Item DR1

Parameter	**Description**	**Value used**
Dispersions (α)	Largest acceptable angle between the predicted and actual striation.	Small (30)
Reliability factors allowed	Equal weight is assigned to fractures with probable and certain slip directions.	P and C
Parameter s	The dispersion parameter of the distribution of angular misfits between the predicted and actual direction of movement along the faults.	15
Parameter d	The threshold for the value of compatibility measure for some fault-slip datum to be compatible with a given stress/strain tensor or not.	30
Parameter q1	The angle of internal friction.	60
Parameter q2	The angle of residual friction for sliding on a preexisting fault.	11/35
Stress Parameter (x10)	Defines the importance of friction along the faults. A high value favors mechanically acceptable results.	20

* All parameters descriptions are based on the T-Tecto 3.0 Manual.

Item DR2

Key to data table

Column Names		
Transect	Outcrop and photograph name (if available)	
Rock Type	Dominant rock type in outcrop	see Rock Type Abbreviations key below
Strike	Strike of fracture	
Dip	Dip of fracture	
Direction	Cardinal direction of dip of fracture	
Trend	Trend of striation (if striation exists)	
Plunge	Plunge of striation	
Slip	Interpreted slip direction based on inference from separation or true slip in the field	Other fractures may have had separation, but table only lists if slip was able to be determined

Abbreviations		Description
ROCK TYPES		
alt. ton.	"Altered" tonalite	No chemical alteration, description for outcrops that have a strongly altered appearance because of the distinct brown color (probably due to weathering of the biotite) and crumbly appearance
bx	Breccia layer or zone	
fg	Fine grained	
ton	Tonalite	
uc	Ultracataclasite	
carb	carbonate	
SLIP SENSE		
n	normal	
d	dextral	
d	thrust	
s	sinistral	

Fault core data *For full data table, please contact aluther1228@gmail.com

Transect	rock type	strike	dip	direction	trend	plunge	slip
YR1	uc/bx	261	30	n	266	3	
YR1	uc/bx	125	78	s			
YR1	uc/bx	114	59	s			
YR1	uc/bx	300	82	n			
YR1	uc/bx	285	89	n			
YR1	uc/bx	235	66	w			
YR1	uc/bx	282	33	n			
YR1	uc/bx	250	86	n			
YR1	uc/bx	275	25	n			
YR1	uc/bx	290	43	n	323	27	
YR1	uc/bx	302	38	n			
YR1	uc/bx	144	45	sw			
YR1	uc/bx	331	86	n			
YR1	bx	260	89	n			
YR1	bx	302	44	n	20	35	
YR1	bx	14	25	e	36	10	
YR1	bx	316	20	n			s
YR1	bx	321	55	ne			d
YR1	bx	317	27	n			s
YR1	bx	273	2	n			
YR1	bx	316	33	n			
YR1	bx	313	52	n			
YR1	bx	92	65	s			
YR1	bx	145	68	w			
YR1	uc/bx	18	17	e			
YR1	uc/bx	258	32	n			
YR1	uc/bx	266	36	n			
YR1	uc/bx	276	38	n	281	4	
YR1	uc/bx	252	39	n			
YR1	uc/bx	273	39	n			
YR1	uc/bx	301	42	n			
YR1	uc/bx	238	43	w			
YR1	uc/bx	144	45	s			
YR1	uc/bx	141	57	s			
YR1	uc/bx	70	78	s			
YR1	uc/bx	325	83	n			
YR1	uc/bx	325	87	n	327	35	
YR1	uc/bx	235	88	w			
YR3euc	uc/bx	277	47	n			d
YR3euc	uc/bx	279	42	n			d
YR3euc	uc/bx	190	83	w	196	43	n
YR3euc	uc/bx	168	75	w	194	59	n

YR3euc	uc/bx	7	73	e			n
YR3euc	uc/bx	180	75	w	205	58	n
YR3euc	uc/bx	12	78	e			n
YR3euc	uc/bx	355	72	e	53	69	t
YR3euc	uc/bx	6	80	e	178	39	t
YR3euc	uc/bx	181	84	w	187	44	t
YR3euc	uc/bx	182	88	w			t
YR3euc	uc/bx	305	40	n			
YR3euc	uc/bx	293	58	n	60	52	
YR3euc	uc/bx	268	53	n			
YR3euc	uc/bx	183	80	w	198	56	
YR3euc	uc/bx	295	47	n			
YR3euc	uc/bx	290	62	n	348	57	
YR3euc	uc/bx	299	63	n			
YR3euc	uc/bx	265	15	n	5	15	
YR3euc	uc/bx	295	23	n	39	23	
YR3euc	uc/bx	313	32	n	47	32	
YR3euc	uc/bx	309	32	ne			
YR3euc	uc/bx	119	33	s			
YR3euc	uc/bx	253	35	n			
YR3euc	uc/bx	308	40	n			
YR3euc	uc/bx	305	46	n	5	42	
YR3euc	uc/bx	280	55	n			
YR3euc	uc/bx	191	62	w	213	35	
YR3euc	uc/bx	141	65	w	186	57	
YR3euc	uc/bx	0	68	e			
YR3euc	uc/bx	8	70	e	51	62	
YR3euc	uc/bx	265	70	n	358	70	
YR3euc	uc/bx	177	73	w	197	48	
YR3euc	uc/bx	13	73	e	172	50	
YR3euc	uc/bx	17	74	e			
YR3euc	uc/bx	180	74	w			
YR3euc	uc/bx	355	77	e			
YR3euc	uc/bx	3	81	e	177	35	
YR3euc	uc/bx	189	81	w	197	41	
YR3euc	uc/bx	178	84	w	186	53	
YR3euc	uc/bx	183	85	w	188	47	
YR3euc	uc/bx	175	88	w	179	66	
YR3euc	uc/bx	355	89	e	171	76	
YR3euc	uc/bx	173	89	w			
YR3euc	uc/bx	358	89	e			
YR4	uc	324	34	e	325	1	d
YR4	pegmatite bx	167	63	w			n
YR4	uc/bx	346	87	e			n
YR4	uc/bx	346	87	e			n

YR4	uc/bx	356	88	e	170	71	n
YR4	uc/bx	356	88	e	170	71	n
YR4	pegmatite bx	37	59	e	100	56	n
YR4	pegmatite bx	164	75	w			n
YR4	pegmatite bx	347	76	e			n
YR4	uc	180	69	w	230	63	n
YR4	uc	336	62	e			n
YR4	uc	17	85	e	194	35	n
YR4	uc	12	84	e			n
YR4	uc	181	69	w	200	40	n
YR4	uc	340	66	e			n
YR4	uc	342	78	e	86	78	n
YR4	uc/bx	0	86	e	154	81	n
YR4	pegmatite bx	184	83	w	349	64	t
YR4	uc	180	80	w	183	17	t
YR4	uc	186	76	w			t
YR4	uc	201	82	w			t
YR4	uc	191	83	w	330	79	t
YR4	pegmatite bx	265	47	n	340	46	t
YR4	pegmatite bx	7	78	e			t
YR4	uc/bx	3	90	e	3	62	s
YR4	uc/bx	3	90	e	3	62	s
YR4	pegmatite bx	180	73	w	213	61	s
YR4	uc	180	84	w	185	42	s
YR4	uc/bx	158	72	w	182	51	t
YR4	uc/bx	158	72	w	182	51	t
YR4	uc/bx	347	85	e			
YR4	uc/bx	347	85	e			
YR4	uc/bx	360	75	e			
YR4	uc/bx	360	75	e			
YR4	uc/bx	345	82	e			
YR4	uc/bx	345	82	e			
YR4	uc/bx	343	85	e	149	70	
YR4	uc/bx	343	85	e	149	70	
YR4	uc/bx	180	86	w	315	84	
YR4	uc/bx	180	86	w	315	84	
YR4	uc/bx	352	89	e	171	55	
YR4	uc/bx	352	89	e	171	55	
YR4	bx	255	70	n	355	69	
YR4	pegmatite bx	292	72	n			
YR4	pegmatite	0	83	e			

	bx						
YR4	pegmatite bx	290	47	n			
YR4	pegmatite bx	7	10	e	162	4	
YR4	pegmatite bx	35	19	e			
YR4	pegmatite bx	11	21	e	183	3	
YR4	pegmatite bx	35	41	e	210	5	
YR4	pegmatite bx	290	45	n	354	41	
YR4	pegmatite bx	288	46	n			
YR4	pegmatite bx	302	48	ne	19	48	
YR4	pegmatite bx	291	50	n	310	23	
YR4	pegmatite bx	285	54	n	328	44	
YR4	pegmatite bx	295	56	n	357	52	
YR4	pegmatite bx	274	59	n	0	59	
YR4	pegmatite bx	345	61	e			
YR4	pegmatite bx	283	70	n	323	61	
YR4	pegmatite bx	280	71	n	70	56	
YR4	pegmatite bx	169	72	w			
YR4	pegmatite bx	178	75	w	257	75	
YR4	pegmatite bx	355	79	e	161	51	
YR4	pegmatite bx	4	83				
YR4	pegmatite bx	166	84	w			
YR4	pegmatite bx	0	86	e			
YR4	uc	177	71	w	273	71	
YR4	uc	317	24	ne	10	19	
YR4	uc	315	27	e	17	24	
YR4	uc	295	28	n	343	21	
YR4	uc	271	30	n			
YR4	uc	307	36	ne	355	28	
YR4	uc	283	39	n			
YR4	uc	272	40	n			
YR4	uc	172	67	w			
YR4	uc	162	68	w			
YR4	uc	292	72		46	70	

YR4	uc	155	73	w	194	64	
YR4	uc	175	75	w	215	67	
YR4	uc	355	75	e			
YR4	uc	9	77	e			
YR4	uc	172	78	w	193	60	
YR4	uc	175	84	w			
YR4	uc	330	86	e	132	77	
YR4	uc	0	87	e	56	86	
YR4	uc	338	90		158	53	
YR5	uc/bx	345	90		165	74	w up
YR5	uc/bx	164	78	w	240	78	
YR5	uc/bx	357	85	e	65	85	
YR5	uc/bx	1	73	e	172	27	
YR5	uc/bx	170	90				e up
YR5	uc/bx	170	90				e up
YR5	uc/bx	9	74	e			n
YR5	uc/bx	9	74	e			n
YR5	uc/bx	357	65	e			n
YR5	uc/bx	357	78	e	53	76	n
YR5	uc/bx	357	65	e			n
YR5	uc/bx	357	78	e	53	76	n
YR5	uc	314	75	e			n
YR5	uc/bx	182	77	w			t
YR5	uc/bx	182	77	w			t
YR5	uc/bx	165	85	w	182	73	t
YR5	uc/bx	165	85	w	182	73	t
YR5	uc/bx	338	80	e			t
YR5	uc/bx	338	80	e			t
YR5	uc/bx	332	84	e			t
YR5	uc/bx	332	84	e			t
YR5	uc	345	72	e	22	62	t
YR5	uc/bx	340	85	e			t
YR5	uc/bx	340	85	e			t
YR5	uc/bx	345	90		165	74	w up
YR5	uc/bx	1	73	e	172	27	
YR5	uc/bx	164	78	w	240	78	
YR5	uc/bx	347	82	e			
YR5	uc/bx	347	82	e			
YR5	uc/bx	357	85	e	65	85	
YR5	uc/bx	351	85	e			
YR5	uc/bx	351	85	e			
YR5	uc/bx	2	86	e			
YR5	uc/bx	2	86	e			
YR5	uc/bx	351	87	e			

YR5	uc/bx	351	87	e			
YR5	bx	250	25	n	310	22	
YR5	bx	44	27	se			
YR5	bx	311	36	ne	58	35	
YR5	bx	291	25	n	0	24	
YR5	bx	318	32	ne			
YR5	bx	285	35	n			
YR5	bx	291	43	n	330	31	
YR5	bx	283	45	n			
YR5	bx	305	47	n			
YR5	bx	346	50	e	34	42	
YR5	bx	318	54	ne	0	43	
YR5	bx	351	68	e			
YR5	bx	345	74	e			
YR5	bx	340	76	e			
YR5	bx	183	81	w			
YR5	bx	356	82	e	118	81	
YR5	uc	280	20	n			
YR5	uc	292	22	n			
YR5	uc	302	27	n	35	27	
YR5	uc	308	27	ne			
YR5	uc	271	31	n	22	29	
YR5	uc	285	33	n	338	28	
YR5	uc	263	33	n	10	32	
YR5	uc	300	34	n	13	33	
YR5	uc	282	35	n	333	29	
YR5	uc	279	43	n	60	30	
YR5	uc	68	43	se	132	40	
YR5	uc	301	44	ne			
YR5	uc	355	45	e	42	37	
YR5	uc	280	47	n	45	42	
YR5	uc	275	48	n			
YR5	uc	275	84	n	296	74	
YR5	uc	340	87	e	350	74	
YR5	uc	171	87	w			

Damage zone data *For full data table, please contact aluther1228@gmail.com

Transect	Rock Type	Strike	Dip	Direction	Trend	Plunge	Slip
YR1	fg bx	135	64	w			d
YR1	alt. ton	32	40	e			
YR1	ton	11	26	e			d
YR1	alt. ton	276	56	n			t
YR1	alt. ton	274	70	w	306	54	
YR1	ton	55	81	se			d
YR1	fg bx	347	55	e			s
YR1	ton	165	68	w			s
YR1	fg bx	45	70	se			d
YR1	alt. ton	252	74	nw	70	9	t
YR1	alt. ton	48	34	e	155	32	n
YR1	ton	253	70	n			s
YR1	alt. ton	254	85	n			s
YR1	fg bx	288	66	n			
YR1	fg bx	337	60	e			
YR1	alt. ton	8	47	e			
YR1	fg bx	265	80	e			
YR1	alt. ton	338	60	e			
YR1	alt. ton	5	35	e			
YR1	alt. ton	43	28	e			
YR1	alt. ton	267	45	n			
YR1	bx	273	80	n			
YR1	bx	278	56	n			
YR1	bx	285	29	n			
YR1	bx	351	56	e			
YR1	bx	53	68	se			
YR1	fg bx	345	75	ne			
YR1	fg bx	357	39	e			
YR1	fg bx	23	46	e			
YR1	ton	340	53	e			
YR1	ton	172	36	w			
YR1	alt. ton	10	88	e			
YR1	fg bx	306	20	n			
YR1	ton	10	42	e			d
YR1	ton	210	32	w			
YR1	fg bx	345	50	e			
YR1	alt. ton	245	90	n			
YR1	alt. ton	164	68	w			
YR1	ton	212	3	w			d
YR1	alt. ton	355	35	e			
YR1	alt. ton	266	24	n			

YR1	ton	345	69	e			d
YR1	fg bx	24	53	e			
YR1	ton	29	70	e			
YR1	alt. ton	142	84	w			
YR1	ton	58	14	se			
YR1	alt. ton	27	33	e			n
YR1	ton	6	86	e			
YR1	ton	160	70	w			
YR1	ton	165	70	w			
YR1	ton	167	75	w			
YR1	ton	169	76	w			
YR1	ton	313	34	n			
YR1	alt. ton	256	66	n	325	64	
YR1	fg bx	224	43	e			
YR1	alt. ton	105	85	s	252	80	s
YR1	ton	182	68	w			d
YR1	fg bx	56	44	se			d
YR1	alt. ton	270	66	n	356	66	t
YR1	alt. ton	265	73	n			t
YR1	alt. ton	104	70	s			s
YR1	alt. ton	58	56	se			s
YR1	ton	58	60	se	228	17	dt
YR1	alt. ton	60	58	se			n
YR1	alt. ton	265	43	n	335	41	t
YR1	alt. ton	110	71	s			t
YR1	alt. ton	249	70	w			s
YR1	alt. ton	254	70	n			s
YR1	alt. ton	306	47	n	119	8	dt
YR1	alt. ton	305	87	ne			d
YR1	ton	75	56	s			s
YR1	ton	50	66	se			t
YR1	ton	68	80	s			s
YR1	ton	270	78	n			n
YR1	ton	86	59	s			d
YR1	alt. ton	3	30	e	156	16	d
YR1	ton	78	84	s			ts
YR1	ton	86	75	s			st
YR1	alt. ton	357	69	e			
YR1	ton	265	69	n	334	66	
YR1	ton	61	71	se			
YR1	alt. ton	359	84	e			
YR1	ton	64	30	se			
YR1	alt. ton	22	25	e			
YR1	alt. ton	258	76	n			d
YR1	alt. ton	310	46	n	96	30	d
YR1	alt. ton	248	81	n	346	81	

YR1	ton	260	68	n	279	38	n
YR1	alt. ton	0	51	e			s
YR1	alt. ton	272	86	n	314	84	
YR1	alt. ton	245	44	w	350	43	
YR1	ton	82	62	s	135	55	
YR1	alt. ton	222	23	w	273	18	
YR1	ton	9	28	e	45	19	
YR1	alt. ton	185	83	w	268	83	
YR1	ton	22	73	e	193	27	
YR1	alt. ton	277	64	n			
YR1	alt. ton	282	50	n			
YR1	alt. ton	293	86	n			
YR1	alt. ton	309	12	n			
YR1	alt. ton	330	27	e			
YR1	alt. ton	334	49	e			
YR1	alt. ton	340	62	e			
YR1	alt. ton	15	75	e			
YR1	alt. ton	95	78	s			
YR1	alt. ton	211	90	n			
YR1	alt. ton	216	90	n			
YR1	alt. ton	236	86	n	244	64	
YR1	alt. ton	240	90	n			
YR1	alt. ton	252	64	n			
YR1	alt. ton	261	76	n			
YR1	alt. ton	264	72	n			
YR1	fg bx	176	62	w			
YR1	fg bx	209	13	e			
YR1	fg bx	252	83	n			
YR1	ton	293	25	n			
YR1	ton	340	82	n			
YR1	ton	35	36	e			
YR1	ton	35	60	e			
YR1	ton	40	34	e			
YR1	ton	49	64	se			
YR1	ton	70	83	s			
YR1	ton	81	59	s			
YR1	ton	108	39	s			
YR1	ton	135	26	w			
YR1	ton	172	72	w			
YR1	ton	191	63	w			
YR1	ton	248	83	n			
YR1	ton	259	53	n			
YR1	ton	265	68	n			
YR2	alt. ton	328	27	ne			d
YR2	alt. ton	271	79	n	292	61	n
YR2	alt. ton	47	72	e			n

YR2	alt. ton	313	22	n			d
YR2	alt. ton	81	32	s			
YR2	alt. ton	295	37	n	90	18	
YR2	alt. ton	22	25	e			
YR2	alt. ton	293	37	n			
YR2	alt. ton	271	75	n			n
YR2	alt. ton	262	63	n			n
YR2	alt. ton	37	77	se	194	59	n
YR2	alt. ton	40	72	se			n
YR2	alt. ton	50	59	se			n
YR2	alt. ton	71	84	s	87	69	n
YR2	alt. ton	253	74	n	21	70	n
YR2	alt. ton	65	63	se	103	50	
YR2	alt. ton	70	61	s	180	59	n
YR2	alt. ton	225	89	w	227	68	n
YR2	alt. ton	320	33	ne	40	33	
YR2	alt. ton	275	50	n			
YR2	alt. ton	275	13	n			
YR2	alt. ton	280	25	n			
YR2	alt. ton	308	34	n			
YR2	alt. ton	335	24	ne			
YR2	alt. ton	335	72	ne			
YR2	alt. ton	37	41	se			
YR2	alt. ton	73	75	s			
YR2	alt. ton	81	80	s			
YR2	alt. ton	179	67	w			
YR2	alt. ton	263	87	n			
YR3e alt ton		355	60	e			d
YR3e alt ton		163	66	w			n
YR3e alt ton		355	28	e	0	4	s
YR3e alt ton		16	22	e			nd
YR3e alt ton		318	39	ne	0	28	n
YR3e alt ton		155	75	w			
YR3e alt ton		299	38	ne	68	30	
YR3e alt ton		315	17	ne	0	12	
YR3e alt ton		333	34	ne	13	23	
YR3e alt ton		295	49	ne	335	37	
YR3e alt ton		1	74	e			

YR3e alt ton		67	30	s			
YR3e alt ton		262	38	n			
YR3e alt ton		168	69	w	303	61	n
YR3e alt ton		50	44	se			n
YR3e alt ton		280	14	n	325	10	d
YR3e alt ton		271	54	n			
YR3e alt ton		35	22	se			n
YR3e alt ton		3	13	e	115	13	
YR3e alt ton		290	48	ne			
YR3e alt ton		308	53	ne			
YR3e alt ton		120	10	s	125	1	d
YR3e alt ton		285	51	n			
YR3e alt ton		272	38	n			
YR3e alt ton		340	35	e	5	16	d
YR3e alt ton		11	13	e	30	4	d
YR3e alt ton		247	71	n	302	67	n
YR3e alt ton		265	56	n	60	33	n
YR3e alt ton		5	43	e	107	43	t
YR3e alt ton		333	37	ne			nd
YR3e alt ton		305	11	ne	76	9	nd
YR3e alt ton		7	33	e			nd
YR3e alt ton		77	33	s			
YR3e alt ton		275	77	n	308	67	
YR3e alt ton		275	66	n	77	35	
YR3e alt ton		320	45	ne	37	44	
YR3e alt ton		346	36	e	88	35	

YR3e alt ton		3	40	e	113	38	
YR3e alt ton		55	26	se	172	23	
YR3e alt ton		95	38	s	176	37	
YR3e alt ton		256	86	n			
YR3e alt ton		15	11	e	66	9	
YR3e alt ton		295	45	n			
YR3e alt ton		297	40	n			
YR3e alt ton		306	34	ne			
YR3e alt ton		331	40	e			
YR3e alt ton		335	57	e			
YR3e alt ton		351	54	e			
YR3e alt ton		68	77	se			
YR3e alt ton		95	87	s			
YR3e alt ton		95	35	s			
YR3e alt ton		161	57	w			
YR3e alt ton		162	78	w			
YR3e alt ton		291	47	n			d
YR3e alt ton		288	52	n	61	43	
YR3e alt ton		295	38	n	67	32	n
YR3e alt ton		346	44	e			s
YR3e alt ton		310	37	ne	110	14	d
YR3e alt ton		55	20	se	160	20	n
YR3e alt ton		279	25	n	337	22	dr
YR3e alt ton		53	15	se	124	14	n
YR3e alt ton		12	70	e			tensile
YR3e alt ton		171	74	w			tensile

YR3e alt ton		275	43	n	69	23	
YR3e alt ton		292	56	n	95	24	
YR3e alt ton		295	47	n	340	37	
YR3e alt ton		152	25	w	191	17	
YR3e alt ton		262	30	n	4	29	
YR3e alt ton		85	44	s	145	40	
YR3e alt ton		331	72	ne			
YR3e alt ton		342	72	e			
YR3e alt ton		356	55	e			
YR3e alt ton		90	22	s			
YR3e alt ton		142	72	w			
YR3e alt ton		155	79	w			
YR3e alt ton		175	60	w			

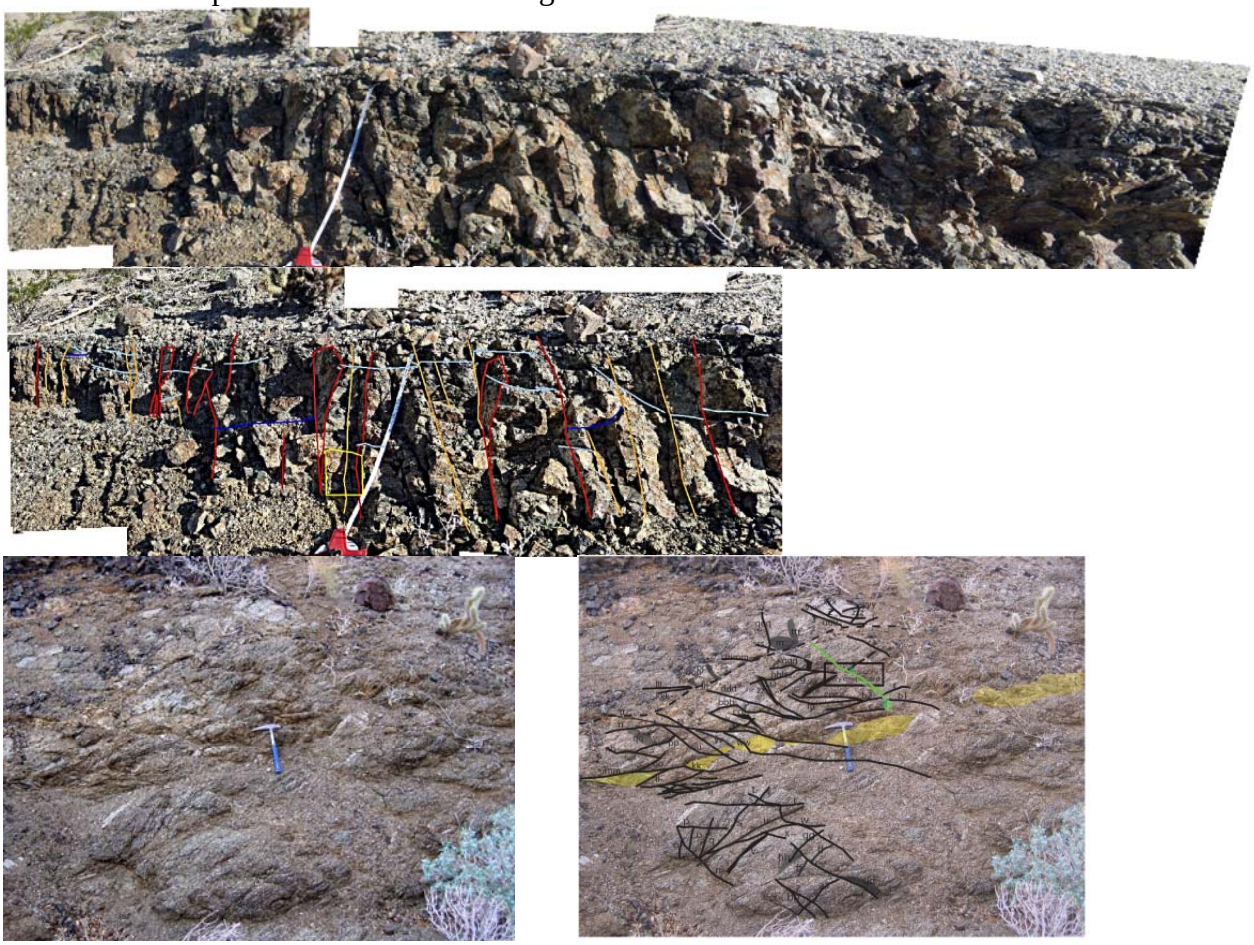
Item DR3

Yaqui Ridge field photographs and annotated field photographs of outcrops used for paleostress analyses. The first transect done during season 1 ("YR1") is not shown because we had not yet started using this photo annotation method.

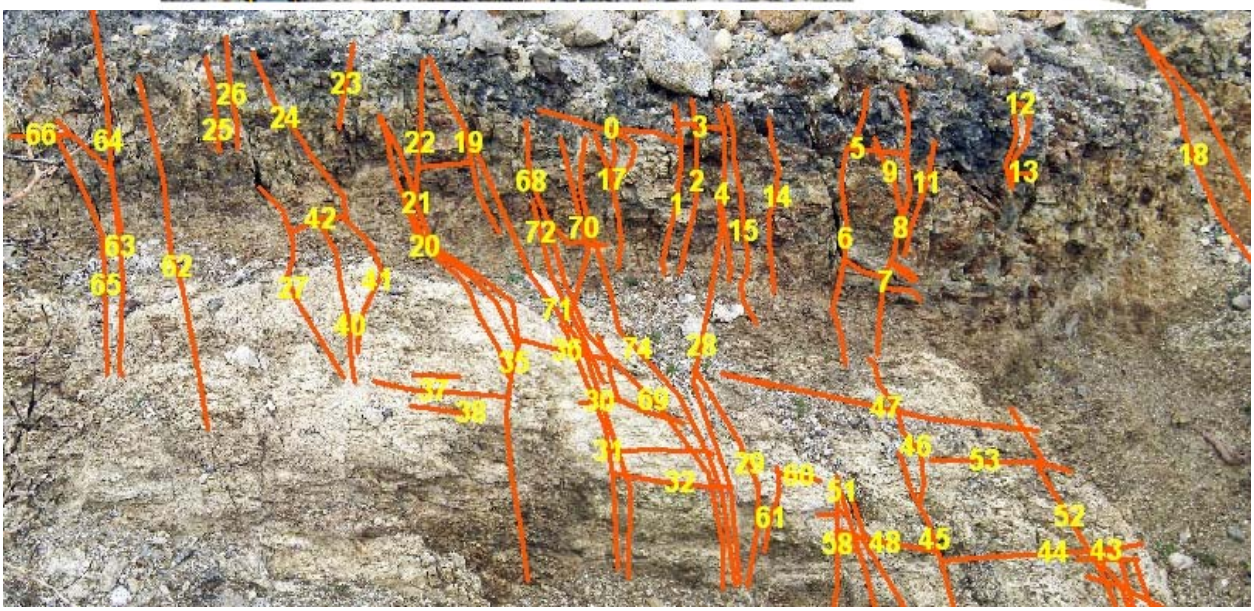
A) Yaqui Ridge transect 2 or YR2 in data tables. Photograph shows a damage zone outcrop.

B) Yaqui ridge transect 3 or YR3 in data tables. No annotated photograph available. Both fault core and damage zone shown here.

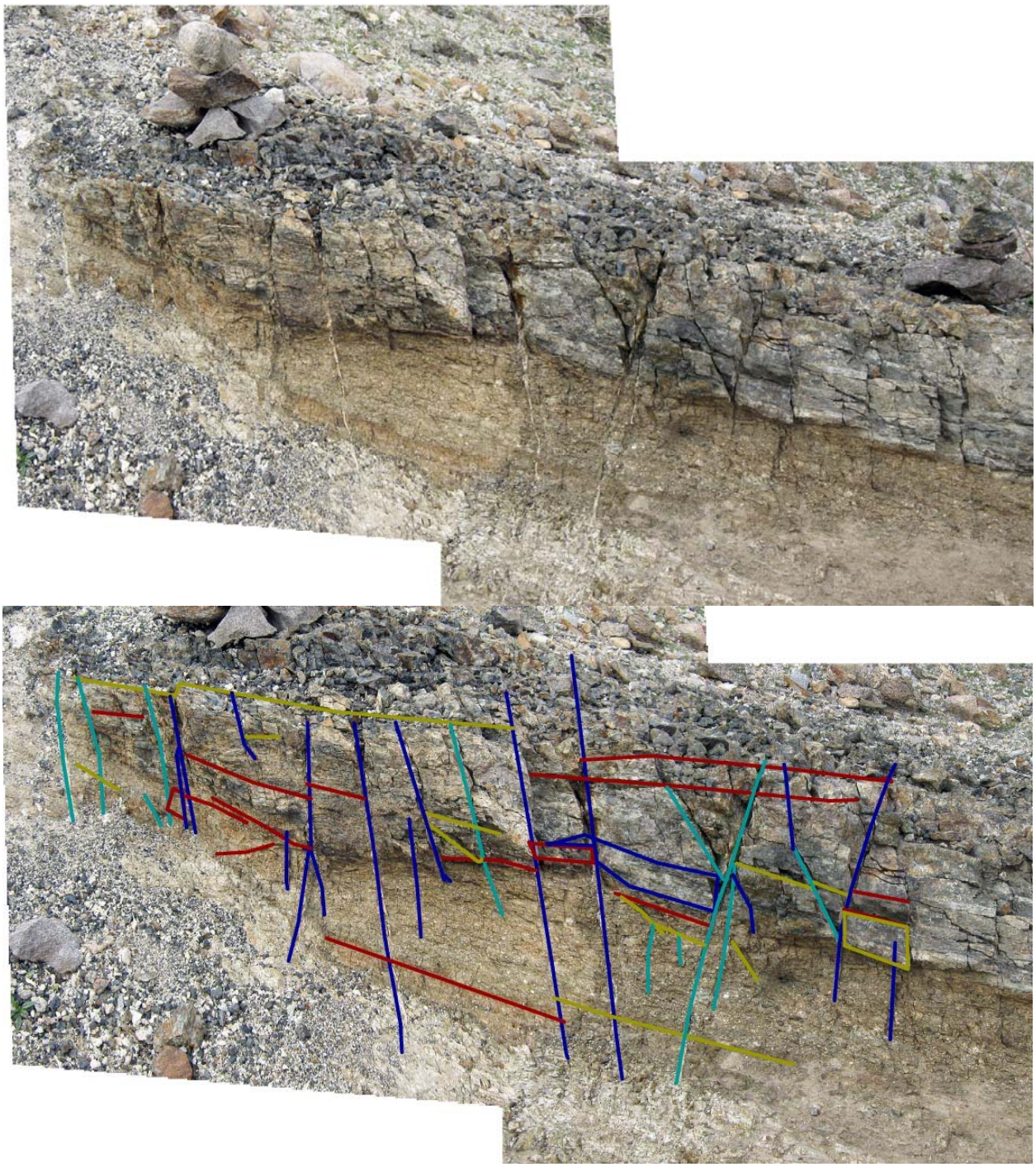
C) Yaqui ridge transect 3east or YR3east in data tables. Upper two photos are from the fault core and bottom two photos are from the damage zone.



D) Yaqui ridge transect 4 or YR4 in data tables. Outcrop of fault core.



E) Yaqui Ridge transect 5 or YR5 in data tables. Outcrop of fault core.



Item DR4

A. Panorama of overlapping outcrop photos of uppermost WSDF footwall, with view to N. WSDF lies ~10-20 cm above field of view, and slipped top-to-right. Base of ultracataclasite layer of fault core is seen in uper left, and is underlain by a cataclasite layer that is texturally isotropic, then by highly fractured, and crushed biotite-rich tonalite and aplite (white). Tensile fractures are black, promary and secondary Reidel shears are pink and green, respectively, and N-dipping, dextral-thrust (top-S), oblique-slip (or separation) fractures are orange. Bush in lower right is ~0.5 m in diameter. Outcrop is in east fork of Nolina Canyon (WGS84 Lat/Long: 33° 3'40.97"N , 116°18'53.62"W), on the north flank of the Whale Peak antiform, in a structural position very similar to Yaqui Ridge.

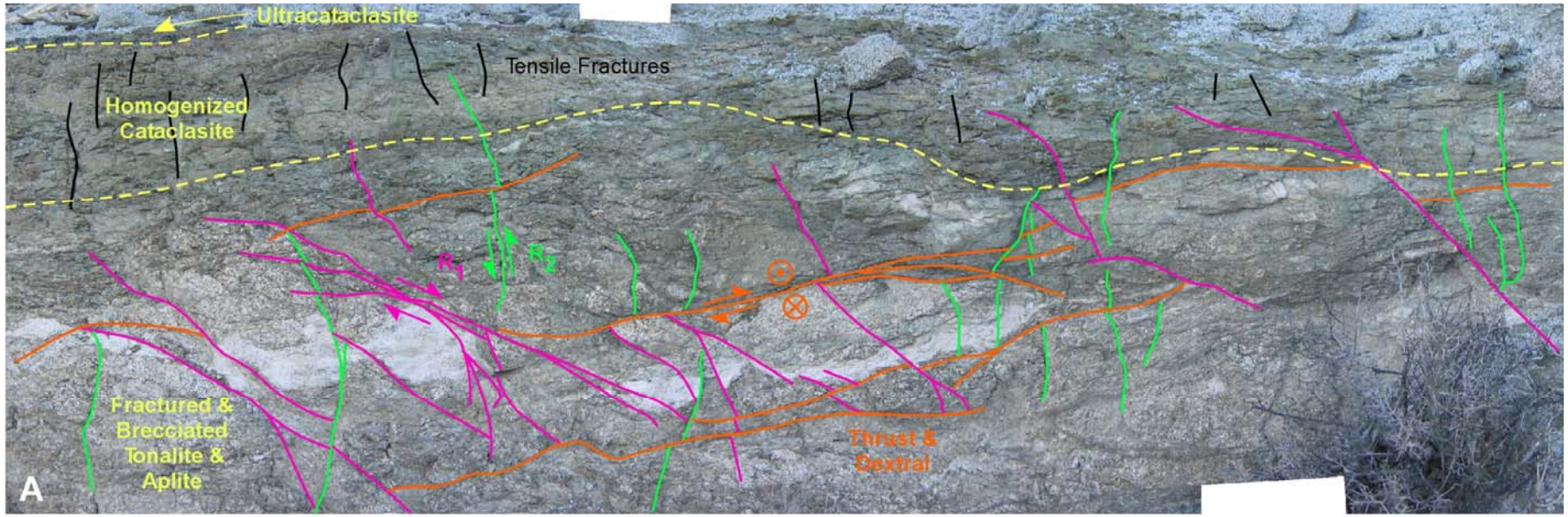
Lower hemisphere equal-area stereonets of fractures from outcrop in A (see associated Excel spreadsheet for data table):

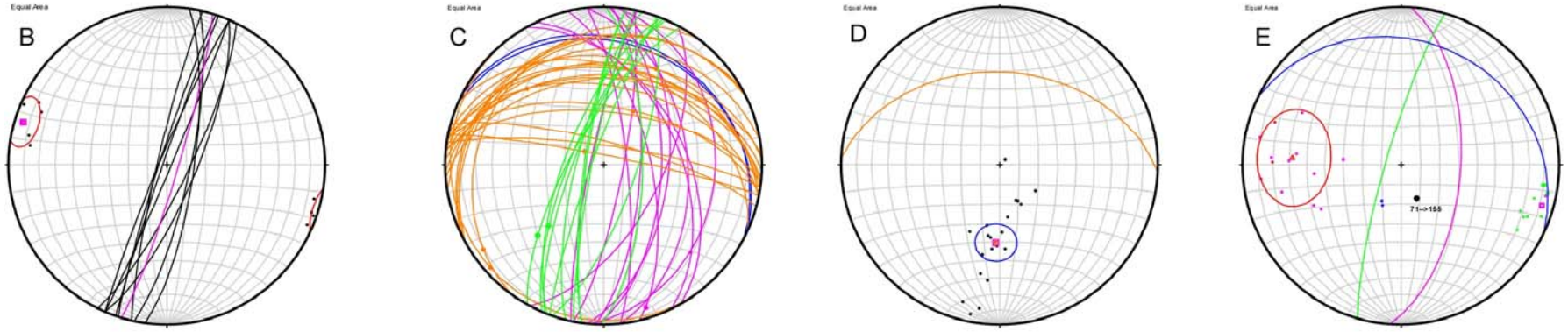
B. Tensile fractures in cataclasite layer (black great circles) and their poles (black dots). These are probably somewhat younger than the other structurally deeper fractures, which do not generally penetrate the cataclasite, suggesting that most of them had formed before or during the cataclasis that formed that layer. Pink pole and great circle are best-fit to fractures with 95% confidence ellipse.

C. Shear fractures (great circles) mostly below the cataclasite layer, with striae shown by dots. WSDF is blue; N-dipping oblique dextral-thrust fractures are orange; primary and secondary Reidel shears are pink and green, respectively.

D. Poles to N-dipping, oblique, dextral-thrust fractures (black dots), showing best-fit pole and fracture (orange box and great circle). 95% confidence ellipse is shown.

E. Best-fit primary and secondary Reidel shears and poles (pink and green, respectively) and WSDF (blue). Inferred $\sigma 1$ is black dot (oriented 71 --> 155) that bisects angle between Reidel shears.


Ultracataclasite
Tensile Fractures
Homogenized Cataclasite
R_1
R_2
Fractured & Brecciated Tonalite & Aplite
Thrust & Dextral
A


Equal Area
B
C
D
E
71->155

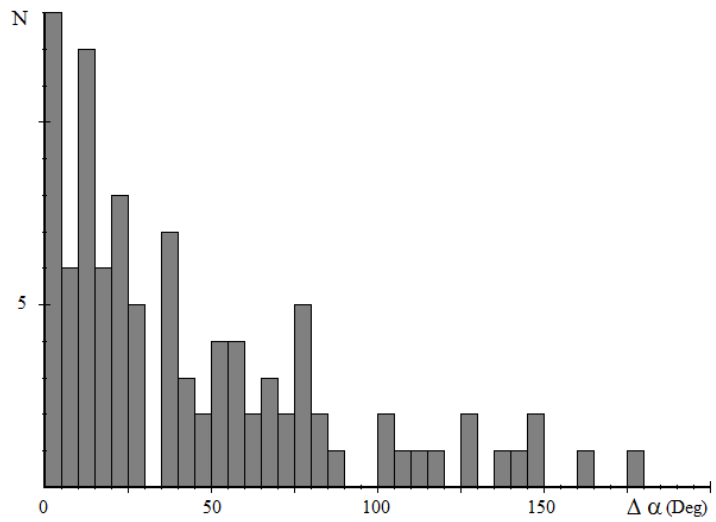
Fractures and striations from Upper East Nolina outcrop of upper WSDF footwall

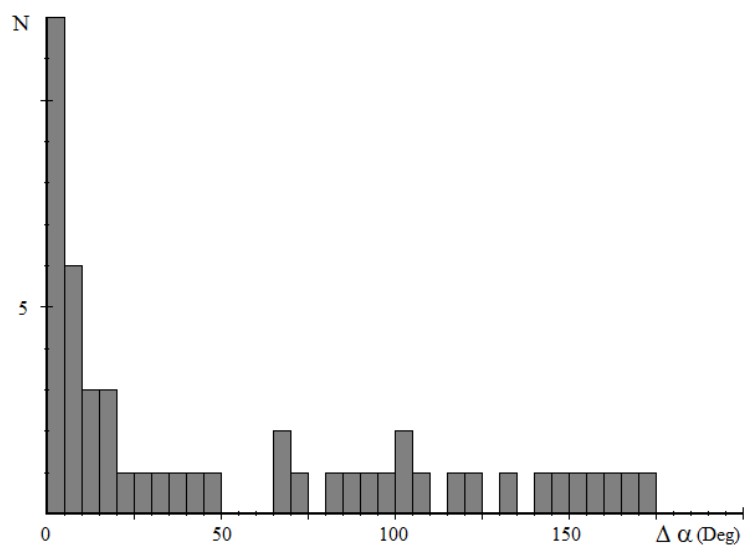
Fracture Type or Striae	strike (AZ) trend (AZ)	dip (°) plunge (°)	dip direction
WSDF	294	23	N
WSDF	298	21	N
Tensile(?) in Cataclasite	26	79	E
Tensile(?) in Cataclasite	199	88	W
Tensile(?) in Cataclasite	193	85	W
Tensile(?) in Cataclasite	198	86	W
Tensile(?) in Cataclasite	12	78	E
Tensile(?) in Cataclasite	23	75	E
Tensile(?) in Cataclasite	8	76	E
Tensile(?) in Cataclasite	23	88	E
Tensile(?) in Cataclasite	203	86	W
E-down, R1	354	78	E
E-down, R1	192	83	W
E-down, R1	11	80	E
E-down, R1	331	48	E
E-down, R1	6	56	E
E-down, R1	5	30	E
E-down, R1	2	60	E
E-down, R1	28	60	E
E-down, R1	335	51	E
E-down, R1	354	46	E
E-down, R1	3	71	E
E-down, R1	347	66	E
E-down, R1 striae	135	23	
E-down, R1 striae	164	8	
W-down, R2	1	70	E
W-down, R2	202	75	W
W-down, R2	194	76	W
W-down, R2	201	70	W
W-down, R2	188	81	W
W-down, R2	188	80	W
W-down, R2	209	73	W
W-down, R2	200	84	W
W-down, R2	203	73	W
W-down, R2	191	84	W
W-down, R2	19	73	E

W-down, R2 striae	223	29	
W-down, R2 striae	222	47	
N-dipping oblique	266	44	N
N-dipping oblique	276	62	N
N-dipping oblique	280	59	N
N-dipping oblique	275	44	N
N-dipping oblique	281	85	N
N-dipping oblique	278	80	N
N-dipping oblique	281	48	N
N-dipping oblique	268	35	N
N-dipping oblique	294	38	N
N-dipping oblique	282	32	N
N-dipping oblique	285	78	N
N-dipping oblique	245	20	N
N-dipping oblique	279	37	N
N-dipping oblique	261	27	N
N-dipping oblique	243	21	N
N-dipping oblique	216	23	N
N-dipping oblique	277	38	N
N-dipping oblique	241	23	N
N-dipping oblique	137	4	W
N-dipping oblique	272	42	N
N-dip oblique striae	29	58	
N-dip oblique striae	305	78	
N-dip oblique striae	29	31	
N-dip oblique striae	323	71	
N-dip oblique striae	235	8	
N-dip oblique striae	228	4	
N-dip oblique striae	315	32	

Item DR5

Histograms from T-Tecto 3.0 showing α vs. the number of fractures for output from the autoseparation of fracture sets. The histograms illustrate that more than one stress field is necessary to fit all of the data, because any fracture with an α greater than 30° is rejected from the first model of the best-fitting stress tensor. The program then finds a second best-fitting stress tensor for the fractures that do not fit into model one. A) Histrogram from iteration one of the T-Tecto inversion showing at least 3 populations of fractures. B). Histogram from iteration two of the T-Tecto inversion showing at least 2 populations of fractures. We chose to reject iteration three because the number of fractures included in that model is less than 10 and may not yield a reliable result.

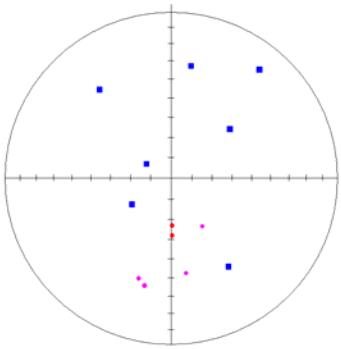




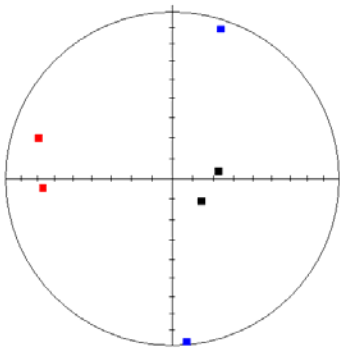
Item DR6

Equal area stereonet projections of T-Tecto 3.0 paleostress inversion results from the damage zone (below the fault core). All results are from combined data of transects YR1, YR2, and YR3east. These results are also all from the T-Tecto autoseparation (no separation of data from geometric sets). A) Extensional stress fields from T-Tecto 3.0. Blue represents σ1, purple circles are σ2, and red circles are σ3. The purple and red often plot on top of one another, which is why there are fewer. B) Shortening stress fields from T-Tecto 3.0. Here, blue are σ1, red are σ2, and black are σ3.

A)



B)



Extensional stress fields
σ1 average = 78 → 192
σ2 average = 7 → 045
σ3 average = 7 → 313

Shortening stress fields
σ1 average = 08 → 013
σ2 average = 51 → 107
σ3 average = 50 → 273