GSA Data Repository 2020105

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Figure DR1: Cross section of the northern East Humboldt Range (modified from Hallett and 1 Spear, 2014; see Figure 1C in the main text for location of section line), illustrating the 2 deformation geometry of the Lizzies Basin block and Winchell Lake nappe. Published 3 thermobarometry samples from Hodges et al. (1992), Peters and Wickham (1994), McGrew et al. 4 (2000), and Hallett and Spear (2014) are projected onto the cross section (see Table DR1 for 5 supporting data). 6 7 **Table DR1:** Compilation of published pressure determinations and timing constraints for 8 samples from the northern East Humboldt Range. The center pressure values and associated error 9 ranges for the samples of Hallett and Spear (2014) were calculated from the upper and lower 10 11 pressure limits of the P-T space fields on their Figure 13. Timing constraints shown for samples from Hallett and Spear (2014) are from Hallett and Spear (2015); all other timing constraints are 12 13 from the corresponding source studies listed. 14 15 Figure DR2: Graph of pressure versus south-to-north distance (measured relative to sample MP-LB132 on Figure DR1), illustrating the decompression paths of the published thermobarometry 16 17 samples compiled on Table DR1, as constrained by the geochronology of Hallett and Spear (2015). 18 19 20 **REFERENCES CITED** 21 Hallett, B.W., and Spear, F.S., 2014, The P-T History of anatectic pelites of the northern East 22

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Figure DR1



Figure DR2

			South-north	Distance north		Pressure	
			distance on	of sample	Pressure	error	Timing constraints
Sample	Location	Source study	Fig. DR1 (km)	MP-LB132 (km)	(kbar)	(kbar)	in source study
Peak pressures:							
1-15-17	Clover Hill	Hodges et al., 1992	14.2	13.7	10.54	0.61	-
554-34	Clover Hill	Hodges et al., 1992	12.6	12.1	9.73	0.88	-
MP-AL196	Winchell Lake Nappe	McGrew et al., 2000	14.4	13.9	9.5	1	~85 Ma
AJM-AL2	Winchell Lake Nappe	McGrew et al., 2000	14.2	13.7	8.3	1.2	~85 Ma
EH06	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	10.6	1.4	<83 Ma, >77 Ma
EH09	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	10.65	1.35	<83 Ma, >77 Ma
EH10	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	11.25	0.75	<83 Ma, >77 Ma
AJM-WL1	Lizzies Basin Block	McGrew et al., 2000	8.2	7.7	8.4	0.9	~85 Ma
AJM-LB1	Lizzies Basin Block	McGrew et al., 2000	3.2	2.7	8.6	0.9	~85 Ma
AJM-LB2	Lizzies Basin Block	McGrew et al., 2000	2.1	1.6	8	1.2	~85 Ma
EH31	Lizzies Basin Block	Hallett and Spear, 2014	1.9	1.4	8.05	1.25	~89-78 Ma
EH37	Lizzies Basin Block	Hallett and Spear, 2014	2	1.5	8.6	1.6	~89-78 Ma
EH45	Lizzies Basin Block	Hallett and Spear, 2014	1.7	1.2	10	1.6	~89-78 Ma
EH46	Lizzies Basin Block	Hallett and Spear, 2014	1.7	1.2	8.65	1.45	~89-78 Ma
Pressures early on decompression path:							
EH30	Lizzies Basin Block	Hallett and Spear, 2014	1.9	1.4	7	1.7	~79-59 Ma
MP-AL311	Winchell Lake Nappe	McGrew et al., 2000	13.4	12.9	7.4	1.2	<85 Ma, >50 Ma
MP-AL312	Winchell Lake Nappe	McGrew et al., 2000	13.4	12.9	7.4	1.1	<85 Ma, >50 Ma
AJM-AL3	Winchell Lake Nappe	McGrew et al., 2000	13.4	12.9	7.1	0.7	<85 Ma, >50 Ma
AJM-SC2	Winchell Lake Nappe	McGrew et al., 2000	11.5	11	6.7	1	<85 Ma, >50 Ma
AJM-WL3	Winchell Lake Nappe	McGrew et al., 2000	8.8	8.3	7	1	<85 Ma, >50 Ma
EH21	Winchell Lake Nappe	Hallett and Spear, 2014	11.4	10.9	7.15	2.35	~77-61 Ma
Pressures after Late Cretaceous-early Cenozoic decompression (middle of decompression path):							
1-22-27	Clover Hill	Hodges et al., 1992	13.4	12.9	5.67	0.72	-
AJM-AL1	Winchell Lake Nappe	McGrew et al., 2000	13.8	13.3	5.2	1.4	>50 Ma
EH10	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	6.25	1.25	~77-61 Ma
MPAL-316	Winchell Lake Nappe	Peters and Wickham, 1994	14	13.5	6		-
AJM-WL2A	Lizzies Basin Block	McGrew et al., 2000	7.9	7.4	6.1	0.4	>50 Ma
AJM-WL2B	Lizzies Basin Block	McGrew et al., 2000	7.9	7.4	6.1	0.8	>50 Ma
MP-WL8A	Lizzies Basin Block	McGrew et al., 2000	7.9	7.4	6.3	1	>50 Ma
MP-LB132	Lizzies Basin Block	McGrew et al., 2000	0.5	0	5.9	0.9	>50 Ma
EH45	Lizzies Basin Block	Hallett and Spear, 2014	1.7	1.2	6.2	1.5	~79-59 Ma
MPLB-123	Lizzies Basin Block	Peters and Wickham, 1994	2.3	1.8	6		-
Pressures late on decompression path:							
EH06	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	4	0.5	~40-32 Ma
EH09	Winchell Lake Nappe	Hallett and Spear, 2014	11.3	10.8	4.55	1.75	~40-32 Ma
EH30	Lizzies Basin Block	Hallett and Spear, 2014	1.9	1.4	4.75	1.85	~40-28 Ma
EH31	Lizzies Basin Block	Hallett and Spear, 2014	1.9	1.4	3.7	1.1	~40-28 Ma
EH37	Lizzies Basin Block	Hallett and Spear, 2014	2	1.5	3.25	1.75	~40-28 Ma
EH46	Lizzies Basin Block	Hallett and Spear, 2014	1.7	1.2	4.4	2.4	~40-28 Ma
EH49	Lizzies Basin Block	Hallett and Spear, 2014	1.5	1	4.1	0.7	~40-28 Ma