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SMITHLAND DAM OHIO RIVER FOUNDATION REPORT VOLUME II
PHOTOGRAPHS AND FOUNDATION MAPS(U) JONES-TEER SMITHLAND
KY R SCHIPP ET AL. FEB 83 DACW62-75-C-0015

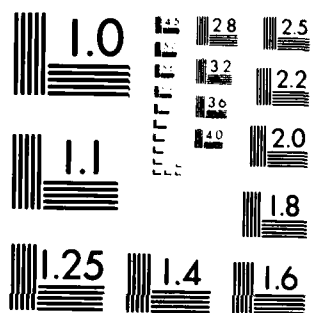
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NATIONAL BUREAU OF STANDARDS-1963-A

FOUNDATION REPORT

SMITHLAND DAM

OHIO RIVER

VOLUME II of II

PHOTOGRAPHS AND FOUNDATION MAPS

Contract No. DACW62-75-C-0015

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) > This report presents complete foundation records of conditions encountered during construction and the methods used to adapt the dam structures to these conditions. The report covers the construction of the Smithland Dam and Weir only. The construction for the twin 1200 foot locks is covered under a previous report. The high lift gated section of the dam consists of 12 piers and 11 gated bays. The dam section starts on the Kentucky side of the river-wall of the locks and extends 1400 feet to the Kentucky side of pier 12. A fixed weir consisting of granular filled and concrete capped can't over		

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Con't

steel piling cells extends from pier 12 some 1728 feet to the Kentucky bank.

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VOLUME II

SMITHLAND DAM
FOUNDATION REPORT

J. A. JONES CONSTRUCTION CO.
& NELLO L. TEER COMPANY
(A JOINT VENTURE)

CONTRACT NO. DACW 62-75-C-0015



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VOLUME II :
SMITHLAND DAM
FOUNDATION REPORT

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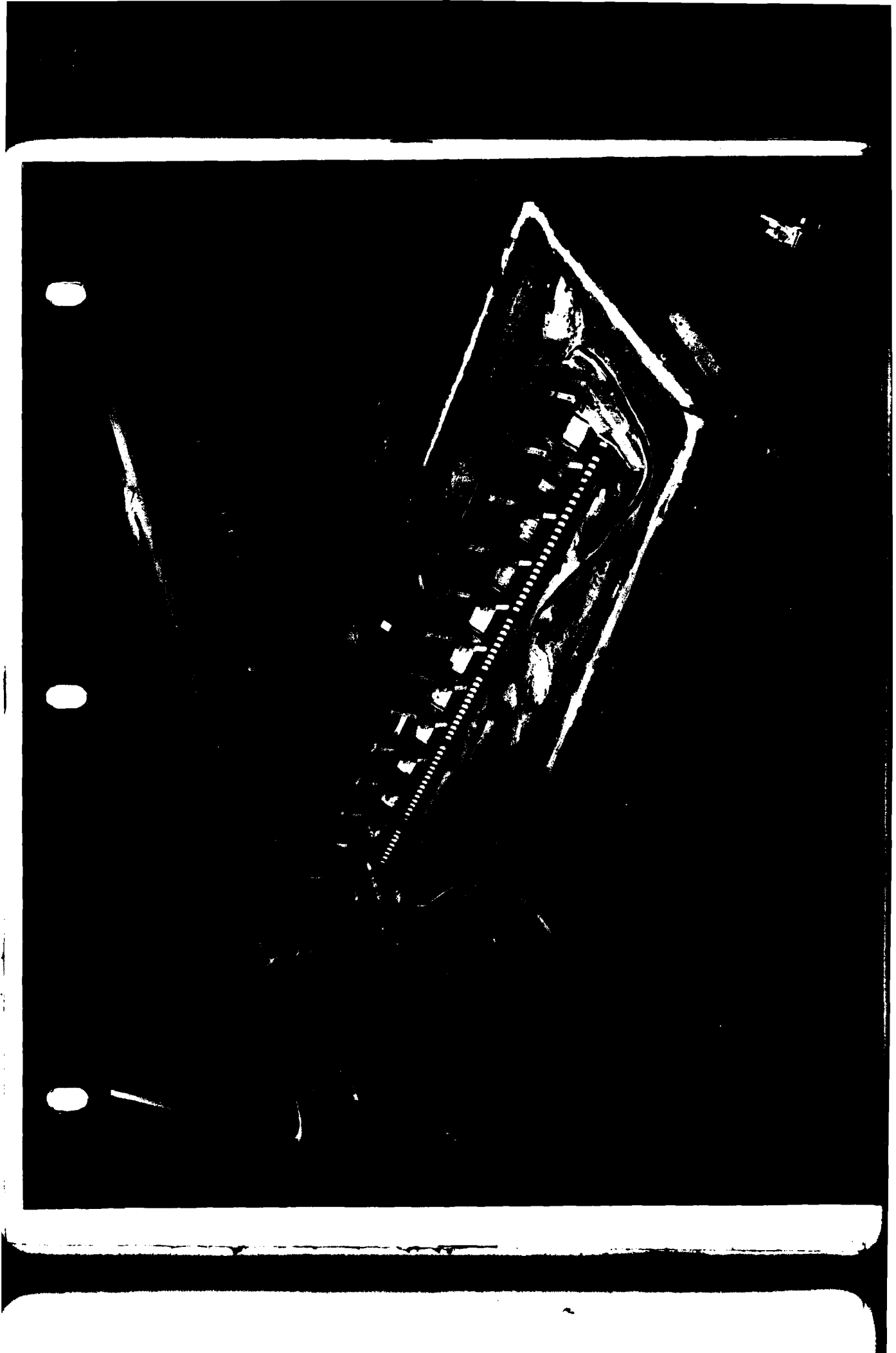
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PART I
PHOTOGRAPHS

1. Cut-off trench, Gate Bay No. 1, View from D/S, Kv. Side, Looking toward U/S face. 12 Nov 76



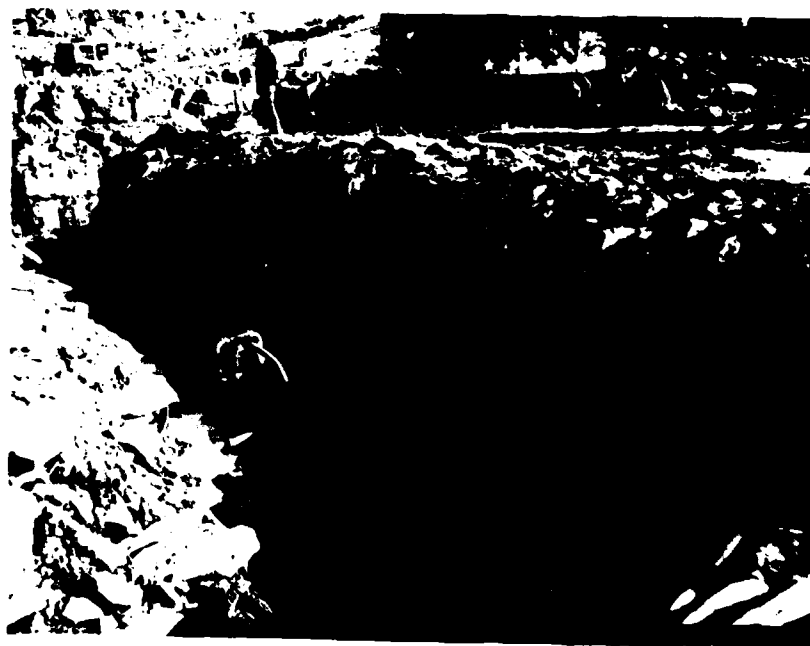
2. Cut-off trench, Gate Bay No. 1, View from Pier 1. 12 Nov 76



3. Cut-off trench, Gate Bay No. 2, View from Pter 2, Facing Pter 3.
3 Dec 76



4. Cut-off trench, Gate Bay No. 4, View from Pier 4 facing Kv., Showing downstream face. 8 Dec 76



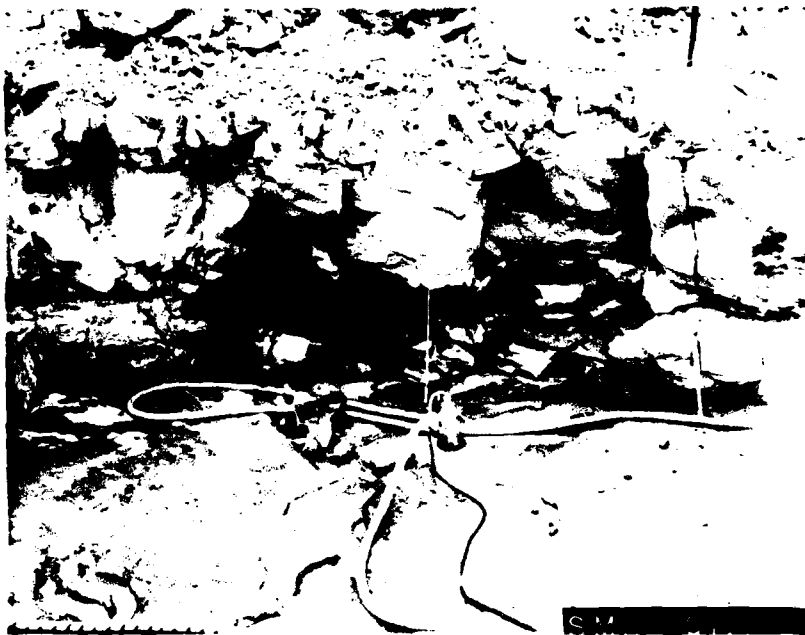
5. Cut-off trench, Gate Bay No. 4, View from Pier 4 facing Kv. showing upstream face. 8 Dec 76



6. Cut-off trench, Gate Bay No. 5, View from Pier 6 showing foundation cleanup. 16 Mar 77



7. Cut-off trench, Gate Bay No. 5, Solutioning in downstream face
17 Mar 77



8. Cut-off trench, Gate Bay No. 5, View of
healed joint in
foundation.
18 Mar 77



9. Cut-off trench, Gate Bay No. 7, Foundation. 24 May 77



10. Cut-off trench, Gate Bay No. 7, Solution cavity in downstream face.
24 May 77



11. Cut-off trench, Gate
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7 Jun 77



12. Cut-off trench, Gate Bay No. 9, Downstream face. 23 Jun 77



13. Cut-off trench, Gate Bay No. 9, View from Pier 10 looking toward Pier 9. 23 Jun 77



14. Cut-off trench, Gate Bay No. 9, View from Pier 10 looking at upstream face. 23 Jun 77



15. Cut-off trench, Gate Bay No. 10, View from Pier 10 towards Pier 11.
30 Jun 77



16. Cut-off trench, Gate Bay No. 10, View from Pier 11, Looking at upstream face. 30 Jun 77

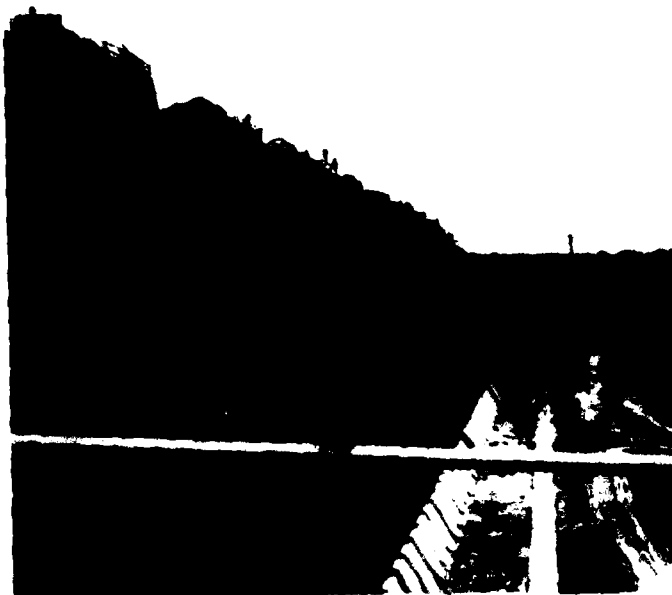


17. Cut-off trench, Gate
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from Pier 12.
30 Jun 77



18. Looking down stilling basins from lockwall to Kv. Note Overbreak. 12 Jun 78

NOTE: Portions of U/S faces of Gate Bays can be seen on Pier foundation photographs.



19. Downstream pre-split face, Gate Bay No. 1, Sta. 0+49.5D, Sta. 72+60S $\pm$, Elev. 260-270 $\pm$. 13 Dec 77



20. Downstream pre-split face (Sta. 0+49.50), Gate Bay No. 2, Sta. 73+40S to 73+70S±, Elev. 260-270±. 19 Dec 77



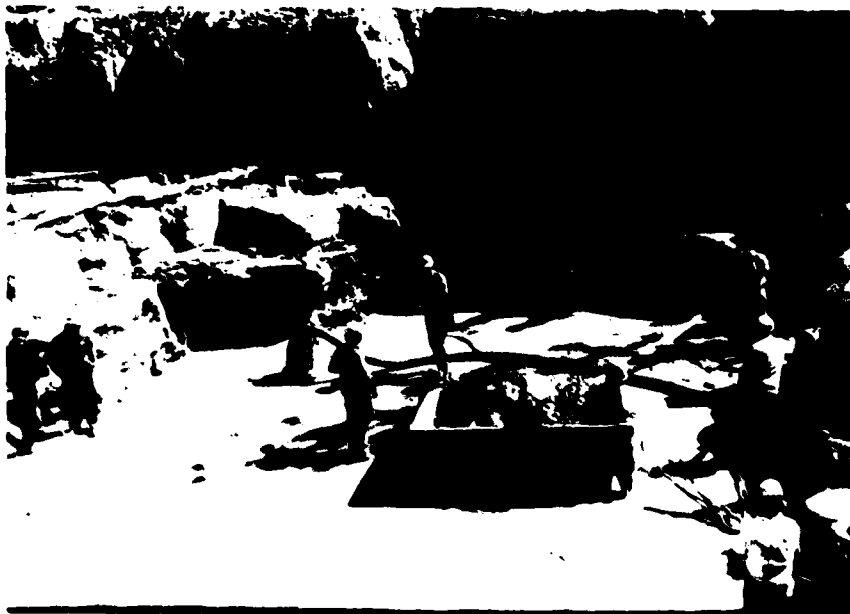
21. Solution channel in 10' strip, Gate Bay No. 2, Sta. 72+50S to 72+60S, Sta. 0+39.50 to 0+49.50, Looking upstream. 19 Dec 77



22. Clean-up in 10' wide section, Sta. 0+39.50 to 0+49.50, Stilling Basin No. 3, Mudseam at 74+25S $\pm$. 21 Dec 77



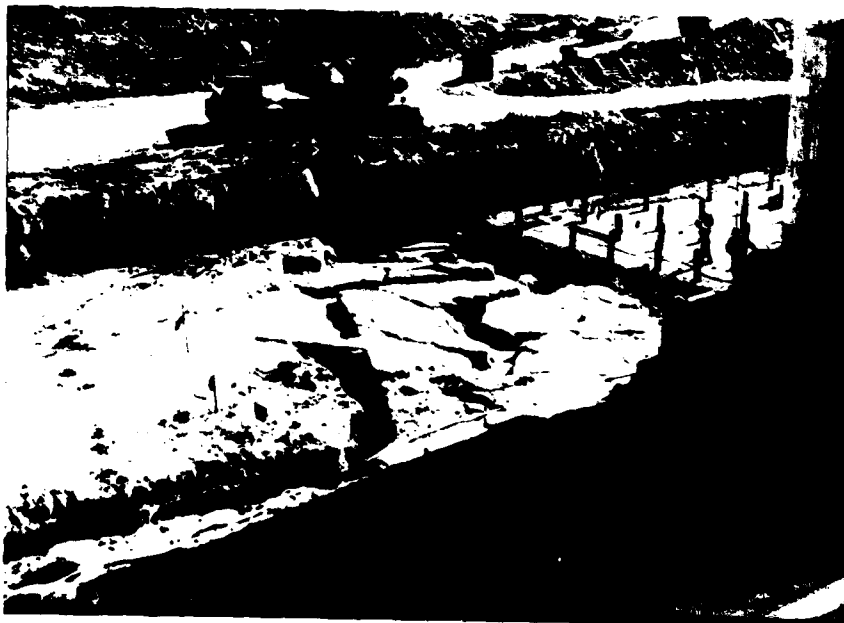
23. Downstream face, Stilling Basin No. 5, Illinois 1/4 of bay, Undergoing final clean-up, Bottom Elev. 253.5 $\pm$. 5 Apr 78



24. Upstream face, Gate Bay No. 5. 31 May 77



25. Looking downstream into Stilling Basin No. 5 from tainter gate. Solutioned area on right prior to removal. Trench through rest of bay later cleaned out and filled with dental concrete. 4 Apr 78



26. Solution channel, Center
of Stilling Basin No. 6,
Sta. 78+25S[±]: 0+13.5U to
0+46.5U, Looking toward
Illinois. 29 Apr 78



27. Solution channel, Stilling
Basin No. 6, Illinois side
and downstream of Pier 7.
3 May 78



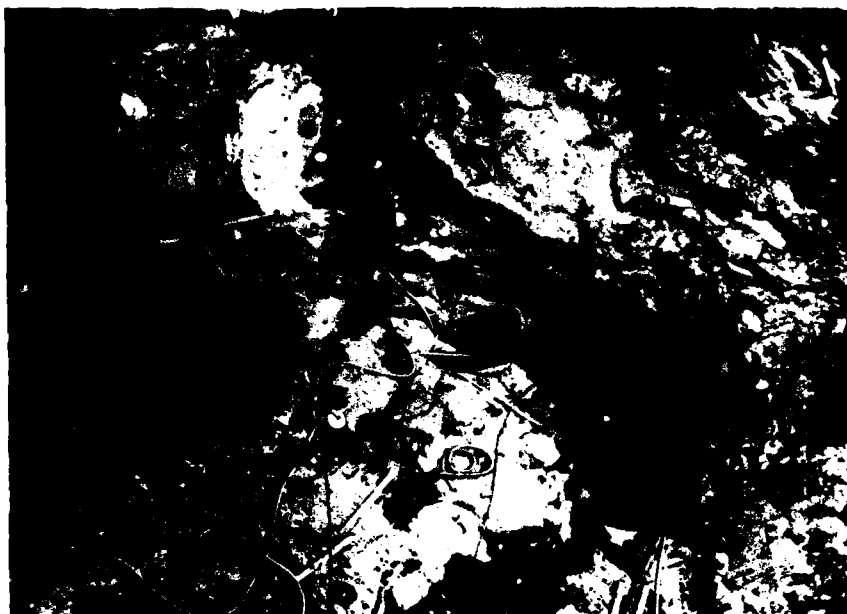
28. Solution channel
Stillling Basin
No. 6, Kv. Side of
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29. Stilling Basin No. 7, Looking toward Kv. 8 May 78



30. Stilling Basin No. 8, Solution channel, View from Pier 8. 31 May 78



31. Stilling Basin No. 8, Showing rock "bridge" over solution channel after excavation, Looking downstream. 31 May 78



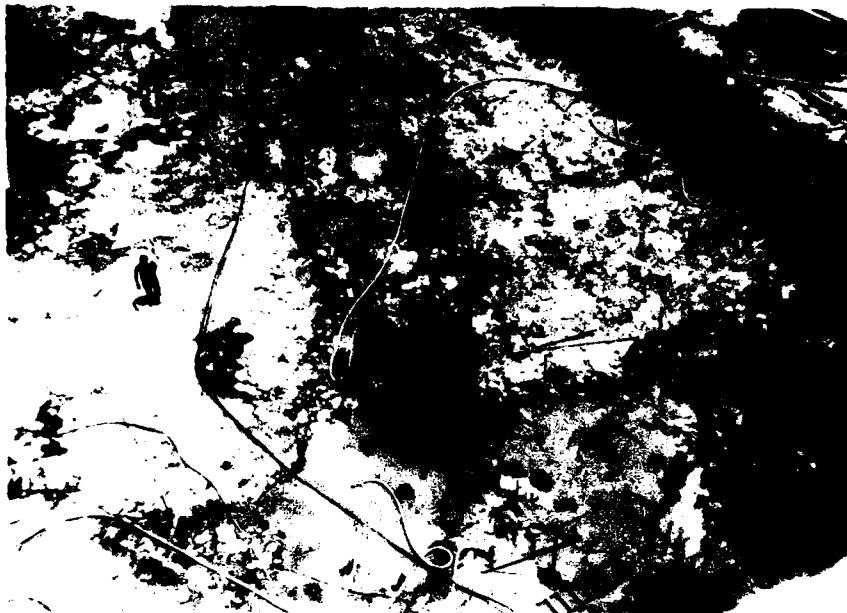
32. Stilling Basin No. 9, Hole in upstream Ill. corner, Due to overbreak and solution channel. 31 Jun 78



33. Kentucky half of Stilling Basin No. 9, Low area just downstream of ogee section which was placed separately to level foundation for anchor rod installation. 15 Jun 78



34. Stilling Basin No. 10, Looking from Pier 10 at installation of rock anchors. 30 Jun 78



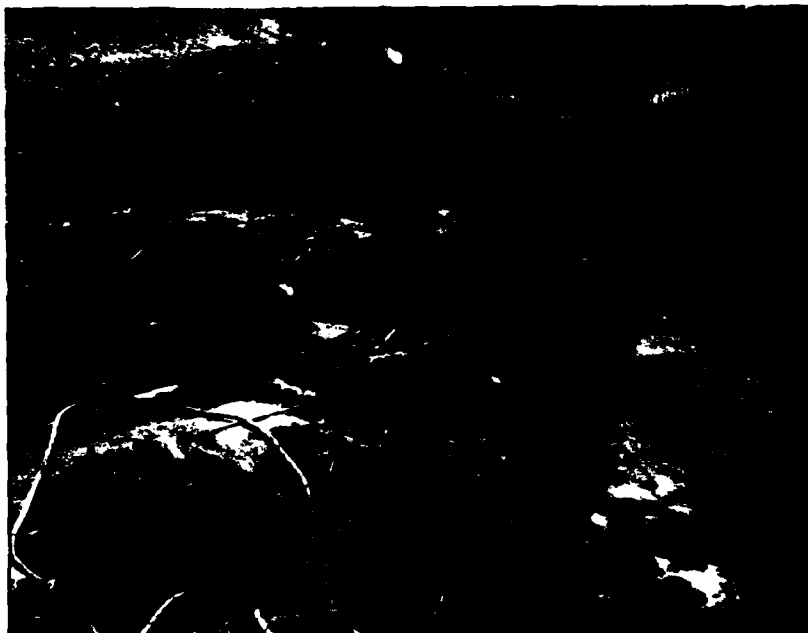
35. Stilling Basin No. 10, Solution area, Bottom Elev. 252±, Sta. 83+11S to 83+28S and 0+410 to 0+470. 10 Jul 78



36. Stilling Basin No. 11, Looking from Pier 10 towards Kv. 30 Jun 78



37. Pier No. 1, Presplit line looking downstream from Sta. 1+270.
25 Aug 76



38. Pier No. 1, Rock face jut downstream of cut-off trench, Kv. side.
13 Oct 76



39. Pier No. 1, Foundation and side wall. 13 Oct 76



40. Pier No. 1, Upstream face. 9 Oct 76



41. Pier No. 2, View from lockwall looking towards Kv. 26 Oct 76



42. Pier No. 2, View from inside looking at upstream rock face.
26 Oct 76



43. Pier No. 2, downstream face. 26 Oct 76



44. Pier No. 2, Illinois side in area of cut-off trench. 15 Oct 76



45. Pier No. 3, Rock condition on Ill. side prior to forming. 16 Oct 76



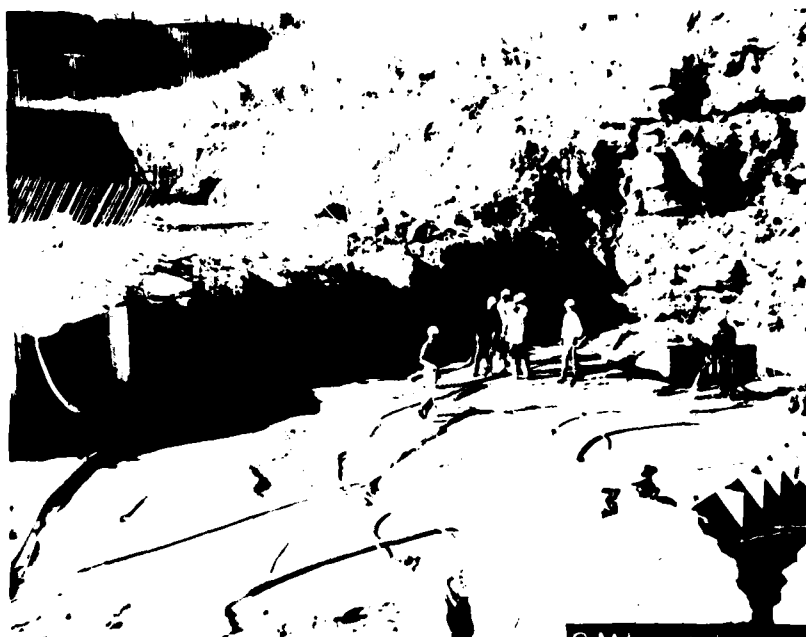
46. Pier No. 3, View along center line showing Kv. side prior to form work. 16 Oct 76



47. Pier No. 3, View from inside excavation showing downstream rock face. 20 Oct 76



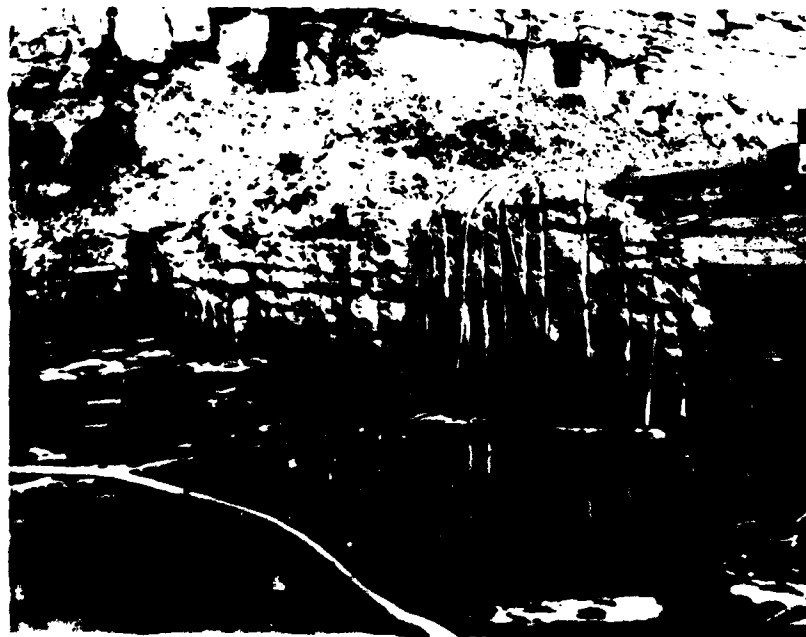
48. Pier No. 4, Upstream Ill. corner. 18 Nov 76



49. Pier No. 4, View from downstream Ill. side showing downstream face and Kv. corner of excavation. 18 Nov 76



50. Pier No. 4, Kv. side just upstream of cut-off trench. 18 Nov 76



51. Pier No. 4, Upstream face. 18 Nov 76



52. Pier No. 5, View from downstream end showing excavation progress. 8 Dec 76



53. Pier No. 5, Looking at downstream face. 20 Dec 76



54. Pier No. 5, View of
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10 Dec 76

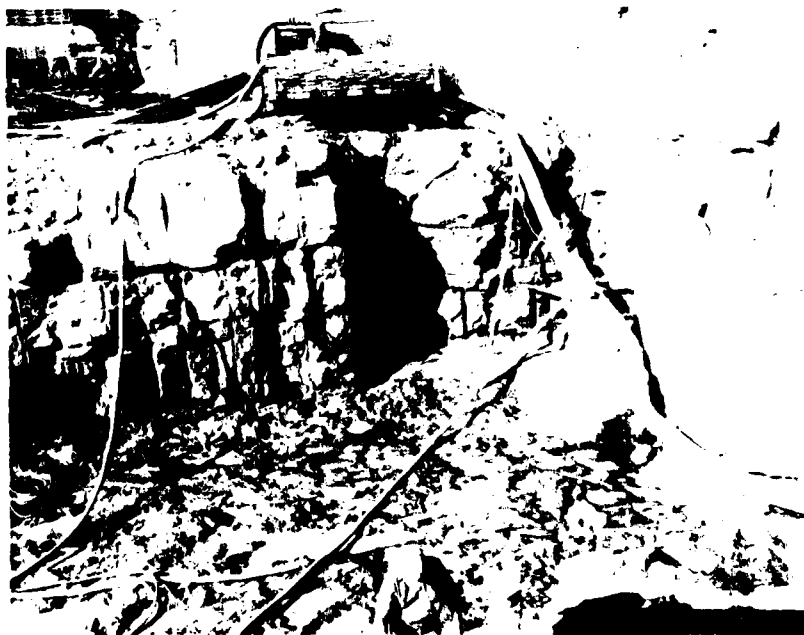
(Unstream and downstream
sections very similar)



55. Pier No. 5, View of
mid-unstream Ill.
side. Bottom Elev.
225±. 10 Dec 76



56. Pier No. 6, Upstream Ill. corner of pier. 18 Feb 77



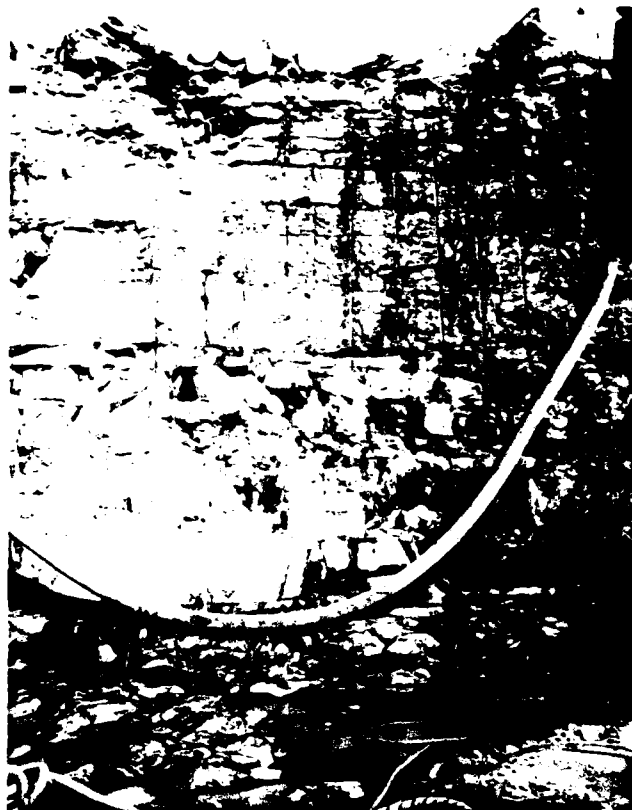
57. Pier No. 6, Upstream Kv. side. 22 Feb 77



58. Pier No. 6, Downstream Kv. side. 22 Feb 77



59. Pier No. 6, Middle of
unstream face.
18 Feb 77



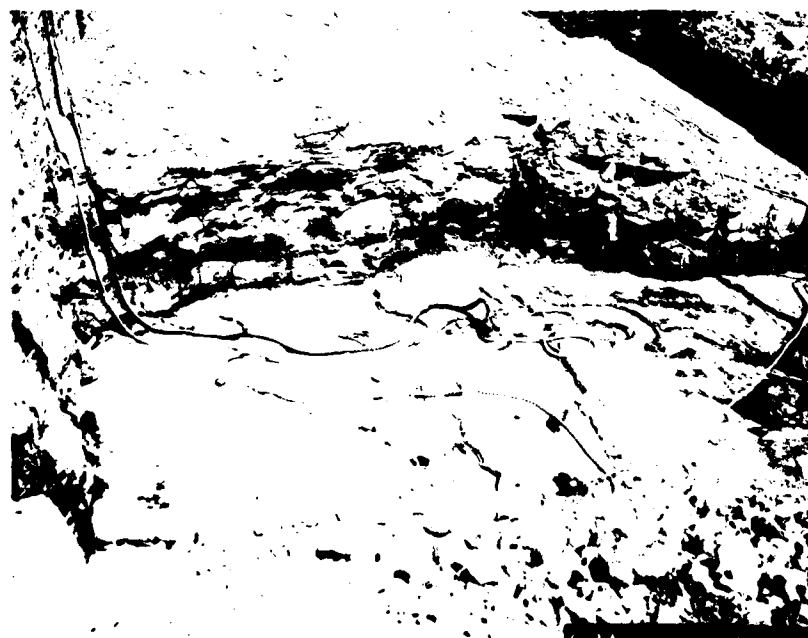
60. Pier No. 6, Overbreak on
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Ruler at approx. neat line.
View from Kv. side.
22 Feb 77



61. Pier No. 7, View from upstream end looking at downstream end.
10 May 77



62. Pier No. 7, View from Ill. side looking at Iv. side. Note
solutioning in foundation floor. 10 May 77



63. Pier No. 7, View of upstream Ill. side. Solutioning at founding
Elev. 250 $\pm$. 12 May 77



64. Pier No. 7, View from Ky. side showing Ill. side just upstream
of cut-off trench. 11 May 77



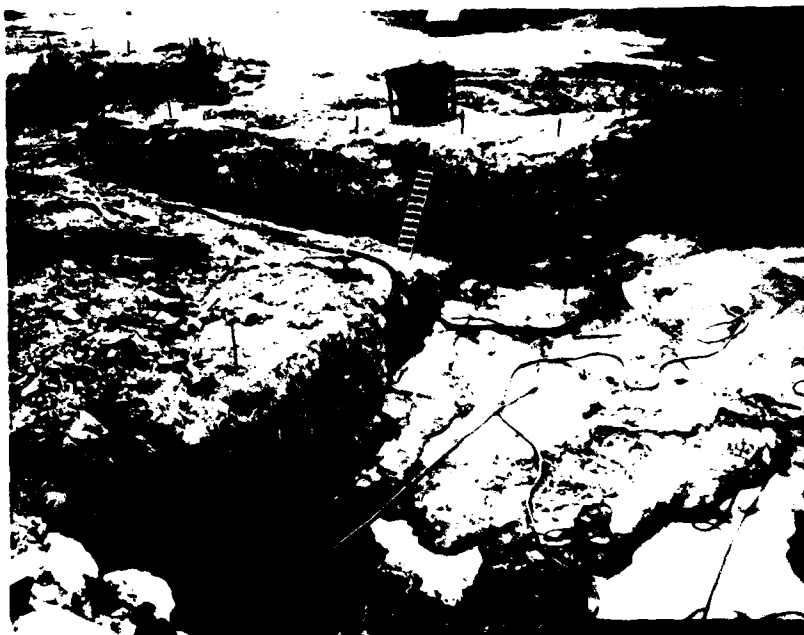
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66. Pier No. 8, Looking downstream at Ill. face and cut-off trench in Gate Bay No. 7. 2 May 77



67. Pier No. 8, Looking downstream at Ky. face and cut-off trench in Gate Bay No. 8. 2 May 77



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69. Pier No. 8, Close-up of
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upstream face. 4 May 77



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4 May 77



71. Pier No. 8, Close-up of solution
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4 May 77



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2 May 77



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2 May 77



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75. Pier No. 10, View from upstream end showing downstream face. Concrete at 250. 2 May 77



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77. Pier No. 11, Solution
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28 May 77



78. Pier No. 11, View from
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28 May 77



79. Pier No. 11, View of solutioning at Elev. 246 bedding plane in upstream face.
27 May 77



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81. Pier No. 12, View from just downstream of cut-off trench showing Ky. side. Pre-split on 6"cc. 6 Jun 77



82. Pier No. 12 and Training Wall, View from upstream end looking downstream. 14 Jun 77



83. Pier No. 12 and Training Wall, View from downstream end looking upstream. 7 Jun 77



84. Pier No. 12, Solution channel and joint in upstream face, III. corner at left. 12 Jun 77



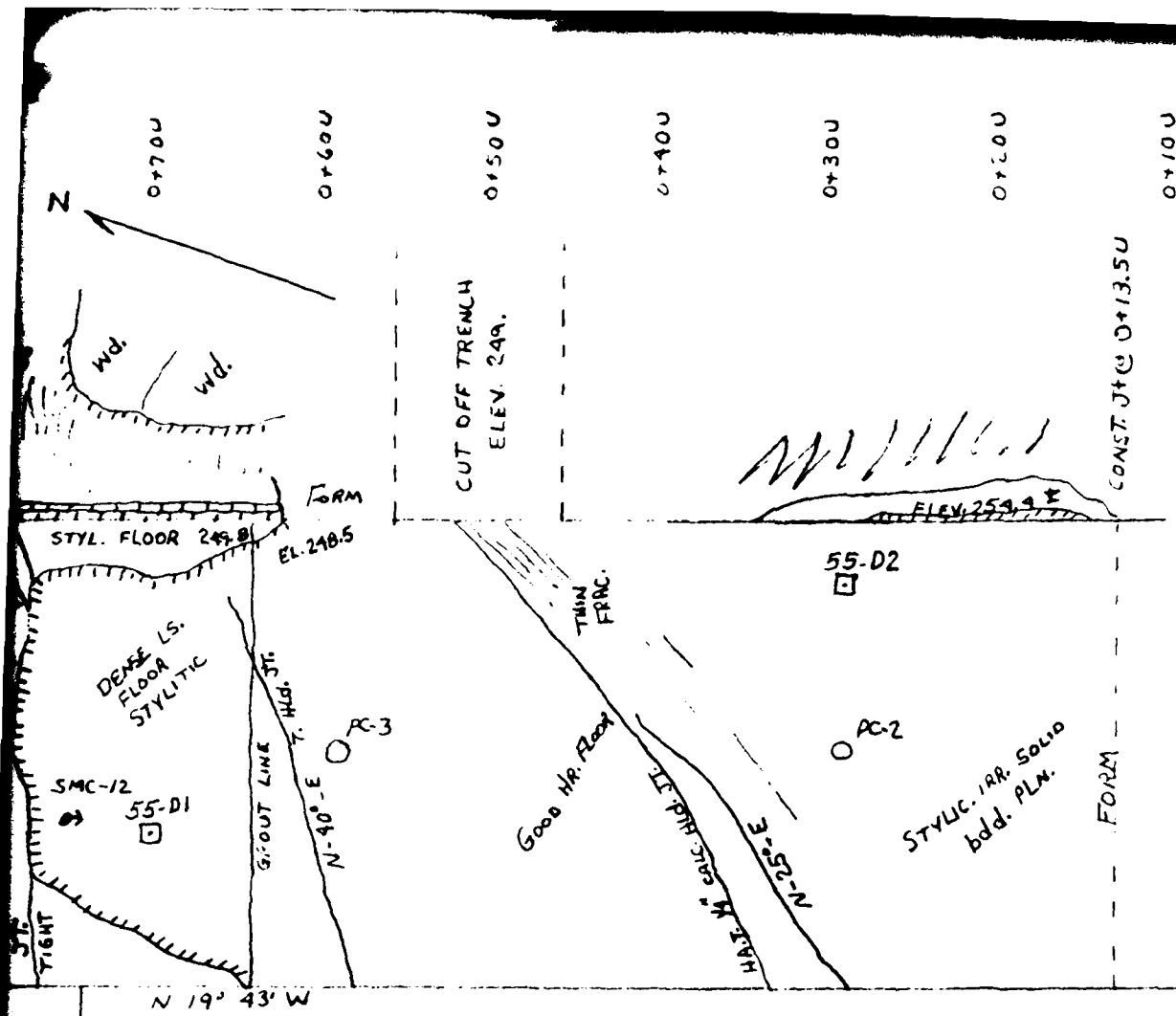
85. Pier No. 12, Joint in
upstream face of pier.
14 Jun 77



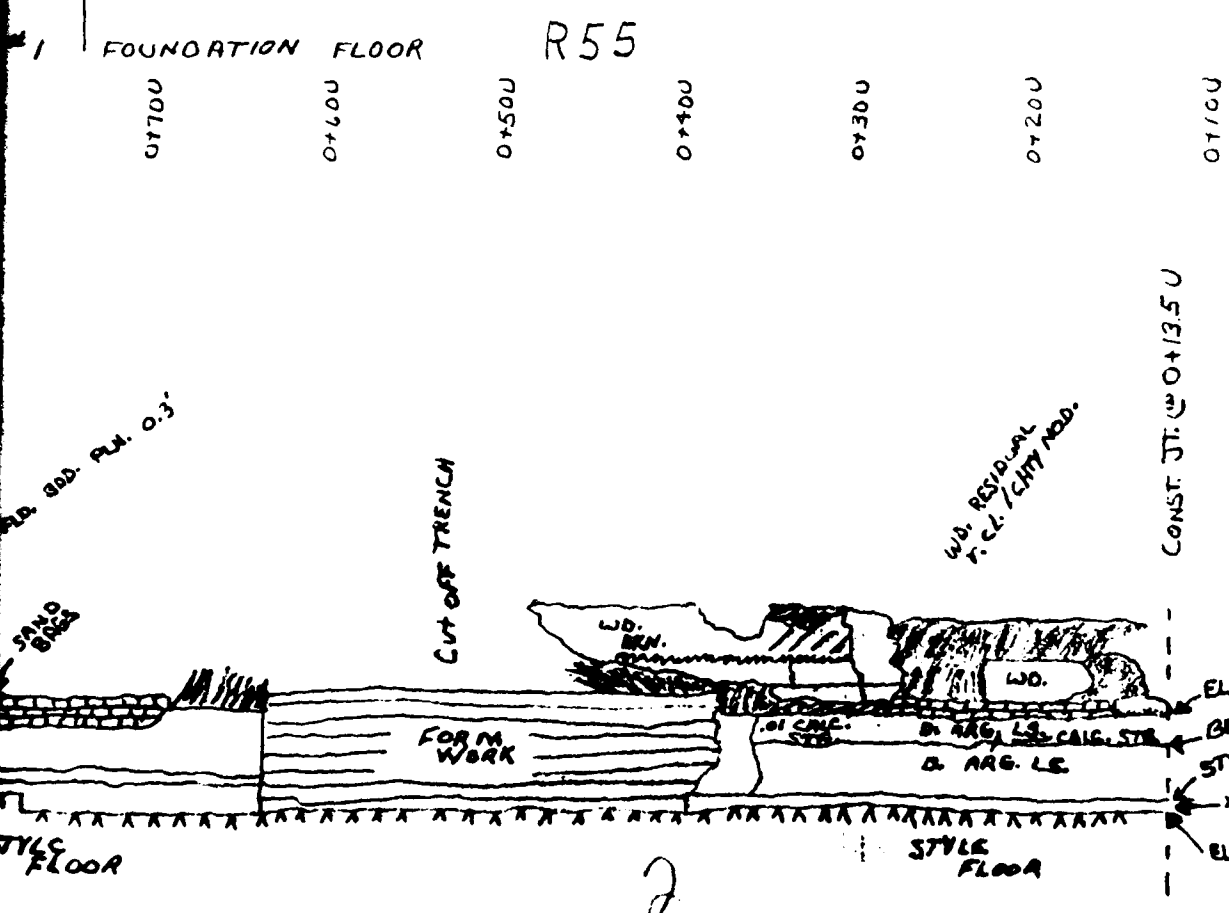
86. Training Wall, View of rock conditions in Kv. face, Bottom Elev. 240 $\pm$.
6 Jun 77



PART II
FOUNDATION MAPS



(cont.)

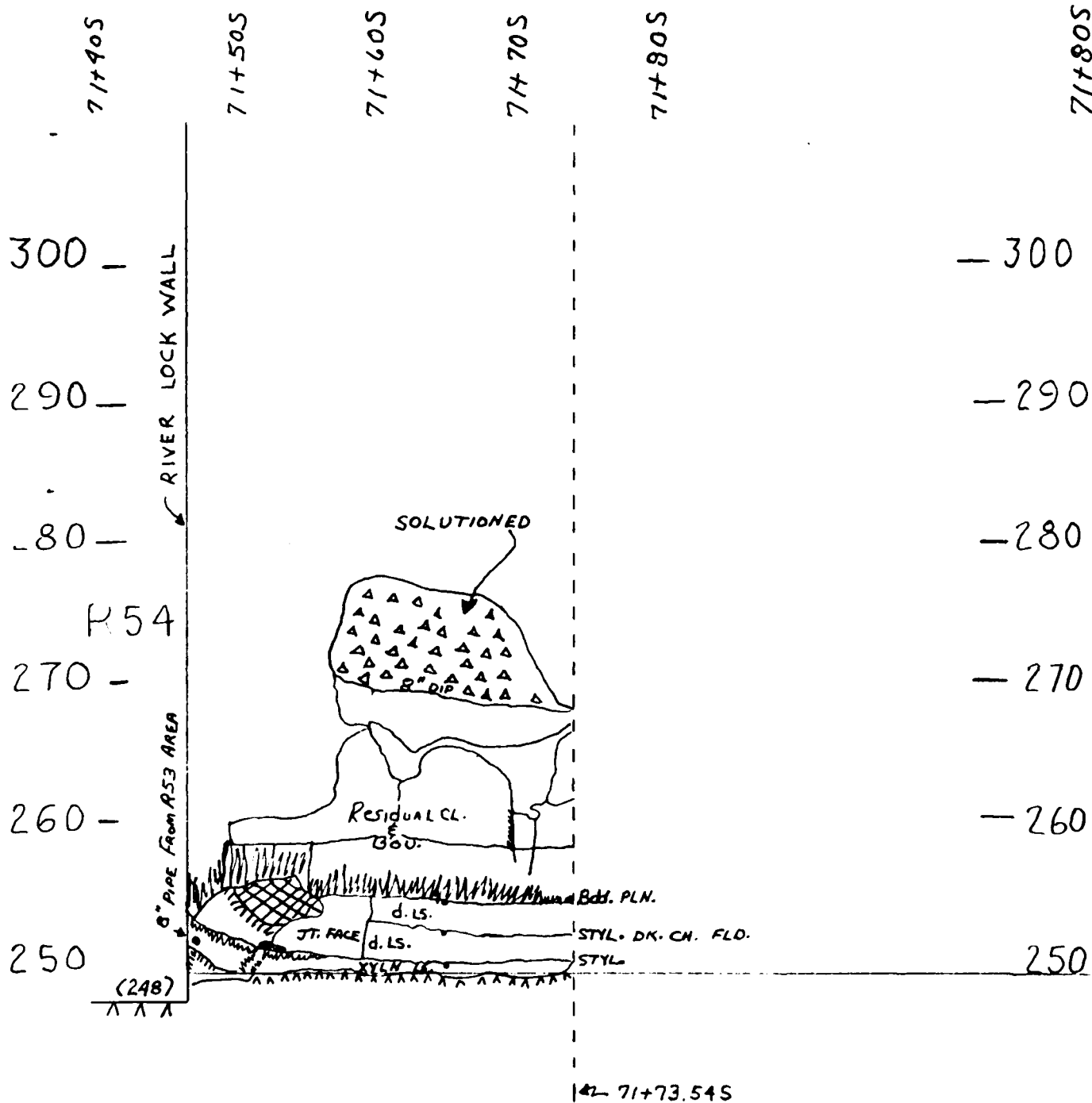


BY
CHKD BY

DATE
DATE

SUBJECT

SHEET NO OF
JOB NO



1/2 1110

PREF 1

CUT OFF TRENCH

el. 249 0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

STYLIC
BDD. PLN.

D. LS.

SMC 332

D. LS.

D/S

FOUNDATION FLOOR

2

0+13.5U
72+98.54 S

N-24°-E

0.1' CALC. HLD. JT.

73+00 S

72+90 S

72+80 S

72+70 S

72+60 S

72+50 S

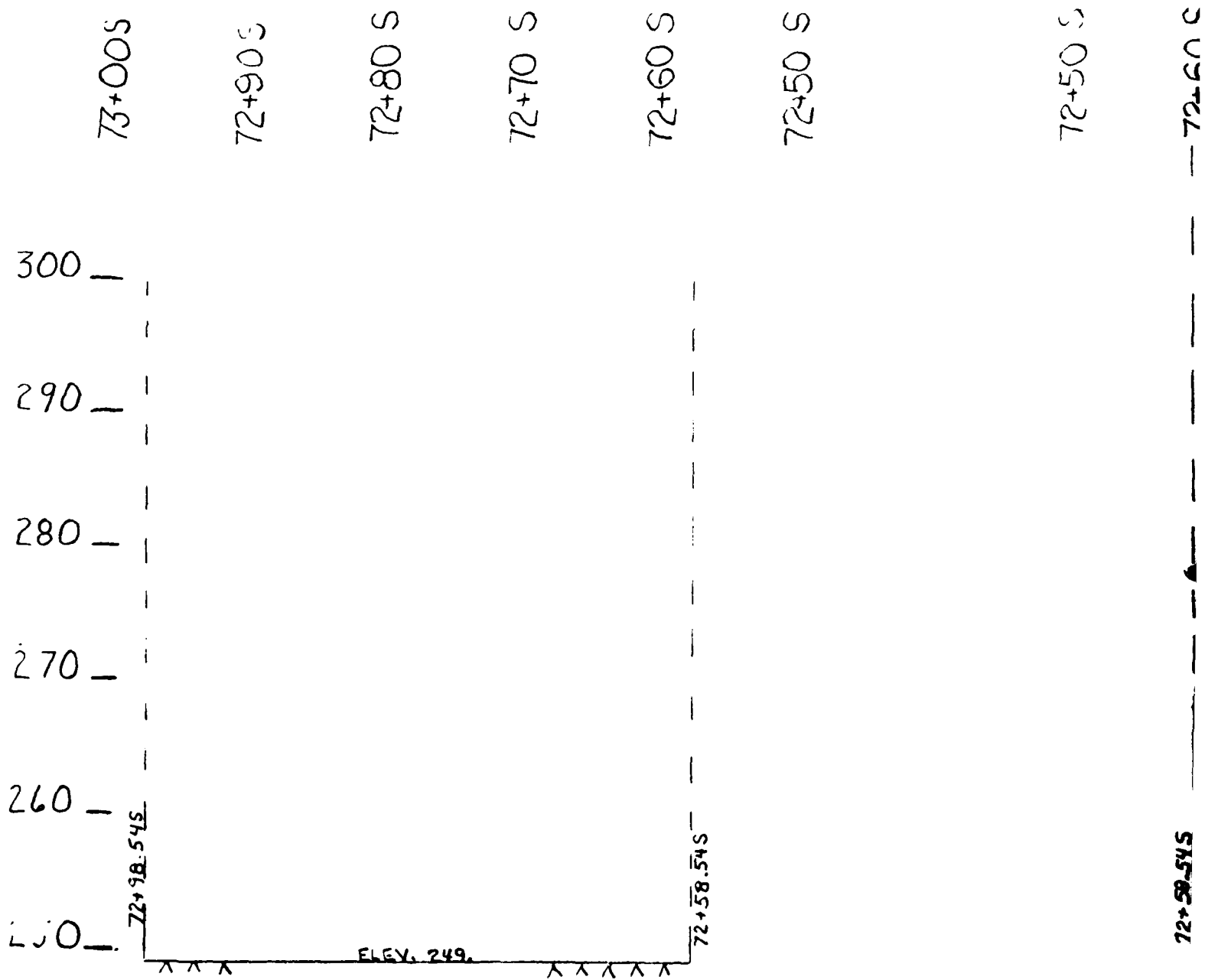
0+13.5U
72+58.54 S

13.6" LONG
HALF ROUND WATER CONTROL

1/4" CALC. HLD.
N-29°-E

0.1' CALC. CALD. HLD.
STE.

N-50°-E



1 D/S END

PIER 2

72+58.54S

72+50S
72+60S

72+50 S

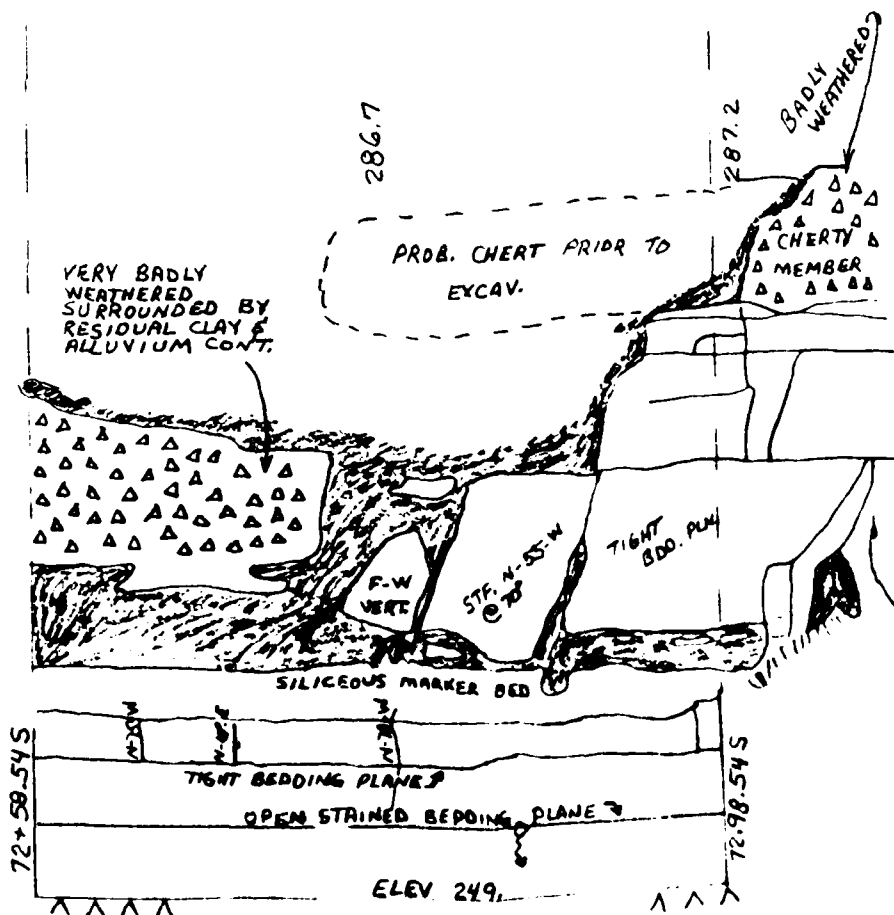
72+60 S

72+70 S

72+80 S

72+90 S

73+00 S



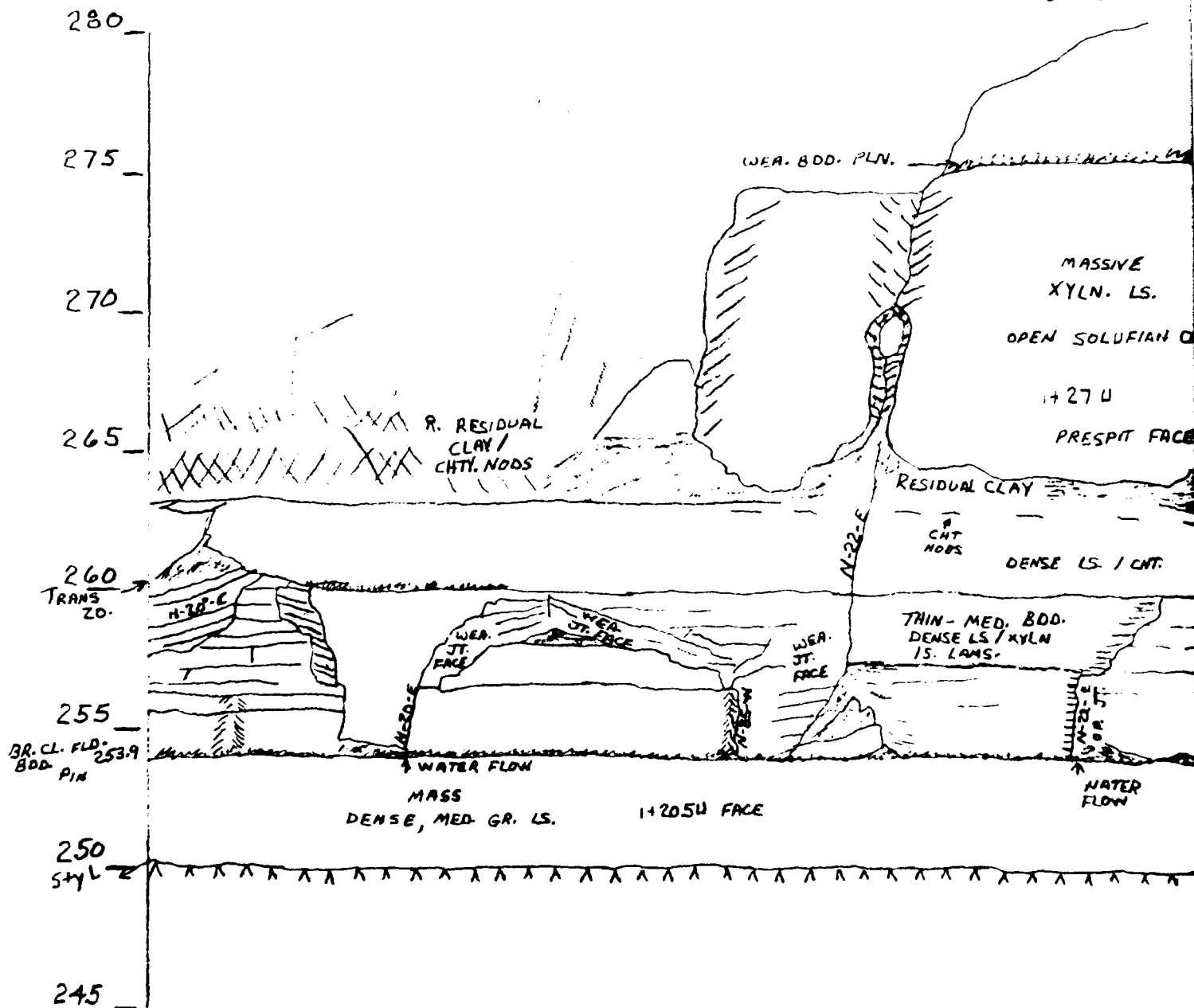
PIER 2

U/S END

FP II-4

U/S FACE OF PIER 2

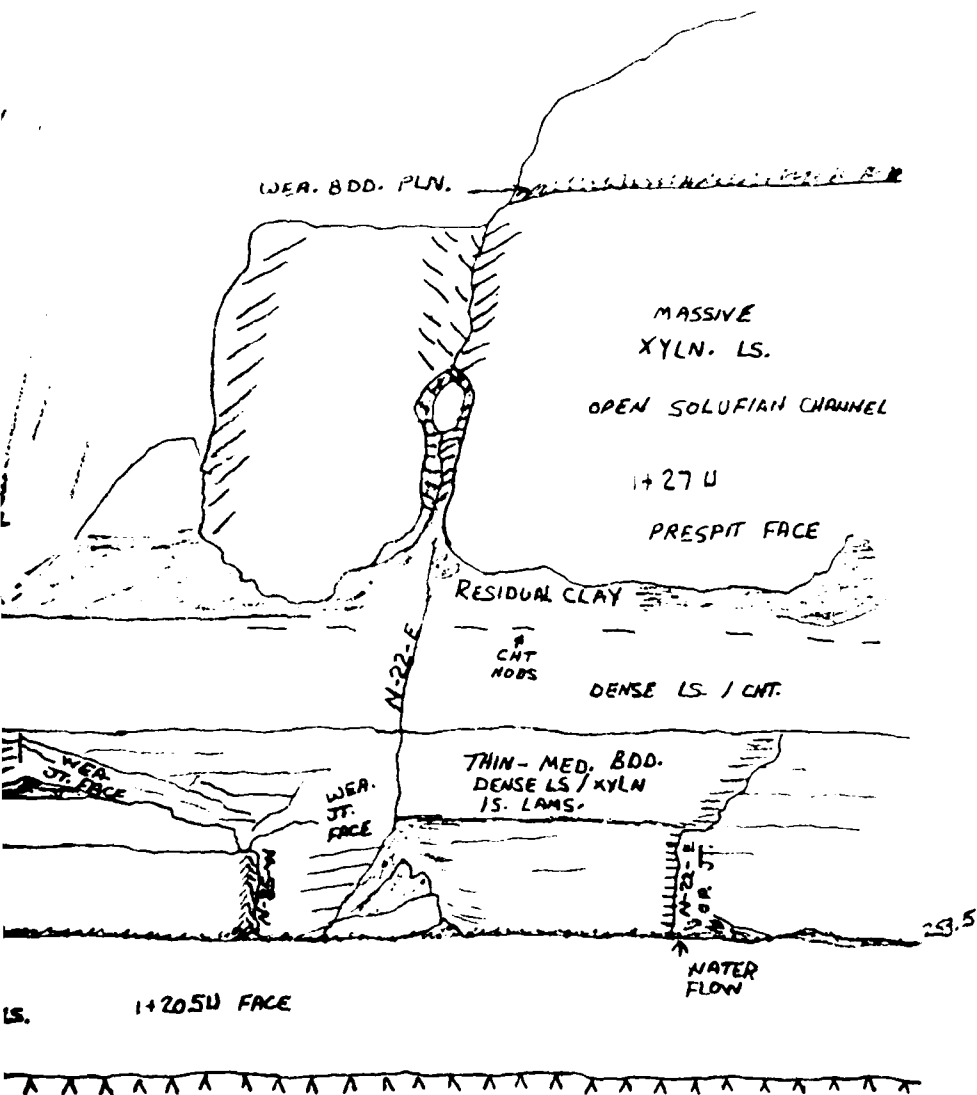
PIER 2
10-15-76



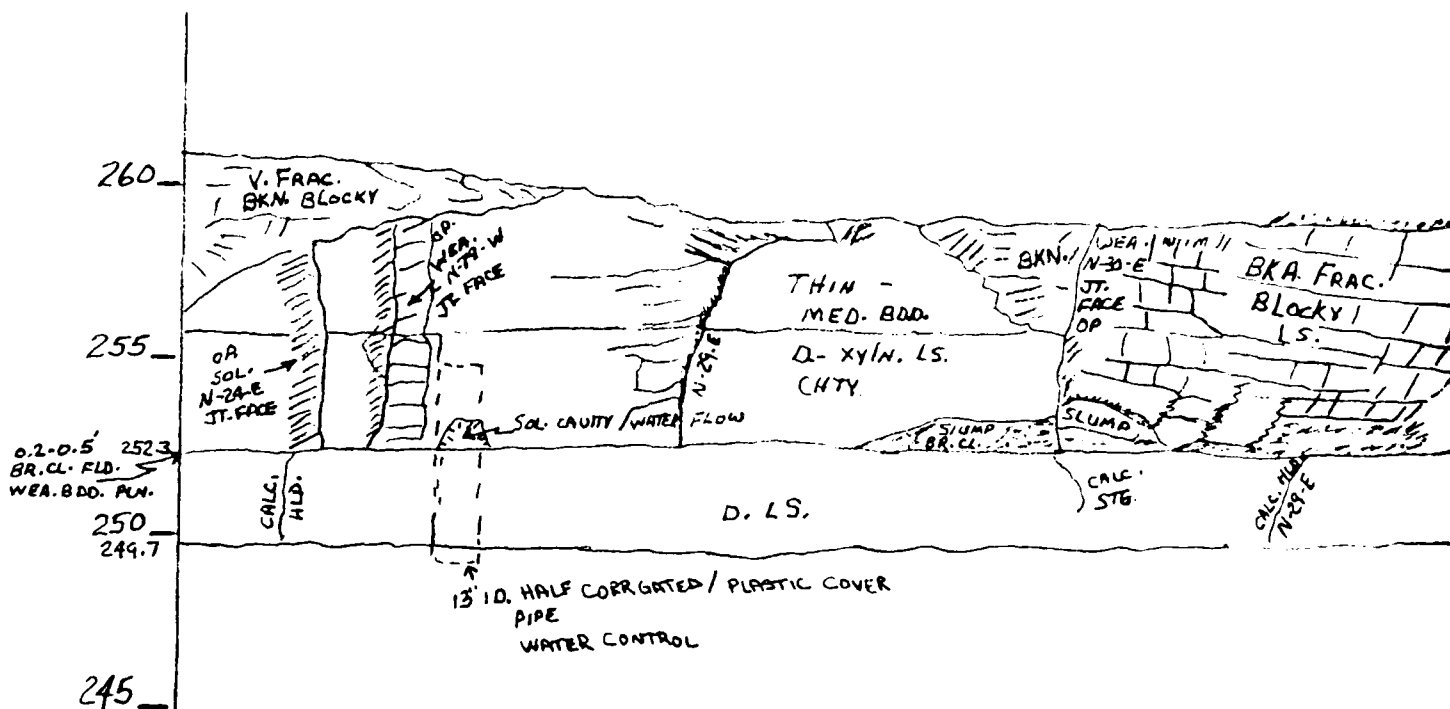
ILL.

U/S FACE OF PIER 2

PIER 2
10-15-76

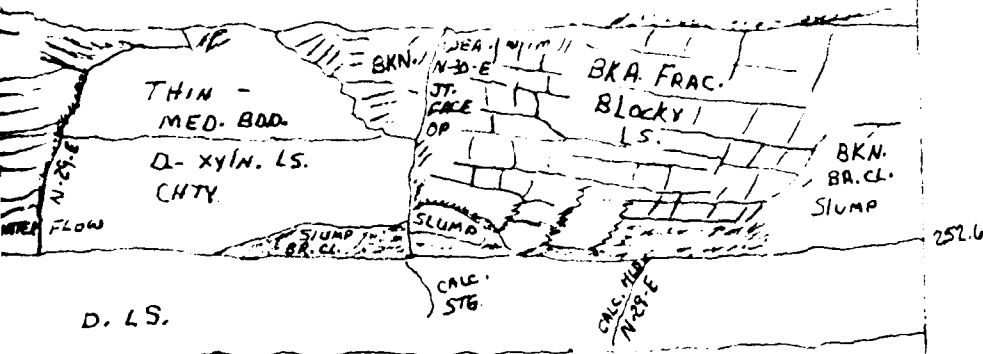


KY.



Ky.

D/S END PIER #2
STA. 0+13.54



GRAVEL / PLASTIC COVER
TROL

S END PIER #2
Sta. 0+13.54

ILL.

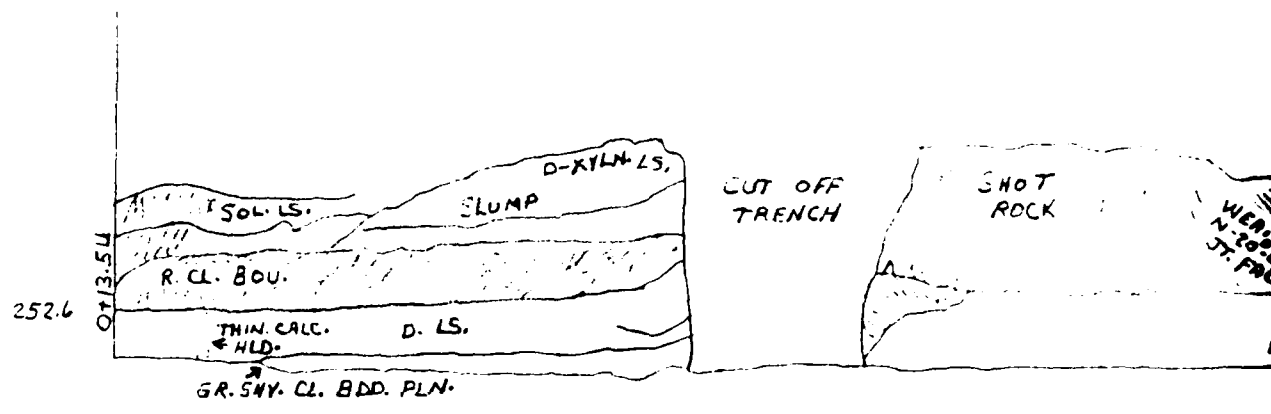
0+10U 0+20U 0+30U 0+40U 0+50U 0+60U 0+70U

288_

270_

260_

250_



ILL. SIDE

PIER 2

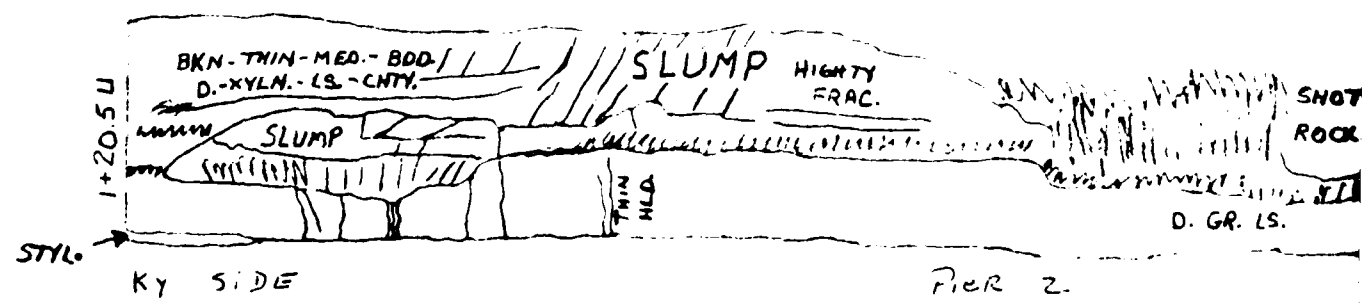
1+20U 1+10U 1+00U 0+90U 0+80U 0+70U 0+60U

280_

270_

260_

250_



KY SIDE

PIER 2.

0+60U

0+70U

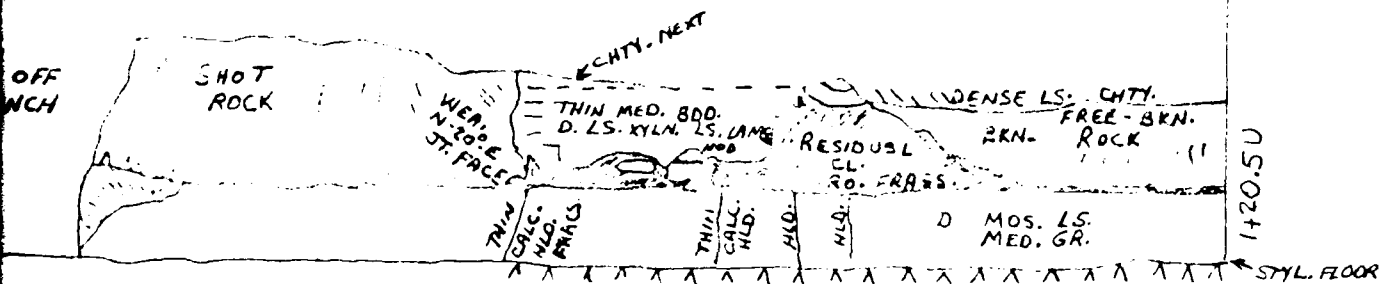
0+80U

0+90U

1+00U

1+00U

1+20U



PIER 2

0+70U

0+60U

0+50U

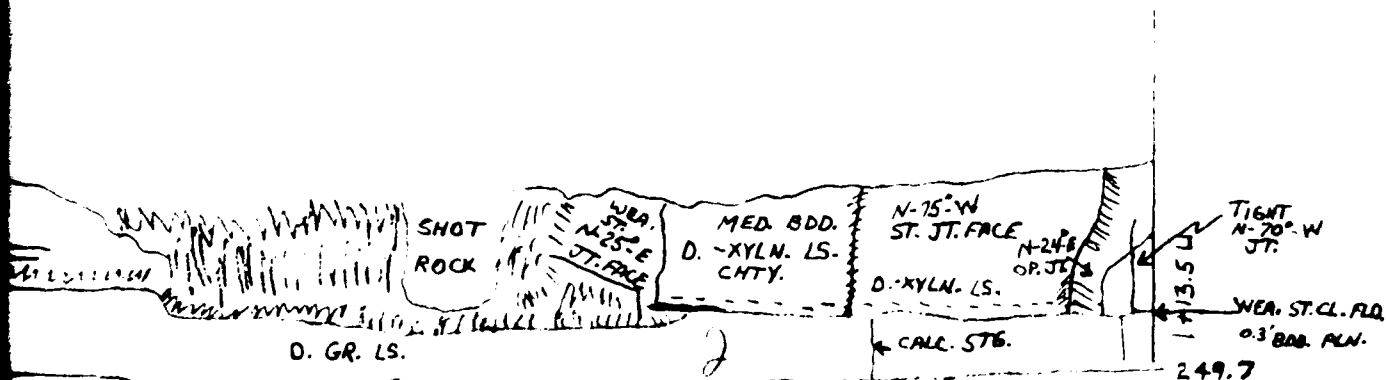
0+40U

0+30U

0+20U

0+10U

252.7
254.3



Pier 2

1+200

1+100

1+000

0+900

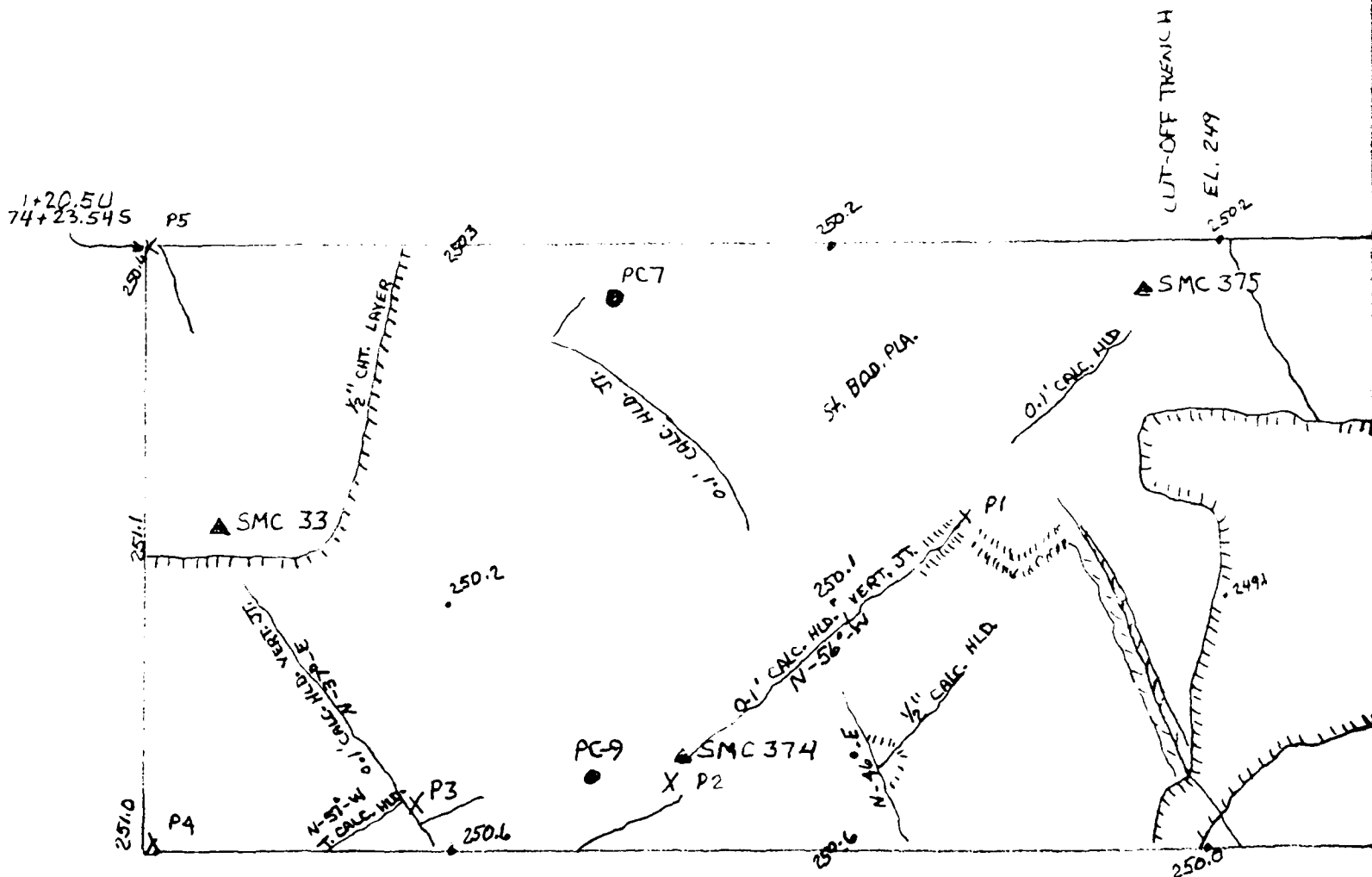
0+800

0+700

0+600

0+500

0+400



1+20.5U
73+83.545

U/S

PIER 3

0+60U

0+50U

0+40U

0+30U

0+20U

0+10U

0+00U

CUT-OFF TRENCH

EL. 249

250.2

▲ SMC 375

0.1' CALC. HLD.

249.6

249.6 / 255.0

0+13.5U

74+23.545

74+30S

74+20S

74+10S

0.1' CALC. HLD. JT.

249.2

249.4

249.7 / 255.0

SMC 140

74+00S

73+90S

0.1' CALC. HLD.

PC-8

250.0

249.6

DIS

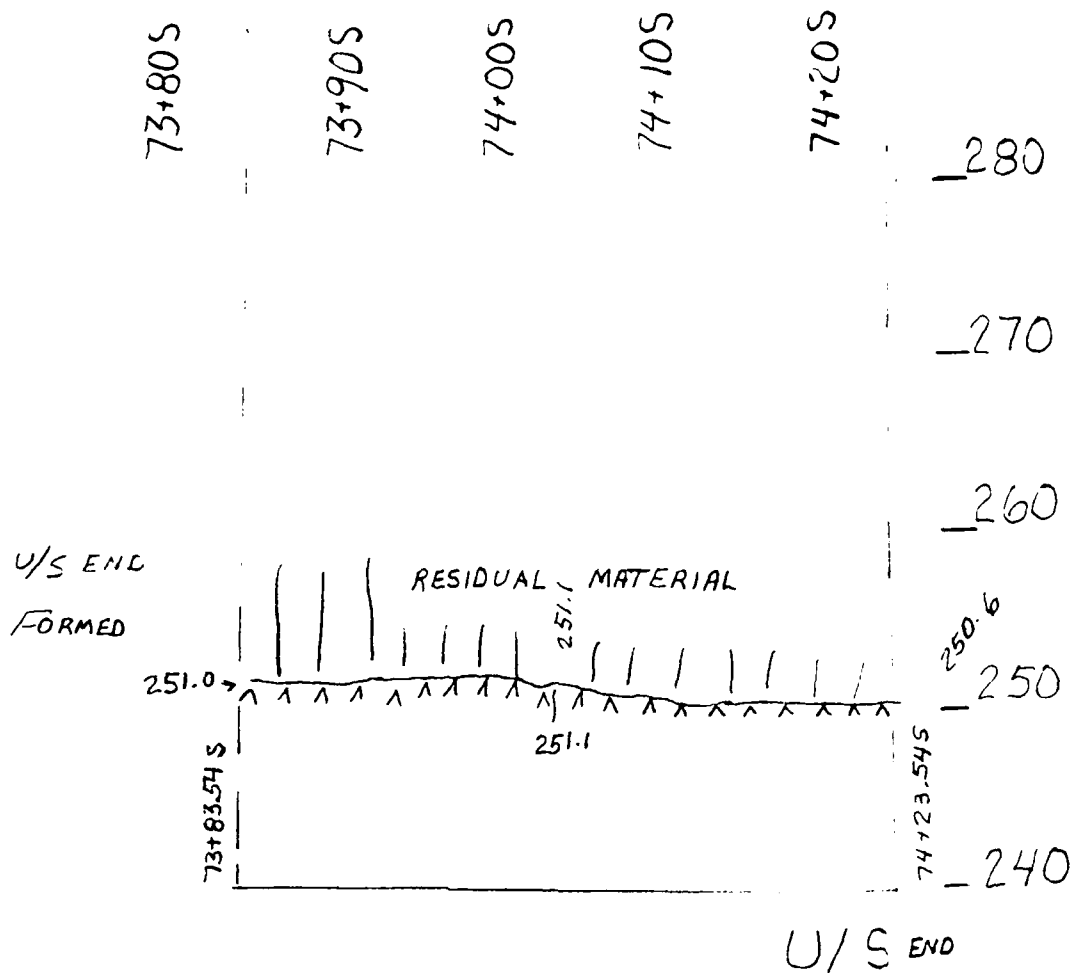
249.6 / 255.0

0+13.5U

73+83.545

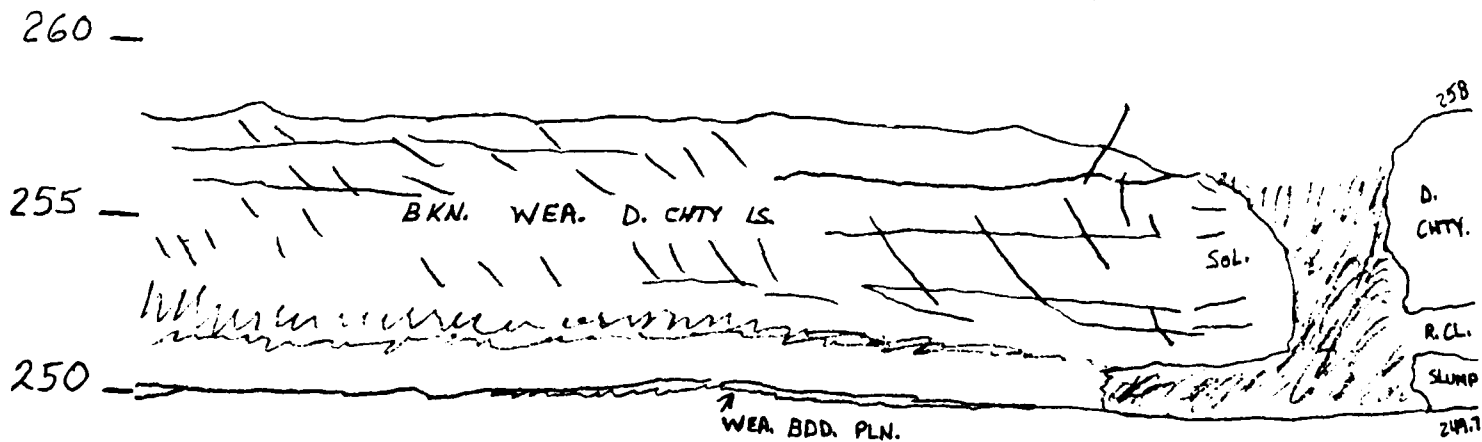
73+80S

FOUNDATION FLOOR



PIER 3

D/S END BKN. BEYOND PRESPLIT LINE



245

Ky.

PIER 3 D/S End

20 Oct 72 ILL. FPII-9

300 1+20S 1+10S 1+00S 0+90S 0+80S 0+70S 0+60S 0+50S

290

280

270

260

250 256.7 FORM WORK TO STA. BDD. PLN.

240 1+20.54

U/S

KY SIDE

PIER 3

1

0+80S

0+70S

0+60S

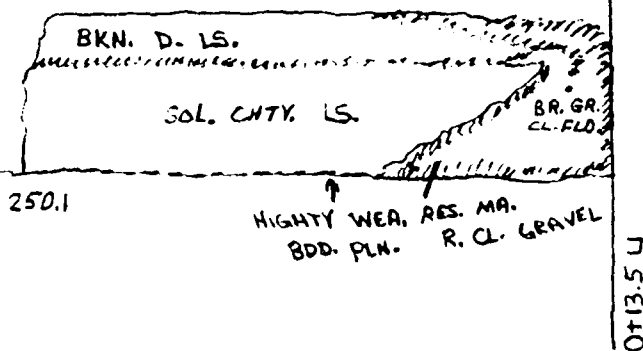
0+50S

0+40S

0+30S

0+20S

0+10S



D/S

PIER 3

2

CCSO

$$C_{50} + C_{50}$$

0403

$$O+3O \rightarrow U$$
$$O+2O \rightarrow$$

0105

887

SMC 381

CUT-OFF
TRENCH
EL. 249

$$\begin{array}{r} 0+15.50 \\ 75+48.545 \end{array} \quad 75+50 S$$
 $75+40S$ $75 + 30S$

75+20S

75+10 S

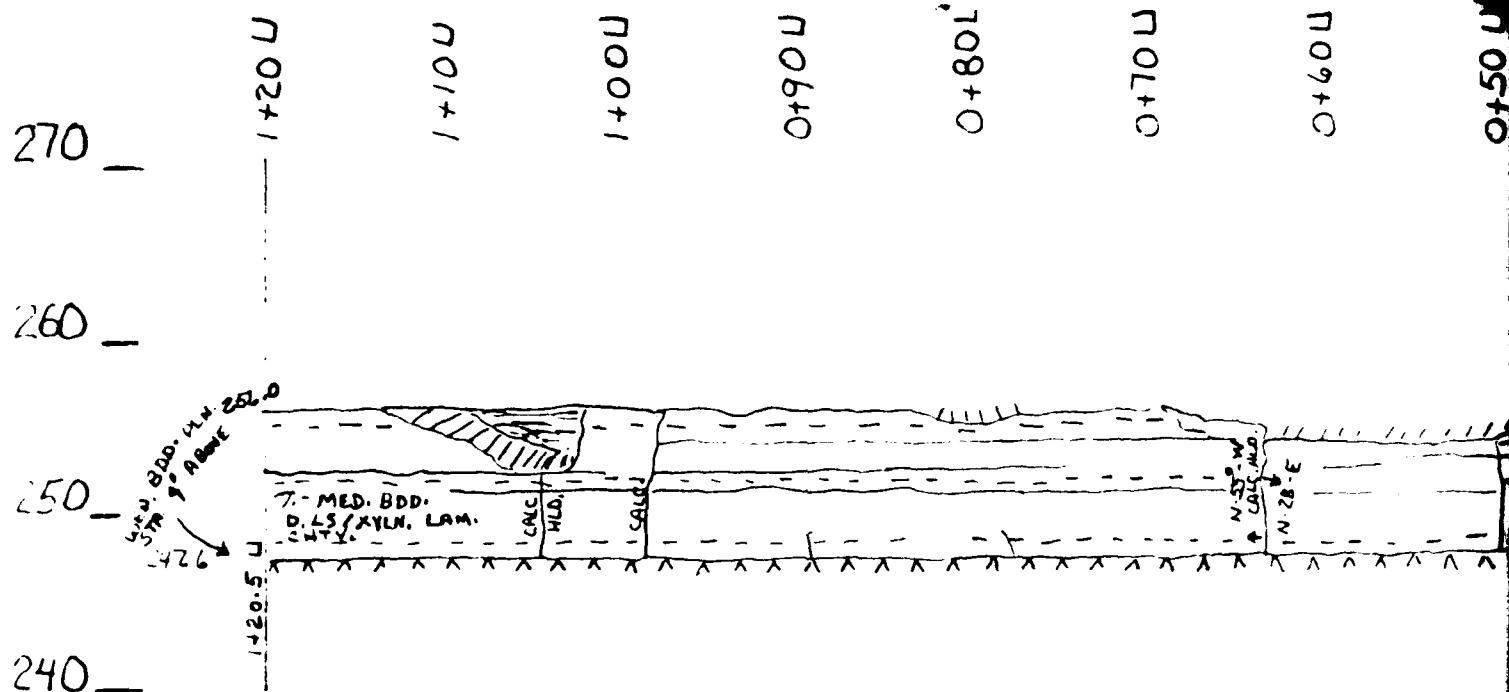
75+00 S

D/S

$$\begin{array}{r} 0+13.5U \\ 75+08.54S \end{array}$$

FOUNDATION FLOOR
19 OCT. 76

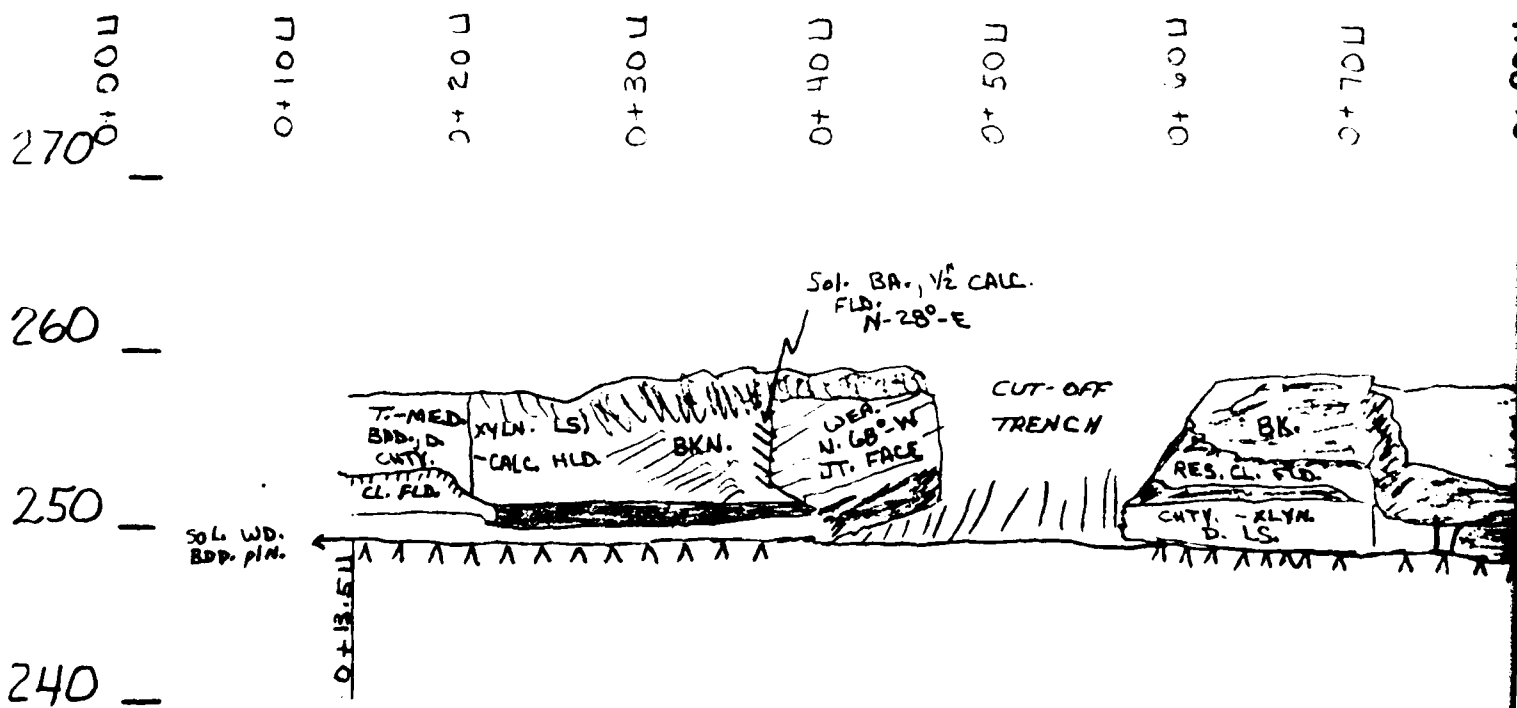
FP II-11



U/S

KY. SIDE

PIER 4



D/S

ILL. SIDE

PIER 4

0+70 U

0+60 U

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

270

260

BDD. PLN.

BDD. PLN.

250

247.7 - STA BDD. PLN.

13.5

240

D/S

PIER 4

19 OCT 76

0+60 U

0+70 U

0+80 U

0+90 U

1+00 U

1+10 U

1+20 U

270

260

257.0

250

247.5

20.5

240

IT-OFF
BENCH

BK.

RES. CL. FLS.

CHTY. - XLYN.
S. LS.

Sol.

BDD. MED. BDD.
XYLN. CHTY. LS.

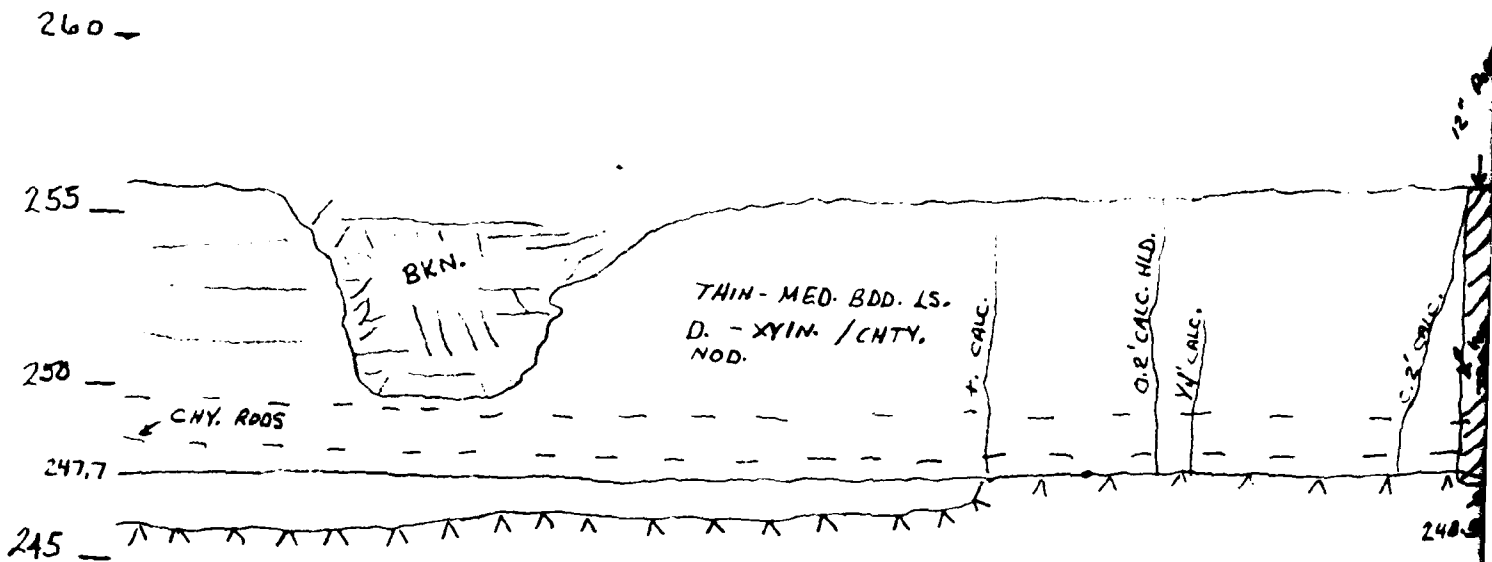
U/S

PIER 4

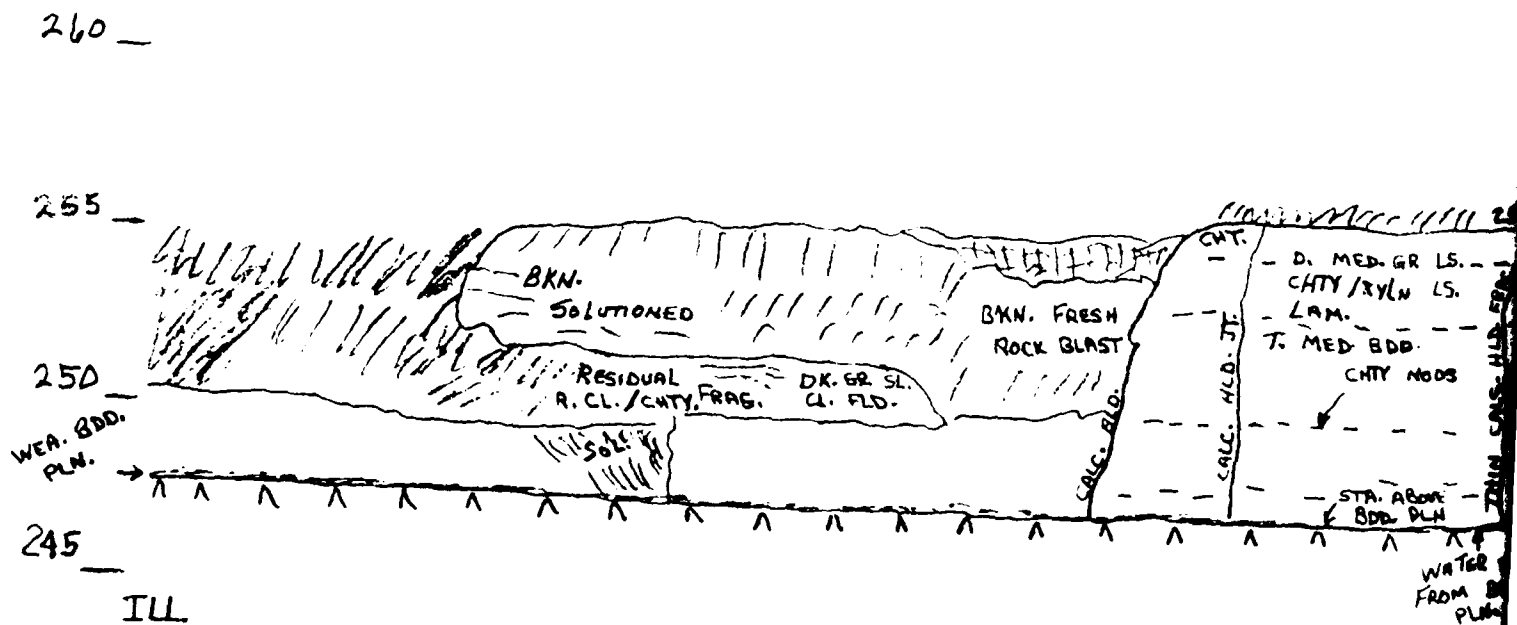
2

19 OCT 76

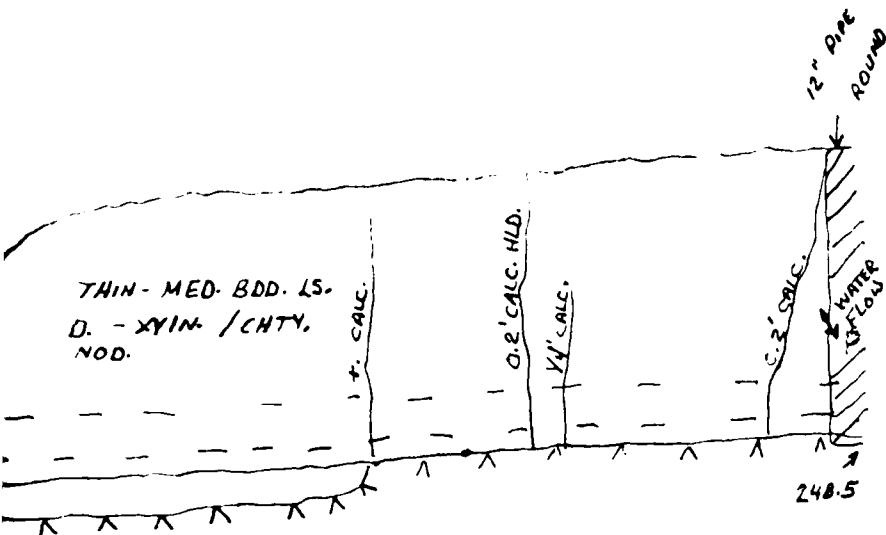
FPII - 12



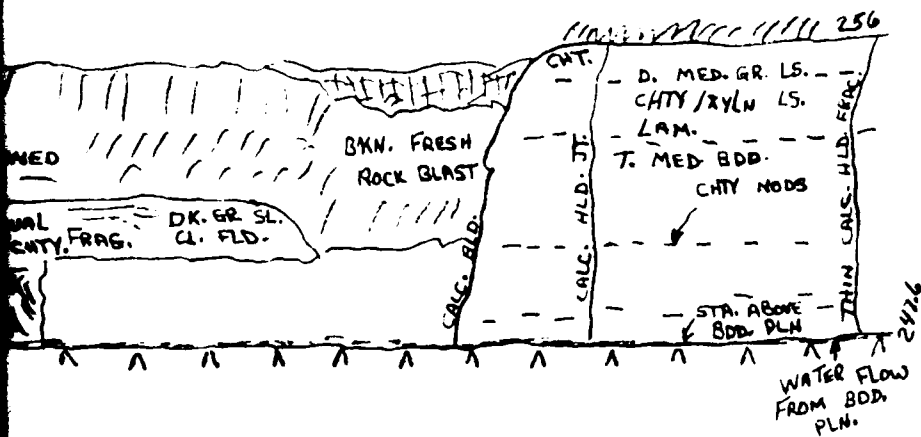
D/S END PIER 4
STA. 0+13.5 U



U/S FACE PIER 4
STA. 1+20.5 U



D/S END PIER 4
0+13.5 U



U/S FACE PIER 4
STA. 1+20.5 U

KY.

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

0+70 U

0+60 U

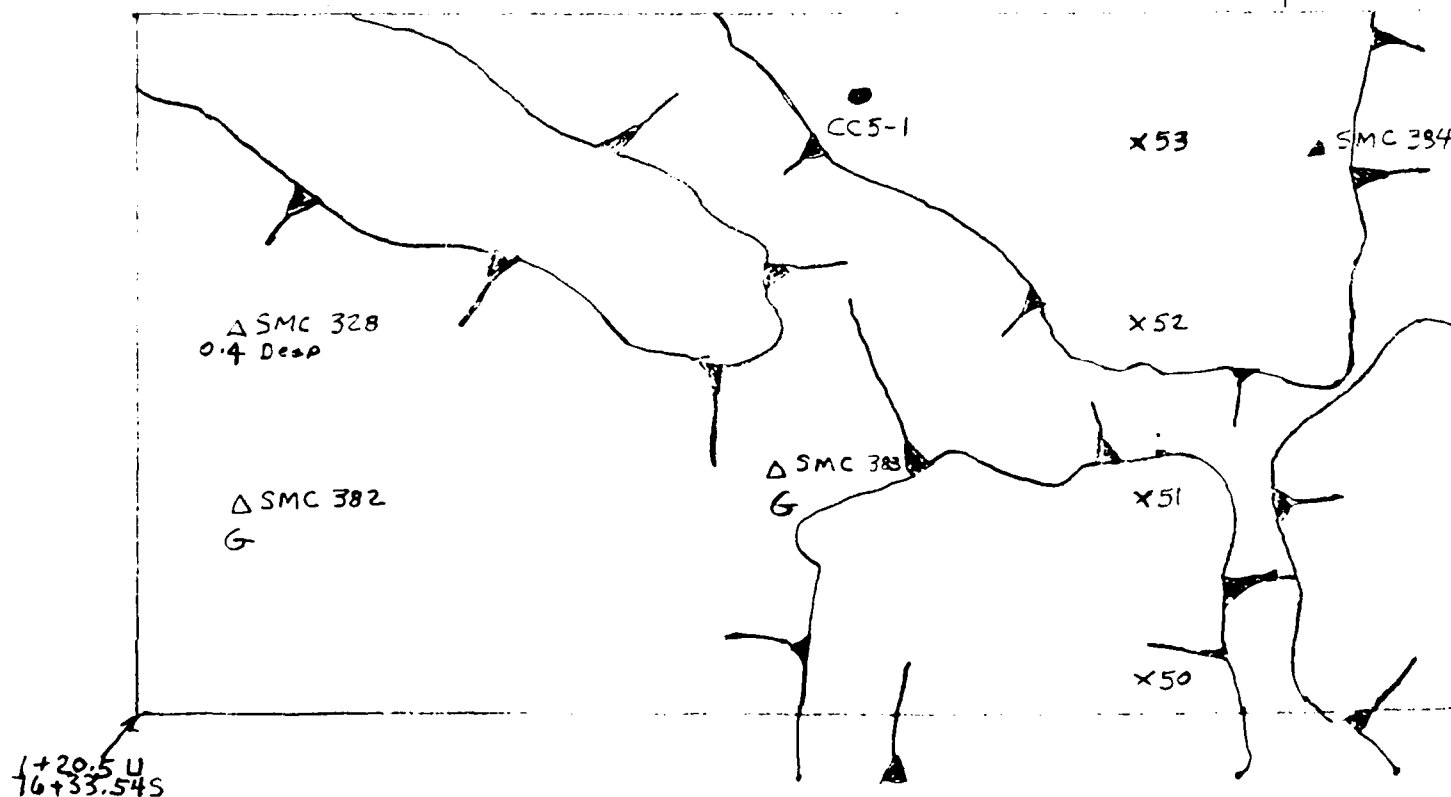
0+50 U

BOTTOM ROUGH - CALSITE DEPOSITS
SHOWING ON JOINT - SHELVY
APPEARANCE DS - ROUGH ROCK
MARKED APPEARANCE US.

1+20.5 U
76+73.54 S

CUT OFF TRENCH

STA 249



PIER 5

CUT OFF TRENCH

STA 249

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

▲ SMC 384

▲ SMC 327
G

CC5-2

G

0+3.5U
To 13+4S

0+13.5U
To 13+54S

13+30S

13+20S

13+10S

13+00S

12+40S

13+00S

D/S

FOUNDATION FLOOR

U/S END

PIER 5

0+13.50
76+33.545

0+13.5 W
16+73.545

EL. 270. —

EL. 270 —

EL. 260

FL 260 —

EL. 250

EL. 250 —

EL. 240

EL. 240 —

EL. 230

EL. 230 -

EL. 220

EL 220 -

PIER 5

D/S END

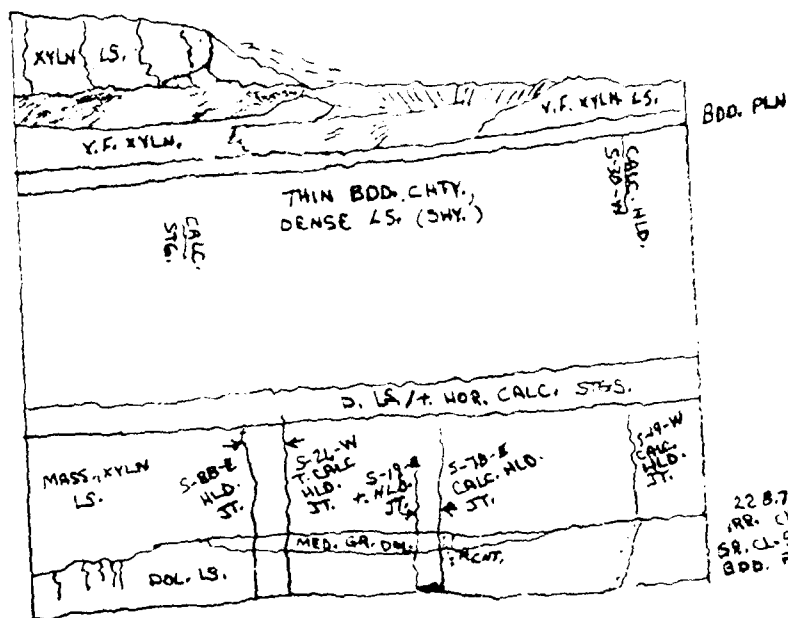
PIER 5

0+13.50
+76+73.54
+

0+13.50
+76+73.54
+

EL. 270 —

EL. 260 —



BDD. PLN.

D. T. - MED BDD
SHY. LS.

- CHTY STYL.

- STYL

- CHTY STYL.

EL. 250 —

EL. 240 —

EL. 230 —

EL. 220 —

280_ 0+10 U 0+20 U 0+30 U 0+40 U 0+50 U 0+60 U 0+70 U 0+80 U

270 _

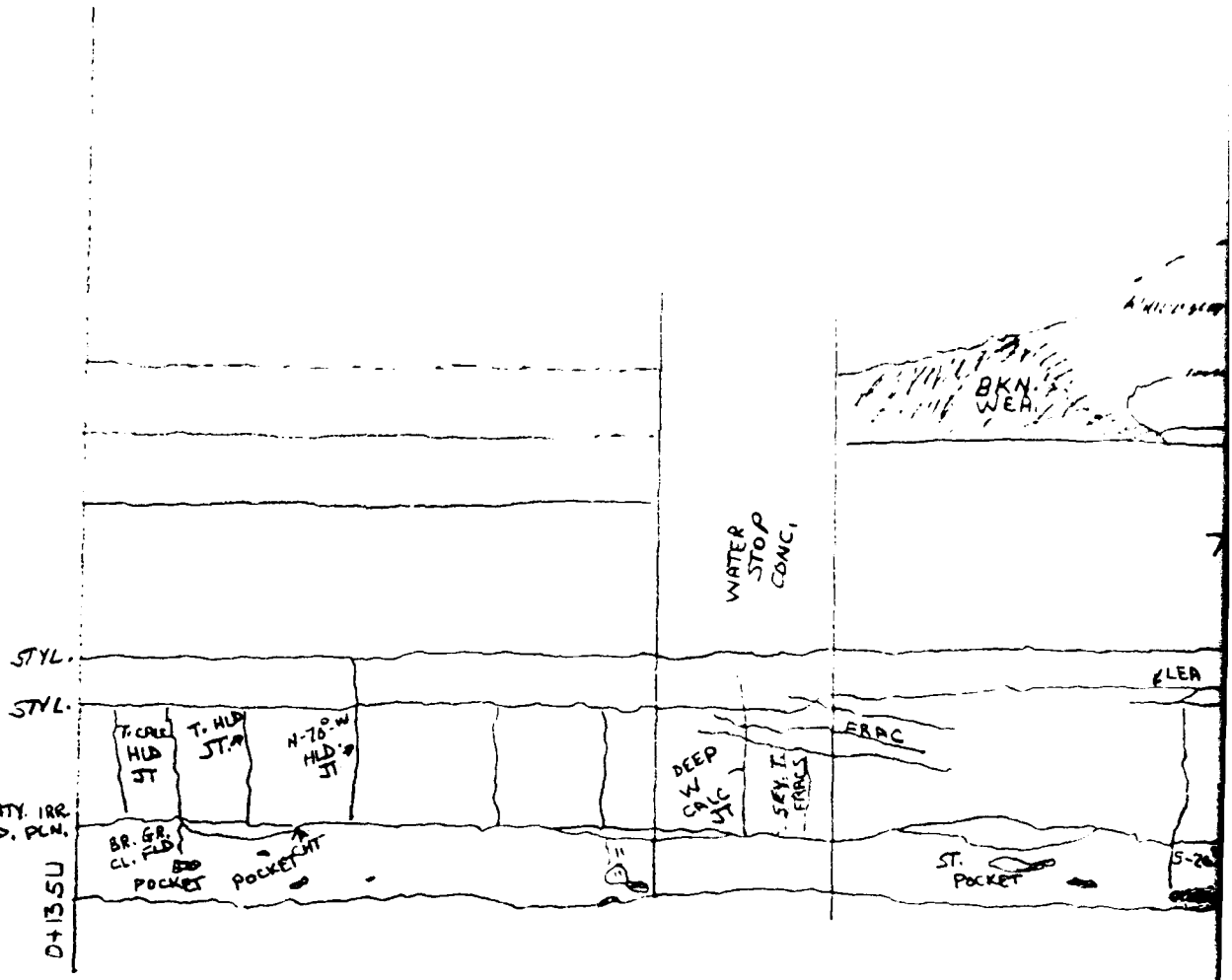
260 _

250 _

240 _

230 _

220 _



D/S

ILL. SIDE

PIER 5

0600

0700

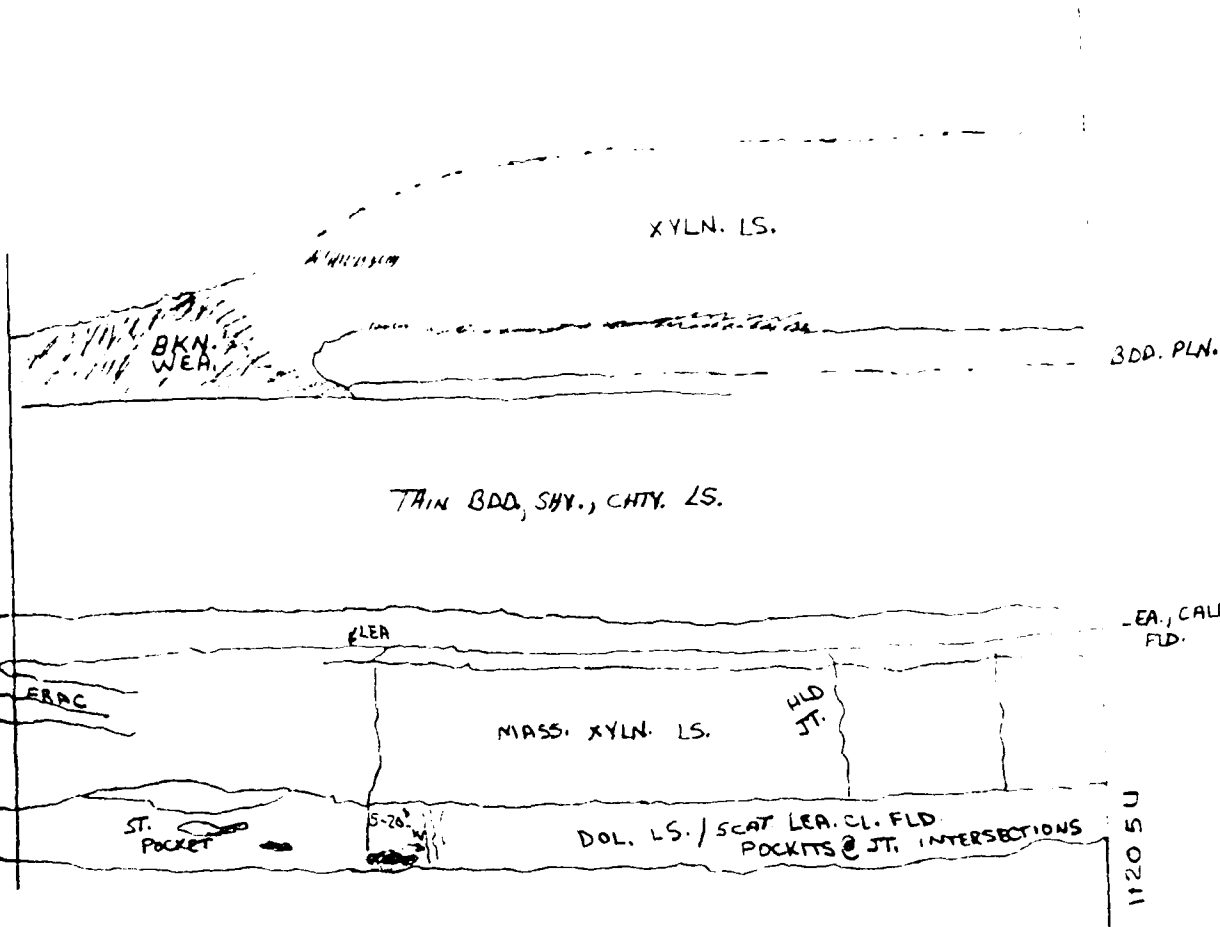
0800

0900

1000

1100

1200

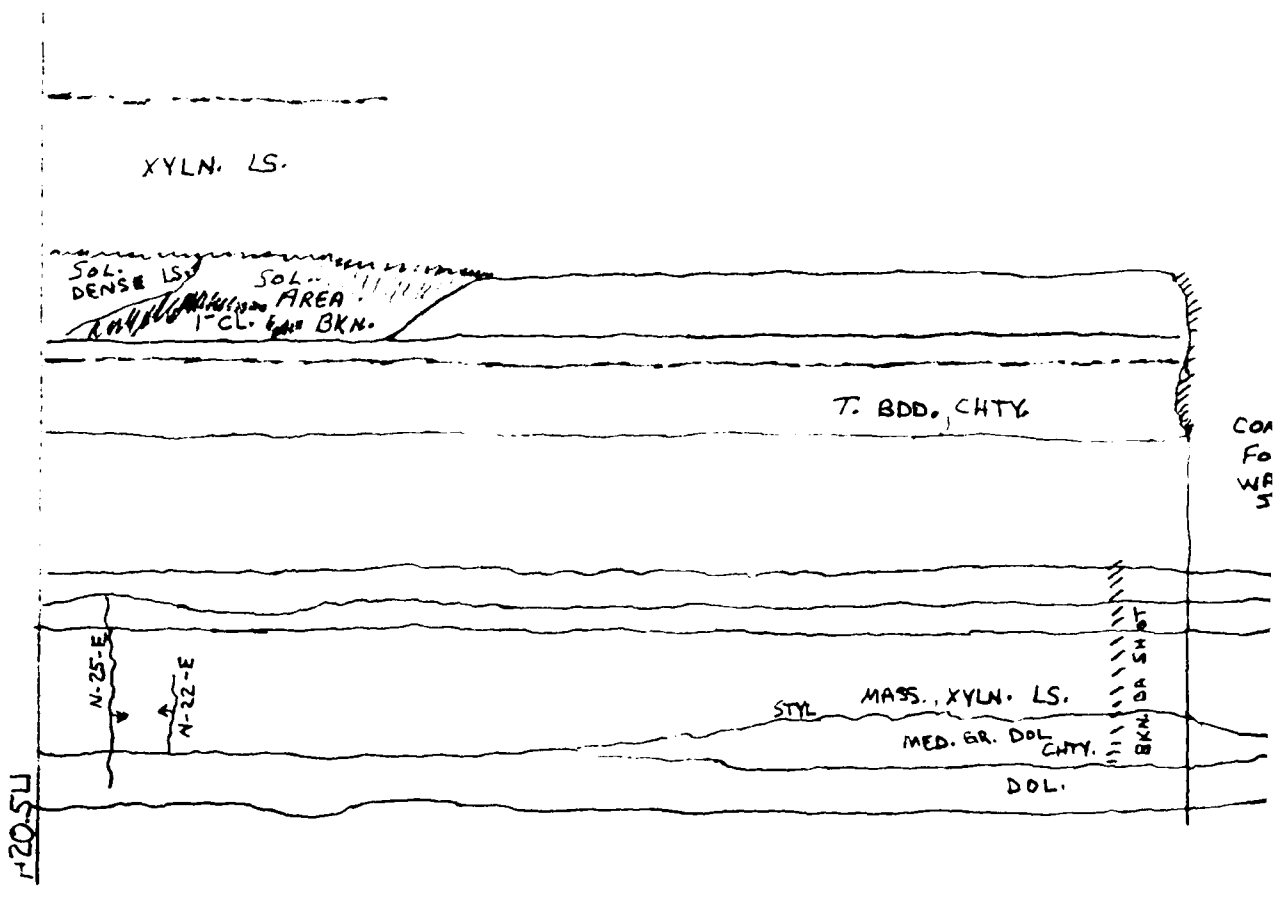


V/S

PIER 5

280 _ 1+200 1+100 1+000 0+900 0+800 0+700 0+600

270 _
260 _
250 _
240 _
230 _
220 _



u/s

KY. SIDE

PIER 5

0+80U

0+70U

0+60U

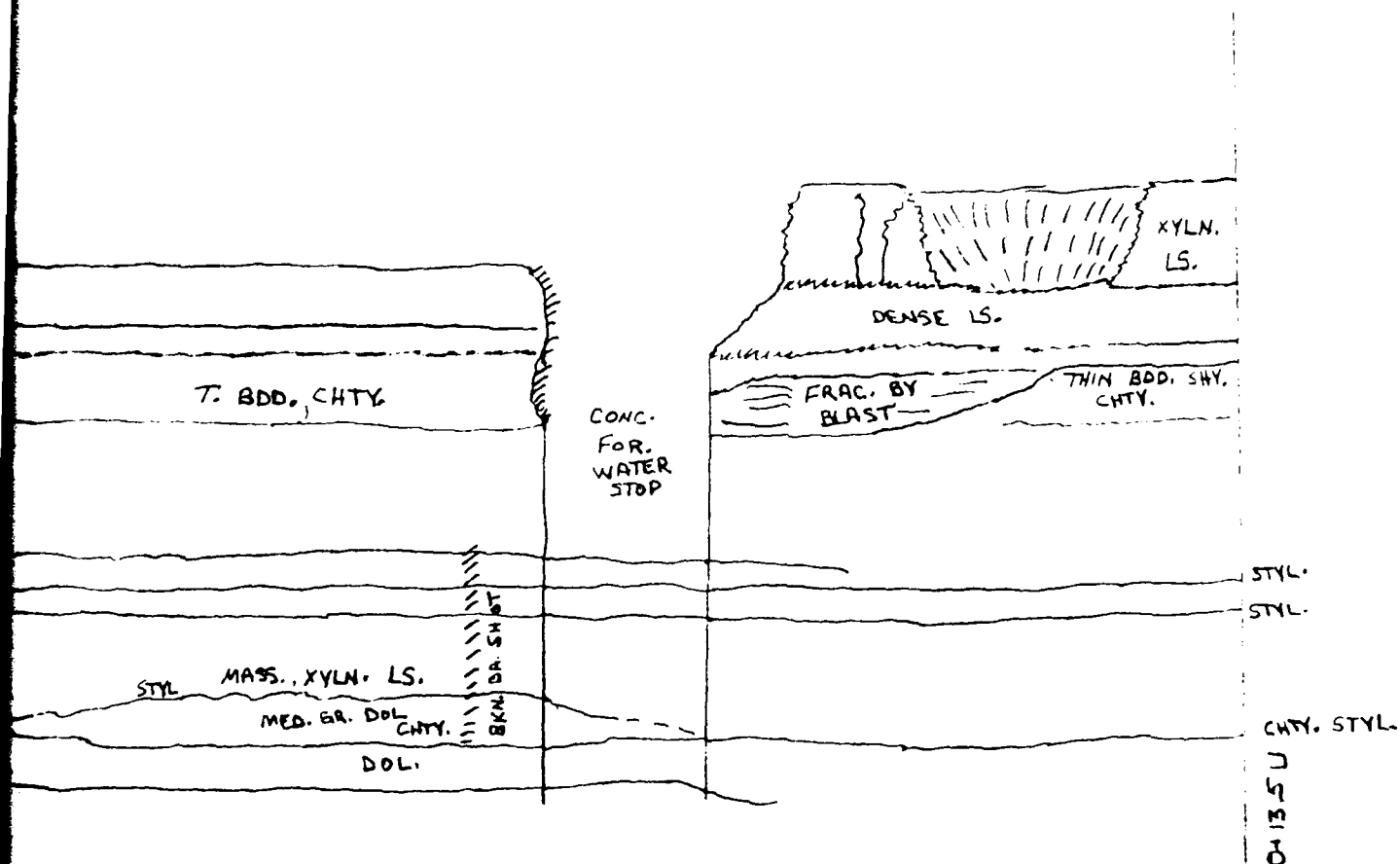
0+50U

0+40U

0+30U

0+20U

0+10U



PIER 5

D/S

$n+2+1$

U
O
H

100+1

0.900

50

$$C_{O_2+O}$$

—

10

O+40U

77 + 98 545

$\Delta SMC 244$

2017-04-26

41.2.13

Δ SMC 389 # 411. JT.

PC-10
(250.2)

(250.2)

 $250 \pm$

F. Xy/N.
LS. Floor.

ΔSMC 387

Shot Holes To
250.3.

△SMC 388

1420.5 U
77458.545

77458.545

TT p/q S-70-E

५५

PIER 6

0+50 U

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

CUT-OFF
Trench

EL. 249

Δ SMC 389 # hld. JT.

1" calc. hld.

PC-III

1" calc. hld. (250.4)
5-38-W

Δ SMC 326

Ver. JT.

1" calc. hld.

1" calc. hld. Ver. JT.
N-32-E

QUICK ROCK
SOL. ROCK

5-40-W
5-40-W

5-72-W
N-72-W

cl. fld. channel

0+13.5 U
77+58.54\$

D/S

78+00 S

77+90 S

77+80 S

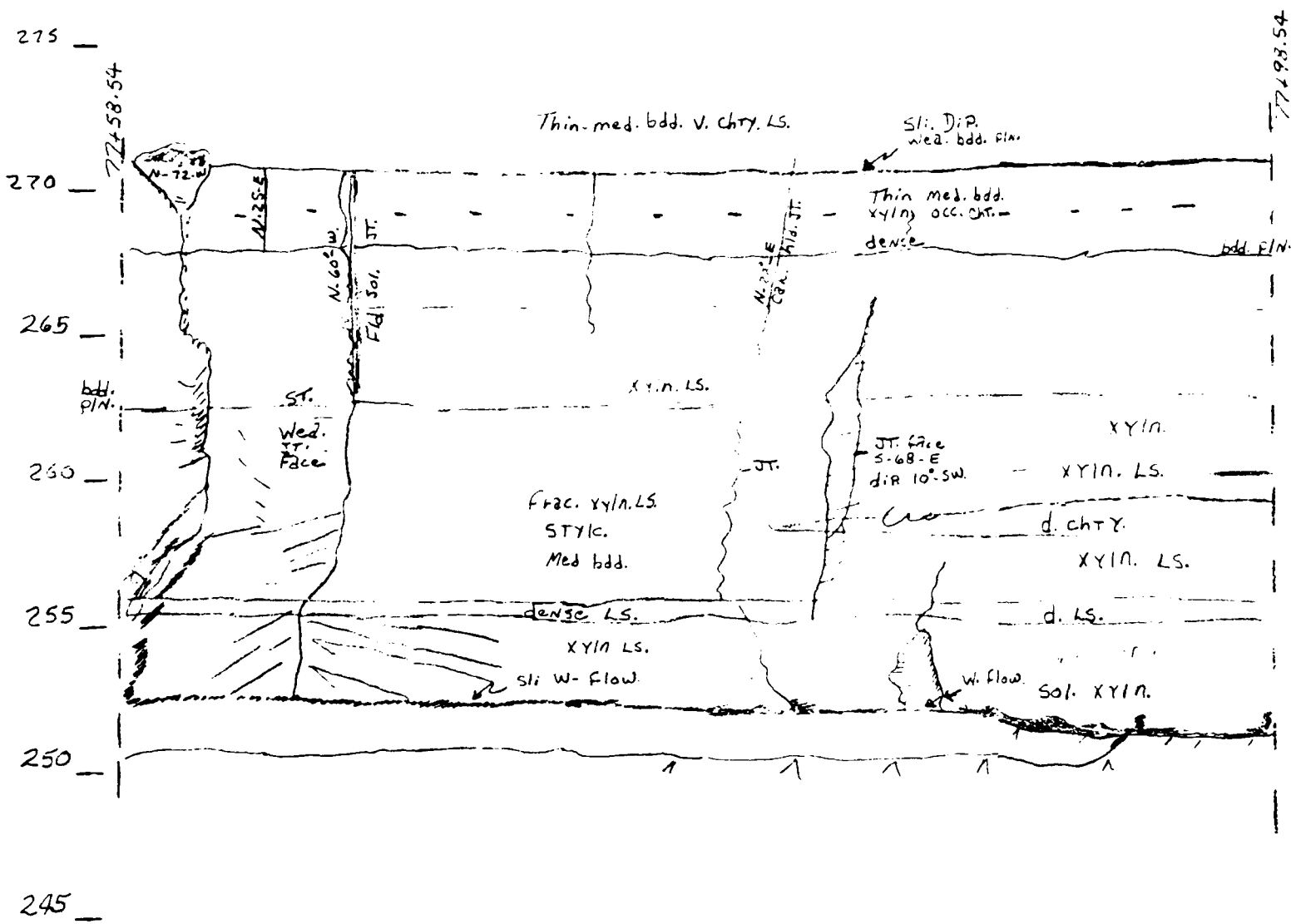
77+70 S

77+60 S

77+50 S

FOUNDATION FLOOR

10



4/5 FACE Pier 6

77+93.54

77+58.54

265

260

255

R. Cl. Fla.

250

245

xy/N. LS.

shy LS.

xy/N. LS.

chty

d. LS.

W. Flood
Sol.

R. Cl.

xy/N.

Sol.

chty

R. Cl.

Lead shy LS.

Lead xy/N LS.

Lead

chty LS.

bad

R. Cl.

Sl.

Sol.

Channel

shy

chty

d. chty LS.

D/S FACE PIER 6

1+200

1+100

1+000

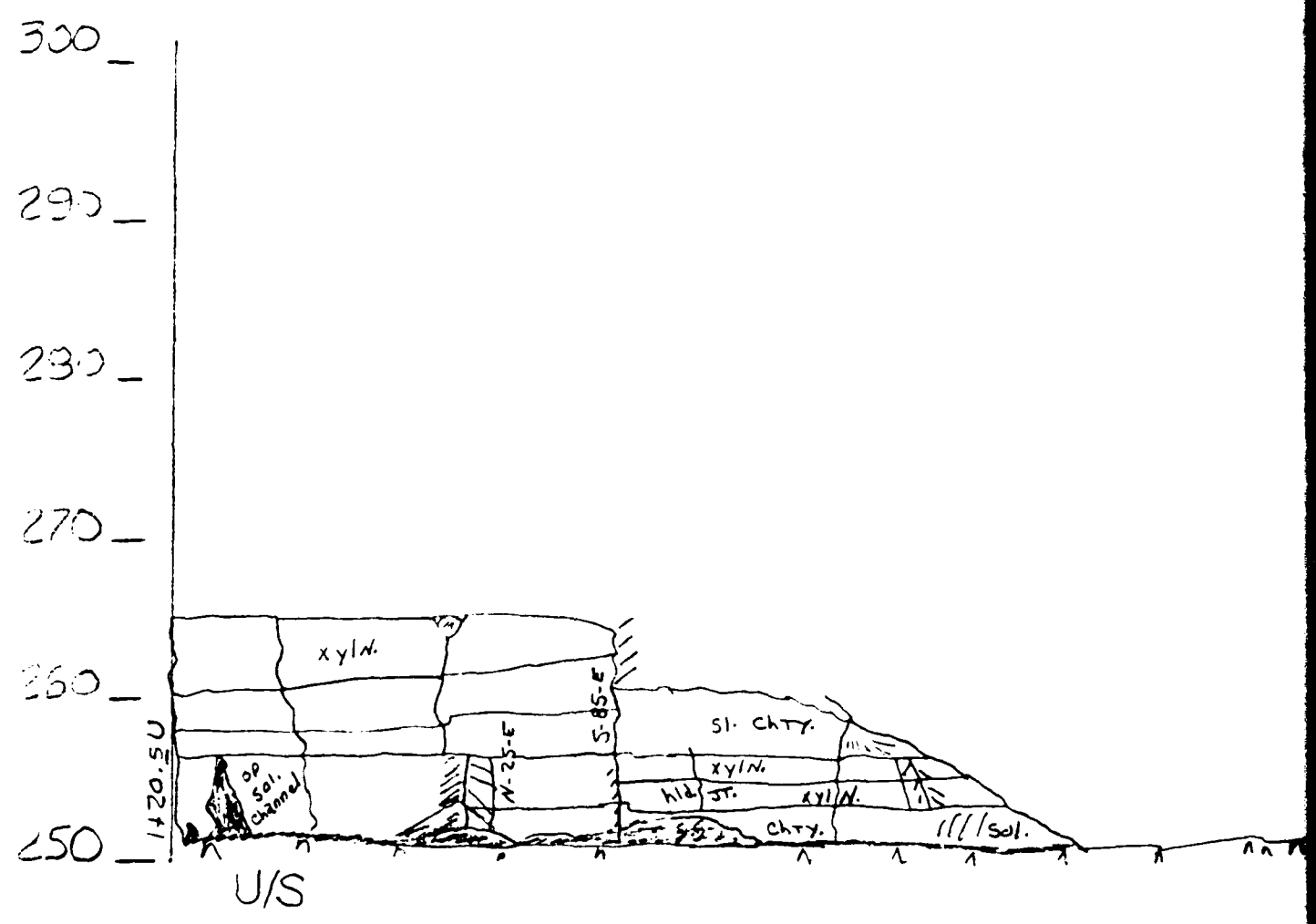
0+900

0+800

0+700

0+600

0+500



KY SIDE

PIER 6

0+800

0+700

0+600

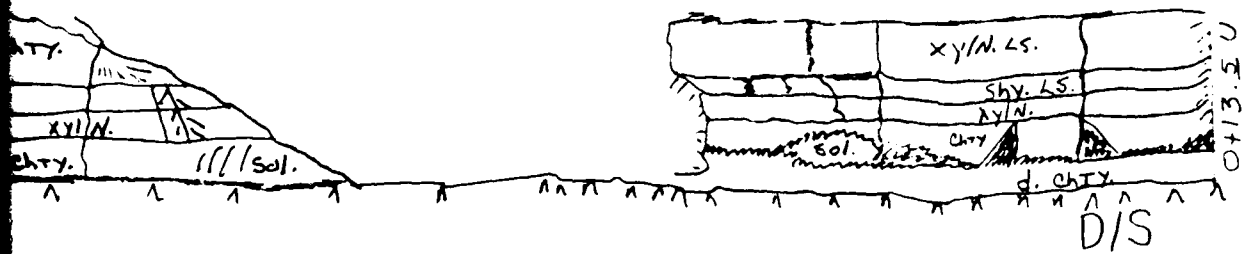
0+500

0+400

0+300

0+200

0+100



PIER 6

0+100

0+200

0+300

0+400

0+500

0+600

0+700

0+800

300 —

290 —

280 —

270 —

260 —

250 —

R. Cl. Fld.
bdd. PLY

0+13.50

D/S

11' 78" W

xyln.

shy.

xyln.

Lea chty.

d. chty.

8KN

6KN
50%

11' 78" W

50%

ILL. SIDE

PIER 6

0+50 U

0+60 U

0+70 U

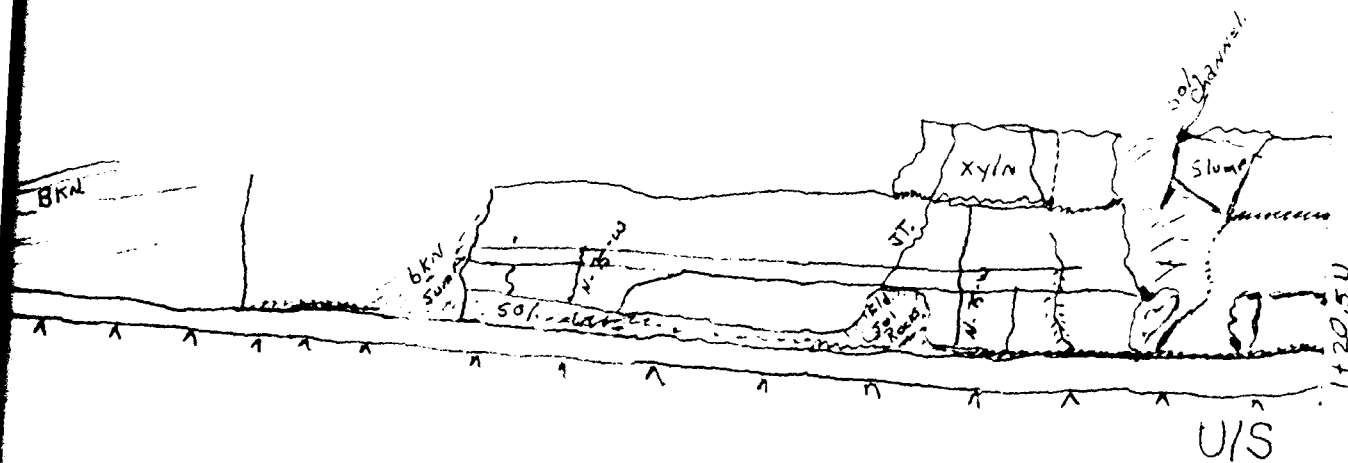
0+80 U

0+90 U

1+00 U

1+10 U

1+20 U



PIER 6

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

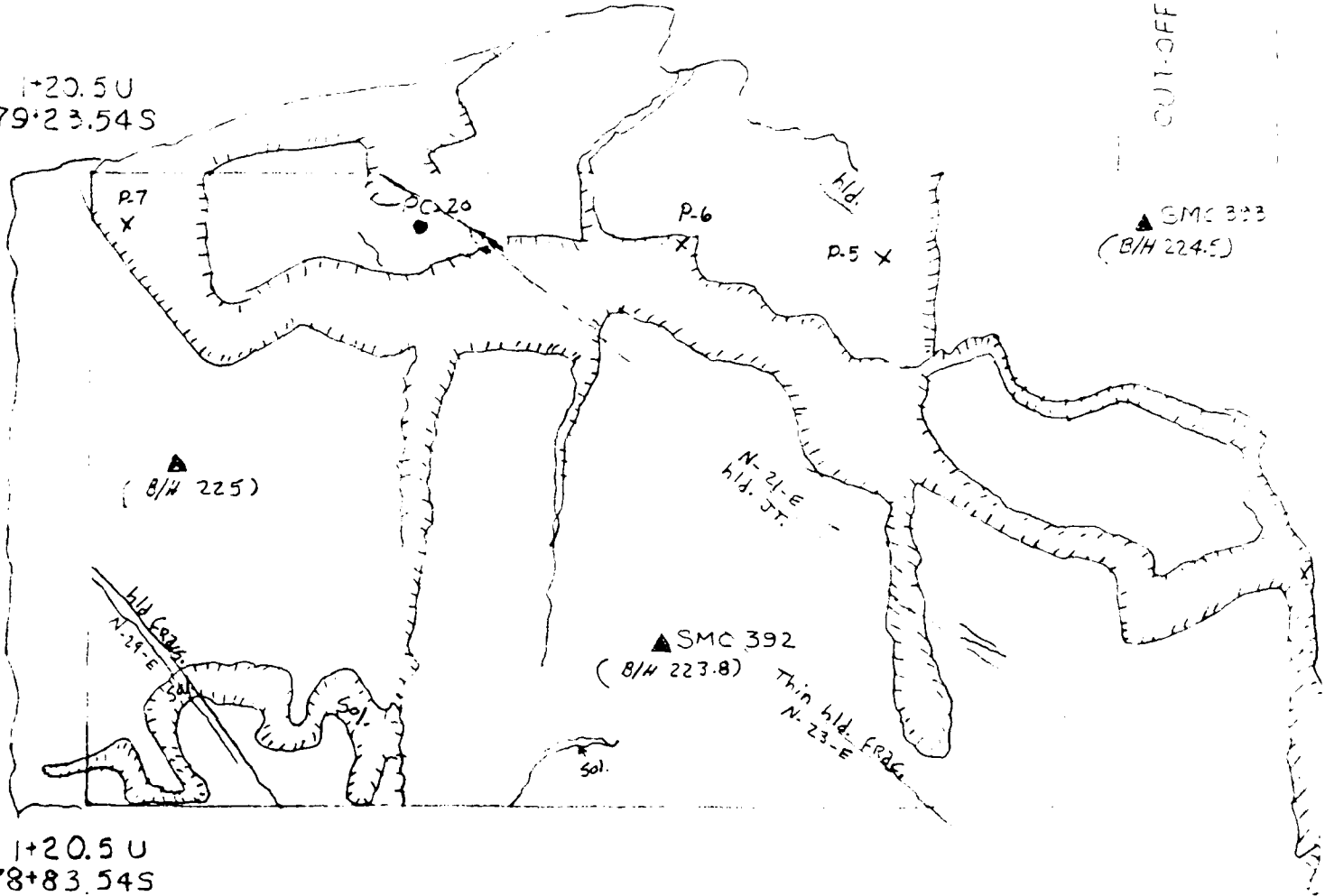
0+70 U

0+60 U

0+50 U

CUT-OFF TRENCH

1+20.5 U
79+23.54S



1+20.5 U
78+83.54S

U/S

PIER 7

AD-A125 057

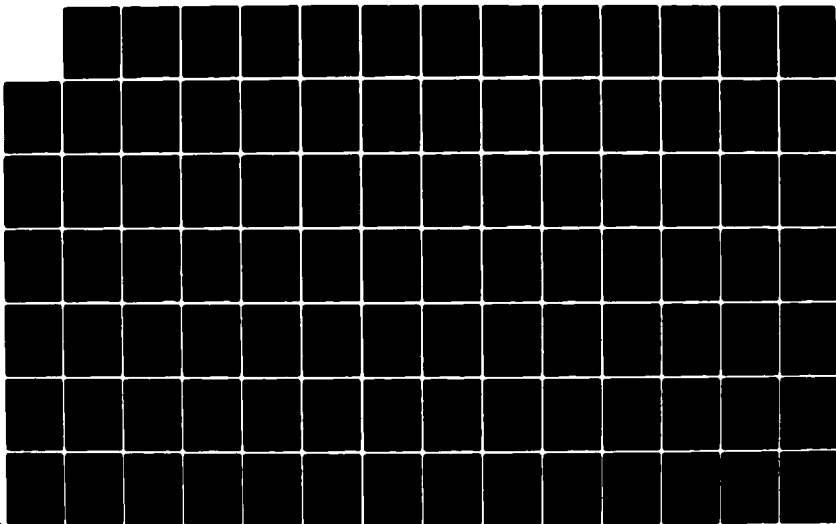
SMITHLAND DAM OHIO RIVER FOUNDATION REPORT VOLUME II
PHOTOGRAPHS AND FOUNDATION MAPS(U) JONES-TEER SMITHLAND
KY R SCHIPP ET AL. FEB 83 DACW62-75-C-0015

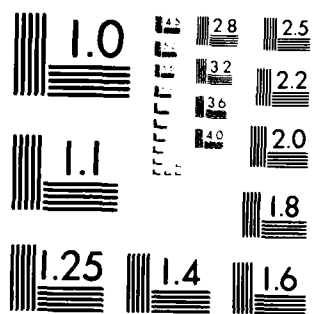
2/3

UNCLASSIFIED

F/G 13/13

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

0+60 U

CUT-OFF TRENCH

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

79+30 S

0+13.5 U

79+23.54 S

79+20 S

79+10 S

79+00 S

78+90 S

0+13.5 U

78+83.54 S

78+80 S

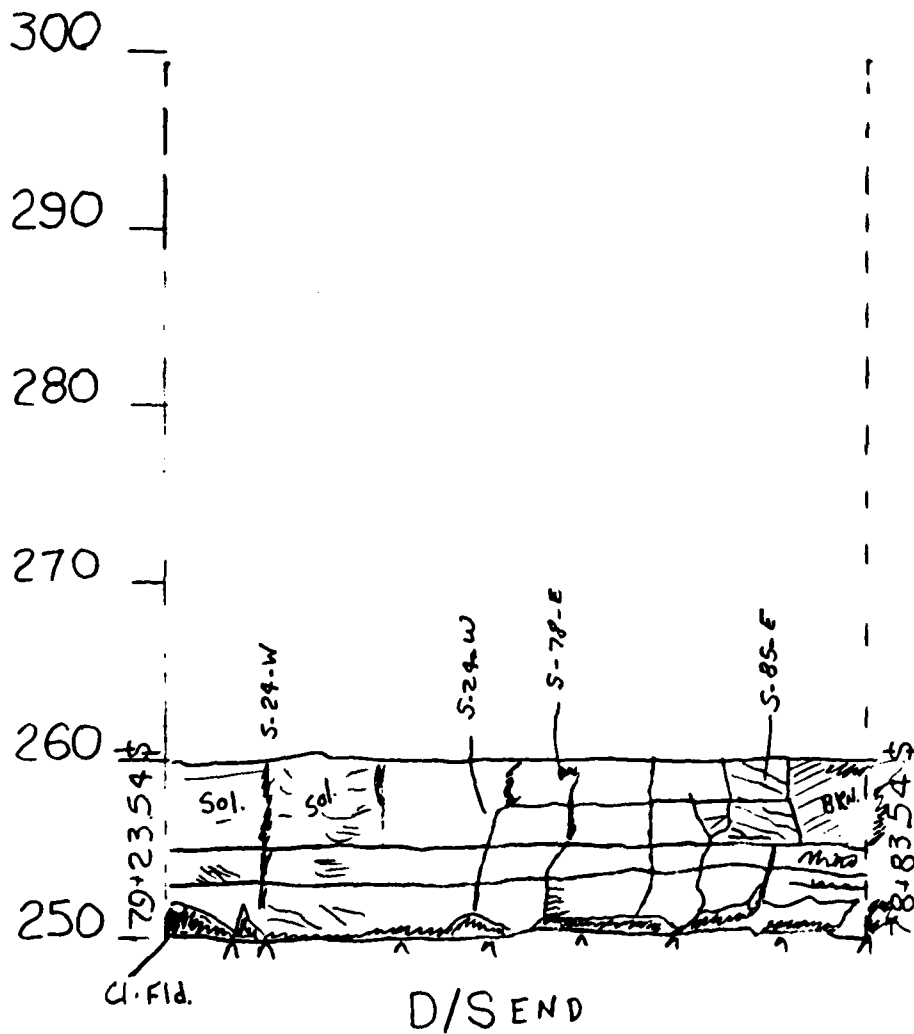
D/S

FOUNDATION FLOOR

0

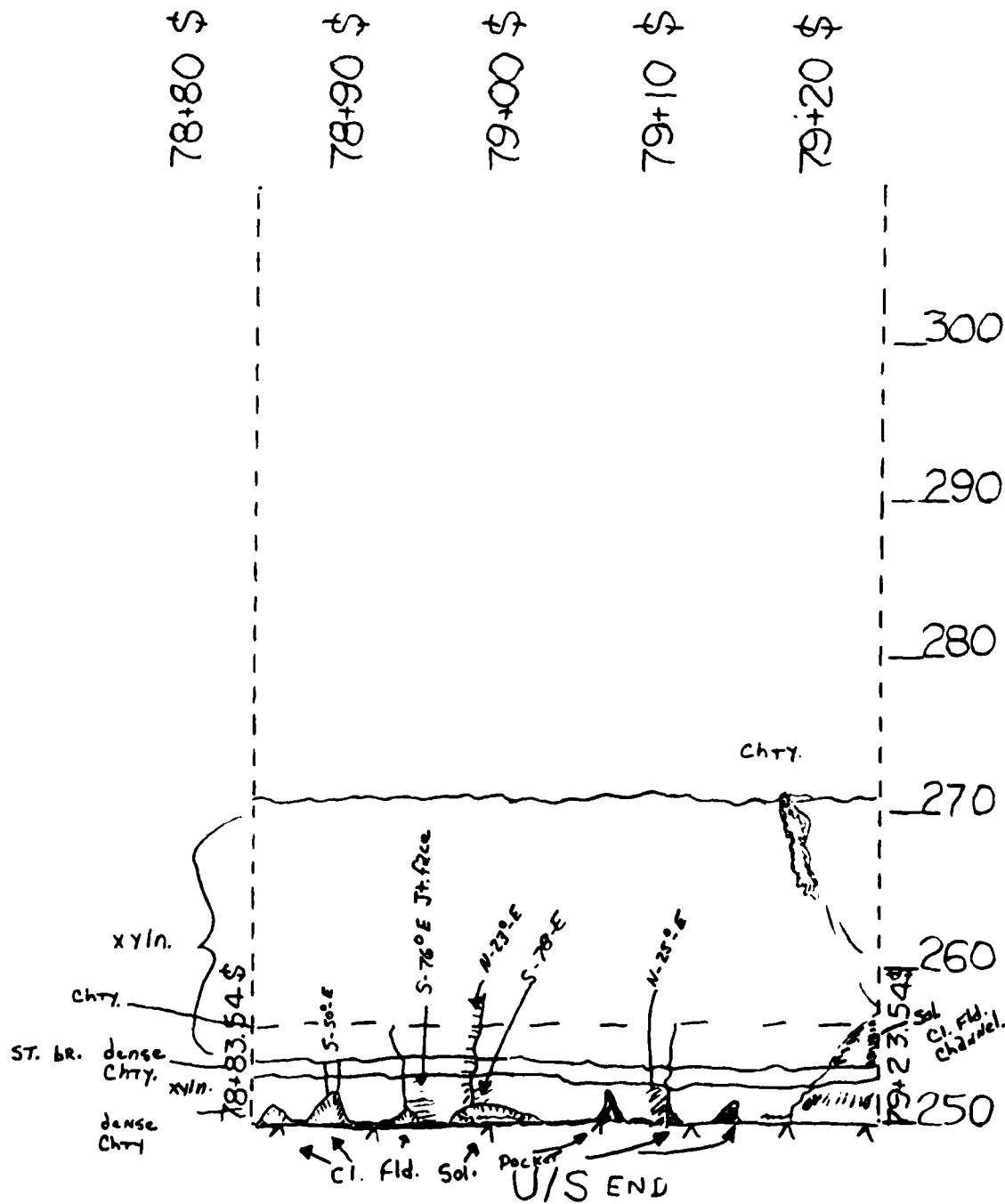
BY DATE SUBJECT SHEET NO OF
 CHKD. BY DATE JOB NO

79+20 \$ 79+10 \$ 79+00 \$ 78+90 \$ 78+80 \$



PIER 7

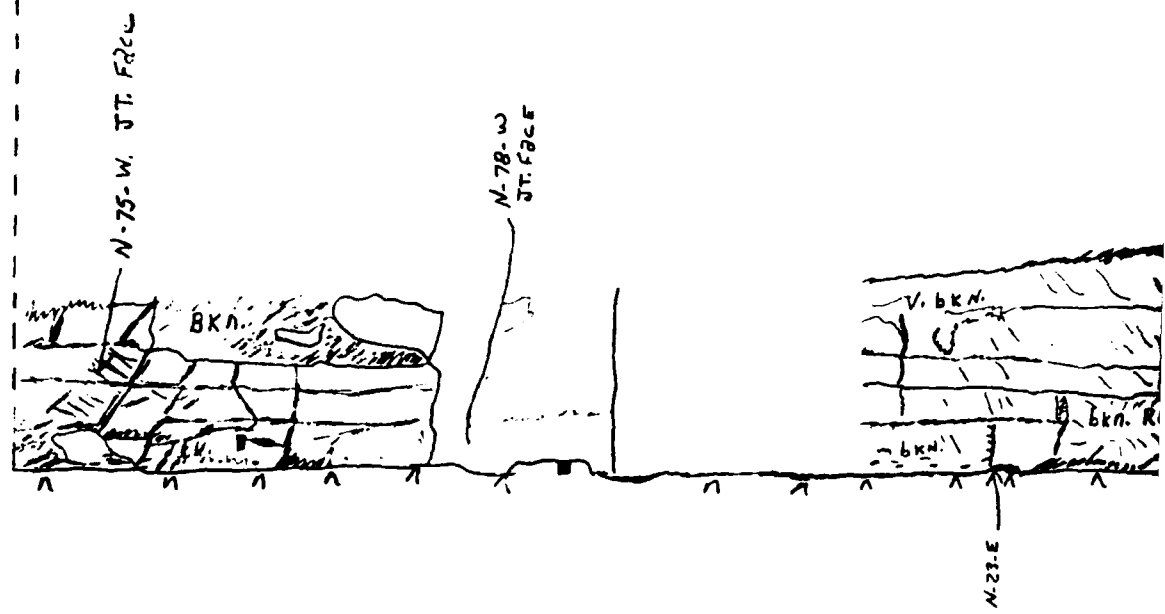
BY DATE SUBJECT SHEET NO. OF
 CHKD. BY DATE JOB NO.



PIER 7

300 0+10 U
290 0+20 U
280 0+30
270 0+40 U
260 0+50 U
250 0+60 U
240 0+70 U

290 —
280 —
270 —
260 —
250 —
240 —



D/S

ILL SIDE

PIER 7

1

0+50 U

0+60 U

0+70 U

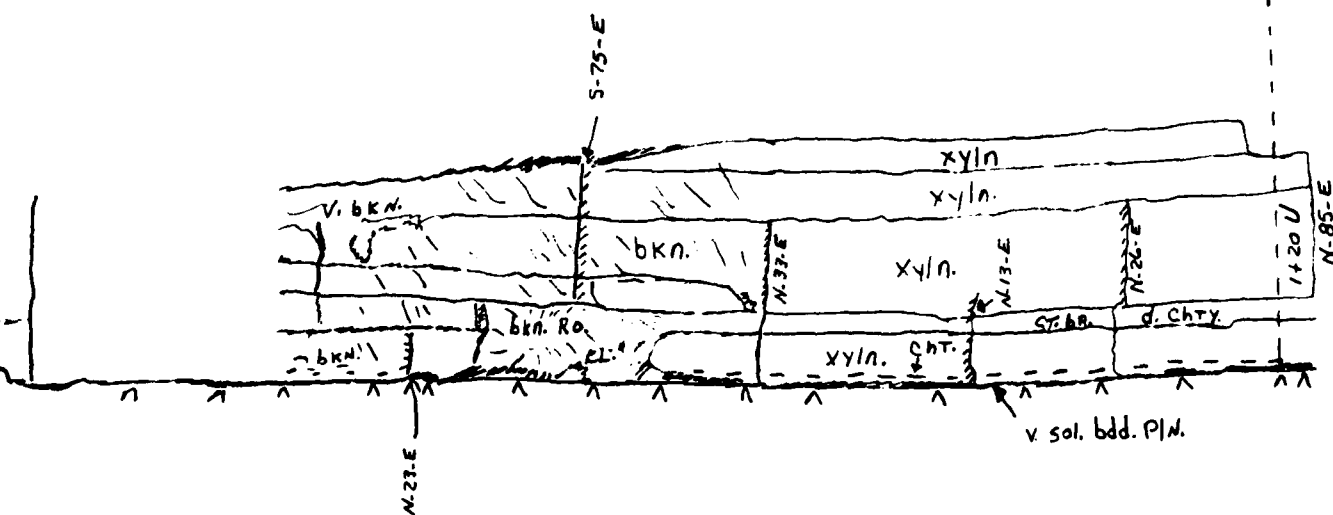
0+80 U

0+90 U

1+00 U

1+10 U

1+20 U



PIER 7

U/S

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

0+70 U

0+60 U

300 —

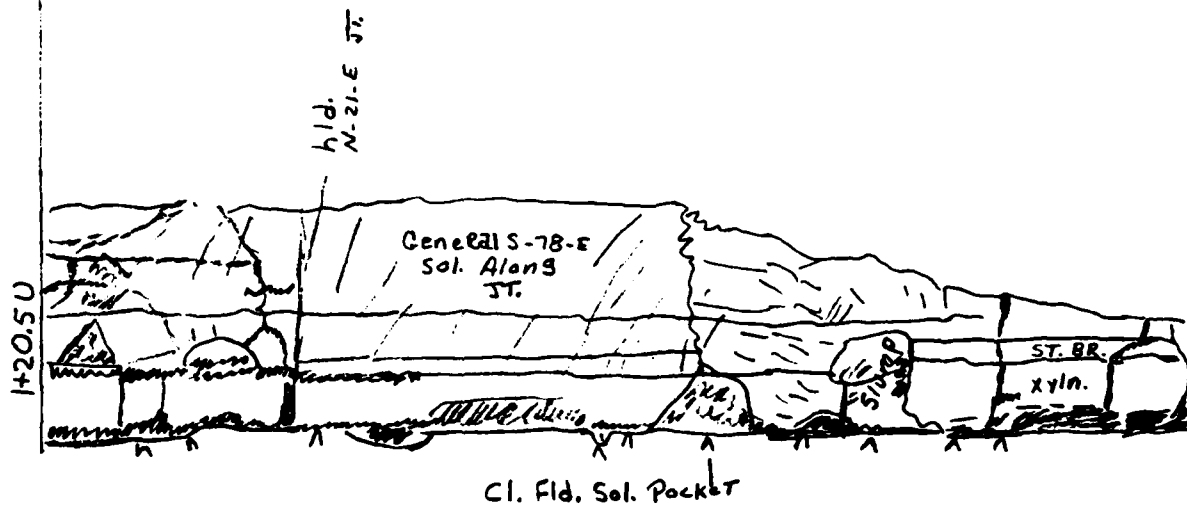
290 —

280 —

270 —

260 —

250 —



U/S

KY. SIDE

PIER 7

0+80 U

0+70 U

0+60 U

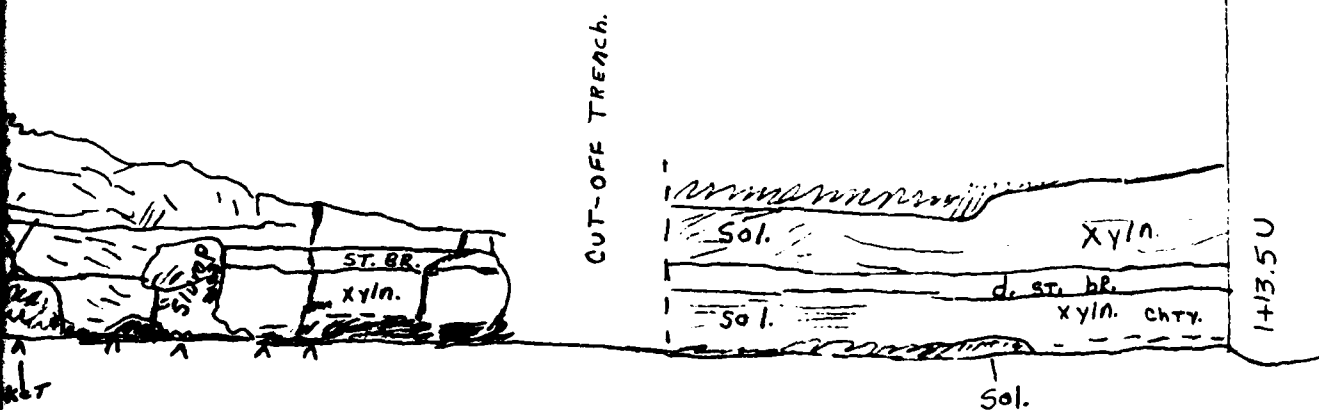
0+50 U

0+40 U

0+30 U

0+20 U

0+10 U



PIER 7

D/S

2

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

0+70 U

0+60

0+50 U

0+40 U

1+20.5U
80+48.54 S

▲ SMC 396

PC-18

397 SMC 397.A

BDD. PLN.

COR.
HOLE

COR.
HOLE

PC-17

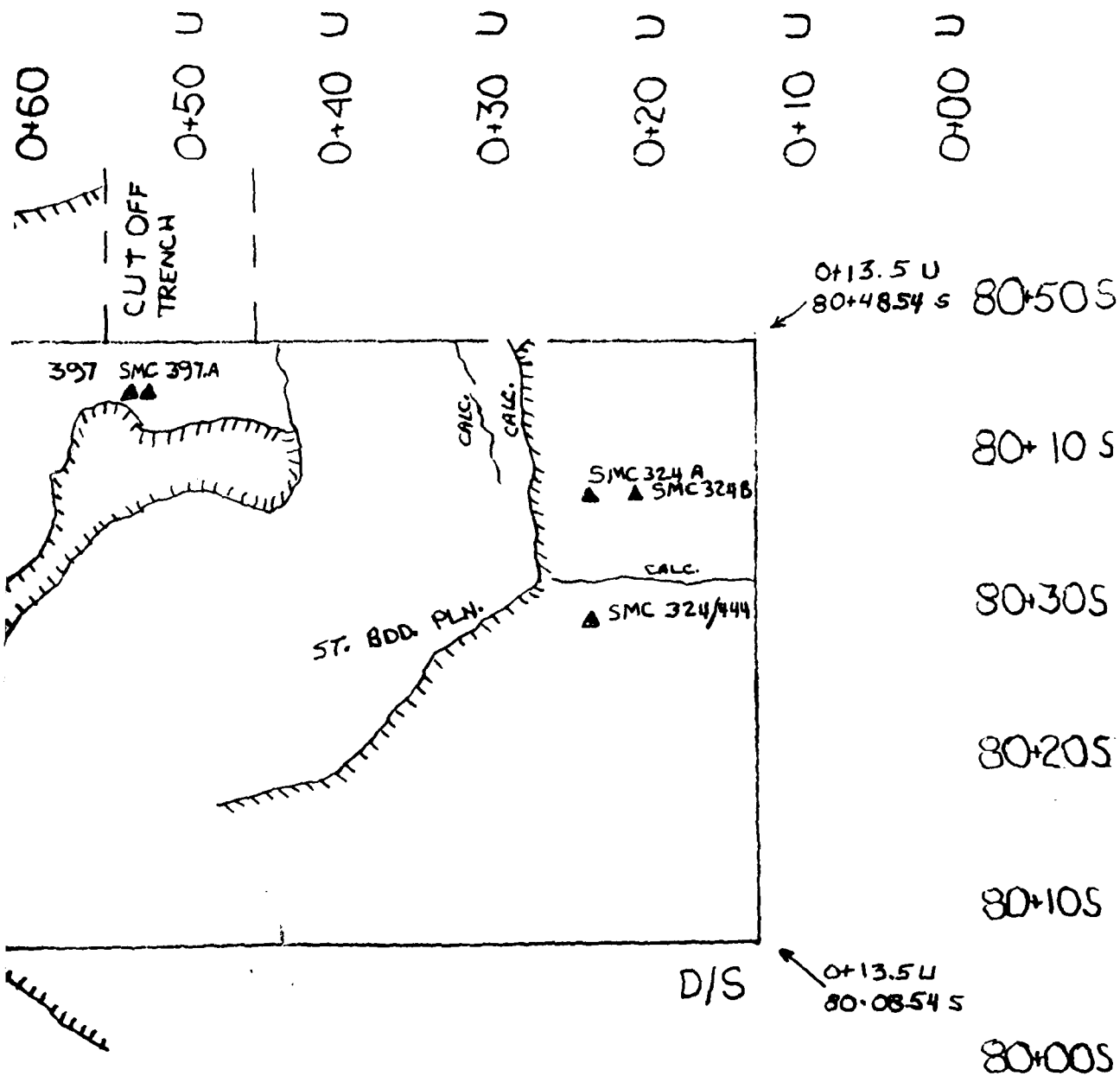
▲ SMC 395

1+20.5U
80+08.54 S

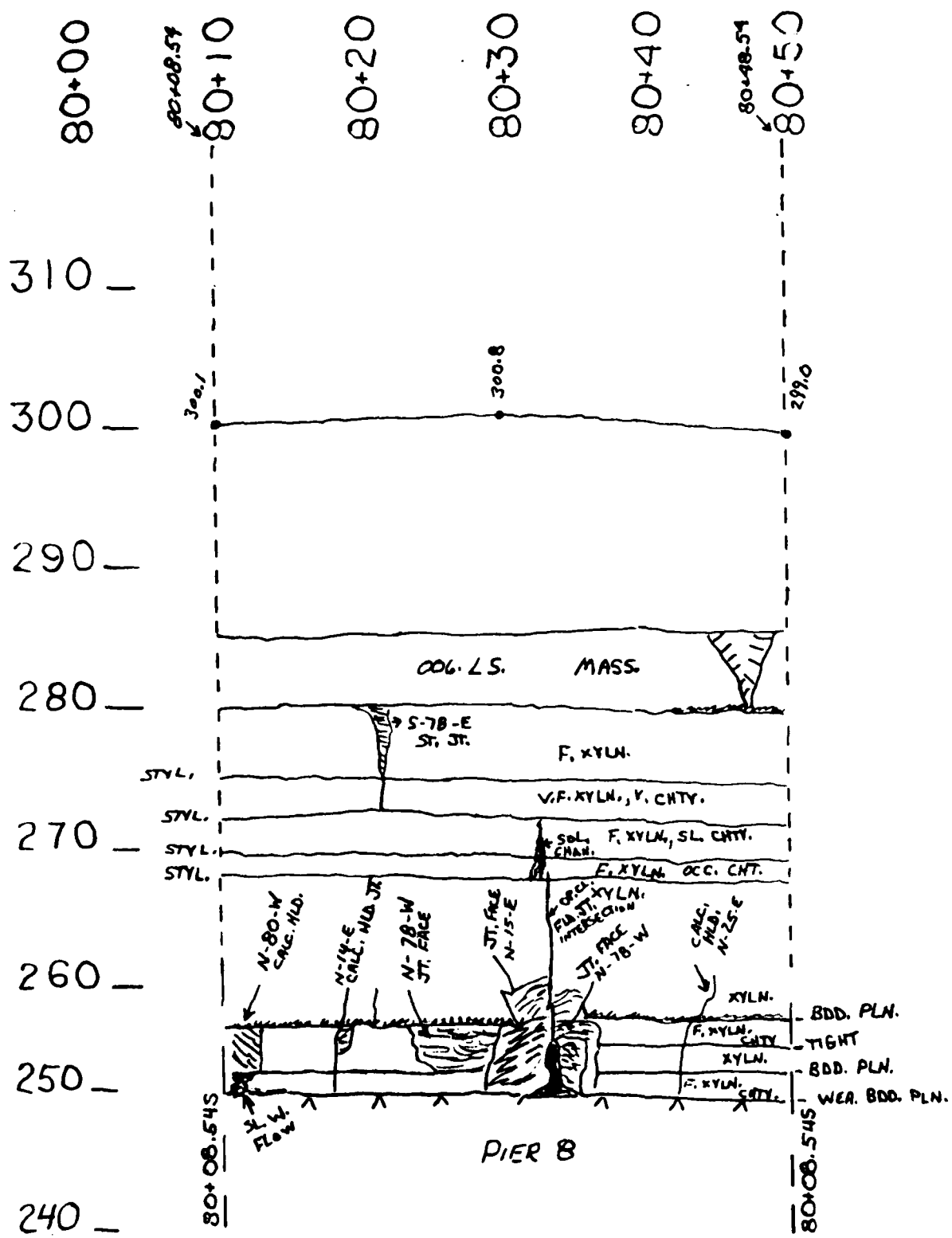
U/S

CUT OFF
TRENCH

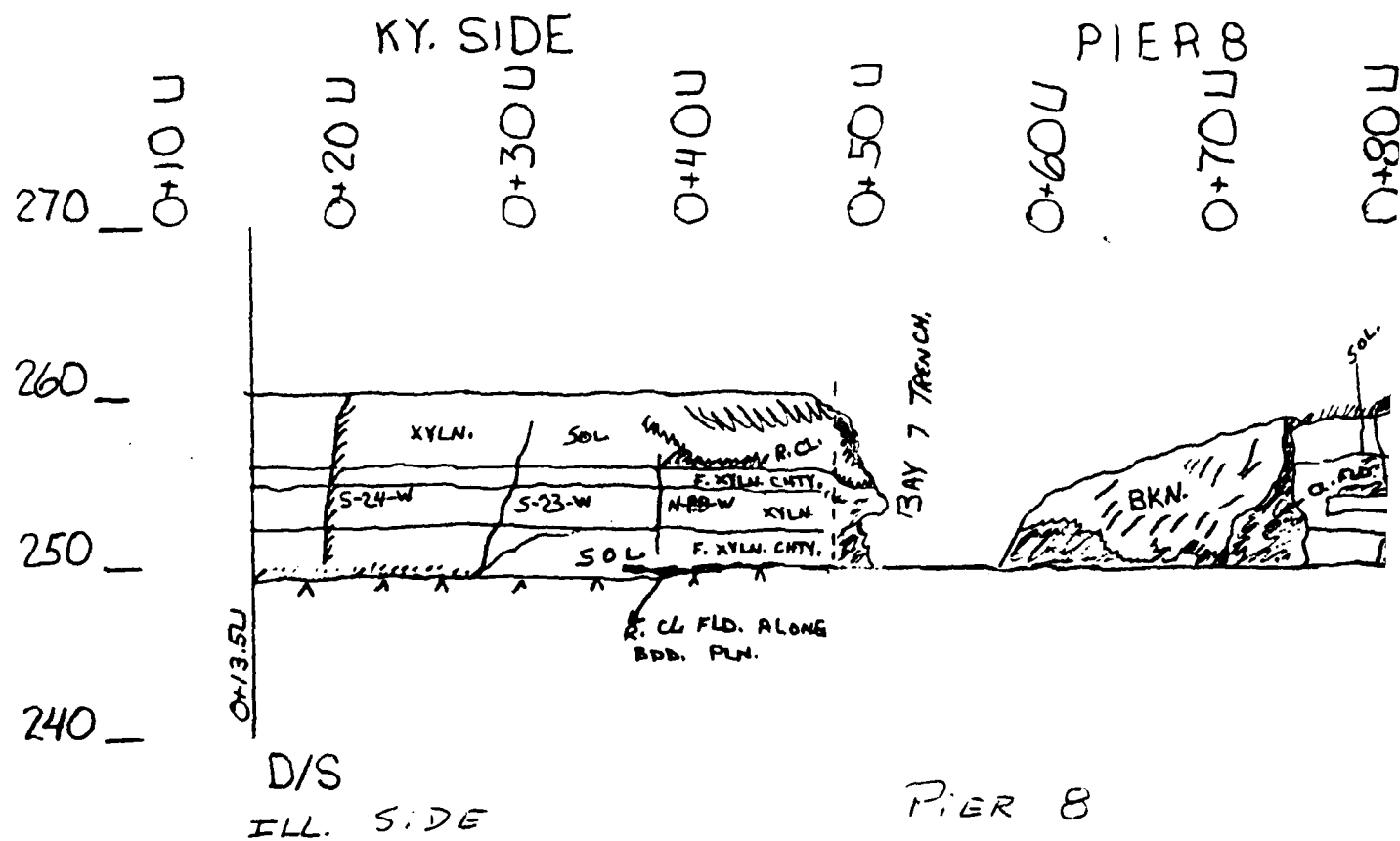
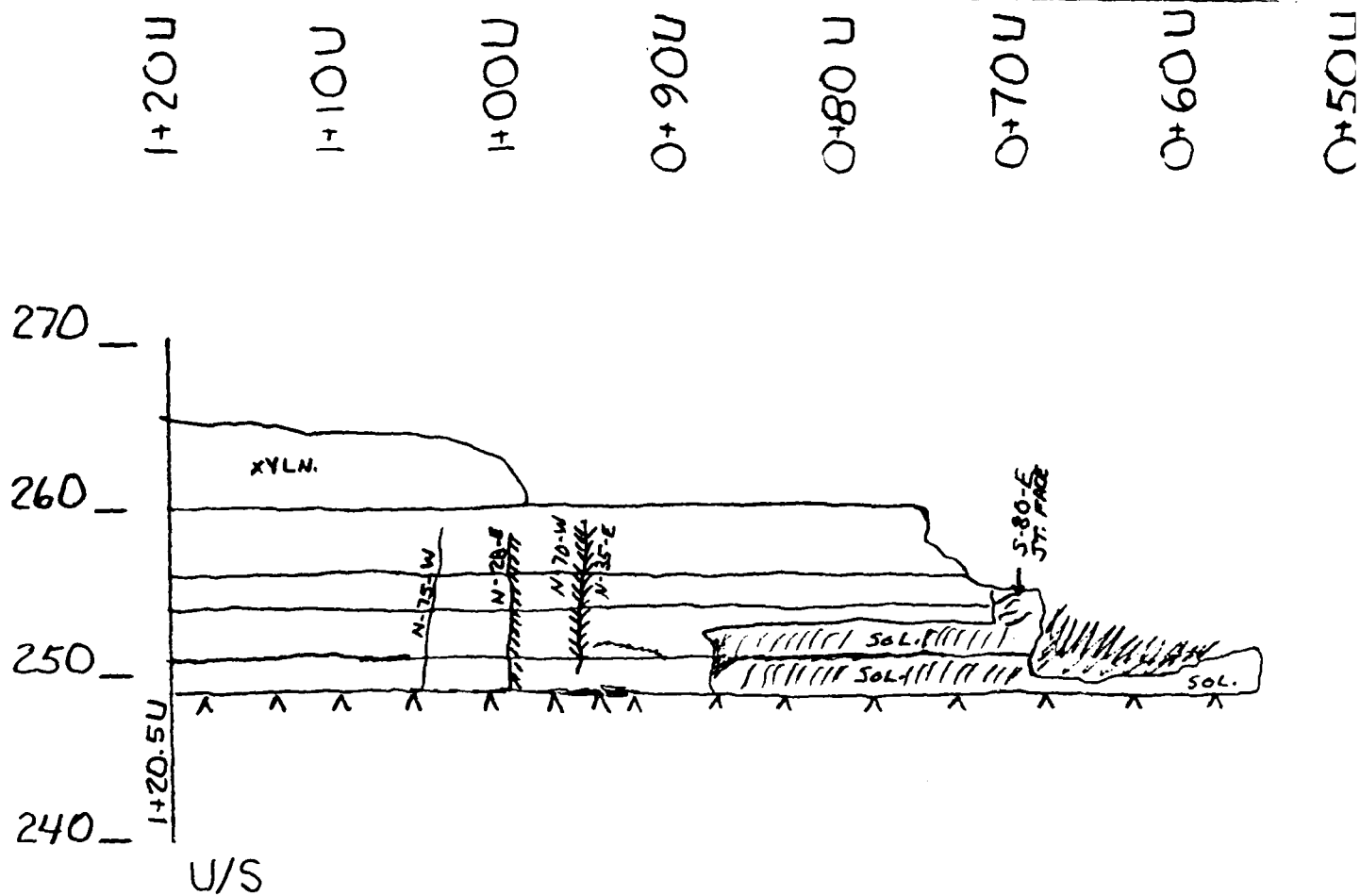
PIER 8



2



U/S



0+80 U

0+70 U

0+60 U

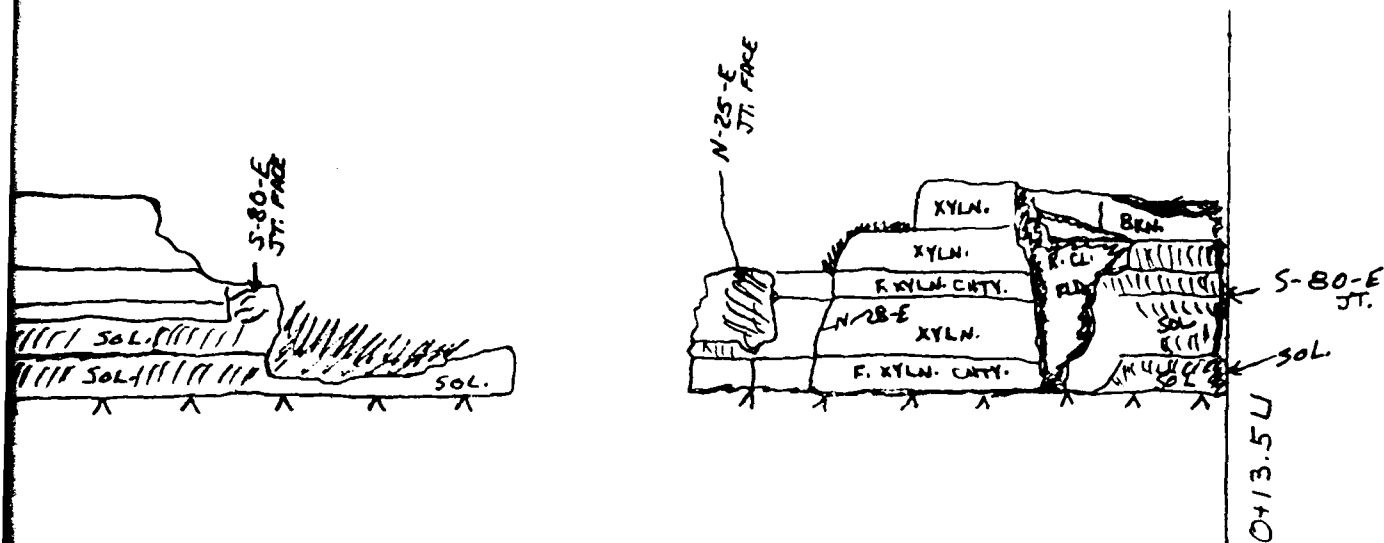
0+50 U

0+40 U

0+30 U

0+20 U

0+10 U



D/S

0+50 U

0+60 U

PIER 8

0+70 U

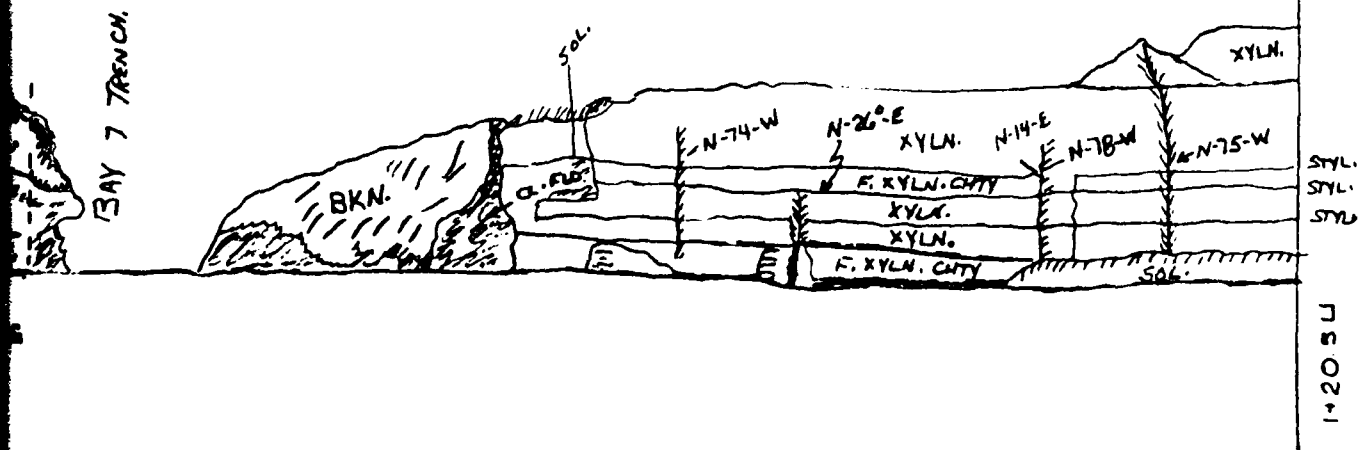
0+80 U

0+90 U

1+00 U

1+10 U

1+20 U



3AY 7 TRENCH.

PIER 8

U/S

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

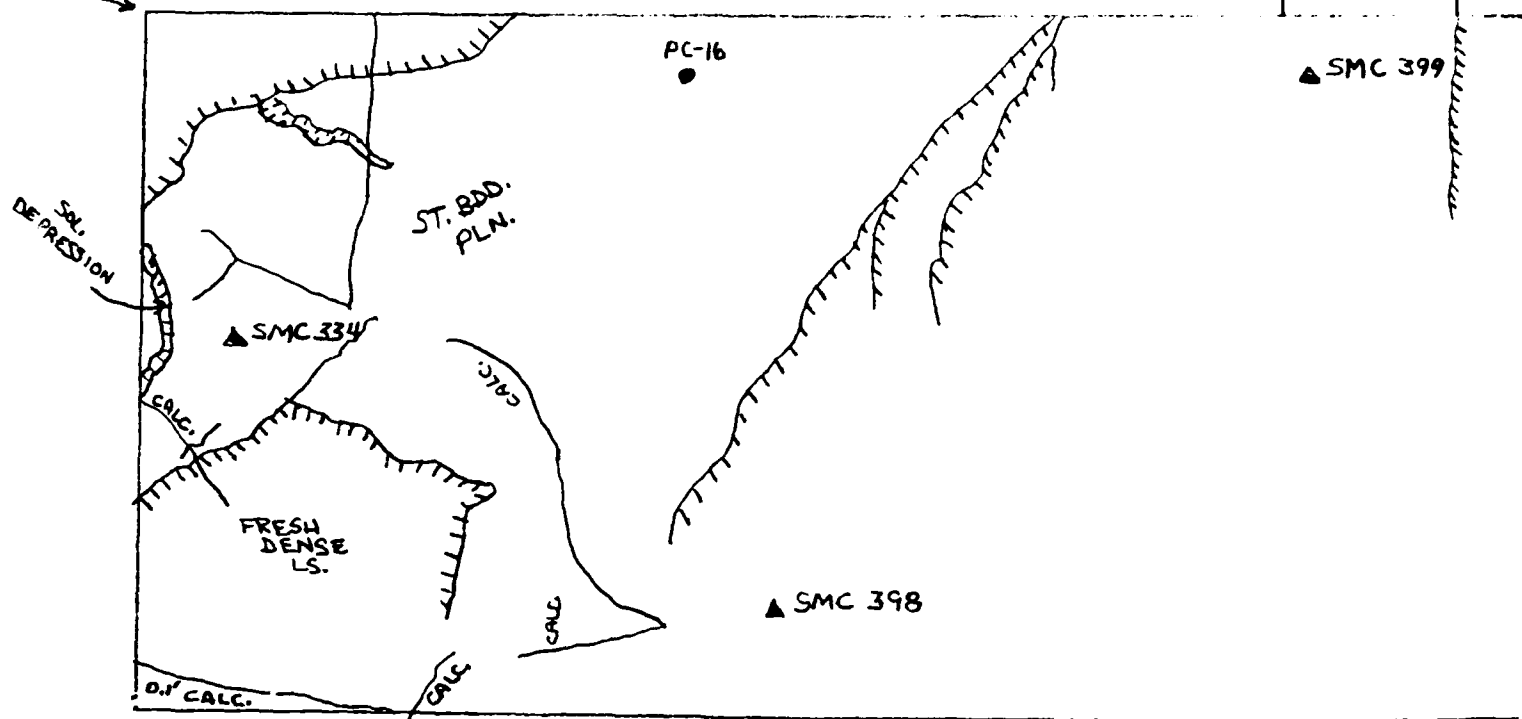
0+70 U

0+60 U

0+50 U

CUT-OFF
TRENCH

1+20.5U
81+73.54 S



1+20.5U
81+33.54 S

U/S

PIER 9

0+60 U

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

CUT-OFF
TRENCH

▲ SMC 399

▲ SMC 335

246.0

244.5

246

24

D/S

0+13.5 U
81+73.54 S

— 81+80 S

— 81+70 S

— 81+60 S

— 81+50 S

— 81+40 S

0+13.5 U
81+33.54 S 81+30 S

FOUNDATION FLOOR

BY _____ DATE 8-30 SUBJECT 40 50 60 70 SHEET NO 80 OF _____
 CHKD. BY _____ DATE 8 8 8 8 JOB NO 8 8

310 —

300 —

290 —

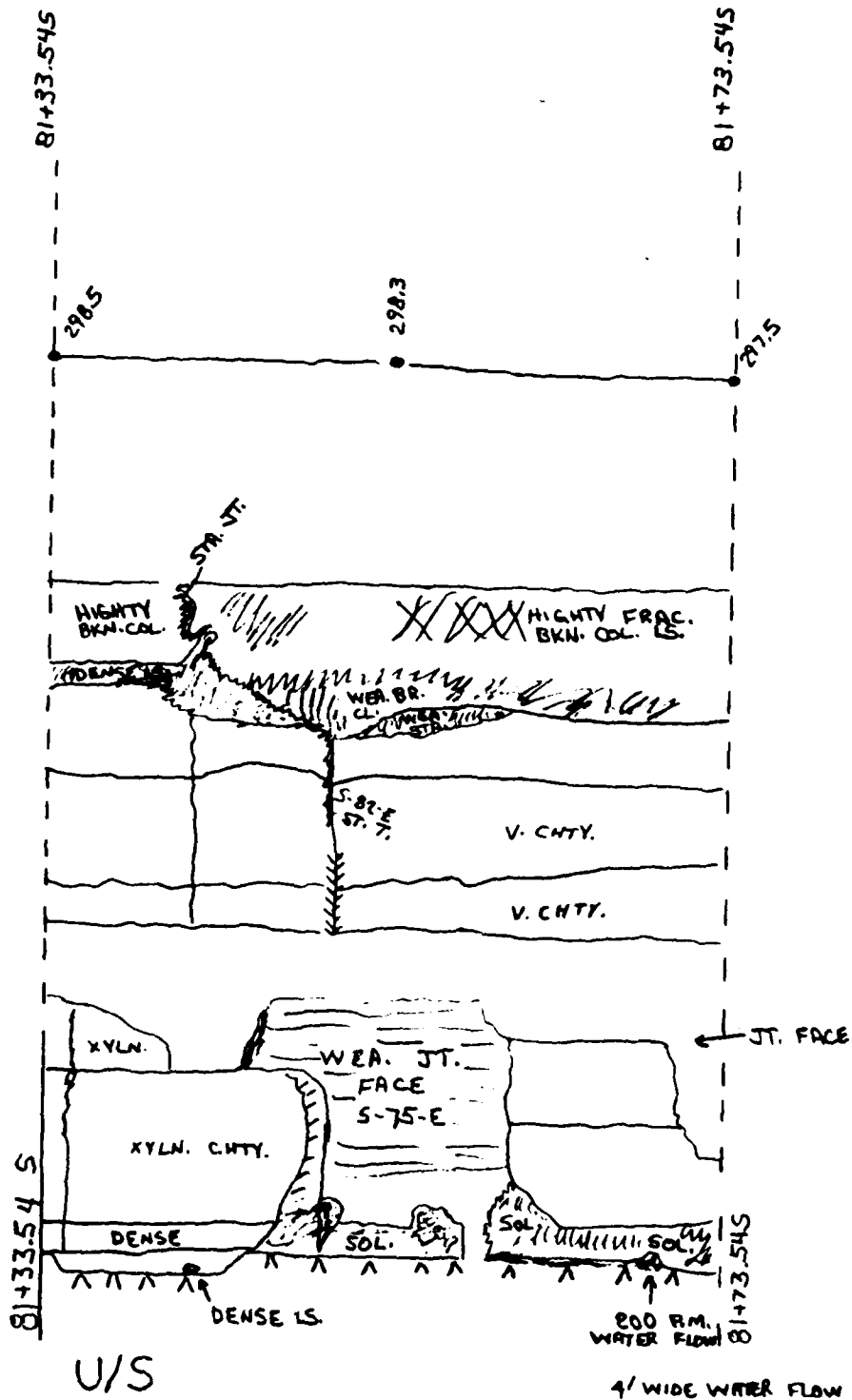
280 —

270 —

260 —

250 —

240 —



PIER 9

BY DATE SUBJECT SHEET NO CF
 CHKD. BY DATE JOB NO

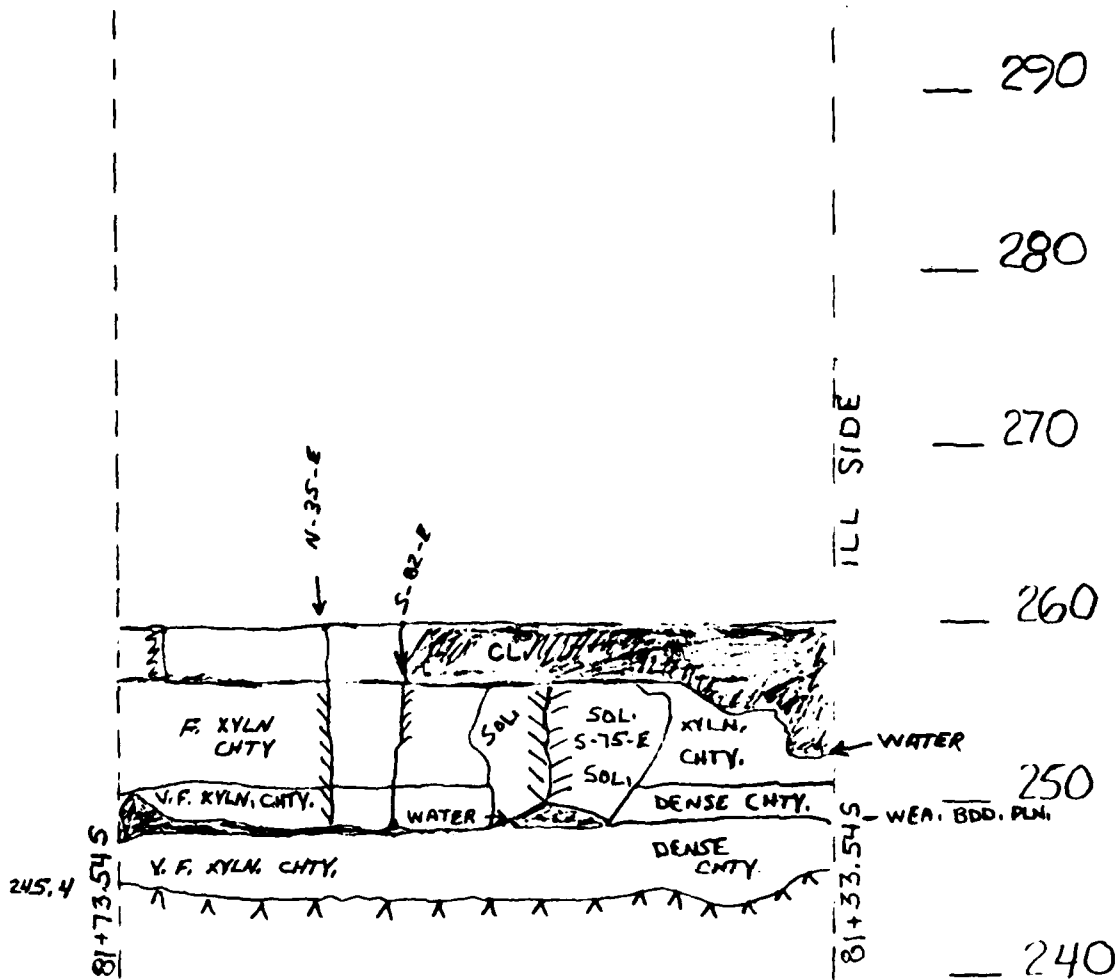
81+70S

81+60S

81+50S

81+40S

81+30S



300 0+10 U 0+20 U 0+30 U 0+40 U 0+50 U 0+60 U 0+70 U 0+80 U

290 _

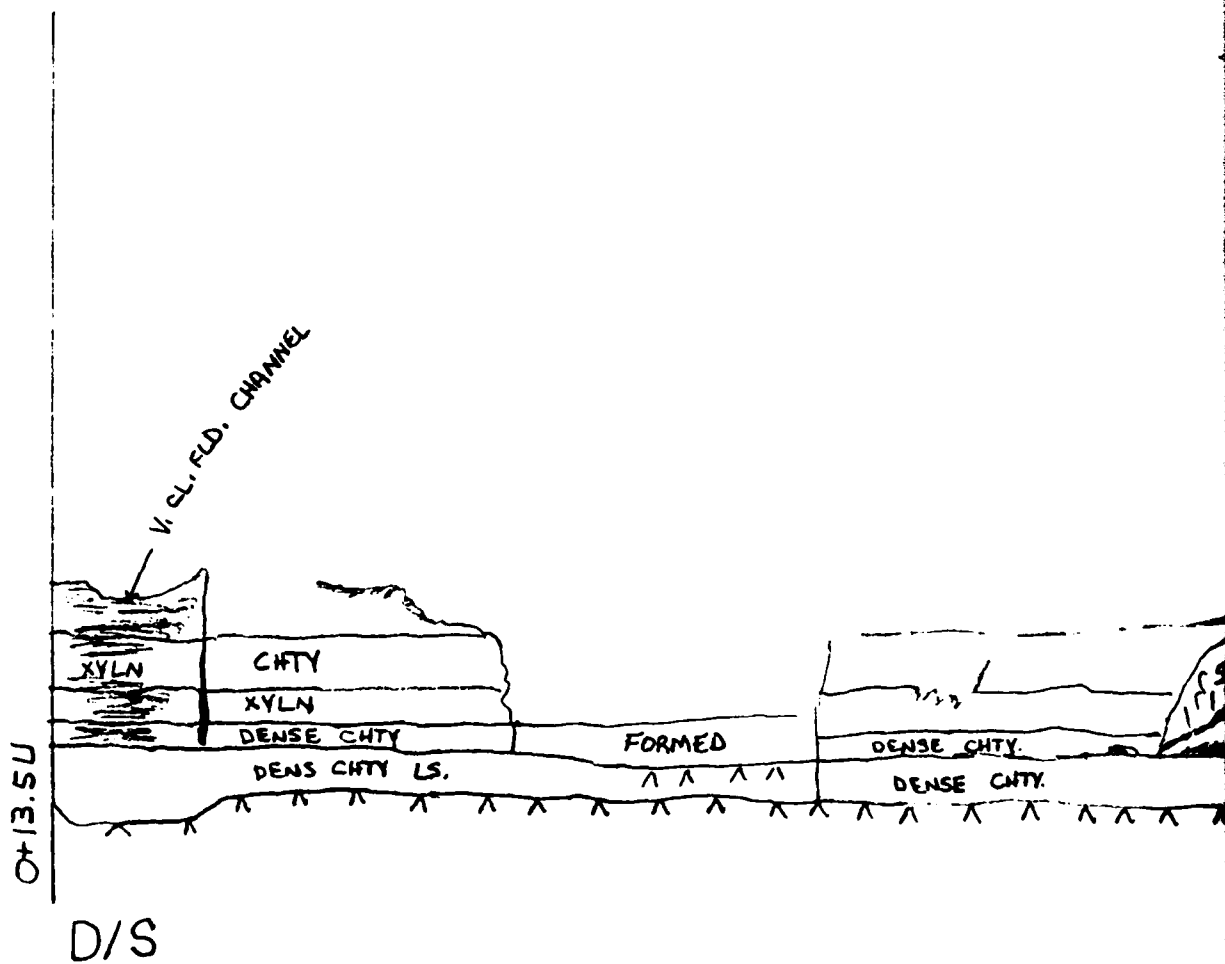
280 _

270 _

260 _

250 _

240 _



0+50 U

0+60 U

0+70 U

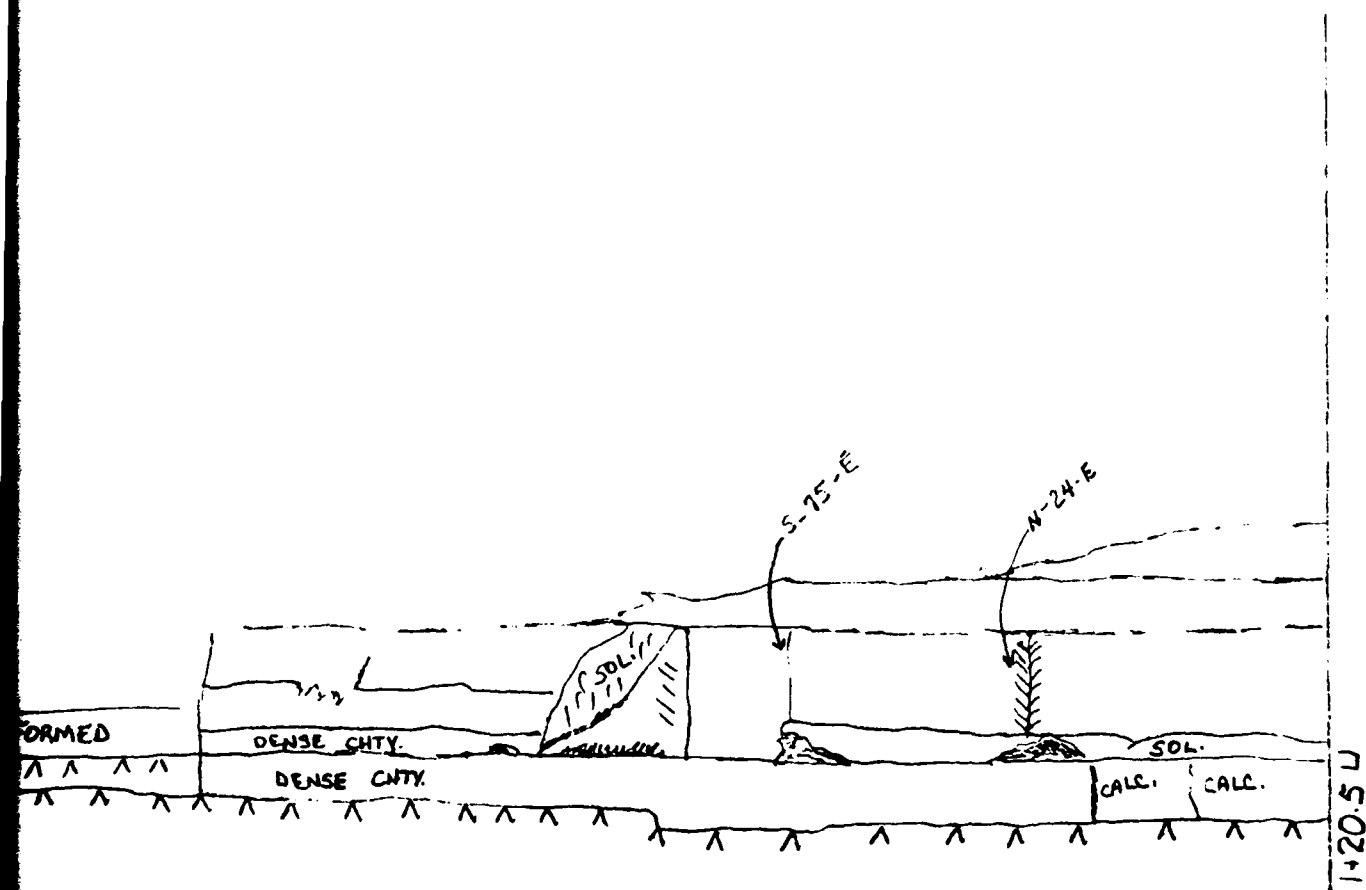
0+80 U

0+90 U

1+00 U

1+10 U

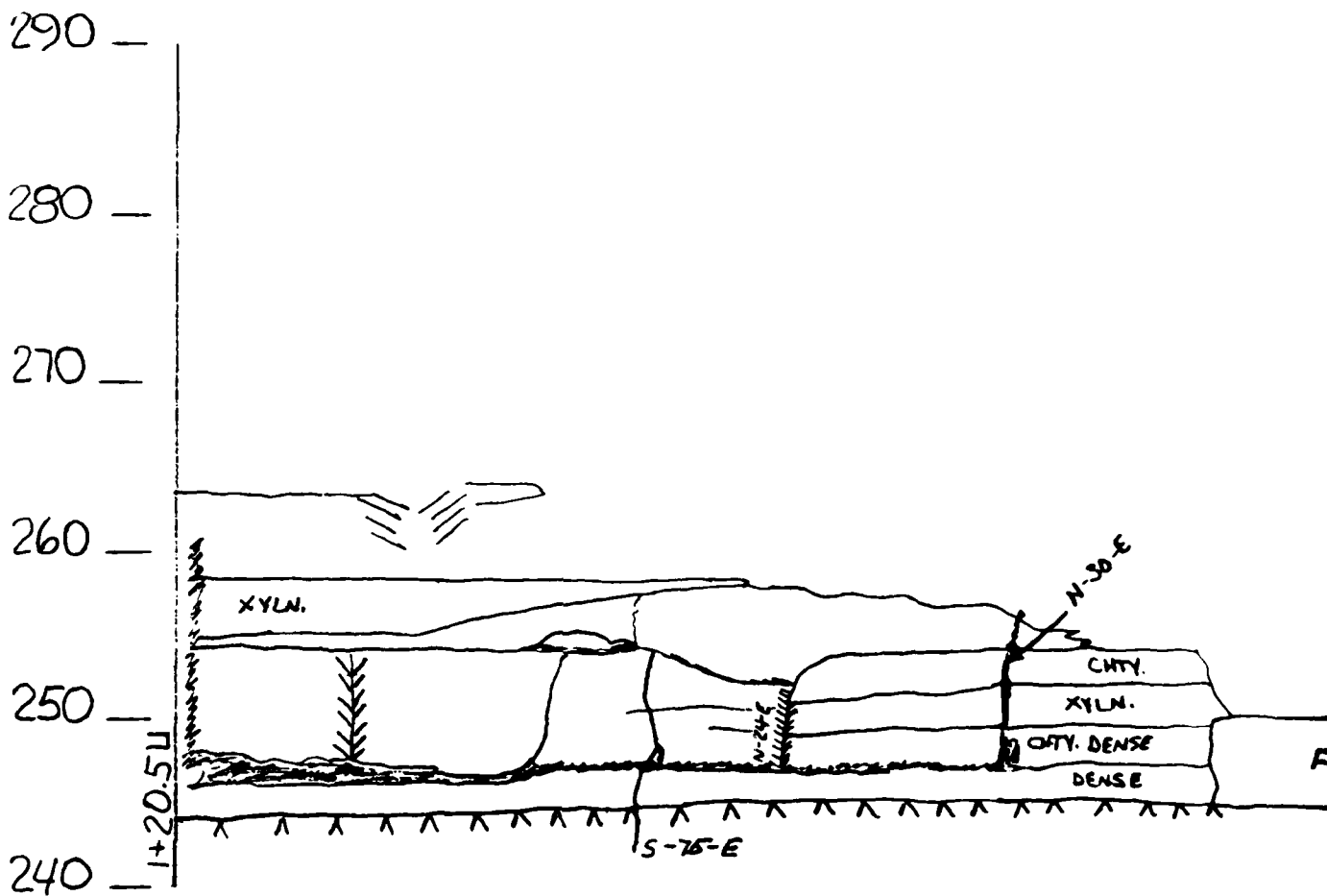
1+20 U



PIER 9

2

300 1+20U 1+10U 1+00U 0+90U 0+80U 0+70U 0+60U



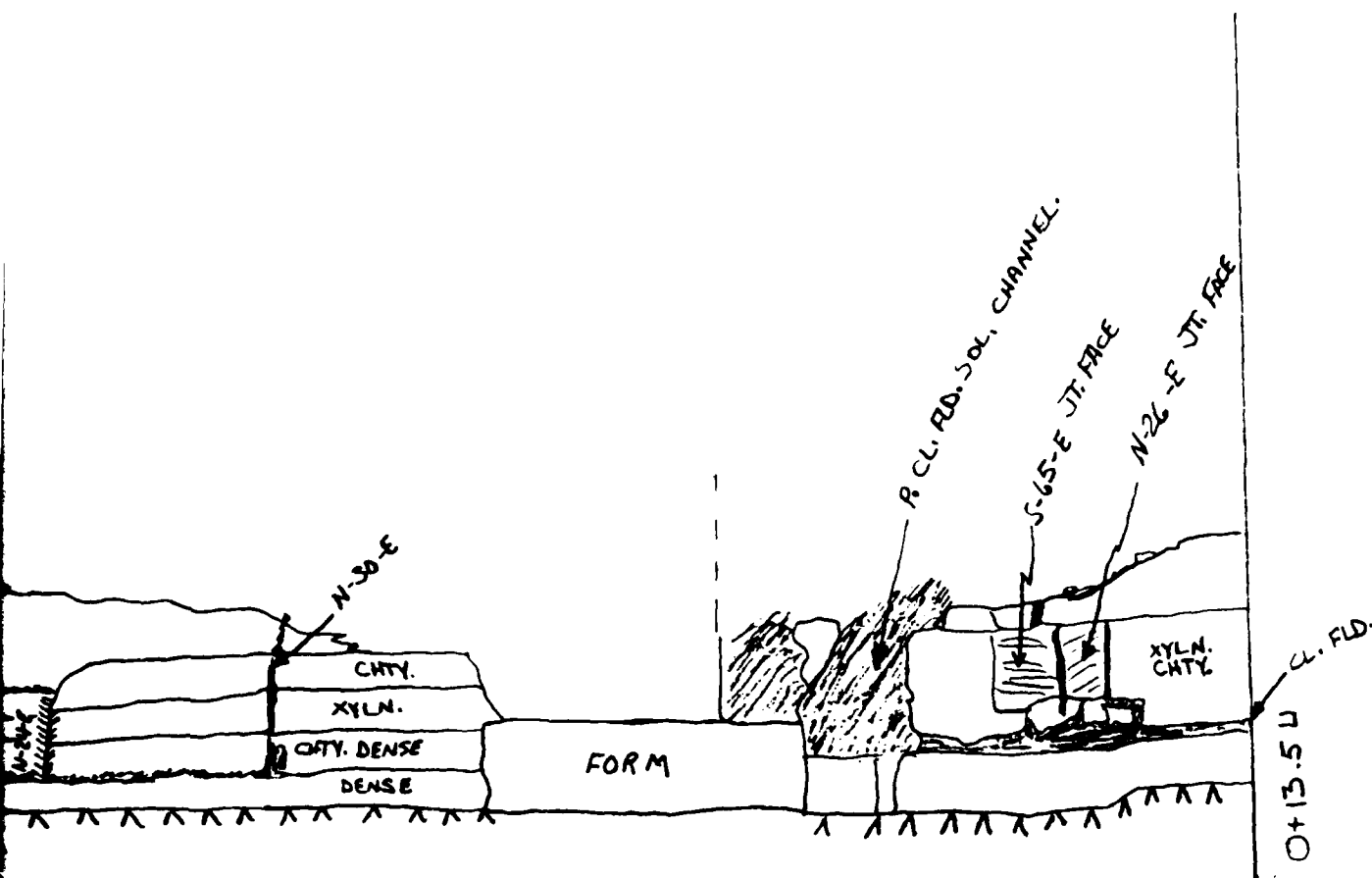
U/S

KY. SIDE

PIER 9

1

0+80U
0+70U
0+60U
0+50U
0+40U
0+30U
0+20U
0+10U



D/S

PIER 9

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

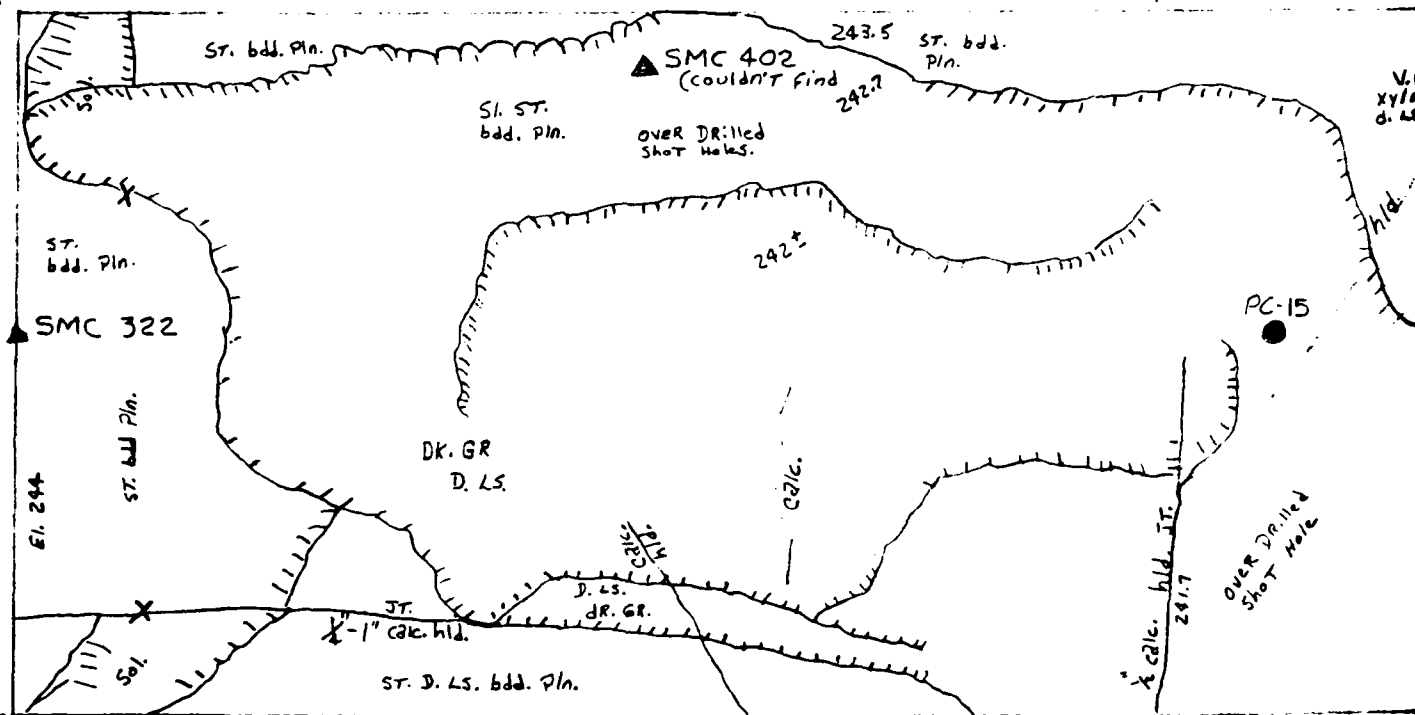
0+70 U

0+60 U

0+50 U

CUT-OFF
TRENCH

1+20.54
82+98.54\$



1+20.5U
82+58.54\$

U/S

PIER 10

0+60 U

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

CUT-OFF
TRENCH

SKETCHED 23, APRIL 77

0+13.5U
82+99.54\$ 83+00 S

▲ SMC 235

xyln.

V.F.
xyln.
d. 45.

244±

245

hld JT

hld JT

N-27°E

hld JT

S-80°E

hld JT

PC-15

OVER DRILLED
SHOT HOLE

281.7

242.9

245.4

PC-14

V.F. xyln.
Denta.

82+90 S

82+80 S

82+70 S

82+60 S

0+13.5U
82+58.54\$

82+50 S

D/S

FOUNDATION FLOOR

82+50

82+58.54

82+60

82+70

82+80

82+90

82+98.54

83+00

300

292

280

270

260

250

240

ILL SIDE

295.8

294.0

292.0

T/R @ Sta. 1+25 U

cut bench.

mds. ool.

N-78-W

Duc N. JT.

J.T.

J.T.

N-25-E

J.T.

ool. LS.

F. xyl.

F. xyl. d. Sil. Chrt.

styl. bdd. pln. op. wed.

becoming V. chrt. @ 271±
Chrt. nod.

V. chrt. LS.

Sol. bdd pln.

xyl. LS.

Xyln.

Xyln.

Xyln.

Xyln. Chrt.

V. & Xyln. Chrt.

Sol. pocket.

bdd. pln.

N-24°-E

U/S end

N-29°-E

S-70°-E

JT. intersection.

PIER 10

83+00 \$

82+98.54

83+00

83+00 \$

82+90 \$

82+80 \$

82+70 \$

82+60 \$

300

T/R @ Sta. 1+25 U

- cut bench.

styl.
bdd. pln. of we2.

becoming V. chtry @ 271±
chtr. nod.

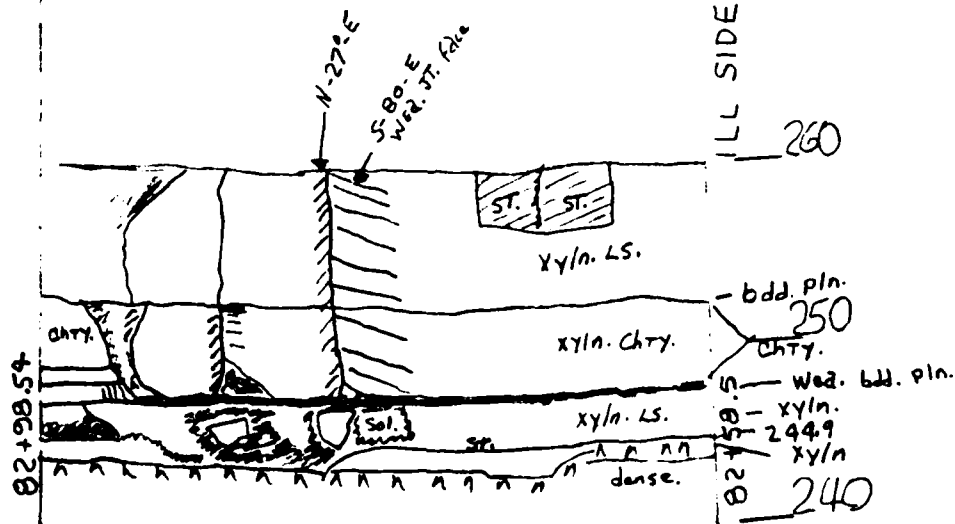
Sol. bdd. Pln.

290

280

270

ILL SIDE
260

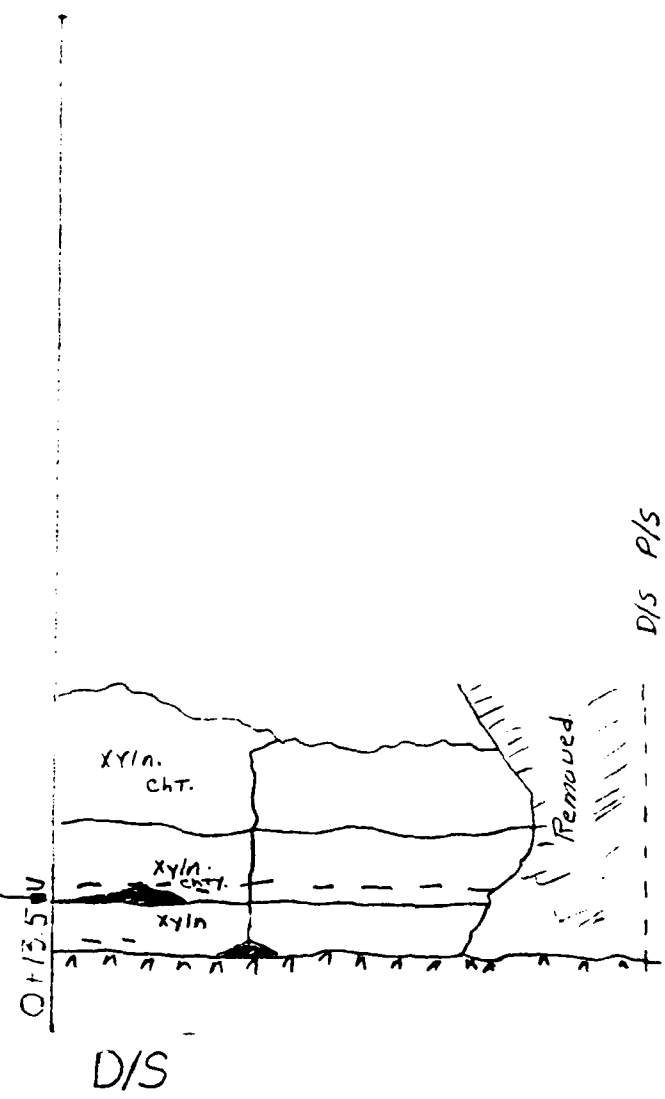


PIER 10

D/Send

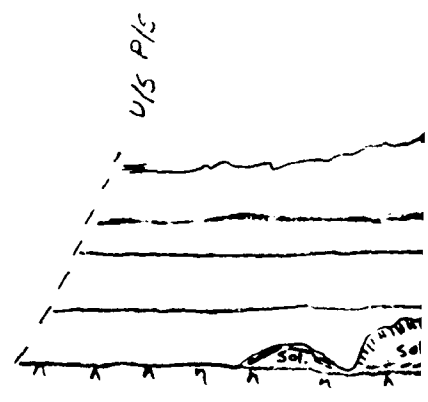
300 0+100 0+200 0+300 0+400 0+500 0+600 0+700 0+800

290
280
270
260
250
240



ILL SIDE

CUT-OFF Trench.



PIER 10

0+60U

0+70U

0+80U

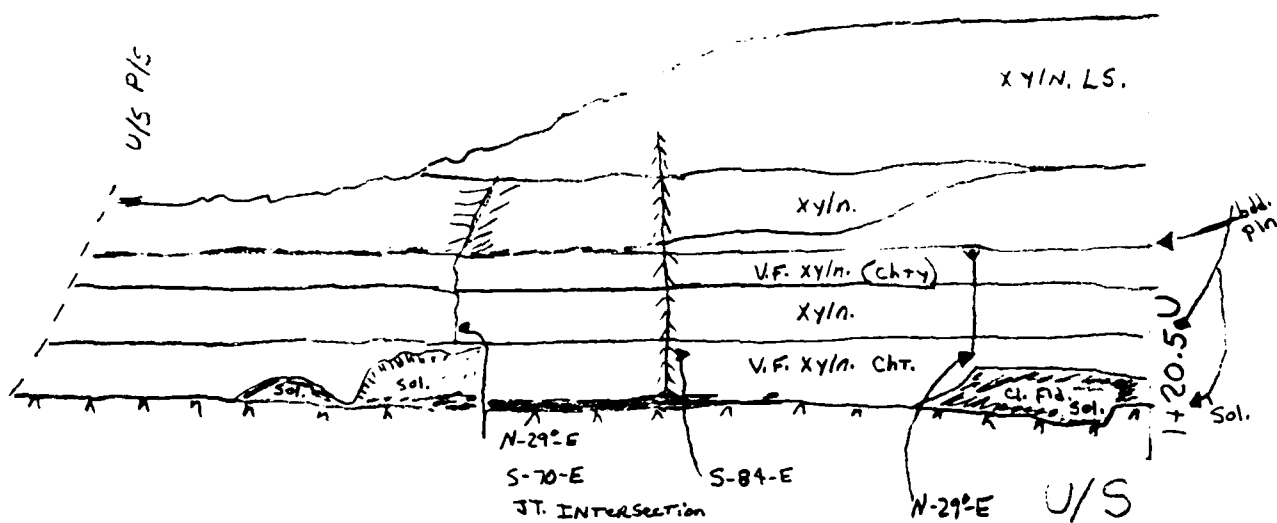
0+90U

1+00U

1+10U

1+20U

CUT-OFF TRENCH.



PIER 10

2

- 1+20U

1+10U

1+00U

0+90U

0+80U

0+70U

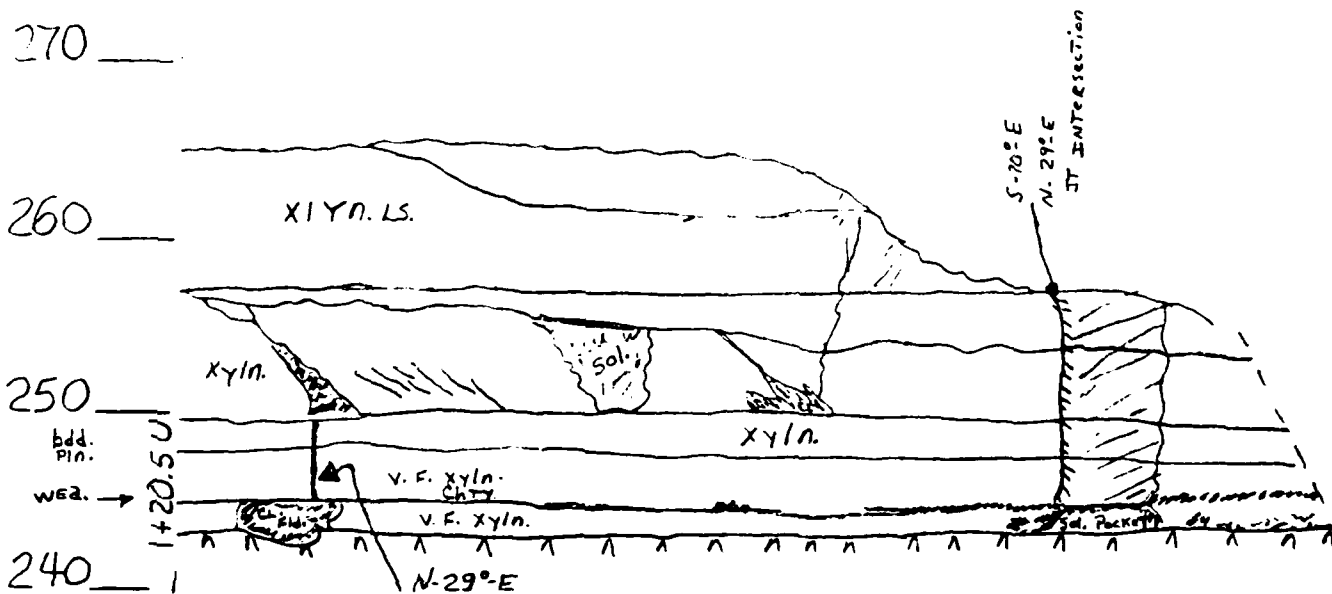
0+60U

Sketched 23 April 77

290

280

270



KY SIDE

PIER 10

0+70U

0+60U

0+50U

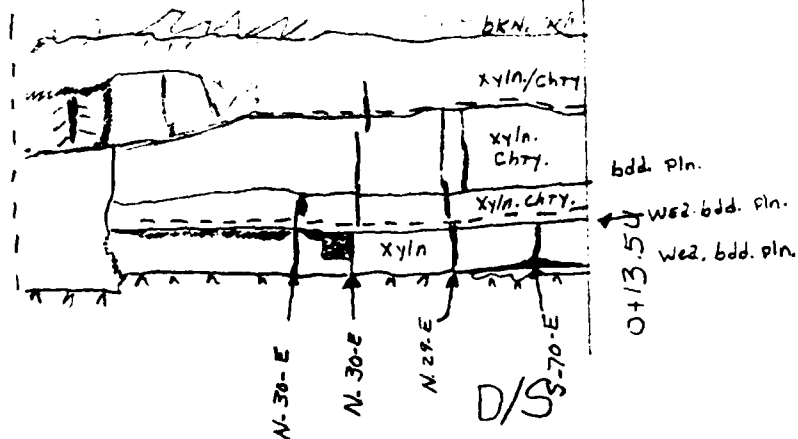
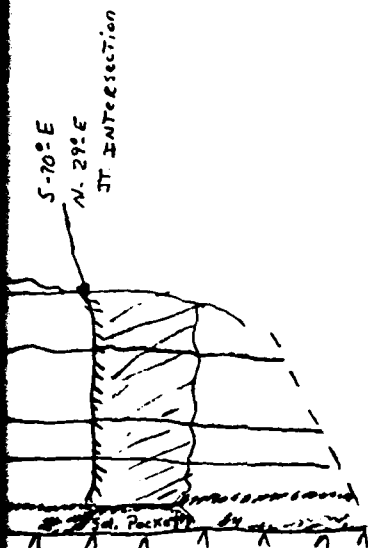
0+40U

0+30U

0+20U

0+10U

Sketched 23-April 77



PIER 10

2

1+20 U

1+10 U

1+00 U

0+90 U

0+80 U

0+70 U

0+60 U

0+50 U

CUT-OFF
TRENCH

1+20.5 U
84+23.54

P3
X

▲ SMC 230

P-2
X

calc.
calc. hdy. 3m

calc. hdy.

▲ SMC 404

P1
X

calc.

ST bdd P/n

1+20.5 U
83+83.54

U/S

PIER II

1

0+60 U

0+50 U

0+40 U

0+30 U

0+20 U

0+10 U

0+00 U

CUT-OFF
TRENCH

84+30 S

0+13.5U
84+23.54 S

84+20 S

84+10 S

84+00 S

83+90 S

83+80 S

0+13.5U
83+83.54

D/S

FOUNDATION FLOOR

FOUNDING ELEV. 241

2

C. O. S.

130

1

005

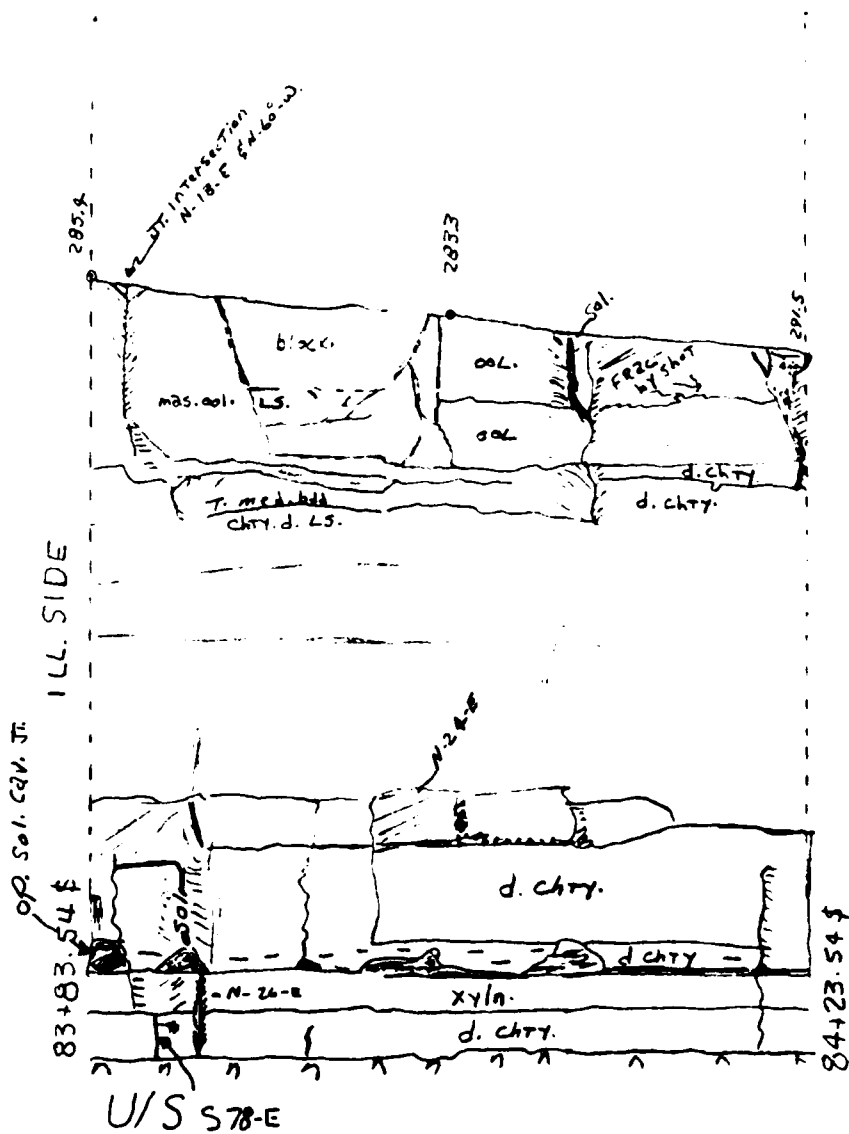
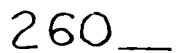
342.

8110

2700

三

84+20



PIER II

84+20

84+10

84+20

84+10

84+00

83+90

83+80

300

290

280

270

260

250

240

ILL SIDE

S-78°-E

N-28-E

cl. fld.
sol. channel

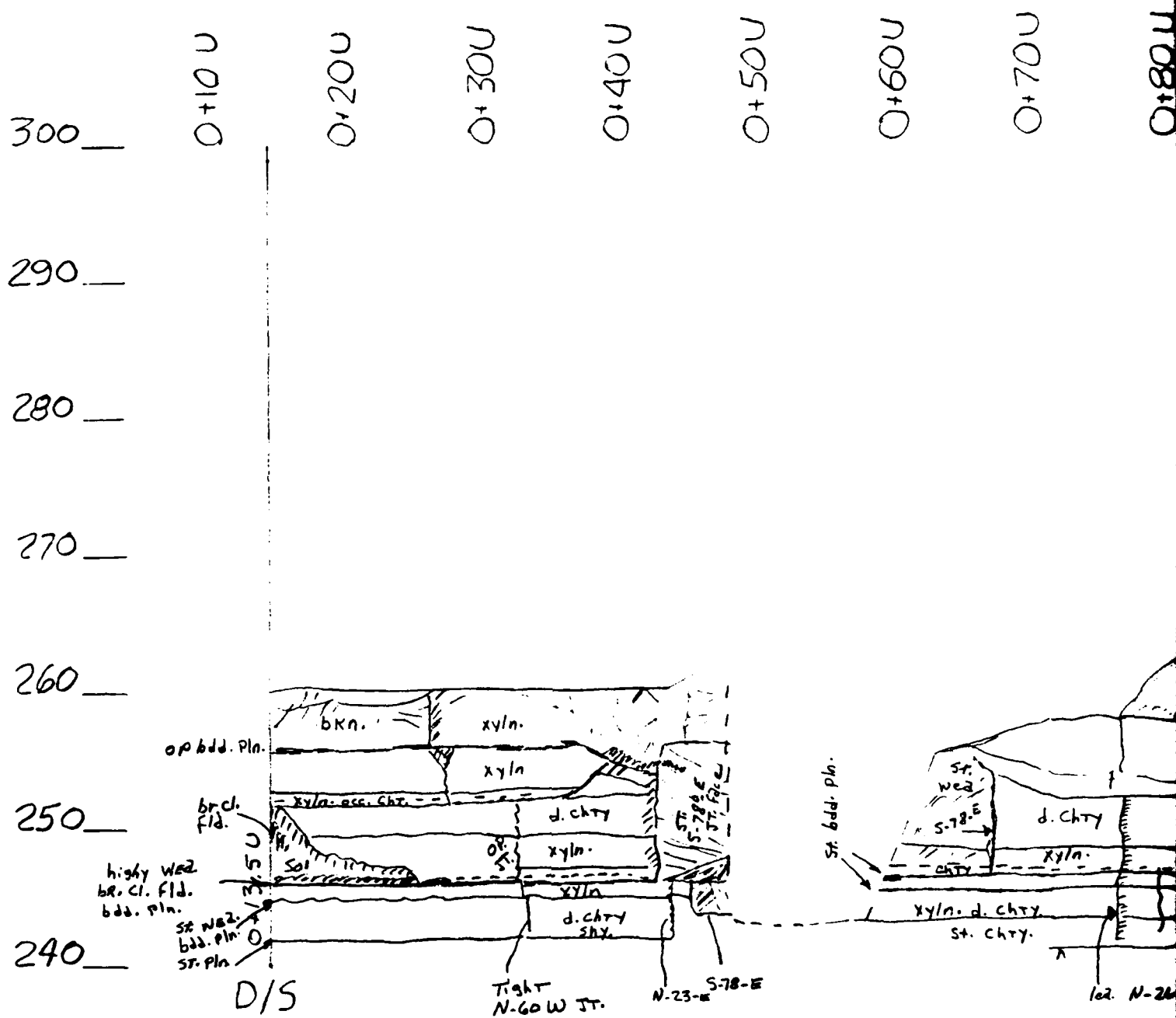
83+83.54

N-28-E

S-78-E

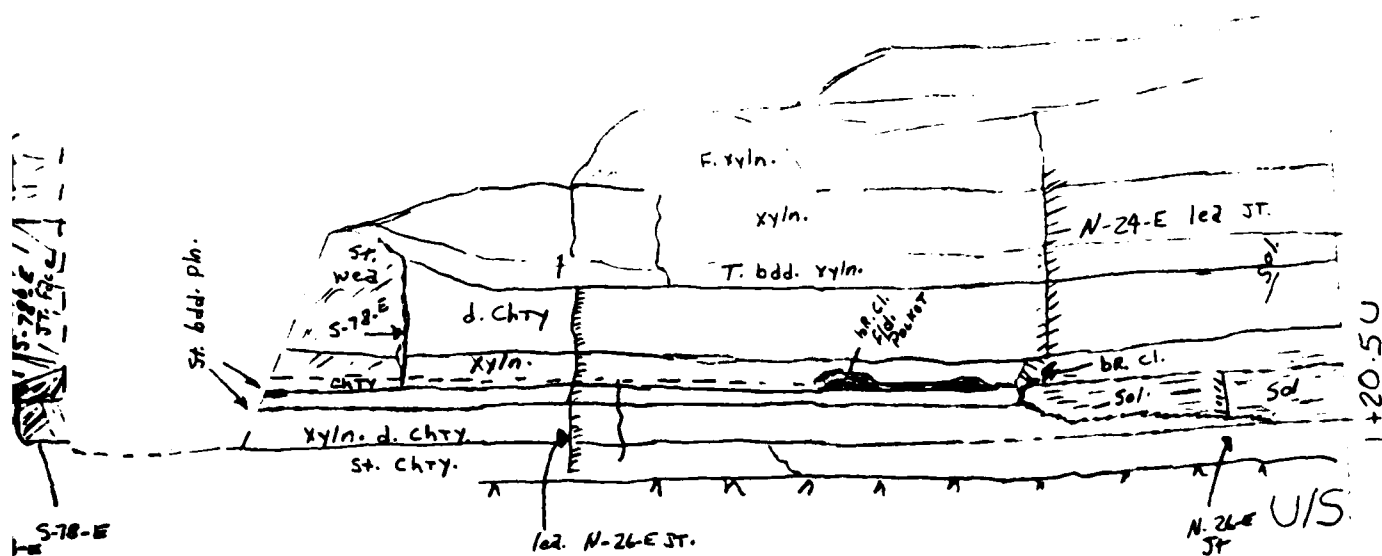
P/S

PIER II

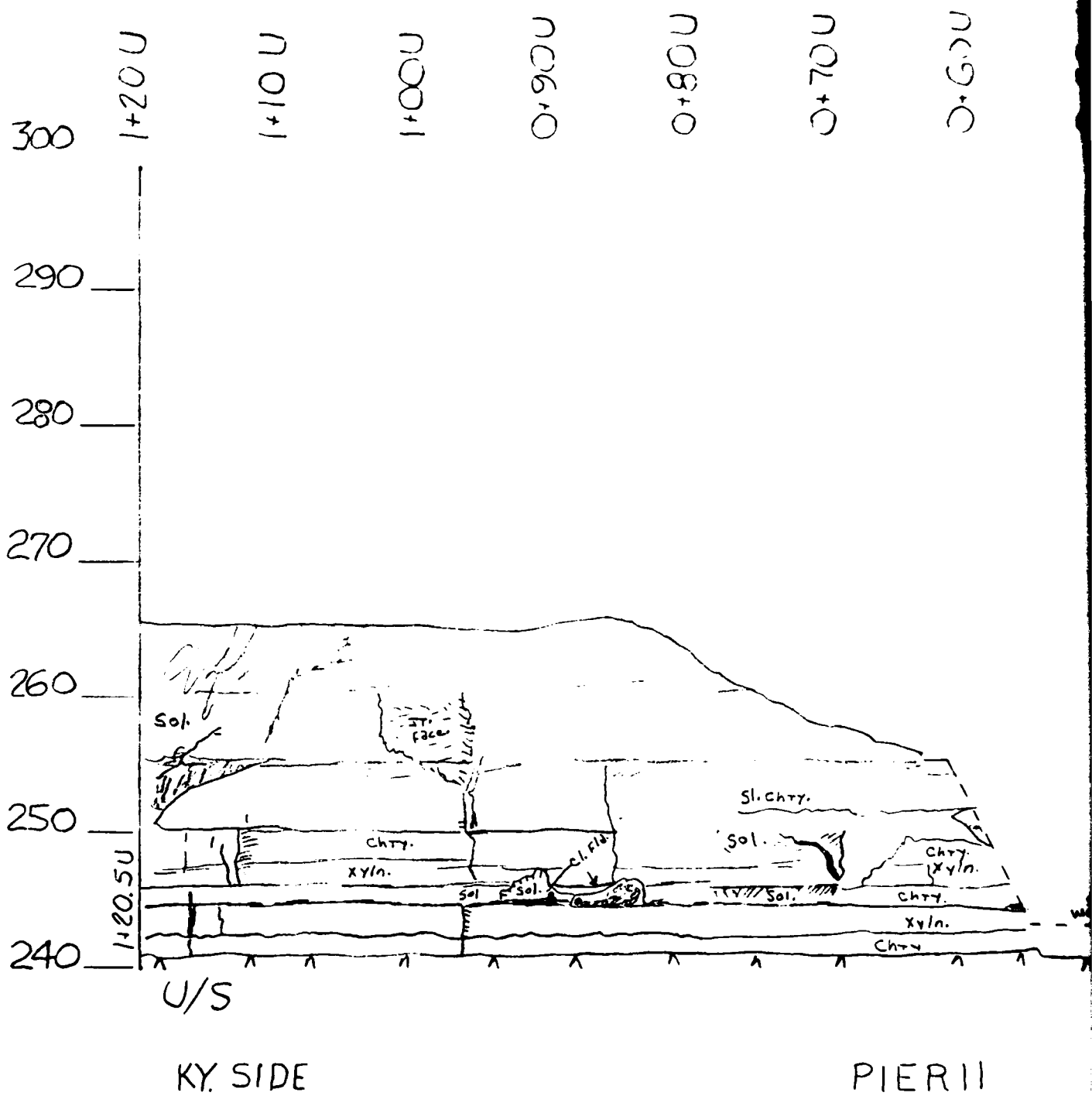


PIER II

0+50U
0+60U
0+70U
0+80U
0+90U
1+00U
1+10U
1+20U



PIER II ILL.



0+70U

0+60U

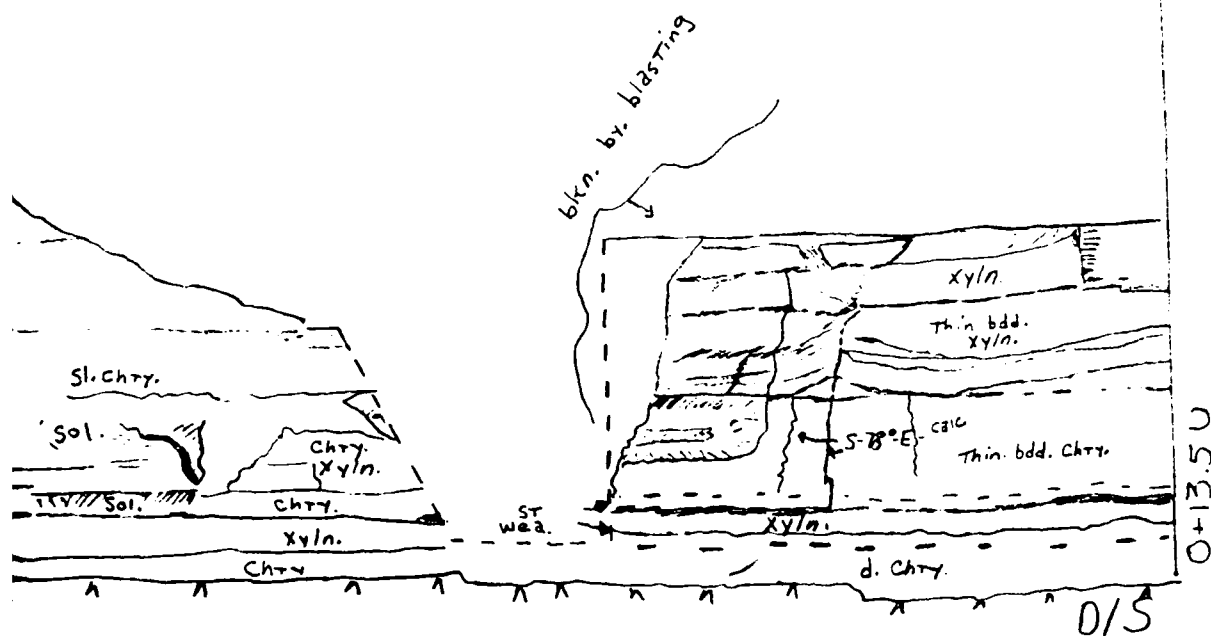
0+50U

0+40U

0+30U

0+20U

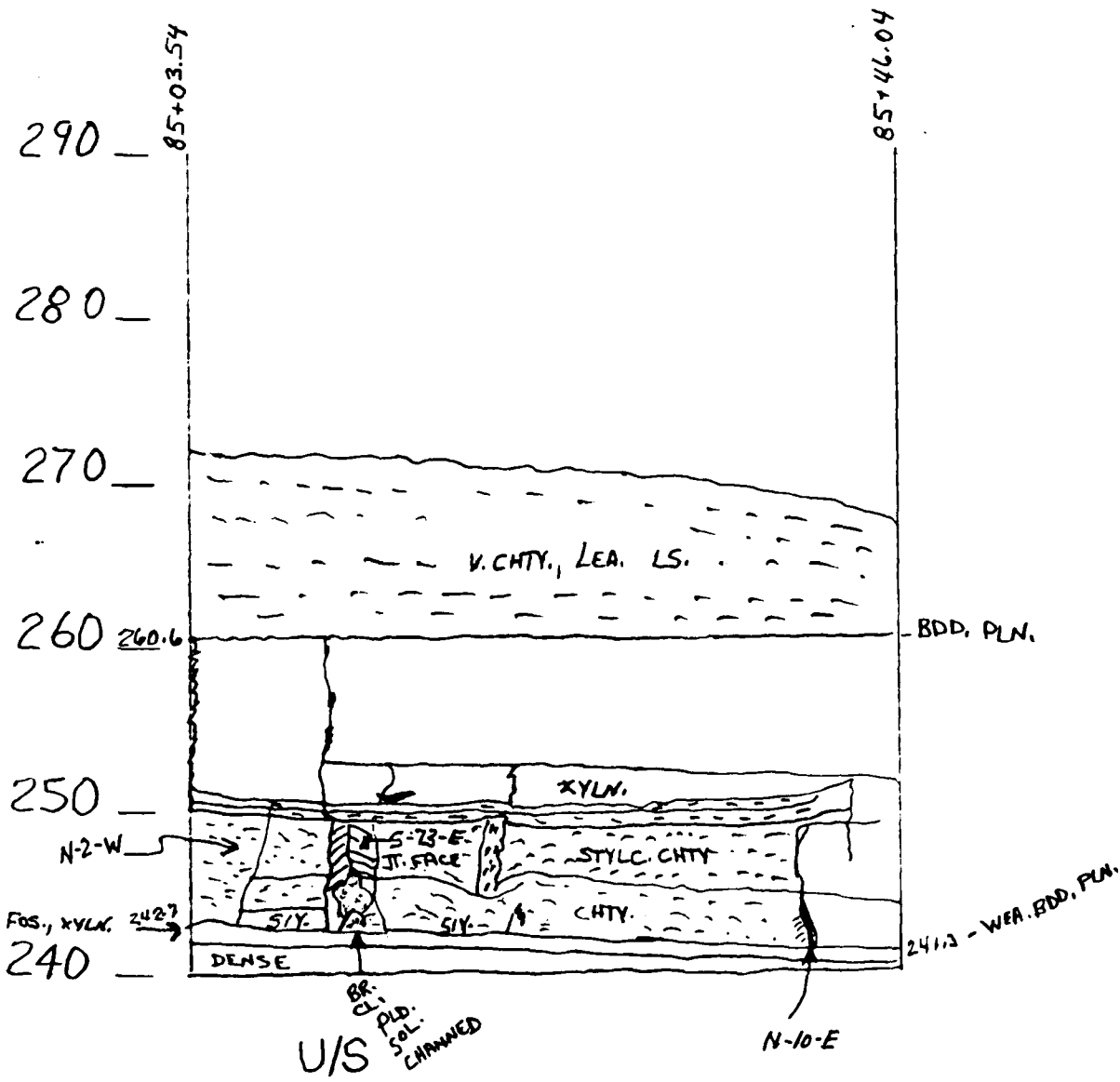
0+10U



PIER II

BY _____ DATE _____ SUBJECT _____ SHEET NO _____ OF _____
 CHKD. BY _____ DATE _____ JOB NO. _____

85+10S 85+20S 85+30S 85+40S 85+50S



PIER 12

0+80U

0+70U

0+60U

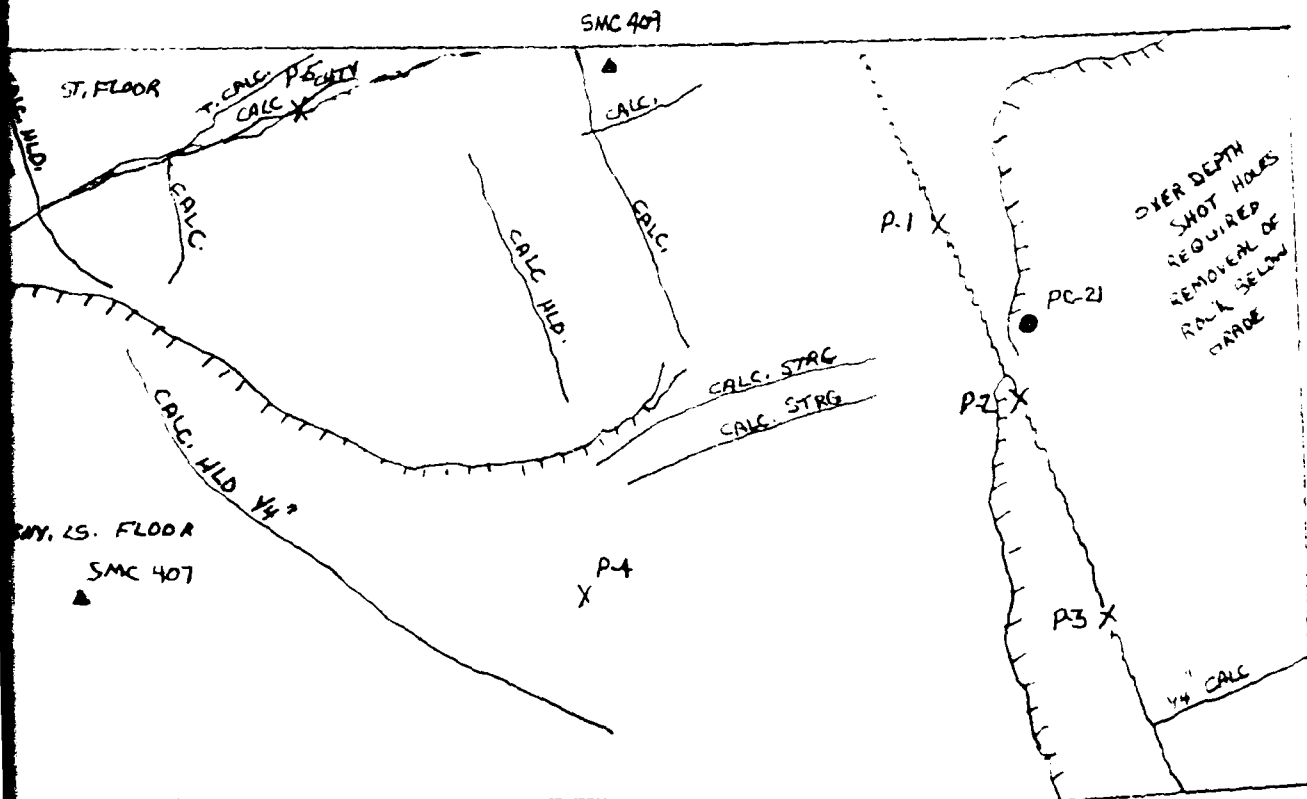
0+50U

0+40U

0+30U

0+20U

0+10U



PIER 12

FOUNDATION FLOOR

0+00U

0+10U

0+20U

0+30U

0+40U

0+50U

0+60U

0+70U

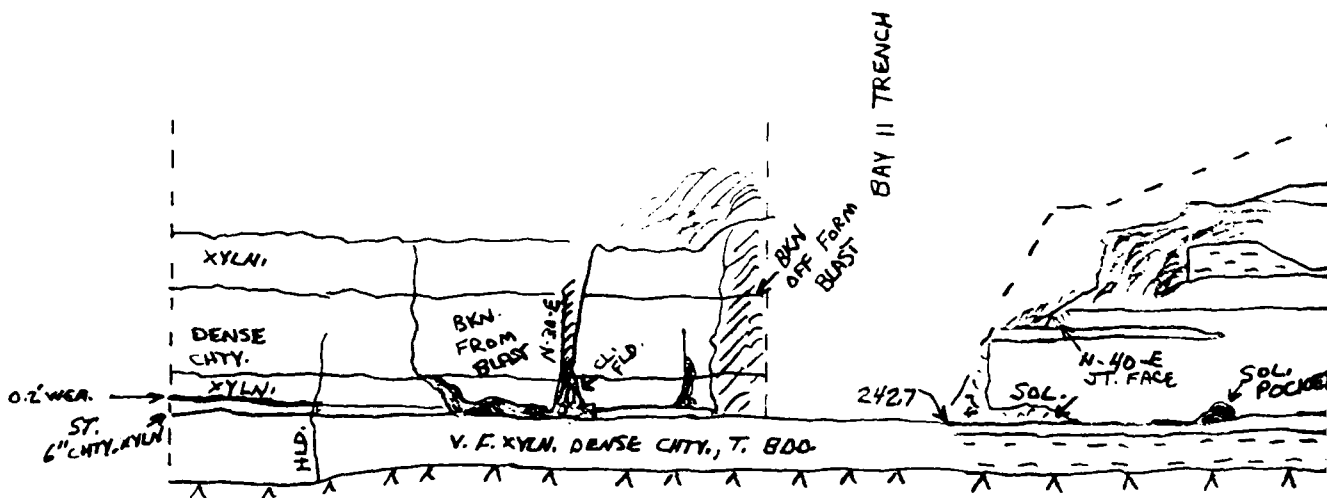
280 —

270 —

260 —

250 —

240 —



ILL SIDE

PIER 12

0+600

0+700

0+800

0+900

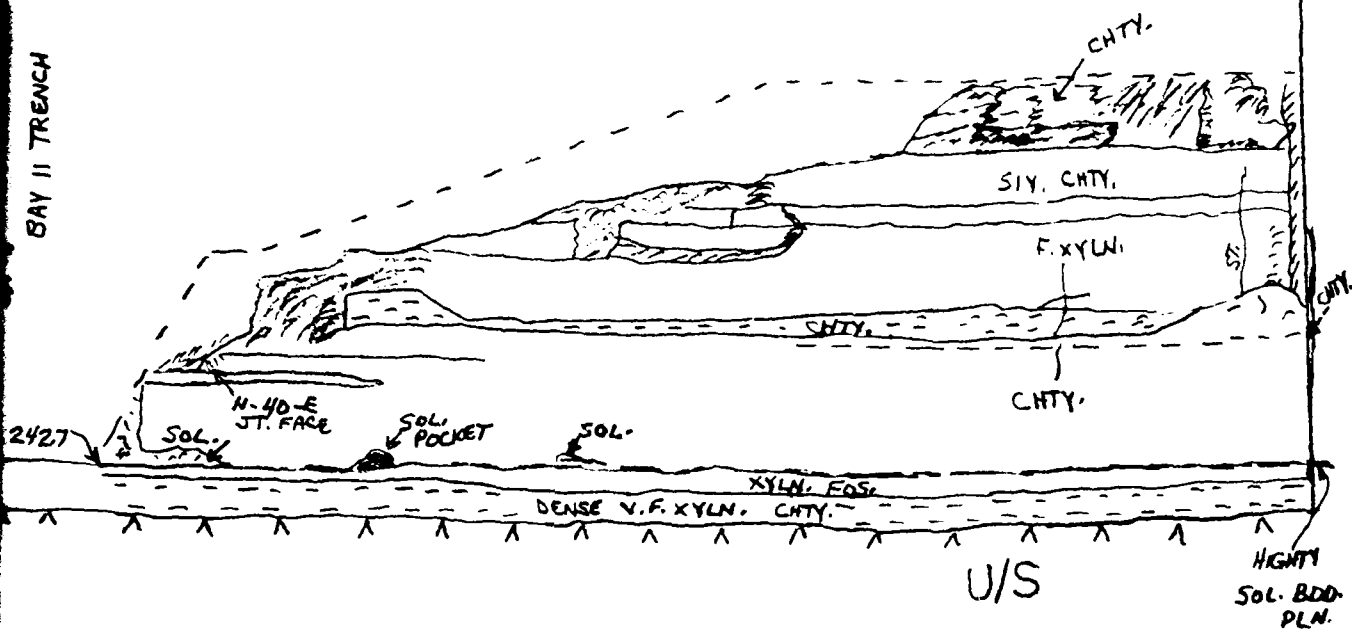
1+000

1+100

1+200

1+270

BAY II TRENCH



PIER 12

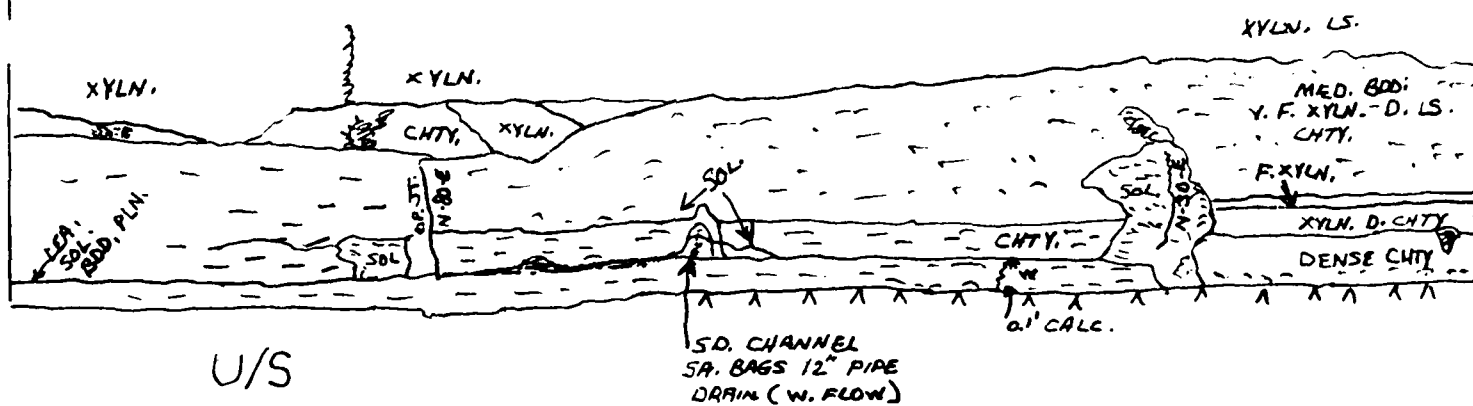
$$1+200$$

1013

$$n+1$$
$$U_0 + 2U_1$$
$$0.80 \cup$$

Q70U

709

$$nS + O$$
 $1+270$ 

U/S
KY SIDE

PIER 12

0+200

0+100

0+000

0+100

0+200

0+300

85+50 S

0+100
85+50 S

85+40 S

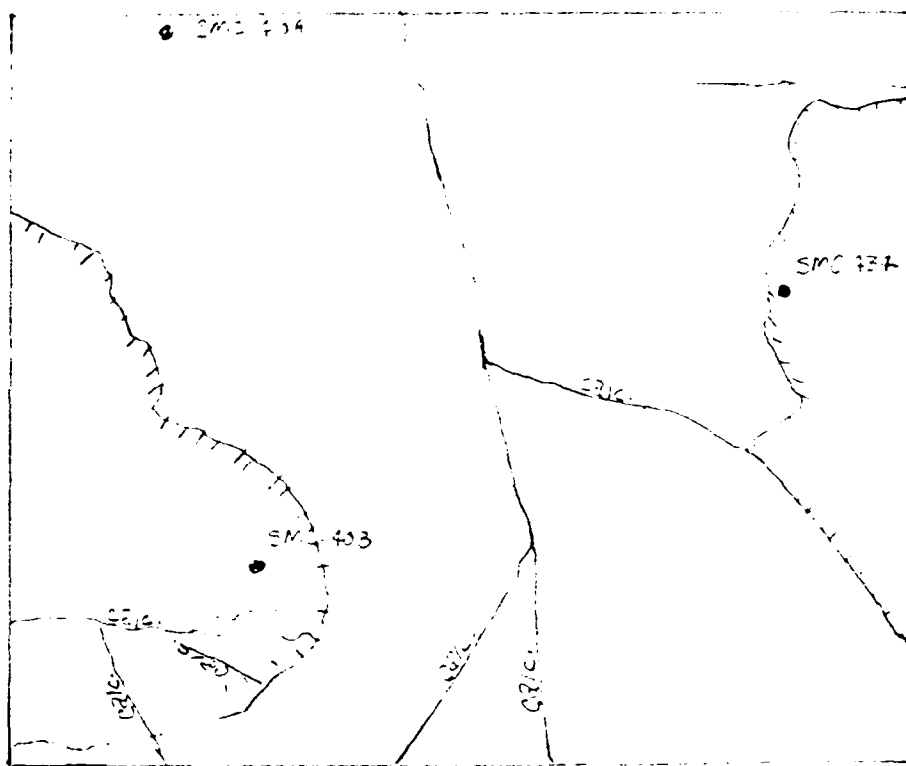
85+30 S

85+20 S

85+10 S

85+00 S

0+100
85+00 S



U/S

PIER 12 S L

0+100

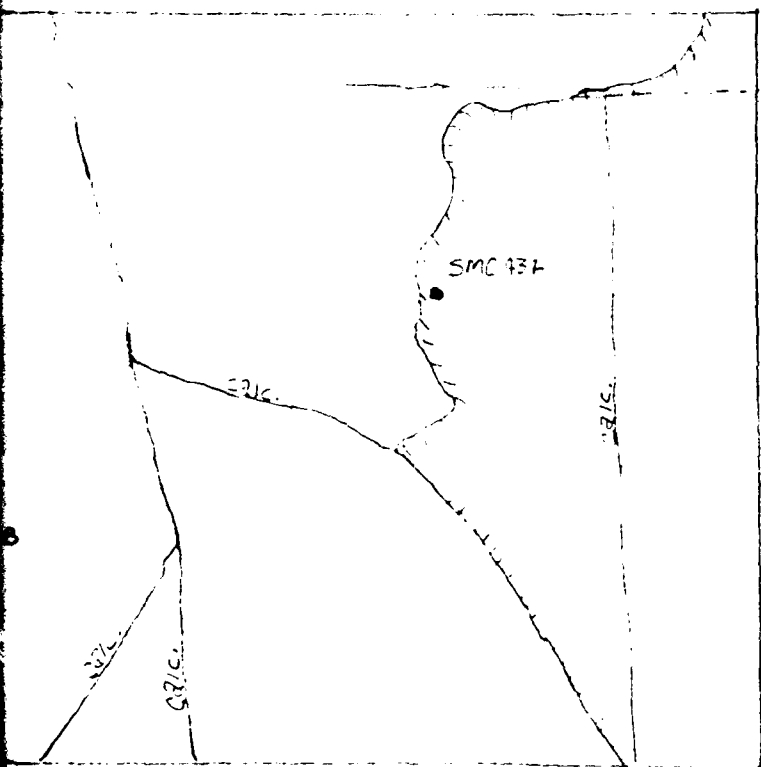
0+200

0+300

0+400

0+500

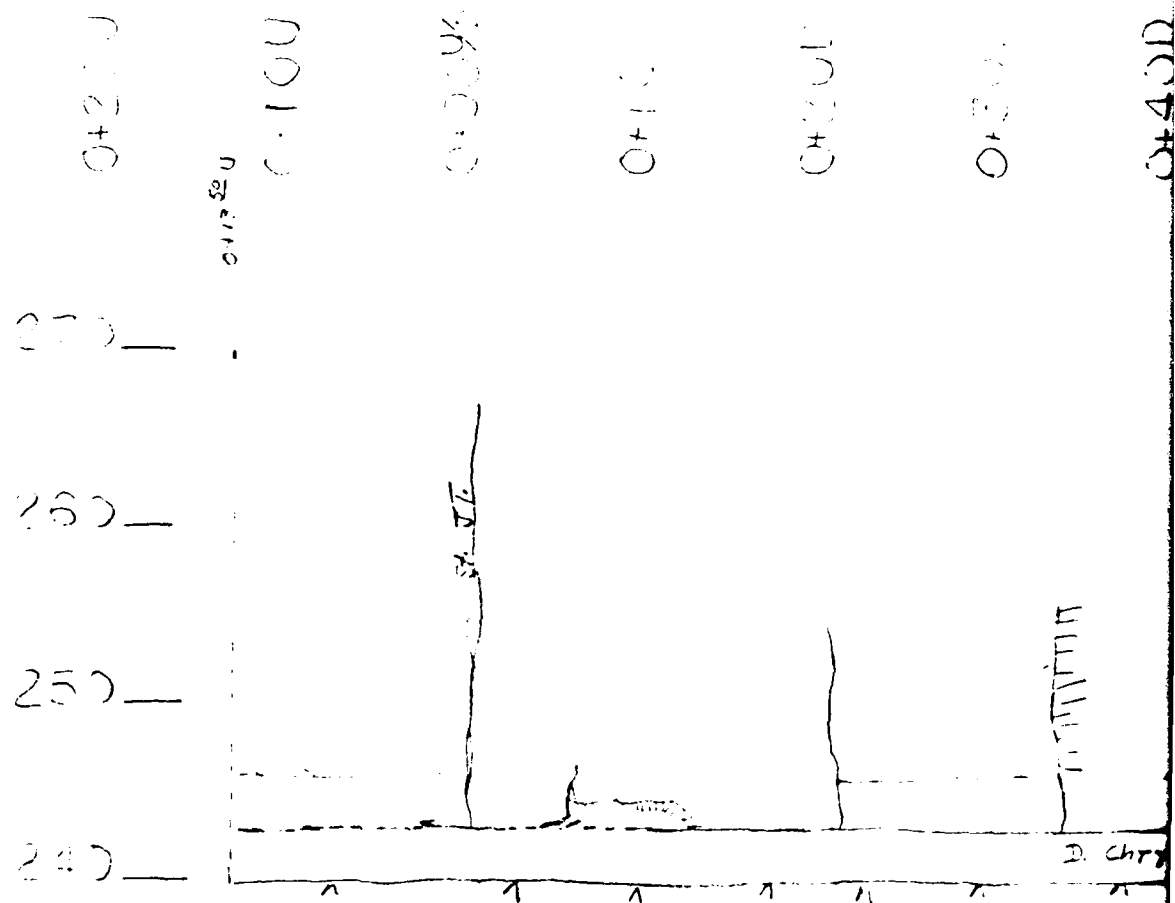
0+435
85+535



0+435
85+535

PIER 12 SILL

FOUNDATION



U/S

PIER 12 SILL

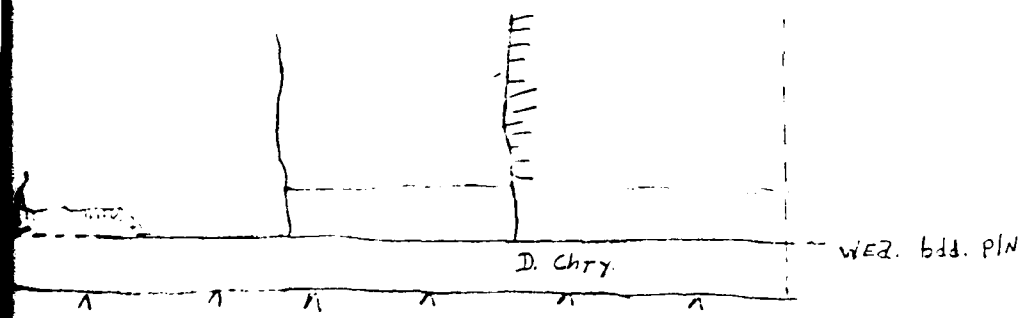
0+100

0+200

0+300

0+400

0+500



PIER 12 SILL KY. SIDE

270_

260_

250_

240_

Q+50P

Q+40P

Q+30P

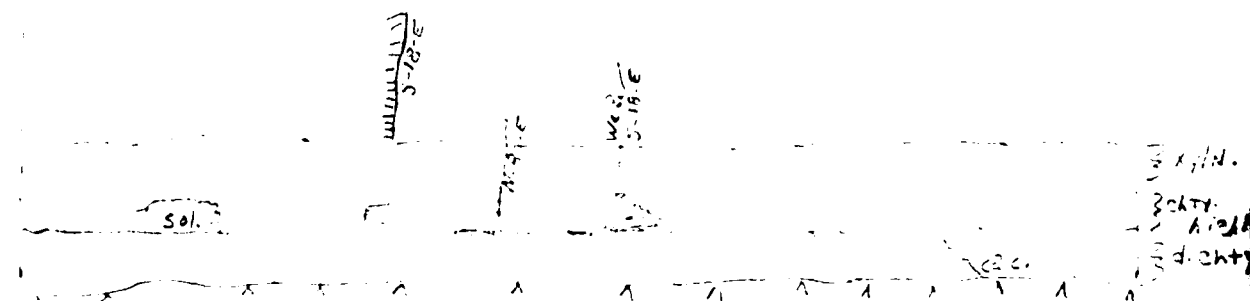
Q+20D

Q+10D

Q+00P

Q+10U

Q+20U



D/S

PIER 12 SILL

ILL S

0010

5

COIT

Q-200

(1) 1. 1. 1.

5. 4. 2.

$$3 \times 4 \times 7$$

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

5. 2024

SILL

ILL. SIDE

0+500

0+600

0+700

0+800

0+900

1+000

1+100

1+200

85+300

MAILED 1500HR 20 JUNE 77 ASD

0+49.50
85+46.04

85+400

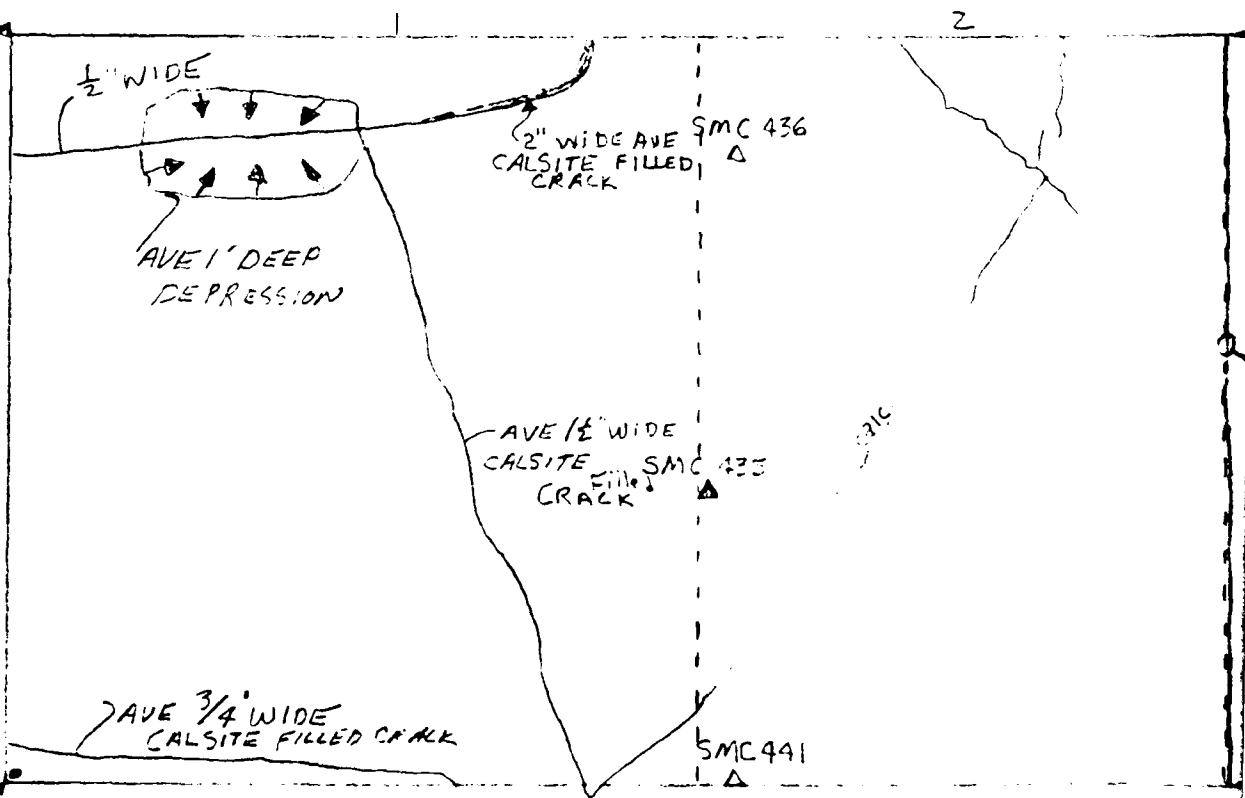
85+300

85+200

85+100

85+000

0+49.50
85+03.54



U/S

TRAINING WALL-1

1+00D

1+10D

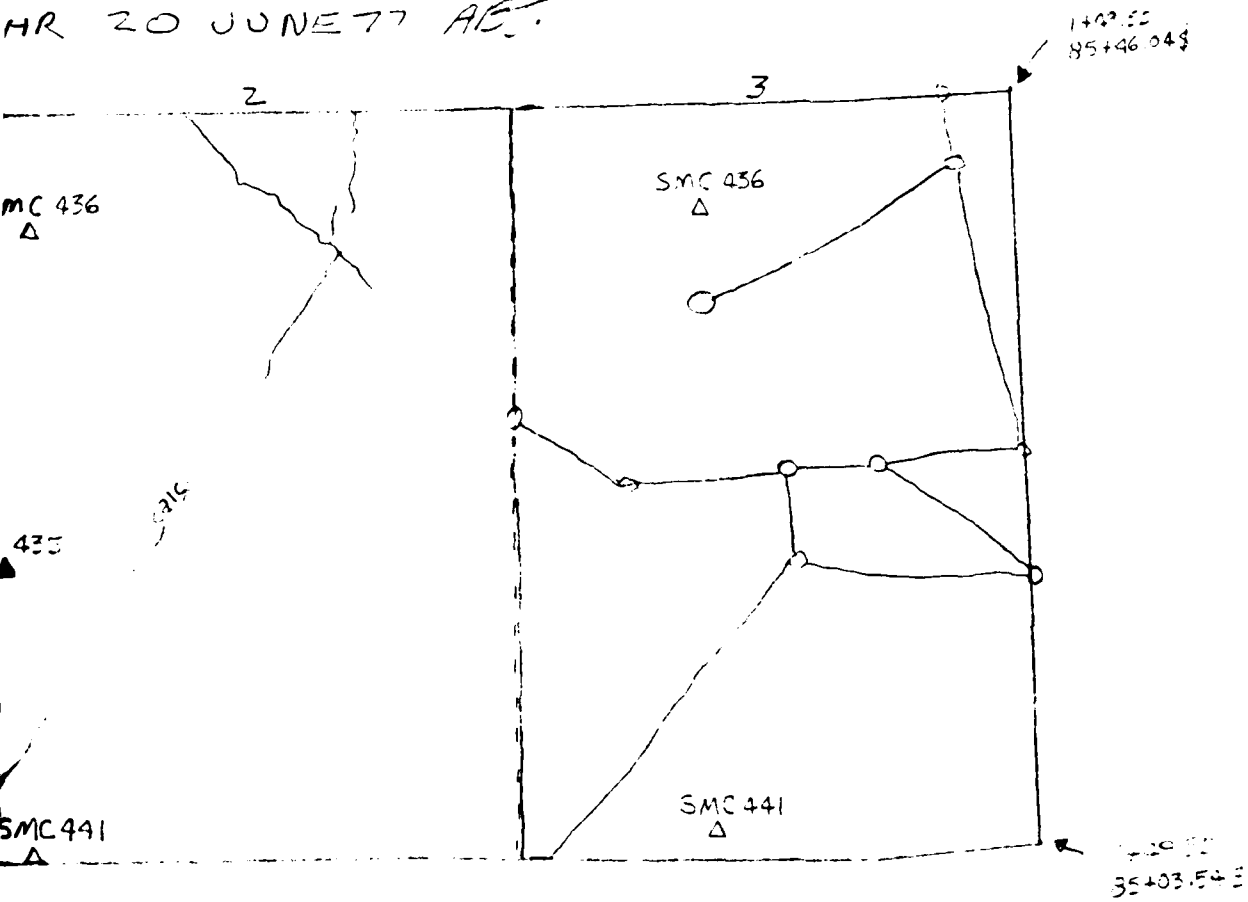
1+20D

1+30D

1+40D

1+50D

HR 20 JUNE 77 A.E.



ING WALL-1

FOUNDATION FLOOR

FPII-52

85+50 S

85+40 S

85+30 S

85+20 S

85+10 S

85+00 S

85+40 S

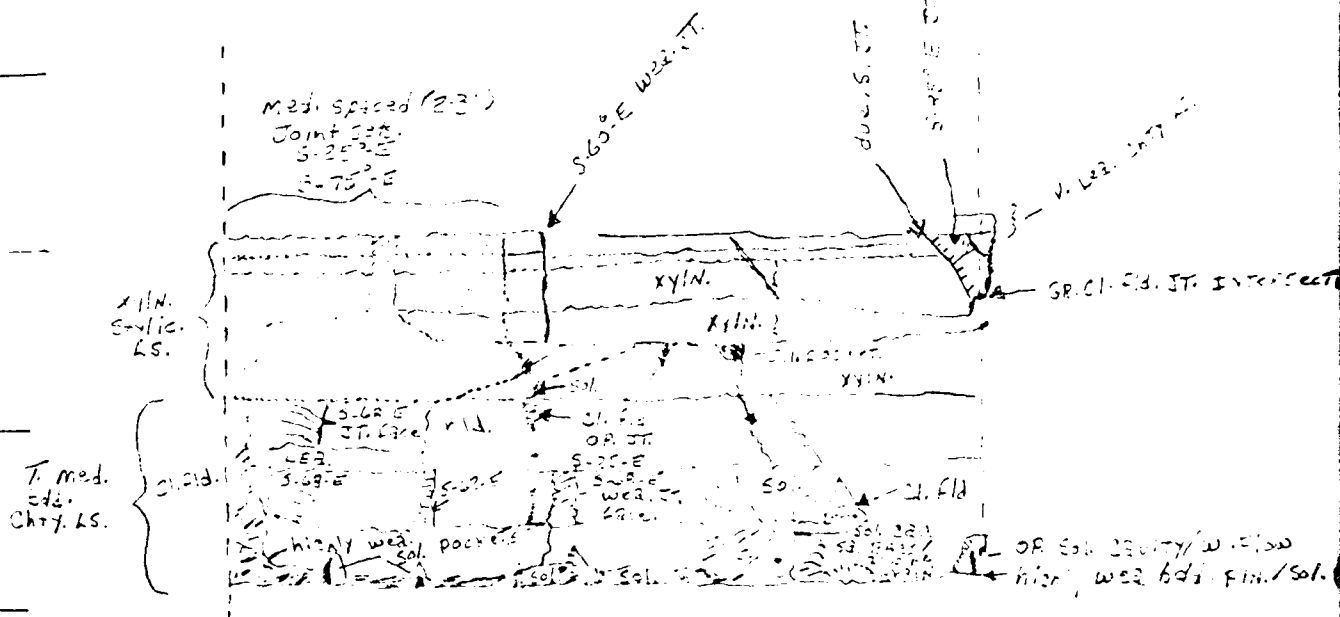
85+00 S

270

260

250

240



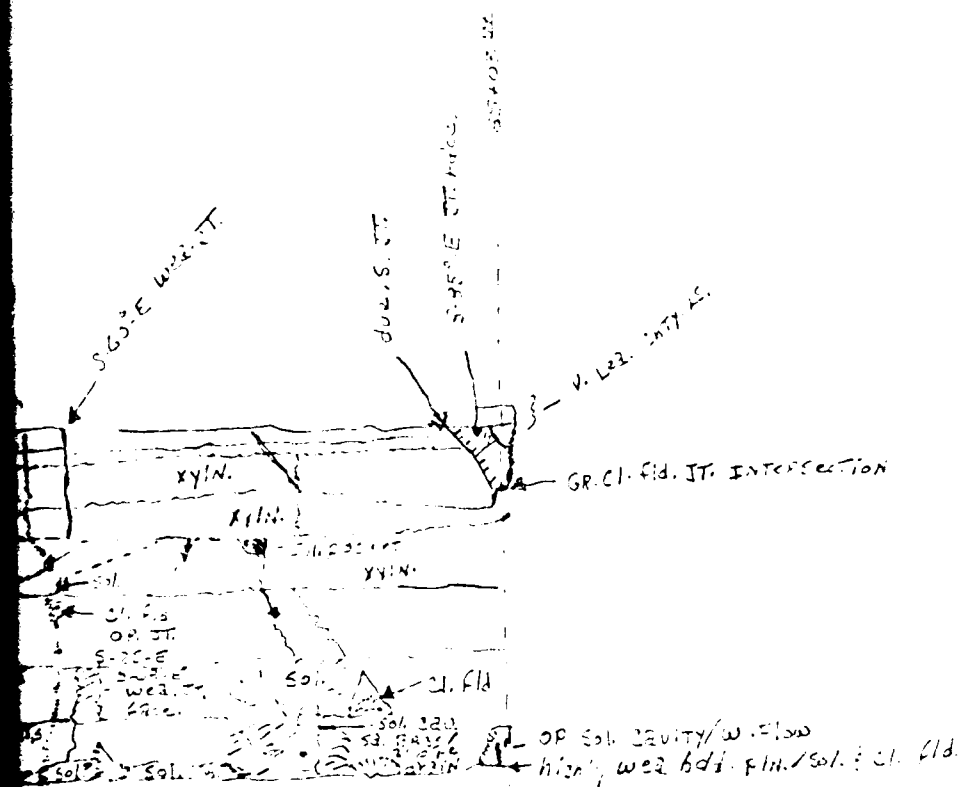
D/S ENT

TRAIL - W/

5050

5

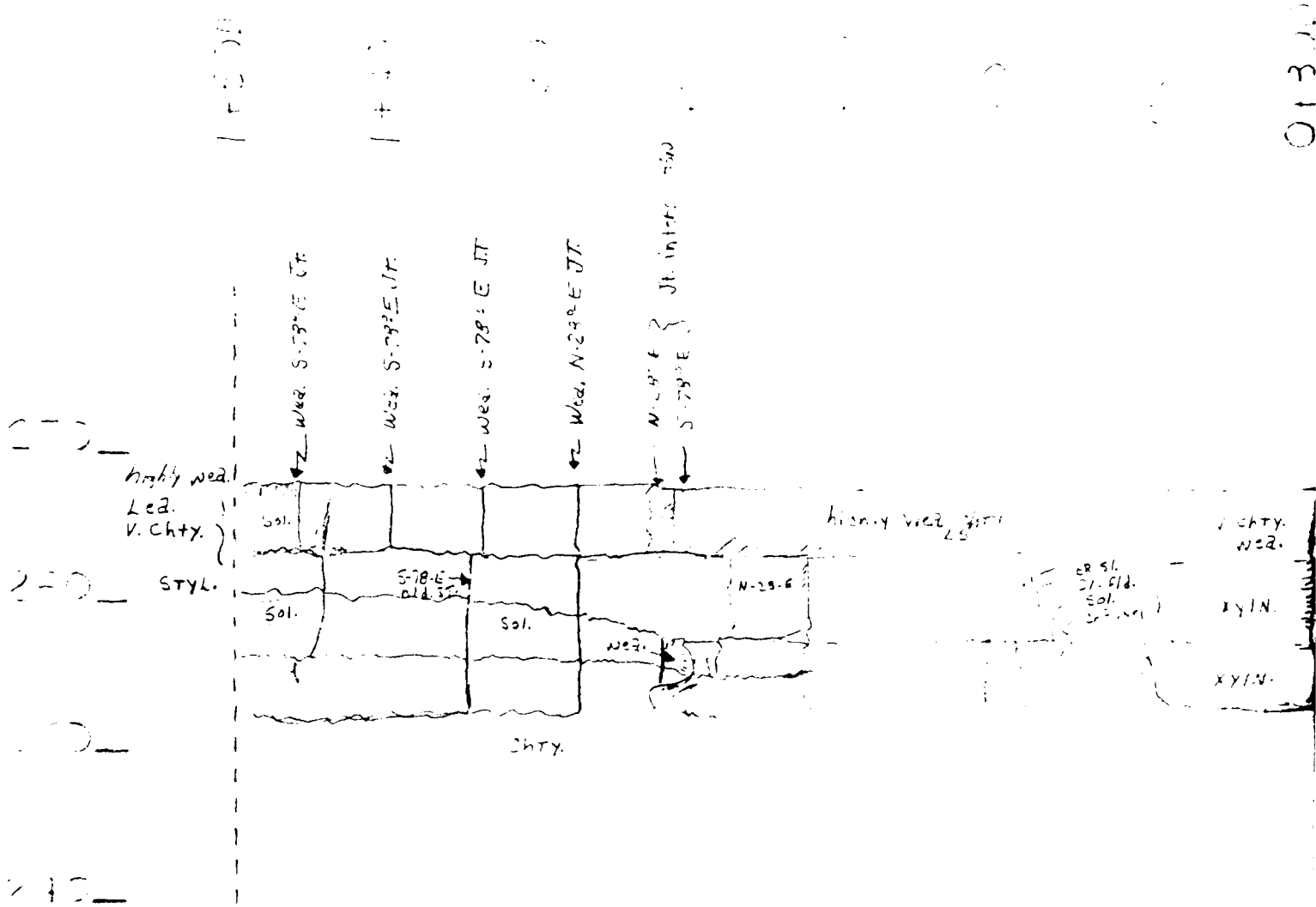
500 + 50



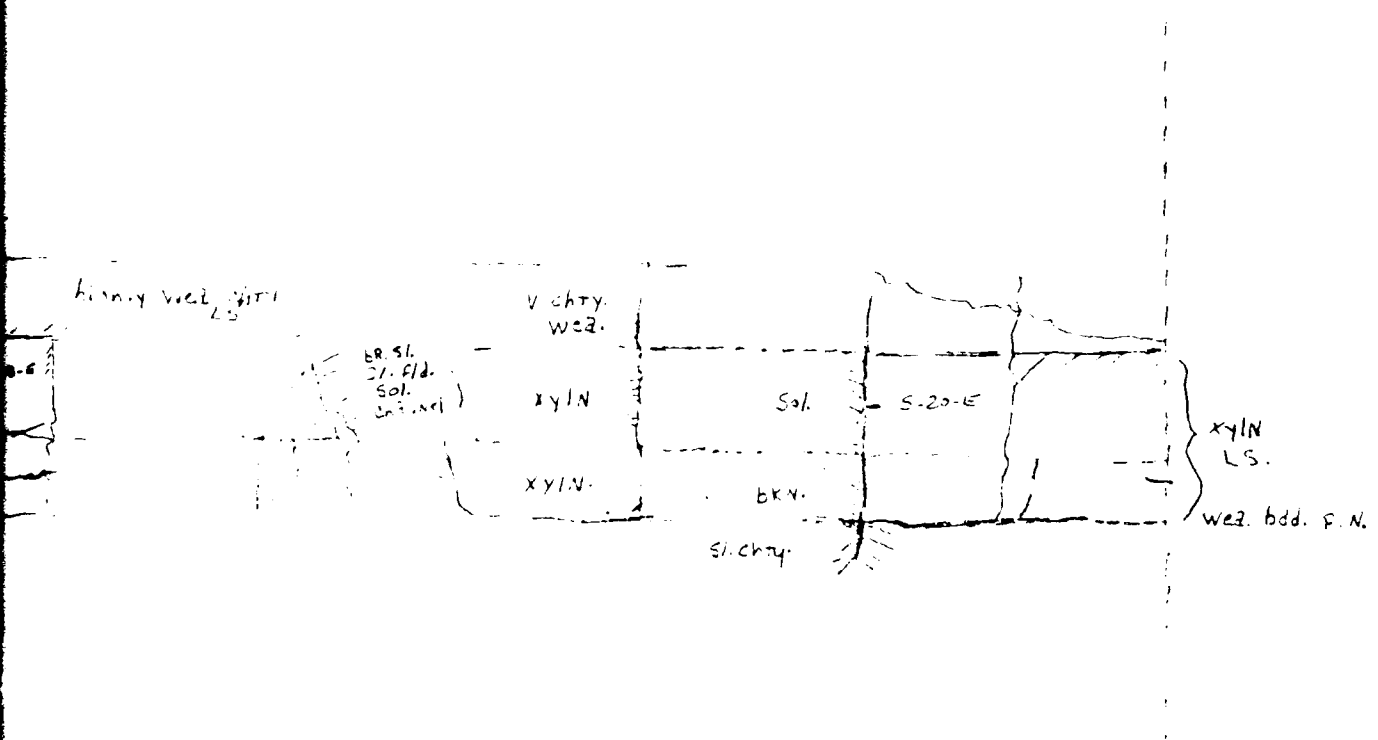
D/S ENC

ALL - W/ -

01300



TRAINING W



TECHNICAL WALL.

2

$$\frac{2}{3} + 0$$

0+5017

$$\frac{5}{6} + \frac{1}{6}$$

10

0551

1001

—

275

250

250.

240.

U/S K Y. SIDE

TRAINING WALL

28. JT. S. G. R. E.

5-2-6 Sol.

Lod.
ChTY.

ChT7.

 $\frac{1}{2}x + y$

Pl. 13
Cham. 1.

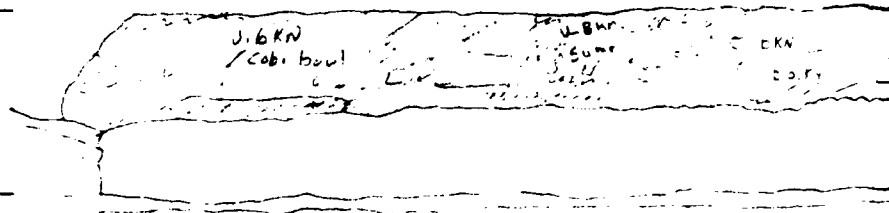
PLJ-13-10-13

D/S
PROFILE

ELEV.
260_

250_

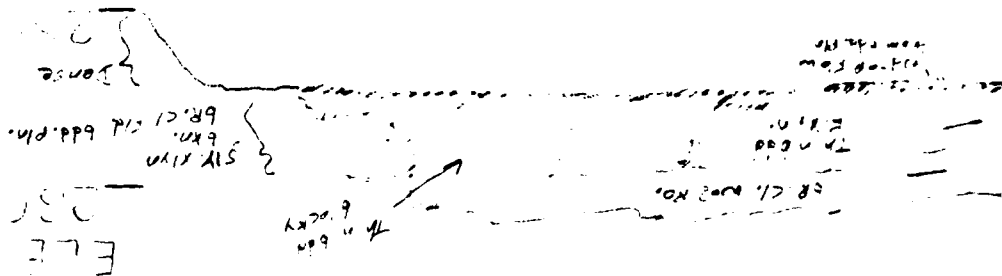
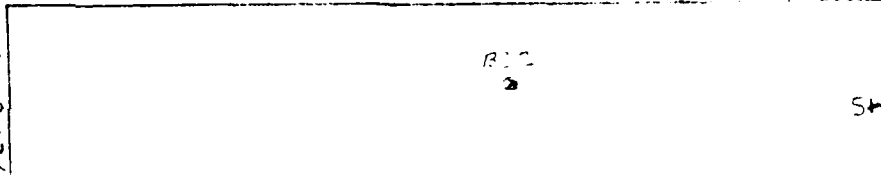
240_



PIER 2

PLAN
VIEW

72+58.54



BAY NO. 1

CUT



D/S
PROFILE

ELEV.

250

250

250

Pier 3

PLAN
VIEW

Sta 73+63.54\$

250

250

260

ELEV

PROFILE

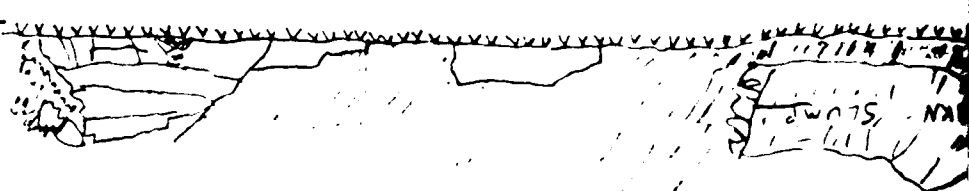
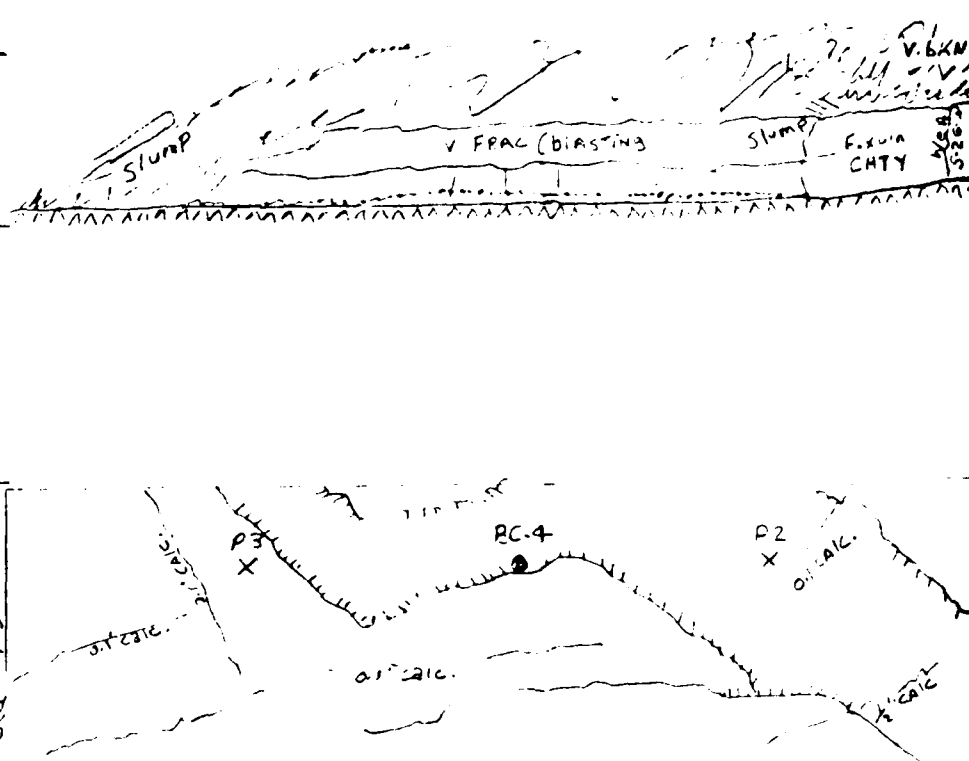
U/S

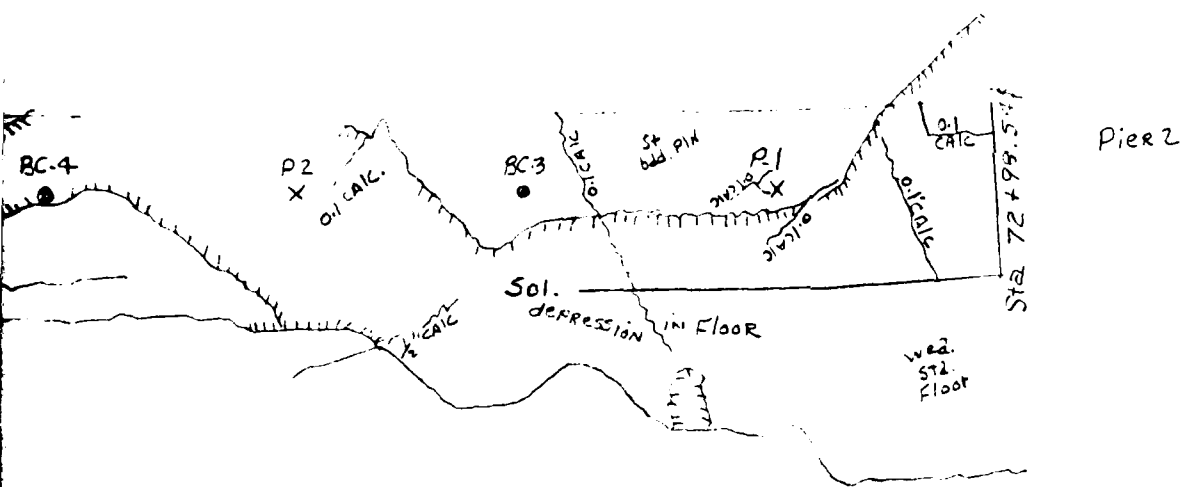
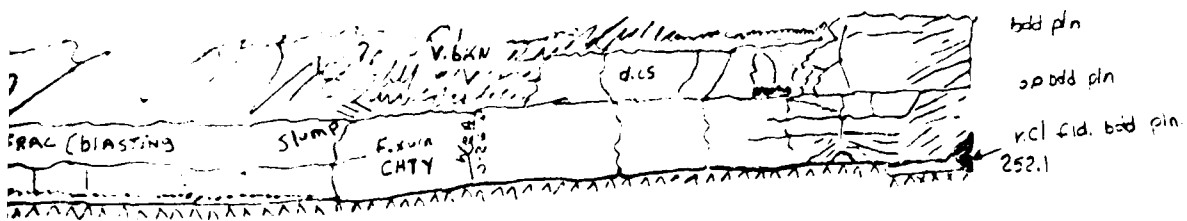
FOUNDING ELEV 250

BAY NO.

2

CUTOFF





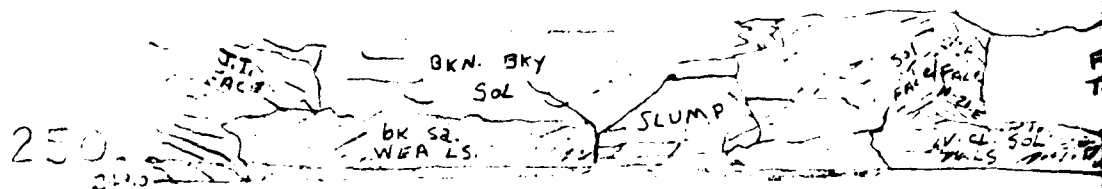
2

CUTOFF TRENCH

DATE 1 DEC 1976

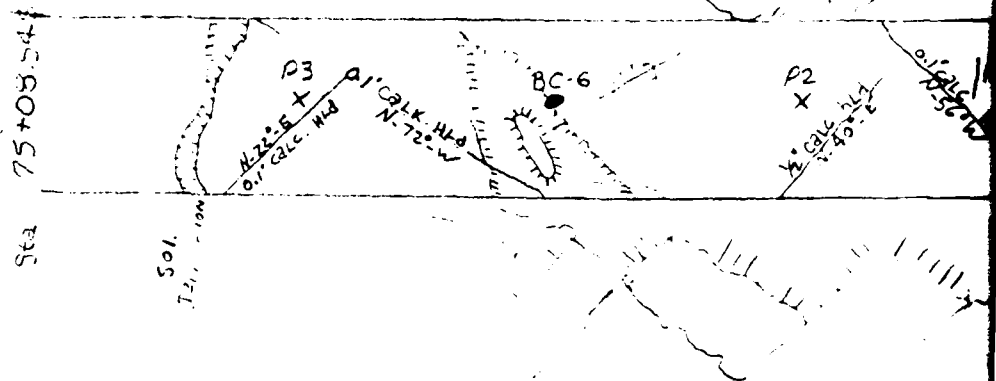
D/S
PROFILE

ELEV.
260--



Pier 4

PLAN
VIEW



250

Slope Face PROFILE

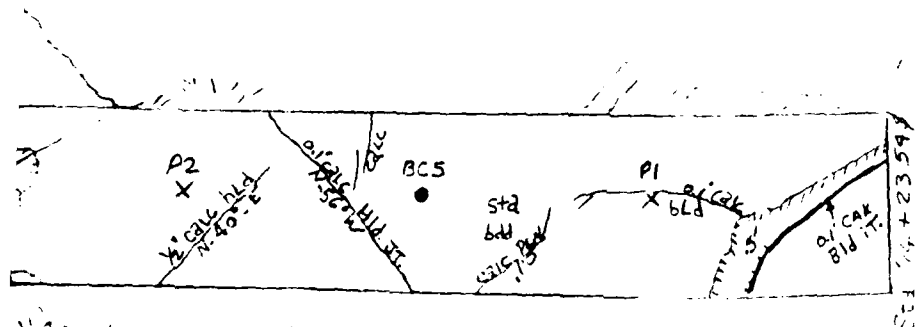
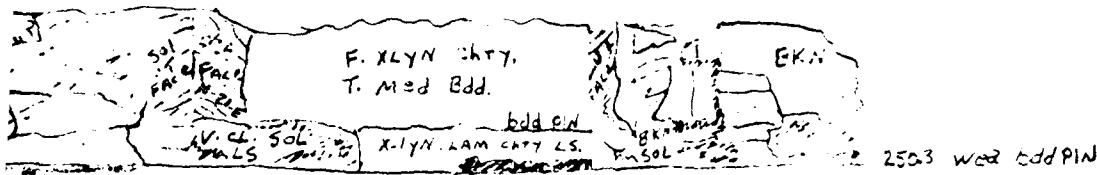
U/S

ELEV.
260--

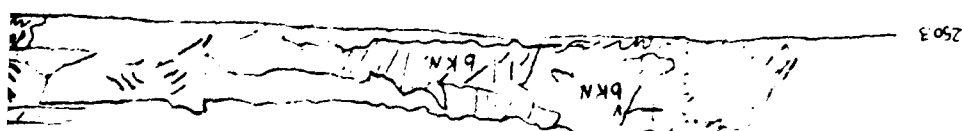


BAY NO. 3

CUTOFF



146.52
3
0+50.511

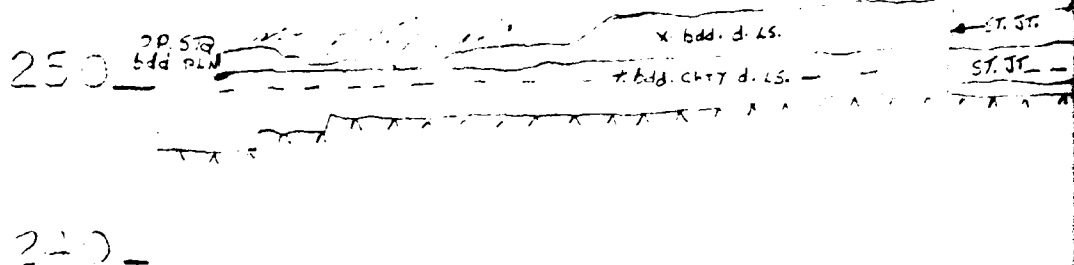


CUTOFF TRENCH

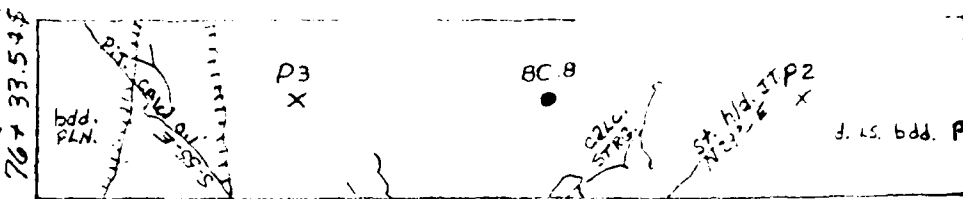
ELEV.
250

D/S

PROFILE

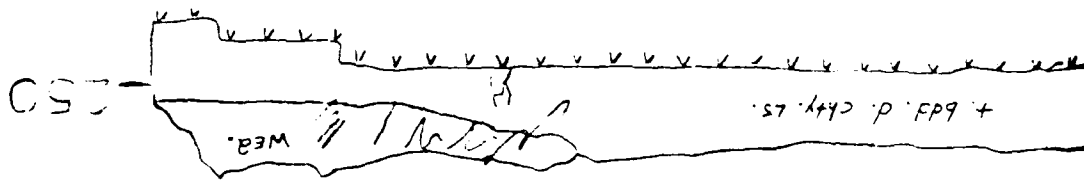


PIER 5 PLAN
VIEW



240

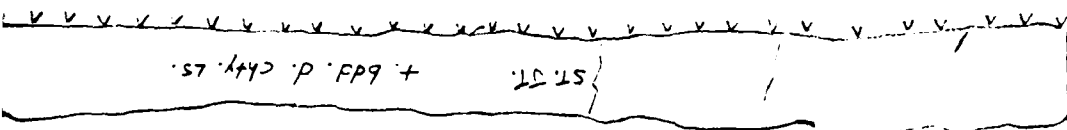
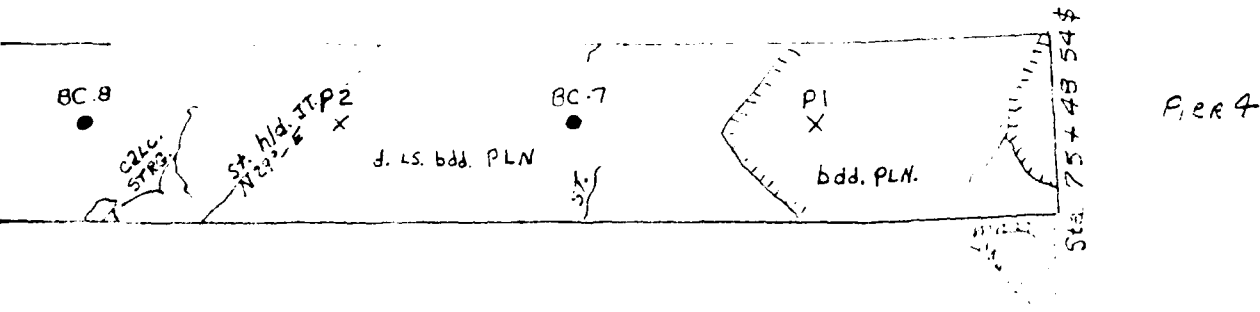
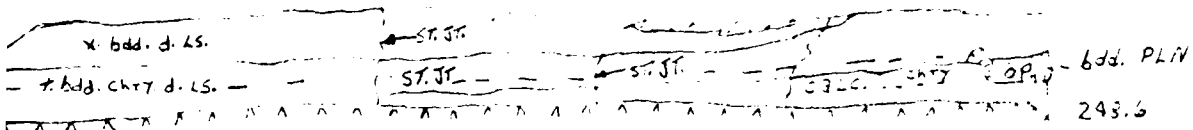
U/E
PROFILE



ELEV.
250

BAY NO. 4

CUT OFF



4 CUTOFF TRENCH

2. fld.
3dd. pin.

15

PLAN
VIEW

242

1250
1251

BAY NO. 5 CUTOFF

Abstract

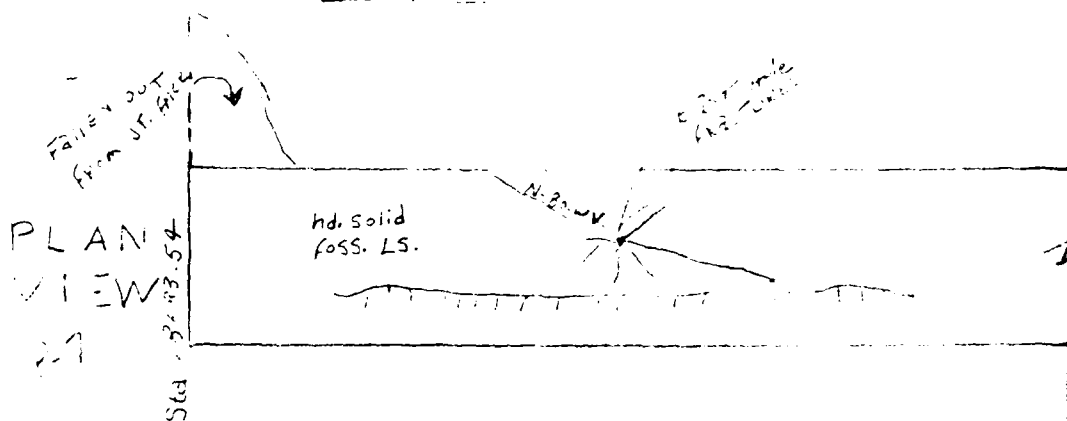
D/S
DD PROFILE

ELEV.
250_

250_

EXPOSED TO HILLS
(N) of P.O. MOD SEAMS.

501 ch.
502 ch. (SE.)



U/E
PROFILE

-250

ELEV.
-250

Rock on 3-1510pe

BAY NO 6

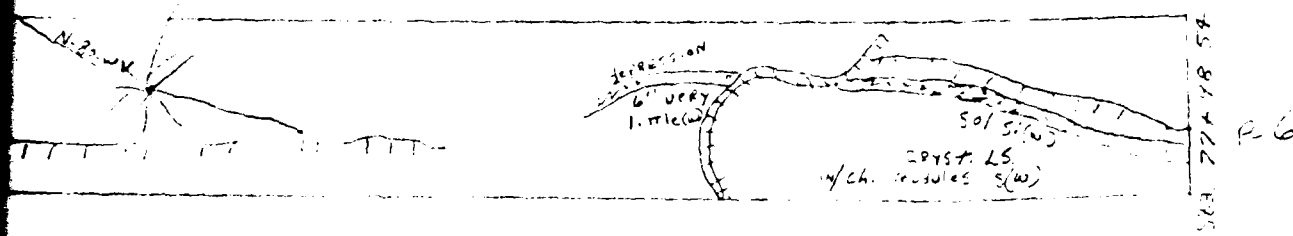
CUTO

To 11 JTS
 1/20 mud seams.

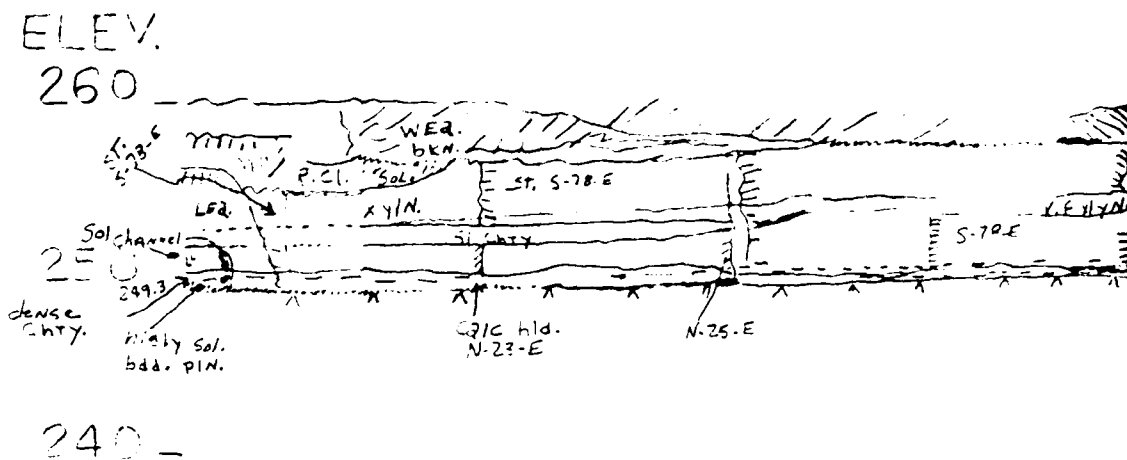
61-CH. mul
SE.

6XN. both MAX. F. VERT. ON ITS.
 MOST BREAKS APPAR. TR. TR. II
 10/PS IN BOTTOM FROM FRAG. IT
 BRK. BACK 6' AT BOTTOM TO 4'
 2 260.0 APPENDS TO be CRACKSHOT

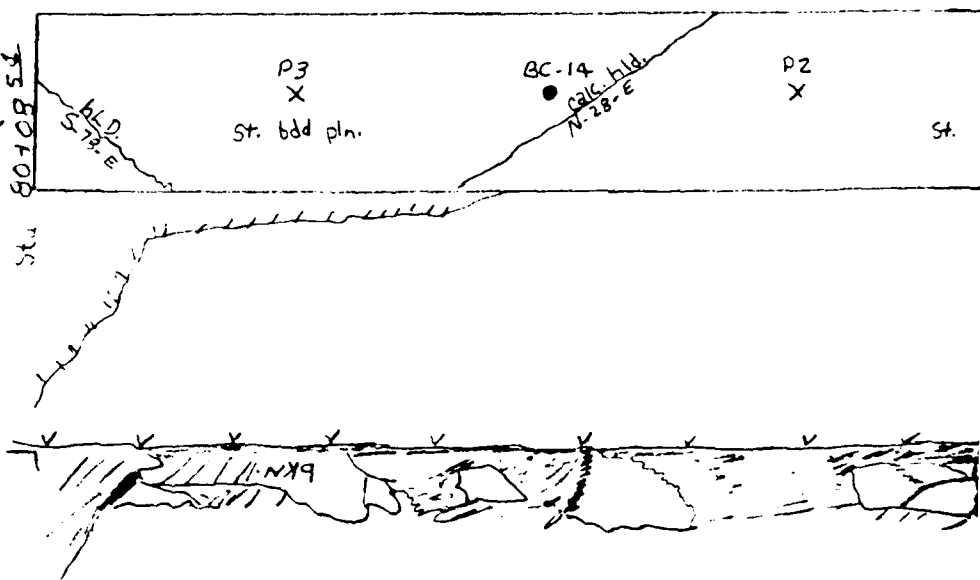
2 260.0
 FRAG. TUBES



L S PROFILE



PLAN VIEW



PROFILE

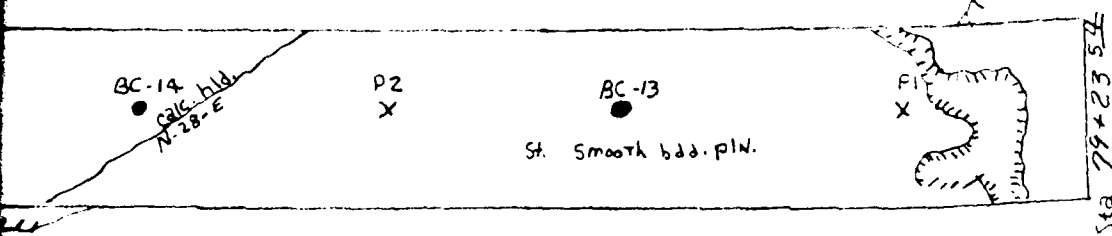
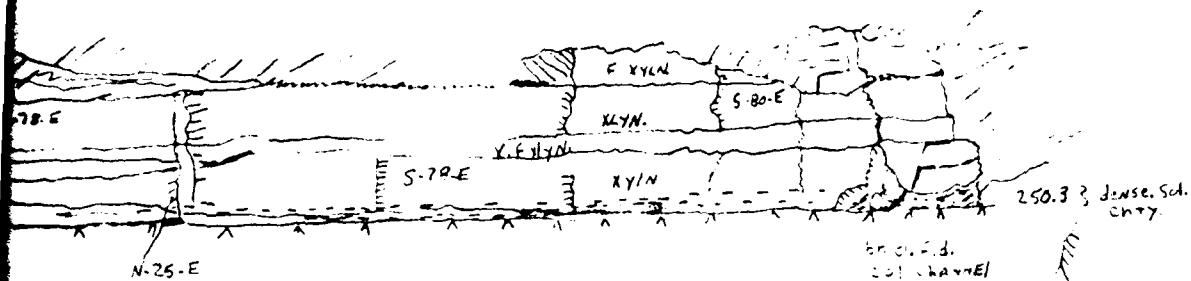
US

ELEV.
 260 -
 250 -

Founding ELEV. 250.

BAY NO. 7

CUTOFF



0+46 ^{SP} 4

0+56 ^{SP} 4

0. 7 CUTOFF TRENCH

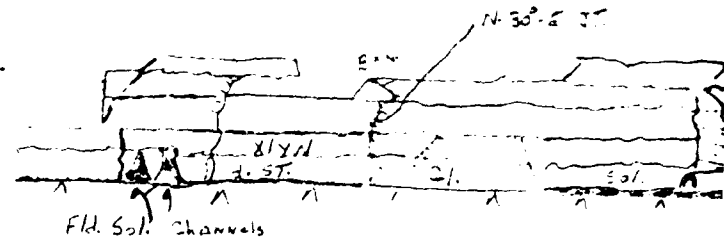
D/S
PROFILE

ELEV.
260

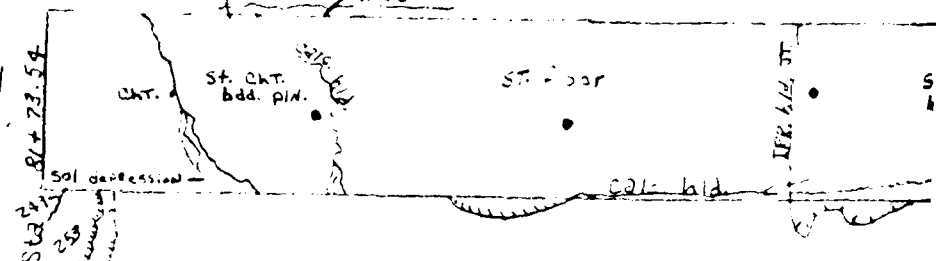
250

240

over break
249



PLAN
VIEW

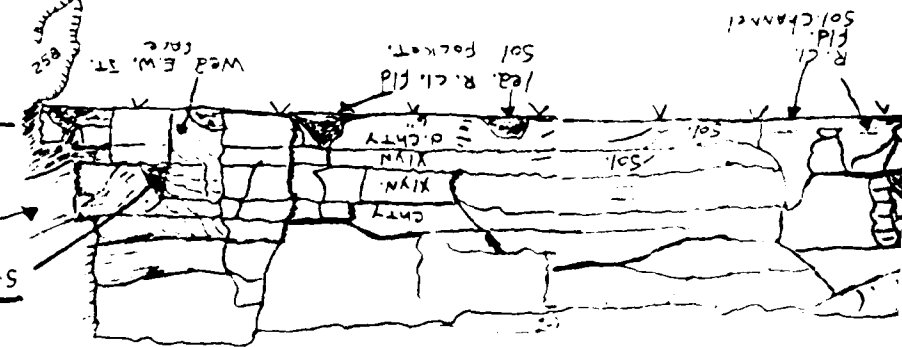


PROFILE

250

5-24-E ST face
5-16-W ST face

ELEV.



25 Holes over drilled 8'

BAY NO. 8

CUTO

4' wide

CHT. 4 pin.

ST. 200r

ST. Smooth bed. PIN. C100

col. bld.

O.L. calc. bld.

100

Sol. Chert

Sol. Chert

R. Cl. Fld.

Sol. Chert

XIVN

CHTY

XIVN

CHTY

OVER RENT

100

BAY NO. 8 CUTOFF TRENCH Fou 249

D/S
PROFILE

ELEV.
257

PLAN
VIEW

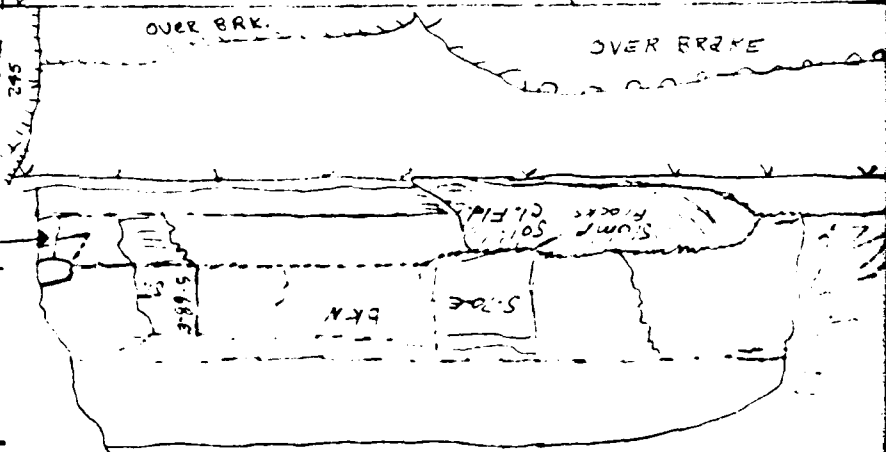
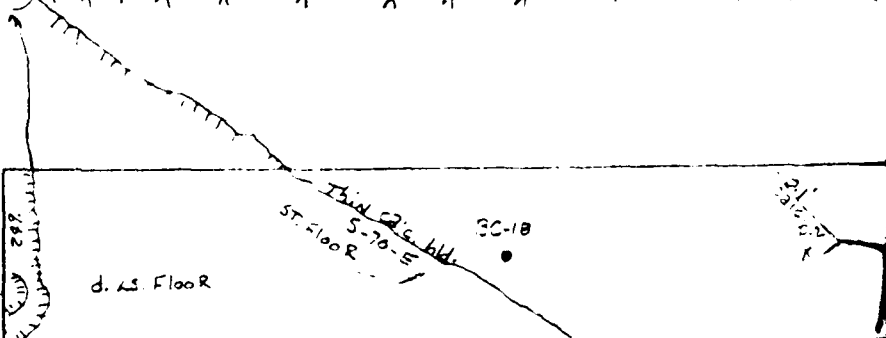
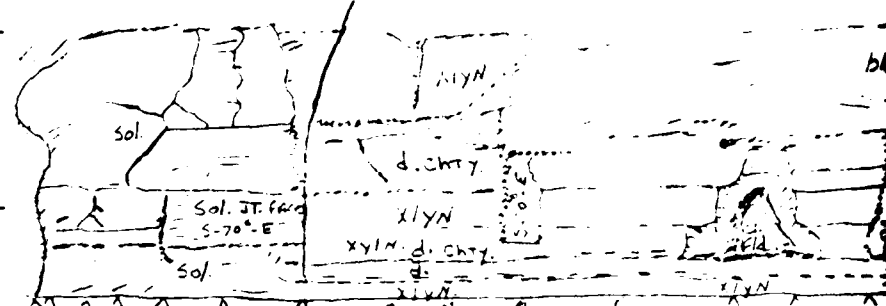
U/S
PROFILE

250

260

ELEV.

S-30°-W.
27° C. H.D. JT.



BAY NO. 9

CUTO

270. Hill, JT.

bkn wea

d. chry

xlyn

xyln d. chry

Sol.

Core

CHTY

OVER BRKE

thin bed. 5-70 E

x bed. 5-70 W

Sump Sol. Cl. Fld

S. 30 E

ST. Floor

ST. 91+73.54

Fou 245

D/S
PROFILE

ELEV.
260_

250_

240_

PLAN
VIEW

240

250_

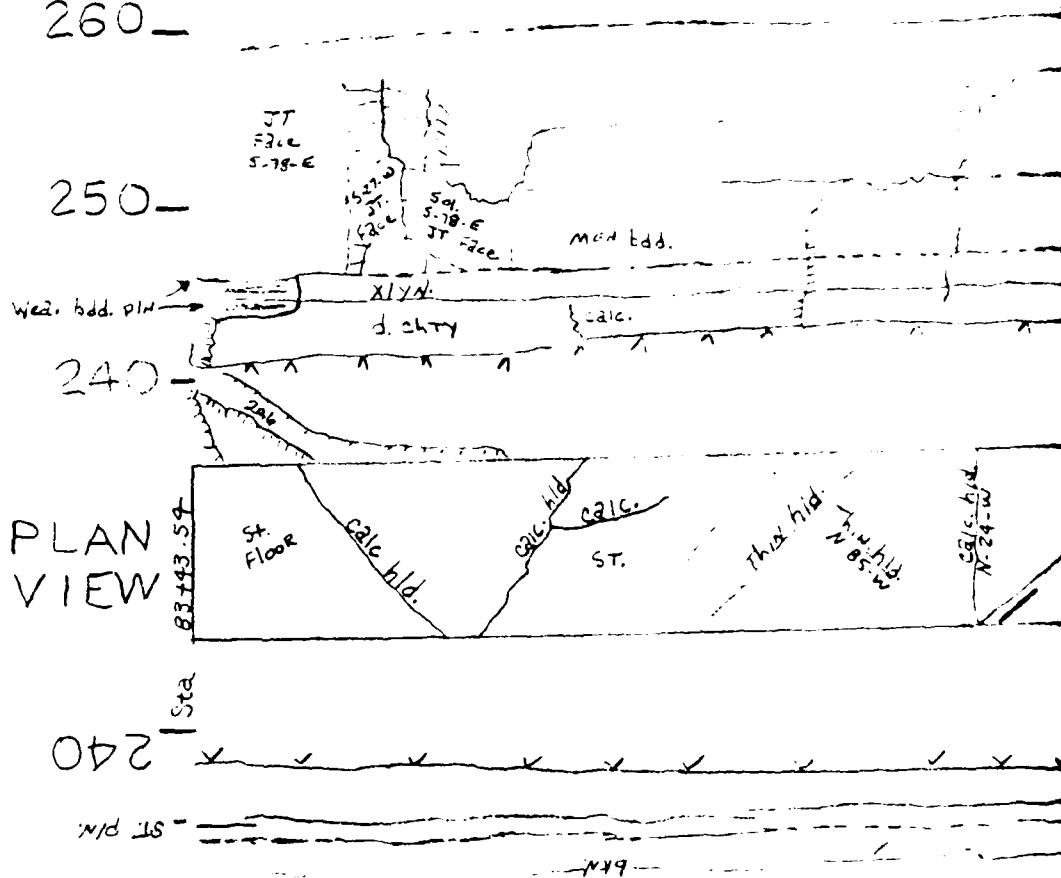
ELEV.
260_

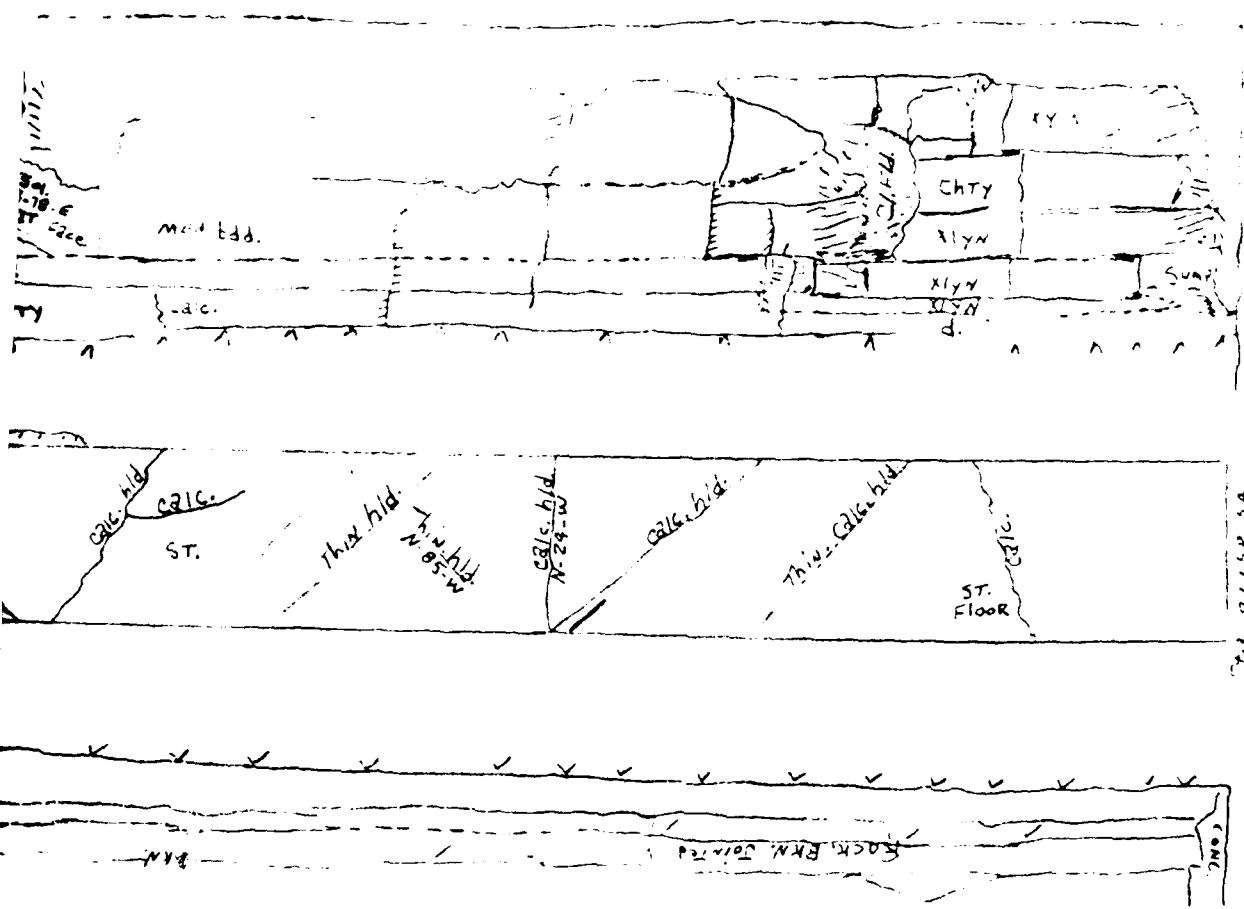
PROFILE

U/S

BAY NO. 10

CUTO





Y NO. 10 CUTOFF TRENCH

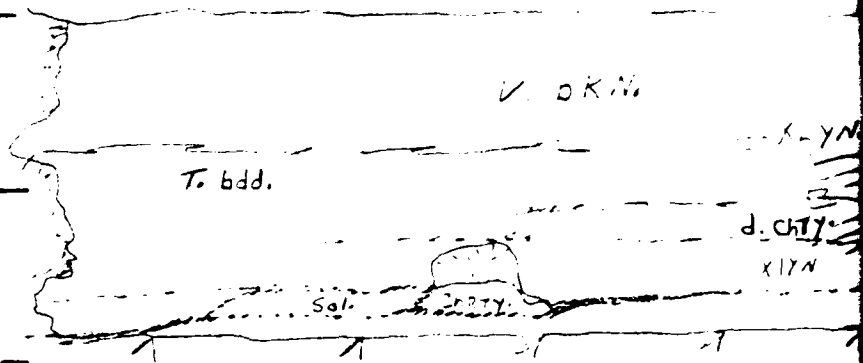
F- 243

D/S
PROFILE

ELEV.
260

250

240



PLAN
VIEW

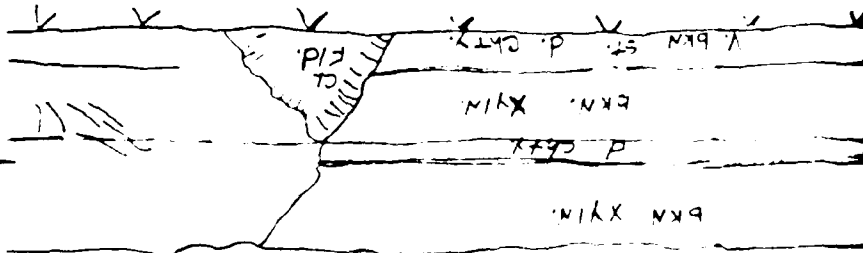
ST. FLOOR.

sta

240

250

ELEV.
260



PROFILE

D/S

BAY NO

//

CUTO

1

V. OKN.

ALYN.

d. chry.

XLYN

d. chry

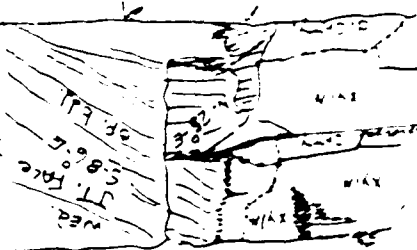
ST. bdd. PLN.

V. BKN ST. d. chry.

BKN. XLYN

d. chry

BKN. XLYN.



NO 11 CUTOFF TRENCH

F-243

FP II-66

71-708

 $25 + 12$

505

55

10

72425

1

2000

300.

295.

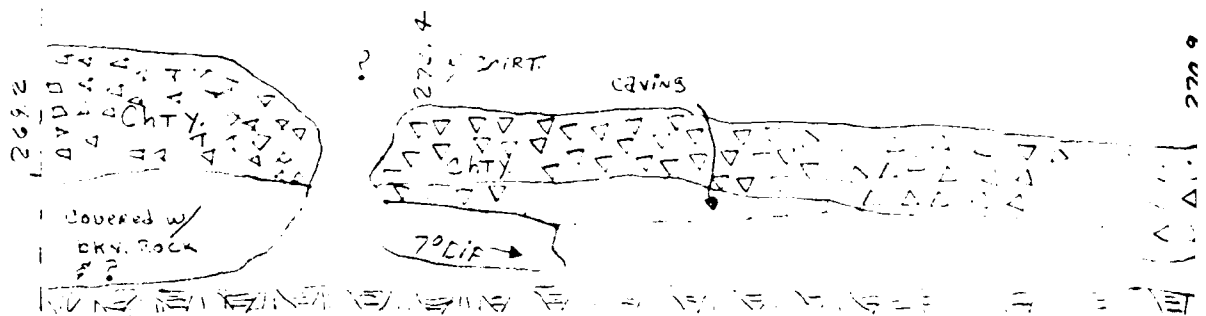
201

279_

260_

250_

Note all the exposed between pores h.
 a very weathered w/lot of st
 in red frequency in clay matter
 This entire face looks very much like
 feature.



72+05

72+20

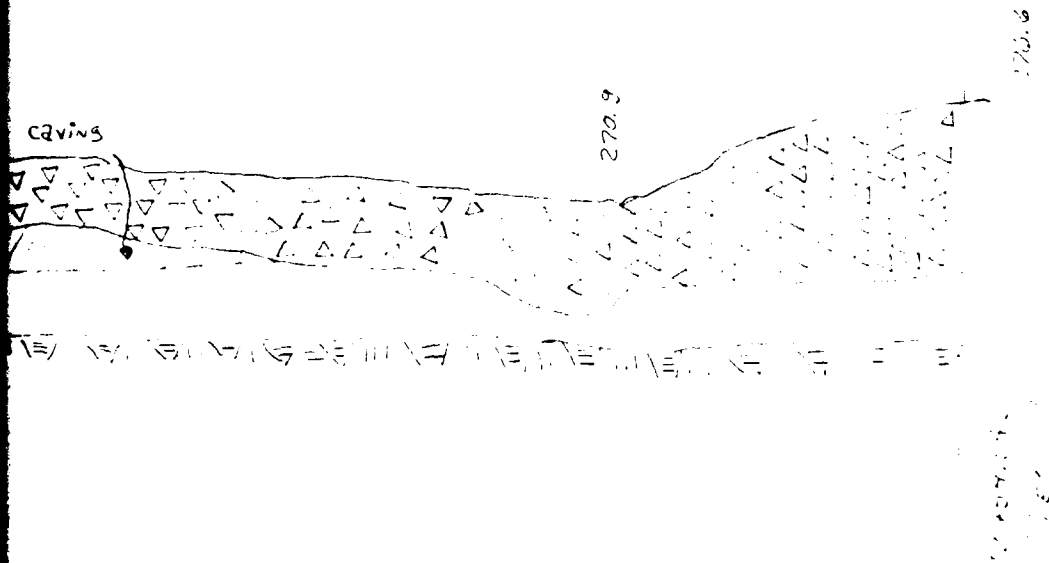
72+35

72+50

72+65

72+80

note all rock exposed between piers 1 & 2
is very weathered with rock staining out
in places frequently in clay material.
This entire face looks very much like a coral
feature.



BAY I U'S FACE

1950

1951

1952

1953

1954

1955

1956

1957

300_

1958

290_

280_

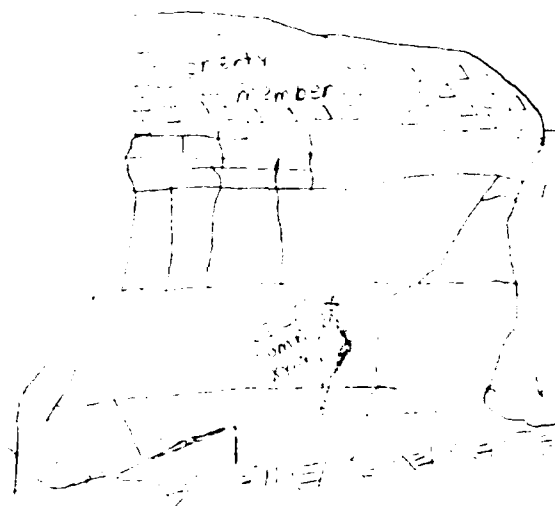
270_

260_

250_

1959

1960



Red soil clay

Soil Channel

BAY 3

73+40 S

73+50 S

73+60 S

73+70 S

73+80 S

73+90 S

Reddish
clay

Sol. Channel.

261.0

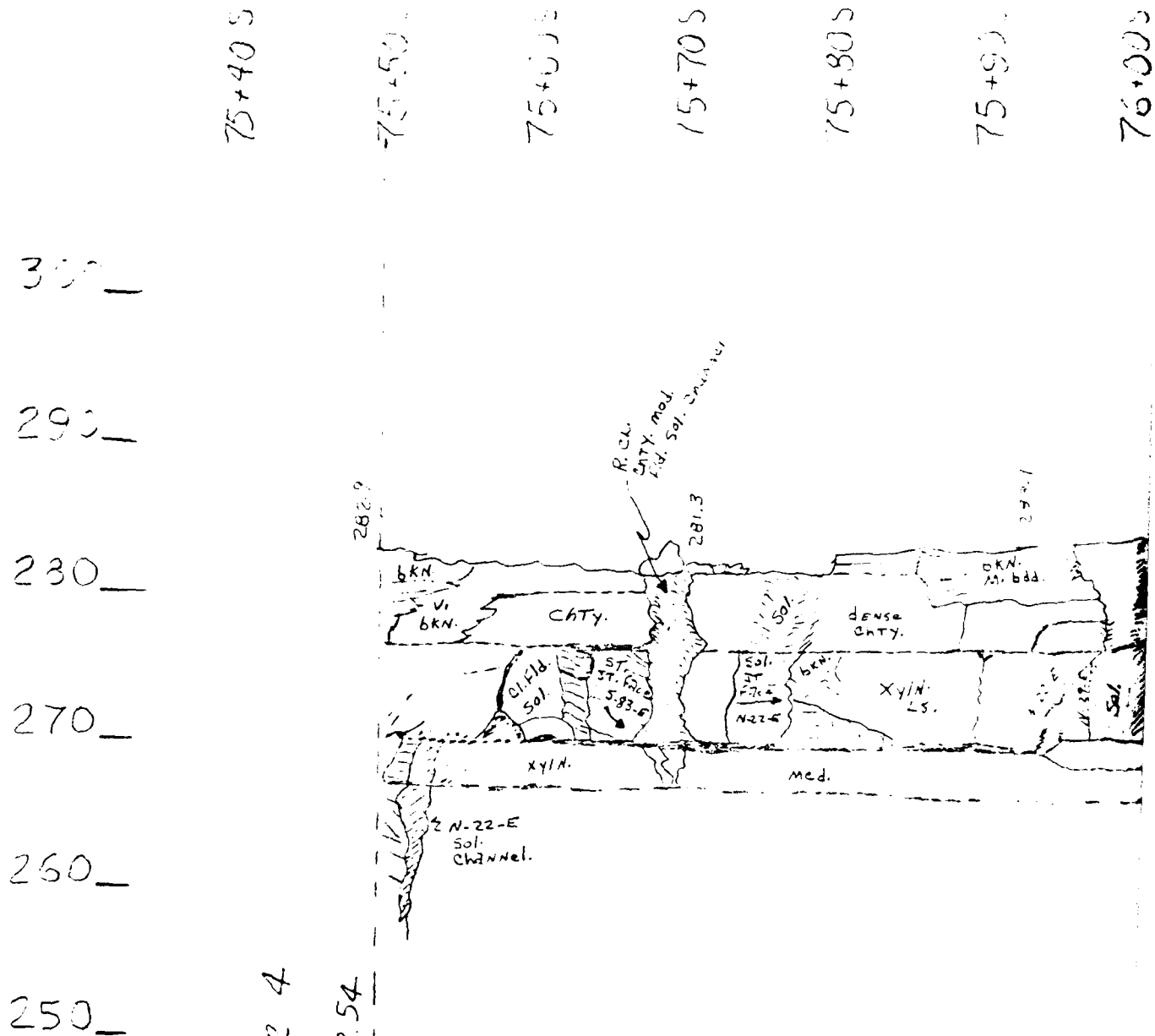
" 251.2

73+83.54 S

Pier

BAY 3

2



SAV ± PROFILE ALON

$75 + 805$ $75 + 90 =$

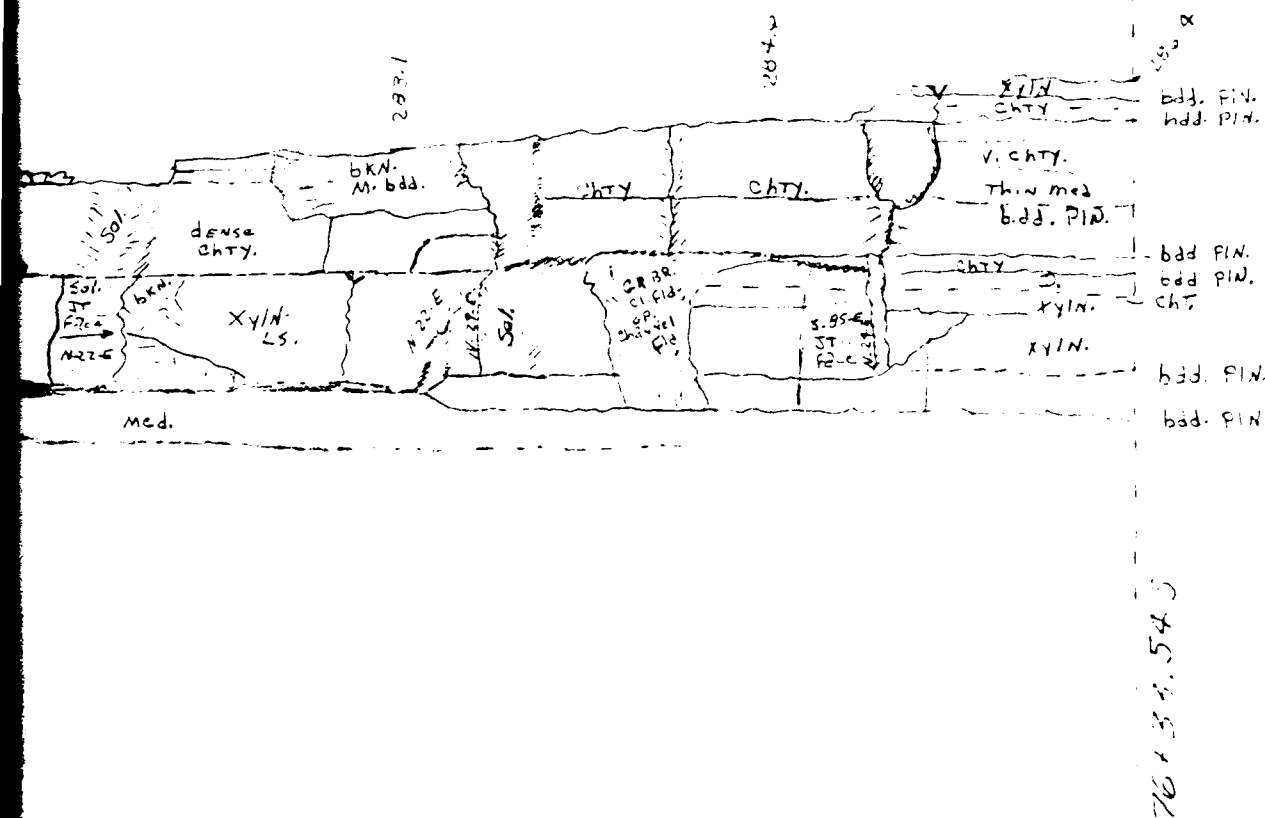
100

76+103

16+20s

 $76 + 305$

76.405



END - PROFILE ALONG STA. 1+270 U/S FACE

300_

290_

230_

270_

260_

250_

PIER 5

76+73.545

289.5

289.7

291.3

T bdd. v. chry. d. - v. F. xyl. N. LS.

bdd. 6"-15" Thick

sol. chert
interbedded by thin
bedded ls.
DKN.

T med. b. v. chry. LS. d. v. F.

we? bdd. pin
x-1/2 dk. gr. shy. bdd. pin
bdd. pin
bdd. pin

chry. x. F. xyl. N.
chry. - led.
med. xyl. N. LS./occ. chry. nod.

chry

xyl. N. LS.

ER.
sol.
JT.

S-33-E

Sec. 14
V. F. N.
283.6

N-23-E
GR. SI.
21. F1
JT. we2

-v. F.
F. 3.

344 E 100' E A-272 - 100' E 100' E

5

5

20

77+305

2-1-57

77.50

9

239.7

2913

bdd. 6" - 1.5"
Thick

222

R. 21.
Sol.

vid. sol.
channel by J.
INTERSECTION

ВКЗ

T. med. bds.
V. Ch-y. LS.
----- d. v. f. xy/n

۱۱۲

$$142 \cdot 1 = 142$$

chty

30 Ty. 22

507. 62

1921. X. 4. 4. 25

—E2.
504.
JT.

5-39-E

500.
VER 112
F296.

$$\{N-2\varepsilon^2 \in$$

GK. 51.

21. fl

三、五、七、九

- hld.

1 Fid.

7 d.
20. E

1.14.25.

$$1: \quad \begin{matrix} 20^\circ - N \\ 30^\circ - W \end{matrix}$$

5715822

0-2-1

ROBERT ALONSO, JR. 1000 1/2 - 1115

79120

79235X

(9-30)

(9-30)

(9-30)

(9-30)

(9-30)

(9-30)

300_

290_

280_

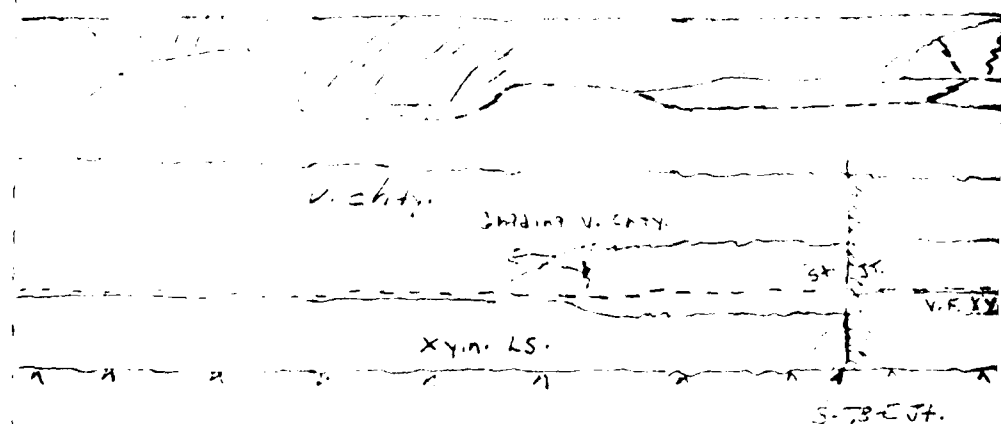
270_

260_

2972

299.4

300.1



PIER 7

BAY 7 /SFACE

1

300.1

77-5410

3. 135. 22-02-1974

sol.
LS

4. 7 000. 274.

ing v. City.

V. ch + y.

554

5441

Exy/N chry.

...

V.F. XY (N)

5-78-54.

S. 70° E IT.

St
5.75-E
JT.

BAY 7 1/5 FACE

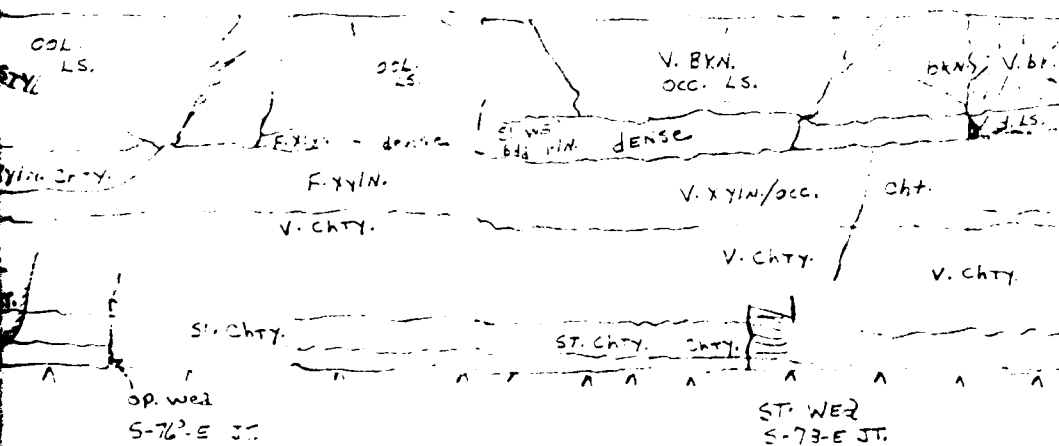
$P_i \in \mathbb{R}^3$

31+00
 31+00
 31+00
 31+00
 31+00
 31+30
 31+00
 31+00

2979

2980

2985

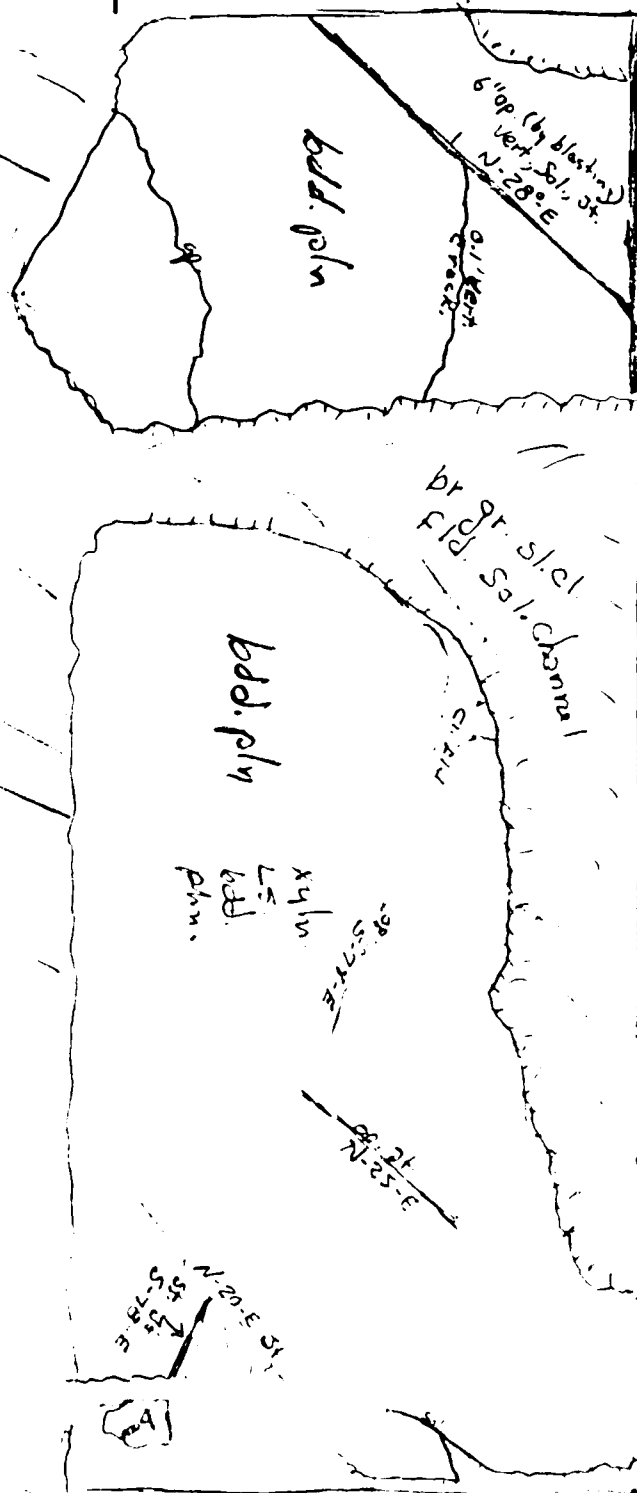


BAY 8 US FACE

Pier 9

2

| | | | | | |
|--|-------------------|--|--------|----|-------|
| CORPS OF ENGINEERS, U.S. ARMY
OHIO RIVER DIVISION | COMPUTATION SHEET | | PAGE | OF | PAGES |
| | SUBJECT | | DATE | | |
| INSTALLATION | COMPUTATION | | NUMBER | | |
| COMPUTED BY | Pier 9 | | | | |
| CHECKED BY | | | | | |



6" gap.
caused by blasting
along Sol. jt.

solutioned along the El. 265 bld ph. @ Sta 1+2714

BAR 9 PLAN views

AS of 1977

$$C + 1$$

0317

33

0.

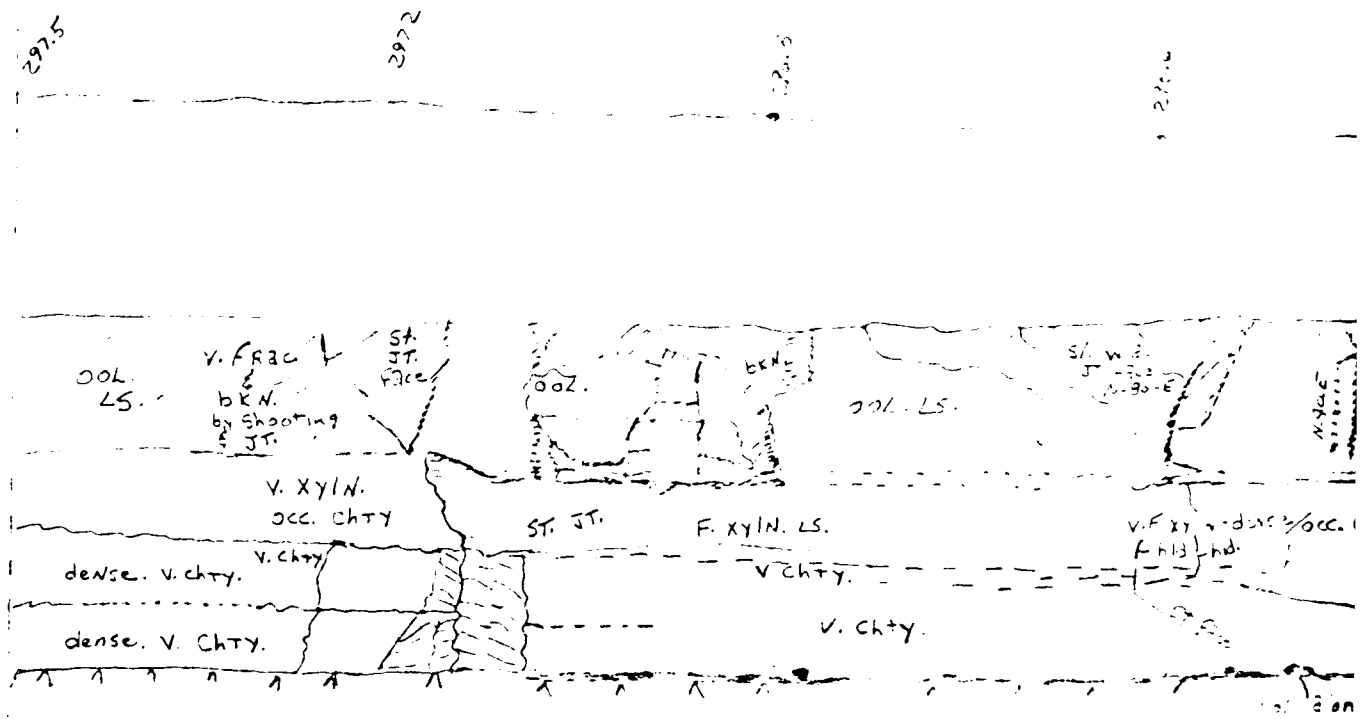
10

100

11

100

11



PIER 9

RAY 9 VS FACE

/

P. ER 10

- 290

-280

- 270

-260

510

15

7/RESTA -
- 254

290

Aut. be. h

230

641 - 4. 07. 07

2

20. 20. 20. J.
 20. 20. 20. J.
 20. 20. 20. J.

Sol. 233. p. 11. 1

200

PIER 10

PAY 10

AD-A125 057

SMITHLAND DAM OHIO RIVER FOUNDATION REPORT VOLUME II
PHOTOGRAPHS AND FOUNDATION MAPS(U) JONES-TEER SMITHLAND
KY R SCHIPP ET AL. FEB 83 DACW62-75-C-0015

9/3

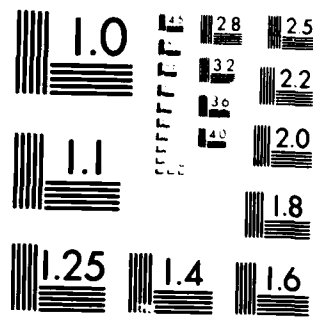
UNCLASSIFIED

F/G 13/13 NL

END

DATE
FILMED

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

83+50

83+00

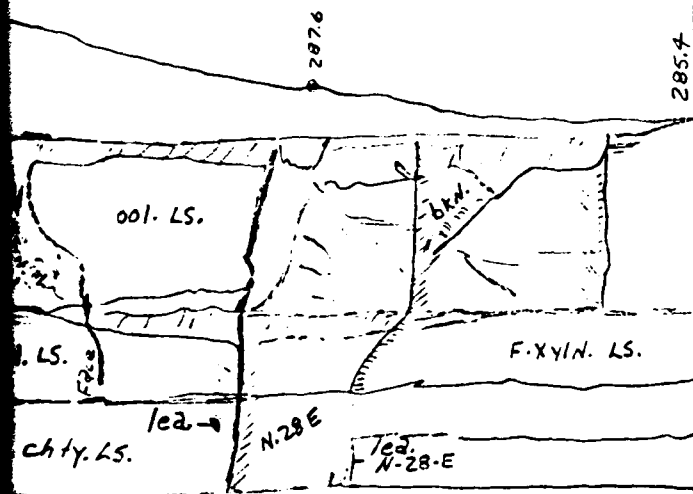
83+00

83+80

83+43.54

83+90

84+00



10 U/S FACE

PIER II

2

84+00

84+10

84+20

84+25.54

84+30

84+40

84+50

84+60

84+70

310

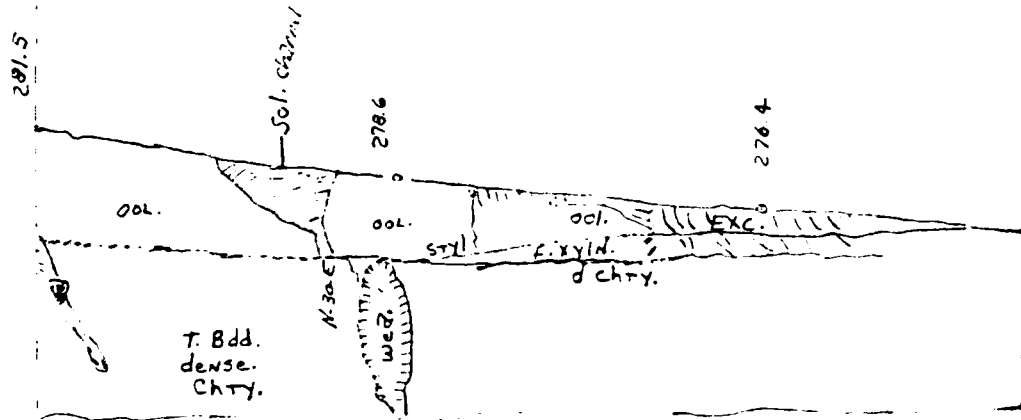
300

290

280

270

260



PIER II

BAY II U/S FACE

84+60

84+70

84+30

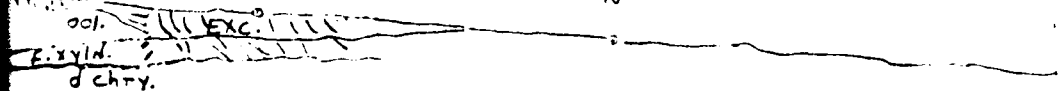
84+90

85+00

85+10

276.4

279.2

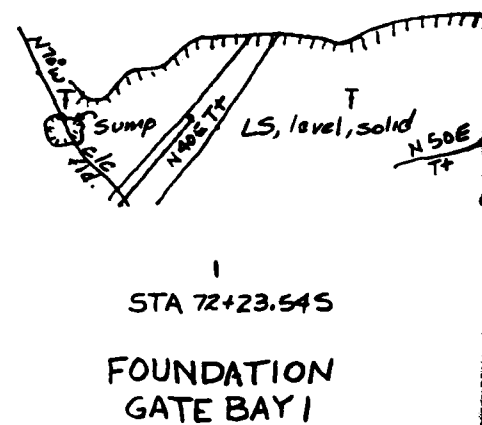
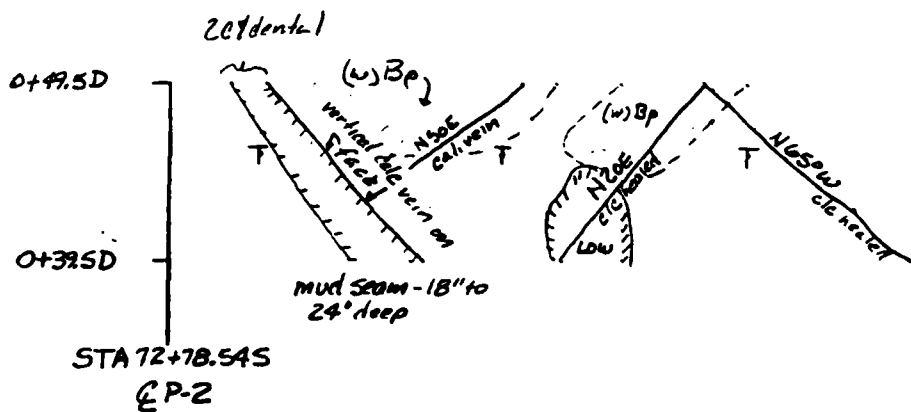


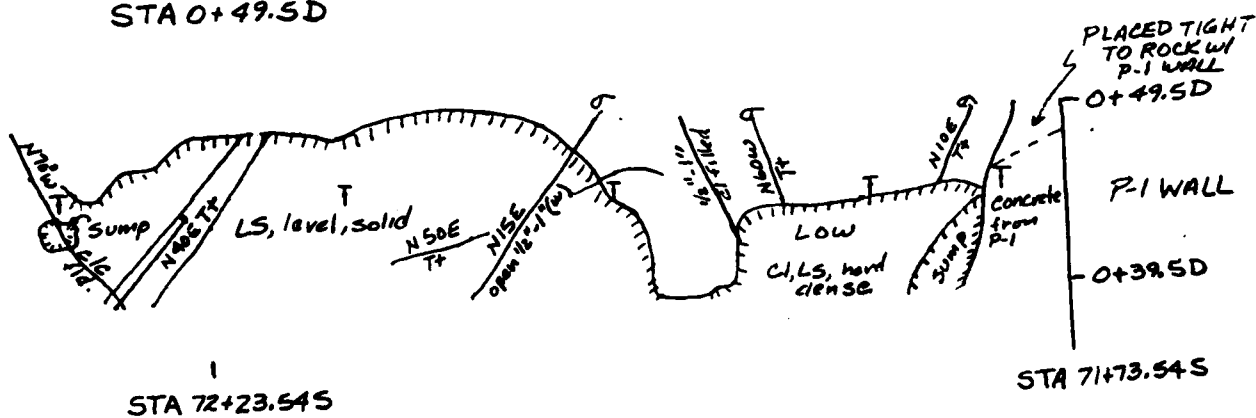
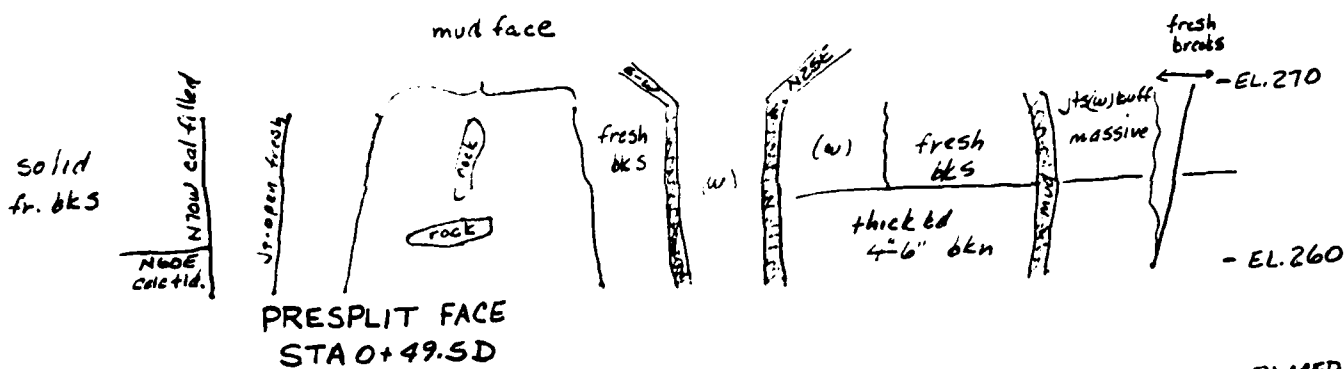
BAY 11 U/S FACE

PIER 12

EL 270-

EL 260-





EL260

LS, thk bdd
fresh brks
from "hoe-ram"

clay
face

isolated
rock

clay face
no rock showing
sloped back $50^{\circ} \pm$

0+49.50

0+39.5D

LP-3

STA 74+03.54S

sol chnl
10CYVOL

sol chnl

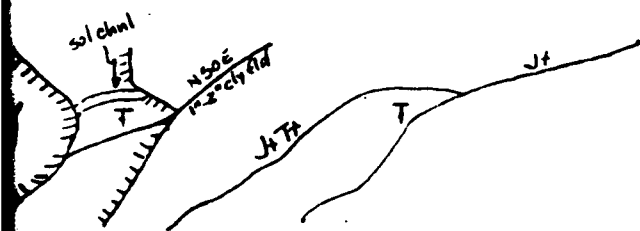
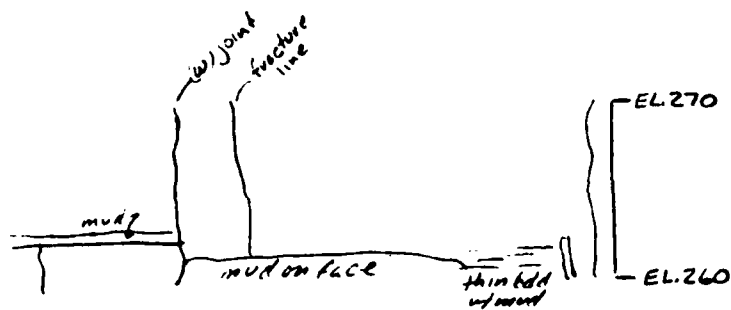
~~NSOE~~
~~1st 2nd 3rd 4th~~

HT

STA 73+38.545

FOUNDATION
GATE BAY 2

WING
0±

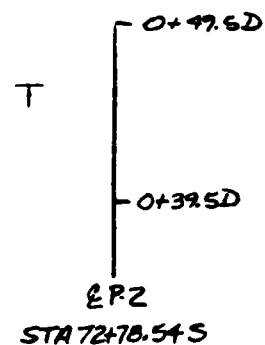


STA 73+38.545

FOUNDATION
GATE BAY 2

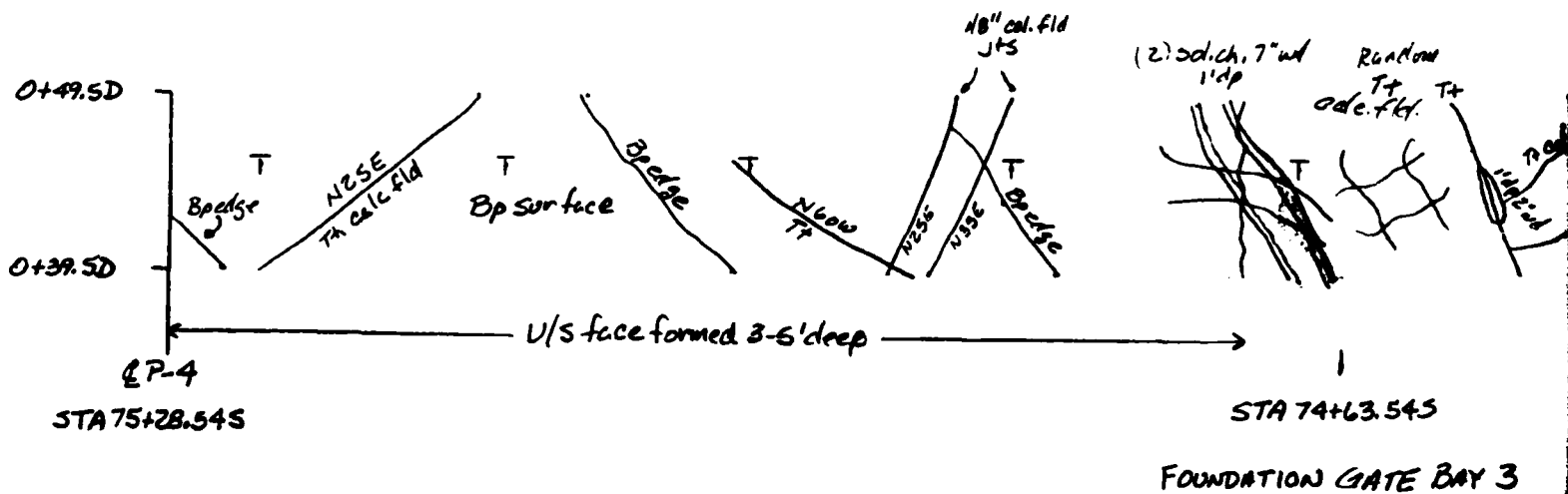


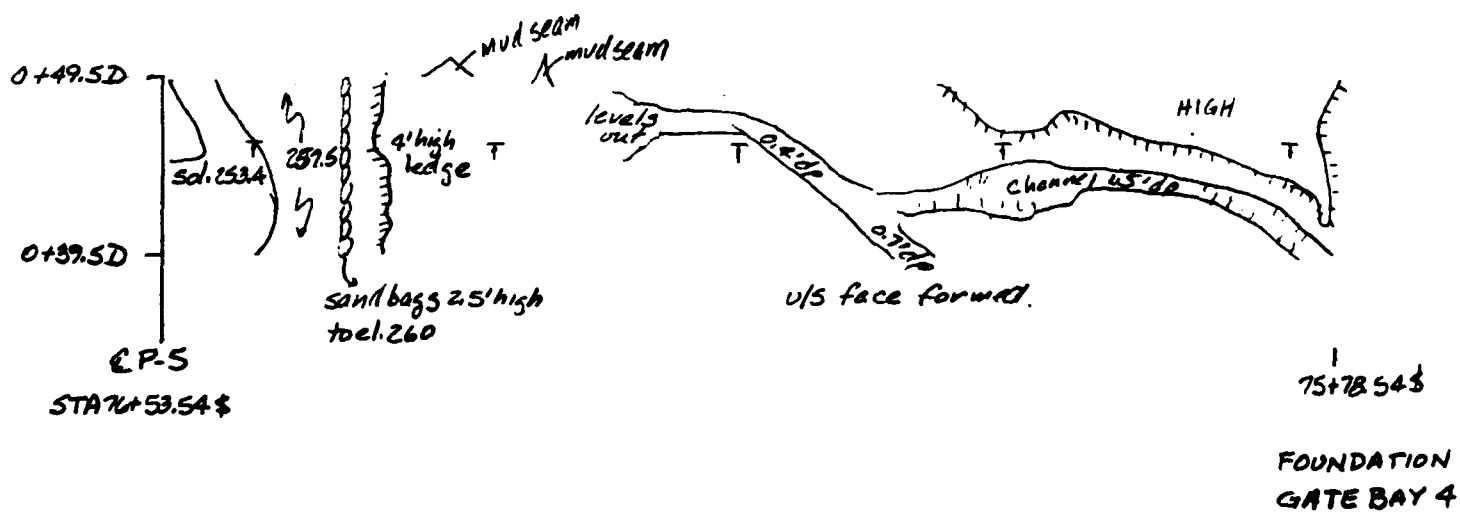
paid as dental
4 CY VOL.



EL. 270
EL. 260

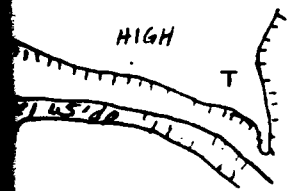
bkn, bky, fr breaks; springing on jts
no pre-split holes visible
unable to map





75+78.54

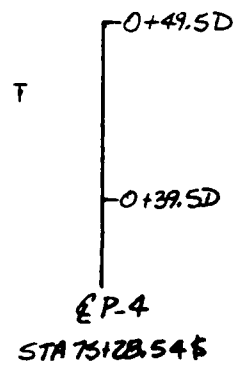
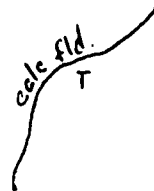
FOUNDATION
GATE BAY 4



75+78.54\$

FOUNDATION
GATE BAY 4

T *Bp, Ls, hd, gr* T
w/ cherty
layers



bkn fell back
to parallel str.
2-3'

most pre-split hole visible

fine grained
silty LS. hd. gr.

X-fine LS, hd. Ge.

E
p-6

FACE VIEW
D/S PRESPLIT LINE
STILLING BASIN 5

PLAN VIEW
D/S STILLING BASIN

mud presplit

— EL. 270

fine Grained
silty, LS, hd. gn

Some vt.
JTS. above
4-5' spaces

vt. JT
N 20 E



vt.
mud JT.

BP. 1-4" (10) w/ clay plug

X-fine LS, hd, Ge.

Few JTS.

— 260

VIEW
ESPLIT LINE
ING BASIN 5

0+49.5D

0+39.5D

LAN VIEW
STILLING BASIN

2

FPII-81

FRAC. 1' LOW
AREA

0+49.50

(JTS. AVG. 3-9' SP)
N-20-E

BP. HD. GR. LS.
W/ LOCALIZED CHERT
CONCENTRATIONS, CHERT
IS FRACTURED
THROUGHOUT

N-20-E

(JTS. AVG. 4-5' SP)
N-20-E

CALC. FLD

TIGHTLY FRAC.
& JOINTED

STA 77+70.54 S

JOINTED N-85-E & N-20-E

SD. CHANNEL EL. 253.2

0+135U

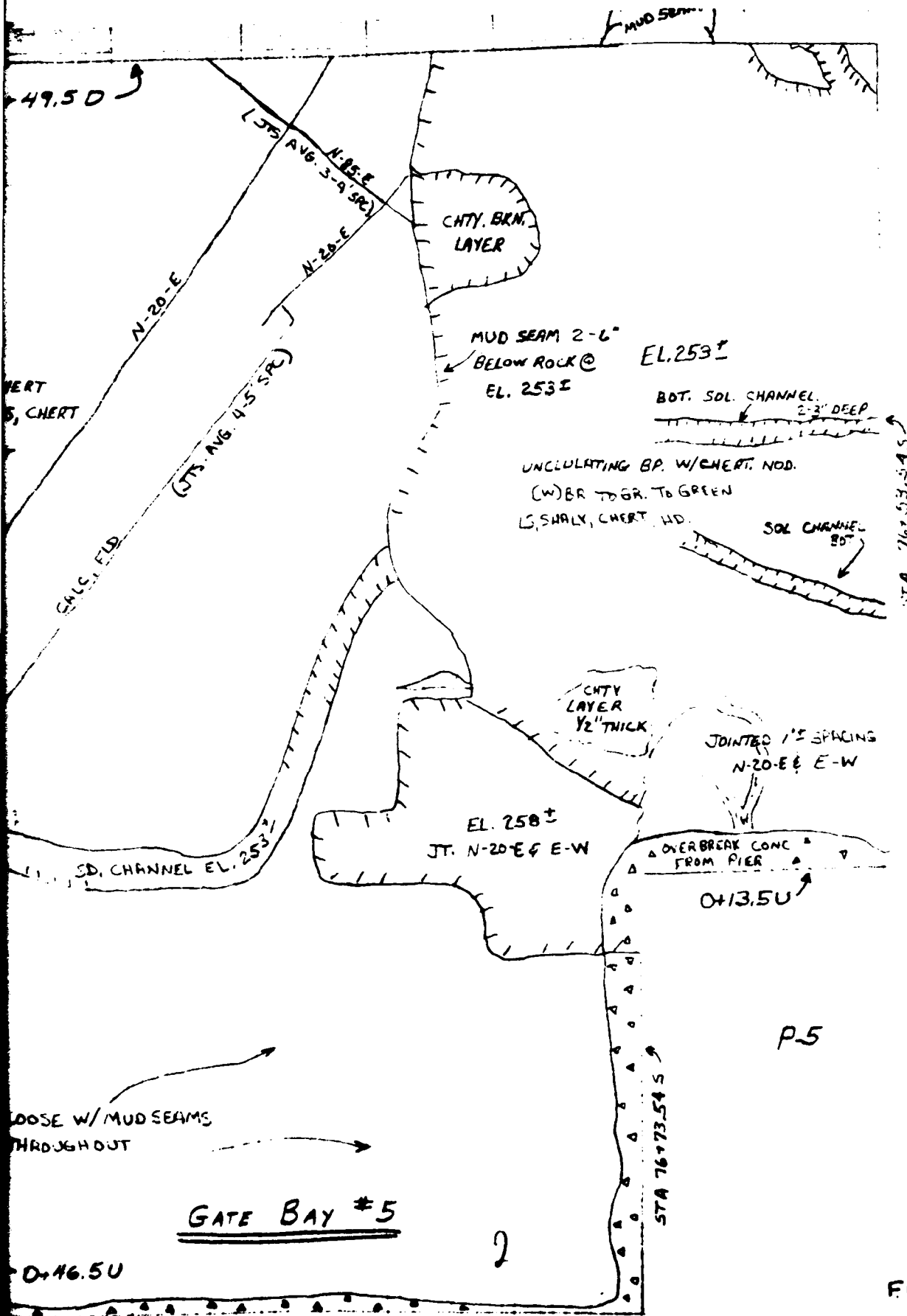
FRAC. LOOSE W/ MUD SEAMS
THROUGHOUT

GATE BAY #3

0+46.50

BF. CONC.
TO EL. 256.5

STA 77+58.54 S



0+47.50

Bf PJ 151 Sh 20th

uggy w/200
Sandy 121
fractured

uggy
Calk 5 200
Calk 5

50-101

0219-250

50-101

Sh 20th 2 057-019

0+13.50

P-9

STILLING BASIN #8

STILLING BASIN #8

0+46.50

Bp rd solid, smooth.

hd, solid, Bc
Ls.

Elev 258-259

Elev 258-259

hd, solid, Bc

Bp

smooth, rd, solid.

SS, 0.415r

cl. 259-260

shale, 257-259

0-90

hd, solid, Bc

0+13.50

F. 3

low
biscay & frag.

2

ING BASIN #8

0+46.50

FP II-83

260

LOCK WALL

71+505

71+605

71+705

71+805

71+905

72+005

72+105

PIER 1

250

PC-3

BC-3

mod. hd. h. 28.

EX. 1/4 SI. 5/7

TYIN. 45.

hd. 28. EX. 1/4. TYIN. 5/7.

mod. hd. 28.

d. 25. VSY.

d. 25.

op. bdd. PM.
25 mod. hd. 28.
Dense

28. cl. 25. mod. hd. 28.
EX. 1/4. TYIN. 5/7. 001.

STYL. 45. mod. hd.
mod. 28. 2. Doh. 2/7

GR. CL.

chr

STYL. mod. hd.
hd. 28. EX. 1/4. TYIN.
SI. 5/7.
EX. 1/4. 001.

CLAY. 25. 1. 28. hd. 28
doh. VSY. 2.

GR. CL.

GR. CL.

GR. CL.

GR. CL.

GR. CL. 5/7/0.

GR. CL.

doh.

GR. CL.

GR. CL.

GR. CL.

STYL. 2/7. hd. 28.

EX. 1/4. 11. 28.

229.2

GR. CL. 25. mod. hd.
EX. 1/4. 28. CL. 5/7.

229.3

$500 + 2L$

50142L

502+2L

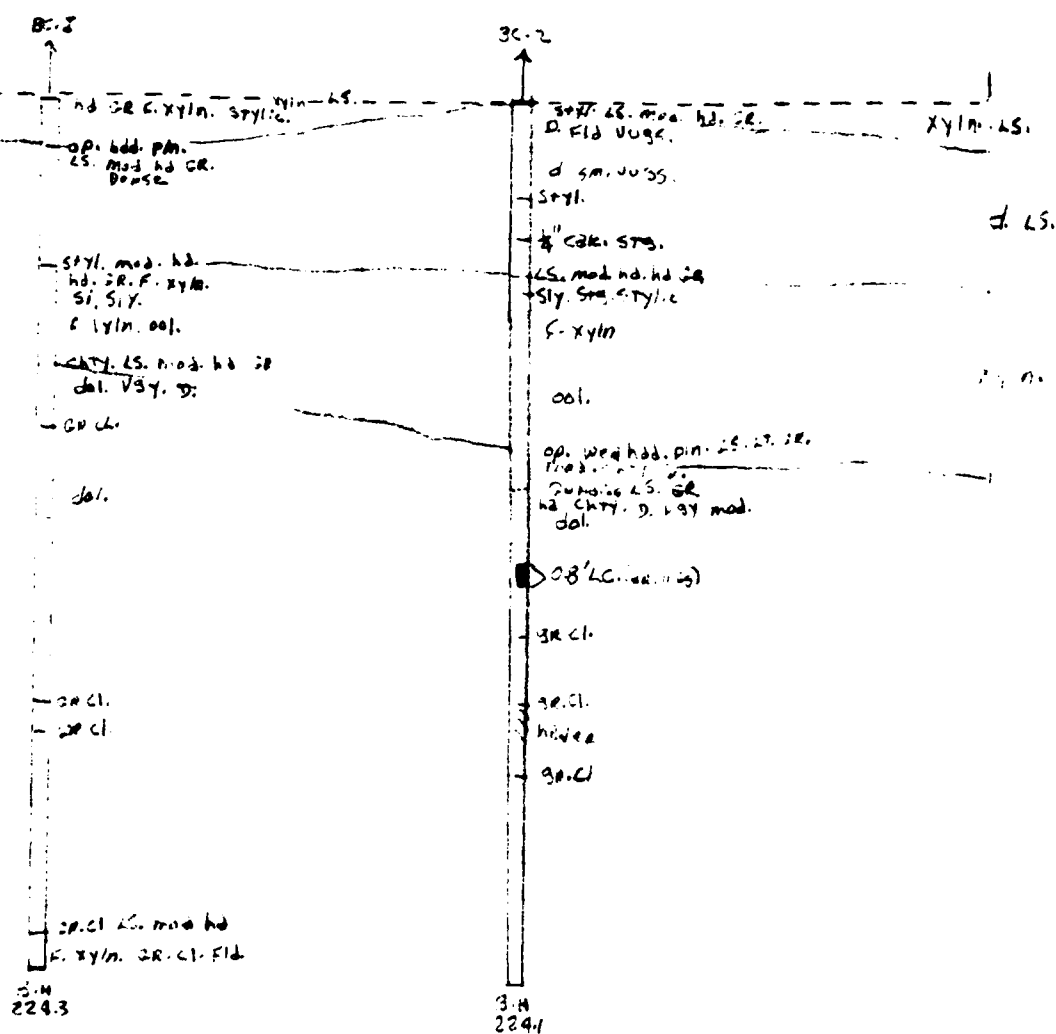
72+305

508+22

 $505 + 27$

72+605

3245, 77E.



FRP-84

Geologic Cross
SECTION

Pier Bay.

260

72+60 S

72+70 S

72+80 S

72+90 S

73+00 S

73+10 S

73+20 S

73+30 S

ALL FIVE

PIER 2

7-10

7-10

P.O.

BC-2

1. 12

1-1

1-1

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1-1

74+30S
74+40S
74+50S
74+60S
74+70S
74+80S
74+90S

P.1

BC-5

R2

BC-6

Soft

LS med sh

Soft

LS med sh
med sh

Solid

LS sh
med sh

Soft

LS med sh

LS med sh
med sh

LS med sh
med sh

BH
235.0

BH
235

BH
235

LS med sh
med sh

LS med sh
med sh

LS

LS

BH
224.1

BH
224.5

2

F.F.II-86

GEOLOGIC CROSS
SECTION
PIER 3 BAY 3

74+90S

75+00S

75+10S

75+20S

75+30S

75+40S

75+50S

75+60S

75+70S

Pier 4

P3

P1

bdia

P2

P1

bdia

bdia

bdia

bdia

bdia

bdia

bdia

bdia

bdia

bdia

220

1

75+50S

75+60S

75+70S

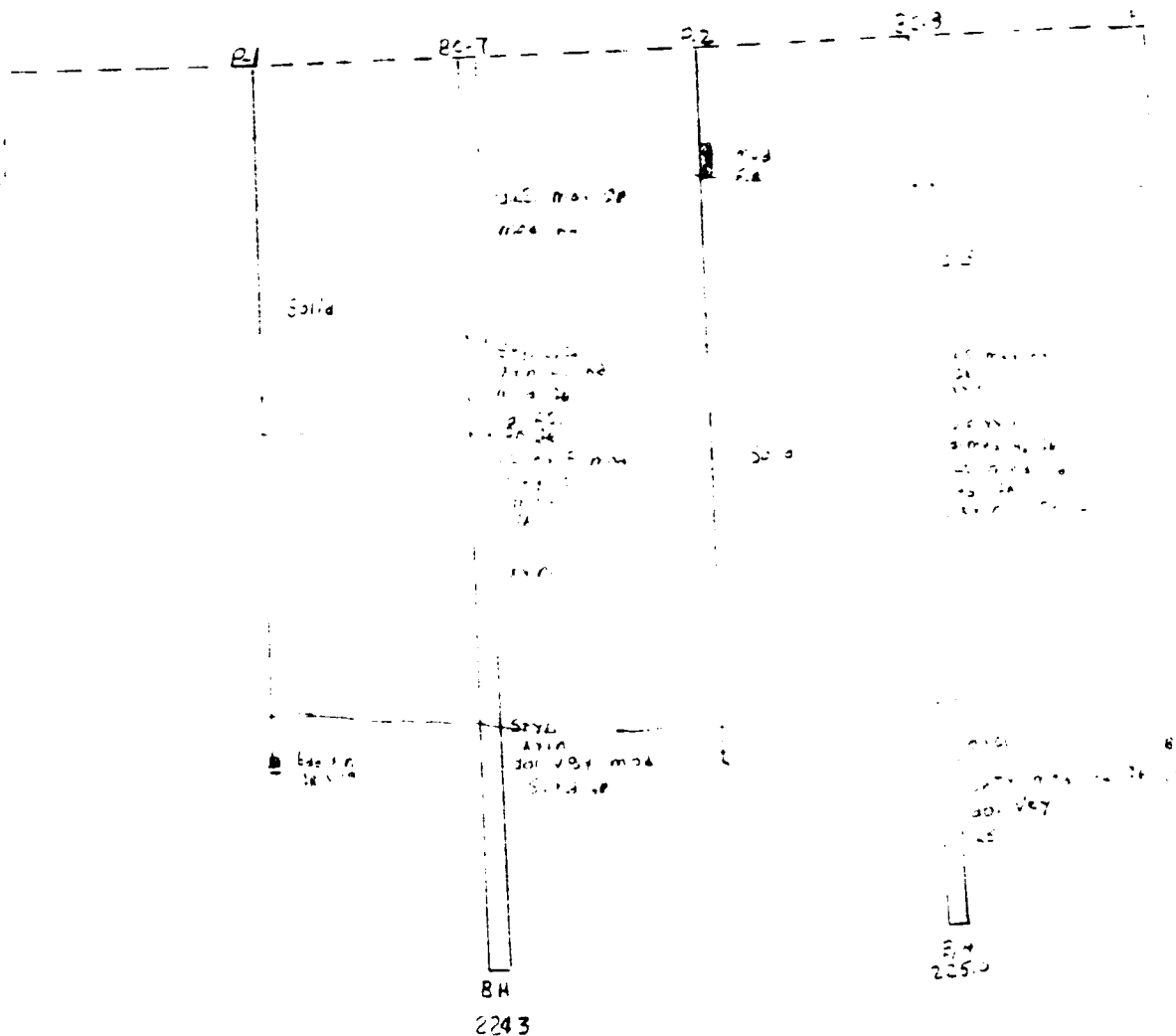
75+80S

75+90S

76+00S

76+10S

76+20S



F.P.II-87
GEOLOGIC CROSS
SECTION
PIER 4 BAY 4

76+205

76+305

76+405

76+505

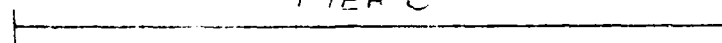
76+605

76+705

76+805

76+905

PIER 5



220

1

CS-2

dot.
LS.

BM
197.1

CS-1

LS.

BM
197.1

Exyln.

76+805

76+905

77+005

77+105

77+205

77+305

77+405

77+505

809 AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

2-0 5.3

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

877
224.6

AS 1702 10 3-2
D. 0.0 24. 2.
S. 10.0 24. 2.
CATT. 577 1. 51

F.P.II-83

Geologic Cross
Section
PIER 5 BAYS

00 077+505

77+605

77+705

77+805

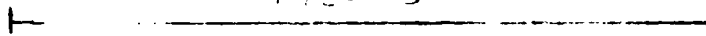
77+905

78+005

78+105

78+205

PIED 6



35-11

50

L
B/W
224

B/W
224

2

1

25 784805

784305

794005

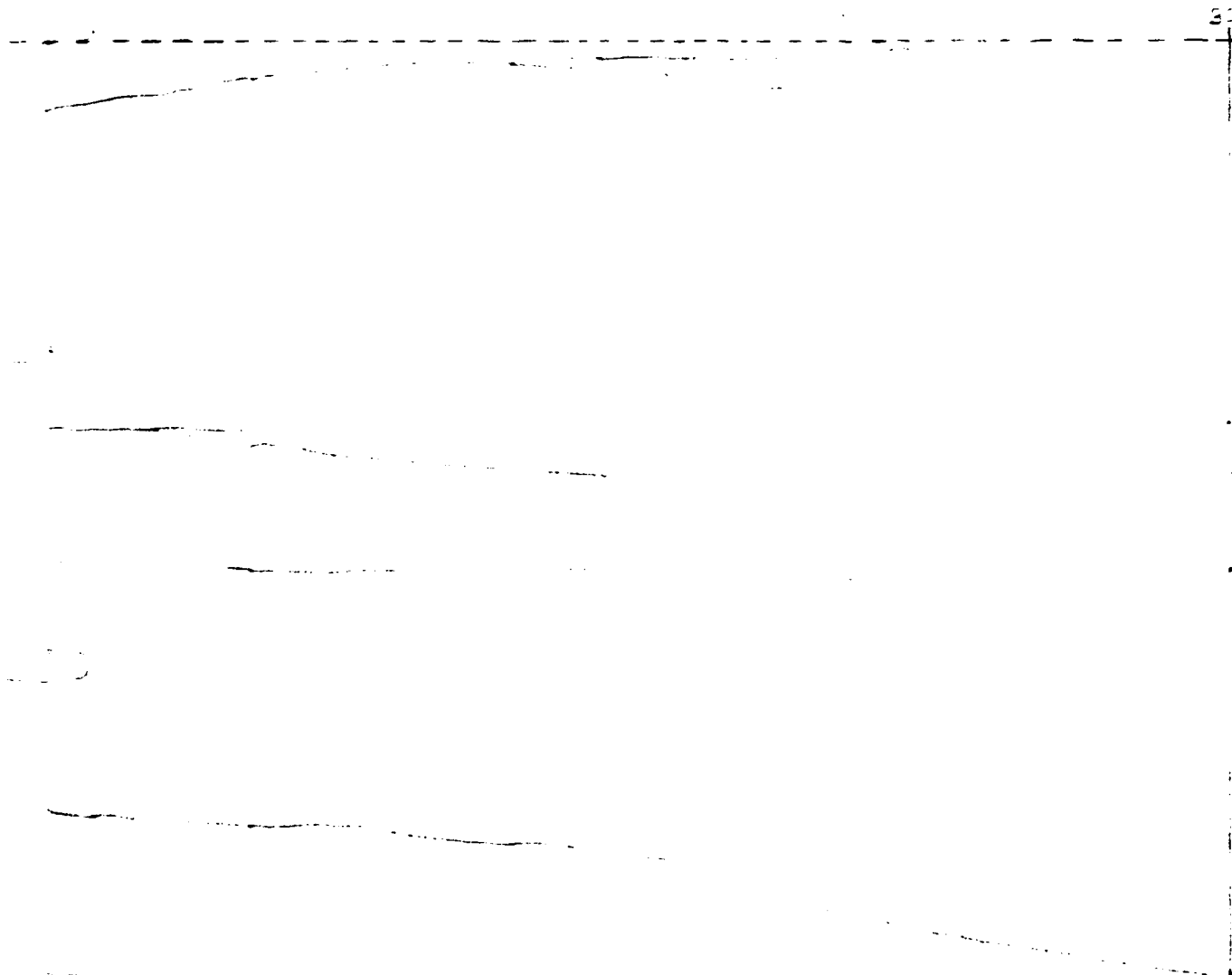
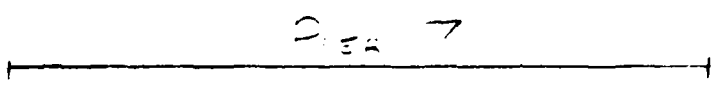
794105

794205

794305

794405

794505



210

220

AS med
7.8 28
7.9 28
7.9 28

AS med
7.8 28
7.9 28
7.9 28

AS med
7.8 28
7.9 28
7.9 28

AS med
7.8 28
7.9 28
7.9 28

79+405

79+505

79+605

79+705

79+805

79+905

80+005

80+105

3-13

RC-14

LS med
m. 2R
J.F. 1000
J.F. 1000

LS med
m. 2R
J.F. 1000
J.F. 1000

LS med
m. 2R
J.F. 1000
J.F. 1000

LS med
m. 2R
J.F. 1000
J.F. 1000

LS med
m. 2R
J.F. 1000
J.F. 1000

LS med
m. 2R
J.F. 1000
J.F. 1000

3/4
225

8/4
220.8

E.P. II-90
GEOLOGIC CROSS
SECTION
PIER 7 BAY 7

80+105

80+205

80+305

80+405

80+505

80+525

80+605

80+805

Pier 2

PC-18

PC-18

PC-18

PC-18

PC-18

PC-18

PC-18

PC-18

PC-18

240

230

220

1

804705

804805

804905

804118

804105

804205

804305

804405

8046

LS. mbr. no. 1
LS. mbr. no. 2

LS. mbr. no. 3
LS. mbr. no. 4
LS. mbr. no. 5

LS. mbr. no. 6
LS. mbr. no. 7
LS. mbr. no. 8

LS. mbr. no. 9
LS. mbr. no. 10

LS. mbr. no. 11
LS. mbr. no. 12
LS. mbr. no. 13

LS. mbr. no. 14
LS. mbr. no. 15
LS. mbr. no. 16

ERT-31
GEOLOGIC CROSS
SECTION
PIER 3 BAY 8

2197

2

260
504+18

505+18

506+18

507+18

508+18

509+18

510+18

511+18

PIER 9

PC-1/6

LS 0.00 1.0
25.0 1.0 1.0
25.0 1.0 1.0

LS med. h.
25.0 1.0 1.0

230

LS med. h.
25.0 1.0 1.0
25.0 1.0 1.0

220

219.8

820+28

821+28

822+28

823+28

824+28

825+28

826+28

827+28

BC-18

5' med. hor.
2' med.
3' med.
1'

30' med.

45' med.
30' med.

5' med.
2' med.
1' med.

B/W
2.4.9

2

EE-32

GEOLOGIC CROSS
SECTION
Pier 9 Bay 9

260 824705

824805

824905

834005

834105

834205

834305

834405

Pier 10

250

240

P. 5

15. med. hd
26. V.F. Xylo
Occ. Chry.

230

15. med. hd
26. V.F. Xylo
Occ. Chry.

220

1

E/H
219.6

83+30

83+40

83+50

83+60

83+70

83+80

83+90

BC-20

2. 11. 11
2. 11. 11
2. 11. 11

2. 11. 11
2. 11. 11

2. 11. 11
2. 11. 11
2. 11. 11

219.7

F.R.II-93

Geologic Cross
SECTION
Pier 10 Bay 10

20

84402

84402

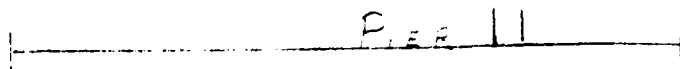
84402

84430

84442

84452

84462



20



20

20

1

844
844
844

844
844

84+502

84+602

84+702

84+802

84+902

84+002

84+102

C-23

84+202

STY.
LS. in car. 4. 22
17. 1. 23. 200.

B/H
225

2

STY.
LS. in car. 4. 22
17. 1. 23. 200.

FF II-34

B/H
219.9

General Cross
Pier II Bay II

260

85+205

85+305

85+405

85+505

85+605

85+705

85+805

PIER 12

250

240

230

220

1

B/H
2 2 2

85+705

85+805

85+905

E.P. II-35
Sewer Line
Section
Pier 12-

DATE
ILME