
Errata 2

Fault rock lithologies and architecture of the central Alpine fault, New Zealand, revealed by DFDP-1 drilling

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On page 156, “Stony Creek” is the correct spelling in Figure 1 and the caption.

On page 161 (Table 1. continued), there are eight incorrectly identified figures. The corrected table appears below with corrections in bold.

On page 167, left column, third line, “Fig. 4N” should read “Fig. 4H.”

Corrected “Toy Table 1. (*continued*)” is on the following page.

TABLE 1. CHARACTERISTIC FEATURES OF LITHOLOGICAL UNITS ENCOUNTERED IN DEEP FAULT DRILLING PROJECT (DFDP-1) (continued)

Unit number	Name	General lithology	Mineralogy and grain sizes	Fabric and microstructure	Notes
5.	Gouges	Foliated to unfoliated, light olive gray to olive black (5Y 6/1–5Y 2/1), with seams of greenish black (5GY 2/1) and white (N9) to very light-gray (N8) clasts, cemented to uncemented gouges.	As for units 3 and 4, but with significantly more calcite (mostly as cement), and clay (smectite + illite/muscovite ± kaolinite). Matrix grain size <10 µm. Clasts range <1 µm but mostly much less.	Medium brown or gray-blue clay-rich ultra-fine-grained material with a scaly fabric. Layering is indistinct; rarely, subplanar, high aspect ratio, less than centimeter-thick lenses of material with visible versus invisible particles mostly <50% define a fabric parallel to unit boundaries (Fig. 3N). Matrix includes aligned phyllosilicates with uniform extinction and amorphous iron and manganese oxide-hydroxides (Fig. 5D). The subrounded clasts include grains of calcite with narrow e-twins; fine-grained aggregates of calcite with altered (to sericite and saussurite) feldspar (Figs. 5C, 5D, and 5F); recycled ultracataclases/gouges (Fig. 5F) with calcite cement and rarely amygdaloidal material (possible pseudotachylyte; Fig. 5D). Matrix phyllosilicates may wrap clasts ("snowball" fabric of Warr and Cox, 2001; Fig. 5D).	Typically cohesive but uncemented. Upper and lower boundaries of unit are not necessarily parallel. In PSZ-1 in DFDP-1B, the boundary with lower cataclasis has <1-mm-long flame-like injection structures.
6.	Lower cataclases	6a. White (N9) to very light-gray (N8) and yellowish gray (5Y 8/1) granular cataclasis.	Quartz + feldspar (may be plagioclase or orthoclase) + chlorite-muscovite + clays (blue-gray; illite/muscovite) ± biotite. Grains in protolith granites and gneisses mostly >>100 µm diameter (Fig. 6). Cataclases comprise patches of clasts <100 µm (Figs. 6B and 6C) in a matrix of grains <30 µm and rarely much larger (millimeter-scale) clasts (Fig. 6D).	Cataclasis with medium to coarse sand (0.5–1 mm) sized, subangular to subrounded qtz-feldspar clasts and matrix proportion from 0% (quite common) to >70%. The unit is poorly indurated but cohesive. Gneissic texture may be defined by elongate muscovite and quartz ribbons composed of numerous blocky, moderately equant grains (Fig. 6C). Feldspar porphyroclasts comprise microcline (note cross-hatched twinning indicated by arrows in Fig. 6C), Myrmekite (Fig. 6B) and flame perthite (Fig. 6A). Rare clasts display interlocking texture of biotite-quartz-feldspar typical of granite (Fig. 6D). Distinctly layered foliated protocataclasis to cataclasis, locally retaining an ultramylonite foliation (sometimes in pods with foliation oblique to contacts with surrounding rock; Fig. 3U).	Sporadic observations of feldspar and biotite in an interlocking texture strongly suggest a granitic protolith (Fig. 6D). Clast color ranges from light to dark green, black, white, and salmon pink. Granitoid and gneissic textures and high natural gamma values (Townsend et al., 2013) suggest derivation from an Australian plate protolith as discussed in the section entitled "Discussion of Inferred Protoliths".
7.	Breccias	Unfoliated, dark greenish black (5G 2/1) breccia with remnant mylonitic foliation and white (N9) to very light-gray (N8) porphyroclasts.	Quartz + K-feldspar + amphibole + epidote + chlorite + muscovite + opaques + accessories (e.g., apatite, graphite). Matrix quartz and mica generally tens of micrometers in diameter with larger (>250 µm) feldspar porphyroclasts (Fig. 5H)	Coarse to very coarse grained with >50% cohesive matrix of comminuted K-feldspar + plagioclase + clinoclase + calcite + epidote + apatite + pyrite + muscovite (Figs. 5E and 5G). Constituent materials are either interlayered (Fig. 5G) or form fault-bounded pods. Ultra-fine-grained, clayey patches are present. Clasts include subangular to subrounded quartz + feldspar in places crosscut by calcite veins and fragmented with little clast rotation or translation (Fig. 5E).	We cannot say if brecciation is drilling-induced or tectonic.
8.	Sedimentary gravels	Color ranges from white (N9) to grayish black (N2).	Gravel composed primarily of angular to subrounded Alpine Schist clasts, ~1–10 cm diameter, in a medium sand matrix.	Gravel composed primarily of angular to subrounded Alpine Schist clasts, ~1–10 cm diameter, in a medium sand matrix.	This unit is only present at the base of DFDP-1a as well as in the Gaunt Creek scarp and terrace exposures.

Note: Colors used in descriptions in this table accord with Munsell (1912) hues, values, and chroma, and are expressed as codes (e.g., 5N, or 5GY 4/1). These were chosen by reference to The Geological Society of America's *Rock Color Chart*, 7th printing (1991).