

Table S1. Sample locations, kinematics, microstructures, deformation category and grain size

Harcuvar samples

Quartz grain size analyses

Sample	UTM		Sample description	Sense of shear	Qtz recrystalliz.	Quartz grain size analyses				Feldspar deformation	additional microstructures, comments	Def. conditions category**
	Easting (m)*	Northing (m)				# grains	median diameter (μm)	geometric mean (μm)	stdev			
Har-1	290605	3777739	granite mylonite	top-NE	SGR, GBM	69	64.8	58.9	33.8	BLG, SGR	minor epi, ~3% biotite, no chlorite, obl qtz GSPO, subtle C' s.b. ultramylonite; wide range of quartz grain sizes (probably from SGR overprint of GBM)	3
Har-2	290605	3777739	quartzo-feldspathic ultramylonite	top-NE	SGR+GBM	57	65.5	61.2	45.9	BLG, SGR	subtle top-NE sense of shear from feldspar sigma-clasts; sample forqtz EBSD	3
Har-3	290596	3777809	2-mica granite mylonite/protomylonite	top-NE	GBM+SGR					SGR, fracturing	wide range of qtz grain sizes, qtz prism <a> slip inferred to be dominant, subtle biot-lined C' s.b. & obl qtz GSPO, pervasive feldspar recrystallization	3
Har-4	290445	3777259	mylonitic quartzo-feldspathic gneiss	top-NE	SGR+GBM	63	64.8	62	32.1	SGR	syn-kin hbl along C' shears	3
Har-6	290286	3776882	amphibolite mylonite	top-NE	SGR+GBM					SGR+BLG	~1% biot, ~1% chl after biot	3
Har-8	289814	3776685	moderately-strained granite	unclear	GBM	63	154.1	162.8	164.6	SGR	C' shear bands with some feldspar BLG, synkin biot	4
Har-9	289814	3776685	biotite-quartz amphibolite	top-NE	minor SGR+GBM					minor SGR	subtle C' s.b., ~5% biot with no chlorite	3
Har-11	289733	3776473	weakly-strained granite sill	top-NE	GBM	53	126.7	125.8	93.1	SGR, myrm	top-NE C' s.b. with biotite and feldspar BLG, ~5% biot, minor chl	4
Har-13	288960	3776088	weakly-strained granite	top-NE	GBM, SGR	59	70.3	75.2	40.5	SGR+BLG		3
Har-16	269983	3769636	granite mylonite	top-NE	SGR	51	57.7	60.8	33	fracturing, BLG	synkin epi+biot, C' s.b. with biot & feldspar BLG, subtle obl qtz GSPO C' s.b., qtz obl GSPO, abundant titanite with asym biotite tails, abundant feldspar recrystalliz.	2
Har-17	270283	3769527	high-strain granite mylonite	top-NE	SGR	53	38.9	35.9	17.7	BLG+SGR	S-C fabric, obl qtz GSPO, ~15% fine-grained biot	3
Har-17a	270283	3769527	high-strain granite mylonite	top-NE	SGR	50	41.1	42.8	16.6	SGR+BLG	conjugate shear bands - no bulk asymmetry	3
Har-19	270541	3769405	high-strain granite mylonite	coaxial	SGR+GBM	54	89.8	91.9	47.9	SGR+BLG, minor fracturing		3
Har-22	250306	3747693	quartz vein with slicks	top-NE	SGR						spectacular obl qtz GSPO, muscovite-fish, C-planes lined by muscovite	2
Har-28	262289	3762730	muscovite schist	top-NE	SGR						muscovite fish & biotite-lined C' s.b., locally qtz obl GSPO	2
Har-36	273422	3771354	granite mylonite	top-NE	SGR+GBM	58	101.7	96.1	43.9	SGR, BLG, minor fracturing	pervasive feldspar recrystallization, subtle obl qtz GSPO, <3% fine-grained biot	3 or 4
Har-37	273409	3771284	low-strain granite	top-NE	GBM+SGR	202	96.5	100	63	SGR	sericitized feldspar, synkin epi & titanite, subtle qtz obl GSPO	4
Har-38	273668	3770836	granite sill	top-NE	GBM	101	172.1	172.4	114.9	SGR	ultramylonite, abundant epi and associated titanite	4
Har-40	274121	3770603	moderately-strained granite	top-NE?	GBM					SGR	pervasive feldspar recrystallization, subtle C' s.b. and sigma clasts	4
Har-41	274524	3770359	weakly-strained granite	top-NE	GBM	77	149.4	151.1	79.2	SGR	obl GSPO in recrystallized feldspar, <2% biot with some chl after biot, sericitization of feldspar common	4
SJ-1	289626	3776345	granite mylonite	top-NE	SGR					BLG	C-planes & C' s.b. with BLG recrystalliz., ~10% biot+chl, obl qtz GSPO	2
SJ-5	271171	3768698	high-strain gneiss with narrow band of lower-								quartz SGR is incomplete, subtle obl GSPO in qtz & feldspar, ~10% biot+chl	3
SJ-6	271529	3768297	T deformation w/060 lineation granite mylonite	top-NE	SGR, GBM?					BLG+SGR	subtle obl qtz GSPO, ~5% biot+chl	3
SJ-7	271529	3768297	granite mylonite	top-NE	GBM, SGR					SGR	C' s.b., subtle obl qtz GSPO, abundant epi, chl, some garnet; GS overprint on amphib fabric	4
SJ-8	271529	3768297	quartzo-feldspathic mylonite	top-NE	SGR+GBM					SGR+BLG	subtle C' s.b., local qtz obl GSPO, discontinuous qtz lenses, incomplete quartz SGR	3
SJ-16	272069	3768086	granite protomylonite w/ N-S lineation	top-N	SGR+GBM	59	61	59.7	29.6	minor BLG		2
SJ-17	276758	3773713	granite mylonite with shear bands	top-NE	GBM+SGR	53	97.8	96.3	29.8	SGR	C' s.b. with biot, local qtz obl GSPO, ~10% biot, no chl	4
SJ-18	277331	3773162	granite protomylonite	top-NE	SGR, GBM	54	79.6	78	34.9	SGR+BLG	incomplete qtz SGR, C' s.b., ~10% biot, no chl	3
SJ-19	277524	3772973	granite with high-strain shear zone	coaxial	SGR+GBM	73	82.7	79.7	33	SGR+BLG	~10% biot, minor chl; symmetric conjugate shear bands (thin section is too thick, hard to see microstructures clearly), C' s.b., local obl qtz GSPO, pervasive feldspar rxstalliz., some large qtz grains lack SGR overprint	3
SJ-19	277867	3772247	low-strain granite	top-NE	GBM, SGR					SGR		4
SJ-21	277084	3771866	granite ultramylonite	top-NE	GBM+SGR	61	67	63.6	25.6	SGR	~10% biot, no chl, abundant feldspar SGR, C' s.b. and obl biot laths crudely developed S-C-C' fabric, qtz ribbons with relatively little recrystallization	4
7-H1	264697	3757318	protomylonitic 2-mica granite	top-NE	BLG II	60	10.1	10.3	4.4	fracturing	S-C-C' fabric, obl qtz GSPO, ~8% muscov+biot (locally chloritized), feldspar sericitization	1
H-3	263593	3759560	leucogranite S-C-C' mylonite	top-SW	BLG II	75	8.7	8.6	2.5	cataclasis, no recrystalliz. chem	top-NE asym folds, obl qtz GSPO, fractured epi porphyroclasts (~5%), ~20% fine-grained white mica	1
H-5	263197	3759125	granite mylonite	top-NE	SGR, BLG	55	7.9	8	2.1	breakdown+BLG+cataclasis	NOT mylonitic; coarse-grained, interlocking quartz, feldspar, biotite, epidote, local zones of quartz subgrain development & BLG gneissic fabric with brittle overprint of feldspar, white mica development from feldspar, qtz blobs/pods show BLG II	1
H-6	263131	3759212	granite with gneissic fabric									
H-7C	263351	3759584	gneiss									
H-7D	263351	3759584	mylonitic gneiss	top-NE	SGR+BLG	77	13.8	13.7	4.5	fracturing, some chemical breakdown	S-C-C' fabric, qtz obl GSPO, some qtz p.clasts and ribbons without recryst., ~12% muscov (compared to ~5% in nonmylon protolith)	1
H-8	263340	3759897	quartzo-feldspathic mylonite	top-NE	SGR, BLG	209	11	10.6	4.5	fracturing & cataclasis, BLG	quartz & feldspar obl GSPO, abundant synkin epi & biot, C' s.b., some ribboned qtz porphyroclasts lacking pervasive recrystallization	1

H-10	263877	3759932	quartzo-feldspathic mylonite	top-NE	BLG+SGR	227	6.9	6.8	3.9	cataclasis, chem breakdown (no BLG)	obl qtz GSPO, some qtz porphyroclasts; qtz ribbons without recrystalliz common, brittle-ductile C' s.b.	1
H-22	266087	3759957	shear band cutting gneissic fabric	top-NE	SGR					fracturing, chemical breakdown	abundant fine-grained epi & biot/muscov matrix, rounded feldspar porphyroclasts likely derived from fracturing, local S-C fabric	2
H-33	288225	3772485	leucogranite mylonite	top-NE	GBM, minor SGR	65	89.6	90.3	51.3	SGR+BLG, myrmek.	~3% biot, subtle qtz obl GSPO, 1 C' s.b., some very large qtz grains lacking SGR	4
H-34	289373	3771258	meta-arkose? mylonite	top-NE	SGR	58	31.3	32.1	9.3	pervasive SGR?	~10% f-grained chl, ~5% opaques, ~5% f-gr epi, ~40% qtz, ~40% grungy feldspar - mixed with qtz, obl qtz GSPO	2
H-35	289303	3771314	granitoid ultramylonite	top-NE	SGR, GBM	104	46.2	45.7	22.1	pervasive feldspar SGR	~5% f-gr epi, ~5-10% mica (mostly chl after biot)	3
H-36	292673	3773185	granitoid (?) ultramylonite (meta-arkose?)	top-NE	SGR+GBM	51	107.6	102.8	38.6	SGR?	grungy feldspar - difficult to evaluate def mechanisms, particularly given potential metased protolith, all mica is chl, subtle qtz obl GSPO	3
H-37A	290084	3776991	shear band cutting amphibolite	top-NE	SGR, GBM					static recrystalliz., BLG along shear bands, myrmek., Qtz SGR along high-strain zones	~20% hbl, ~10% qtz, obl qtz GSPO, minor feldspar recrystalliz overprinting static recrystalliz., amphib-facies protomylonite with upper GS-facies shear bands	3
H-37B	290084	3776991	leucogranite mylonite w/ hbl-rich layers	unclear	GBM	110	143.3	140.6	91.5	SGR, myrmek.	weakly-developed mylon fabric	4
H-37C	290084	3776991	amphibolite with NE-trending lin	top-NE	minor GBM					static?, myrmek, minor BLG	hbl aligned along subtle C' s.b.	4
H-38	289802	3776569	leucogranite mylonite/ultramylon	top-NE	GBM	60	134.4	143.7	74.3	SGR? recrystallized grains mixed with qtz & myrmek.	obl qtz GSPO	4
H-39	290314	3777223	leucogranite mylonite	top-NE	GBM+SGR	81	57.4	58.1	31.3	SGR, BLG, myrmek.	feldspar SGR dominant, C' s.b., obl qtz GSPO, incomplete qtz SGR overprint of GBM (some very large qtz grains)	3
H-40	293448	3774209	musc-chl mylonitic schist	top-NE	SGR+GBM	62	55.4	53.5	23.8		S-C-C' fabric, ~30% mica (mostly muscov, some chl+biot), mica fish, ~60% qtz, feldspar (?) porphyroclasts altered to cryptocrystalline grunge (not on matrix)	3
H-42	293610	3773948	quartzo-feldspathic ultramylonite pegmatite protomylonite, cuts high-strain mylon fabric	top-NE	SGR, GBM	84	44.4	43.1	14.7	SGR	pervasive feldspar SGR, locally altered to cryptocrystalline grunge & f-grained sericite, ~10% biot+chl+white mica, qtz SGR is fairly pervasive, but locally some large quartz grains from GBM, obl qtz GSPO	3
Har-50a	270543	3769406	mylon fabric	unclear	GBM+SGR	119	131.7	133.9	44.5	SGR, myrmek.	feldspar SGR along porphyroclast margins	4
HV-32	278861	3765380	biotite granitoid mylonite	top-NE	GBM, SGR					SGR + BLG, myrmek	C' s.b. common, ~40% of biot is chloritized	3 or 4
HV-33	278866	3765459.2	high-strain felsic ultramylonite within platy bio-rich mylonite	top-NE	GBM, SGR	80	129.7	120.6	59.2	SGR	obl qtz GSPO, complete feldspar SGR, partial chloritization of biot	4
HV-34	278466	3765839.7	mylonitic milky quartz vein	top-NE	GBM	73	201.5	210.4	164.3	--	minor muscov defines macroscopic fol, obl qtz GSPO	4
HV-35	278473	3765818.1	granite ultramylonite	top-NE	GBM					SGR, myrmek	very little chloritization of biot, biot-lined C' s.b., pervasive feldspar rxstalliz - mixed with quartz	4
HV-36	278275	3766103.6	granitoid protomylonite, locally gneissic	top-NE	GBM, SGR	85	172.4	176.6	65	SGR+BLG	biot-lined C' s.b., ~25% of biot is chloritized, relatively minor feldspar rxstalliz.	4
HV-37	277321	3766777.4	quartz-rich portion of leucogranite mylonite	top-NE	GBM	115	209.3	210.2	129.3		minor biot with trace chl, obl qtz GSPO	4
HV-38B	277313	3766779.2	kyanite schist			221	141	131.3	71			4
HV-40	276636	3767985.3	mylonitic granitoid gneiss	top-NE	GBM, SGR	60	100.4	95.5	47.3	minor BLG	~15% biot (no chl), ~5% epi p.clasts, qtz SGR heterogeneously distributed (locally absent, locally dominant), obl qtz GSPO, very little feldspar rxstalliz (perhaps b/c abundant biot takes up much strain)	3
HV-41B	276639	3767995.7	ultramylonitic granitoid gneiss	top-NE	GBM	56	104.1	104.9	37.3	SGR	~20% biot (minor chlo)+hbl, ~5% epi, pervasive feldspar SGR, subtle alignment of biot & hbl along C' bands	4
HV-41A	276639	3767995.7	gneiss/protomylonite	unclear	GBM					minor SGR	minor chloritiz of biot, epi common (associated with biot)	4
HV-43A	280228	3770867	mylonitic milky quartz vein	top-NE	SGR+GBM	64	94.7	88.9	40.9		obl qtz GSPO	3
HV-46	278535	3769679.6	leucogranite mylonite	top-NE	SGR+GBM	60	65.2	62.8	37.2	SGR+BLG	pervasive feldspar rxstalliz, well-defined obl qtz GSPO, C' s.b., biot+muscov - no chl	3
HV-48	279055	3770091.1	mylonitic milky quartz vein	top-NE	SGR, GBM	97	64.9	64.2	27.3		qtz SGR overprints GBM, qtz obl GSPO, some epi-rich layers	3
HV-49	279551	3770349.5	leucogranite mylonite	top-NE	SGR+GBM	118	93.6	97.4	34	SGR+BLG	obl qtz GSPO, pervasive feldspar rxstalliz, ~1% muscovite	3
HV-50/Har-81	279744	3770388.4	leucogranite mylonite	top-NE	SGR+GBM	85	82.1	83.9	37.6	SGR, BLG	obl qtz GSPO, pervasive feldspar rxstalliz, ~3% biot+muscov - no chl, some subtle C' s.b. (same location as Har-81)	3
HV-51	281222	3771206.2	leucogranite ultramylonite	top-NE	GBM+SGR	58	43.7	45.1	22.7	SGR	~90% feldspar rxstalliz., locally qtz GBM dominant with minor SGR, obl qtz GSPO, ~3-5% biot with no chl, qtz mixed with rxstallized feldspar	4
HV-52/Har-82	282456	3771404	layered protomylonitic gneiss	top-NE	GBM+SGR	71	76.4	80.7	31	BLG, myrmek	weakly-developed mylon fabric, ~5% hbl (concentrated in layers), subtle C' s.b., trace biot & no chl (same location as Har-82)	4
HV-53	283365	3772186.6	leucogranite mylonite	top-NE	GBM+SGR	60	67.6	65.5	28.5	SGR+BLG, myrmek	obl qtz GSPO, no chloritization of biot, locally qtz SGR is dominant, a few C' s.b.	4
HV-54	285169	3772593.6	layered leucogranite protomylonite	top-NE	GBM	97	217.4	215	121.9	myrmek, SGR	some C' s.b., ~50% of biot is chloritized, myrmek development very common along feldspar p.clasts	4

HV-56	287128	3772830.9	leucogranite ultramylonite	top-NE	SGR, GBM	58	51.9	52.5	23.7	SGR, BLG	obl qtz GSPO, some subtle C' s.b., pervasive feldspar rxstalliz, no chloritization of biot	3
HV-57	287903	3773098.8	mylonitic milky quartz vein	top-NE	GBM, SGR	108	62.4	63.4	36.6		some qtz SGR overprint of GBM, obl qtz GSPO, macroscopic fol defined by zones of aligned feldspar (not recrystallized)	3
HV-60	287696	3773839.5	biotite granitoid mylonite/protomylonite	top-NE	SGR+GBM	79	66.3	65.8	38.7	BLG	biot-lined C' s.b. common, obl qtz GSPO, ~30% of biot is chloritized, locally qtz SGR is dominant	3
HV-62	287390	3774301.5	layered leucogranite mylonite	unclear	GBM, SGR	59	195.9	197.4	78.1	SGR, BLG	minor chloritiz of biot, qtz SGR locally not important	4
HV-67	286588	3775148.6	leucogranite mylonite	unclear	GBM	84	128.3	122.7	95.3	SGR	very long, single layer quartz grains present, little to no qtz SGR, feldspar myrmekite common, ~1% biot with trace chl	4
HV-69	286374	3774779.2	leucogranite mylonite	top-NE	GBM	92	131.8	138.5	101.9	SGR, myrmek	some very large qtz grains present, ~5% biot - no chl, some subtle biot-lined C' s.b.	4
HV-71	286383	3774572.7	massive leucogranite mylonite	top-NE	GBM					SGR, myrmek	biot-lined C' s.b., feldspar SGR grains are relatively large, ~5-7% biot with trace chl	4
HAR73	278467	3765840	leucogranite ultramylonite	unclear	GBM					SGR	~5% biot with no chl, pervasive feldspar rxstalliz., qtz does not form distinct continuous layers	4
HAR90, 90a	272480	3761864	biotite-rich mylonite with shallowly-dipping foliation (anomalous orientation compared to other steep shear zones here)	unclear	SGR, GBM					SGR+BLG?, chem breakdown	~15% biot with almost no chl, grungy feldspar, locally large irregular qtz grains lack SGR, anhedral titanite common (associated with epi), relatively large, fractured epi porphyroclasts common, no chloritization of biot, some subtle indicators of top-NE shear (obl qtz & feldspar) but overall poorly developed shear indicators	3
HAR91	272339	3761907	10-20 cm thick mylonite zone	unclear	GBM, SGR					SGR, BLG, some myrmek	nonmylonitic, fresh coarse-grained biot+muscov; odd myrmek intergrowth btw biot & qtz (?) in one spot; garnet has inclusion of rounded biot, one small grain of kyanite noted	4
HAR92b	272298	3761918	muscovite-garnet schist with variable amounts of biotite								nonmylonitic, huge qtz grains with some GBM & SGR	
HAR95	271971	3762001	quartz vein in amphibolite-rich gneiss								~10% biot, ~50% of biot is chloritized, grungy feldspar is pervasively sericitized, discontinuous qtz does not form clear layers	3
HAR96	271871	3762096	biotite augen gneiss (weakly mylonitic)	unclear	GBM+SGR						4-5 cm shear zone; shear bands abundant, obl qtz GSPO, rxstallized feldspar mixed with fine-grained biot, large epi/allanite porphyroclasts common, no chloritization of biot	4
HAR97	272196	3764254	discrete mylonitic shear zone in gneiss	top-NE	GBM+SGR					SGR, BLG?	S-C-C' fabric, grungy feldspar - minor SGR+BLG?, locally pervasive small qtz subgrain development, other qtz-rich areas characterized by very large & irregular grains	3
HAR98	272123	3764740	mylonitic muscovite schist	top-NE	GBM+SGR						relatively large Fe-rich (green pleochroic) epi common, obl qtz GSPO, C' s.b. sigma-type clasts, partial chloritization of biot, muscov is commonly sheared	3
HAR99	271976	3765905	mylonitic pegmatite	top-NE	GBM+SGR					SGR+BLG, fracturing	large feldspar along margin of vein is not recrystallized, epi veinlet along top margin, subtle obl qtz GSPO suggests dextral (orientation unclear), qtz SGR polygonization in some areas (but GBM is dominant)	3
HAR101	271919	3766105	quartz vein, parallel to gneissic foliation		GBM, SGR	93	105.8	101.2	37.9		qtz ribbons mostly lacking recrystallization, pervasive feldspar fracturing/crushing, evidence for mixed qtz slip, ~2% epidote, biot is not chloritized, C' s.b.	1
HAR103	256633	3759523	mylonitic biotite-feldspar-rich gneiss	top-NE	BLG+SGR						ribboned quartz grains mostly lacking recrystallization, evidence for qtz basal slip based on inferred CPO, local obl qtz GSPO & white mica-lined shear band (dextral)	1
HAR103A	256633	3759523	mylonitic quartz vein		BLG+SGR						subtle indicators of dextral shear (e.g. shear bands, fractured feldspar porphyroclasts), pervasive fracturing of feldspar	2
HAR103B	256633	3759523	protomylonitic pegmatite		BLG+SGR	87	15.1	15.3	3.6	fracturing, local cataclasis & chemical breakdown	partial chloritization of biot, obl qtz GSPO	3
HAR104	268690	3769217	mylonitic tank pass	top-SW?	SGR	87	71	71.8	24.8	BLG, fracturing	some subtle C' s.b. & sigma-type clasts, minor chloritization of biot	4
HAR106	268419	3766125	thin quartz vein associated with pegmatite with NE-trending lineation	top-NE	GBM+SGR					minor BLG+SGR, fracturing		
HAR110	274132	3770583	protomylonitic pegmatite	top-NE	GBM					SGR		
HAR114	254628	3753807	strained leucogranite with NW-trending lineation		annealed					static		
HAR116	254664	3753861	muscovite schist (not mylonitic)		static/annealed						relatively coarse-grained muscovite lacking shear bands, static/annealed qtz rxstalliz, minor GBM spectacular S-C-C' fabric, qtz basal slip inferred to be common, muscovite is fine-grained & sheared, some ribboned qtz lacking recrystalliz, some feldspar porphyroclasts appear to be disaggregated by fracturing	1
15-JB-03	274669	3775001	quartzite mylonite	top-NE	SGR+BLG	53	16.7	16.5	5.3	fracturing	minor feldspar porphyroclasts are fractured, obl qtz GSPO, fol locally rotated along brittle-ductile shear bands, transposition of synkin qtz veinlets, very fine grained sheared white mica common	1
15-JB-15	274504	3774714	quartzite mylonite	top-NE	BLG	60	10.1	10	3.8		pervasive cataclastic overprint, brittle top-NE shears, some zones of qtz BLG, clasts showing SGR+BLG, very fine grained mica abundant - locally aligned // to fol	1
15-JB-25	275129	3774361	meta-arkose mylonite/cataclasite	top-NE	BLG							

15-JB-26	275172	3774314	leucogranite mylonite	top-NE	GBM, SGR	55	77.9	79.6	37.6	SGR, GBM	abundant feldspar rxstalliz., locally qtz SGR not important, partial chloritization of biot, subtle obl qtz GSPO, sigma clasts	4
15-JB-27	275177	3774311	leucogranite mylonite with pseudotachylyte								pseudotachylyte & cataclastic overprint on predominantly amphibolite-facies mylonitic fabric	
15-JB-30	275322	3774145	leucogranite mylonite	top-NE	GBM, minor SGR	72	111.1	107.7	56.1	SGR, myrmek	obl qtz GSPO, subtle C' shear bands, partial chloritization of biot (~25%)	4
15-JB-53	277628	3771387	leucogranite mylonite	top-NE	GBM, minor SGR	58	69.5	74.82	44.1	SGR	C' s.b., abundant feldspar SGR, little to no chloritization of biot, some very large qtz grains unaffected by SGR	4
15-JB-86	288745	3770968	leucogranite mylonite	top-NE	SGR	56	51.3	49.1	21	SGR	obl qtz GSPO, C' s.b. with fine-grained chl, pervasive feldspar SGR, all mica is chlorite, ~10% epidote	3
15-JB-89	288657	3771072	leucogranite mylonite	top-NE	SGR+GBM	60	132.8	126.8	46.8	SGR	obl qtz GSPO, pervasive feldspar SGR, musc+biot with trace chl	3
15-JB-96	288727	3771714	leucogranite mylonite	top-NE	GBM, SGR	60	125	120.2	54	SGR, myrmek, BLG	qtz GBM dominant, locally SGR overprint, ~50% of biot is chloritized, some subtle C' s.b., relatively little feldspar rxstalliz.	4
15-JS-67	265165	3761922	granitoid mylonite zone	top-NE	SGR	52	47.7	45.7	20.2	BLG, fracturing	S-C-C' fabric, obl qtz GSPO, muscov + sheared chloritized biot heterogenous recrystallization - SGR in some areas, other areas characterized by patchy extinction & relative large subgrains, sutured grain boundaries from BLG (very small bulges), subtle obl qtz GSPO (but fol is not well defined)	2
15-JS-70	265191	3762079	mylonitic quartz vein (low strain)	top-NE (?)	SGR, BLG	55	43.4	42.6	19.8		obl qtz GSPO, C' s.b. in biot-rich areas, ~25% fine-grained biot, minor qtz BLG overprint of SGR, pure-qtz layers are very thin, epi common but no chlorite	1 or 2
16-3-BW2	274647	3774589	biot-rich meta-arkose mylonite	top-NE	SGR, BLG	51	37.7	39.4	15.5	SGR?	rounded detrital feldspar grains are brittly deformed, little evidence for rxstalliz, discontinuous qtz pods; biot, actinolite/hbl, epi all common; weak foliation development due to abundant rigid feldspar	1
16-3-BW3	274738	3774871	meta-arkose mylonite	unclear	SGR+BLG					fracturing		1

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3: lower amphibolite facies to upper GS (transitional or evidence for upper GS overprint on amphibolite-facies deformation)

4: amphibolite-facies fabric. little to no evidence for GS overprint

Little Buckskin samples

Quartz grain size analyses

Sample	UTM		Sample description	Sense of shear	Qtz recrystalliz.	Quartz grain size analyses				Feldspar deformation	additional microstructures, comments	Def. conditions category**
	Eastings (m)*	Northings (m)				# grains	median diameter (μ)	geometric mean (μ)	std v			
LB-H-11	266015	3774600	leucogranite ultramylonite	top-NE	GBM	102	144	135	64	SGR	obl mica laths, pervasive feldspar SGR (no BLG or fracturing)	4
LB-11-113	266084	3775392	leucogranite mylonite	top-N	SGR + GBM	75	60	58	30	SGR	>80% feldspar recrystalliz., synkin biot (some chl) & titanite fish, subtle C' s.b.	3
LB-9-293	266654	3776937	leucogranite mylonite	unclear	GBM	61	250	272	185	SGR, minor fracturing, no BLG	qtz prism <a>, 1% mica (chloritized biot, minor muscov)	4
LB-11-171	267142	3777209	mylonitic quartz vein	top-NNE	GBM, SGR	249	76	73	48	--	inferred prism <a> dominant, some grains suggest basal slip	3
LB-11-173	267107	3777404	meta-arkose mylonite	app. top-NE	SGR	59	44	45	18.5	minor BLG, SGR?	~20% fine-grained biotite, qtz obl GSPO, biotite-lined C' s.b., 5-10% epi	2
LB-7-197	268302	3776275	leucogranite ultramylonite	top-NE	GBM	62	216	205	103	SGR, minor kinking and fracturing, not BLG	prism <a> qtz slip, subtle qtz obl GSPO, abundant feldspar SGR	4
LB-7-154	267831	3777126	leucogranite ultramylonite	top-NE?	GBM	60	189	186	104	SGR	~4% biot (~50% chloritized), some very large qtz grains (1-layer wide grains), pervasive feldspar recrystallization	4
LB-7-126	267600	3777596	leucogranite mylonite	unclear	GBM	76	142	139	88	SGR, no BLG	abundant feldspar SGR, large prism <a> qtz grains, subtle qtz obl GSPO, ~2% biotite, trace muscovite	4
LB-7-190	268923	3775793	leucogranite mylonite	top-NE	GBM	61	281	256	150	SGR	S-C-C' fabric, abundant feldspar SGR, ~5% biot with some chl, no muscov., smeared out biot along C-planes	4
HAR108	270606	3777903	mylonitic tank pass	top-NE	GBM	73	200	200	64	SGR	obl qtz GSPO, pervasive feldspar rxstalliz, ~3% biot (~50% chloritized)	4
LB-11-3	272041	3776984	calc. quartzite mylonite	top-NE	SGR+BLG						~50% calcite, rounded detrital quartz & feldspar, quartz mixed with calcite, calcite obl GSPO	1
LB-10-231	271870	3777483	meta-arkose mylonite	app. top-NE	SGR	50	50	51	21		synkinematic epidote + chlorite, obl qtz GSPO, subtle C' s.b.	2
LB-10-232	272220	3777737	quartzite	app. top-NE	SGR, BLG	133	11	12	3		obl qtz GSPO, ~10% epi, <5% chl	1
LB-11-9	272583	3777778	meta-arkose	unoriented	SGR	59	34	33	13	BLG, chemical breakdown	obl qtz GSPO, grungy feldspar locally altered to epi & Fe-poor chl, ~5-10% epi, synkin chl+epi vein is buckled (cool!)	2
LB-7-106	272397	3778843	leucogranite mylonite	top-NE	GBM	69	212	223	106	SGR, myrkem, no BLG	>50% feldspar SGR, prism <a> qtz slip, subtle obl qtz GSPO, <4% biot, no muscov	4
LB-7-116	272672	3778505	leucogranite? ultramylonite	unclear	GBM	97	355	358	213	static recrystalliz, SGR	qtz prism <a> dominant, >70% feldspar recrystalliz., <2% biot, no muscov. nearly complete SGR of feldspar, qtz obl GSPO, subtle C' s.b. with recrystallized muscov	4
LB-7-81	272268	3779625	leucogranite ultramylonite	top-NE	GBM					SGR	recrystallized quartz grains up to ~3 mm wide, subtle S-C fabric, <5% mica (biot, chloritized biot, trace muscov)	4
LB-7-71	272716	3778930	leucogranite mylonite	top-NE	GBM	53	233	237	168	SGR (no BLG)		4
LB-7-69	272794	3778879	mylonitic quartz vein	top-NE	GBM	219	271	274	163	--	prism <a> slip dominant, trace mica & feldspar define fol, qtz obl GSPO	4
LB-7-77	272674	3779197	amphibolite	unclear								
LB-H-23	273171	3778877	hbl amphibolite	unclear	GBM					static recrystalliz.	weakly mylonitic; synkin hbl	4
LB-H-24	273239	3778979	hbl amphibolite									
LB-H-25	273354	3779049	mylonitic quartz vein	top-NE	SGR, GBM	204	44	44	27		SGR overprint on GBM, oblique quartz GSPO	3
LB-7-21	273665	3778681	leucogranite(?) ultramylonite	top-NE	GBM					SGR	oblique preferred orientation of biotite, qtz layers typically 1 grain wide, pervasive feldspar rxstalliz	4
LB-7-12	273034	3779791	leucogranite mylonite	unclear	GBM	54	287	276	133	SGR, minor BLG	<5% mica (biot with some muscov), abundant feldspar SGR but large porphyroclasts still present	4
LB-7-28	273632	3779232	mylonitic quartz vein	top-NE	GBM	268	183	187	109	--	irregular quartz grains >100 μm wide, obl GSPO	4
LB-H-26	273792	3779078	leucogranite mylonite	top-NE	GBM	81	196	197	106	SGR	S-C-C' fabric, pervasive feldspar SGR, ~3% biot, 5-10% muscov, mica fish	4
LB-7-3	274007	3779010	leucogranite mylonite	top-NE	GBM	95	155	156	114	SGR	S-C fabric visible at outcrop scale, ~3% biot, trace muscov.	4

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LR-4-2012	254557	3783637	calcareous quartzite mylonite	unclear	SGR+BLG						mostly recrystallized calcite, minor pods of qtz are partially recrystallized, tremolite & cpx p. clasts	1
H-1	270409	3786105	muscovite-bearing leucogranite (?)	top-NE	SGR, GBM	109	53.5	51.1	19.4		qtz locally mixed with feldspar, incomplete qtz SGR, ~15% muscov (throughgoing) - takes up much strain, <1% biot with minor chl, S-C' fabric, muscov fish	2
H-16	255530	3783297	amphibolite	top-NE								
H-17	255526	3783303	leucogranite mylonite	top-NE	GBM, SGR	168	55.6	57.2	37.5	SGR, myrmek	biot locally chloritized, subtle biot-lined C' s. b., very little feldspar fracturing, some very large qtz grains untouched by SGR	4
H-18	255483	3783339	leucogranite mylonite	top-NE	GBM+SGR	133	60.3	57.1	30.1	SGR	pervasive feldspar SGR, subtle qtz obl GSPO, biot-lined C' s. b., minor chloritization of biot, some large qtz grains lacking SGR	4
H-19	255523	3781732	granitoid mylonite	top-NE	GBM, SGR					SGR	pervasive feldspar SGR, recrystallized qtz mixed with feldspar, subtle obl biot & GSPO, ~13% biot (no chl), mix of feldspar & qtz probably inhibits GBM grain size	4
H-20	256666	3780698	leucogranite ultramylonite	top-NE	GBM, SGR	202	52.7	55.9	34.2	SGR	~3% biot - commonly chloritized, pervasive feldspar SGR, some large qtz grains lacking SGR overprint	4
H-21	256741	3780690	amphibolite		GBM					SGR	not really mylonitic, ~25% hbl, ~5-10% biot - mostly chloritized, ~5% qtz pods with some GBM, ~50+% plag with some zones of SGR	
BP-179	240238	3772517	biotite gneiss	unclear	GBM, some SGR						minor subgrain development & SGR	4
BP-181A	240290	3772850	biotite gneiss protomylonite	top-NE	GBM, SGR	60	82.6	82	51.8		gneissic fabric, ~12% bio, ~12% epi	
BP-181B	240290	3772850	quartzite mylonite	top-NE	GBM, SGR						fol // barite (+/- calcite) veins common, subtle obl qtz GSPO, some subtle C' s. b., ~50% of biot is chloritized, pervasive sericitization of feldspar, relatively minor feldspar rxstalliz	3
											obl qtz GSPO, ~10% f-grained muscovite, qtz grains commonly	3
BP-187B	240337	3773120	biotite quartzo-feldspathic mylonite	top-NE	SGR+GBM	129	81	80	31	BLG & chemical breakdown/sericitiz, minor fracturing	C' s. b., ~10% mica (mostly biot with some chl), subtle qtz obl GSPO	3
BP-189	240335	3773137	marble mylonite								obl calcite GSPO, locally micaceous (colorless, low birefr white mica, low-Fe chl?), finely-recrystallized calcite	1
BP-190	240333	3773139	quartzite mylonite	top-NE	BLG, SGR	108	18.6	18.6	4.3		~7% white mica, C' s. b., qtz basal slip interpreted to be dominant	1
BP-192	240319	3773174	micaceous-calcareous phyllite mylonite	(unoriented)	minor BLG							1
BP-193	240322	3773187	marble mylonite	top-NE	minor subgrain development						~5% rounded/subgr qtz grains, subtle calcite obl GSPO	1
BP-194	240316	3773195	quartzite mylonite	top-NE	BLG	125	7.8	7.8	2.1		qtz ribbons with BLG along margins, ~5-10% white mica, C' s. b., mica fish, late kinematic veins (qtz, barite, calcite, chl)	1
BP-195	240325	3773202	quartzite/meta-arkose mylonite	(unoriented)	BLG						subtle qtz obl GSPO, ~5% white mica	1
BP-199	240240	3773228	marble mylonite	top-NE	minor qtz subgrains & BLG, fracturing						obl calcite GSPO, ~5% biot+muscov, ~5% qtz detritus	1
BP-201	240256	3773253	marble mylonite	top-NE							subtle obl fol defined by white mica (~3%, minor chl), rounded/subr barite (synmylon?)	1
BP-202	240286	3773276	marble mylonite	top-NE							subtle obl GSPO, up to 5% mica (biot & white mica), zones of qtz silt	1
BP-204A	240362	3773332	marble mylonite	top-NE							synkin calcite & barite veins, ~5% biot concentrated in layers (minor chl), obl calcite GSPO	1
BP-13-1	240239	3773236	calcareous quartzite mylonite	unclear	SGR						isoclinal micro folds with fol // axial traces are common, small recrystallized grain size for SGR	1
BP-13-4	240275	3773286	calcareous quartzite mylonite	unclear	BLG						cataclastic overprint of calc qtzite, very fine qtz grain size	1
										fracturing, sweeping extinction, grain boundary sliding?, minor subgrain development; grain size analysis on quartz veinlet that cuts foliation at high angle		
BP-C2	240263	3773211	aplite mylonite	top-NE	BLG	160	6.7	6.7	2.1		~7% mica (mostly muscov, minor chl & biot), obl qtz GSPO, synkin barite+quartz veins	1
											~10% mica (mostly muscov, minor chl, biot), obl qtz GSPO, disaggregated & chloritized gamet (1), postmylonitic calcite veins	
7C2	238410	3772110	aplite mylonite	top-NE	SGR, BLG	52	29.6	29.6	10.3	minor SGR; grain boundary sliding?		2

14-4-294	249142	3778970	leucogranite mylonite	top-SW	GBM	74	96.8	98.5	48.1	SGR	long Qtz single-layer grains lacking SGR common, pervasive feldspar SGR, minor chloritization of biot, subtle obl Qtz GSPO	4
14-5-298	249435	3779494	leucogranite mylonite	top-NE	GBM	78	90.8	85.7	59.4	SGR, myrmek.	very minor chloritization of biot, synkin titanite, C' s.b.	4
14-5-301	249446	3780707	marble mylonite	unclear							relatively clean marble with finely recrystallized mylonite	1
14-5-315	237948	2771734	marble								relatively coarse-grained marble	
14-5-317	237935	3771711	calc-silicate								tremolite marble	
											~10% chl, trace non-chloritized biot, ~5% epi, Qtz well-mixed with feldspar in many places (Qtz grain size estimate somewhat unreliable in this sample due to lack of pure Qtz layers), Qtz obl GSPO, C' s.b., locally some fol-// cataclasis	2
15-JS-74	264984	3779444	quartzofeldspathic mylonite	top-NE	SGR, minor BLG	58	38.6	38.8	12.3	BLG, SGR?	S-C-C' fabric, incomplete quartz recrystallization, ~25% muscovite, minor feldspar appears to have undergone subgrain development	1
16-3-BP1	240282	3773252	micaceous quartzite	top-NE	SGR+BLG	130	13.8	14.1	4.2			

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Swansea samples

<u>Sample</u>	<u>UTM Easting (m)*</u>	<u>UTM Northing (m)</u>	<u>Sample description</u>	<u>Sense of shear</u>	<u>Qtz recrystalliz.</u>	<u>median qtz diameter (μ)</u>	<u>Feldspar deformation</u>	<u>additional microstructures, comments</u>	<u>Def. conditions category**</u>
5-169	230296	3775048	Granodiorite	top-NE	SGR	~30-50	fracturing, BLG rextalliz.	obl. qtz GSPO: 27° (11-40°), σ - & δ -clasts, C' s.b. (15-30°), catacl., myrmek.	2
5-203	229512	3776811	Granodiorite	top-NE	SGR	32 ± 3	fracturing, BLG rextalliz.,	obl. qtz GSPO: 31° (14-42°), σ -clasts, C' s.b. (16-30°), myrmek.	2
5-174	231406	3775139	Granodiorite	top-NE	SGR	~20-40	fracturing, BLG rextalliz.	obl. qtz GSPO: 19° (7-25°), qtz ribbons, σ -clasts, C' s.b. (15-33°), catacl.,	2
5-155	232846	3774467	Quartz diorite	top-NE	SGR, GBM		fracturing, BLG rextalliz.,	local obl. qtz GSPO (subtle), qtz ribbons, σ -clasts, C' s.b. (16-38°), syn-kinematic	2
8-224	226966	3780859	Granite	top-NE	SGR	56 ± 10	fracturing, BLG rextalliz.	obl. qtz GSPO: 28° (13-36°), σ - & δ -clasts, C' s.b. (20-35°), myrmek., fl. Perthite	2
8-193	230652	3777843	Granite	top-NE	SGR, GBM	63 ± 10	fracturing, BLG rextalliz.,	obl. qtz GSPO: 18° (12-33°), σ - & δ -clasts, C' s.b. (14-30°), myrmek., fl. Perthite	2
1-51	229440	3779858	Granodiorite	top-NE	SGR, GBM	55 ± 9	fracturing, BLG rextalliz.	obl. qtz GSPO: 22° (10-34°), σ -clasts, C' s.b. (14-30°), myrmek.	2
9-1	232708	3776734	Granodiorite	top-NE	SGR	~30-55	fracturing, BLG rextalliz.	obl. qtz GSPO: 18° (14-28°), σ - & δ -clasts, C' s.b. (13-35°), myrmek., fl. Perthite	2
2-41	232737	3784401	Granite	top-NE	SGR	26 ± 2	fracturing, BLG rextalliz.	obl. qtz GSPO: 15° (9-26°), σ - & δ -clasts, C' s.b. (15-30°), catacl., myrmek., fl.	2
6-170	235121	3783226	Granite	top-NE	SGR	46 ± 7	fracturing, BLG rextalliz.	obl. qtz GSPO: 31° (11-35°), σ -clasts, C' s.b. (18-33°), catacl., myrmek., fl.	2
2-144	239160	3779399	Granite	top-NE	BLG II	~15-25	fracturing, BLG rextalliz.	obl. qtz GSPO: 20° (12-30°), σ -clasts, qtz ribbons, C' s.b. (17-28°), catacl.,	1
2-98	239009	3782534	Granite	top-NE	SGR, BLG	~12-20	fracturing, BLG rextalliz.	obl. qtz GSPO: 23° (9-33°), σ -clasts, C' s.b. (14-30°), catacl., fl. Perthite	1
2-90	239257	3782306	Granite	top-NE	SGR, minor	16 ± 1	fracturing, BLG rextalliz.	obl. qtz GSPO: 14° (7-28°), qtz ribbons, σ -clasts, catacl., myrmek., fl. Perthite	1
1-70	239138	3783840	Granodiorite	top-NE	SGR	47 ± 7	BLG rextalliz., fracturing,	obl. qtz GSPO: 15° (8-35°), σ - & δ -clasts, C' s.b. (15-25°), myrmek., fl. Perthite	2
4-234	241433	3782661	Granodiorite	top-NE	SGR, GBM	~35-60	SGR rextalliz., BLG	C' s.b. (20-35°), σ -clasts, C' s.b. (15-25°), myrmek., fl. Perthite	3
2-152	239447	3784681	Granodiorite	top-NE	SGR	~30-55	BLG rextalliz., fracturing,	obl. qtz GSPO: 30° (10-38°), σ -clasts, C' s.b. (15-30°), myrmek.	2
6-262	241376	3783574	Granite	top-NE	SGR, minor	~15-30	fracturing, BLG rextalliz.	obl. qtz GSPO: 18° (10-30°), σ -clasts, C' s.b. (15-30°), catacl., myrmek., fl.	1
8-138	238588	3787279	Granite	top-NE	SGR	64 ± 8	fracturing, BLG rextalliz.,	obl. qtz GSPO: 25° (13-33°), σ - & δ -clasts, C' s.b. (20-30°), myrmek., fl. Perthite	2
4-464	243154	3784009	Granodiorite	top-NE	SGR, GBM	~35-55	fracturing, SGR rextalliz.,	σ -clasts, C' s.b. (13-25°), myrmek., fl. Perthite	2
9-35	240625	3788669	Granite	top-NE	SGR	~40-70	fracturing, BLG rextalliz.,	obl. qtz GSPO: 17° (9-30°), σ -clasts, myrmek., fl. Perthite	2
8-6	246035	3786154	Granodiorite	top-NE	SGR	~35-60	fracturing, BLG rextalliz.,	σ - & δ -clasts, myrmek., fl. perthite	2
5-7	247228	3787589	Granite	top-NE	SGR, minor	25 ± 2	fracturing, BLG rextalliz.	obl. qtz GSPO: 25° (8-33°), qtz ribbons, σ -clasts, C' s.b. (17-33°), myrmek., fl.	1
5-9	246989	3789220	Granite	top-NE	SGR	40 ± 4	BLG rextalliz., fracturing,	obl. qtz GSPO: 19° (11-26°), C' s.b. (20-29°), myrmek., fl. Perthite	2
5-1	250001	3787797	Granodiorite	top-NE	SGR	32 ± 4	BLG rextalliz., fracturing,	obl. qtz GSPO: 22° (12-33°), σ -clasts, C' s.b. (20-30°), myrmek., fl. Perthite	2
2-127	251049	3789401	Granodiorite	top-NE	SGR	~20-35	BLG rextalliz., fracturing,	obl. qtz GSPO: 24° (13-35°), σ -clasts, C' s.b. (14-24°), myrmek., fl. Perthite	2
1-121	260283	3790949.6	Granodiorite	top-NE	SGR, GBM	~25-45	BLG rextalliz., fracturing,	obl. qtz GSPO: 23° (9-33°), qtz ribbons, σ - & δ -clasts, C' s.b. (19-28°), myrmek.	2
1-119	259993	3791818	Granite	top-NE	SGR	48 ± 9	BLG rextalliz., fracturing,	obl. qtz GSPO: 16° (10-22°), σ - & δ -clasts, C' s.b. (19-28°), myrmek., fl. Perthite	2
5-27	258671	3793904	Granodiorite	top-NE	SGR+GBM	53 ± 8	SGR rextalliz., fracturing,	obl. qtz GSPO: 23° (13-29°), qtz ribbons, σ -clasts, C' s.b. (19-28°), myrmek., fl.	3
3-263	260406	3792182	Granite	top-NE	SGR, GBM	31 ± 4	BLG rextalliz. & fracturing,	obl. qtz GSPO: 26° (12-32°), qtz ribbons, σ -clasts, C' s.b. (13-26°), myrmek., fl.	2
5-46	258093	3795051	Granite	top-NE	SGR, GBM	43 ± 5	BLG rextalliz., fracturing,	obl. qtz GSPO: 14° (8-25°), σ - & δ -clasts, C' s.b. (15-25°), myrmek., fl. Perthite	2
5-16	260524	3793858	Granite	top-NE	SGR, minor	~20-37	fracturing, BLG rextalliz.	obl. qtz GSPO: 30° (11-34°), qtz ribbons, σ -clasts, C' s.b. (20-35°), catacl., kink	1
12-144	239691	3768399		top-NE	BLG, SGR	7.0 ± 1.8	fracturing, BLG, local SGR	beautiful S-C fabric, sheared biot, no chl	1
BP-189B	240335	3773137	ultramylonite	top-NE	SGR, GBM	77 ± 32	chemical breakdown, BLG	obl fine-grained mica (biot, chl, white mica), subtle qtz obl GSPO	2
BP-206	240237	3773221	ultramylonite	unorient	BLG		chemical breakdown, BLG,	post-kinematic calcite+barite veins, most biot is chloritized, white mica after ~10% c-grained epi, minor chloritization of biot, symmetric conjug s.b. at	1
8-221	226346	3783173		coaxial	SGR, GBM		minor BLG, local SGR	relatively high angle to fol	2

rows 1-63 from Singleton & Mosher (2012)

* UTM locations given in NAD27 Datum

**categories for deformation conditions

1: mid- to lower GS facies microstructures

2: pervasive upper GS microstructures, little to no evidence of amphibolite-facies deformation

3: lower amphibolite facies to upper GS (transitional or evidence for upper GS overprint on amphibolite-facies deformation)

4: amphibolite-facies fabric. little to no evidence for GS overprint