

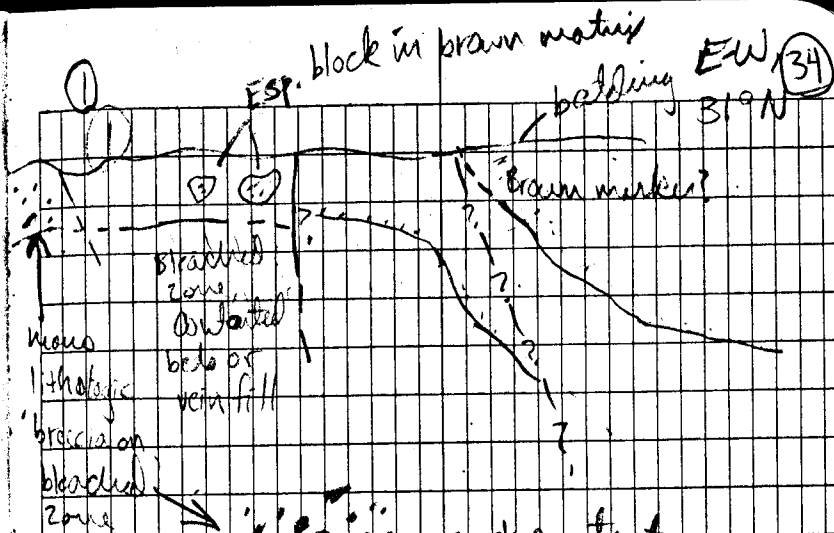
8/7/89

Corrillo's Project: swampy conditions on Railroad tr. frontage road required parking near Backs' house/ basis? Walked up exposure just west of RR siding - good exposure up to the top good place for small detailed section.

Brown marker horizon (w/ tuff like bed 1-3cm thick under north) disappears against disrupted zone at MU-100. Forms a SE projecting ridge → fracture/fault orientations run across almost ±

faults: N86W  
N65E  
N90E-W

sketch of ridge from E ①



rough contact  
Block  
mineralized  
due to primary or secondary (alteration) processes?

photos: 1. en echelon fractures in volcanic clast

2. contorted relic

← bedding at fine fractures 15 to 20cm long - seal or interference?

could be hematite-filled flabs in contact with intrusive pod.

On the next hill to the east no brecciation is observed but again monolithic breccia overlies bleached zone.

bedding:

N24W, 16 NE

Brown zones (alteration?) occur locally in gully between 2 ridges

MU-101: fault throw?

N85E

run for a ways:

north side of fault:

blocky red breccia w/  
tufflike horizons separating  
- some show burrowing  
on upper surface

South side: poorly  
exposed - in places  
thick reddish gray  
d.f. with gray  
interbeds.

other side of ridge from MU-102

↓  
West side of windmill valley  
west bench (2) · Why 2  
reddish-brown units → does  
gray unit - red unit system  
not work here?

MU-102: Bed for grading  
+ clast size analysis.  
photo 3: d.t. with tape.

in	h	1 (cm)	2 (cm)	3 (cm)	4 (cm)	5
10.16	(4) base	ms	ms	ms	ms	ms
20.32	8	.1	ms	.1	ms	ms
30.48	12	ms	.1	.3	.2	.2
40.64	16	.2	.1	.4	2.5	ms
50.80	20	.1	ms	ms	ms	.4
60.96	24	2.7	ms	.4	1.5	1.1
71.12	28	ms	.5	.8	.4	ms
81.28	32	1.6	ms	6	.7	ms
91.44	36	ms	2.4	ms	.8	ms
101.60	40	6.	.1	ms	1.2	2.2
111.76	44	.4	ms	5	ms	1.4
121.92	48	ms	6.5	1.2	.2	ms
132.08	52	.2	.2	1.7	.8	.4
142.24	56		.2	3.5	ms	ms

(36)

(2)

reddish-brown  
with few gray  
beds

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gray

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red, blocky units

↑ N35E

← every 4 inches - tape pos.  
every 12 inches

m.s. - medium ss

maximum thickness at trap  
= 68 inches  
max clast = 11 cm  
most clasts:

- lt gray clay + blk latite  
- sparse (~5%) white clasts  
- few red nodules / silt



Number NE - following same  
bed looking for good  
place to do another  
measurement:

photo 4: chunk of silicified  
wood in base of  
d.f. (the core being  
on)

MU-103: just SW of UV.  
section - same d.f.

h	1	2	3	4	5
base	CS	CS	CS	CS	CS
4	CS	"	CS	1	"
8	.7	"	CS	.2	"
12	.1	"	.7	CS	"
16	CS	.4	CS	1.2	"
20	1.5	.8	CS	CS	.2
24	CS	CS	.8	.3	.2
28	CS	.2	.3	.9	1
32					
36					

(38)

→ matrix a bit coarser than at  
102

clasts: mostly lt to dark  
gray plg-hbl latite  
2-3% bleach white plg-hbl  
clasts

CS: coarse sandstone

max clast: 30 cm (soft clast)  
6.5 cm (hard clast)

very  
few soft clasts



8/15/89

### Cerillos Project:

MU-104: East of Cañon de la Cueva along RR tracks bedding in Red unit.

N33W 13 NE

1-2 m thick debris flow crops out between RR siding & ploughed dike along the base of the hill slope.

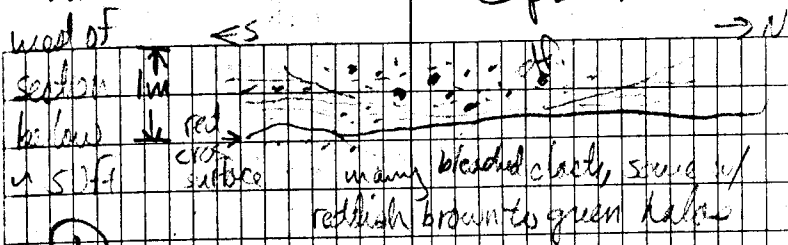
Above d.f., a fairly continuous red horizon w/ bleached white clasts (up to 2-3 cm) and upper surface w/ up to 1 m relief, crops out. ①

MU-105: hilltop NE of 104 at head above small canyon.

The notorious reddish-brown, hackly marker bed forms top of hill. On SE side of hill units beneath the hackly horizon are contorted and faulted, similar to

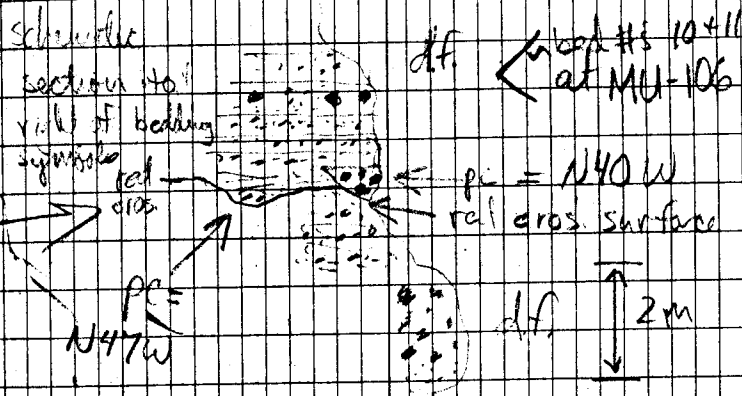
A.

(40) pc = N89W.



①

B.



see map for A+B locations

Phase at MU-100

Biotite-plag-hbl dikes  
(small spots) occur along  
southwest side of hill  
MU-105

In the canyon between 104 &  
105 no clear cut red/gray  
boundary can be defined.  
However, another red-weathering  
erosional surface in addition to that  
at 104, was found at pt. C.

It is strat. above the  
horizon at 104 A+B and  
shows less relief than  
that at 104 A+B.

MU-106: section from top  
of RR siding to hill top -  
laterally continuous dist.  
is marked and a set of  
clast size distrib. are given

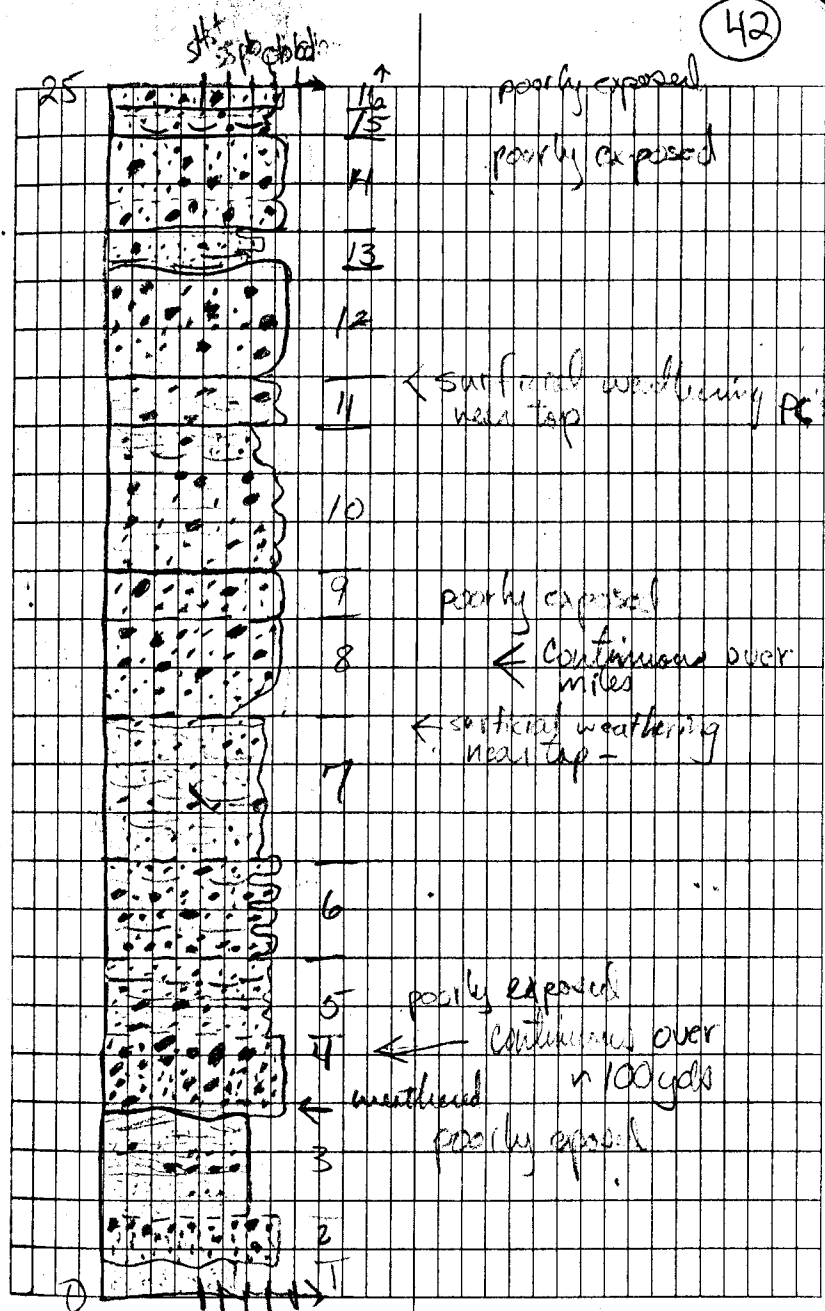
(11)

→ most of the units are gray but  
many blocky pink to reddish  
brown beds are interbedded.  
Near 104, most of the beds are  
reddish to pink.

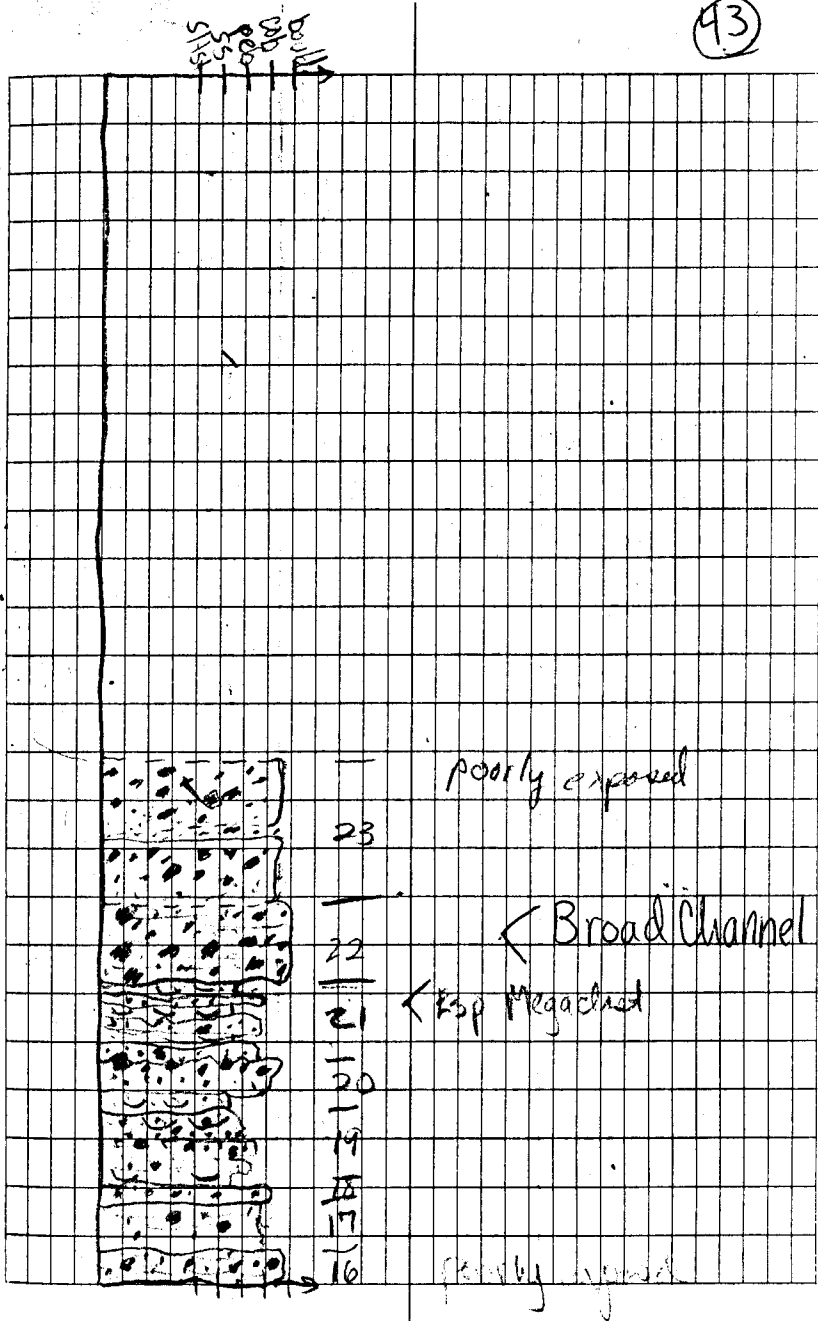


# MU-106 Section:

bed no	t (m)	Description
1	.6	massive, eg ss (red) - erosion -
2	1	red clast-rich dt. breccia - mostly lt gray hbl-plag but many pyx-plag glom. clasts all angular - max clast 30cm near top - diffuse -
3	2	reddish-gray, stf bedded eg ss + pebbly ss. - boulder horizon 30cm thick in middle - max clast 27cm  - weathered <sup>near</sup> top (up to 20cm thick), locally cut out by ss. Silty to sandy unit w/ v. irregular patterned red stain + abundant bleached clasts. Up to 10cm of well bedded ss overlie - sharp -
4	1.5+	red clast-rich breccia similar to b.2 - numerous pyx-plag glom. clasts max clast 10cm - near top → v. irregular thin ss.



bed no	t (m)	
5	1.6	interbedded pebbly to cobbly s.f. + s+f ss. boulders often red and overlying beds - max clast 30 cm. - diffuse -
6	2	4 thin (< 50 cm) red d.f. - few pyx - plg glau. clasts - max clast 40 cm - boulders ~ 30 cm widely dispersed in units. Units separated by vaguely strat pebbly ss. - diffuse -
7	3	cobbly to pebbly, s+f ss. + congloms. rare pyx - plg glau. clasts - max clast - 20 cm. most clast 2-3 cm  - weathered zone (surficial) near top of unit -  - diffuse -



below (cm)  
 8 2 red d.f. breccia  
 angular clasts - no pyx.  
 platy clasts - none  
 clast - 47cm  
 - laterally continuous up  
 to a mile long.

flattened clasts are common  
 but not abundant

Clast + grading analysis:

in	1 (cm)	2 (cm)	3 (cm)	4 (cm)	5 (cm)
base	MS	MS	MS	CS	CS
10	CS	CS	CS	CS	CS
20	.6	CS	CS	CS	CS
30	3.7	1.1	.3	.1	.2
40	.3	.3	1.7	.6	.1
50	CS	6	1	1	CS
60	4.7	CS	2.2	7	.2
70	1.7	1.1	CS	CS	.7
80	CS	MS	CS	1.5L	3.1
90	6.5	CS	.6	12.2	.5
100	CS	CS	2.2	CS	CS
110	2.5	2.2	.5	1.5	1.2
120	.8	.9	1.7	.3	CS
130	CS	CS	.9	1.8	.2
140	CS	2.5	CS	.4	.1
150	CS	CS	CS	CS	CS

MS = medium sandstone  
 CS = coarse sandstone

clast measurement every 4  
 inches (10 cm); tape positions  
 1/2 inches (30 cm) apart



bed no.	L(m)		9/3
11	1	mostly vaguely strat; cobble to boulders of breccia w/ intermingling ss. max clast in breccias 32 cm pc diti: N61W: scow N51W: breccia-1.1 scow N21W: scow	
12	2.3	-sharp, weathered below - red d.f. breccia similar to b.8. Weathers as two rounded edges but shows no signs of amalgamation. Max clast ~ 40 cm - 1 boulder of pyrophy glass. - badly weathered. -sharp, undulatory -	
13	.8	reddish gray sst. pebb. ss w/ pebbly d.f. cap upper surface of d.f. is reddish and contains some bladed white pebbles	

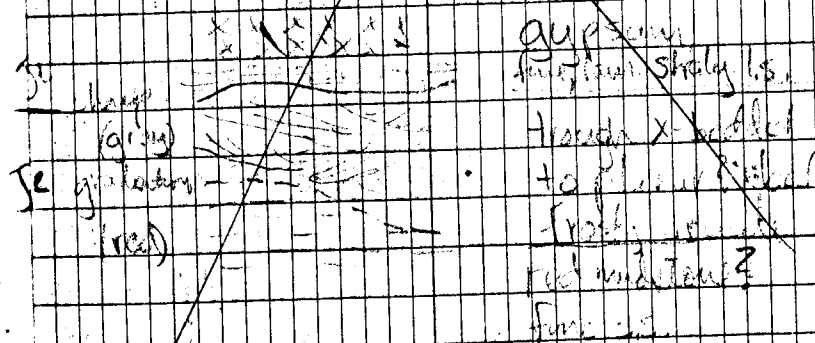
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Provincia San Felipe  
San Felipe (on road between  
I-25 & 14<sup>th</sup> (in Ortiz))

Gypsum Mine Strat.

- frosty, rounded gts in both  
red & gray Estrada units



bed no.

1 (1) max clast 20cm (too high to measure)

-sharp, undulatory-

14 2 2 amalgamated df, arg. red to reddish gray to subang. con cobbles - max clast 10cm - poorly exposed in upper 1.5m. df's locally separated by thin ss. (2cm thick)

15 .5 -sharp, mostly covered - pebbly to cobbly s.f. ss, reddish-gray to gray, numerous subrounded pebbles & cobbles. Peb. & Cob often occur on upper surfaces & create bedding discontinuities & wavy bedforms in overlying units.

16 1.3 -diffuse to sharp - Red, pebbly to cobbly (arg. to subang.) variably strat. s.f. breccia, max clast = 40cm. Bottom 60cm may be a

bed no	t	df. but exposure makes determination difficult.
		- sharp, undulating to diffuse -
17	1	red to reddish gray pebbly to cobbly (ang to subrounded) sf. ss. + breccia; Max clast = 16 cm. Some thin (1 cm) s. + f. ss. occur between breccias - diffuse -
18	.35	red cobbly df. (ang to sub ang), vague inverse grading max clast = 14 cm, 1 pyx- plag glau. clast. - sharp -
19	1.6	interbedded s + f pebbly ss + pebbly to cobbly sf. breccia (ang. to subrounded), Max clast in breccias = 18 cm - sharp w/ ss; diffuse w/ df.
20	1	lower 30 cm s + f. ss w/ localized 20 cm thick df. Upper 70 cm cobbly to boulder df. (ang to subrounded) Max clast = 28 cm

(48)

reddish gray to red

bed no.	t	
		marked inverse grading noted on a local scale
		-diffuse, but marked grain size change-
21	1.6	A series of 3 to 4 pebbly to small cobble-bearing s.f. breccias + df units (up to 35 cm thick) each overlain by s.f. pebbly ss. Scouring into upper surface of s.f. + df units is common. Most of the large clasts are in the 18 to 20 cm range. 1 mega last of Esp. breccia (97 cm across) contains abundant hbl. phg cobbles + pebbles and has a rusty yellow to gray cast.
		-sharp, laterally continuous contact-
22	1.6	reddish-gray cobble to boulder s.f. + s.f. breccia (avg. 10 subbands) with vague stratification

①

