Bhutan
September - November 2004

** PLANAR STRUCTURES HAVE BEEN PRESENTED AS DIP DIRECTION AND DIP ANGLE

Date	Station #	GPS co-ords	GPS Elevation (m)	Sample #	Sample Description	S' features	L' features
Northeastern Bhutan: HIGHER STRUCTURAL LEVEL							
27/09/04	1	see D's notes	2,760	—	—	—	—
	2	see D's notes	2,745	BH-248	sand for fission track	—	—
	3	see D's notes	—	BH-249	sand for fission track	—	—
	4	see D's notes	2,550	—	—	—	—
29/09/04	Shumpha Camp	27°39.521'N 090°12.520'E	1,160	—	—	—	—
30/09/04	Durgang Camp	27°41.254'N 091°14.510'E	1,317	—	—	—	—
1/10/04	Yunglapung Camp	27°44.309'N 091°16.338'E	2,048	—	—	—	—
2/10/04	Chikang gong Camp	27°49.470'N 091°18.722'E	2,557	—	—	—	—
3/10/04	Thangkarma Camp	27°53.476'N 091°19.472'E	2,947	—	—	—	—
5/10/04	5	27°'58.395'N 091°18.223'E	3,850	BH-250	migmatite for fission track	s.f: 330/50 328/50 336/65	—
6/10/04	6	27°'58.419'N 091°17.441'E	3,865	BH-352	gnt-bt gneiss for fission track	s.f: 000/15 236/45 340/25 006/28	s.l: 352-05 f.a: 270-30
	7	27°57.300'N 091°16.682'E	4,200	BH-353	bt+tour leucogranite	s.f: 270/40 302/35 048/80 sh.pl: 312/60	—
	8	27°57.341'N 091°18.005'E	3,718	—	—	s.f: 033/32 056/35	—
	—ringthang Camp	see D's notes?	4,280	—	—	—	—
10/10/04	9	27°59.402'N 091°17.919'E	4,227	BH-355	bt-tour granite for fission track		—
				BH-356	oriented bt+gnt+sill gneiss.	s.f: 260/58(?) 005/40	—
	10	27°59.163'N 091°17.878'E	4,045	BH-357	leucogranite for fission track	s.f: 020/70	—

12/10/04	11	27°00.598'N 091°16.954'E	4,818	BH-359	oriented (on bottom) bt gneiss	s.f: 025/45 023/43	—
13/10/04	12	27°58.567'N 091°22.261'E	3,540	BH-360	tour+gnt qtzite	D's notes	D's notes
				BH-361	bt+sill+gnt gneiss	D's notes	D's notes
				BH-362		D's notes	D's notes
14/10/04	Romethang Camp	27°57.740'N 091°21.538'E	3,440	—	—	—	—
15/10/04	13	27°58.567'N 091°22.261'E	3,545 (or 3,645?)	BH-263	ms+tour leucogranite for fission track	massive?	—
18/10/04	Khomakang Camp	27°45.582'N 091°16.624'E	2,005	—	—	—	—
	14	27°40.963'N 091°16.355'E	1,565	BH-367	bt+gnt+sill+ms gneiss	s.f: 314/15 a.pl: 048/44	s.l: 002-30 (// to f.a. and min. lin)
				BH-368	bt+sill+/-ms gneiss	s.f: 030/40	—
19/10/04	Khoma Camp	27°41.284'N 091°13.520'E	1,290	—	—	—	—
	Shumpha Camp	27°39.426'N 091°12.572'E (why so different from sept measure??)	1,115	—	—	—	—
20/10/04	15	27°39.939'N 091°12.287'E	1,165	—	—	s.f: 084/45 070/57 071/60	—
	16	27°39.879'N 091°12.523'E	1,192	BH-371	oriented bt+gnt+ms schist	s.f: 060/33 052/35 054/50	—
		27°39.881'N 091°12.538'E	1,194	BH-372	graphite schist	s.band: 030/56	—
		see D's notes	see D's notes	BH-373	bt quartzite	—	—
		see D's notes	see D's notes	BH-374	ky+gnt+bt+ms gneiss	s.f: 049/44	—
	17	27°39.901'N 091°12.769'E	1,214			s.f: 060/57 063/60	m.ln:128-40
	18	27°40.160'N 091°13.060'E	1,228	BH-375A BH-375B	ky+gnt+bt+ms gneiss A: boulder B: oriented	s.f: 008/50	—
	19	27°36.140'N 091°12.875'E	1,104	BH-376	bt+ms+/-gnt ultramylonite	s.f: 050/56 034/27	—

21/10/04	20	27°35.616'N 091°12.911'E	1,127	BH-377	bt+/-ms+/- gnt schist	s.f: 340/44 310/55	—
	21	27°31.700'N 091°10.853'E	1,117	BH-378	plag porphry dyke	s.f: 076/30	—
24/10/04	22	27°23.027'N 091°31.081'E	1,278	BH-396	plag porphry dyke intruding into Checkha	s.f: 350/20 s.f2: 320/59	—
25/10/04	24?	see D's notes	see D's notes	BH-297	bt+gnt+ms gneiss	—	—

Surey/Jigmecholing Section: LOWER STRUCTURAL LEVEL

29/10/04	1	26°59.692'N 090°32.984'E	1,223	BH-1	bt+gnt+ms+/- sill granite gneiss. Oriented on bottom	s.f: 020/30 014/23	—
		26°59.572'N 090°33.005'E	1,224	—	—	s.f: 044/25	—
	2	26°58.908'N 090°33.393'E	1,252	—	—	s.f: 034/31 a.pl: 344/55 347/53	f.a: 270-07 (chevron fold)
	3	26°58.735'N 090°33.404'E	1,239	BH-2A	oriented bt+gnt gneiss (intercalated w/ quartzite)	s.f: 003/90 347/45	m.ln:317-43
				BH-2B	oriented bt+gnt+ms gneiss	s.f: 232/67 213/85	f.a: 195-85 (crenulation)
	4	26°58.260'N 090°32.701'E	1,148	BH-3	bt+musc+/- gnt+/-sill gneiss	s.f: 077/35	—
	5	26°58.213'N 090°32.718'E	1,142	BH-4	bt+gnt+ms gneiss	s.f: 028/05	m.ln:026-05
				BH-5	mylonitized augen gneiss	s.f: 044/25	—
	6	26°58.260'N 090°32.701'E	1,136	BH-6	bt+gnt+mus+ k-spar augen granite(?) gneiss	s.f: 070/60 079/63	—
	7	26°58.247'N 090°33.164'E	1,106	BH-7	oriented gnt+mica schist	s.f: 069/57	—

	8	26°58.082'N 090°33.436'E	1,097	BH-8	quartzite layer in gnt+bt+ms gneiss	s.f: 083/83 032/57	—
				BH-9A	oriented bt+gnt+ms gneiss		
				BH-9B	boulder of ky bearing quartz vein boudine		
				BH-9C	foliated granite		
	9	26°57.999'N 090°33.455'E	1,083	BH-10	oriented bt+gnt+ms mylonite granite gneiss	s.f: 049/50	—
	10	26°57.835'N 090°33.349'E	1,074	BH-11	mylonitic mica+qtz schist	s.f: 042/70 053/65	m.ln: 162-60
	11	26°57.028'N 090°32.825'E	771	—	—	s0&s.f: 037/45 014/57 031/72 024/57 j.p: 184/33	—
	12	26°57.232'N 090°33.307'E	865	—	—	s0&s.f: 048/77 042/58	—
	13	26°57.635'N 090°33.579'E	964	BH-12	white mica schist (phyllite)	s0&s.f: 072/30 s.f: 056/52	—
		26°57.589'N 090°33.448'E		BH-12B	gnt+mica schist		
	14	26°57.633'N 090°33.260'E	1,017	BH-13	gnt+mica schist	s.f: 097/25	—
30/10/04	15	26°58.333'N 090°32.773'E	1,173	BH-14A	mica schist	s.f: 042/43 053/40	—
				BH-14B	mylonitized gnt+mica+tm granite gneiss		
	16	27°00.635'N 090°34.877'E	915	BH-15	gnt+mica schist of GHS	s.f: 352/40	—
	17	27°01.176'N 090°36.919'E	1,615	BH-16	granite gneiss w/ xenoliths of augen gneiss	s.f: 302/45	—
	18	—	—	BH-17	gnt+mica schist intercalated w/ quartzites	a.p: 302/45 (// to s.f)	f.a: 145-10
	19	26°58.589'N 090°33.096'E	1,231	—	gnt+mica granite	massive	—

	20	26°58.496'N 090°32.785'E	1,192	BH-18	gnt+mica schist	s.f: 052/40	—
31/10/04	Gelephu	26°52.098'N 090°29.187'E	197 (map says 210)	—	—	—	—

Sarpang - Damphu Section: LOWER STRUCTURAL LEVEL

	21	26°52.098'N 090°29.187'E	997	—	—	s.f: 320/60	—
	22	26°55.123'N 090°12.339'E	1,022	BH-19	gnt+mica schist	s.f: 341/32 342/40	—
	23	26°55.395'N 090°12.326'E	1,056	BH-20	gnt+mica psammite	s.f: 002/47 004/46	—
	24	26°55.517'N 090°12.418'E	1,078	BH-21	oriented gnt+mica granite	s.f: 349/42 345/52	m.ln:346-47
				BH-21B	oriented gnt+mica granite for geochron		
	25	26°55.587'N 090°12.438'E	1,096	BH-22	granite gneiss also for geochron	s.f: 341/40 348/35	—
31/10/04	26	26°55.729'N 090°12.477'E	1,112	BH-23A	oriented? Gnt+mica mylonitized augen? gneiss	s.f: 346/47 008/50 020/50	m.ln:352-47
				BH-23B	oriented? Gnt+mica augen gneiss (seems more mylonitic than 23A)		
	27	26°55.604'N 090°12.588'E	1,140	BH-24	gnt+mica augen gneiss	s.f: 314/60	—
	28	26°55.469'N 090°12.571'E	1,158	BH-25	gnt+mica schist	s.f: 346/53 348/42 012/50	—
	29	26°55.500'N 090°12.966'E	1,215	—	gnt+mica augen gneiss	—	—
	30	26°55.583'N 090°13.076'E	1,228	—	gnt+mica augen gneiss (of GHS)	s.f: 326/52 332/55	—
	31	26°55.812'N 090°13.289'E	1,274	—	gnt+mica augen gneiss (of GHS)	s.f: 324/32	—

	32	26°56.220'N 090°13.286'E	1,329	BH-26	gnt+mica gneiss (of GHS)	s.f: 005/64 017/44	m.ln:354-43
1/11/04	33	27°00.567'N 091°04.293'E	287	BH-27	medium grained sand for fission track	—	—
	waypoint #123	27°04.133'N 090°04.250'E	355	—	GHS migmatites	dipping to NE	—
	waypoint #124	27°05.772'N 090°04.452'E	526	—	Checkha quartzites. contact b/w GHS and Checkha is just below this	s0: 058/37 (// to s.f.)	—
	Way—yter Checkpost (Wangdue-Tsirang border)	27°09.027'N 090°04.330'E	432	—	Checkha quartzites.	s0: 012/52 010/32 (// to s.f.)	—
	waypoint #126	27°13.360'N 090°04.109'E	818	—	GHS migmatites	s.f: 180/75	—
	waypoint #127	27°14.842'N 090°03.100'E	703	—	btm contact of massive leucognt intruding Checkha	—	—
	waypoint #128	27°16.599'N 090°01.476'E	647	—	upper contact of massive leucognt intruding Checkha	—	—
	waypoint #129	27°16.794'N 090°00.744'E	662	—	last o/c of Checkha dipping to the S-SE	—	—
	waypoint #130	27°23.102'N 089°54.469'E	1,139	—	GHS migmatites	s.f: 142/40	—
	waypoint #133	27°24.331'N 089°54.178'E	1,196	—	GHS migmatites	s.f: 000/20	—
	waypoint #134	27°25.598'N 089°54.144'E	1,209	—	GHS migmatites	dips to NE	—