

GENERAL ELECTRIC

NUCLEAR ENERGY
ENGINEERING
DIVISION

GENERAL ELECTRIC COMPANY, P.O. BOX 460, PLEASANTON, CALIFORNIA 94566

November 2, 1978

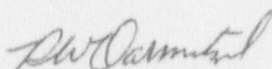
THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

Mr. Chris Nelson
Operating Reactors Branch #4
Nuclear Regulatory Commission
Washington, D. C., 20545

Dear Mr. Nelson:

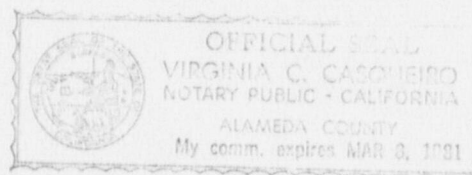
Six sets of geological trench logs were mailed under separate cover.

To the best of my knowledge, the information contained therein is accurate.



R. W. Darmitzel
Manager
Irradiation Processing Operation

VCC



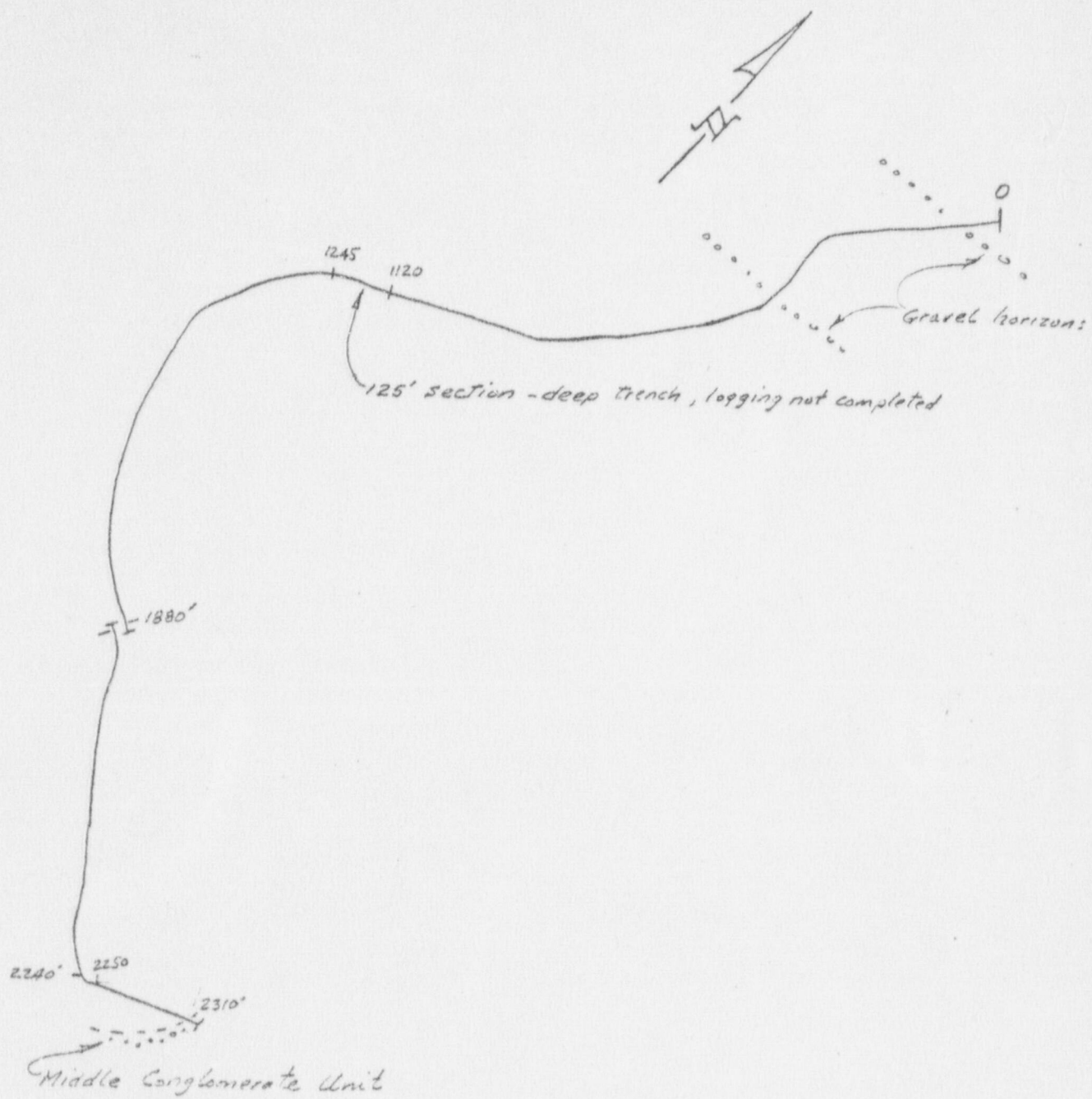
Submitted and sworn before me this second day of November, 1978

Virginia C. Casqueiro, Notary Public in and for the County of Alameda,
State of California.

7811130177.2

CHANGE
ACRS
w/ENCL
Doid
3/6*

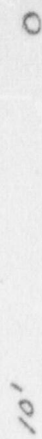




SKETCH MAP
TRENCH A
(NOT TO SCALE)

①

NE — A



SCALE 1" = 6' FEET

①

74

300'

282

NNW wall

260-

517. Carpent Dues
Co Dues, color
= 1048
noobly stand.

Soil (A)

5-6" w. dia. 20" tall
caliche pods at base
vert. elongated (see below)

E.) SANDY CLAY, some are
in upper K_2

Southern

SILTY CLAYEY SAND, 545/6,
med to coarse

SANDY CLAY, 5Y 7/2

SANDY CLAY 5Y 7/2
20-25' and 10-15' above
40-50' and 20-30' or sandy siltstone to siltstone,
82% silt. type, with cum silty calcareous
(thin bedded 2-4") mass hardening to a
5-10' layer near sandy approach clayey sand.

less caliche
in situ.

350'

340'

10-5-69
 11-5-69
 12-5-69
 13-5-69
 14-5-69
 15-5-69
 16-5-69
 17-5-69
 18-5-69
 19-5-69
 20-5-69
 21-5-69
 22-5-69
 23-5-69
 24-5-69
 25-5-69
 26-5-69
 27-5-69
 28-5-69
 29-5-69
 30-5-69
 31-5-69
 1-6-69
 2-6-69
 3-6-69
 4-6-69
 5-6-69
 6-6-69
 7-6-69
 8-6-69
 9-6-69
 10-6-69
 11-6-69
 12-6-69
 13-6-69
 14-6-69
 15-6-69
 16-6-69
 17-6-69
 18-6-69
 19-6-69
 20-6-69
 21-6-69
 22-6-69
 23-6-69
 24-6-69
 25-6-69
 26-6-69
 27-6-69
 28-6-69
 29-6-69
 30-6-69
 1-7-69
 2-7-69
 3-7-69
 4-7-69
 5-7-69
 6-7-69
 7-7-69
 8-7-69
 9-7-69
 10-7-69
 11-7-69
 12-7-69
 13-7-69
 14-7-69
 15-7-69
 16-7-69
 17-7-69
 18-7-69
 19-7-69
 20-7-69
 21-7-69
 22-7-69
 23-7-69
 24-7-69
 25-7-69
 26-7-69
 27-7-69
 28-7-69
 29-7-69
 30-7-69
 31-7-69
 1-8-69
 2-8-69
 3-8-69
 4-8-69
 5-8-69
 6-8-69
 7-8-69
 8-8-69
 9-8-69
 10-8-69
 11-8-69
 12-8-69
 13-8-69
 14-8-69
 15-8-69
 16-8-69
 17-8-69
 18-8-69
 19-8-69
 20-8-69
 21-8-69
 22-8-69
 23-8-69
 24-8-69
 25-8-69
 26-8-69
 27-8-69
 28-8-69
 29-8-69
 30-8-69
 31-8-69
 1-9-69
 2-9-69
 3-9-69
 4-9-69
 5-9-69
 6-9-69
 7-9-69
 8-9-69
 9-9-69
 10-9-69
 11-9-69
 12-9-69
 13-9-69
 14-9-69
 15-9-69
 16-9-69
 17-9-69
 18-9-69
 19-9-69
 20-9-69
 21-9-69
 22-9-69
 23-9-69
 24-9-69
 25-9-69
 26-9-69
 27-9-69
 28-9-69
 29-9-69
 30-9-69
 1-10-69
 2-10-69
 3-10-69
 4-10-69
 5-10-69
 6-10-69
 7-10-69
 8-10-69
 9-10-69
 10-10-69
 11-10-69
 12-10-69
 13-10-69
 14-10-69
 15-10-69
 16-10-69
 17-10-69
 18-10-69
 19-10-69
 20-10-69
 21-10-69
 22-10-69
 23-10-69
 24-10-69
 25-10-69
 26-10-69
 27-10-69
 28-10-69
 29-10-69
 30-10-69
 31-10-69
 1-11-69
 2-11-69
 3-11-69
 4-11-69
 5-11-69
 6-11-69
 7-11-69
 8-11-69
 9-11-69
 10-11-69
 11-11-69
 12-11-69
 13-11-69
 14-11-69
 15-11-69
 16-11-69
 17-11-69
 18-11-69
 19-11-69
 20-11-69
 21-11-69
 22-11-69
 23-11-69
 24-11-69
 25-11-69
 26-11-69
 27-11-69
 28-11-69
 29-11-69
 30-11-69
 1-12-69
 2-12-69
 3-12-69
 4-12-69
 5-12-69
 6-12-69
 7-12-69
 8-12-69
 9-12-69
 10-12-69
 11-12-69
 12-12-69
 13-12-69
 14-12-69
 15-12-69
 16-12-69
 17-12-69
 18-12-69
 19-12-69
 20-12-69
 21-12-69
 22-12-69
 23-12-69
 24-12-69
 25-12-69
 26-12-69
 27-12-69
 28-12-69
 29-12-69
 30-12-69
 31-12-69

320'

E) SANDY CLAY 10-15% clay, med to h. silt
red to dr. 5-10-35% med to silt
1-2" thick, sandy, med to h. silt, some
few to no bly. 2-5% gravel to 1/2" - 1/4" diam
1/2" to 1/4" diam. (1/2") gravel, coarse.

300-

CHIEF, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991,

(1951-1952) (1953-1954)

 $\text{Sol}(A)$

SILTY SAND & SILTY GRAVEL
mod. bedg

SILTY CLAYEY SAND

compact indic.

[illegible]

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100
101
102
103
104
105
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149
150
151
152
153
154
155
156
157
158
159
160
161
162
163
164
165
166
167
168
169
170
171
172
173
174
175
176
177
178
179
180
181
182
183
184
185
186
187
188
189
190
191
192
193
194
195
196
197
198
199
200
201
202
203
204
205
206
207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223
224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245
246
247
248
249
250
251
252
253
254
255
256
257
258
259
260
261
262
263
264
265
266
267
268
269
270
271
272
273
274
275
276
277
278
279
280
281
282
283
284
285
286
287
288
289
290
291
292
293
294
295
296
297
298
299
300
301
302
303
304
305
306
307
308
309
310
311
312
313
314
315
316
317
318
319
320
321
322
323
324
325
326
327
328
329
330
331
332
333
334
335
336
337
338
339
340
341
342
343
344
345
346
347
348
349
350
351
352
353
354
355
356
357
358
359
360
361
362
363
364
365
366
367
368
369
370
371
372
373
374
375
376
377
378
379
380
381
382
383
384
385
386
387
388
389
390
391
392
393
394
395
396
397
398
399
400
401
402
403
404
405
406
407
408
409
410
411
412
413
414
415
416
417
418
419
420
421
422
423
424
425
426
427
428
429
430
431
432
433
434
435
436
437
438
439
440
441
442
443
444
445
446
447
448
449
450
451
452
453
454
455
456
457
458
459
460
461
462
463
464
465
466
467
468
469
470
471
472
473
474
475
476
477
478
479
480
481
482
483
484
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
518
519
520
521
522
523
524
525
526
527
528
529
530
531
532
533
534
535
536
537
538
539
540
541
542
543
544
545
546
547
548
549
550
551
552
553
554
555
556
557
558
559
560
561
562
563
564
565
566
567
568
569
570
571
572
573
574
575
576
577
578
579
580
581
582
583
584
585
586
587
588
589
590
591
592
593
594
595
596
597
598
599
600
601
602
603
604
605
606
607
608
609
610
611
612
613
614
615
616
617
618
619
620
621
622
623
624
625
626
627
628
629
630
631
632
633
634
635
636
637
638
639
640
641
642
643
644
645
646
647
648
649
650
651
652
653
654
655
656
657
658
659
660
661
662
663
664
665
666
667
668
669
670
671
672
673
674
675
676
677
678
679
680
681
682
683
684
685
686
687
688
689
690
691
692
693
694
695
696
697
698
699
700
701
702
703
704
705
706
707
708
709
710
711
712
713
714
715
716
717
718
719
720
721
722
723
724
725
726
727
728
729
730
731
732
733
734
735
736
737
738
739
740
741
742
743
744
745
746
747
748
749
750
751
752
753
754
755
756
757
758
759
760
761
762
763
764
765
766
767
768
769
770
771
772
773
774
775
776
777
778
779
780
781
782
783
784
785
786
787
788
789
790
791
792
793
794
795
796
797
798
799
800
801
802
803
804
805
806
807
808
809
810
811
812
813
814
815
816
817
818
819
820
821
822
823
824
825
826
827
828
829
830
831
832
833
834
835
836
837
838
839
840
84

TRENCH A

④

LXL

von 1914 - 1918
von 1919 - 1924

SAND
AUEL

1916, 13/6/14
% clay, med. plast.

cts of sand
 span of 18" with
 gravel, 1/4"
 & sub to and
 6" into (containing?)
 ool. fig., 1-3" thick
 v. prevalent for clasts.
 amp, mod dense.

 $R_{2/2}$

roots & my vesicles.
stem, cracked

— (lines)

100

1

many pebbles show
o. int 11 + bds

at 2000 ft
to 1000 ft
sandy (less gravel)

pas-guared,

2. ind, mottled 5/9/4,

45-60% sand,
s.d. silt, spec. 1
gravel; extend to

... with do many
(d'imbriate)
...
LKL

$$\frac{1}{2}$$

7) 570'

560'

VIEW OF NNW WALL

540'

C) SILTY & CLAYEY SAND
- 30% fines, 175% fine sand
- 30% fines, 175% fine sand
- 30% fines, 175% fine sand



TRENCH A

PRELIMINARY

7

LKE

LKL

54

54

920.

1

11

1

 $\frac{1}{2}, \frac{1}{3}$

July

1

mass,

5

71

Wash.

1

4

11

1

5

...for ...

Book 11

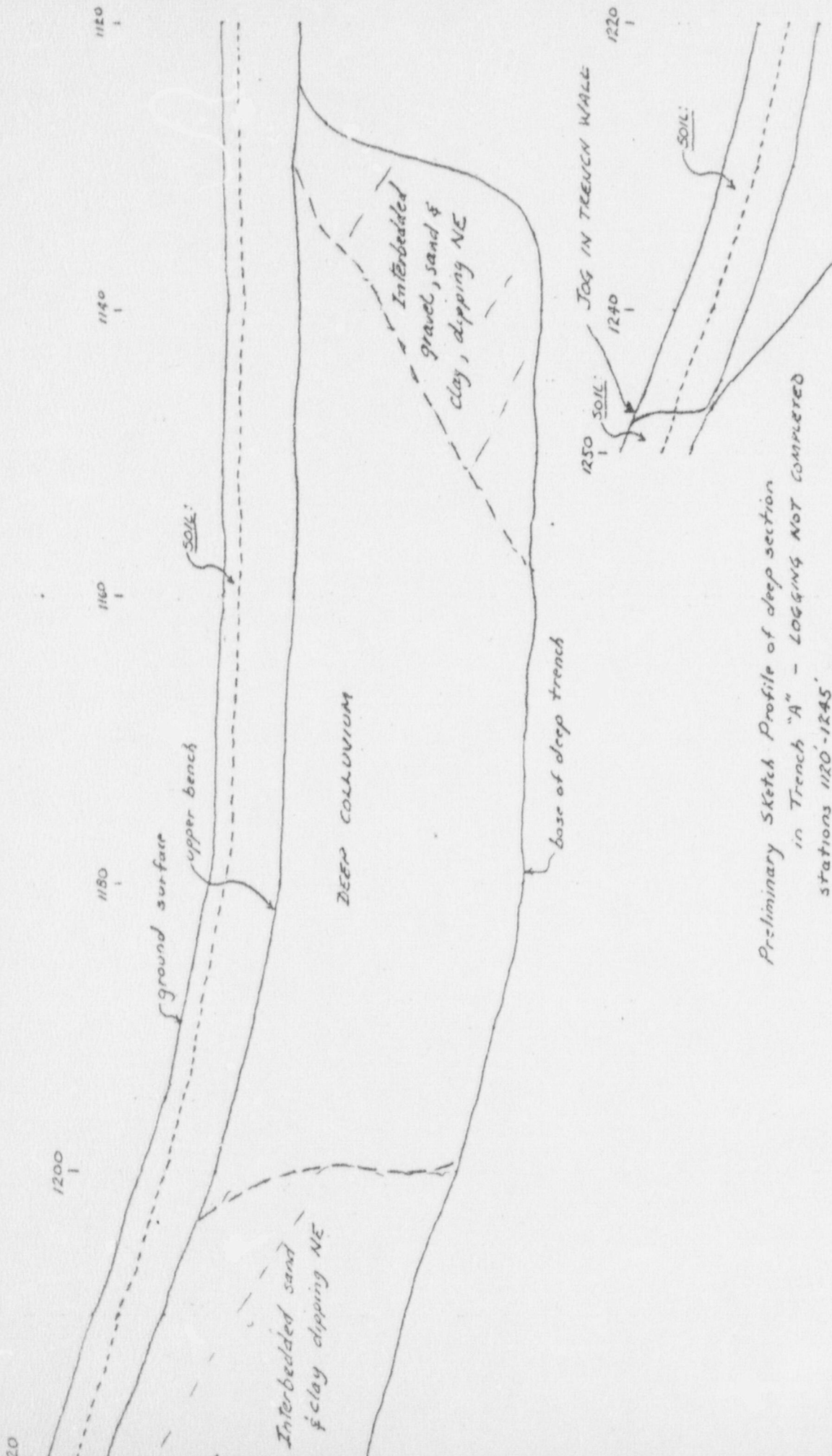
5

CHINA

1

Walden

1



Preliminary Sketch Profile of deep section
in Trench "A" - LOGGING NOT COMPLETED
stations 1120'-1245'

SCALE 1"=10' (THIS SHEET ONLY)

PRELIMINARY

1290

1270

1250

CLAYEY SAND: dusky yellow (5Y 6/4);
0-15% plastic fines; sand is fine-grained;
poorly graded, angular, quartzose, friable;
massive, dry

fine-grained sand, multi-colored; 0-15% fine gravel
grayish brown (5YR 3/2) fine-grained sand

SANDY GRAVEL: grayish orange
(10YR 7/6); 10-40% silt; sand;
well graded; mostly fine
gravel w/ some cobbles;
friable, dry

SANDY CLAY: dusky yellow
(5Y 6/4); 10-15% silt; fine-
grained sand; low plasticity;
friable, dry strength; slow
dilatory, med. clayiness;
massive on half vertical;
much caliche especially at upper
contact; hard, moist

sandy gravel grades yellowish
gray (5Y 7/6)

olive black (5Y 2/1)
organics scattered
in gravel

SOIL:
grayish black (N2); generally silty sandy
material derived from unit below;
structureless; some desiccation cracks;
roots; dry

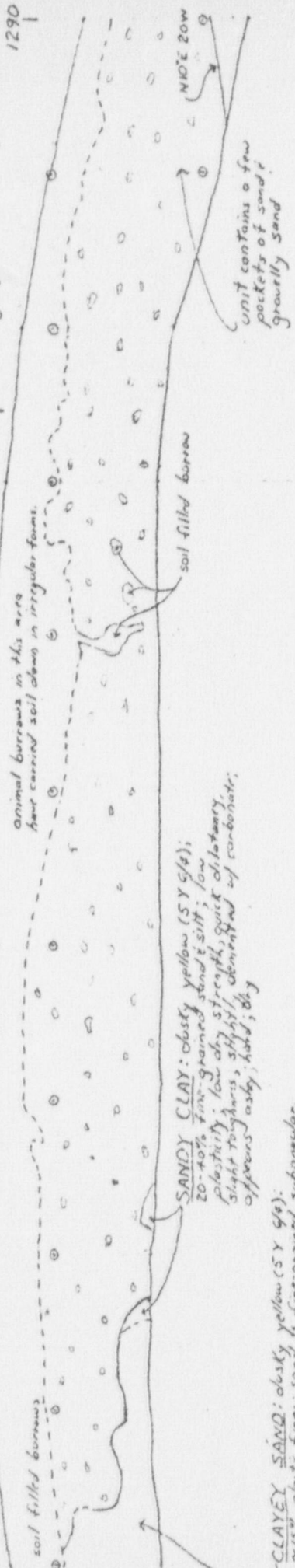
SANDY GRAVEL: grayish orange (10YR 7/6);
10-30% silt; sand; sand is fine-grained, subround
fine to coarse-grained; gravel is fine to
coarse w/ some cobbles, subangular to
rounded, mostly sandstone clasts;
massive, non-to slightly
concentrated, dense; dry

GRAVELLY SAND:
grayish orange (10YR 7/6) to
faded yellowish brown (10YR 8/4);
10% silt; fine to coarse-grained, well
graded, subangular, 0-25% fine gravel;
massive w/ common packets of sand; non-
to slightly concentrated; otherwise dry

SAND: grayish orange (10YR 7/6);
fine to medium-grained, subangular,
poorly graded, 10-25% silt; massive;
slightly concentrated; dry

CLAYEY SAND: dusky yellow (5Y 6/4);
15% plastic fines; sand is fine-grained, subangular,
poorly graded; unit is massive w/ some gradations
to sand; clay is friable; slightly cemented silt calcic
beddy, dry

SANDY CLAY: dusky yellow (5Y 6/4);
20-40% fine-grained sand & silt; low
plasticity; low dry strength; quick dilatatory
slight toughness; slightly cemented w/ carbonate;
appears lumpy; hard, dry



PRELIMINARY

TRENCH A

SCALE 1" = 5 FEET

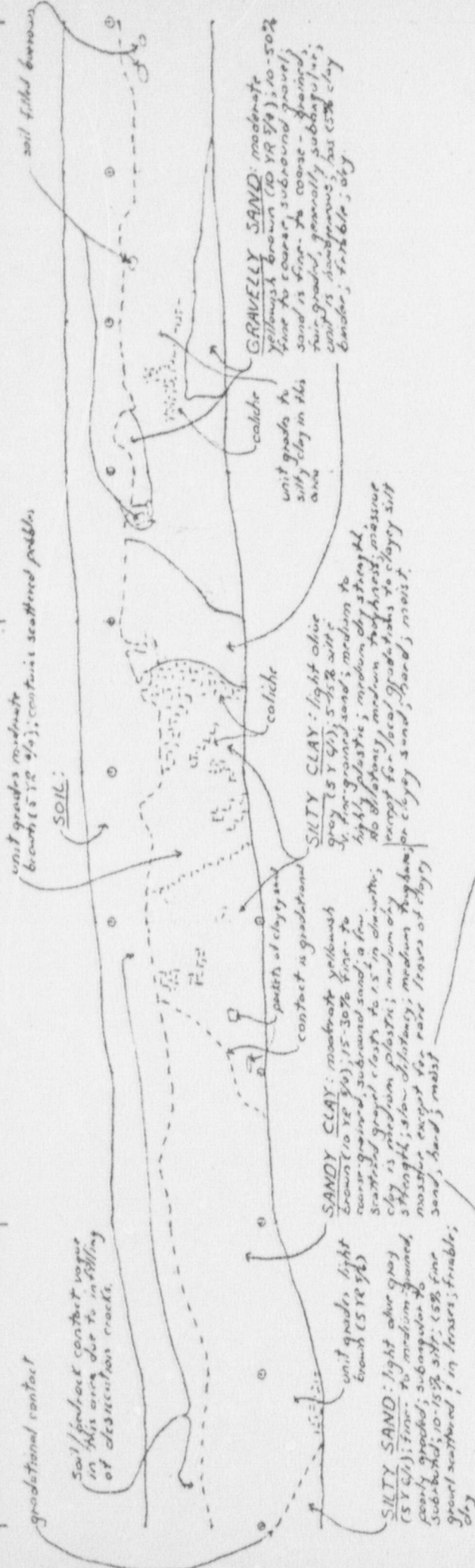
14

1390

1380

1360

1340

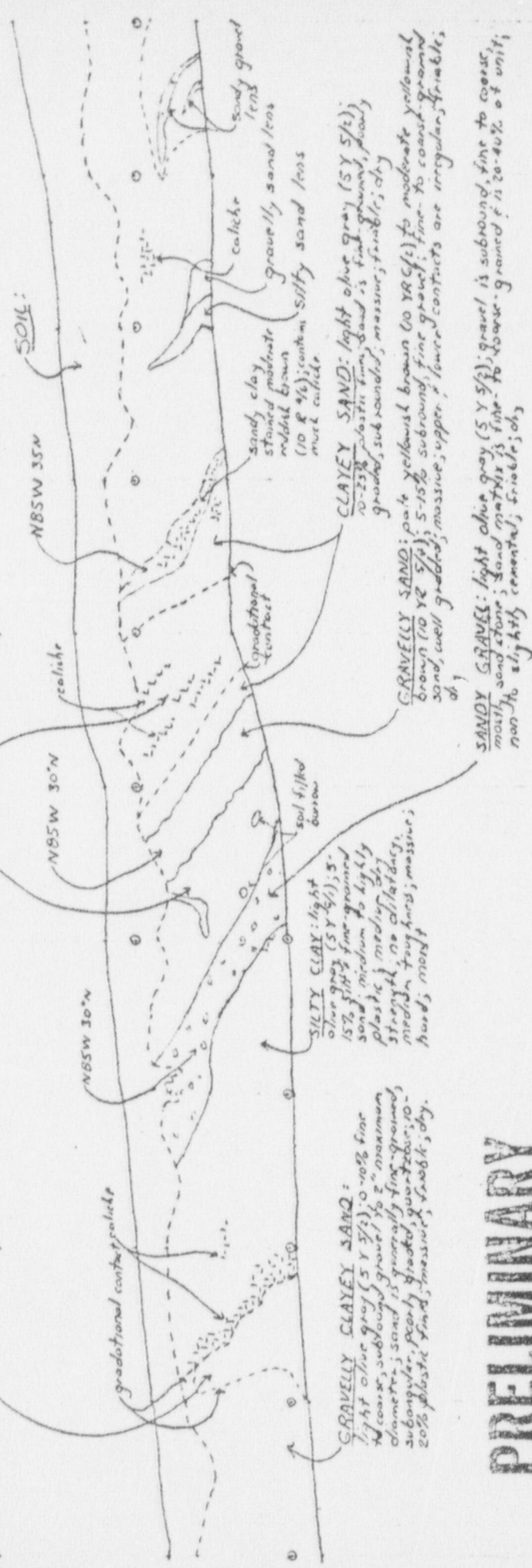


1440

1430

1410

1390



TRENCH A

(15)

PRELIMINARY

1490

1480

1470

NSE
1
N10W

Trench axising gently to the west

soil filled burrows

SOIL

soil filled burrows

sandy gravel lens;
fine to coarse, subround
gravel in matrix of
fine to coarse-grained
sand.GRAVELLY SAND: light olive
gray (5Y 5/2); 20-35% fine to
coarse, subangular to subround
gravel, clasts to 2" maximum
diameter; sand is fine to coarse-
grained, well graded, subangular
to subround, massive, friable;
dryGRAVELLY CLAYEY SAND:
(Same as unit just up trench
except contains some stringers
of gravel)

iron stained gravelly sand lens

unit grades light brown (5 YR 5/6)

1540

1530

1510

1490

soil filled burrows

soil filled
burrowsupper 1' of unit grades
light brown (5 YR 5/6)sandy gravel lens:
fine to coarse, subround
gravel in matrix of fine-
to coarse-grained sand.

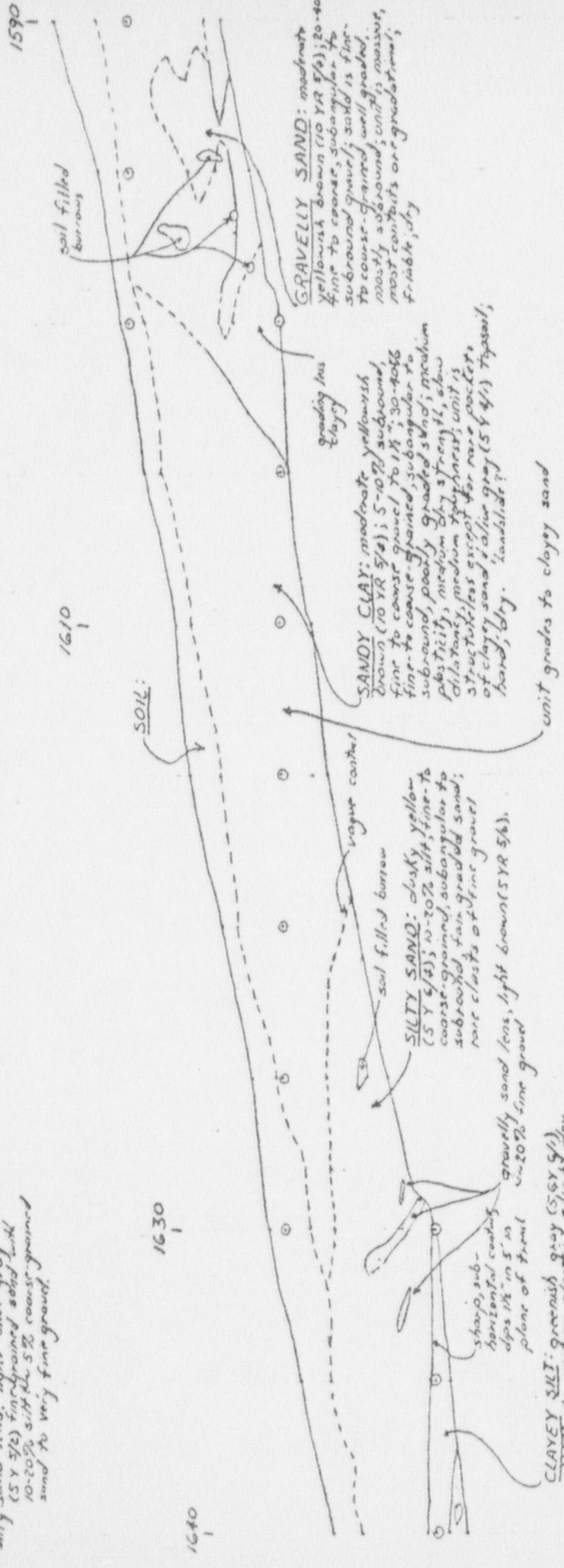
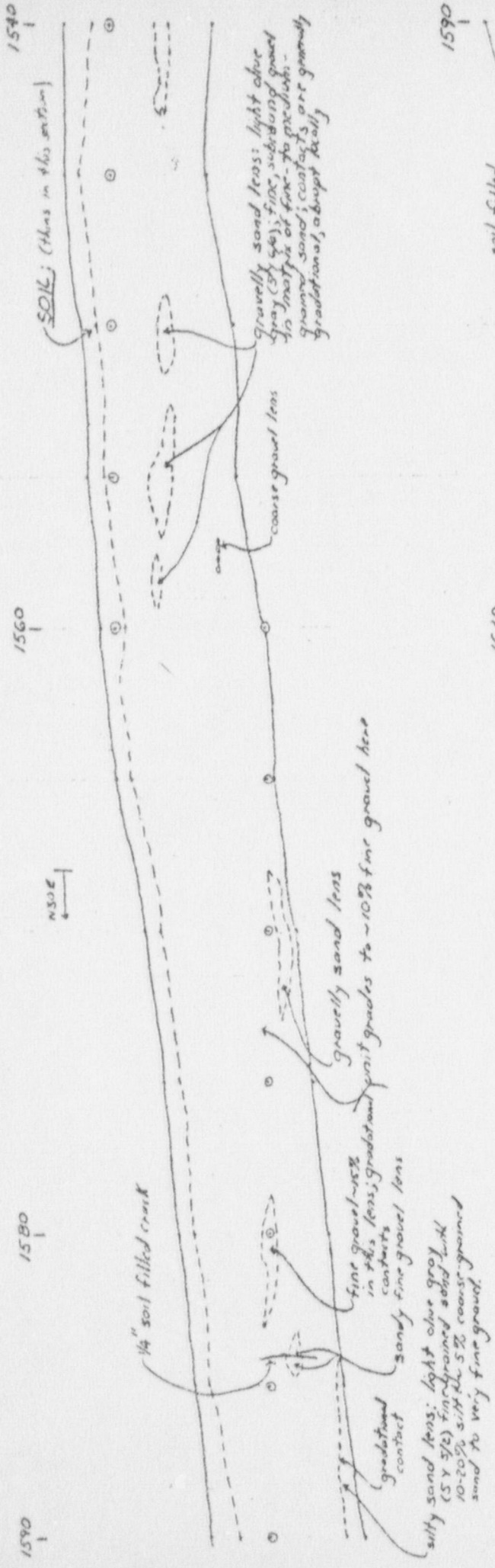
unit grading more clayey

sandy gravel lens,
all contacts are
gradationalsoil filled
burrowssandy gravel lens, as
elsewhere in unit, all
contacts are gradational

PRELIMINARY

TRENCH A

(16)



PRELIMINARY

TRENCH A

Cliff 100 Lbs to 100 ft.
98% high plasticity, dry, sticky, & to
be made to sand, silt, & sub-sand, with a
mod. cement. Crystals will be bonded, calcu-
lated, fairly indist. with act. 5, still to hard, clump.

SILTY CLAY, 10Y 6/2, 95% fines,
need to keep plastic, need to keep a dry str.,
5% to 10% of sand, subsoil to sink and
likely to mod. clean, MSV. hard, dry to damp

caliche pods in lower
1st soil.

GENCO. SANDY CLAY 10VRE-54,
-75% med to high plastic clay, silty, dry str.,
-25% med to high silty clay, silty, submed to subhard,
fine, light gray clay can w/ dry, calcareous, no
fossils, indurated, conchoidal fracture, dry to damp.

SANDY CLAY, mottled 5Y 4/4, 10Y 6/6,
75% clay, night plaster, bright dry, 25% to form and
some, when the solvent, 80, 116, tiger, on a formal case w/ caliche
no being seen, few to some caliche pods, shift to hard,
down to dry

100% of 100% - 95% Clay from 100%
 high clay 95% - 100% to 100% for
 with, when to 100% for
 100% when each 100% for
 100% the 100% 100%
 by each 100% 100%
 by each 100% 100%

L. crude blackness
at base of soil

~ I think zone 7 could be pods.

Zona 9 CaO stain
in CLAY, ind. st.
massive

Zone - 31 g slice
parts

Sand content increases
to 5-15%

contact folder

RECEIVED

TRENCH A

61

LXL

2

1935

SANDY CLAY, 10V 6 1/2, 56V 5 1/2, 10V 8 1/2

to family told, they should have taken a
blocky to the Harriet Street, St. H. Road, Camp

canal in process
w/ thick extends
laterally

7

17

black
strut

Forest, Day of Rec. - Mar 1946/16;
NO Sluts seen

(E)

Same dirt as in
next portion of
trench, no FB

Wall

1835

SANDY CLAY, 54 3/4% clay, med
plst, med to fine dry str. 10% med dr sand
subord to subord, 1/4-3/8" subord to rad,
wk covd. 54, AT dry sand, roots & root holes, 4 covd a
black, 1/4-1/2" cracks in upper 1-2', 1 embd,
hard dry, 1/4 damp, lying sandy clay, but more org.
spad. later, contact

SANDY CLAY, less coherent than
sandy clay below
shale (?)

Caliche in radio zone
1/4" thick, extends
11' laterally

much diss. surface min
dusty looking

SOIL in animal
burrows

big contact N70E SN

CLAYEY SAND, SANDY CLAY 10Y 6/2, 54Y 5/2,
50-70% clay, high plst, high dry str, 40-60% fine sand,
subord to subord, 1/4-1/2" subord, massive, many cracks filled
w/ calcite, FeO staining, 5700 to hard, damp

CLAYEY GRAVEL 10Y 6/2, 60-70% clay,
med plst, med dry str, 20-40% fine sand, 10-20% gravel,
subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, 1/4-1/2" damp

CLAYEY GRAVEL 5Y 5/6, 15-20% fines,
med plst, med dry str, 1/4-1/2" subord, 1/4-1/2" gravel,
subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, 1/4-1/2" damp

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

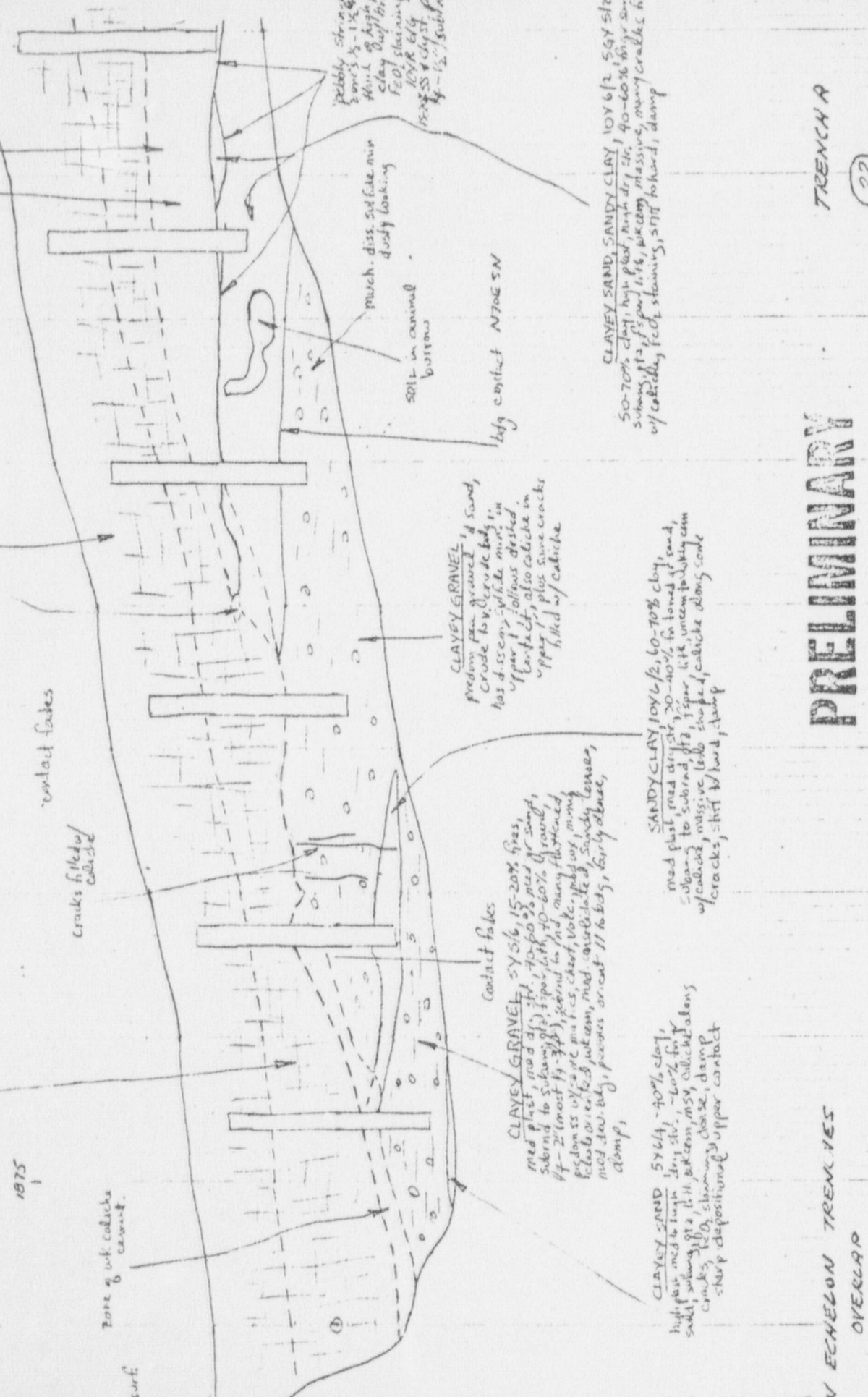
CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact

CLAYEY SAND 5Y 6/4, 40% clay,
high plst, med to high dry str, 10-20% fine
sand, subord to subord, 1/4-1/2" subord, 1/4-1/2" gravel, calcite along
cracks, FeO staining, close, damp
sharp dispositionally upper contact



PRELIMINARY

EN ECHELON TRENCHES
OVERLAP

TRENCH A

22

LKL

1925
1

grad. contact

SANDY CLAY

SOIL, SANDY CLAY

caliche cement
along base of soil

CLAYEY SILTY SAND

much coliche

CLAYEY SANDY GRAVEL

SOIL, SANDY CLAY

11/13/2013

Andy Clark

blocky street.
near base of stn

CLAYEY SAND
25% fine, 75% into
part of sand
low

CLAYEY SAND
40% clay 60% sand

clayey sand lenses

Caliche crystals
on cracks.

CLAYEY SAND

CLAYEY SAND CLAYEY GRAVEL

CLAYEY SAND
30-40% clay, 60-70% finger sand
caliche mostly in cracks

sulfide mine value in zone ~ 1' thick
along top of unit.

predom ss clasts,
14-1" and 10 subround,
many flake pet.

sharp body contact,
head horiz.

EN ECHÉLON TRENCHES

OVERLAP

4

RECEIVED

TRENCIA A

23

44

(H)

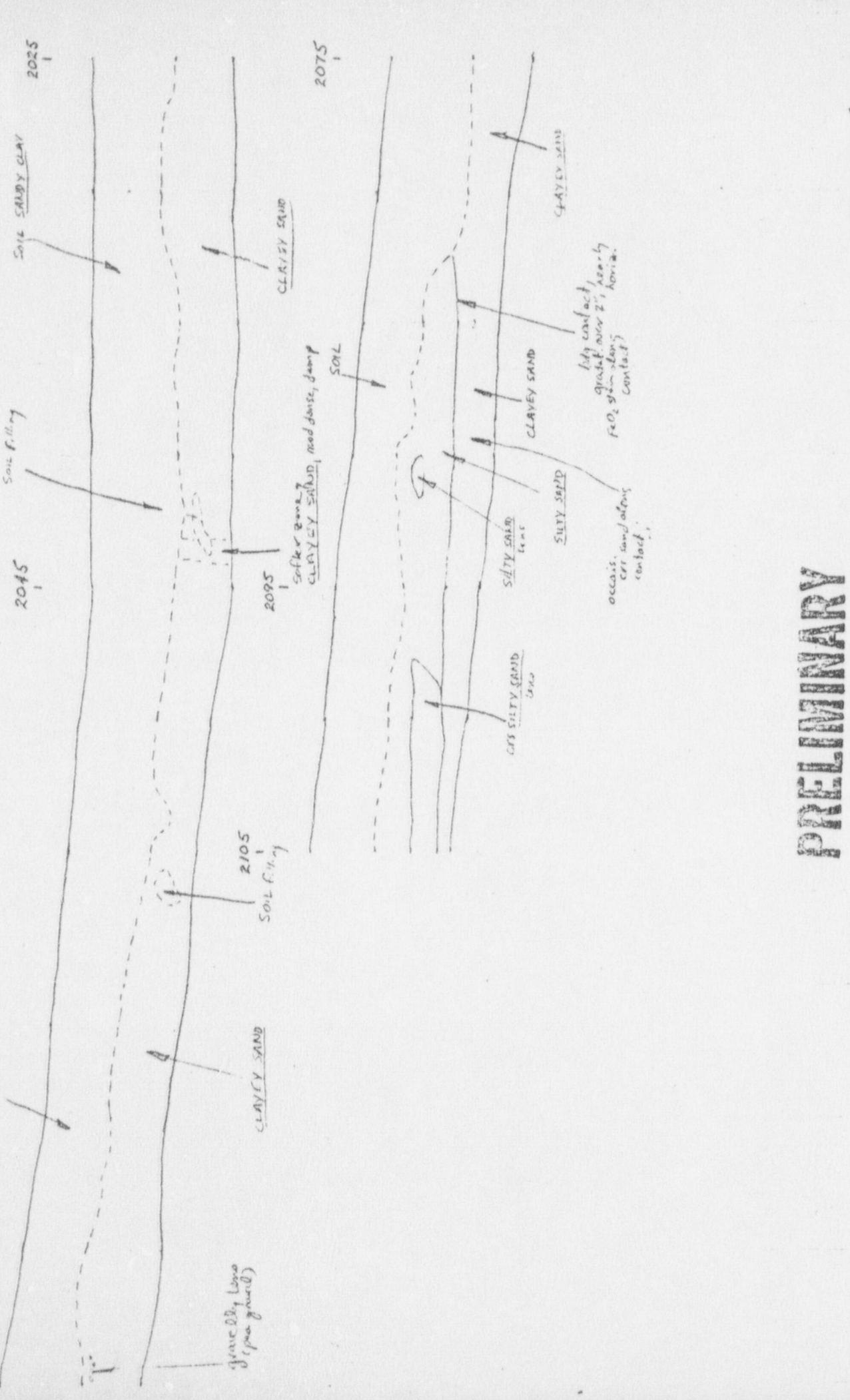
5306

2075

SOUTH WEST WALL

2065

SOIL, SANDY CLAY



PRELIMINARY

TRENCH A

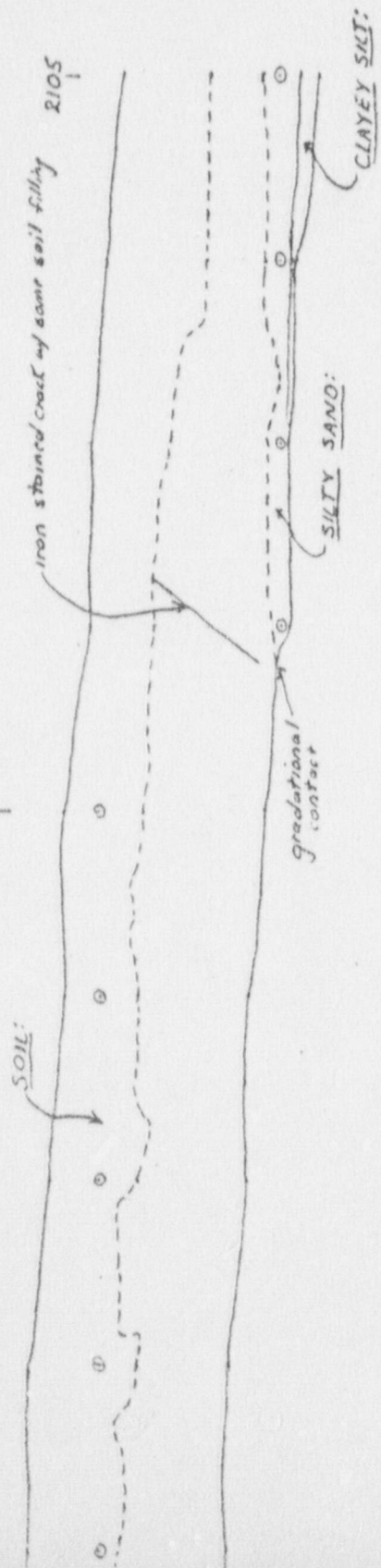
(25)

LKL

N 25-30 W →

2145

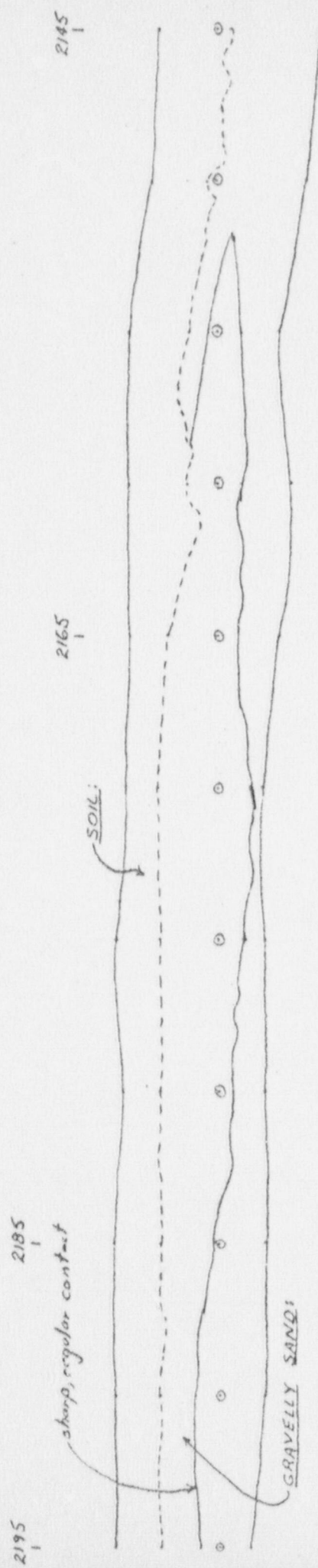
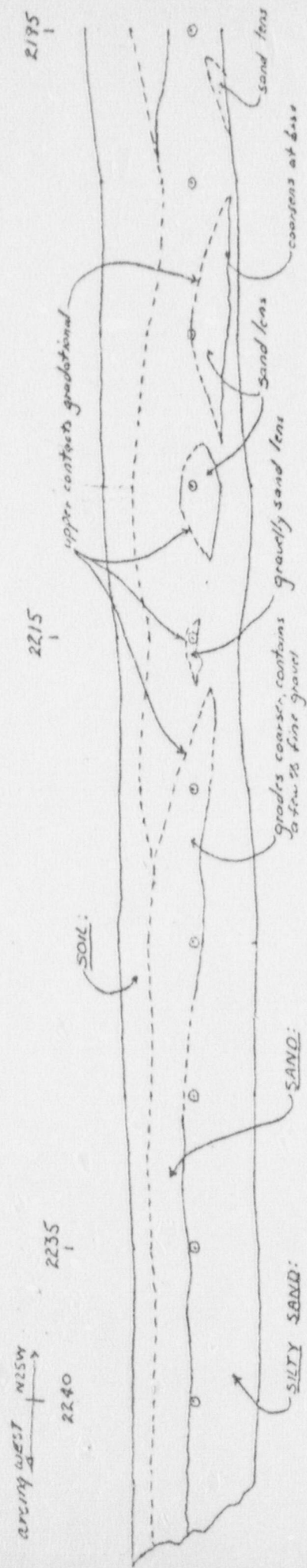
2125



TRENCH A

26

PRELIMINARY

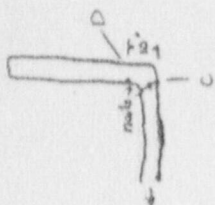


RECEIVED

TRENCH A

(27)

Log of N. wall
Trench Trends N80E



SILTY SAND:

2260

SILTY SAND:

2280

SOIL:

CLAYEY SILT:

SAND:

2300

SANDY GRAVEL:

LIVERMORE GRAVELS

MIDDLE CONGLOMERATE

SILTY SAND:

CLAYEY SILT:

2260 NORTH WALL

2240 WEST WALL

PLAN MAP

BEND IN TRENCH

WEST WALL

2240

SOIL:

imbricate structure suggests subhorizontal

grades siltier

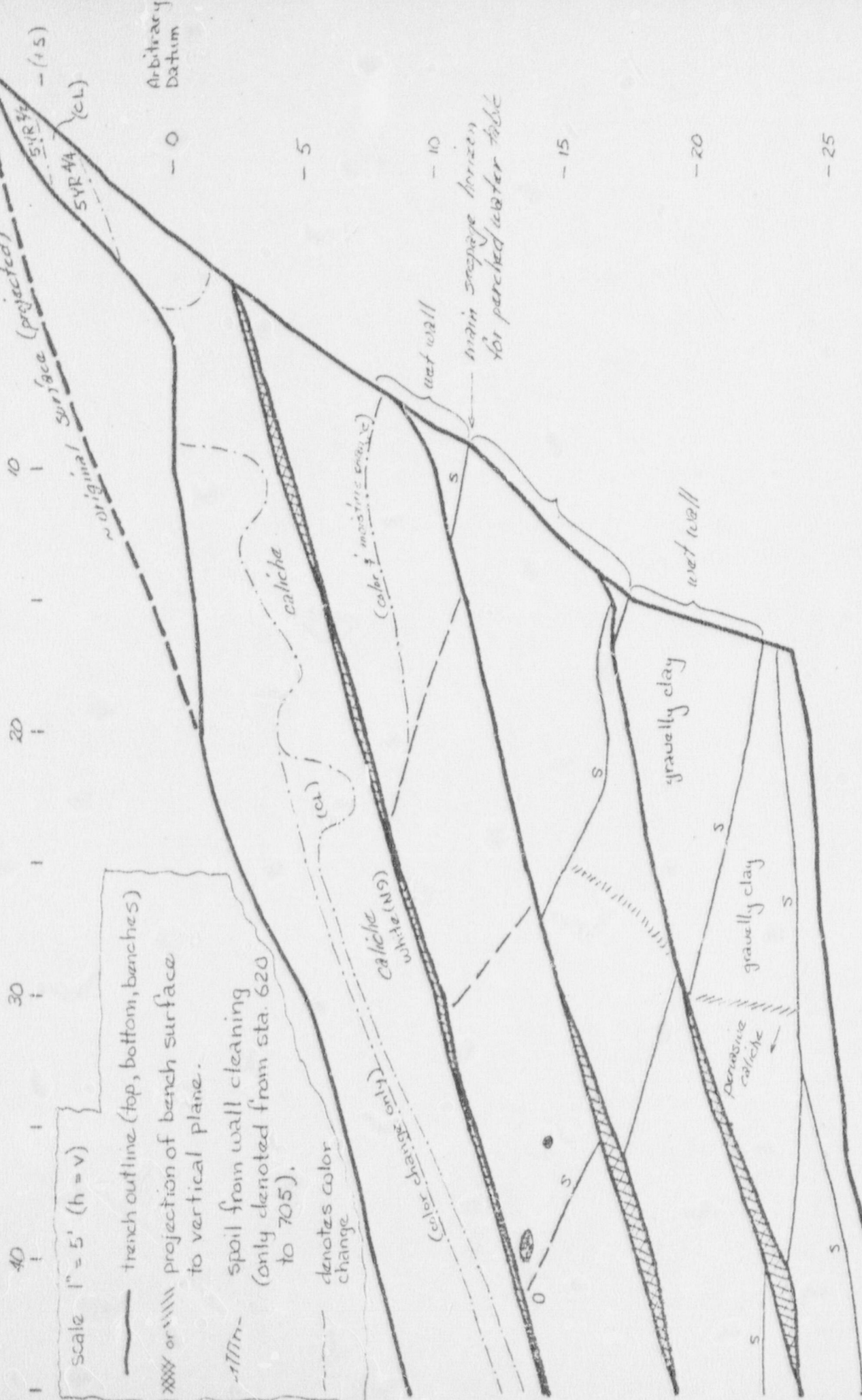
PRELIMINARY

TRENCH A

28

N42E

Vallecitos Trench B (main segment)



PRELIMINARY

N42E

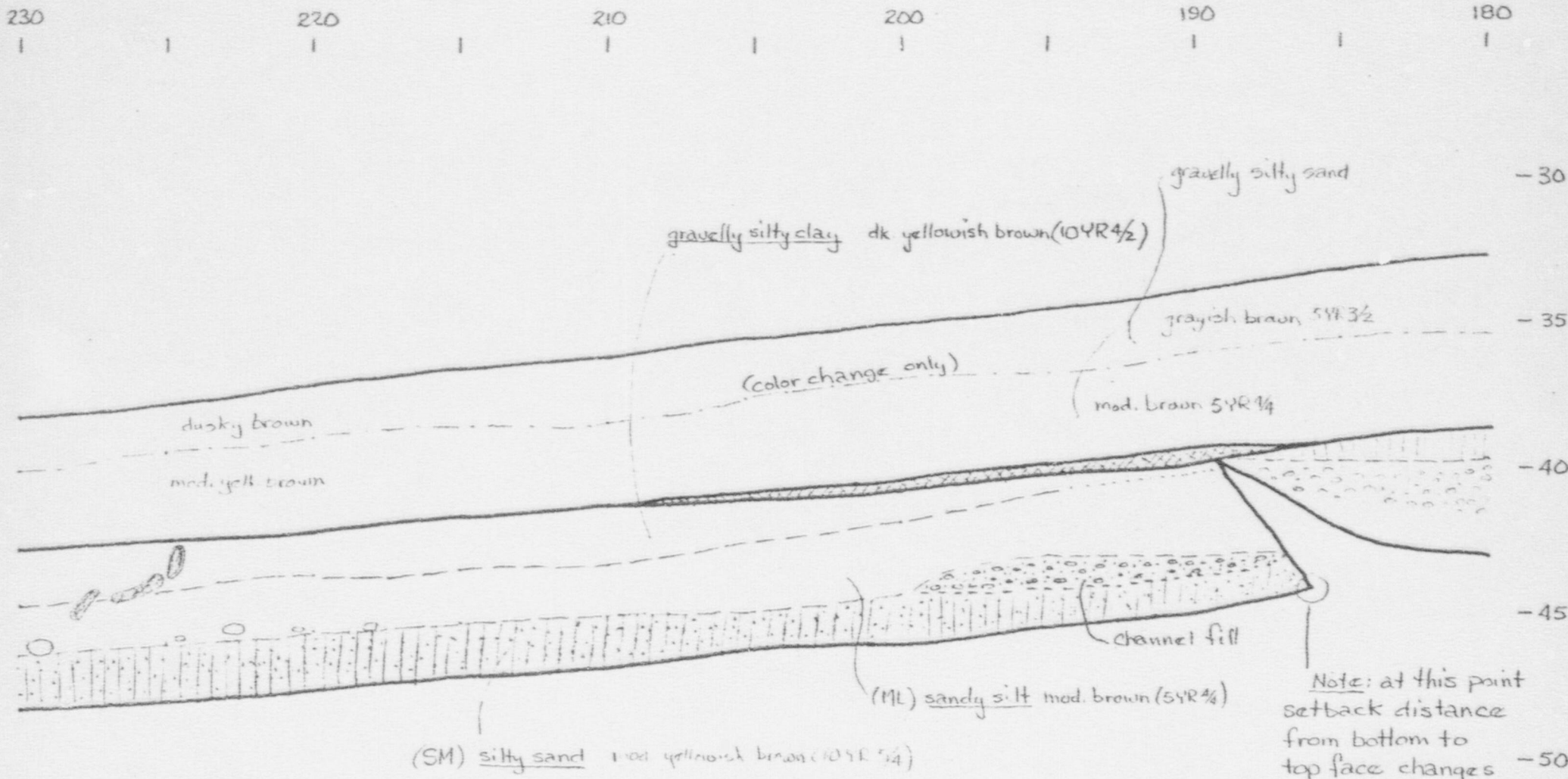
Vallecitos Trench B (main segment)



PRELIMINARY

N42E
→

Vallecitos trench B



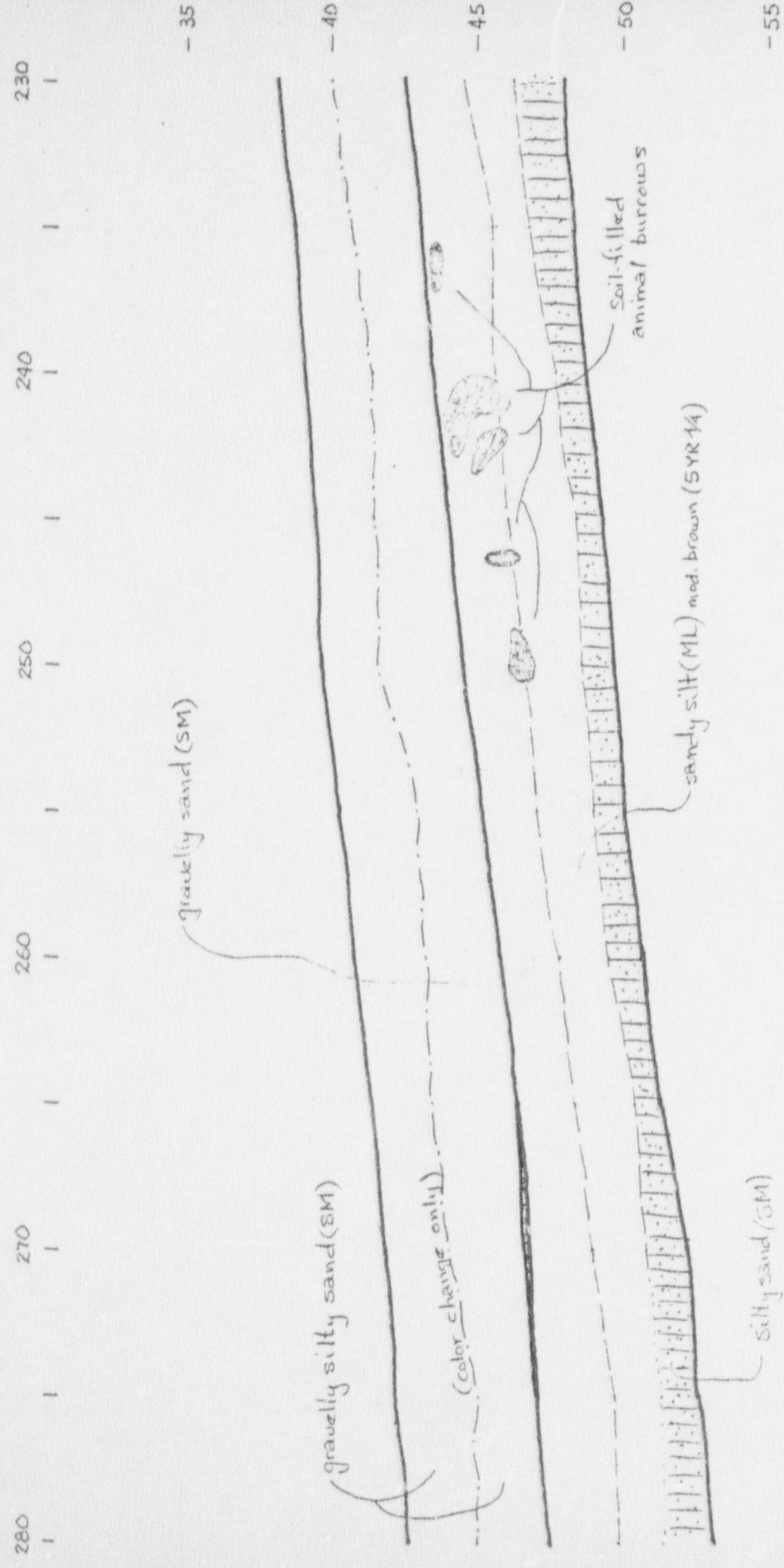
PRELIMINARY

JAB

6

Vallecitos trench B

N42E



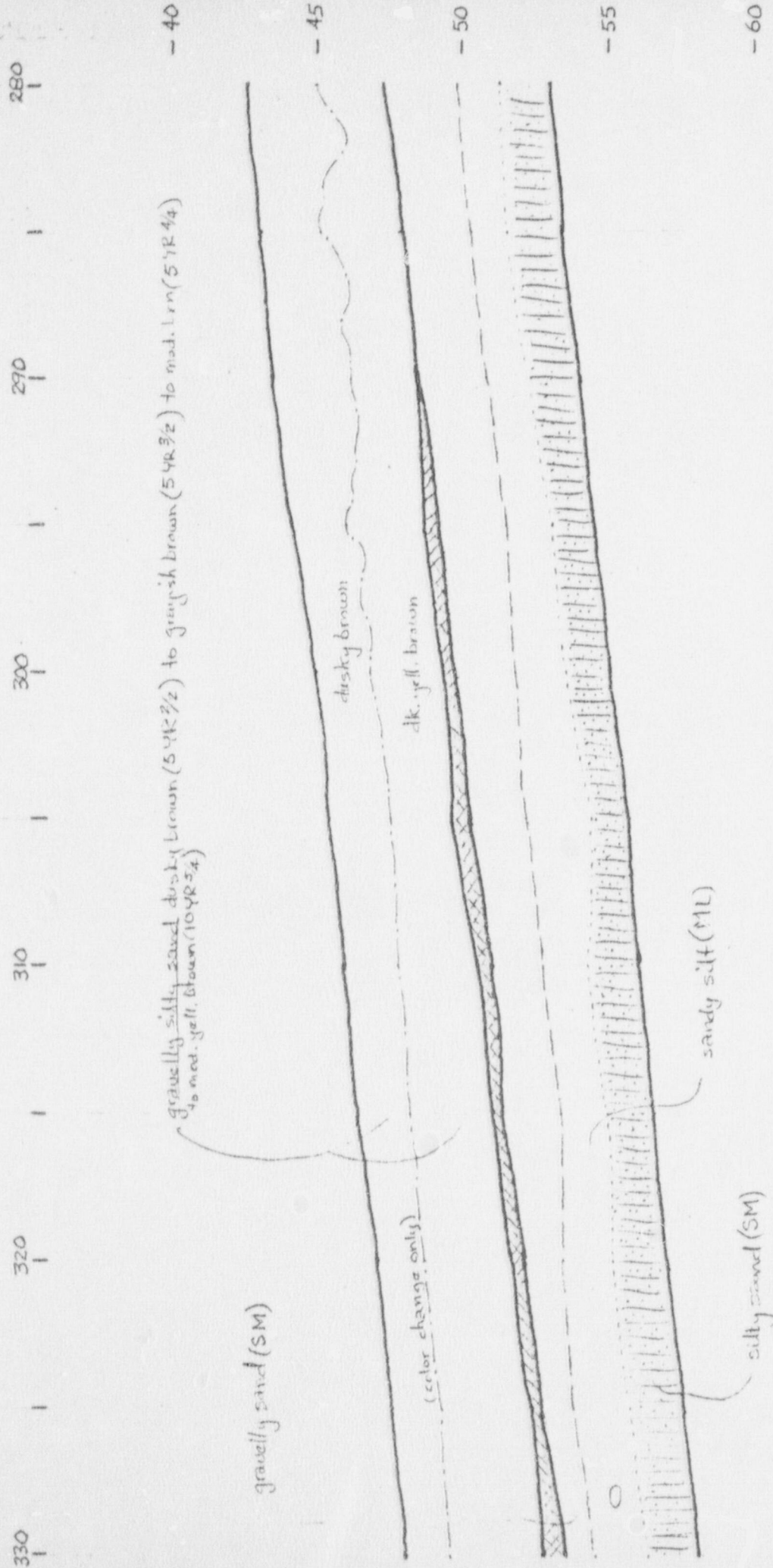
PRELIMINARY

JAB

(7)

Vallecitos trench B

N42E



PRELIMINARY

JAB

N42E



350

340

330

-42

Note: log switches to opposite
(SE) wall at 340 ft. station
because of inadequate excavation
of NW wall for next 200 ft.

(SM)

(color change only)

(SM)

(SM)

(ML)

(SM) →

-60

PRELIMINARY

N42E

Valley floor trench B

DMP/LAB

340 -
345 -
350 -
360 -
365 -
370 -
375 -

large oak ~ 2' behind

GRAVELLY SANDY SILT: dk. brn. (5-VR 3/4) to mod. brn. (5-VR 4/5)

(most recent soil)
(5-VR 2/2) SANDY SILT: dk. brn. (5-VR 3/2)

Note: within upper soil have at least crude blocky structure and conc. of Mn. along root holes and are mod. to deeply weathered suggesting that pedogenic processes have been active

irregular disrup contact - unit appears to be mixed in part due to root and animal action

fractile, porous, root, bark holes, coppery brown; no blocky structure

trench

oak tree roots

similar to and gradational to unit below: more voids (root holes, fox holes, burrows), less compact, more friable, higher percentage of 1-2 gravel clasts

soil filled animal burrow

SANDY SILT: mod. brn.

(5-VR 4/4); scattered fine mod. gravel clasts, enough clayey fines to allow v. crude blocky structure to develop; abundant small root holes, conc. along old root holes

PRELIMINARY

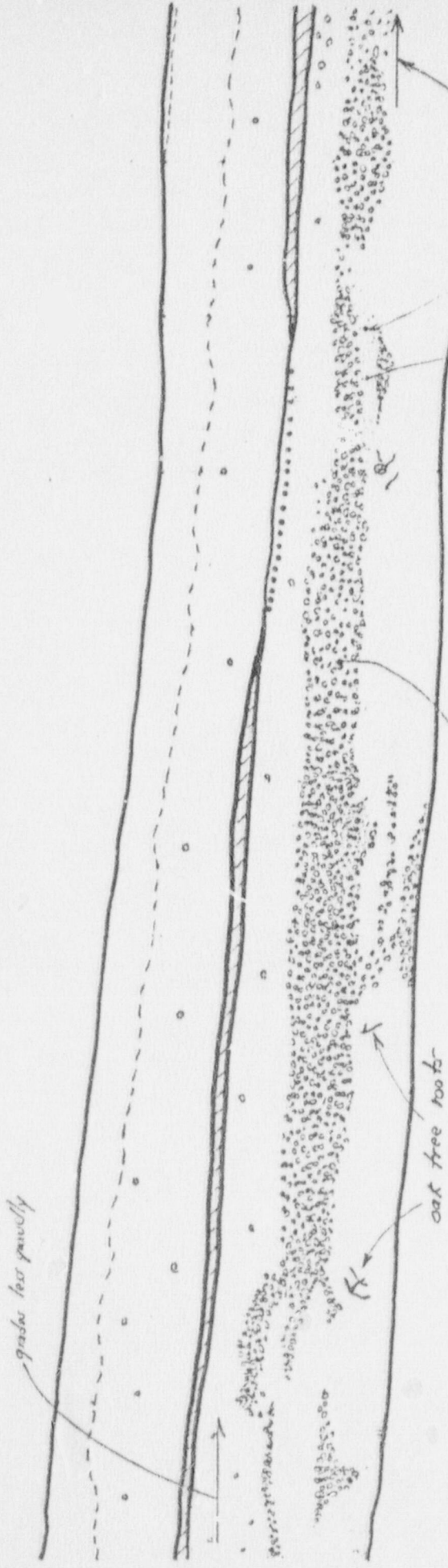
N42E

Vallecito trench B

DWY/JAB

(10)

375 - 380 - 385 - 390 - 395 - 400 - 405 - 410 - 415 - 420 - 425



SKTP to SANDY GRAVEL:
160 BR. (5 VA 4/4 to 5 VR 5/4)
w/ reddish tint and dusky
brn. staining mother

silt root

grading to low
gravel in the
gravelly unit -
probable facies
gradation

oak tree roots

grades low gravelly

PRELIMINARY

SE wall

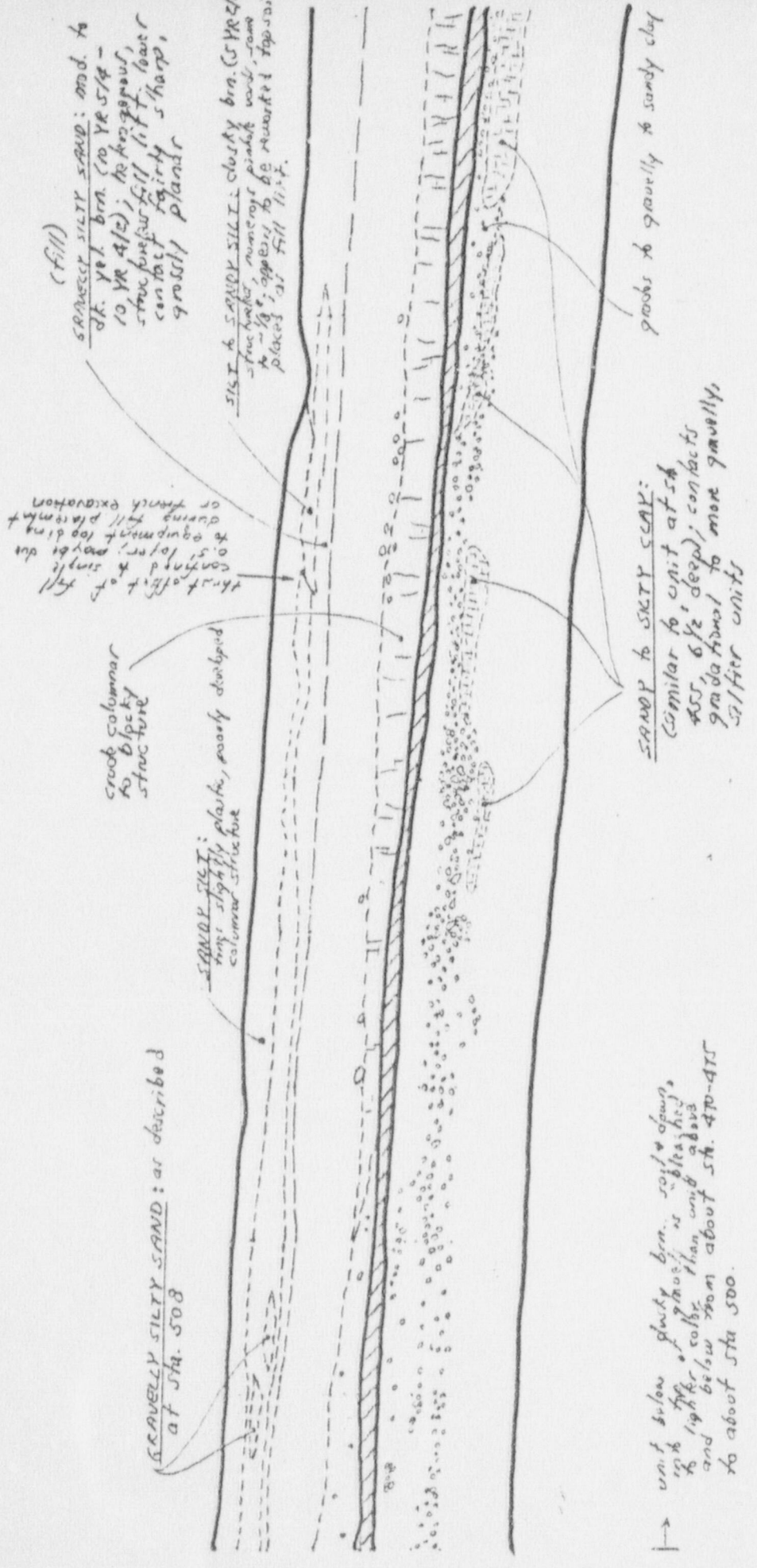
Valley for trench B

(12)

N42E

475 -
480 -
485 -
490 -
495 -
500 -
505 -
510 -
515 -
520 -
525 -

Note: begin logging
NW wall at sta.
525 →



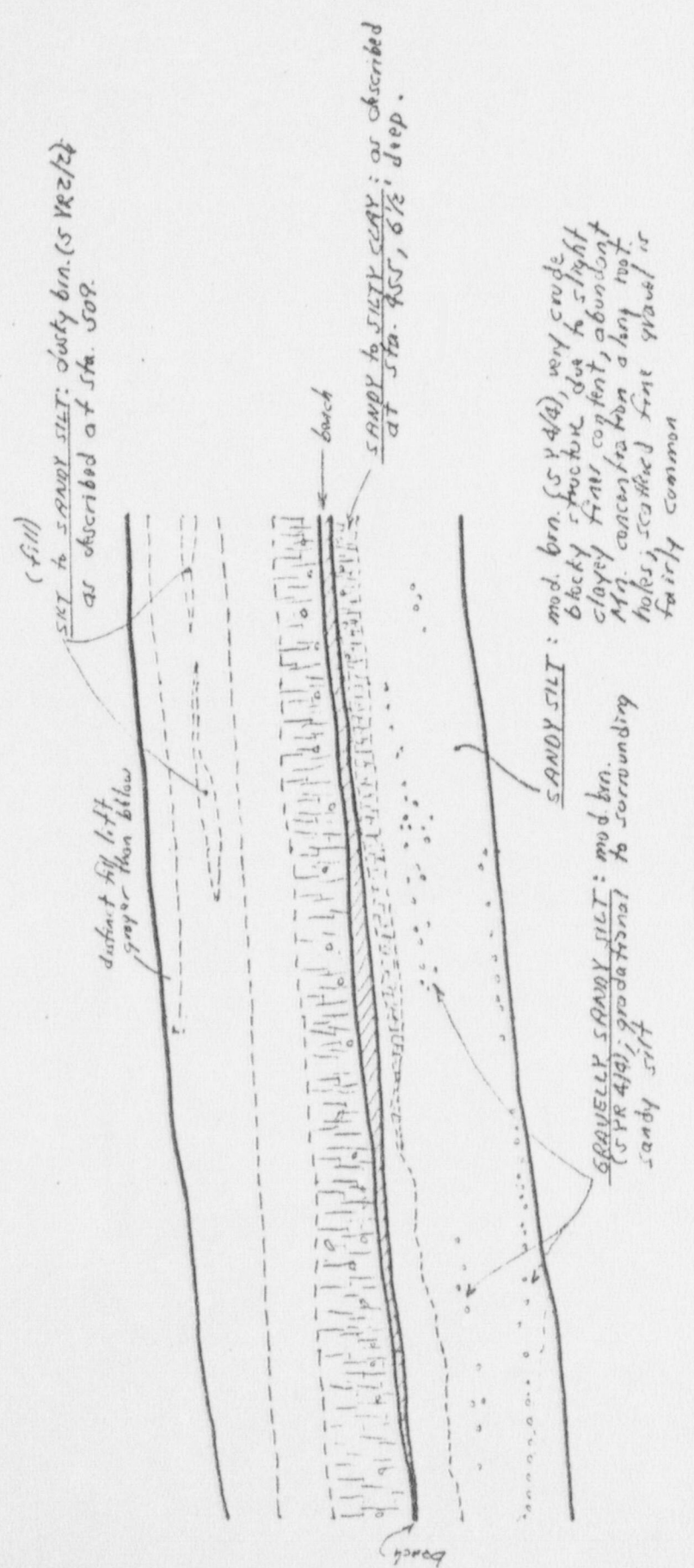
rocks to gravelly to sandy clay

SANDY to SILTY CLAY:
(similar to unit at Sta
455, 6 1/2' deep); contacts
gradational to more gravelly,
siltier units

→ unit below dusty brn. soil & gravel
with type of ghost is "bleached"
to lighter color than unit above
and below from about Sta. 470-475
to about Sta. 500.

PRELIMINARY

new wall
N42E
→
filling road trench
(see next sheet - now logging SE wall)
53' 1"
225' 1"
275' 1"
340' 1"
351' 1"
351' 1"
351' 1"



N42E

555-
565-
570-
575-
580-
585-
590-
595-
600-
605-

(Fill)

GRAVELLY SILTY SAND: mod. to dk. yel. brn. (10 YR 5/4) - (10 YR 4/2), as described at sta. 508.

conc. of sta. for weathered sandstone clasts $\approx 1/4 - 1/2$

crude blocky structure, fine clayey than below, contact diffuse, irregular and gradational

GRAVELLY SILTY SAND: mod. brn. (5 YR 4/4); unit is generally friable, looser than unit below, contact is irregular and upper fairly sharp to gradational

PRELIMINARY

N42E

Section 7 - 20 ft. x 20 ft.

Mud - dk. vol. brn. (to PR S₂S₃) w/dark yel. brn.
C10 PR S₂ thinning; 50-80% flow to ash-platte
lines; 30-40% fine to coarse sand, silt &
mud; well graded, med s-s-t. brn. chert da
l. thin; generally ~ 10% to locally 30-35% by
fine-mud gravel, similar to sand except for
deeply eroded, s-s-t, gray-wacke clasts up to 6"
dk. vol. orange (to PR S₂S₃) color; same v. easily
bedding planes, slightly better exposed; "lentils"
consist of highly clayey fines; friable w/ soft
dry to slightly moist.

SANDY SILTY CLAY = mod. yel. brn. (to YR 5/4),
to brn. gray (5H 4/1) v. crude blocky structure

51274 CCAY: local pod,
blocky structure

irreg., grad. contact

good contact
over a
fairly clayey fine
grained (similar to
overlying silt clay)
10-15% fine, med. and
(chip - yrd. sed): 10-15%
fine-med gravel, med
ss-s, med poorly graded
white chert, yrd. - blk. lithes
(calc.) ss, max. granular, ss - ls
to 1 1/2" max.

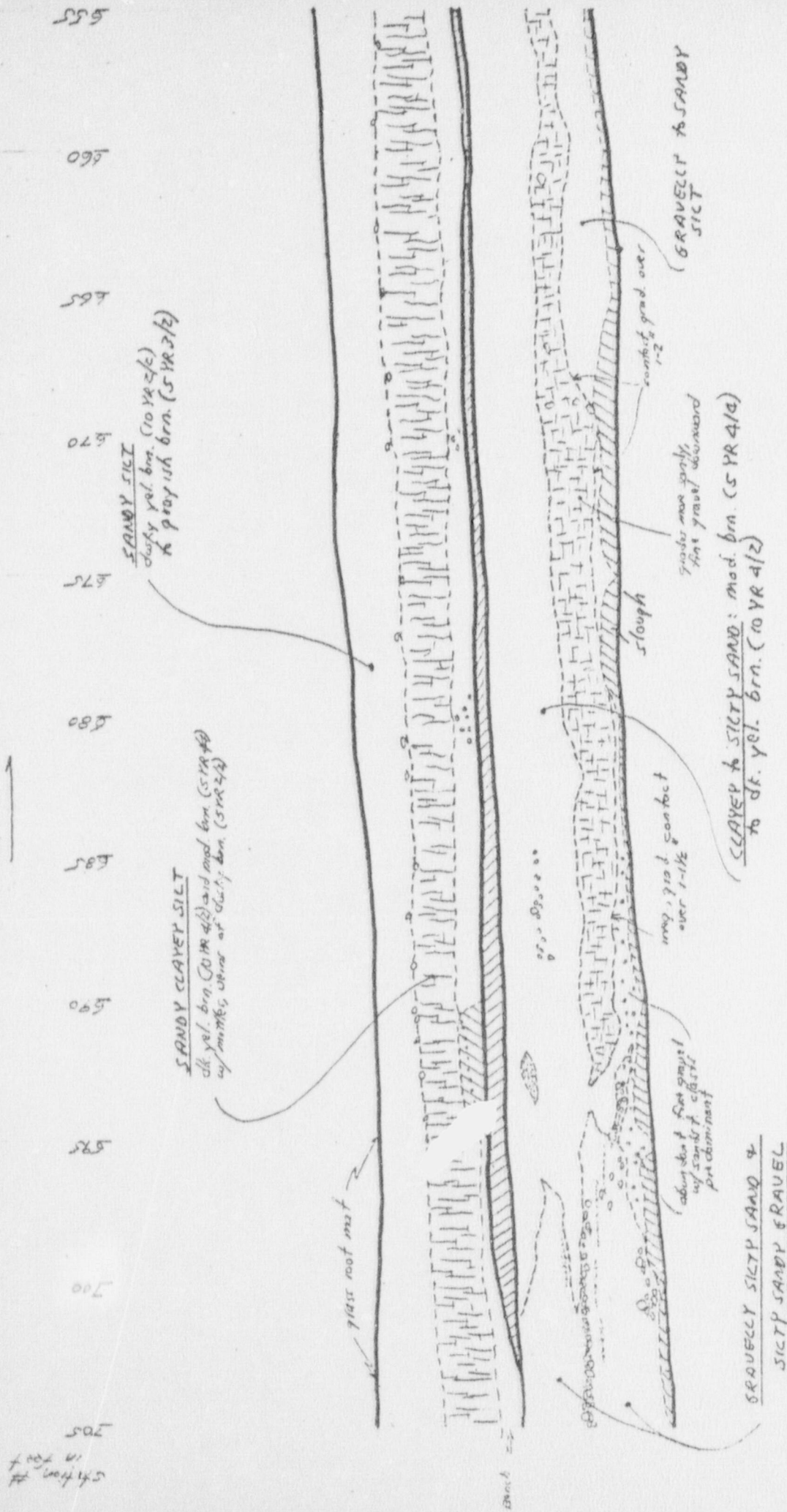
[illegible]

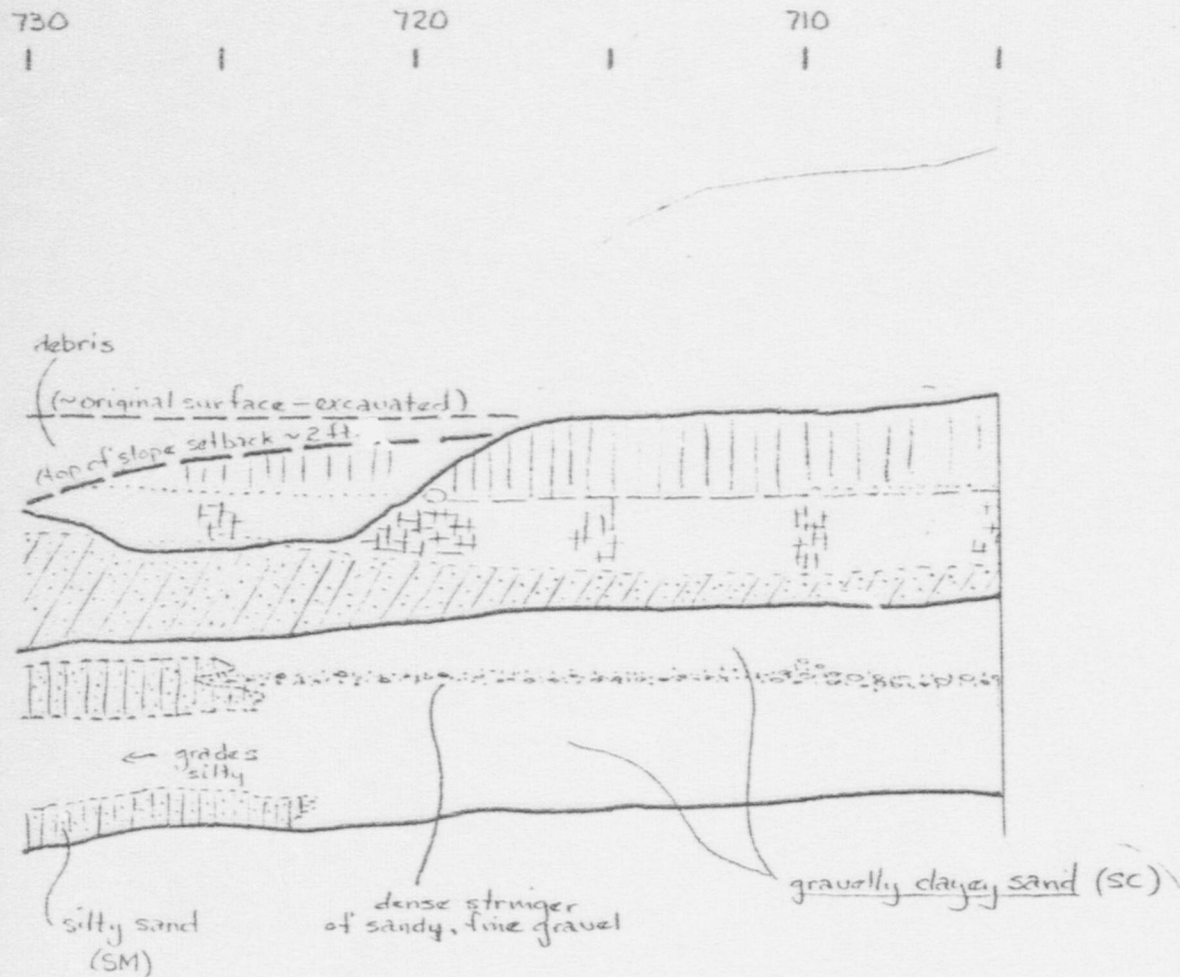
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

Vallecitos trench B" (16)

N42E

PRELIMINARY

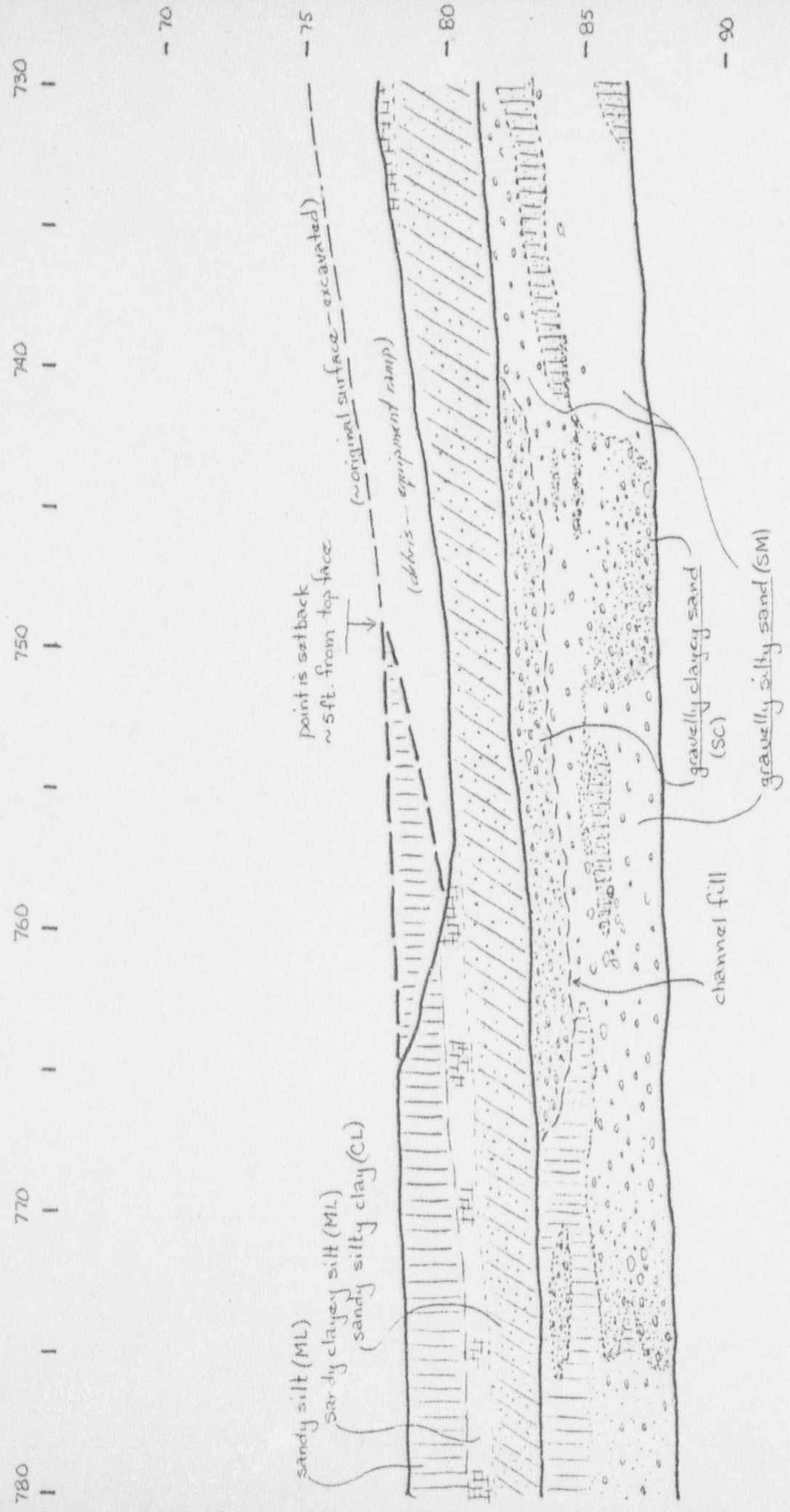




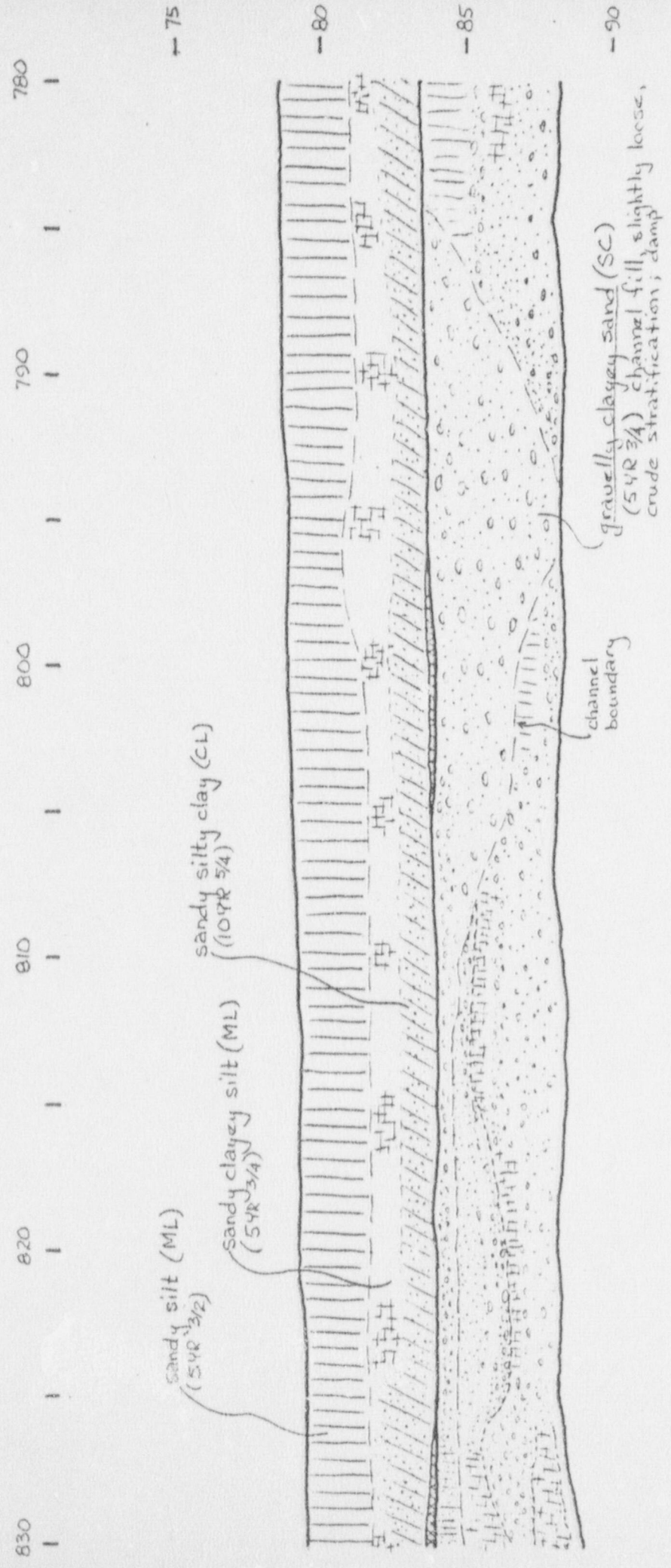
Note: through this interval
top face is set back ~17.5 ft.
w/ respect to bottom face.

PRELIMINARY

~N43E →



N43E



PRELIMINARY

~N43E

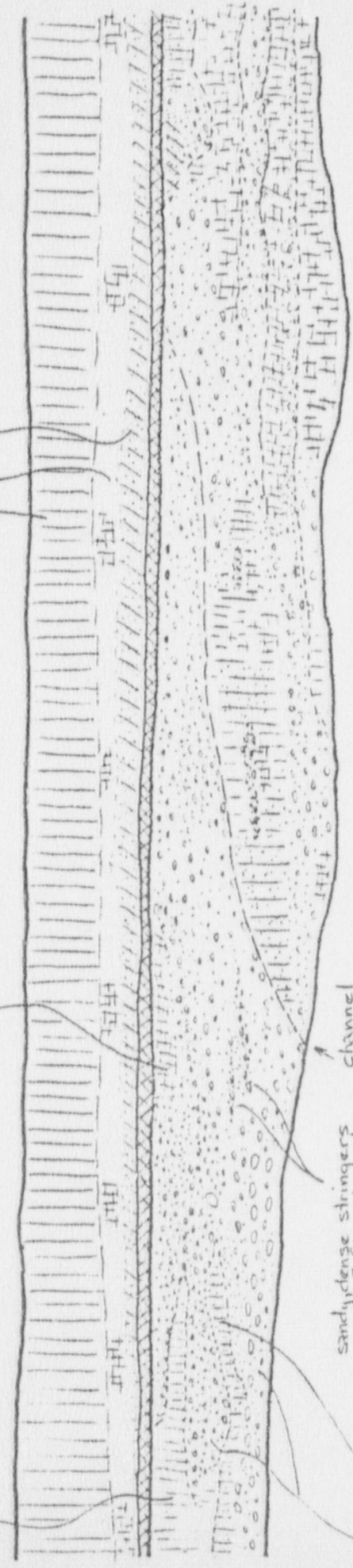
overlap w/ TDH



sandy silt mod. yellowish brown (10YR 3/4) (ML)

clayey silt dark yellowish brown (10YR 4 1/2) (ML)

sandy silt (ML) 5YR 3/2
sandy clayey silt (ML) 5YR 3/4
sandy silty clay (CL) 10YR 5/4



sandy dense stringers of fine gravel
silty sand (SM)

gravely silty sand mod. brown (5YR 3/4) (SM) channel fill, slightly loose, crude stratification

Note: through this interval top face is set back ~17.5 ft w/respect to bottom face.

PRELIMINARY

Volliciter trench B

(21)

TDH

885

PRELIMINARY

Valley for Trench B

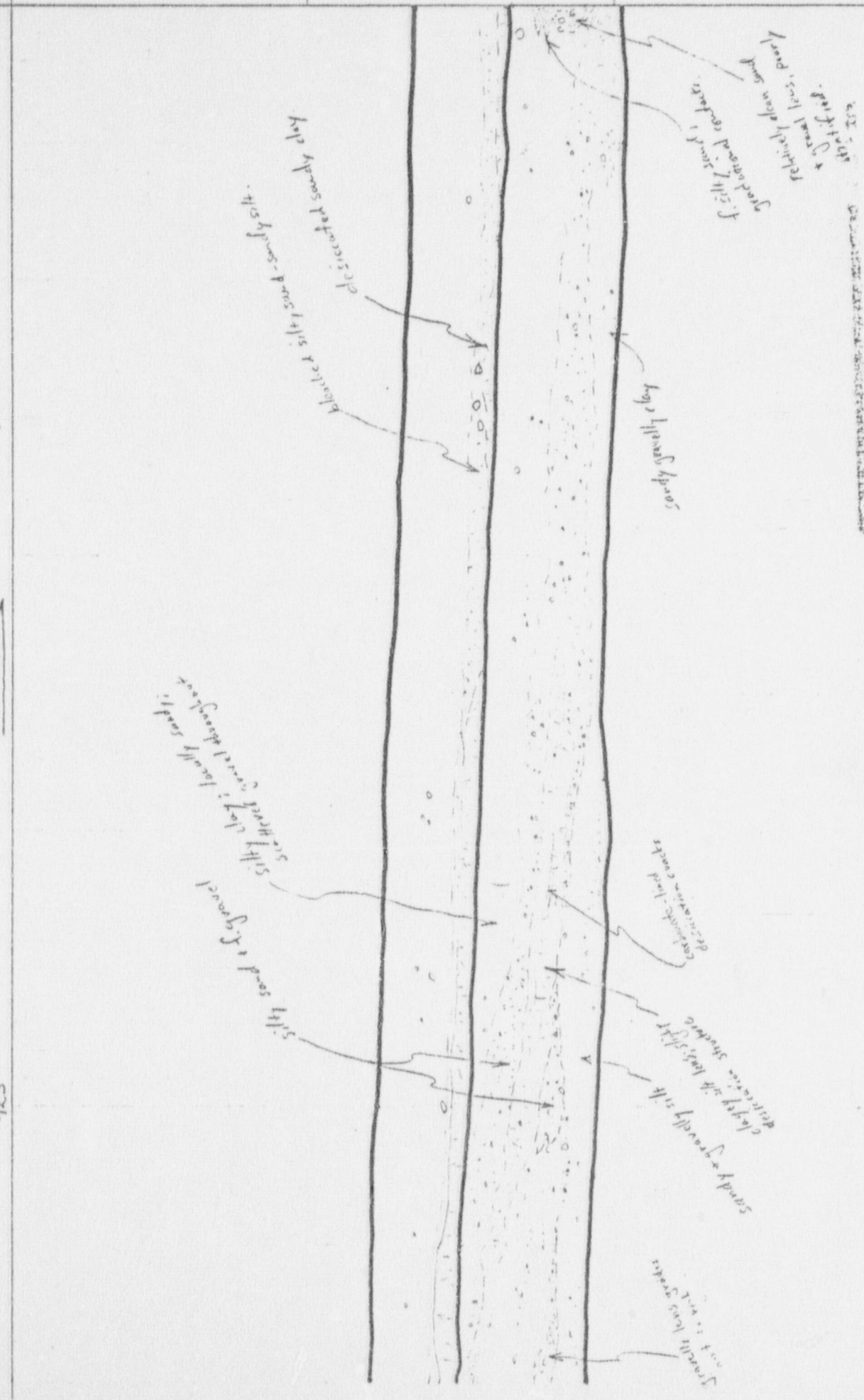
NATIONAL 43 281 50 SHEETS 3 SQUARE 43 282 100 SHEETS 3 SQUARE 43 283 200 SHEETS 3 SQUARE

900

N42E

925

935



PRELIMINARY

	42-381	50 SHEETS	3 SQUARE
	42-382	100 SHEETS	3 SQUARE
	42-389	200 SHEETS	3 SQUARE

N42E

985

576

950

Vallecitos french B

935

only clay, pinkish brown, cracks
5 ft. 5 in.

growth/lens

Sand Karap at Gajah

Hypernasal + hypernasal
top hypernasal

March 1904

Handwritten: 1000 ft + 1000 ft

1050 ft. 12/24/1921

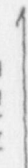
clayey pocket.

locally porous;
root pinholes

It was supposed to be a small
piece of paper, clean

100

N42E



1035

1025

1000

985

Sand & gravel grade out to right
Silt clay

Sand & silt, scattered gravel

Sand clay
structure
primary & secondary

Silt & clay sand & gravel
clayey silt, sand & gravel
clayey silt

tailor pale green stain
formed by leaching?

very fine sand

very fine sand, clayey sand,
silt, shaly, structure
bedding about to partly defined body

clayey gravelly sand,
structure poorly defined;
typically c. 30 sand & gravel
in irreg. obscure lenses.

PRELIMINARY

V9/11/81 for trench 15

Trench B

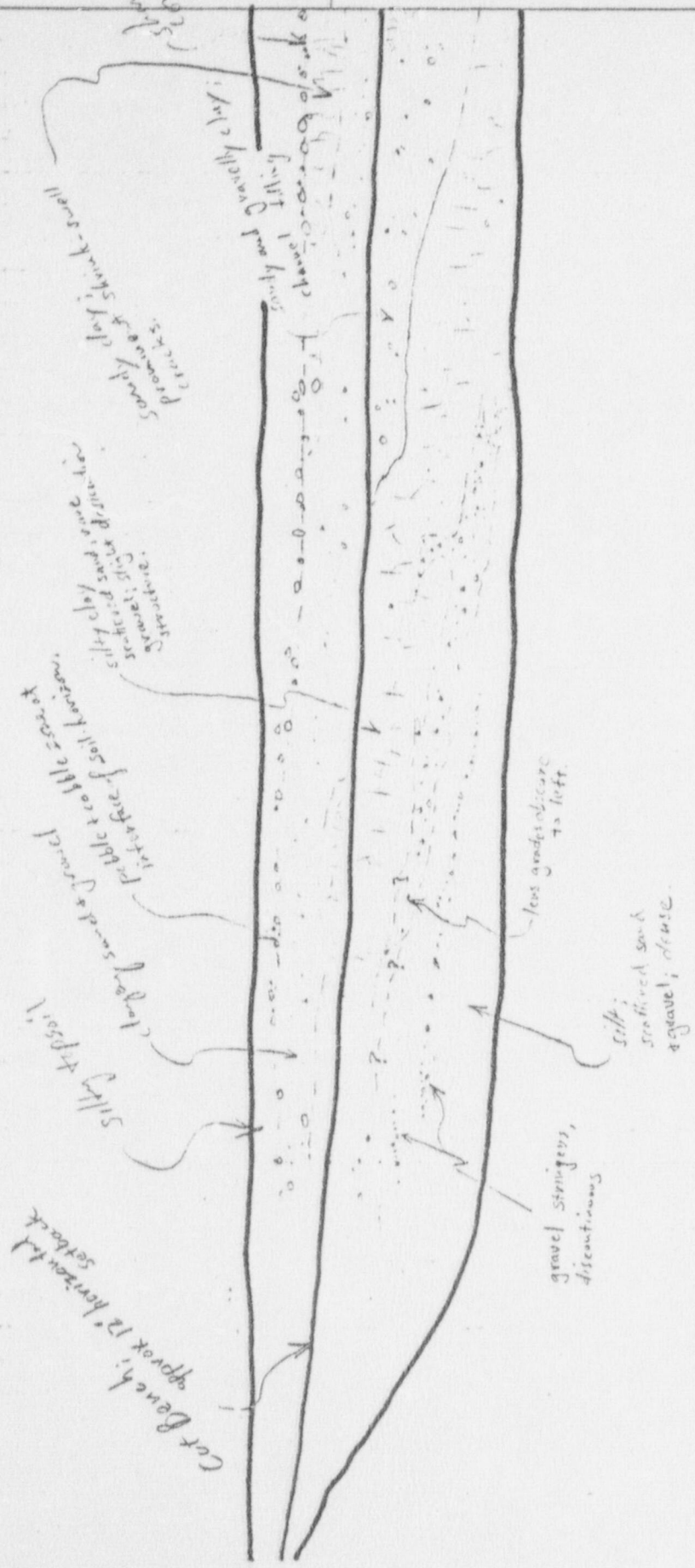
42 381 30 SHEETS 5 SQUARE
42 382 100 SHEETS 5 SQUARE
42 383 300 SHEETS 5 SQUARE
NATIONAL

N42E

1070

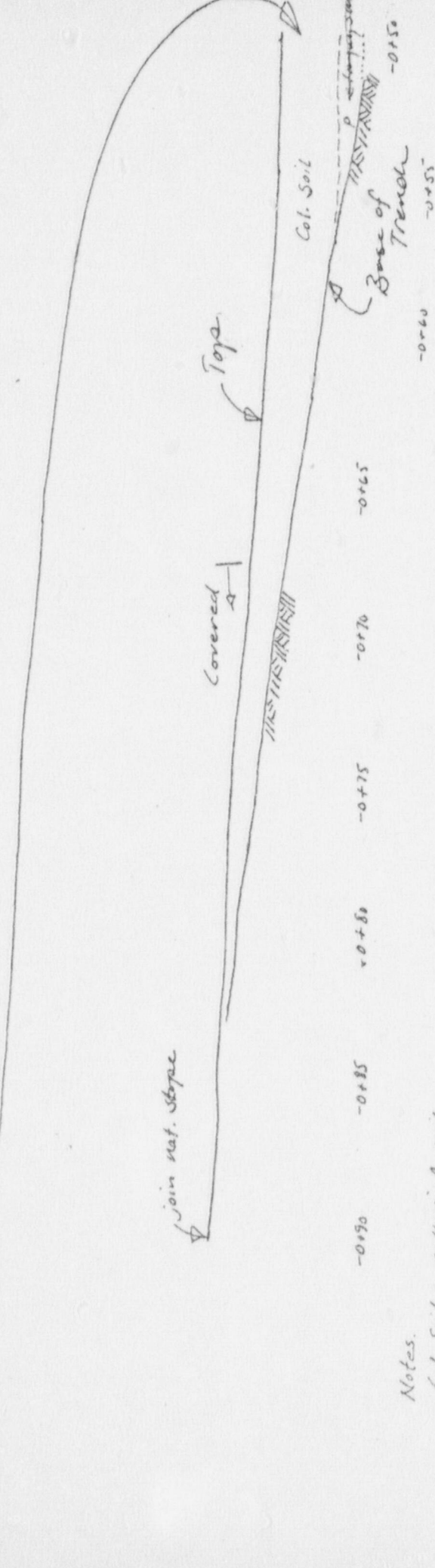
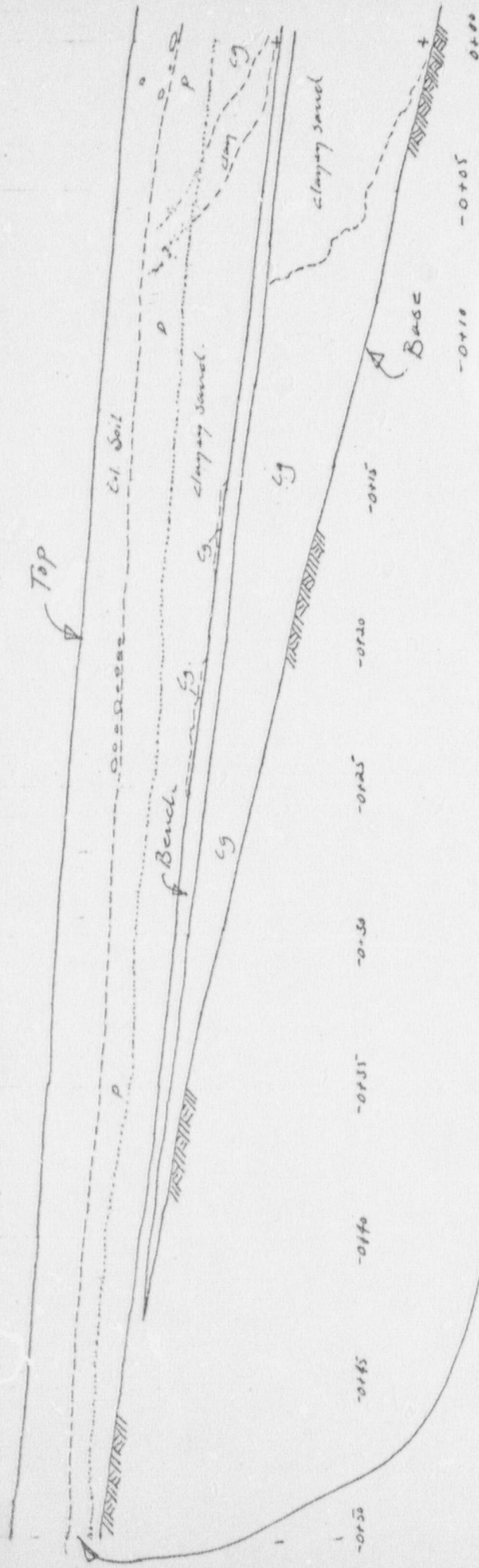
1050

1035



PRELIMINARY

TRENCH E

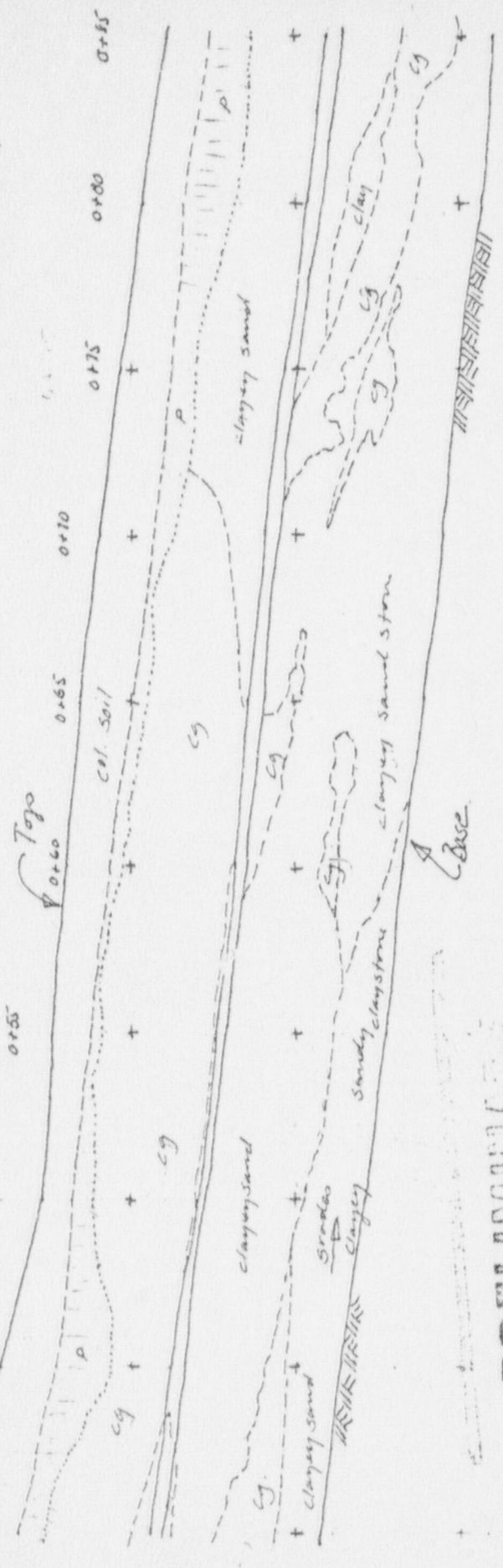
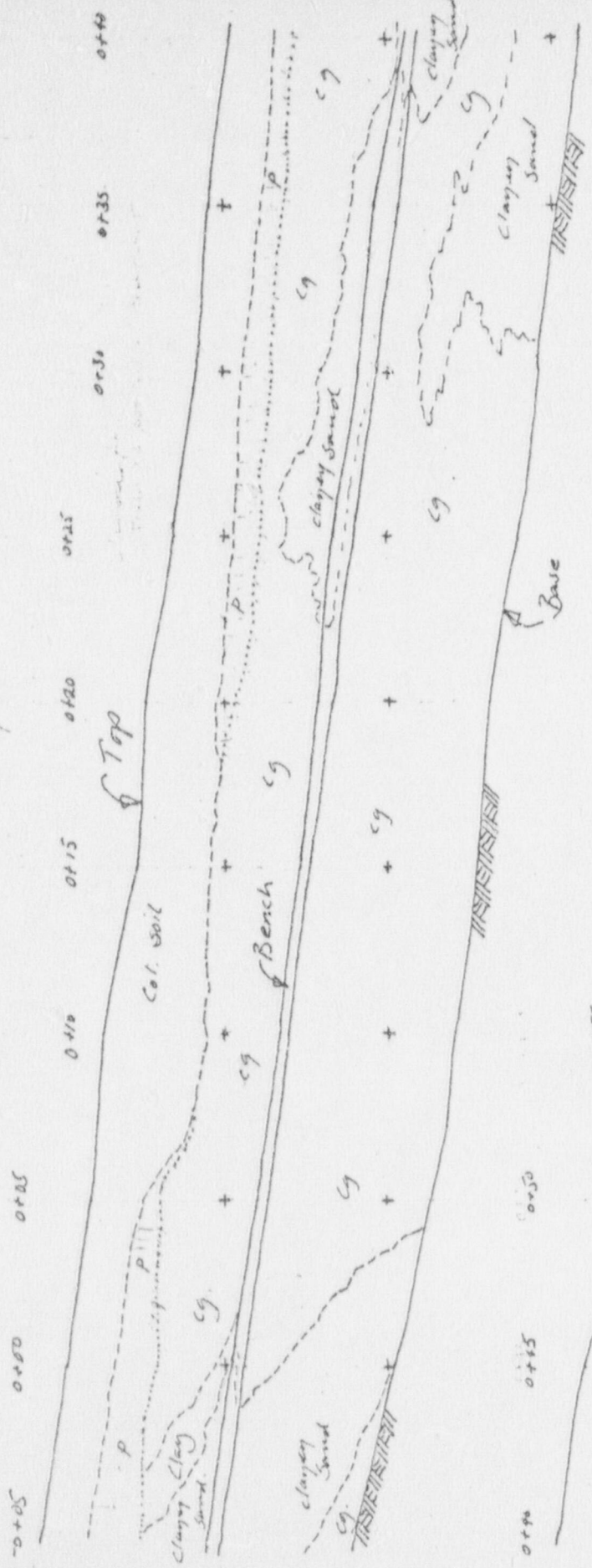


Notes:
 Col Soil = colluvial soil
 = Base of oxidized paleosol (p)
 cg = conglomerate

← E - W →
 South Wall
 1" = 5'

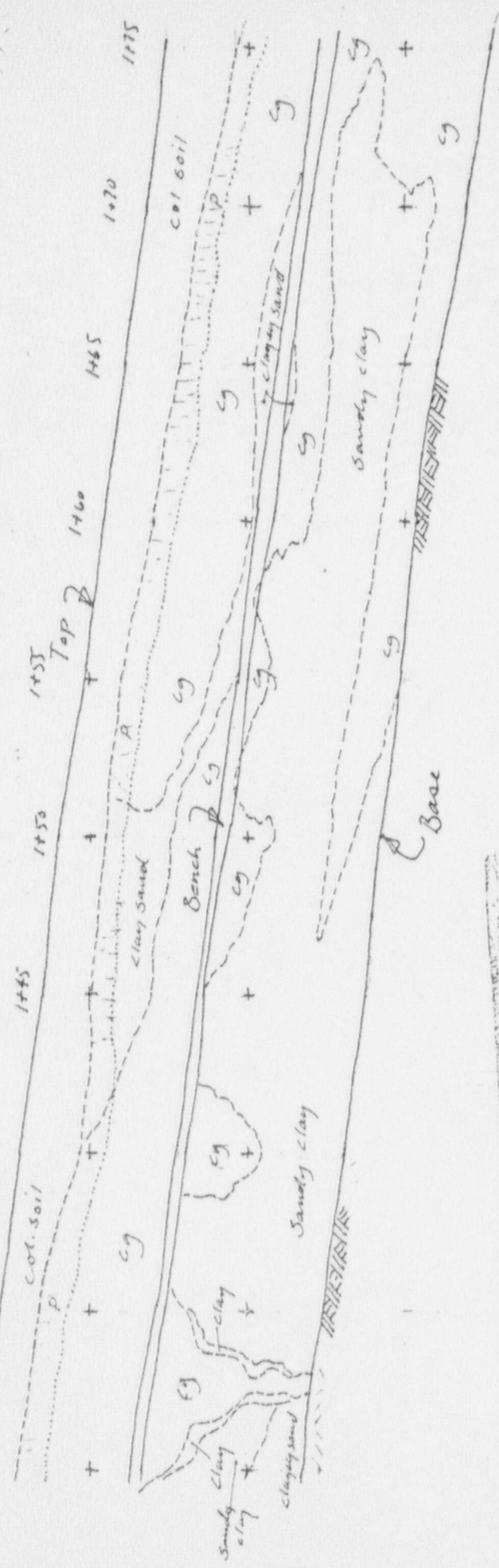
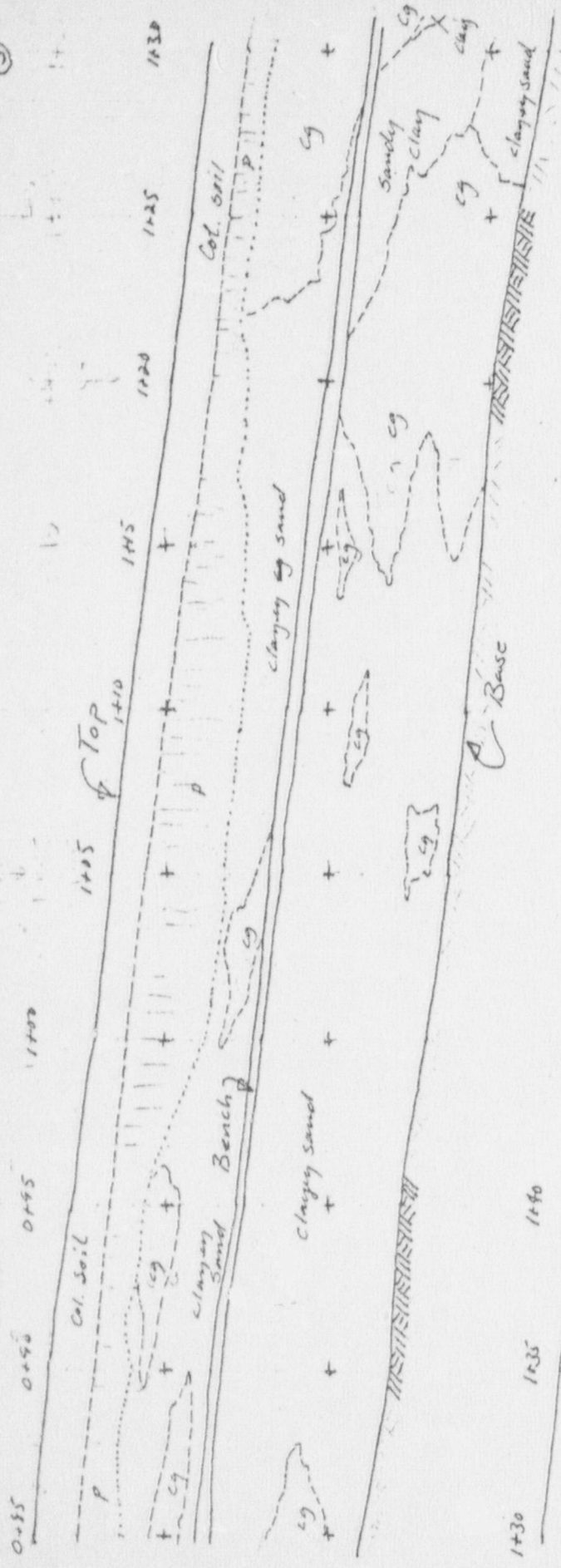
PRELIMINARY

Soil - red brown, silty sandstone
massive - good, following are
stone columns - pale yellow
light - brown clay

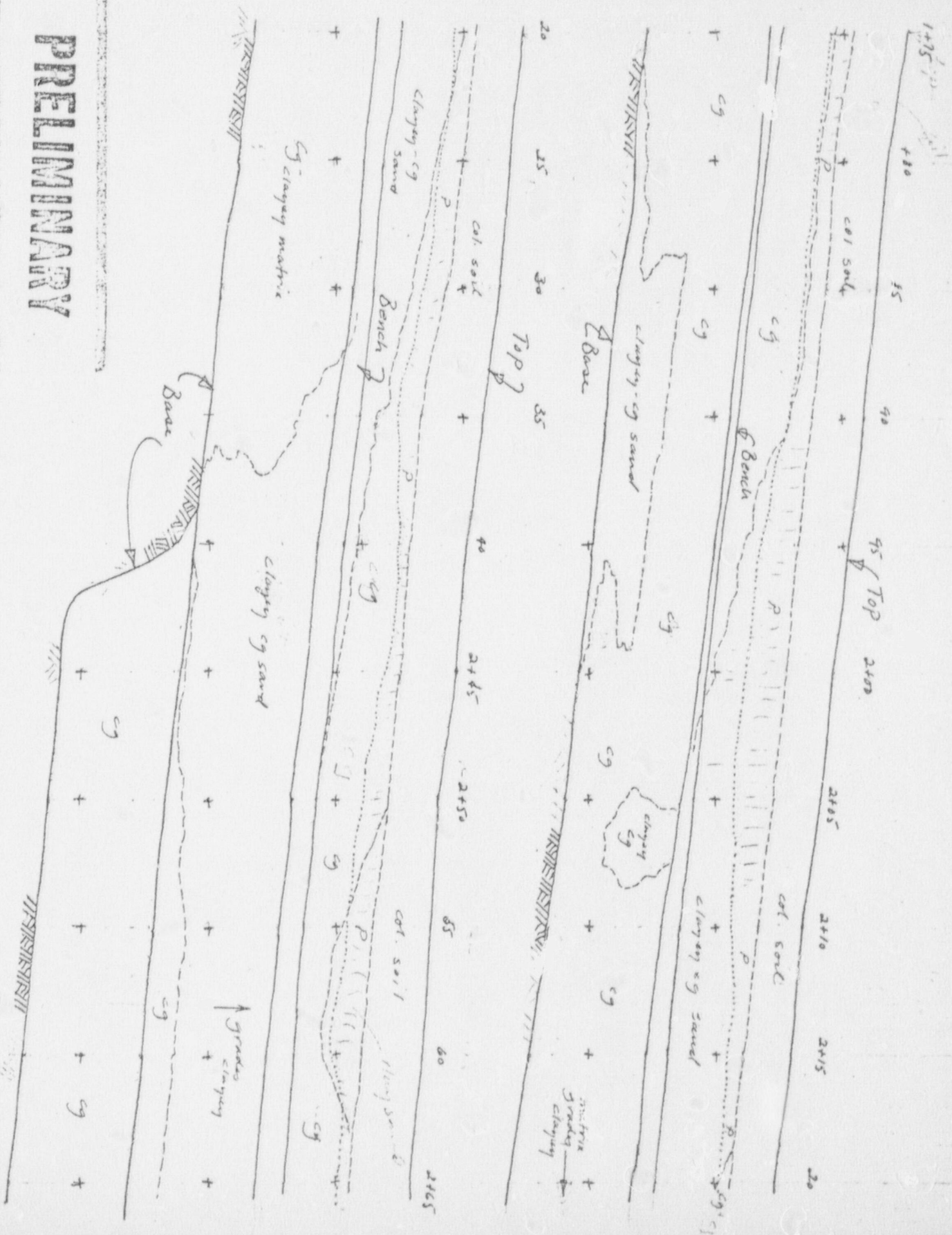


PRELIMINARY

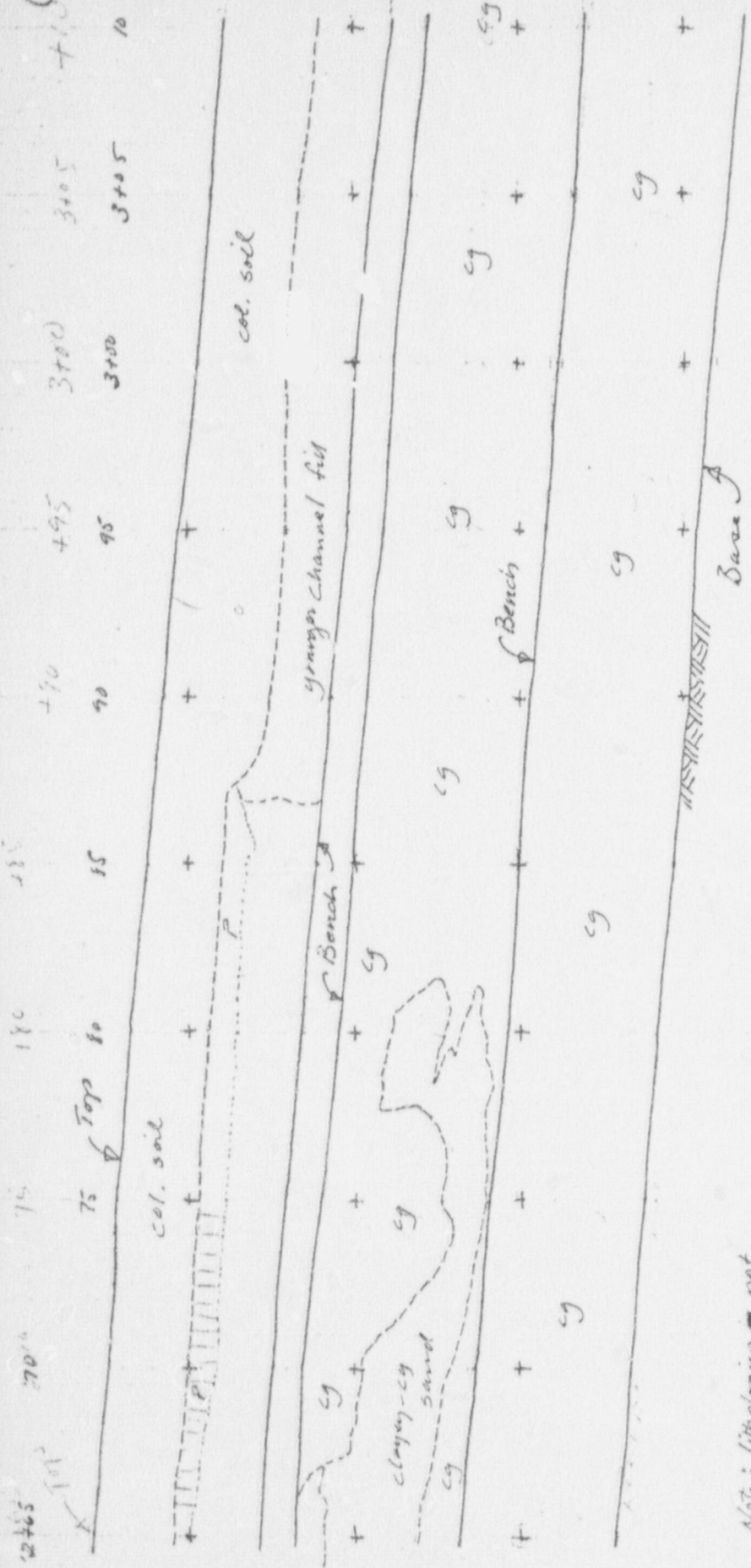
3



PRELIMINARY



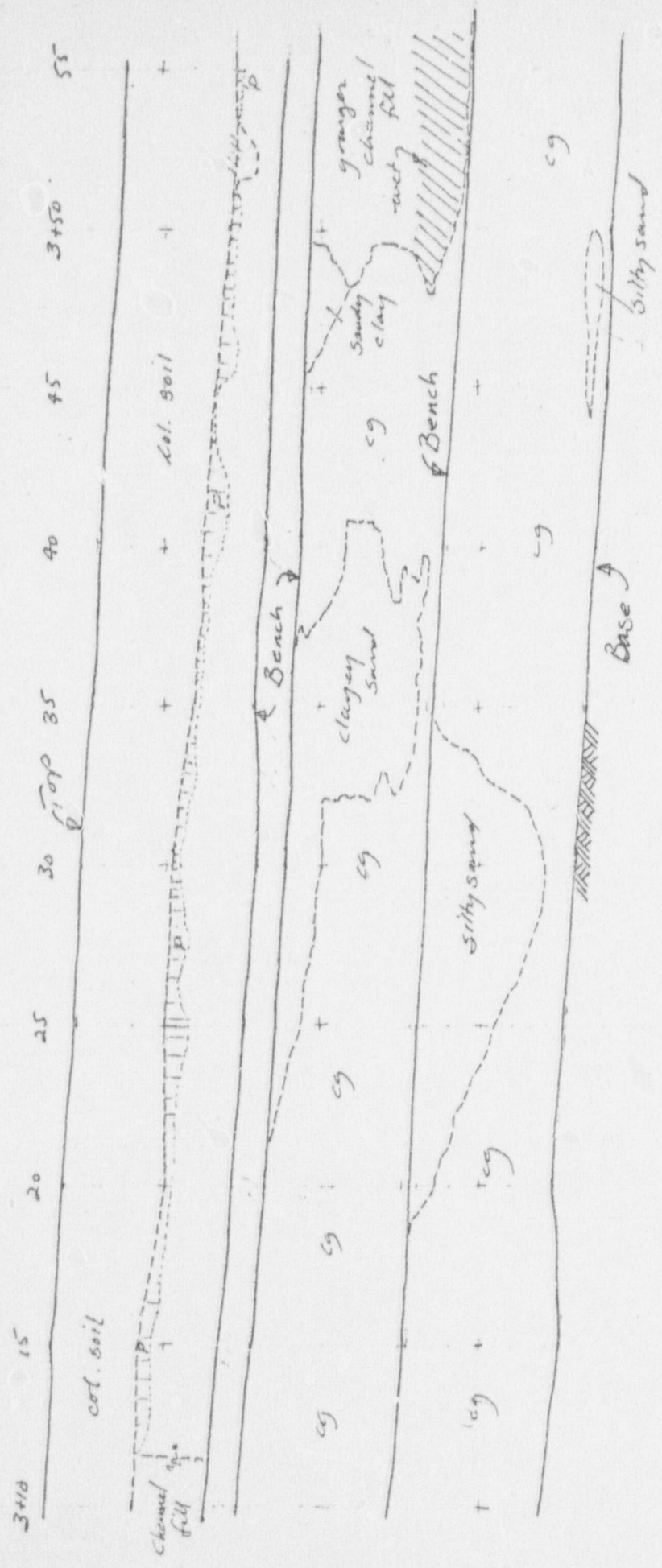
5



Note: lithologies not
logged on upper bench
2425 to 2500

PRELIMINARY

6



PRELIMINARY

31 40 45 70 80 85 90 95 100

⑦

control grad. over 2"-3", discontinuously
marked by distinct to indistinct stone
line at or just above constant 4100

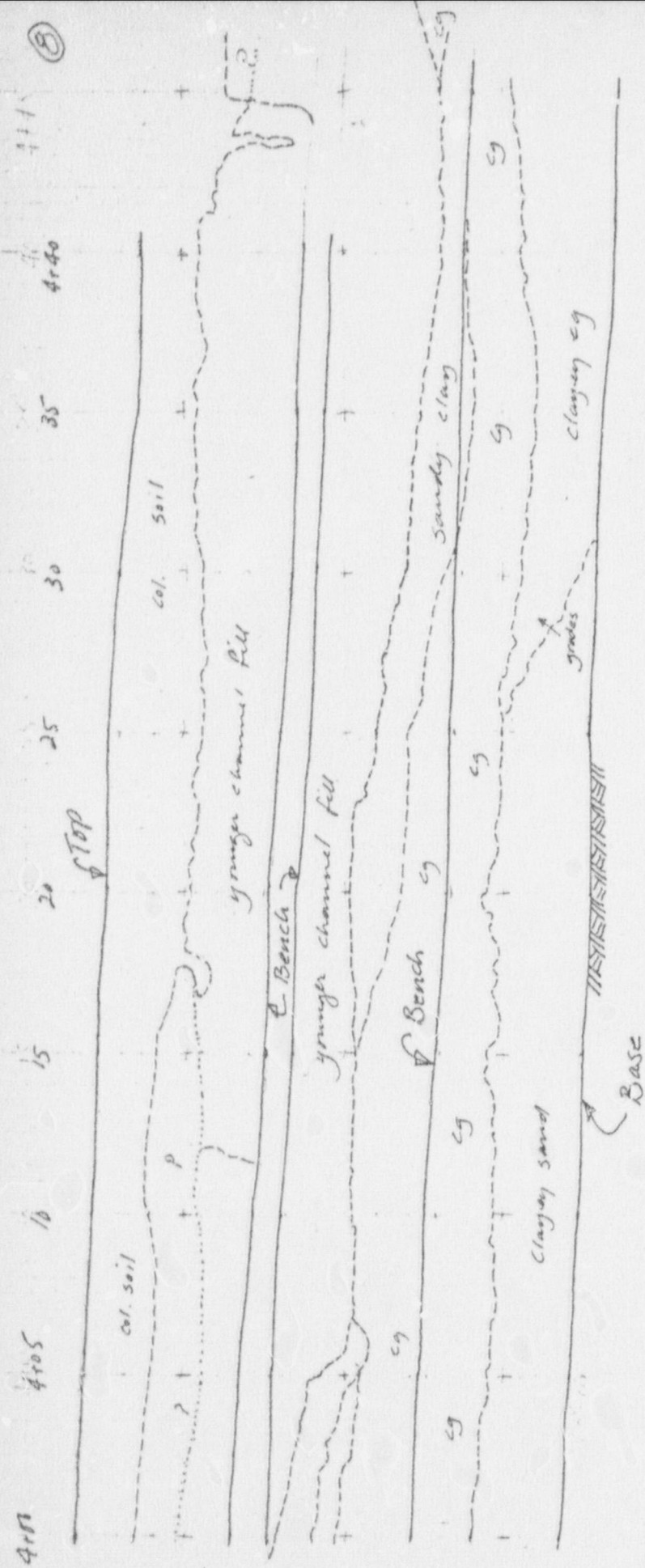
Diffuse grad. contact
6"-12" apparent stone
line likely 75

Diffuse gradational contact
6" over 6"-8"
65

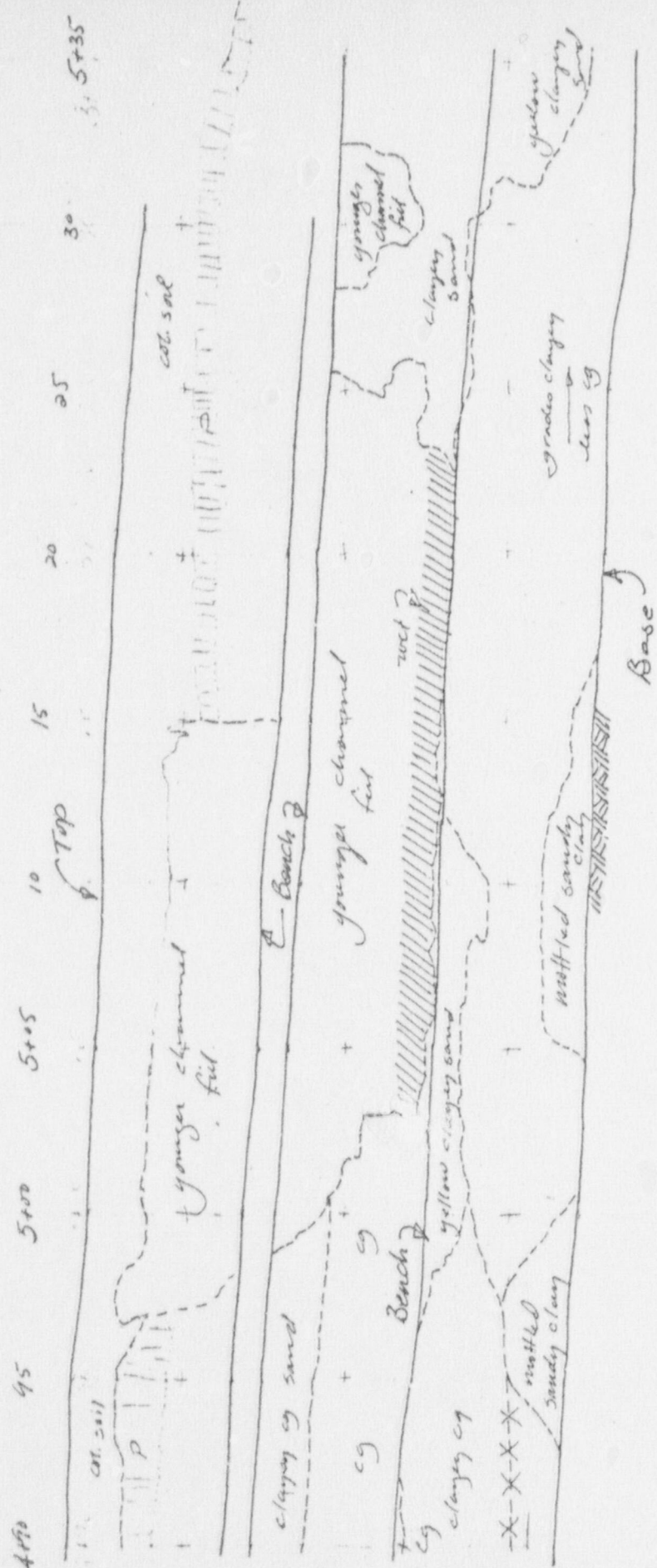


Colluvial Soil ① - Dark grayish brown sandy silt
scattered pebbles and small cobbles.
gravel concentration near base. Desiccation
cracks not common. Pansy, many
root holes (1)

PRELIMINARY

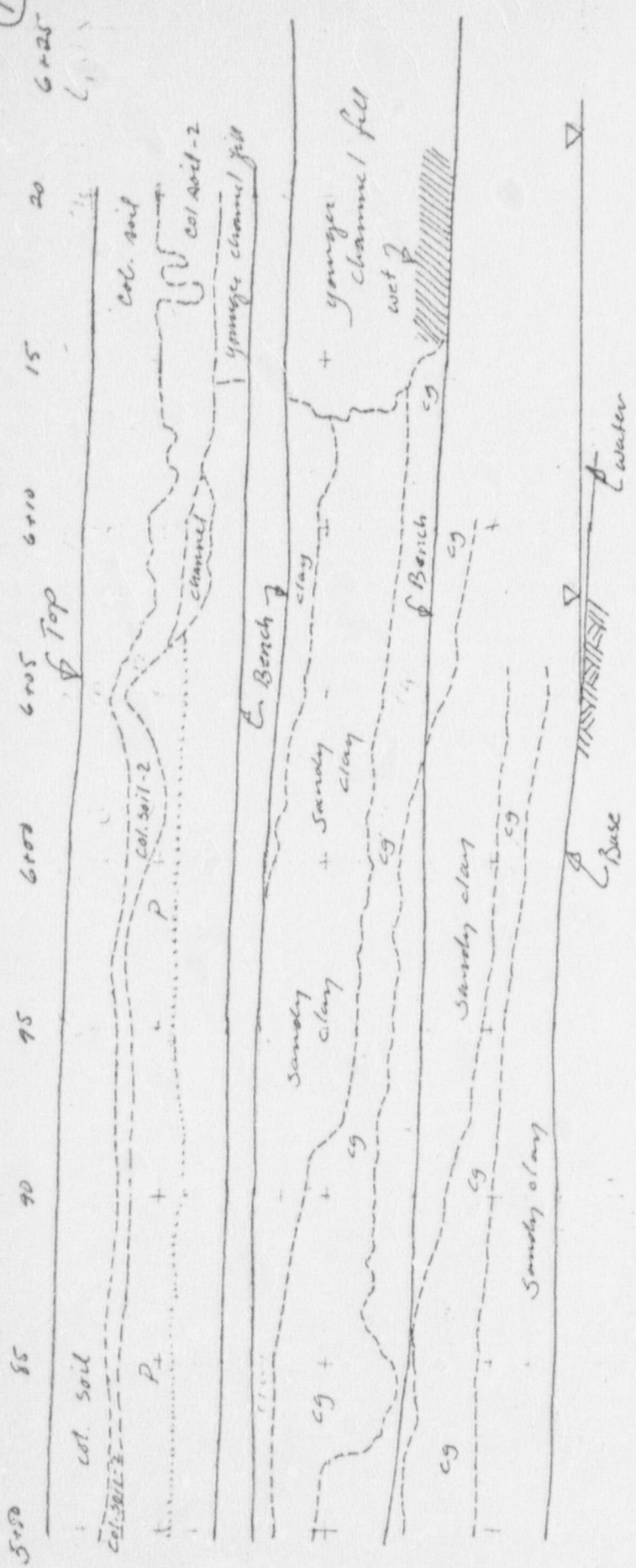


RECEIVED

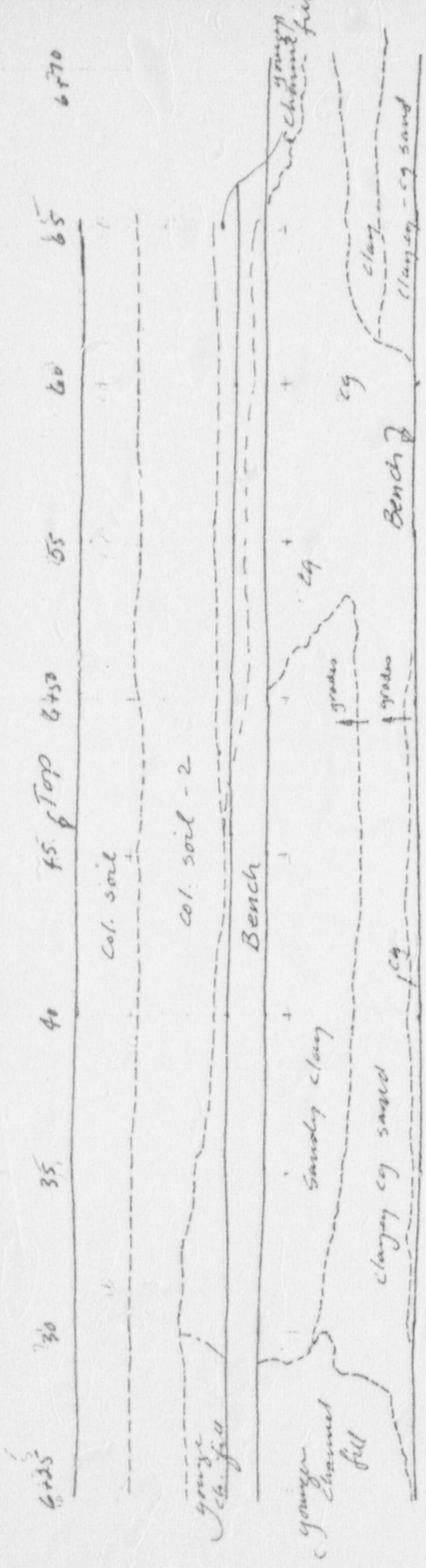


PRELIMINARY

[illegible]



PRELIMINARY

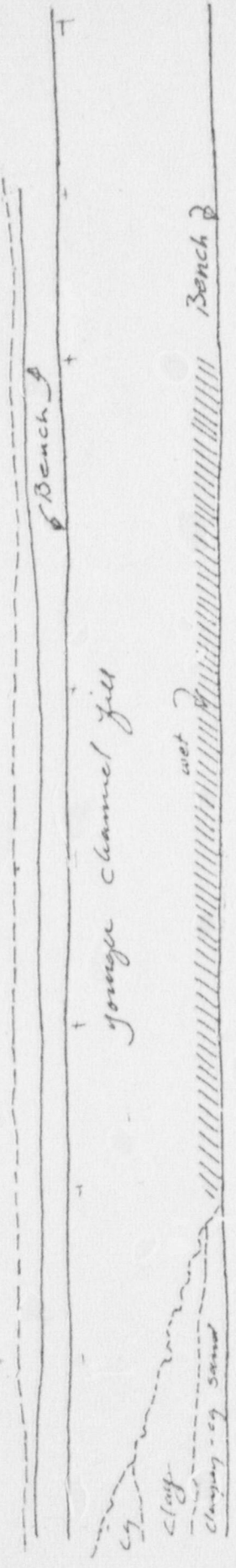


PRELIMINARY

6570 7 1/2 80 85 90 Top 95 700 705 11 15

col. soil

col. soil - 2



PRELIMINARY

7+15

20

25

30

25

35

40

45

50

55

60

15

Top 2

Col. soil

col. soil - 2

col. soil - 2

col. soil

younger channel

fill

col soil 2

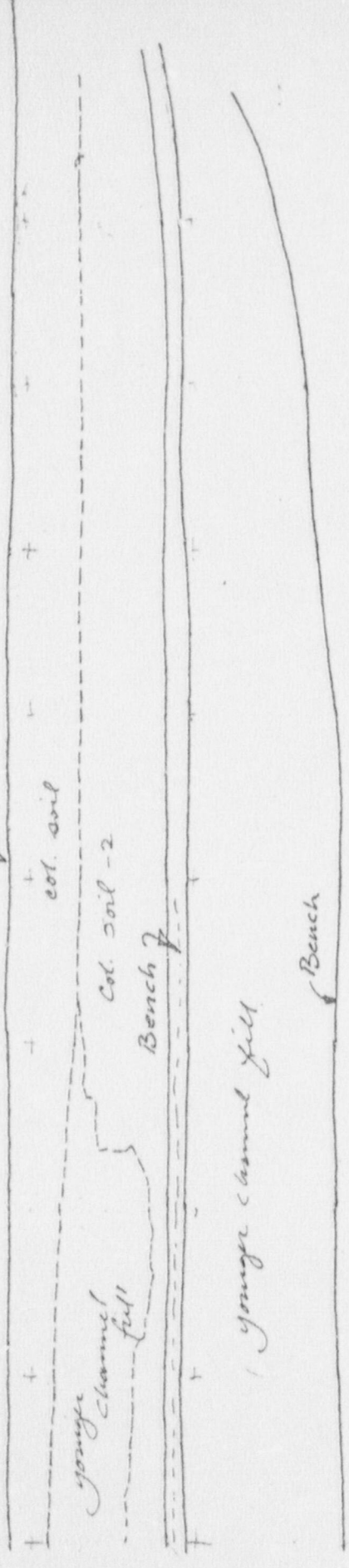
Bench 3

younger channel fill

Bench 2

PRELIMINARY

7460 65 70 75 80 Top 85 90 95 8+10 8+05



PRELIMINARY