

ID	Notes		Horizon
1	NA		3 =
2	NA		Bedroc
3	NA		k at 16
4	NA		cm
5	Very Rocky		
6	NA		
7	Hit bedrock at 21 centimeters.		
8	60 sm to BR		
9	NA		
10	NA		
11	NA		
12	Horizon 1 = 40% Clay	Horizon 2 = 60% Clay	
13	NA		
14	NA		
15	NA		
16	NA		
17	NA		
18	Bed rock at approximately 11cm Horizon=H. H1 was ~30% Clay. H2 was ~35% Clay. H3 was ~25% Clay with 42 % gravel and 30% Cobbles. H4 was ~22% Clay with 12% Gravel and 60% Cobbles. H5 was ~6% Clay, 1%Gravel, 15% Cobbles, 80% Stones and horizon 5 had small		
19	fragments of 10YR 5/8.		
20	Johnston Key: FD13C. Lodgepole pine present on plot via photos	key mentions elk sedge - potentially present in the area. ESD: Conifer Forest	
21	35 to r		
22	NA		
23	Hit bedrock at 26 cm in depth.		
24	NA		
25	Bedrock at approximately 10 cm deep. Typical of this area. Other locations were lightly augered to verify.		
26	Hit bedrock at 51 cm in depth		
27	NA		
28	NA		
29	NA		
30	15 cm to Bedrock		
31	NA		
32	NA		

we dug at several other
locations to confirm
bedrock

- 33 Hit bedrock at approximately 30 cm deep
ESD is coniferous forest Ecotype: dominated by
subalpine fir with stands of aspen and some
lodgepole pine and blue spruce, aspen pea vetch,
34 lupine, and thurber fescue dominating understory
35 NA
36 NA
37 NA
38 NA
39 Hit bedrock at 32cm
40 NA
41 Hit bedrock at approximately 30 cm in depth
42 NA
Slope is greater than 40% throughout plot. Leaf litter
and other organic matter accumulated at soil surface.
Dense gambels oak was ubiquitous throughout the
plot alongside cercocarpus montanis as the
understory to pinus edulus and juniperus
43 osteospermum.
44 NA
Hit parent material at 43cm. Think basalt is parent
45 material.
46 NA
47 NA
There is a lot of debris and rock fragments in this soil
pit. When we reached 52 cm, we saw a lot of
48 weathered rock.
49 50m to BR
50 Roots throughout the pit
51 NA
52 Bedrock at 53 cm
Dug to 34cm impermeable rock layer (site was right
53 next to talus slope)
54 Bedrock at 31 cm.
55 NA
56 NA
57 NA
58 Could not dig past 30 cm due to high rock content
59 NA
60 NA
61 Bedrock at 50 cm.
62 NA
63 No soil pit. Talus field.
64 Bedrock hit at 35cm.
65 Alpine tundra - too rocky to dig pit to depth
66 NA
67 Rock layer at 50 centimeters

68 Hit bedrock at 47 cm.
 69 NA
 70 NA
 71 35cm to bedrock
 horizon 1-3 were darker black than munsell had..PIT
 72 SHOULD BE REDONE ON REVISIT
 73 NA
 74 Rocky pit.
 BR @30cm. Soil was gley colored at 15 cm. color
 75 for horizon 2&3= Gley16/10y.
 76 No soil pit - talus field
 Caliche layer present from 36cm on. We stopped
 digging at 60m because the soil was too difficult to
 dig and the horizons had no changes after we hit this
 77 layer.
 78 100% rock, talus
 For Horizon 2 it is massive and solid. It is still soft
 enough to push through the sieve. Horizon 1 = 30%
 79 clay Horizon 2 = 20% clay
 80 NA
 81 impassable compaction and stony layer at 25cm
 82 Extremely rocky and compact. Impassable at 32 cm.
 83 NA
 84 NA
 85 NA
 flat rock between 20cm and 40cm across entire
 86 horizon about 2cm thick at 15 degree angle
 87 NA
 88 Rock layer at 30 centimeters
 89 53 cm to BR
 90 rocky layer at 27in
 91 Most of the plot is in a water flow path
 92 Bedrock at 43 cm.
 93 Extremely rocky
 94 No soil pit. Plot center located on a talus field.
 95 NA
 96 Rocky layer at 21 inches
 Stopped at 62cm as caliche was taking too long to
 get through, horizon 4 has many wood fragments and
 97 is heavily compacted and high in caliche
 98 NA
 50 cm to BR ~` lrg stones removed from surface
 99 to dig soilpit
 100 NA
 101 NA
 102 NA
 103 Extremely rocky. Hit bedrock at 62cm.
 104 NA
 105 Rocks prohibited digging past 52 cm

ESD: Conifer woodland with sagebrush Johnston
 FD10C - elevation of plot slightly lower than key
 mentions (8700ft on plot vs 9440 in key). Plot was
 106 done by sidney bussler not chelsea
 107 Bedrock at 25 cm.
 108 Hit bedrock at 33 cm
 Hit bedrock at 36cm. Soil Hoizon 1 was ~18% clay.
 109 Horizon 2 was ~25% clay.
 Calcius zone from soil horizon 4 to, presumed 70 cm
 of depth. Horizon 1, 10% clay. Horizon 2, 20% clay.
 110 Horizon 3, 25% clay. Horizon 4, 20 % clay
 111 Extremely rocky. Bedrock at 46 cm.
 As I dug down, the amount of hard CaCo3 rock
 112 pieces increased, as well as their size.
 113 NA
 Johnston Key: AL01 - plot higher elevation than in plot significant amount
 114 key. Live cover also less than listed in key of skree.
 115 NA
 Very compacted caliche starting at 30cm, stopped
 116 digging at 57cm
 117 NA
 118 57cm to impenetrable layer
 119 45 to rock
 120 53 to Rock
 121 NA
 122 No soil pit - talus
 123 NA
 124 NA
 125 49 cm to BR
 126 NA
 127 NA
 128 45 cm to R
 Only reached a depth of 45 cm due to Calichie layer
 that became very compacted at 22 cm. This layer did
 129 not change and became too difficult to dig.
 130 Hit bedrock at 68cm, top horizon is litter and duff
 131 NA
 Plot was dominated by exposed bedrock with
 132 deposited sandy soil in deeper areas of rock
 133 Solid rock layer at bottom of pit (68 cm)
 134 bedrock at 45 cm
 135 NA
 136 No pit, talus field.
 137 No pit, talus field.
 138 NA
 139 Forgot to take slope/aspect
 140 NA
 141 Johnston Key: FD12J - Thurber fescue mentioned in was potentially on plot. still
 key Elk sedge very likely best fit.

	absent but mentioned in key	ESD: Coniferous forest.
142	Bedrock at 43 cm	
143	NA	
144	Hit parent material at 61 cm	
145	NA	
146	The soil surface is gravelley with exposed stones and boulders common.	
147	NA	
148	NA	
149	Clouds of swarming (biting) gnats made slow, methodical data capturing extremely difficult.	
150	NA	
151	Bedock after 48cm	
152	Rocky compaction layer starting at 12 inches - could not dig to depth	
153	NA	
154	Reached 60 cm, layer from 28 cm down was calichie and showed no change. "Gravel" from this layer was very compacted soil and tough to break down.	
155	NA	
156	Not very compact through all 70cm	
157	Johnston Key: AL03	cover on plot slightly less than in key per skree transects. Two transects entirely or mostly covered by skree field
158	NA	
159	Layer 2 high organic matter %. Bedrock hit at 45 cm.	
160	NA	
161	Conifer forest	
162	Johnston Ecological type	
163	FL2-A	
164	NA	
165	Fits Unita found in conifer forest. No Eco site or parent material Provided. Plot map listed soil type between LhF and PhF	
166	NA	
167	20 to r	
168	NA	
169	Soil pit was near an old two track and might have been a bit more compacted in the first 2 horizons than the rest of the plot	
170	NA	
171	NA	

ESD not given in Wetterhorn description.
 ESD: Conifer forest

170 Johnston: FD09 B
 Plot is a true aspen, occurring in a moist drainage with
 171 high diversity
 172 NA
 173 NA
 Very compacted caliche begins around 45cm,
 174 therefore stopped digging
 Johnston Key: FLO5C, Lodgepole pine was not
 noted but is seen in plot photos. Did not call Elk
 Sedge, but was potentially present. ESD does not
 appear to match site/ not given. ESD: Conifer
 175 woodland
 176 NA
 177 NA
 Area is open sage surrounded by oakbrush stands.
 Many open areas with sage that is mostly spreading.
 Many forbs and grasses among sage with sparse
 178 pinyon nearby.
 179 Bedrock at 52 cm.
 180 No soil pit
 181 Bedrock at 64 cm
 182 NA
 183 NA

lacking Elk sedge and
 common juniper on plot
 verses key. ESD: Conifer
 forest

184 Johnston Key: FD16C
 185 53 cm to parent material
 186 soilpit close to 4x4 road
 187 Rocky. Hit rockbed at 53cm
 188 NA
 Only used 7.5YR for color, horizon 2 at 10-31cm
 consisted of very compacted caliche, horizon 3, 5, 7,
 and 9 are bands of gravel; bottom horizon 62-75cm
 has extremely high clay percentage and not
 189 compacted at all
 190 NA
 Clay layer at 15 cm. Petrocalcic layer at 37 cm.
 191 Bedrock at 55 cm.
 192 NA
 All gravel measured for the rock fragment volume is
 193 shale
 194 NA
 195 34 cm to rock
 196 No ecological site listed on soil description
 197 NA
 198 Johnston Key: FL07C ESD: Conifer forest

No PJ on or hear plot, appeared to have more
 199 potential to be a Sagebrush Steppe
 200 Hit bedrock at 26 cm
 Horizon1 is ~60% Clay. Horizon 2 is ~55% Clay.
 Horizon 3 is ~46% Clay. Horizon 4 is ~45% Clay.
 201 Horizon 5 is ~40% Clay
 tree stump at center point. Transect 2 passes thru
 deep gully. Transect 1 passes thru gully. Site moved
 50 meters west from original point (<45 degree
 202 slope).
 203 NA
 204 NA
 205 impassable layer at 43cm. Hard clay?
 206 Hit bedrock at 66cm
 207 Bedrock at 48 cm
 208 NA
 209 NA
 210 NA
 211 Bedrock at 55 cm
 Rocky layer and massive rock prohibited digging full 38 cm was measurement
 212 soil pit to depth in between
 213 NA
 214 Bedrock at 60 cm.
 215 NA
 Johnston Key: FL05C. ROWO absent. ESD: Aspen
 216 forest
 No soil pit: entire plot on highly vegetated talus
 217 slope.
 218 NA
 219 Bedrock at 60 cm.
 220 NA
 221 NA
 222 High organic matter in layer 1.
 223 NA

		Horiz
		Horizon on 4 =
		3 = Bedro
		20% ck at
224 Horizon 1 = 30% clay	Horizon 2 = 30% clay	clay 55 cm
225 NA		
226 very rocky ,38 centimeters at rock layer		
227 Bedrock at 29 cm		
228 NA		
229 Plot was on talos field. No pit.		
impermeable rock layer prohibited digging past 10-		
230 cm (boulders).		
231 Soil was wet from previous night's rain.		
232 Could not dig past 52cm due to impermeable layer		

white concretions below 9cm. Dense band 9-16cm,
233 less to depth. "gravel," is just hard clay balls.
234 28cm to parent material
235 very rocky 31cm to BR
236 NA
237 NA
238 Lighting and rocks hindered soil pit picture. Soil was
wet from rain. A lot of weathered rock is present.
Three soil pits were dug, but site was dominated by
large rocks and boulders in the ground.
239 Hit bedrock at 20 cm.
240 NA
241 NA
242 Bedrock at 18 cm.
243 NA
244 Impermeable layer at 36 cm
245 36 centimeters to bedrock
246 NA
247 NA
248 NA
249 Impermeable layer at 33cm
250 NA