

## Soil pit description: PF01

**Images:** PF01\_01.jpg, PF01\_03.jpg  
**Soil class:** Ava  
**Map unit:** A  
**Location:** 20 m W of 2.5, Armour Trail, ca 50 m N of 50 ha LTER plot  
**Site position:** Upper part of dipslope plateau  
**Slope:** 1%, linear, aspect 100°  
**Parent material:** Andesite, residual + colluvial  
**Forest structure:** Closed canopy, open understory, no palms  
**Litter:** 90% cover, 3 layers, no root mat  
**Outcrops:** None  
**Stones:** None  
**Cracks:** Continuous net, 10 mm wide, 10 cm spacing  
**Microrelief:** None  
**Faunal activity:** Few fine worm casts  
**Other surface features:** None

<b>Horizon [cm]</b>		<b>Samples [cm]</b>
<b>0 - 6</b>	5YR 3/3 (dark reddish brown); no mottles; sandy clay; moderate medium-fine subangular blocky breaking to moderate fine crumb, including clusters of fine worm casts; no cutans; common medium pores; slightly dry & friable; many fine tree roots; many very fine angular quartz grit & many fine grey andesite gravel; no concretions; no charcoal; clear regular boundary to:	[0-6]
<b>6 - 26</b>	7.5YR 4/6 (strong brown); no mottles; silty clay loam; moderate medium subangular blocky breaking to moderate medium crumb; no cutans; common medium pores; slightly dry & friable; common medium & coarse tree roots; many very fine angular quartz grit & few medium hard grey platy andesite stones; few fine black ferrimanganiferous concretions; few fine charcoal; gradual regular boundary to:	[6-26] [6-16] [16-26]
<b>26 - 51/79</b>	5YR 4/6 (yellowish red); no mottles; silty clay; moderate medium subangular blocky breaking to moderate medium crumb; no cutans; common medium pores; slightly dry & firm; few fine tree roots; many very fine angular quartz grit & common medium soft orange & yellow subangular andesite stones; few fine & medium black ferrimanganiferous andesite-cored concretions; few white hyphae; rare fine charcoal; clear wavy boundary to:	[26-51] [26-36] [36-46] [46-56]
<b>51/79 - 91/126</b>	5YR 4/6 (yellowish red); no mottles; silty clay loam; moderate medium subangular blocky breaking to moderate medium crumb; weak patchy clayskins, many fine pores; slightly dry & firm; rare medium & fine tree roots; diffuse stone line of many medium subangular soft orange & yellow andesite stones; many medium & fine black ferrimanganiferous andesite-cored concretions; no charcoal; diffuse boundary to:	[51-91] [56-66] [66-76] [76-86] [86-96] [96-106] [106-116] [116-126]
<b>91/126 - 150</b>	2.5YR 4/6 (red); no mottles; silty clay; moderate fine subangular blocky; weak patchy clayskins; few fine pores; slightly dry & firm; rare fine tree roots; common medium soft orange & yellow subangular andesite stones & few subrounded andesite boulders up to 50 cm diameter, spheroidally weathered with soft yellow & orange outer layers & harder grey interiors; common medium & fine black ferrimanganiferous andesite-cored concretions; no charcoal; diffuse boundary to:	[91-151] [126-136] [136-146]
<b>150 - 170</b>	2.5YR 4/8 (red); no mottles; gritty sandy clay loam; weak medium platy breaking to moderate fine crumb; weak patchy clayskins; few fine pores; slightly moist & firm; very rare fine tree roots; few subrounded andesite boulders up to 50 cm diameter, spheroidally weathered with soft yellow & orange outer layers & harder grey interiors; many medium & fine black ferrimanganiferous andesite-cored concretions; no charcoal:	[151-160] [146-156] [156-166]
<b>170 - 260+</b>	As 150 – 170	None

### **Correlations**

**Catapan (1970):** O X W Cf 1  
 E A 1 0  
**World Reference Base:** (Chromic Luvisol) Eutric Ferralsol  
**Soil Taxonomy:** (Hapludalfic) Typic Eutrudox

**Features:**

Moderately firm & compact subsoil, although colours are bright reddish & unmottled. Clay contents increase rapidly from topsoil, but are erratic below that, and clayskins are weak, so argillic is marginal and the profile is correlated as Ferralsol/Oxisol. The upper subsoil is eutric but becomes marginally dystic below. On balance, the profile is s marginally Luvic/Alfic. The small quantities of fine quartz may be secondary but, if residual, they indicate that the parent material is more andesitic than basaltic.