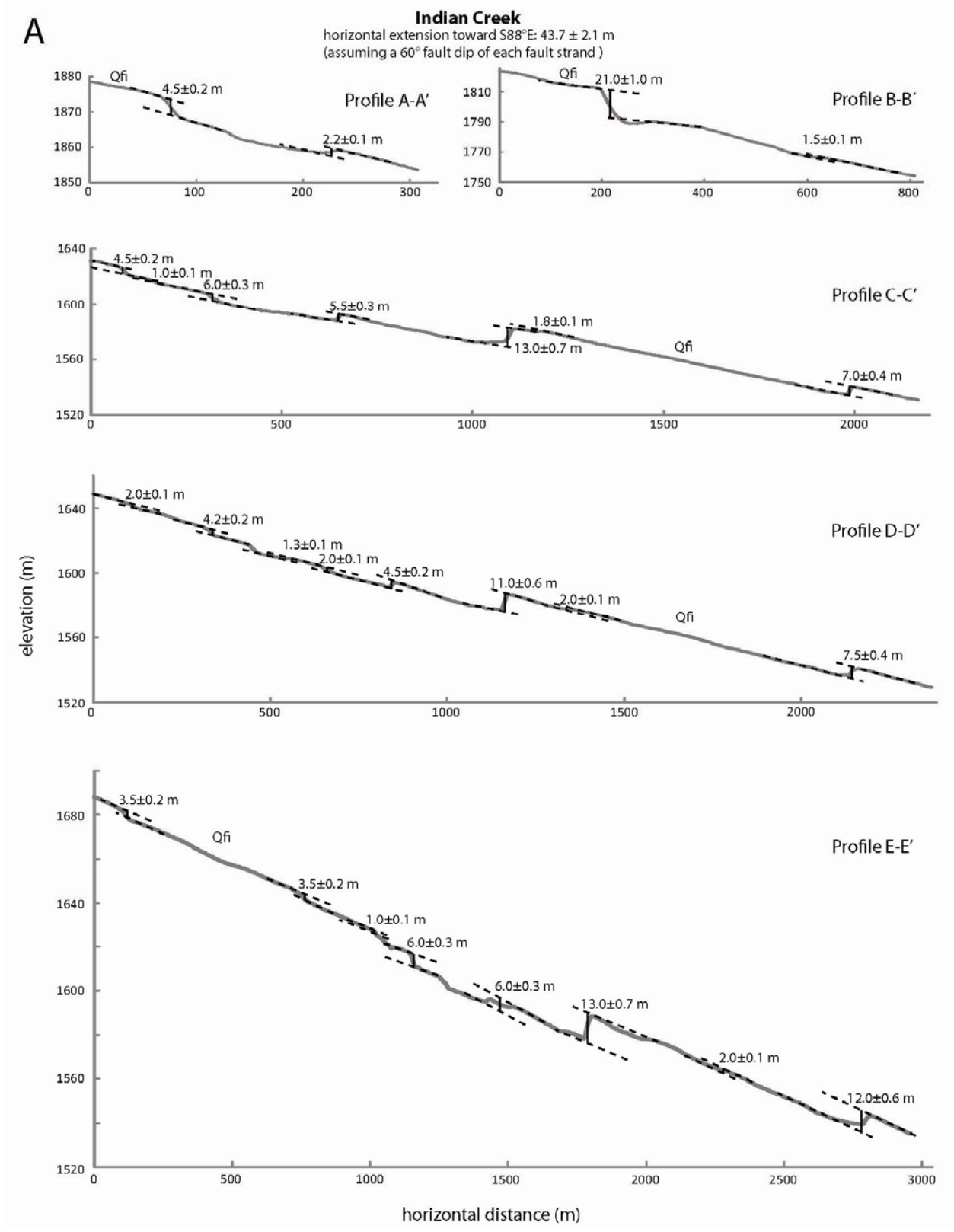
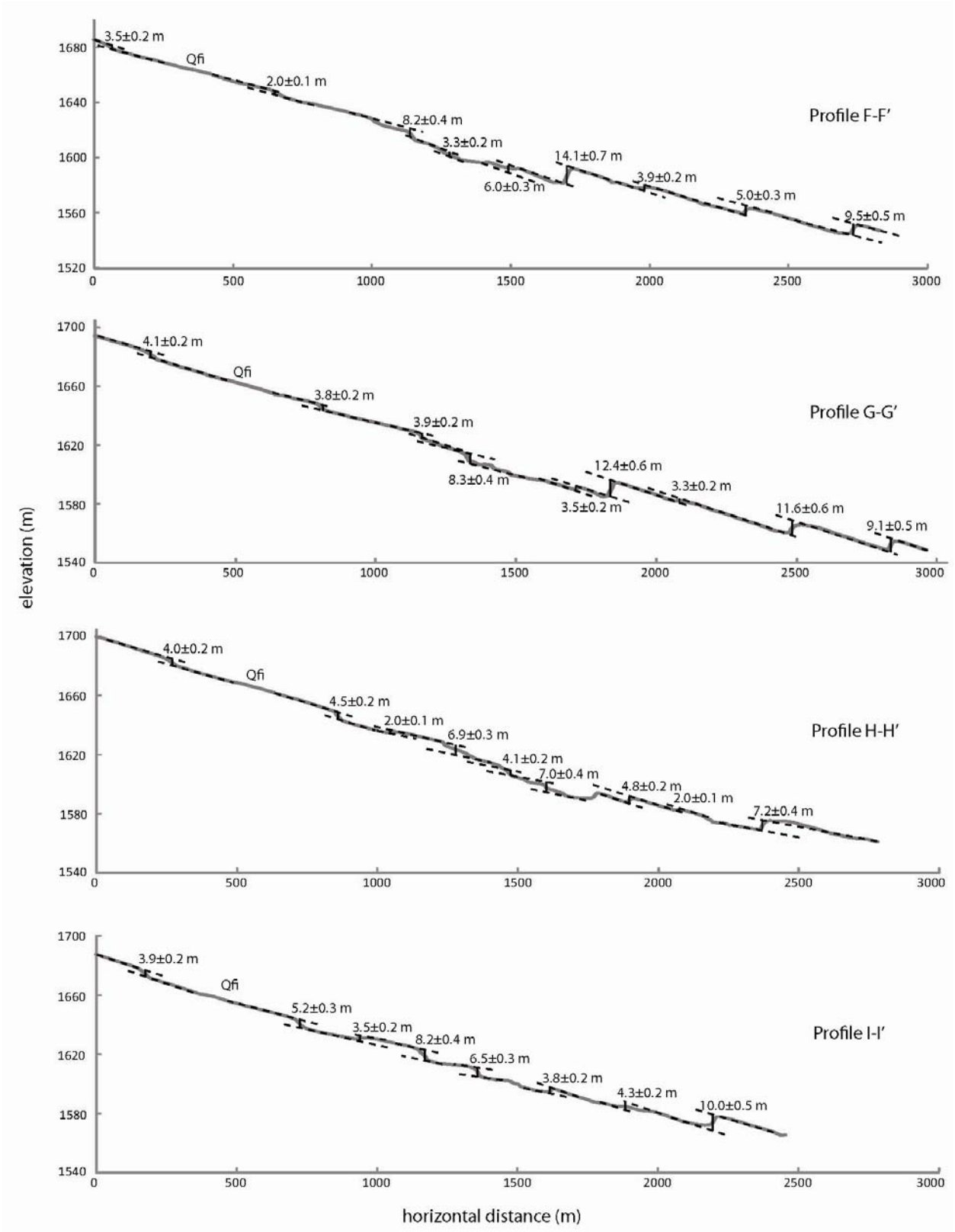
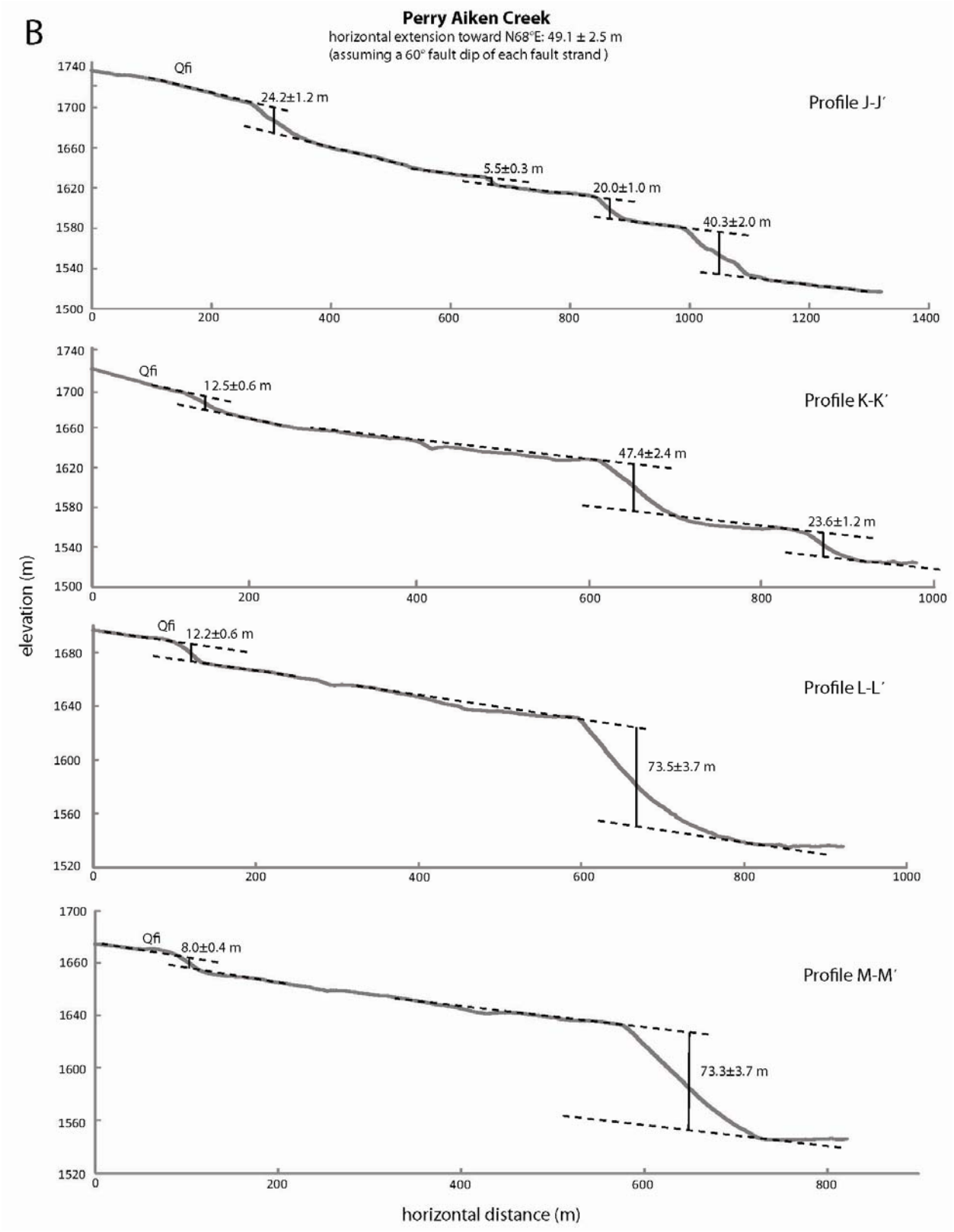
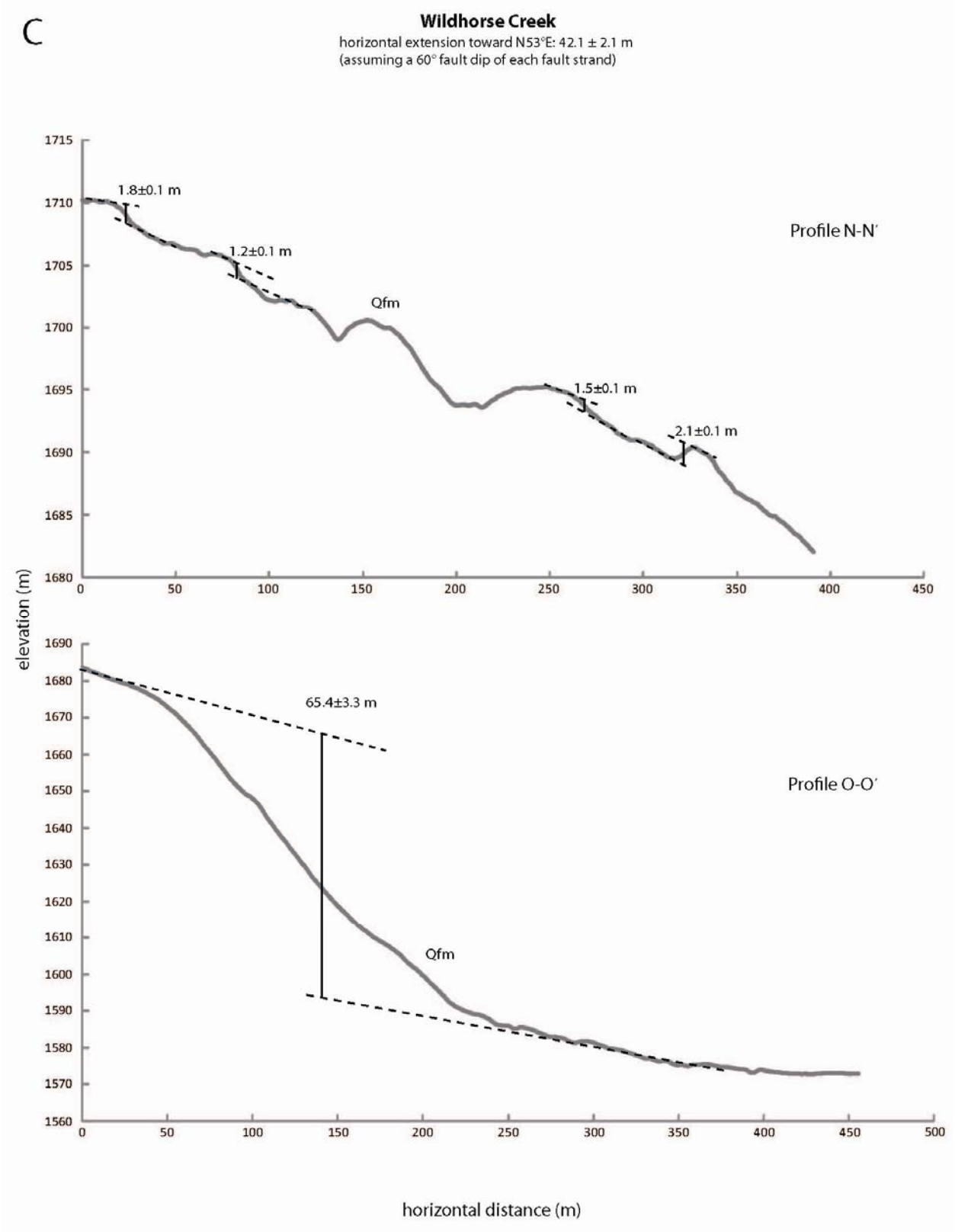
DATA REPOSITORY FIGURES

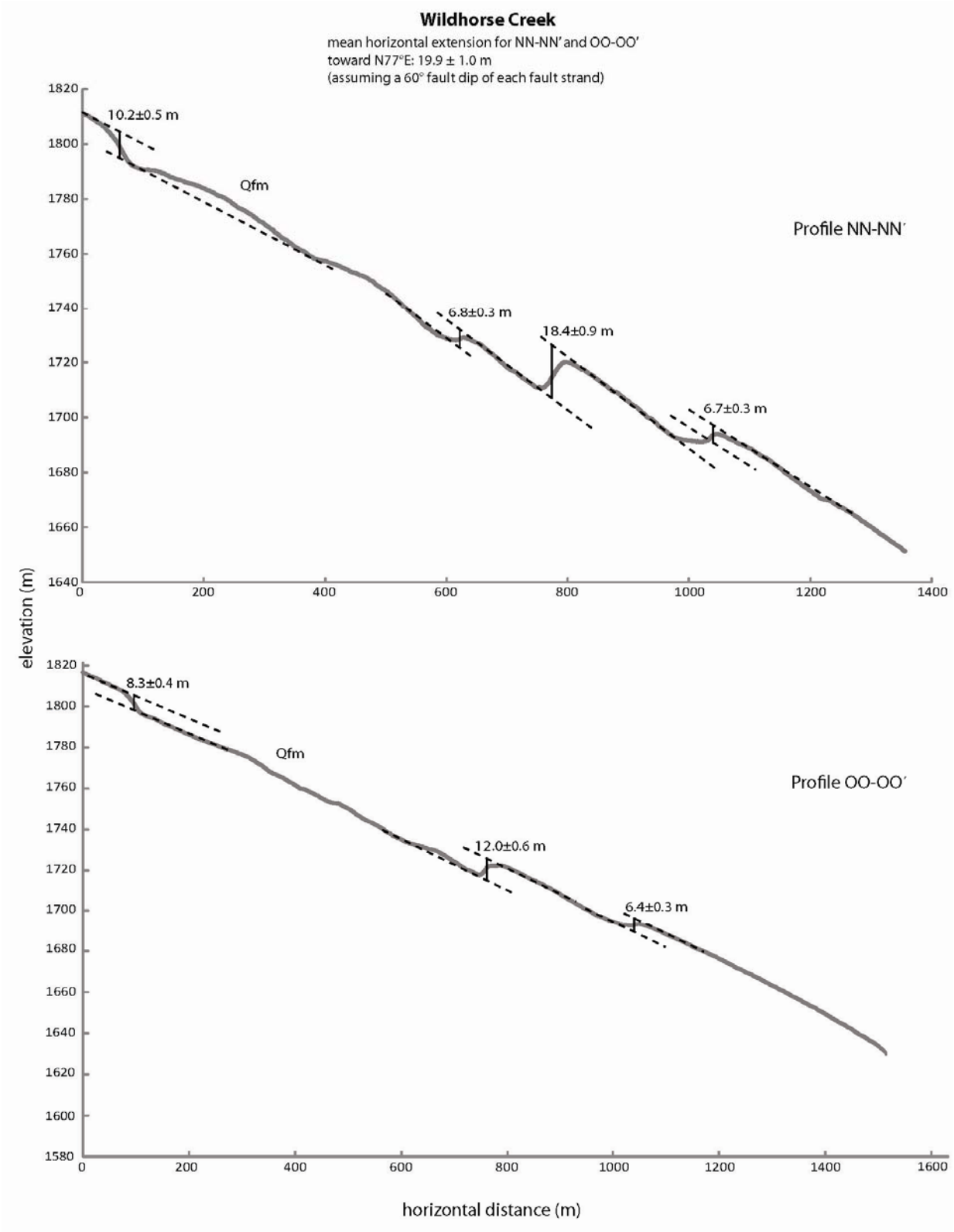
Figure DR1: Complete list of the analyzed topographic profiles across alluvial fan surfaces and calculated vertical components of displacement from the four study sites: (a) Indian Creek; (b) Perry Aiken Creek; (c) Wildhorse Creek; (d) Furnace Creek. See Figures 4-7 for locations of the profiles.


A
Indian Creek
horizontal extension toward S88°E: 43.7 ± 2.1 m
(assuming a 60° fault dip of each fault strand)
Profile A-A′
Qfi
4.5±0.2 m
2.2±0.1 m
Profile B-B′
Qfi
21.0±1.0 m
1.5±0.1 m
Profile C-C′
4.5±0.2 m
1.0±0.1 m
6.0±0.3 m
5.5±0.3 m
1.8±0.1 m
13.0±0.7 m
Qfi
7.0±0.4 m
Profile D-D′
2.0±0.1 m
4.2±0.2 m
1.3±0.1 m
2.0±0.1 m
4.5±0.2 m
11.0±0.6 m
2.0±0.1 m
Qfi
7.5±0.4 m
Profile E-E′
3.5±0.2 m
Qfi
3.5±0.2 m
1.0±0.1 m
6.0±0.3 m
6.0±0.3 m
13.0±0.7 m
2.0±0.1 m
12.0±0.6 m
elevation (m)
horizontal distance (m)


Profile F-F′
3.5±0.2 m
Qfi
2.0±0.1 m
8.2±0.4 m
3.3±0.2 m
14.1±0.7 m
6.0±0.3 m
3.9±0.2 m
5.0±0.3 m
9.5±0.5 m
Profile G-G′
4.1±0.2 m
Qfi
3.8±0.2 m
3.9±0.2 m
12.4±0.6 m
8.3±0.4 m
3.3±0.2 m
3.5±0.2 m
11.6±0.6 m
9.1±0.5 m
Profile H-H′
4.0±0.2 m
Qfi
4.5±0.2 m
2.0±0.1 m
6.9±0.3 m
4.1±0.2 m
7.0±0.4 m
4.8±0.2 m
2.0±0.1 m
7.2±0.4 m
Profile I-I′
3.9±0.2 m
Qfi
5.2±0.3 m
3.5±0.2 m
8.2±0.4 m
6.5±0.3 m
3.8±0.2 m
4.3±0.2 m
10.0±0.5 m
elevation (m)
horizontal distance (m)


B
Perry Aiken Creek
horizontal extension toward N68°E: 49.1 ± 2.5 m
(assuming a 60° fault dip of each fault strand)
Profile J-J′
Qfi
24.2±1.2 m
5.5±0.3 m
20.0±1.0 m
40.3±2.0 m
Profile K-K′
Qfi
12.5±0.6 m
47.4±2.4 m
23.6±1.2 m
Profile L-L′
Qfi
12.2±0.6 m
73.5±3.7 m
Profile M-M′
Qfi
8.0±0.4 m
73.3±3.7 m
elevation (m)
horizontal distance (m)


C
Wildhorse Creek
horizontal extension toward N53°E: 42.1 ± 2.1 m
(assuming a 60° fault dip of each fault strand)
1.8±0.1 m
1.2±0.1 m
Qfm
1.5±0.1 m
2.1±0.1 m
Profile N-N′
65.4±3.3 m
Qfm
Profile O-O′
elevation (m)
horizontal distance (m)


Wildhorse Creek
mean horizontal extension for NN-NN' and OO-OO'
toward N77°E: 19.9 ± 1.0 m
(assuming a 60° fault dip of each fault strand)
10.2±0.5 m
Qfm
6.8±0.3 m
18.4±0.9 m
6.7±0.3 m
Profile NN-NN'
8.3±0.4 m
Qfm
12.0±0.6 m
6.4±0.3 m
Profile OO-OO'
elevation (m)
horizontal distance (m)

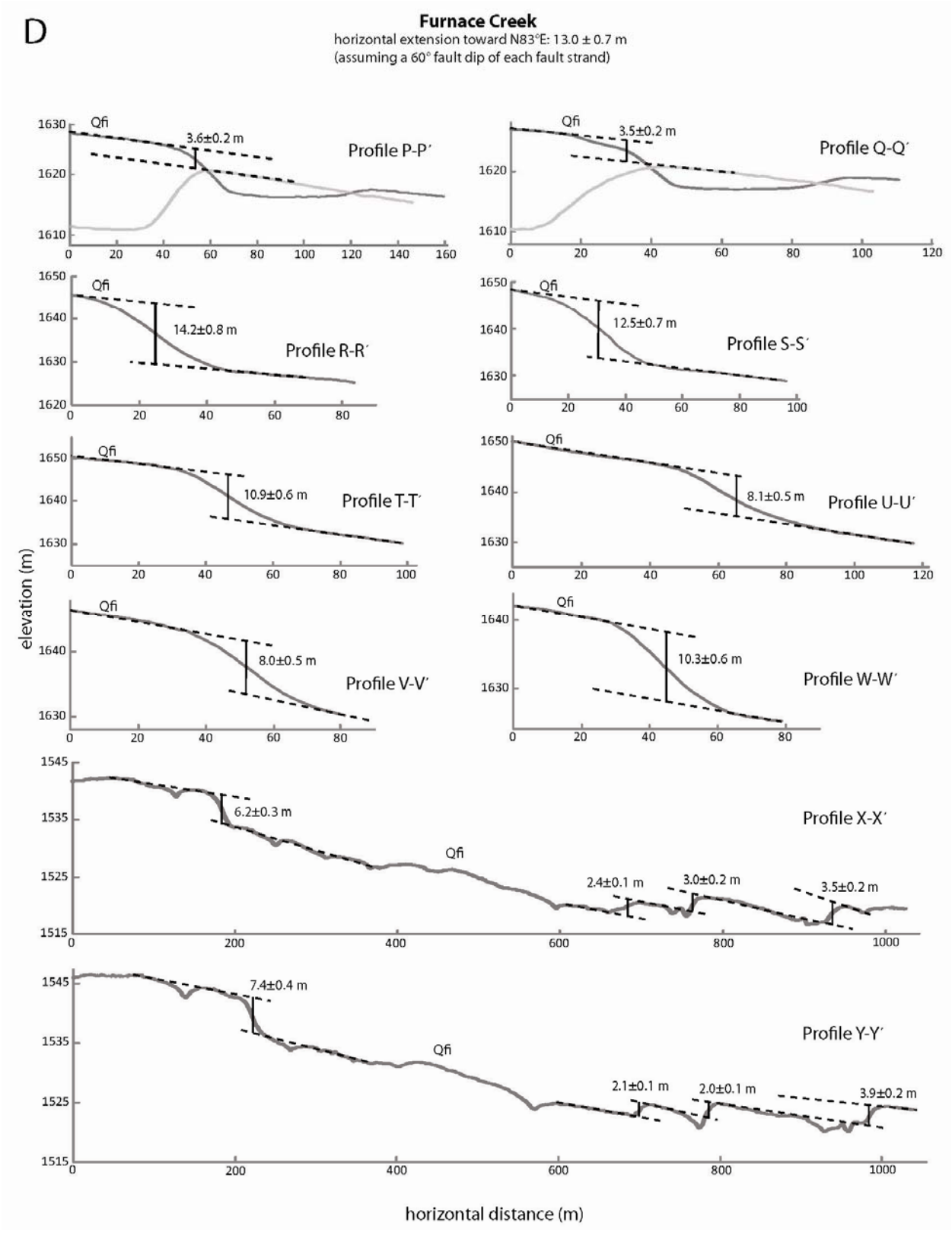

D
Furnace Creek
horizontal extension toward N83°E: 13.0 ± 0.7 m
(assuming a 60° fault dip of each fault strand)
Profile P-P′
3.6±0.2 m
Profile Q-Q′
3.5±0.2 m
Profile R-R′
14.2±0.8 m
Profile S-S′
12.5±0.7 m
Profile T-T′
10.9±0.6 m
Profile U-U′
8.1±0.5 m
Profile V-V′
8.0±0.5 m
Profile W-W′
10.3±0.6 m
Profile X-X′
6.2±0.3 m
2.4±0.1 m
3.0±0.2 m
3.5±0.2 m
Profile Y-Y′
7.4±0.4 m
2.1±0.1 m
2.0±0.1 m
3.9±0.2 m
Qfi
elevation (m)
horizontal distance (m)

Figure DR2: Restoration of right lateral offset at Perry Aiken Creek. Restoration of the offsets walls of the southern channel is highlighted in blue.

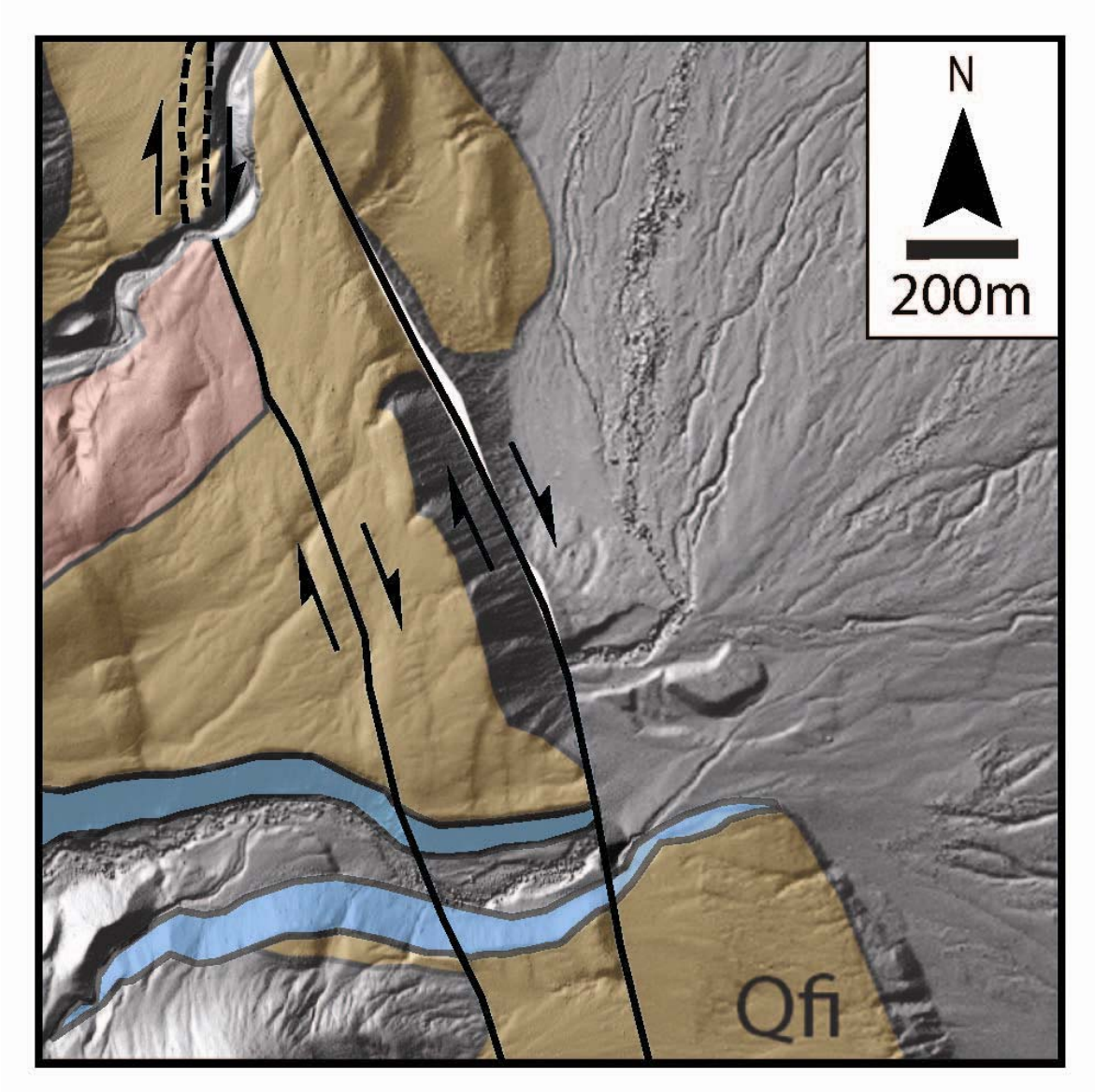


TABLE DR1. MEASURED VERTICAL AND CALCULATED HORIZONTAL OFFSETS FROM PROFILES

Profile scarp #	Location		Surface*	Farfield slope	Fault-scarp slope	Vertical offset (m)	Horizontal offset† (m)
	Up-fan end of profile (easting, northing)	Down-fan end of profile (easting, northing)					
Indian Creek							
A-A'	395524, 4182778	395815, 4182852	Qfi			6.7±0.3	3.9±0.2
scarp A1§				3°	11°	4.5±0.2	2.6±0.1
scarp A2#				2°	1°	2.2±0.1	1.3±0.1
B-B'	396106, 4182387	396888, 4182302	Qfi			22.5±1.1	13.0±0.6
scarp B3				2°	29°	21.0±1.0	12.1±0.6
scarp B4#				4°	1°	1.5±0.1	0.9±0.0
C-C'	399034, 4182931	401038, 4182403	Qfi			38.8±2.0	22.4±1.2
scarp C6				3°	16°	4.5±0.2	2.6±0.1
scarp C8				3°	7°	1.0±0.1	0.6±0.0
scarp C9				3°	11°	6.0±0.3	3.5±0.2
scarp C11#				3°	16°	5.5±0.3	3.2±0.2
scarp C12#				3°	27°	13.0±0.7	7.5±0.4
scarp C13#				3°	1°	1.8±0.1	1.0±0.1
scarp C15#				3°	25°	7.0±0.4	4.0±0.2
D-D'	398749, 4182551	401059, 4182297	Qfi			34.5±1.8	20.1±1.0
scarp D6				3°	8°	2.0±0.1	1.2±0.1
scarp D8				3°	13°	4.2±0.2	2.4±0.1
scarp D9				3°	15°	1.3±0.1	0.8±0.0
scarp D10				3°	7°	2.0±0.1	1.2±0.1
scarp D11#				3°	11°	4.5±0.2	2.6±0.1
scarp D12#				4°	30°	11.0±0.6	6.4±0.3
scarp D13#				4°	1°	2.0±0.1	1.2±0.1
scarp D15#				4°	20°	7.5±0.4	4.3±0.2
E-E'	398062, 4182461	400964, 4182096	Qfi			47.0±2.6	27.2±1.5
scarp E5				3°	9°	3.5±0.2	2.0±0.1
scarp E6				3°	8°	3.5±0.2	2.0±0.1
scarp E8				3°	8°	1.0±0.1	0.6±0.0
scarp E9				3°	20°	6.0±0.3	3.5±0.2
scarp E11#				3°	4°	6.0±0.3	3.5±0.2
scarp E12#				3°	22°	13.0±0.7	7.4±0.4
scarp E13#				3°	1°	2.0±0.1	1.2±0.1
scarp E15#				3°	12°	12.0±0.6	7.0±0.4
F-F'	398083, 4182376	400810, 4181853	Qfi			55.5±2.9	32.1±1.6
scarp F5				3°	11°	3.5±0.2	2.0±0.1
scarp F6				3°	6°	2.0±0.1	1.2±0.1
scarp F9				3°	16°	8.2±0.4	4.7±0.2
scarp F10				2°	4°	3.3±0.2	1.9±0.1
scarp F11#				4°	1°	6.0±0.3	3.5±0.2
scarp F12#				4°	24°	14.1±0.7	8.1±0.4
scarp F13#				4°	5°	3.9±0.2	2.3±0.1
scarp F14#				3°	15°	5.0±0.3	2.9±0.1
scarp F15#				3°	22°	9.5±0.5	5.5±0.3
G-G'	397919, 4182302	400768, 4181731	Qfi			60.0±3.1	34.8±1.7
scarp G5				3°	8°	4.1±0.2	2.4±0.1
scarp G6				3°	9°	3.8±0.2	2.2±0.1
scarp G8				3°	18°	3.9±0.2	2.3±0.1
scarp G9				3°	17°	8.3±0.4	4.8±0.2
scarp G11#				4°	9°	3.5±0.2	2.0±0.1
scarp G12#				4°	22°	12.4±0.6	7.2±0.4
scarp G13#				4°	3°	3.3±0.2	1.9±0.1
scarp G14#				4°	17°	11.6±0.6	6.7±0.3
scarp G15#				4°	22°	9.1±0.5	5.3±0.3
H-H'	397787, 4182017	400462, 4181308	Qfi			42.5±2.1	24.7±1.2
scarp H5				3°	9°	4.0±0.2	2.3±0.1
scarp H6				3°	18°	4.5±0.2	2.6±0.1
scarp H7#				2°	7°	2.0±0.1	1.2±0.1
scarp H8				2°	17°	6.9±0.3	4.0±0.2

scarp H9				2°	11°	4.1±0.2	2.4±0.1
scarp H10				2°	17°	7.0±0.4	4.0±0.2
scarp H12[#]				4°	9°	4.8±0.2	2.8±0.1
scarp H13[#]				4°	1°	2.0±0.1	1.2±0.1
scarp H14[#]				2°	18°	7.2±0.4	4.2±0.2
I-I'	397892, 4181837	400229, 4181129	Qfi			45.4±2.3	26.3±1.3
scarp I5				3°	11°	3.9±0.2	2.3±0.1
scarp I6				3°	13°	5.2±0.3	3.0±0.2
scarp I7[#]				2°	4°	3.5±0.2	2.0±0.1
scarp I8				2°	12°	8.2±0.4	4.7±0.2
scarp I9				2°	14°	6.5±0.3	3.8±0.2
scarp I12[#]				3°	10°	3.8±0.2	2.2±0.1
scarp I13[#]				3°	1°	4.3±0.2	2.5±0.1
scarp I14[#]				3°	24°	10.0±0.5	5.8±0.3
Mean[**] (C-C' through I-I')				**-**	**-**	**46.2±2.4**	**26.8±1.3**
Total resolved extension toward S88°E[††] (A-A' through I-I')				**-**	**-**	**-**	**43.7±2.1**
Perry Aiken Creek							
J-J'	402498, 4168976	403504, 4169754	Qfi			90.0±4.5	52.0±2.6
scarp J1				8°	25°	24.2±1.2	14.0±0.7
scarp J2				4°	28°	5.5±0.3	3.2±0.5
scarp J3				4°	25°	20.0±1.0	11.5±0.6
scarp J4				4°	25°	40.3±2.0	23.3±1.2
K-K'	402646, 4169023	403511, 4169421	Qfi			83.5±4.2	48.2±2.4
scarp K1				10°	25°	12.5±0.6	7.2±0.4
scarp K3				5°	31°	47.4±2.4	27.4±1.4
scarp K4				5°	29°	23.6±1.2	13.6±0.7
L-L'	402692, 4168908	403540, 4169257	Qfi			85.7±4.3	49.5±2.5
scarp L1				5°	27°	12.2±0.6	7.0±0.4
scarp L4				5°	29°	73.5±3.7	42.4±2.1
M-M'	402710, 4168897	403504, 4169102	Qfi			81.3±4.1	46.9±2.3
scarp M1				6°	26°	8.0±0.4	4.6±0.2
scarp M4				6°	28°	73.3±3.7	42.3±2.1
Mean (J-J' through M-M')				**-**	**-**	**85.1±4.3**	**49.1±2.5**
Total resolved extension toward N68°E (J-J' through M-M')				**-**	**-**	**-**	**49.1±2.5**
Wildhorse Creek							
N-N'	406621, 4161662	407013, 4161691	Qfm			6.6±0.4	3.8±0.3
scarp N1				2°	19°	1.8±0.1	1.0±0.1
scarp N2				4°	21°	1.2±0.1	0.7±0.0
scarp N3				7°	22°	1.5±0.1	0.9±0.1
scarp N4[#]				9°	23°	2.1±0.1	1.2±0.1
O-O'	406987, 4161700	407322, 4162004	Qfm			65.4±3.3	37.8±1.9
scarp O5				4°	22°	65.4±3.3	37.8±1.9
NN-NN'	406444, 4160451	407573, 4161193	Qfm			42.1±2.0	24.3±1.2
scarp N6				6°	21°	10.2±0.5	5.9±0.3
scarp N7[#]				9°	6°	6.8±0.3	3.9±0.2
scarp N8[#]				9°	17°	18.4±0.9	10.6±0.5
scarp N9[#]				9°	15°	6.7±0.3	3.9±0.2
OO-OO'	406433, 4160384	407948, 4161274	Qfm			26.7±1.3	15.4±0.7
scarp O6				6°	21°	8.3±0.4	4.8±0.2
scarp O8[#]				6°	16°	12.0±0.6	6.9±0.3
scarp O9[#]				6°	12°	6.4±0.3	3.7±0.2
Mean (NN-NN' through OO-OO')				**-**	**-**	**34.4±1.7**	**19.9±1.0**
Total resolved extension toward N53°E (N-N' through O-O')				**-**	**-**	**-**	**42.1±2.1**
Furnace Creek							
P-P'	410914, 4158261	411042, 4158357	Qfi			-	-
P1-P1'	411105, 4158112	411223, 4158230	Qfi			-	-
scarp P2				3°	22°	3.6±0.2	2.1±0.1

Q-Q'	410947, 4158263	411035, 4158328	Qfi			-	-
Q1-Q1'	411148, 4158102	411229, 4158179	Qfi			-	-
scarp Q2				3°	25°	3.5±0.2	2.0±0.1
Mean (P-P' through Q-Q')				**-**	**-**	**3.6±0.2**	**2.1±0.1**
R-R'	410721, 4158297	410787, 4158347	Qfi				
scarp R1				4°	29°	14.2±0.8	8.2±0.4
S-S'	410742, 4158253	410815, 4158315	Qfi				
scarp S1				4°	27°	12.5±0.7	7.2±0.4
T-T'	410776, 4158207	410846, 4158275	Qfi				
scarp T1				5°	26°	10.9±0.6	6.3±0.3
U-U'	410789, 4158177	410879, 4158253	Qfi				
scarp U1				6°	22°	8.1±0.5	4.7±0.2
V-V'	410832, 4158166	410895, 4158218	Qfi				
scarp V1				5°	22°	8.0±0.5	4.6±0.2
W-W'	410876, 4158136	410932, 4158191	Qfi				
scarp W1				5°	25°	10.3±0.6	5.9±0.3
Mean (R-R' through W-W')				**-**	**-**	**10.7±0.6**	**6.2±0.3**
X-X'	411896, 4159228	412723, 4158623	Qfi			15.1±0.8	8.7±0.5
scarp X3				1°	17°	6.2±0.3	3.6±0.2
scarp X4[#]				3°	12°	2.4±0.1	1.4±0.1
scarp X5[#]				3°	11°	3.0±0.2	1.7±0.1
scarp X6[#]				3°	14°	3.5±0.2	2.0±0.1
Y-Y'	411840, 4159192	412668, 4158569	Qfi			15.4±0.8	9.0±0.5
scarp Y3				2°	16°	7.4±0.4	4.3±0.2
scarp Y4[#]				3°	19°	2.1±0.1	1.2±0.1
scarp Y5[#]				3°	11°	2.0±0.1	1.2±0.1
scarp Y6[#]				3°	15°	3.9±0.2	2.3±0.1
Mean (X-X' through Y-Y')				**-**	**-**	**15.3±0.8**	**8.9±0.5**
Total resolved extension toward N83°E(P-P' through Y-Y')				**-**	**-**	**-**	**13.0±0.7**

[*]Surface notations from Reheis et al., (1992,1993, and 1995).

[†]Reported horizontal offsets are calculated assuming a fault plane dip angle of 60°.

[§]Fault scarps are numbered sequentially from the most western to the most eastern scarp along each set of profiles.

[#]Fault scarp has westward (or north-westward) dip orientation.

[**]Mean values are reported for sets of profiles that measure the same fault scarps.

[††]Total resolved extension is reported on basis of the vector sums of each set of profiles. See figure X.