.43	i	1.49	8	3.8	9	2.55	0.31	118	88	0.77	–	–	.042	11.1	–	0.00294	0.00006	18.92	0.38	0.00295	0.00006	18.99	0.38
203080	080-119.1	28 Mar, 2008 02:02	33.49	i	1.49	8	3.8	9	2.55	0.31	386	316	0.85	–	–	.050	5.8	0.39	0.00279	0.00003	17.96	0.22	0.00280	0.00003	18.03	0.22
203080	080-120.1	28 Mar, 2008 03:44	35.19	i	1.49	8	3.8	9	2.55	0.31	304	275	0.94	–	–	.048	6.6	0.22	0.00284	0.00004	18.31	0.25	0.00285	0.00004	18.38	0.25
203080	080-121.1	28 Mar, 2008 05:36	37.06	i	1.49	8	3.8	9	2.55	0.31	423	336	0.82	0.0003	60	.045	5.7	–	0.00285	0.00003	18.33	0.22	0.00286	0.00003	18.41	0.22
203080	080-122.1	28 Mar, 2008 07:15	38.70	i	1.49	8	3.8	9	2.55	0.31	380	312	0.85	0.0017	33	.137	21.5	11.41	0.00286	0.00013	18.39	0.84	0.00287	0.00013	18.46	0.84
203080	080-123.1	28 Mar, 2008 08:52	40.33	c	1.49	8	3.8	9	2.55	0.31	373	317	0.88	0.0004	42	.049	5.7	0.38	0.00286	0.00004	18.41	0.23	0.00287	0.00004	18.48	0.23
203080	080-124.1	28 Mar, 2008 10:29	41.93	i	1.49	8	3.8	9	2.55	0.31	113	83	0.76	–	–	.051	10.5	0.56	0.00283	0.00006	18.23	0.38	0.00284	0.00006	18.31	0.38
203080	080-125.1	28 Mar, 2008 12:02	43.49	c	1.49	8	3.8	9	2.55	0.31	125	91	0.75	–	–	.062	9.0	1.99	0.00288	0.00006	18.54	0.37	0.00289	0.00006	18.61	0.37
203080	080-126.1	28 Mar, 2008 13:36	45.05	c	1.49	8	3.8	9	2.55	0.31	89	59	0.69	–	–	.061	10.9	1.84	0.00275	0.00007	17.69	0.42	0.00276	0.00007	17.77	0.42
203080	080-127.1	28 Mar, 2008 15:39	47.10	c	1.49	8	3.8	9	2.55	0.31	275	251	0.94	–	–	.048	6.7	0.20	0.00291	0.00004	18.74	0.26	0.00292	0.00004	18.81	0.26
203080	080-128.1	28 Mar, 2008 17:46	49.22	i	1.49	8	3.8	9	2.55	0.31	587	504	0.89	0.0001	59	.049	4.2	0.27	0.00285	0.00003	18.34	0.18	0.00286	0.00003	18.41	0.18
203080	080-129.1	28 Mar, 2008 19:23	50.84	i	1.49	8	3.8	9	2.55	0.31	203	170	0.87	0.0008	48	.046	7.3	–	0.00293	0.00004	18.86	0.27	0.00294	0.00004	18.94	0.27
203080	080-130.1	28 Mar, 2008 23:26	54.89	i	1.49	8	3.8	9	2.55	0.31	224	200	0.93	–	–	.048	6.5	0.18	0.00286	0.00004	18.38	0.25	0.00287	0.00004	18.45	0.25
203080	080-131.1	29 Mar, 2008 03:31	58.97	c	1.49	8	3.8	9	2.55	0.31	248	222	0.93	–	–	.046	6.3	–	0.00291	0.00004	18.71	0.24	0.00292	0.00004	18.78	0.24
203080	080-132.1	29 Mar, 2008 07:33	63.00	i	1.49	8	3.8	9	2.55	0.31	175	126	0.74	–	–	.048	7.7	0.16	0.00281	0.00004	18.09	0.28	0.00282	0.00004	18.17	0.28
203085	085-101.1	26 Mar, 2008 17:39	1.11	rc	2.20	8	9.8	9	4.45	0.54	144	129	0.93	–	–	.053	8.6	0.80	0.00295	0.00005	19.01	0.34	0.00297	0.00005	19.10	0.34
203085	085-102.1	26 Mar, 2008 19:34

Figure DR29

SHRIMP-RG 206Pb/238U ages for zircon from six Tatoosh Intrusive Suite samples (scale on left; corrected for initial U–Th disequilibrium) and the R33 zircon standard (scale on right) plotted against time from beginning of the analysis session. Error bars are shown as ± 1σ for clarity. Dashed line at 18.61 Ma is weighted mean age of zircon in sample 203080, which is thought to contain a single population of zircon and which was analyzed throughout the session in order to monitor instrument- or mount-related variation. Dashed line at 419 Ma is accepted age of R33 zircon, which was used for calibration.



Zircon Trace Elements, SIMSSIMS (ppm) trace element concentrations and isotopic ratios for zircons from the Yilgarn province.

| Sample | Spot Name | Date/Time | ppm | U ppm | Th ppm | Hf ppm | La ppm | Ce ppm | Nd ppm | Sm ppm | Eu ppm | Gd ppm | Dy ppm | Er ppm | Yb ppm | Lu(N) | Ce/U | Ce/Ce* | Eu/Eu* | Eu/Eu* | Eu/Eu