**Supplementary material for**

3D Paleoseismology of the Dog Valley Fault (California, USA) from iOS Lidar and Structure-from-Motion Photogrammetry

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# Supplement 1. Soil descriptions from the east wall of the trench.

1) Depth: 0-15 cm. bottom contact transition is over 2cm. A. Texture: silt loam. Structure: 2 f & m sbk. Gravel <10%. Dry Consistence: Firm & Hard. Moist Consistence: Slightly Sticky (ss), slightly plastic. No clay films. Boundaries: c, w. Dry color: 10yr4/1 // dark gray. Moist color: 10yr2/1 // black. Notes: few fine, few medium roots.

2) Depth: 15-32 cm. bottom contact transition is over 4 cm. Bw1. Structure: 3, mc, sbk/abk. Dry Color: 10yr4/1 dark gray. Gravel 10%. Dry consistence: Very Hard. Texture: Silty clay loam. Moist consistence: very firm. Lower boundary: gradual, wavy. Notes: roots are trace coarse, Few medium. Clay films: v1, f, pf. Wet color: 10yr 2/1, black.

3) Depth: 32-52 cm. bottom contact transition is over 3 cm. Bw2. Dry Color 10yr4/1 dark gray. Gravel 10-25%. Structure: 3, m-c, sbk. Dry consistence: hard, very firm. Texture: silty clay loam. Wet: 10yr2/2 v. dark brown. Lower boundary: wavy, gradual. Moist consistence: ss/ps. Clay films: v1, f, pf. Notes: roots are trace, medium.

4) Depth: 52-71 cm. bottom contact transition is over 2 cm. Bt(2Bt?). Structure: 2 f-m sbk. Dry consistence: soft. Moist consistence: friable-very friable. Gravel <10%. Notes: orange mottling. Dry: 10yr4/2, dark grayish brown. Texture: clay loam. Wet color: 10yr2/2, v. dark brown. Clay films: 2pf po. Notes: few very fine pores, trace medium roots. Lower boundary: wavy, abrupt.

5) Depth: 71- 90+ cm. C/parent material. Sandy loam. Dark brown-black.

# Supplement 2. OxCal Sequence Model Code

Options()

 {

 };

 Plot()

 {

 Sequence("DV1")

 {

 Phase("1")

 {

 R\_Date("RC 43", 7640, 30);

 R\_Date("RC 26", 7690, 30);

 };

 Date("Event 2");

 Phase("2")

 {

 R\_Date("RC 15", 7570, 30);

 R\_Date("RC 40", 7360, 30);

 };

 Date("Event 1");

 Phase("3")

 {

 C\_Date("Modern", 0, 0);

 };

 };

 };