THIS RUN EXECUTED 07/03/81 8:38:42

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      YANCEY CO NC FEMA STUDY                                          5
T2      10 YR FLOOD                                                      10
T3      HANEY CREEK                        FLOOD PROFILES                15

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC   HVINS     Q      WSEL    FQ
         0.      2.      0.      0. 0.02618      0.     0.0      0.     0.0     0.0      20

J2  NPROF   IPLOT   PRFVS    XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE
         0.      0.     -1.      0.      0.     0.0     0.0      0.      0.      0.      25

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     150.00    0.0  160.00     0.0     0.0     0.0     0.0     0.0     0.0     0.0      30

  QT      5.    975.   1680.   2065.   3170.   2065.      0.      0.      0.      0.      35
  NC  0.150   0.150   0.055     0.1     0.5                                              40


  X1   0.01      12.    366.    384.      0.      0.      0.     0.0     0.0      0.      45
  GR 2946.0     200.  2933.3    277.  2931.6    340.  2932.4    345.  2928.7    366.     50
  GR 2925.7     372.  2925.0    377.  2928.2    384.  2928.9    390.  2932.3    400.     55
  GR 2933.7     416.  2946.0    467.     0.0      0.     0.0      0.     0.0      0.      60
  NC  0.120   0.120   0.040     0.0     0.0                                              65


  X1   0.01      13.    355.    384.     40.     40.     40.     0.0     0.0      0.      70
  X3     10.     0.0     0.0      0.     0.0      0.     0.0  2932.6  2932.3               75
  GR 2946.0     200.  2933.3    277.  2931.6    340.  2932.4    345.  2930.6    355.     80
  GR 2928.7     366.  2925.7    372.  2925.0    377.  2928.2    384.  2928.6    390.     85
  GR 2932.3     400.  2933.7    416.  2946.0    467.     0.0      0.     0.0      0.      90


  X1   0.01      17.    355.    384.      1.      1.      1.     0.0     0.0      0.      95
  BT    4.0   355.0  2934.6      0.0   355.0  2934.6  2933.7   384.0  2932.8   2931.5    100
  BT  384.0  2932.8     0.0      0.0     0.0     0.0     0.0     0.0     0.0      0.0     105
  GR 2946.0     200.  2933.3    277.  2933.1    286.  2934.8    328.  2934.6    355.     110
  GR 2931.5     355.  2930.5    360.  2933.4    360.  2933.3    362.  2925.5    362.     115
  GR 2925.0     375.  2925.3    381.  2926.3    384.  2932.8    384.  2933.0    408.     120
  GR 2933.7     416.  2946.0    467.     0.0      0.     0.0      0.     0.0      0.      125


  X1   0.01       0.      0.      0.     12.     12.     12.     0.0     0.0      0.      130
  X2     0.     0.0       0.     0.0     0.0     0.0      1.     0.0     0.0      0.      135


  X1   0.01      13.    355.    384.      1.      1.      1.     0.0     0.0      0.      140
  X3     10.     0.0     0.0      0.     0.0      0.     0.0  2933.1  2932.8               145
```

B01

```
GR 2946.0    200.  2933.3    277.  2931.6    340.  2932.4    345.  2930.6    355.    150
GR 2928.7    366.  2925.7    372.  2925.0    377.  2928.2    384.  2928.6    390.    155
GR 2932.3    400.  2933.7    416.  2946.0    467.     0.0      0.     0.0      0.    160

X1   0.01     12.    366.    384.    10.     10.     10.     0.0     0.0      0.    165
GR 2946.0    200.  2933.3    277.  2931.6    340.  2932.4    345.  2928.7    366.    170
GR 2925.7    372.  2925.0    377.  2928.2    384.  2928.9    390.  2932.3    400.    175
GR 2933.7    416.  2946.0    467.     0.0      0.     0.0      0.     0.0      0.    180
NC   0.150  0.150   0.055     0.0     0.8                                            185

X1   0.02      0.     0.      0.     50.     50.     50.     0.0    3.70      0.    190
QT      5.    970.  1670.   2050.   3155.   2050.      0.      0.      0.      0.    195
NC   0.100  0.150   0.050     0.0     0.0                                            200

X1   0.08     18.    298.    322.    270.    270.    270.     0.0     0.0      0.    205
GR 2957.5    200.  2943.7    222.  2943.5    270.  2943.0    287.  2943.5    298.    210
GR 2937.5    307.  2937.2    310.  2937.1    314.  2937.0    317.  2941.9    322.    215
GR 2944.6    387.  2951.3    410.  2951.4    417.  2949.2    430.  2949.5    460.    220
GR 2955.7    500.  2956.3    583.  2957.4    589.     0.0      0.     0.0      0.    225
NC   0.0      0.0   0.040     0.0     0.5                                            230

X1   0.08      0.     0.      0.     60.     60.     60.     0.0     0.0      0.    235
X3     10.     0.0    0.0     0.     0.0      0.     0.0  2941.5  2943.8             240
SB   1.25     1.60   3.00      0.    4.00   0.01   22.00     0.0  2937.0  2937.0    245

X1   0.08      0.     0.      0.     25.     25.     25.     0.0     0.0      0.    250
X2     0.      0.0    1.   2942.5  2942.0     0.0      0.     0.0     0.0      0.    255
X3     10.     0.0    0.0     0.     0.0      0.     0.0  2942.0  2944.3             260
BT   15.0   200.0  2957.5     0.0   222.0  2943.7     0.0   270.0  2943.5     0.0    265
BT  287.0  2943.0     0.0   298.0  2943.5     0.0   300.0  2942.0     0.0   314.0    270
BT 2943.9     0.0   402.0  2948.6     0.0   410.0  2951.3     0.0   417.0  2951.4    275
BT    0.0   430.0  2949.2     0.0   460.0  2949.5     0.0   500.0  2955.7     0.0    280
BT  583.0  2956.3     0.0   589.0  2957.4     0.0     0.0     0.0     0.0     0.0    285

X1   0.08     19.    298.    327.    15.     15.     15.     0.0     0.0      0.    290
GR 2957.5    200.  2943.7    222.  2943.5    270.  2943.0    287.  2943.5    298.    295
GR 2937.5    307.  2937.2    310.  2937.1    314.  2937.0    317.  2946.5    327.    300
GR 2946.5    343.  2946.5    393.  2951.3    410.  2951.4    417.  2949.2    430.    305
GR 2949.5    460.  2955.7    500.  2956.3    583.  2957.4    589.     0.0      0.    310
NC   0.150  0.150   0.060     0.0     0.8                                            315

X1   0.09      0.     0.      0.     30.     30.     30.     0.0    2.00      0.    320
QT      5.    960.  1660.   2035.   3135.   2035.      0.      0.      0.      0.    325
NC   0.080  0.130   0.055     0.0     0.8                                            330

X1   0.15     14.    312.    344.    210.    210.    210.     0.0   -0.50      0.    335
GR 2964.5    200.  2963.7    202.  2962.7    293.  2952.5    312.  2941.5    325.    340
GR 2941.5    330.  2953.6    344.  2953.5    367.  2953.8    377.  2953.8    397.    345
GR 2952.1    399.  2958.0    488.  2958.0    555.  2964.5    572.     0.0      0.    350
NC   0.0      0.0   0.0       0.0     0.5                                            355
```

C01

```
                                                                                      360
```

C01

X1	0.15	14.	312.	344.	60.	60.	60.	0.0	0.0	0.	360
GR	2964.5	200.	2963.7	202.	2962.7	293.	2952.5	312.	2941.5	325.	365
GR	2941.5	330.	2953.6	344.	2953.5	367.	2953.8	377.	2953.8	397.	370
GR	2952.1	399.	2958.0	488.	2958.0	555.	2964.5	572.	0.0	0.	375
SB	1.25	1.60	3.00	0.	5.00	0.30	28.00	0.0	2941.5	2941.5	380
X1	0.15	0.	0.	0.	12.	12.	12.	0.0	0.0	0.	385
X2	0.	0.0	1.	2947.5	2951.3	0.0	0.	0.0	0.0	0.	390
BT	14.0	200.0	2964.5	0.0	202.0	2963.7	0.0	293.0	2962.7	0.0	395
BT	313.0	2951.7	0.0	326.0	2951.3	0.0	342.0	2952.0	0.0	344.0	400
BT	2953.6	0.0	367.0	2953.5	0.0	377.0	2953.8	0.0	397.0	2953.8	405
BT	0.0	399.0	2952.1	0.0	488.0	2958.0	0.0	555.0	2958.0	0.0	410
BT	572.0	2964.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	415
NC	0.120	0.120	0.050	0.0	0.0						420
X1	0.15	14.	312.	344.	15.	15.	15.	0.0	0.0	0.	425
GR	2964.5	200.	2963.7	202.	2962.7	293.	2952.5	312.	2941.5	325.	430
GR	2941.5	330.	2953.6	344.	2953.5	367.	2953.8	377.	2953.8	397.	435
GR	2952.1	399.	2958.0	488.	2958.0	555.	2964.5	572.	0.0	0.	440
QT	5.	950.	1640.	2010.	3095.	2010.	0.	0.	0.	0.	445
NC	0.150	0.150	0.055	0.0	0.8						450
X1	0.30	14.	320.	335.	895.	895.	895.	0.0	0.0	0.	455
GR	3020.5	200.	3017.5	213.	3010.9	266.	3010.5	293.	3005.8	298.	460
GR	3005.4	316.	3002.0	320.	2999.3	323.	2999.3	327.	3003.3	335.	465
GR	3006.5	420.	3013.5	506.	3017.5	537.	3020.5	577.	0.0	0.	470
NC	0.0	0.0	0.0	0.0	0.5						475
X1	0.30	0.	0.	0.	40.	40.	40.	0.0	0.0	0.	480
X3	10.	0.0	0.0	0.	0.0	0.	0.0	3004.8	3004.3		485
SB	1.25	1.60	3.00	0.	15.00	0.30	72.00	0.0	2999.3	2999.3	490
X1	0.30	0.	0.	0.	12.	12.	12.	0.0	0.0	0.	495
X2	0.	0.0	1.	3004.2	3004.8	0.0	0.	0.0	0.0	0.	500
X3	10.	0.0	0.0	0.	0.0	0.	0.0	3005.3	3004.8		505
BT	12.0	200.0	3020.5	0.0	213.0	3017.5	0.0	266.0	3010.9	0.0	510
BT	293.0	3010.5	0.0	298.0	3005.8	0.0	316.0	3005.4	0.0	345.0	515
BT	3005.0	0.0	370.0	3004.8	0.0	420.0	3006.5	0.0	506.0	3013.5	520
BT	0.0	537.0	3017.5	0.0	577.0	3020.5	0.0	0.0	0.0	0.0	525
X1	0.30	14.	320.	335.	10.	10.	10.	0.0	0.0	0.	530
GR	3020.5	200.	3017.5	213.	3010.9	266.	3010.5	293.	3005.8	298.	535
GR	3005.4	316.	3002.0	320.	3000.0	327.	3000.8	331.	3003.3	335.	540
GR	3006.5	420.	3013.5	506.	3017.5	537.	3020.5	577.	0.0	0.	545
QT	5.	945.	1635.	2005.	3085.	2005.	0.	0.	0.	0.	550
X1	0.32	0.	0.	0.	100.	100.	100.	0.0	0.0	0.	555
QT	5.	945.	1630.	1995.	3075.	1995.	0.	0.	0.	0.	560
X1	0.37	0.	0.	0.	250.	250.	250.	0.0	15.20	0.	565
EJ											570

D01

```
*PROF 1

CCHV=   0.100 CEHV=   0.500
*SECNO .010
2096 WSEL NOT GIVEN,AVG OF MAX,MIN USED
    HANEY CREEK                  10 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3720 CRITICAL DEPTH ASSUMED
     0.01        975.        25.        900.        50.       1.77          0        43.
  2930.96     2930.96        15.         81.        21.       0.50         11   2928.70
     5.96         0.0       1.69       11.09       2.43        0.0    2932.73    2928.20
 0.025052         0.0      0.150      0.055      0.150        0.0      -0.00     353.16
              2925.00         0.         0.         0.        22.         21.     396.07         0.


*SECNO .010

3301 HV CHANGED MORE THAN HVINS

     0.01        975.        19.        882.        74.       0.53          5        101.
  2932.62         0.0        33.        144.        48.      -1.23          0    2930.60
     7.62         0.0       0.58       6.14       1.55        0.3    2933.15    2928.20
 0.003482       0.039      0.120      0.040      0.120       0.12      -0.00     302.35
              2925.00         40.        40.        40.        67.        34.     403.61         0.


*SECNO .010

*SECNO .010

3265 DIVIDED FLOW


3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

     0.01        975.         0.        975.         0.       0.57          2        27.
  2932.60         0.0         0.        161.         0.       0.04          0    2934.60
     7.60         0.0        0.0       6.07        0.0       0.00    2933.17    2932.80
 0.007758       0.038      0.120      0.040      0.120       0.02      -8.01     355.00
              2925.00          1.         1.         1.        15.        15.     384.00         0.


*SECNO .010

*** GR CARDS REPEATED

3265 DIVIDED FLOW


3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

     0.01        975.         0.        975.         0.       0.56          2        27.
  2932.70         0.0         0.        162.         0.      -0.01          0    2934.60
     7.70         0.0        0.0       6.02        0.0       0.09    2933.27    2932.80
 0.007847       0.038      0.120      0.040      0.120       0.00      -9.56     355.00
              2925.00         12.        12.        12.        15.        15.     384.00         0.
```

```
*SECNO .010
    HANEY CREEK                    10 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE,ELLEA=     2933.10 ELREA=     2932.80

     0.01       975.        0.       975.        0.       0.71          2        29.
  2932.64       0.0         0.       144.        0.       0.15          0      2930.60
     7.64       0.0         0.0      6.76        0.0      0.01       2933.35     2928.20
 0.004196       0.037       0.120    0.040       0.120    0.07         -0.00     355.00
             2925.00          1.       1.          1.      15.          15.      384.00        0.


*SECNO .010
     0.01       975.       69.       833.       74.      0.74          2        103.
  2932.66       0.0        69.       112.       46.      0.03          0      2928.70
     7.66       0.0        1.00      7.45       1.61     0.04       2933.40     2928.20
 0.003906       0.037      0.120     0.040      0.120    0.01         -0.00     300.65
             2925.00         10.       10.        10.      74.          29.      404.14        0.


CCHV=   0.100 CEHV=   0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                    10 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.02       975.       25.       900.       51.      1.76         20        43.
  2934.67    2934.67       15.       81.        21.      1.02         16      2932.40
     5.97       0.0        1.68      11.05      2.42     0.40       2936.43     2931.90
 0.024833       0.044      0.150     0.055      0.150    0.81         -0.00     353.10
             2928.70         50.       50.        50.      22.          21.      396.10        0.


*SECNO .080
    HANEY CREEK                    10 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
```

F01

3720 CRITICAL DEPTH ASSUMED

0.08	970.	0.	965.	5.	1.81	4	39.	
2942.59	2942.59	0.	89.	6.	0.05	12	2943.50	
5.59	0.0	0.0	10.81	0.79	6.83	2944.40	2941.90	
0.025767	0.048	0.100	0.050	0.150	0.04	-0.00	299.36	
	2937.00	270.	270.	270.	11.	29.	338.70	1.

CCHV= 0.100 CEHV= 0.500
*SECNO .080

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

0.08	970.	66.	849.	55.	0.56	2	162.	
2944.43	0.0	74.	133.	78.	-1.25	0	2943.50	
7.43	0.0	0.89	6.39	0.70	0.46	2944.99	2941.90	
0.003672	0.047	0.100	0.040	0.150	0.12	-0.00	220.82	
	2937.00	60.	60.	60.	89.	73.	383.11	1.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	4.00	0.01	22.00	0.0
	ELCHU	ELCHD						
	2937.00	2937.00						

*SECNO .080

*** GR CARDS REPEATED

HANEY CREEK 10 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
2992.73	2944.99	0.00	835.	138.	22.	22.	2942.50
ELTRD							
2942.00							

0.08	970.	115.	774.	81.	0.34	2	169.	
2945.06	0.0	123.	148.	119.	-0.22	0	2943.50	
8.06	0.0	0.94	5.22	0.68	0.42	2945.40	2941.90	
0.002127	0.046	0.100	0.040	0.150	0.0	-0.00	219.81	
	2937.00	25.	25.	25.	90.	79.	388.62	2.

*SECNO .080

0.08	970.	130.	840.	0.	0.40	2	106.
2945.07	0.0	123.	154.	0.	0.06	0	2943.50
8.07	0.0	1.06	5.44	0.0	0.04	2945.47	2946.50

G01

8.07	0.0	1.06	5.44	0.0	0.04	2945.47	2946.50

0.002697	0.046	0.100	0.040	0.150	0.03	-0.00	219.82	
	2937.00	15.	15.	15.	93.	13.	325.49	2.

CCHV= 0.100 CEHV= 0.800
*SECNO .090

*** GR CARDS REPEATED

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

0.09	970.	0.	970.	0.	1.43	2	28.	
2945.05	0.0	0.	101.	0.	1.03	0	2945.50	
6.05	0.0	0.02	9.59	0.0	0.19	2946.48	2948.50	
0.028094	0.047	0.150	0.060	0.150	0.82	-0.00	285.21	
	2939.00	30.	30.	30.	27.	11.	323.37	2.

CCHV= 0.100 CEHV= 0.800
*SECNO .150

3301 HV CHANGED MORE THAN HVINS

0.15	960.	0.	960.	0.	0.92	2	25.	
2949.42	0.0	0.	125.	0.	-0.51	0	2952.00	
8.42	0.0	0.0	7.69	0.0	3.80	2950.33	2953.10	
0.012597	0.049	0.080	0.055	0.130	0.05	-0.00	315.06	
	2941.00	210.	210.	210.	13.	12.	339.73	2.

CCHV= 0.100 CEHV= 0.500
*SECNO .150

0.15	960.	0.	960.	0.	0.81	2	25.	
2950.23	0.0	0.	133.	0.	-0.11	0	2952.50	
8.73	0.0	0.0	7.22	0.0	0.69	2951.04	2953.60	
0.010649	0.050	0.080	0.055	0.130	0.01	-0.00	314.68	
	2941.50	60.	60.	60.	13.	12.	340.11	3.

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 2950.13 ,NOT 2950.23
HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	5.00	0.30	28.00	0.0
	ELCHU	ELCHD						
	2941.50	2941.50						

*SECNO .150

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 10 YR FLOOD 07/03/81

HANEY CREEK 10 YR FLOOD 07/03/81

H01

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
PRESSURE AND WEIR FLOW								
EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC	
2979.43	2956.12	0.0	611.	357.	28.	28.	2947.50	
ELTRD								
2951.30								
0.15	960.	1.	938.	20.	0.22	2	119.	
2954.05	0.0	2.	245.	51.	-0.59	0	2952.50	
12.55	0.0	0.61	3.83	0.39	3.23	2954.27	2953.60	
0.001817	0.050	0.080	0.055	0.130	0.0	-0.00	309.12	
	2941.50	12.	12.	12.	19.	100.	428.37	3.
*SECNO .150								
0.15	960.	1.	938.	21.	0.22	2	120.	
2954.07	0.0	2.	246.	53.	-0.00	0	2952.50	
12.57	0.0	0.37	3.81	0.39	0.02	2954.29	2953.60	
0.001485	0.049	0.120	0.050	0.120	0.00	-0.00	309.07	
	2941.50	15.	15.	15.	19.	101.	428.76	3.

CCHV= 0.100 CEHV= 0.800
*SECNO .300

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 10 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.30	950.	19.	793.	138.	1.33	20	105.	
3005.86	3005.86	13.	78.	87.	1.11	11	3002.00	
6.56	0.0	1.40	10.12	1.58	3.20	3007.20	3003.30	
0.018237	0.052	0.150	0.055	0.150	0.89	-0.00	297.93	
	2999.30	895.	895.	895.	30.	76.	403.07	8.

CCHV= 0.100 CEHV= 0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

0.30	950.	50.	646.	254.	0.46	3	132.

3007.19	0.0	44.	98.	198.	-0.87	0	3002.00	
7.89	0.0	1.14	6.58	1.29	0.38	3007.66	3003.30	
0.005700	0.052	0.150	0.055	0.150	0.09	-0.00	296.52	
	2999.30	40.	40.	40.	31.	101.	428.46	8.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3007.66 HIGHER THAN COMPUTED ENERGY OF 3007.43
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3011.52	3007.69	0.03	734.	224.	72.	72.	3004.20

ELTRD
3004.80

0.30	950.	50.	645.	255.	0.46	2	132.	
3007.20	0.0	44.	99.	199.	-0.01	0	3002.00	
7.90	0.0	1.14	6.54	1.28	0.0	3007.66	3003.30	
0.005626	0.052	0.150	0.055	0.150	0.0	-0.00	296.51	
	2999.30	12.	12.	12.	31.	101.	428.65	8.

*SECNO .300
HANEY CREEK 10 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.30	950.	54.	621.	275.	0.47	0	133.	
3007.25	0.0	45.	92.	204.	0.01	0	3002.00	
7.25	0.0	1.20	6.74	1.35	0.06	3007.72	3003.30	
0.006078	0.052	0.150	0.055	0.150	0.01	-0.00	296.45	
	3000.00	10.	10.	10.	31.	102.	429.28	8.

*SECNO .320

*** GR CARDS REPEATED

0.32	945.	65.	560.	320.	0.29	2	142.	
3007.91	0.0	61.	102.	268.	-0.18	0	3002.00	
7.91	0.0	1.08	5.50	1.19	0.46	3008.20	3003.30	
0.003531	0.052	0.150	0.055	0.150	0.02	-0.00	295.76	
	3000.00	100.	100.	100.	32.	110.	437.31	9.

*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK			10 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.37	945.	24.	756.	165.	1.32	20	109.	
3021.22	3021.22	17.	73.	98.	1.03	15	3017.20	
6.02	0.0	1.45	10.28	1.68	1.73	3022.54	3018.50	
0.019097	0.053	0.150	0.055	0.150	0.52	-0.00	297.77	
	3015.20	250.	250.	250.	30.	80.	407.20	11.

K01

THIS RUN EXECUTED 07/03/81 8:38:46

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**************************************************

T1      YANCEY CO NC FEMA STUDY                                          575
T2      50 YR FLOOD                                                      580
T3      HANEY CREEK                                                      585

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC    HVINS      Q      WSEL     FQ
        0.      3.      0.      0. 0.02618      0.      0.0      0.      0.0     0.0     590

J2  NPROF   IPLOT   PRFVS   XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE
        2.      0.     -1.      0.      0.     0.0     0.0      0.      0.      0.     595
```

L01

*PROF 2

CCHV= 0.100 CEHV= 0.500
*SECNO .010
2096 WSEL NOT GIVEN,AVG OF MAX,MIN USED

HANEY CREEK			50 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
3720 CRITICAL DEPTH ASSUMED								
0.01	1680.	166.	1366.	148.	1.69	0	122.	
2933.03	2933.03	96.	118.	54.	0.50	15	2928.70	
8.03	0.0	1.73	11.53	2.73	0.0	2934.73	2928.20	
0.016374	0.0	0.150	0.055	0.150	0.0	-0.00	286.84	
	2925.00	0.	0.	0.	88.	33.	408.39	0.

*SECNO .010

3301 HV CHANGED MORE THAN HVINS

0.01	1680.	190.	1327.	162.	0.56	3	150.	
2934.50	0.0	176.	198.	102.	-1.14	0	2930.60	
9.50	0.0	1.08	6.70	1.59	0.22	2935.06	2928.20	
0.002692	0.039	0.120	0.040	0.120	0.11	-0.00	269.73	
	2925.00	40.	40.	40.	100.	50.	419.32	0.

*SECNO .010

3265 DIVIDED FLOW

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

0.01	1680.	47.	1540.	93.	0.99	2	108.	
2934.29	0.0	30.	185.	42.	0.43	0	2934.60	
9.29	0.0	1.53	8.31	2.23	0.01	2935.28	2932.80	
0.023088	0.038	0.120	0.040	0.120	0.22	-30.96	270.97	
	2925.00	1.	1.	1.	99.	49.	418.47	0.

*SECNO .010

*** GR CARDS REPEATED

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

0.01	1680.	101.	1435.	144.	0.69	2	153.	
2934.86	0.0	64.	201.	62.	-0.30	0	2934.60	
9.86	0.0	1.57	7.14	2.33	0.23	2935.54	2932.80	
0.016311	0.038	0.120	0.040	0.120	0.03	-31.70	267.57	
	2925.00	12.	12.	12.	102.	51.	420.79	0.

*SECNO .010

```
   HANEY CREEK                     50 YR FLOOD          07/03/81
  MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
  ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
  DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
  SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
             ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

     0.01      1680.       244.      1261.       175.       0.40          2       157.
  2935.18        0.0       236.       218.       128.      -0.29          0    2930.60
    10.18        0.0       1.03       5.78       1.37       0.00    2935.58    2928.20
 0.001767      0.037      0.120      0.040      0.120       0.03      -0.00     265.57
             2925.00         1.         1.         1.       104.        53.     422.16          0.

*SECNO .010
     0.01      1680.       375.      1116.       189.       0.54          2       156.
  2935.13        0.0       291.       156.       123.       0.14          0    2928.70
    10.13        0.0       1.29       7.15       1.53       0.02    2935.67    2928.20
 0.002301      0.037      0.120      0.040      0.120       0.07      -0.00     265.90
             2925.00        10.        10.        10.       109.        47.     421.93          1.

CCHV=    0.100 CEHV=    0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

   HANEY CREEK                     50 YR FLOOD          07/03/81
  MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
  ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
  DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
  SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
             ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.02      1680.       164.      1368.       148.       1.71          4       121.
  2936.72    2936.72        94.       118.        54.       1.17         12    2932.40
     8.02        0.0       1.74      11.58       2.74       0.24    2938.43    2931.90
 0.016566      0.044      0.150      0.055      0.150       0.94      -0.00     287.49
             2928.70        50.        50.        50.        88.        33.     408.20          1.

*SECNO .080

3301 HV CHANGED MORE THAN HVINS

   HANEY CREEK                     50 YR FLOOD          07/03/81
  MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
  ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
  DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
  SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
             ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.08      1670.       180.      1356.       134.       1.21          2       167.
  2944.70    2944.70        94.       139.        94.      -0.51         11    2943.50
```

```
      7.70       0.0       1.92       9.74       1.42       3.88    2945.90    2941.90
  0.012562     0.048      0.100      0.050      0.150       0.05       0.0     220.41
             2937.00       270.       270.       270.        90.        77.    387.33          3.

 CCHV=    0.100 CEHV=    0.500
 *SECNO .080

 *** GR CARDS REPEATED

 3301 HV CHANGED MORE THAN HVINS

      0.08     1670.       270.      1221.       179.       0.64          2       172.
   2945.70       0.0       173.       163.       162.      -0.56          0    2943.50
      8.70       0.0       1.56       7.48       1.10       0.38    2946.34    2941.90
  0.003824     0.047      0.100      0.040      0.150       0.06      -0.00     218.80
             2937.00        60.        60.        60.        91.        81.    390.79          3.

 SPECIAL BRIDGE

 SB    HK        XKOR       COFQ      RDLEN        BWC        BWP      BAREA         SS
      1.25       1.60       3.00       0.0        4.00       0.01      22.00        0.0
    ELCHU      ELCHD
   2937.00   2937.00

 *SECNO .080

 *** GR CARDS REPEATED
  PRESS FLOW BECAUSE EGLWC OF    2946.34  EXCEEDS 1.5 DEPTH
     HANEY CREEK                           50 YR FLOOD           07/03/81
    MILE        Q         QLOB        QCH        QROB        HV         ITRIAL     TOPWID
    ELEV        CRIWS     ALOB        ACH        AROB        DHV        IDC        BANK ELEV
    DEPTH       WSELK     VLOB        VCH        VROB        HL         EG       LEFT/RIGHT
    SLOPE       WTN       XNL         XNCH       XNR         OLOSS      CORAR      SSTA
                ELMIN     XLOBL       XLCH       XLOBR       WSDL       WSDR       ENDST        VOL

 PRESSURE AND WEIR FLOW

     EGPRS     EGLWC         H3      QWEIR        QPR      BAREA      TAREA       ELLC
   3088.86   2946.34       0.01      1549.       120.        22.        22.    2942.50

     ELTRD
   2942.00

      0.08     1670.       285.      1198.       187.       0.58          3       173.
   2945.86       0.0       185.       167.       172.      -0.06          0    2943.50
      8.86       0.0       1.54       7.17       1.09       0.10    2946.44    2941.90
  0.003416     0.046      0.100      0.040      0.150       0.0       -0.00     218.56
             2937.00        25.        25.        25.        91.        81.    391.32          4.

 *SECNO .080
      0.08     1670.       328.      1342.         0.       0.74          2       108.
   2945.84       0.0       184.       176.         0.       0.16          0    2943.50
      8.84       0.0       1.79       7.63       0.0        0.06    2946.57    2946.50
  0.004662     0.046      0.100      0.040      0.150       0.08      -0.00     218.59
             2937.00        15.        15.        15.        94.        14.    326.30          4.
```

CCHV= 0.100 CEHV= 0.800
*SECNO .090

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 50 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.09	1670.	168.	1502.	0.	1.51	2	105.	
2946.71	2946.71	95.	145.	0.	0.78	15	2945.50	
7.71	0.0	1.77	10.39	0.0	0.27	2948.22	2948.50	
0.023586	0.047	0.150	0.060	0.150	0.62	-0.00	220.39	
	2939.00	30.	30.	30.	92.	13.	325.12	4.

CCHV= 0.100 CEHV= 0.800
*SECNO .150

0.15	1660.	0.	1660.	0.	1.55	3	28.	
2950.96	0.0	0.	166.	0.	0.04	0	2952.00	
9.96	0.0	0.0	10.00	0.0	4.26	2952.51	2953.10	
0.017609	0.049	0.080	0.055	0.130	0.03	-0.00	313.22	
	2941.00	210.	210.	210.	15.	14.	341.53	5.

CCHV= 0.100 CEHV= 0.500
*SECNO .150

3265 DIVIDED FLOW

0.15	1660.	0.	1660.	0.	1.21	2	32.	
2952.23	0.0	0.	188.	0.	-0.34	0	2952.50	
10.73	0.0	0.0	8.81	0.19	0.89	2953.44	2953.60	
0.012604	0.050	0.080	0.055	0.130	0.03	-0.00	312.32	
	2941.50	60.	60.	60.	16.	73.	400.96	5.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	5.00	0.30	28.00	0.0
	ELCHU	ELCHD						
	2941.50	2941.50						

*SECNO .150

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 50 YR FLOOD 07/03/81

MILE Q QLOB QCH QROB HV ITRIAL TOPWID

```
   MILE      Q         QLOB      QCH       QROB      HV        ITRIAL    TOPWID
   ELEV      CRIWS     ALOB      ACH       AROB      DHV       IDC       BANK ELEV
   DEPTH     WSELK     VLOB      VCH       VROB      HL        EG      LEFT/RIGHT
   SLOPE     WTN       XNL       XNCH      XNR       OLOSS     CORAR     SSTA
             ELMIN     XLOBL     XLCH      XLOBR     WSDL      WSDR      ENDST      VOL

PRESSURE AND WEIR FLOW

    EGPRS     EGLWC       H3      QWEIR       QPR     BAREA     TAREA      ELLC
  3039.55   2953.76     0.32      1349.       312.      28.       28.   2947.50

    ELTRD
  2951.30


     0.15      1660.       6.      1556.       98.     0.48         2      133.
  2954.82       0.0       5.       270.      122.    -0.72         0   2952.50
    13.32       0.0     1.14       5.76      0.81     1.87   2955.31   2953.60
 0.003613     0.050    0.080      0.055     0.130      0.0     -0.00    307.66
           2941.50       12.       12.       12.      20.       112.   440.18       5.


*SECNO .150
     0.15      1660.       4.      1555.       102.    0.48         2      133.
  2954.88       0.0       5.       272.      127.    -0.01         0   2952.50
    13.38       0.0     0.69       5.72      0.80     0.05   2955.36   2953.60
 0.002923     0.049    0.120      0.050     0.120     0.00     -0.00    307.57
           2941.50       15.       15.       19.      20.       113.   440.94       6.


CCHV=   0.100 CEHV=   0.800
*SECNO .300

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                    50 YR FLOOD              07/03/81
   MILE      Q         QLOB      QCH       QROB      HV        ITRIAL    TOPWID
   ELEV      CRIWS     ALOB      ACH       AROB      DHV       IDC       BANK ELEV
   DEPTH     WSELK     VLOB      VCH       VROB      HL        EG      LEFT/RIGHT
   SLOPE     WTN       XNL       XNCH      XNR       OLOSS     CORAR     SSTA
             ELMIN     XLOBL     XLCH      XLOBR     WSDL      WSDR      ENDST      VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.30      1640.      87.      1109.      444.     1.34        20      132.
  3007.23   3007.23       45.       99.      201.     0.87        11   3002.00
     7.93       0.0     1.96      11.22      2.21     5.15   3008.57   3003.30
 0.016447     0.052    0.150      0.055     0.150     0.69     -0.00    296.48
           2999.30       895.      895.      895.      31.       101.   428.94      13.


CCHV=   0.100 CEHV=   0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

     0.30      1640.      122.      932.      585.     0.58         3      149.
```



```
3000.47       0.0        74.      117.      327.    -0.27         0   3002.00
```

3008.47	0.0	74.	117.	327.	-0.77	0	3002.00	
9.17	0.0	1.65	7.94	1.79	0.39	3009.04	3003.30	
0.006556	0.052	0.150	0.055	0.150	0.08	-0.00	295.17	
	2999.30	40.	40.	40.	32.	117.	444.11	14.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3009.04 HIGHER THAN COMPUTED ENERGY OF 3008.74
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3021.35	3009.08	0.04	1401.	241.	72.	72.	3004.20

ELTRD
3004.80

0.30	1640.	123.	931.	587.	0.57	2	149.	
3008.47	0.0	75.	118.	328.	-0.00	0	3002.00	
9.17	0.0	1.64	7.91	1.79	0.0	3009.04	3003.30	
0.006498	0.052	0.150	0.055	0.150	0.0	-0.00	295.15	
	2999.30	12.	12.	12.	32.	117.	444.27	14.

*SECNO .300

HANEY CREEK 50 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.30	1640.	129.	896.	615.	0.57	0	150.	
3008.54	0.0	76.	111.	335.	0.00	0	3002.00	
8.54	0.0	1.69	8.05	1.84	0.07	3009.11	3003.30	
0.006740	0.052	0.150	0.055	0.150	0.00	-0.00	295.09	
	3000.00	10.	10.	10.	32.	118.	445.00	14.

*SECNO .320

*** GR CARDS REPEATED

0.32	1635.	142.	822.	671.	0.37	2	160.	
3009.28	0.0	95.	122.	420.	-0.20	0	3002.00	
9.28	0.0	1.50	6.71	1.60	0.52	3009.65	3003.30	
0.004123	0.052	0.150	0.055	0.150	0.02	-0.00	294.30	
	3000.00	100.	100.	100.	33.	127.	454.13	15.

*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK			50 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.37	1630.	99.	1036.	495.	1.21	20	135.	
3022.63	3022.63	49.	95.	220.	0.84	14	3017.20	
7.43	0.0	2.00	10.94	2.25	1.79	3023.84	3018.50	
0.015430	0.053	0.150	0.055	0.150	0.42	-0.00	296.27	
	3015.20	250.	250.	250.	31.	104.	431.43	18.

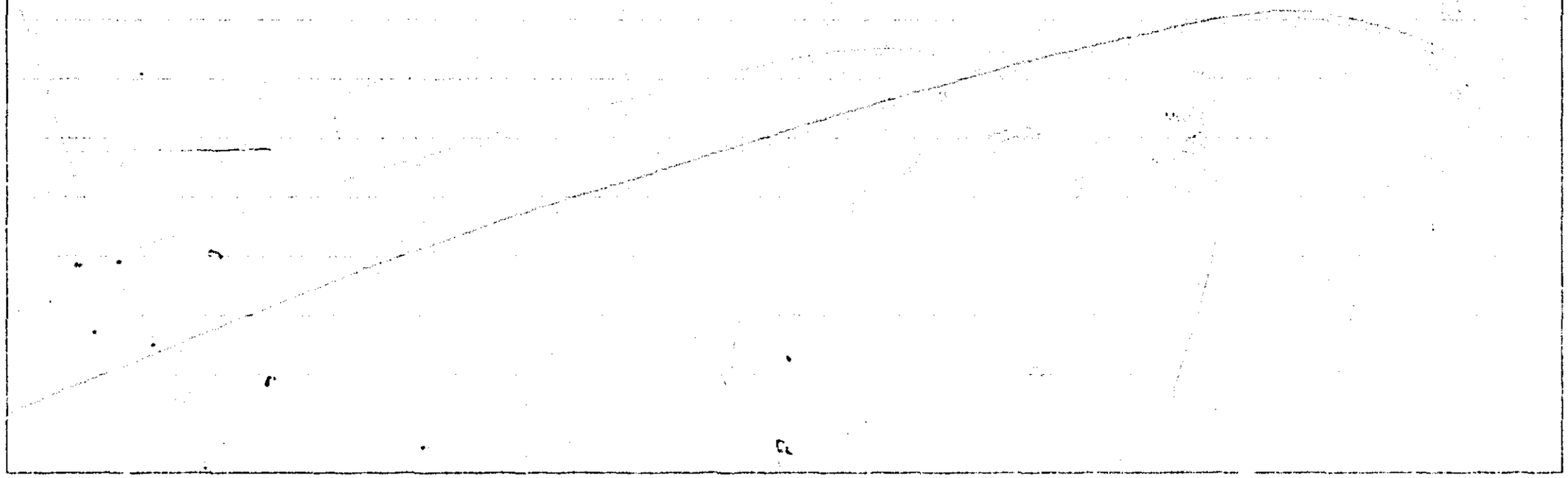
F02

THIS RUN EXECUTED 07/03/81 8:38:48

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**************************************************

T1      YANCEY CO NC FEMA STUDY                                          600
T2      100 YR FLOOD                                                     605
T3      HANEY CREEK                                                      610

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC   HVINS      Q      WSEL     FQ
         0.      4.      0.      0. 0.02618      0.     0.0      0.     0.0     0.0     615
J2  NPROF   IPLOT   PRFVS   XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE
         3.      0.     -1.      0.      0.     0.0     0.0      0.      0.      0.     620
```



G02

*PROF 3

CCHV= 0.100 CEHV= 0.500
*SECNO .010
2096 WSEL NOT GIVEN;AVG OF MAX,MIN USED

HANEY CREEK			100 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
3720 CRITICAL DEPTH ASSUMED								
0.01	2065.	314.	1546.	205.	1.62	0	142.	
2933.78	2933.78	161.	132.	76.	0.50	12	2928.70	
8.78	0.0	1.94	11.72	2.71	0.0	2935.40	2928.20	
0.014656	0.0	0.150	0.055	0.150	0.0	0.0	274.08	
	2925.00	0.	0.	0.	101.	41.	416.34	0.

*SECNO .010

3301 HV CHANGED MORE THAN HVINS

0.01	2065.	291.	1561.	213.	0.63	3	156.	
2935.09	0.0	227.	215.	124.	-0.99	0	2930.60	
10.09	0.0	1.28	7.25	1.72	0.22	2935.72	2928.20	
0.002830	0.039	0.120	0.040	0.120	0.10	-0.00	266.17	
	2925.00	40.	40.	40.	103.	52.	421.75	0.

*SECNO .010

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

0.01	2065.	134.	1748.	183.	0.99	2	154.	
2934.91	0.0	70.	203.	64.	0.37	0	2934.60	
9.91	0.0	1.92	8.63	2.86	0.01	2935.91	2932.80	
0.023535	0.038	0.120	0.040	0.120	0.18	-31.70	267.21	
	2925.00	1.	1.	1.	102.	52.	421.03	0.

*SECNO .010

*** GR CARDS REPEATED

3370 NORMAL BRIDGE,NRD= 4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

0.01	2065.	240.	1593.	232.	0.65	3	160.	
2935.51	0.0	123.	220.	87.	-0.35	0	2934.60	
10.51	0.0	1.95	7.25	2.68	0.22	2936.16	2932.80	
0.014889	0.038	0.120	0.040	0.120	0.03	-31.70	263.62	
	2925.00	12.	12.	12.	106.	54.	423.49	1.

*SECNO .010

HANEY CREEK			100 YR FLOOD		07/03/81		
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV

ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV

DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.01	2065.	345.	1494.	226.	0.47	2	162.	
2935.72	0.0	284.	234.	149.	-0.18	0	2930.60	
10.72	0.0	1.21	6.40	1.52	0.00	2936.18	2928.20	
0.001974	0.037	0.120	0.040	0.120	0.02	-0.00	262.34	
	2925.00	1.	1.	1.	107.	55.	424.37	1.

*SECNO .010

0.01	2065.	514.	1305.	246.	0.62	2	161.	
2935.66	0.0	345.	166.	144.	0.15	0	2928.70	
10.66	0.0	1.49	7.87	1.71	0.02	2936.28	2928.20	
0.002580	0.037	0.120	0.040	0.120	0.08	-0.00	262.68	
	2925.00	10.	10.	10.	112.	49.	424.13	1.

CCHV= 0.100 CEHV= 0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 100 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.02	2065.	315.	1544.	206.	1.61	20	142.	
2937.49	2937.49	162.	132.	76.	0.99	12	2932.40	
8.79	0.0	1.94	11.69	2.70	0.26	2939.10	2931.90	
0.014560	0.044	0.150	0.055	0.150	0.79	0.0	274.03	
	2928.70	50.	50.	50.	101.	41.	416.37	1.

*SECNO .080

HANEY CREEK 100 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.08	2050.	316.	1517.	217.	1.17	4	170.	
2945.22	2945.22	135.	152.	129.	-0.44	10	2943.50	
8.22	0.0	2.34	9.99	1.68	3.53	2946.39	2941.90	
0.011773	0.048	0.100	0.050	0.150	0.04	-0.00	219.57	
	2937.00	270.	270.	270.	90.	79.	389.14	4.

```
CCHV=   0.100 CEHV=   0.500
*SECNO .080

*** GR CARDS REPEATED
     0.08      2050.      375.      1432.      243.      0.76         2      174.
  2946.07       0.0       202.       172.      187.     -0.40         0   2943.50
     9.07       0.0       1.85       8.31      1.30      0.41   2946.84   2941.90
 0.004404     0.047      0.100      0.040     0.150      0.04     -0.00    218.21
             2937.00       60.        60.       60.       92.       82.    392.07        4.


SPECIAL BRIDGE

SB     HK        XKOR      COFQ      RDLEN      BWC       BWP      BAREA       SS
      1.25       1.60      3.00       0.0       4.00      0.01      22.00      0.0
    ELCHU      ELCHD
  2937.00    2937.00

*SECNO .080

*** GR CARDS REPEATED
 PRESS FLOW BECAUSE EGLWC OF   2946.84  EXCEEDS 1.5 DEPTH
    HANEY CREEK                 100 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH       QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH       AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH       VROB       HL         EG      LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH      XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH      XLOBR      WSDL       WSDR       ENDST       VOL

PRESSURE AND WEIR FLOW

    EGPRS      EGLWC         H3      QWEIR       QPR      BAREA      TAREA       ELLC
  3161.80    2946.84       0.01      1917.      124.       22.        22.    2942.50

    ELTRD
  2942.00


     0.08      2050.      382.      1421.      247.      0.73         3      174.
  2946.14       0.0       208.       174.      192.     -0.03         0   2943.50
     9.14       0.0       1.84       8.18      1.29      0.03   2946.87   2941.90
 0.004212     0.046      0.100      0.040     0.150       0.0     -0.00    218.11
             2937.00       25.        25.       25.       92.       82.    392.28        5.


*SECNO .080
     0.08      2050.      441.      1609.        0.      0.96         2      108.
  2946.10       0.0       204.       183.        0.      0.22         0   2943.50
     9.10       0.0       2.16       8.78       0.0      0.07   2947.05   2946.50
 0.005931     0.046      0.100      0.040     0.150      0.11     -0.00    218.18
             2937.00       15.        15.       15.       94.       14.    326.58        5.

CCHV=   0.100 CEHV=   0.800
*SECNO .090

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS
```

```
 HANEY CREEK                    100 YR FLOOD          07/03/81
MILE       Q          QLOB      QCH        QROB       HV         ITRIAL     TOPWID
ELEV       CRIWS      ALOB      ACH        AROB       DHV        IDC        BANK ELEV
DEPTH      WSELK      VLOB      VCH        VROB       HL         EG       LEFT/RIGHT
SLOPE      WTN        XNL       XNCH       XNR        OLOSS      CORAR      SSTA
           ELMIN      XLOBL     XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
    0.09      2050.      311.      1739.        0.       1.57          2       106.
 2947.27   2947.27       139.       160.        0.       0.61         12   2945.50
    8.27       0.0       2.24      10.88       0.0       0.31    2948.84    2948.50
0.023371     0.047      0.150      0.060     0.150       0.49      -0.00     219.49
           2939.00        30.        30.        30.         93.       13.     325.71        5.


CCHV=   0.100 CEHV=   0.800
*SECNO .150

3265 DIVIDED FLOW

    0.15      2035.        0.      2035.        0.       1.84          2        31.
 2951.68       0.0         0.       187.        0.       0.27          0   2952.00
   10.68       0.0        0.0      10.90       0.02      4.46    2953.52    2953.10
0.019368     0.049      0.080      0.055     0.130       0.22      -0.00     312.38
           2941.00        210.       210.       210.        16.       72.     400.18        6.


CCHV=   0.100 CEHV=   0.500
*SECNO .150

3265 DIVIDED FLOW

    0.15      2035.        0.      2027.        7.       1.36          2        50.
 2953.14       0.0         0.       216.        9.      -0.49          0   2952.50
   11.64       0.0        0.90      9.37       0.82      0.93    2954.50    2953.60
0.012596     0.050      0.080      0.055     0.130       0.05      -0.00     310.81
           2941.50        60.        60.        60.        17.       87.     414.66        7.


SPECIAL BRIDGE

SB      HK         XKOR       COFQ       RDLEN      BWC        BWP      BAREA       SS
      1.25         1.60       3.00         0.0      5.00       0.30      28.00      0.0
    ELCHU      ELCHD
  2941.50    2941.50

*SECNO .150

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

 HANEY CREEK                    100 YR FLOOD          07/03/81
MILE       Q          QLOB      QCH        QROB       HV         ITRIAL     TOPWID
ELEV       CRIWS      ALOB      ACH        AROB       DHV        IDC        BANK ELEV
DEPTH      WSELK      VLOB      VCH        VROB       HL         EG       LEFT/RIGHT
SLOPE      WTN        XNL       XNCH       XNR        OLOSS      CORAR      SSTA
```



```
           ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL
```

```
                ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST      VOL
PRESSURE AND WEIR FLOW
    EGPRS      EGLWC         H3      QWEIR       QPR      BAREA      TAREA       ELLC
  3084.37    2954.87       0.37       1748.       288.       28.        28.    2947.50
    ELTRD
  2951.30

     0.15       2035.         9.       1873.       153.       0.64          3       137.
  2955.12        0.0          6.        280.       150.      -0.72          0    2952.50
    13.62        0.0       1.40        6.70       1.02       1.27    2955.76    2953.60
 0.004677      0.050      0.080       0.055      0.130        0.0      -0.00     307.12
              2941.50         12.        12.        12.        21.       117.     444.55        7.

*SECNO .150
     0.15       2035.         6.       1869.       161.       0.63          2       139.
  2955.20        0.0          7.        282.       158.      -0.02          0    2952.50
    13.70        0.0       0.85        6.62       1.01       0.06    2955.83    2953.60
 0.003735      0.049      0.120       0.050      0.120       0.00      -0.00     306.97
              2941.50         15.        15.        15.        21.       118.     445.74        7.

CCHV=   0.100 CEHV=   0.800
*SECNO .300

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                    100 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST      VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.30       2010.       127.       1259.       625.       1.39         20       139.
  3007.74    3007.74         57.        107.       251.       0.77         12    3002.00
     8.44        0.0       2.24       11.81       2.49       6.11    3009.13    3003.30
 0.016518      0.052      0.150       0.055      0.150       0.61      -0.00     295.94
              2999.30        895.       895.       895.         32.       108.     435.21       16.

CCHV=   0.100 CEHV=   0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

     0.30       2010.       163.       1076.       771.       0.64          3       156.
  3008.97        0.0          87.        125.       384.      -0.75          0    3002.00
     9.67        0.0       1.87        8.60       2.01       0.41    3009.62    3003.30
 0.007074      0.052      0.150       0.055      0.150       0.07      -0.00     294.63
              2999.30         40.        40.        40.         33.       123.     450.37       16.
```

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3009.62 HIGHER THAN COMPUTED ENERGY OF 3009.29
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3028.34	3009.66	0.04	1758.	255.	72.	72.	3004.20

ELTRD
3004.80

0.30	2010.	163.	1074.	773.	0.64	2	156.	
3008.98	0.0	88.	125.	385.	-0.01	0	3002.00	
9.68	0.0	1.87	8.57	2.00	0.0	3009.62	3003.30	
0.007009	0.052	0.150	0.055	0.150	0.0	-0.00	294.61	
	2999.30	12.	12.	12.	33.	123.	450.54	16.

*SECNO .300
HANEY CREEK 100 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.30	2010.	170.	1035.	805.	0.64	0	157.	
3009.05	0.0	89.	119.	393.	-0.00	0	3002.00	
9.05	0.0	1.91	8.70	2.05	0.07	3009.69	3003.30	
0.007190	0.052	0.150	0.055	0.150	0.00	-0.00	294.54	
	3000.00	10.	10.	10.	33.	124.	451.33	16.

*SECNO .320

*** GR CARDS REPEATED

0.32	2005.	185.	952.	868.	0.41	2	167.	
3009.85	0.0	110.	131.	490.	-0.22	0	3002.00	
9.85	0.0	1.68	7.27	1.77	0.55	3010.27	3003.30	
0.004409	0.052	0.150	0.055	0.150	0.02	-0.00	293.69	
	3000.00	100.	100.	100.	34.	134.	461.18	18.

*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 100 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
3685 20 TRIALS ATTEMPTED WSEL,CWSEL								
3693 PROBABLE MINIMUM SPECIFIC ENERGY								
3720 CRITICAL DEPTH ASSUMED								
0.37	1995.	137.	1189.	669.	1.32	20	141.	
3023.07	3023.07	60.	101.	264.	0.90	14	3017.20	
7.87	0.0	2.29	11.75	2.54	1.90	3024.38	3018.50	
0.016277	0.053	0.150	0.055	0.150	0.45	-0.00	295.80	
	3015.20	250.	250.	250.	32.	109.	436.78	21.

THIS RUN EXECUTED 07/03/81 8:38:51

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**************************************************

T1      YANCEY CO NC FEMA STUDY                                          625
T2      500 YR FLOOD                                                     630
T3      HANEY CREEK                                                      635

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC   HVINS      Q      WSEL      FQ
         0.      5.      0.      0. 0.02618      0.     0.0      0.     0.0     0.0     640

J2  NPROF   IPLOT   PRFVS   XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE
        15.     0.    -1.      0.      0.    0.0     0.0      0.      0.      0.     645
```

```
*PROF 4

CCHV=   0.100 CEHV=   0.500
*SECNO .010
2096 WSEL NOT GIVEN,AVG OF MAX,MIN USED
    HANEY CREEK                    500 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3720 CRITICAL DEPTH ASSUMED
     0.01     3170.       733.      2063.       374.      1.85          0       155.
  2935.01  2935.01        279.       154.       119.      0.50         12   2928.70
    10.01      0.0        2.62      13.39       3.15       0.0    2936.87   2928.20
 0.015542      0.0       0.150      0.055      0.150       0.0      -0.00    266.61
           2925.00          0.         0.         0.      108.        46.    421.45         0.


*SECNO .010

3301 HV CHANGED MORE THAN HVINS

     0.01     3170.       605.      2198.       367.      0.83          3       169.
  2936.39      0.0        347.       253.       176.     -1.02          0   2930.60
    11.39      0.0        1.74       8.70       2.08      0.25    2937.22   2928.20
 0.003283    0.039       0.120      0.040      0.120      0.10      -0.00    258.31
           2925.00          40.        40.        40.      111.        58.    427.12         1.


*SECNO .010

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

     0.01     3170.       593.      2135.       442.      0.84          0       169.
  2936.39      0.0        206.       246.       123.      0.01          0   2934.60
    11.39      0.0        2.88       8.70       3.58      0.01    2937.23   2932.80
 0.018488    0.038       0.120      0.040      0.120      0.01     -31.70    258.24
           2925.00          1.         1.         1.      111.        58.    427.17         1.


*SECNO .010

*** GR CARDS REPEATED

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

     0.01     3170.       679.      2020.       471.      0.66          2       173.
  2936.78      0.0        245.       257.       141.     -0.18          0   2934.60
    11.78      0.0        2.77       7.86       3.35      0.19    2937.44   2932.80
 0.014237    0.038       0.120      0.040      0.120      0.02     -31.70    255.86
           2925.00          12.        12.        12.      114.        59.    428.80         1.


*SECNO .010
    HANEY CREEK                    500 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
```



```
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
```

DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.01	3170.	643.	2150.	377.	0.72	2	173.	
2936.76	0.0	384.	264.	193.	0.05	0	2930.60	
11.76	0.0	1.67	8.16	1.96	0.01	2937.47	2928.20	
0.002730	0.037	0.120	0.040	0.120	0.03	-0.00	256.05	
	2925.00	1.	1.	1.	113.	59.	428.67	1.

*SECNO .010

0.01	3170.	921.	1836.	413.	0.92	2	172.	
2936.68	0.0	454.	184.	187.	0.21	0	2928.70	
11.68	0.0	2.03	9.97	2.21	0.03	2937.61	2928.20	
0.003596	0.037	0.120	0.040	0.120	0.10	-0.00	256.48	
	2925.00	10.	10.	10.	119.	53.	428.38	1.

CCHV= 0.100 CEHV= 0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 500 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.02	3170.	735.	2061.	374.	1.84	20	155.	
2938.72	2938.72	280.	154.	119.	0.92	12	2932.40	
10.02	0.0	2.62	13.36	3.14	0.33	2940.57	2931.90	
0.015454	0.044	0.150	0.055	0.150	0.74	-0.00	266.55	
	2928.70	50.	50.	50.	108.	46.	421.49	2.

*SECNO .080

HANEY CREEK 500 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.08	3155.	682.	2031.	441.	1.41	3	174.	
2946.14	2946.14	208.	174.	192.	-0.43	10	2943.50	
9.14	0.0	3.29	11.69	2.30	3.89	2947.55	2941.90	
0.013444	0.048	0.100	0.050	0.150	0.04	-0.00	218.11	
	2937.00	270.	270.	270.	92.	82.	392.29	5.

CCHV= 0.100 CEHV= 0.500

```
CCHV=   0.100 CEHV=   0.500
*SECNO .080

*** GR CARDS REPEATED
     0.08     3155.      717.     1986.      452.     1.04        2      179.
  2947.05      0.0       281.      196.      257.    -0.38        0     2943.50
    10.05      0.0       2.55     10.15     1.76     0.49     2948.08   2941.90
 0.005550     0.047     0.100     0.040     0.150    0.04     -0.00     216.66
             2937.00      60.       60.       60.      93.      85.     395.40        6.


SPECIAL BRIDGE

SB     HK         XKOR       COFQ      RDLEN      BWC       BWP      BAREA       SS
      1.25       1.60       3.00       0.0       4.00      0.01      22.00      0.0
    ELCHU      ELCHD
  2937.00    2937.00

*SECNO .080

*** GR CARDS REPEATED
 PRESS FLOW BECAUSE EGLWC OF   2948.09  EXCEEDS 1.5 DEPTH
6870 D.S. ENERGY OF 2948.08 HIGHER THAN COMPUTED ENERGY OF 2947.98
    HANEY CREEK                    500 YR FLOOD          07/03/81
   MILE       Q         QLOB       QCH       QROB       HV        ITRIAL     TOPWID
   ELEV       CRIWS     ALOB       ACH       AROB       DHV       IDC        BANK ELEV
   DEPTH      WSELK     VLOB       VCH       VROB       HL        EG      LEFT/RIGHT
   SLOPE      WTN       XNL        XNCH      XNR        OLOSS     CORAR      SSTA
              ELMIN     XLOBL      XLCH      XLOBR      WSDL      WSDR       ENDST       VOL

PRESSURE AND WEIR FLOW

    EGPRS      EGLWC        H3       QWEIR       QPR       BAREA      TAREA      ELLC
  3458.01    2948.09      0.01      3000.      135.        22.        22.     2942.50

    ELTRD
  2942.00


     0.08     3155.      719.     1983.      453.     1.03        3      179.
  2947.06      0.0       282.      196.      258.    -0.01        0     2943.50
    10.06      0.0       2.55     10.12     1.75     0.0      2948.08   2941.90
 0.005495     0.046     0.100     0.040     0.150    0.0      -0.00     216.64
             2937.00      25.       25.       25.      93.      85.     395.46        7.


*SECNO .080
     0.08     3155.      832.     2307.      16.      1.44        4      178.
  2946.95    2946.36     273.      208.      30.      0.41       11     2943.50
     9.95      0.0       3.05     11.10     0.53     0.10     2948.39   2946.50
 0.008178     0.046     0.100     0.040     0.150    0.20     -0.00     216.81
             2937.00      15.       15.       15.      96.      82.     394.61        7.


CCHV=   0.100 CEHV=   0.800
*SECNO .090

*** GR CARDS REPEATED
    HANEY CREEK                    500 YR FLOOD          07/03/81
```



```
   MILE       Q         QLOB       QCH       QROB       HV        ITRIAL     TOPWID
```

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.09	3155.	749.	2406.	0.	1.88	3	109.	
2948.44	2948.44	231.	193.	0.	0.45	8	2945.50	
9.44	0.0	3.24	12.47	0.0	0.40	2950.32	2948.50	
0.025602	0.047	0.150	0.060	0.150	0.36	-0.00	217.64	
	2939.00	30.	30.	30.	95.	14.	326.93	7.

CCHV= 0.100 CEHV= 0.800
*SECNO .150

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

0.15	3135.	3.	3093.	39.	2.61	4	94.	
2953.29	2952.53	2.	237.	30.	0.73	12	2952.00	
12.29	0.0	1.89	13.05	1.30	5.00	2955.90	2953.10	
0.022154	0.049	0.080	0.055	0.130	0.58	-0.00	309.60	
	2941.00	210.	210.	210.	18.	96.	424.44	9.

CCHV= 0.100 CEHV= 0.500
*SECNO .150

3301 HV CHANGED MORE THAN HVINS

0.15	3135.	19.	2802.	314.	1.27	3	145.	
2955.56	0.0	9.	294.	195.	-1.34	0	2952.50	
14.06	0.0	2.14	9.55	1.61	0.80	2956.83	2953.60	
0.008910	0.050	0.080	0.055	0.130	0.13	-0.00	306.31	
	2941.50	60.	60.	60.	22.	123.	451.10	9.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	5.00	0.30	28.00	0.0
	ELCHU	ELCHD						
	2941.50	2941.50						

*SECNO .150

*** GR CARDS REPEATED
HANEY CREEK 500 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3267.01	2957.13	0.30	2934.	211.	28.	28.	2947.50

ELTRD
2951.30

0.15	3135.	22.	2745.	368.	1.12	3	150.	
2955.84	0.0	10.	303.	228.	-0.15	0	2952.50	
14.34	0.0	2.11	9.06	1.61	0.13	2956.97	2953.60	
0.007688	0.050	0.080	0.055	0.130	0.0	-0.00	305.76	
	2941.50	12.	12.	12.	22.	128.	455.58	9.

*SECNO .150

0.15	3135.	15.	2729.	391.	1.07	2	152.	
2956.01	0.0	11.	308.	245.	-0.05	0	2952.50	
14.51	0.0	1.28	8.86	1.59	0.10	2957.07	2953.60	
0.005949	0.049	0.120	0.050	0.120	0.01	-0.00	305.47	
	2941.50	15.	15.	15.	23.	130.	457.91	10.

CCHV= 0.100 CEHV= 0.800
*SECNO .300

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 500 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.30	3095.	248.	1674.	1173.	1.61	20	154.	
3008.88	3008.88	85.	124.	373.	0.54	18	3002.00	
9.58	0.0	2.92	13.54	3.15	8.52	3010.49	3003.30	
0.017794	0.052	0.150	0.055	0.150	0.43	-0.00	294.73	
	2999.30	895.	895.	895.	33.	122.	449.21	21.

CCHV= 0.100 CEHV= 0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

0.30	3095.	287.	1458.	1350.	0.80	3	172.	
3010.23	0.0	120.	144.	538.	-0.81	0	3002.00	
10.93	0.0	2.40	10.14	2.51	0.46	3011.03	3003.30	
0.008150	0.052	0.150	0.055	0.150	0.08	-0.00	293.29	
	2999.30	40.	40.	40.	34.	138.	465.76	22.

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 3009.11 ,NOT 3010.23
HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3011.03 HIGHER THAN COMPUTED ENERGY OF 3010.63
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3056.14	3012.99	0.0	2809.	289.	72.	72.	3004.20

ELTRD
3004.80

0.30	3095.	288.	1455.	1352.	0.80	2	173.	
3010.23	0.0	120.	144.	541.	-0.01	0	3002.00	
10.93	0.0	2.39	10.10	2.50	0.0	3011.03	3003.30	
0.008067	0.052	0.150	0.055	0.150	0.0	-0.00	293.27	
	2999.30	12.	12.	12.	34.	138.	466.00	22.

*SECNO .300
HANEY CREEK 500 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.30	3095.	296.	1408.	1391.	0.79	0	174.	
3010.32	0.0	122.	138.	550.	-0.01	0	3002.00	
10.32	0.0	2.42	10.21	2.53	0.08	3011.11	3003.30	
0.008125	0.052	0.150	0.055	0.150	0.00	-0.00	293.20	
	3000.00	10.	10.	10.	34.	139.	466.88	22.

*SECNO .320

*** GR CARDS REPEATED

0.32	3085.	320.	1297.	1468.	0.52	2	215.	
3011.25	0.0	163.	152.	679.	-0.27	0	3002.00	
11.25	0.0	1.96	8.54	2.16	0.63	3011.77	3003.30	
0.004994	0.052	0.150	0.055	0.150	0.03	-0.00	263.19	
	3000.00	100.	100.	100.	64.	151.	478.36	25.

*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK			500 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
3685 20 TRIALS ATTEMPTED WSEL,CWSEL								
3693 PROBABLE MINIMUM SPECIFIC ENERGY								
3720 CRITICAL DEPTH ASSUMED								
0.37	3075.	250.	1639.	1186.	1.78	20	153.	
3023.95	3023.95	81.	114.	358.	1.26	19	3017.20	
8.75	0.0	3.07	14.33	3.31	2.24	3025.72	3018.50	
0.020541	0.053	0.150	0.055	0.150	0.63	-0.00	294.87	
	3015.20	250.	250.	250.	33.	120.	447.59	29.

THIS RUN EXECUTED 07/03/81 8:38:55

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**********************************************************
```

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER
INDICATES MESSAGE IN SUMMARY OF ERRORS LIST/

HANEY CREEK

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
*	0.010	0.	0.0	0.0	2925.0	975.0	2930.96	2930.96	2932.73	250.52	11.09	116.49	61.60
*	0.010	0.	0.0	0.0	2925.0	1680.0	2933.03	2933.03	2934.73	163.74	11.53	268.37	131.29
*	0.010	0.	0.0	0.0	2925.0	2065.0	2933.78	2933.78	2935.40	146.56	11.72	369.02	170.57
*	0.010	0.	0.0	0.0	2925.0	3170.0	2935.01	2935.01	2936.87	155.42	13.39	552.26	254.28
	0.010	40.	0.0	0.0	2925.0	975.0	2932.62	0.0	2933.15	34.82	6.14	224.54	165.23
	0.010	40.	0.0	0.0	2925.0	1680.0	2934.50	0.0	2935.06	26.92	6.70	476.72	323.79
	0.010	40.	0.0	0.0	2925.0	2065.0	2935.09	0.0	2935.72	28.30	7.25	566.27	388.18
	0.010	40.	0.0	0.0	2925.0	3170.0	2936.39	0.0	2937.22	32.83	8.70	776.40	553.29
	0.010	1.	2932.8	2933.7	2925.0	975.0	2932.60	0.0	2933.17	77.58	6.07	160.70	110.69
	0.010	1.	2932.8	2933.7	2925.0	1680.0	2934.29	0.0	2935.28	230.88	8.31	257.64	110.57
	0.010	1.	2932.8	2933.7	2925.0	2065.0	2934.91	0.0	2935.91	235.35	8.63	336.18	134.61
	0.010	1.	2932.8	2933.7	2925.0	3170.0	2936.39	0.0	2937.23	184.88	8.70	575.16	233.14
	0.010	12.	2932.8	2933.7	2925.0	975.0	2932.70	0.0	2933.27	78.47	6.02	161.92	110.07
	0.010	12.	2932.8	2933.7	2925.0	1680.0	2934.86	0.0	2935.54	163.11	7.14	327.09	131.54
	0.010	12.	2932.8	2933.7	2925.0	2065.0	2935.51	0.0	2936.16	148.89	7.25	429.24	169.23
	0.010	12.	2932.8	2933.7	2925.0	3170.0	2936.78	0.0	2937.44	142.37	7.86	642.05	265.67
	0.010	1.	0.0	0.0	2925.0	975.0	2932.64	0.0	2933.35	41.96	6.76	144.19	150.51
	0.010	1.	0.0	0.0	2925.0	1680.0	2935.18	0.0	2935.58	17.67	5.78	581.64	399.63
	0.010	1.	0.0	0.0	2925.0	2065.0	2935.72	0.0	2936.18	19.74	6.40	666.53	464.73
	0.010	1.	0.0	0.0	2925.0	3170.0	2936.76	0.0	2937.47	27.30	8.16	840.18	606.69
	0.010	10.	0.0	0.0	2925.0	975.0	2932.66	0.0	2933.40	39.06	7.45	226.40	156.00
	0.010	10.	0.0	0.0	2925.0	1680.0	2935.13	0.0	2935.67	23.01	7.15	570.29	350.20
	0.010	10.	0.0	0.0	2925.0	2065.0	2935.66	0.0	2936.28	25.80	7.87	654.64	406.57
	0.010	10.	0.0	0.0	2925.0	3170.0	2936.68	0.0	2937.61	35.96	9.97	825.13	528.65
*	0.020	50.	0.0	0.0	2928.7	975.0	2934.67	2934.67	2936.43	248.33	11.05	116.94	61.87
*	0.020	50.	0.0	0.0	2928.7	1680.0	2936.72	2936.72	2938.43	165.66	11.58	266.31	130.53
*	0.020	50.	0.0	0.0	2928.7	2065.0	2937.49	2937.49	2939.10	145.60	11.69	370.37	171.14
*	0.020	50.	0.0	0.0	2928.7	3170.0	2938.72	2938.72	2940.57	154.54	13.36	553.71	255.00
*	0.080	270.	0.0	0.0	2937.0	970.0	2942.59	2942.59	2944.40	257.67	10.81	95.14	60.43
*	0.080	270.	0.0	0.0	2937.0	1670.0	2944.70	2944.70	2945.90	125.62	9.74	327.29	149.00
*	0.080	270.	0.0	0.0	2937.0	2050.0	2945.22	2945.22	2946.39	117.73	9.99	415.77	188.94
*	0.080	270.	0.0	0.0	2937.0	3155.0	2946.14	2946.14	2947.55	134.44	11.69	573.34	272.10

J03

K03

K03

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	0.080	60.	0.0	0.0	2937.0	970.0	2944.43	0.0	2944.99	36.72	6.39	284.64	160.08
	0.080	60.	0.0	0.0	2937.0	1670.0	2945.70	0.0	2946.34	38.24	7.48	497.99	270.05
	0.080	60.	0.0	0.0	2937.0	2050.0	2946.07	0.0	2946.84	44.04	8.31	562.18	308.91
	0.080	60.	0.0	0.0	2937.0	3155.0	2947.05	0.0	2948.08	55.50	10.15	733.50	423.50
	0.080	25.	2942.0	2942.5	2937.0	970.0	2945.06	0.0	2945.40	21.27	5.22	390.02	210.33
	0.080	25.	2942.0	2942.5	2937.0	1670.0	2945.86	0.0	2946.44	34.16	7.17	524.37	285.73
	0.080	25.	2942.0	2942.5	2937.0	2050.0	2946.14	0.0	2946.87	42.12	8.18	573.28	315.86
	0.080	25.	2942.0	2942.5	2937.0	3155.0	2947.06	0.0	2948.08	54.95	10.12	736.47	425.62
	0.080	15.	0.0	0.0	2937.0	970.0	2945.07	0.0	2945.47	26.97	5.44	277.32	186.79
	0.080	15.	0.0	0.0	2937.0	1670.0	2945.84	0.0	2946.57	46.62	7.63	359.27	244.59
	0.080	15.	0.0	0.0	2937.0	2050.0	2946.10	0.0	2947.05	59.31	8.78	387.39	266.19
	0.080	15.	0.0	0.0	2937.0	3155.0	2946.95	2946.36	2948.39	81.78	11.10	511.30	348.87
	0.090	30.	0.0	0.0	2939.0	970.0	2945.05	0.0	2946.48	280.94	9.59	101.24	57.87
*	0.090	30.	0.0	0.0	2939.0	1670.0	2946.71	2946.71	2948.22	235.86	10.39	239.76	108.74
*	0.090	30.	0.0	0.0	2939.0	2050.0	2947.27	2947.27	2948.84	233.71	10.88	298.79	134.10
*	0.090	30.	0.0	0.0	2939.0	3155.0	2948.44	2948.44	2950.32	256.02	12.47	424.20	197.18
	0.150	210.	0.0	0.0	2941.0	960.0	2949.42	0.0	2950.33	125.97	7.69	124.79	85.53
	0.150	210.	0.0	0.0	2941.0	1660.0	2950.96	0.0	2952.51	176.09	10.00	166.08	125.10
	0.150	210.	0.0	0.0	2941.0	2035.0	2951.68	0.0	2953.52	193.68	10.90	186.81	146.22
	0.150	210.	0.0	0.0	2941.0	3135.0	2953.29	2952.53	2955.90	221.54	13.05	268.54	210.63
	0.150	60.	0.0	0.0	2941.5	960.0	2950.23	0.0	2951.04	106.49	7.22	132.91	93.03
	0.150	60.	0.0	0.0	2941.5	1660.0	2952.23	0.0	2953.44	126.04	8.81	188.46	147.86
	0.150	60.	0.0	0.0	2941.5	2035.0	2953.14	0.0	2954.50	125.96	9.37	225.50	181.32
	0.150	60.	0.0	0.0	2941.5	3135.0	2955.56	0.0	2956.83	89.10	9.55	497.69	332.13
*	0.150	12.	2951.3	2947.5	2941.5	960.0	2954.05	0.0	2954.27	18.17	3.83	298.79	225.19
	0.150	12.	2951.3	2947.5	2941.5	1660.0	2954.82	0.0	2955.31	36.13	5.76	397.32	276.16
	0.150	12.	2951.3	2947.5	2941.5	2035.0	2955.12	0.0	2955.76	46.77	6.70	436.47	297.58
	0.150	12.	2951.3	2947.5	2941.5	3135.0	2955.84	0.0	2956.97	76.88	9.06	541.48	357.54
	0.150	15.	0.0	0.0	2941.5	960.0	2954.07	0.0	2954.29	14.85	3.81	301.86	249.14
	0.150	15.	0.0	0.0	2941.5	1660.0	2954.88	0.0	2955.36	29.23	5.72	404.09	307.05
	0.150	15.	0.0	0.0	2941.5	2035.0	2955.20	0.0	2955.83	37.35	6.62	447.39	333.00
	0.150	15.	0.0	0.0	2941.5	3135.0	2956.01	0.0	2957.07	59.49	8.86	564.88	406.44
*	0.300	895.	0.0	0.0	2999.3	950.0	3005.86	3005.86	3007.20	182.37	10.12	179.12	70.35
*	0.300	895.	0.0	0.0	2999.3	1640.0	3007.23	3007.23	3008.57	164.47	11.22	344.61	127.88
*	0.300	895.	0.0	0.0	2999.3	2010.0	3007.74	3007.74	3009.13	165.18	11.81	413.96	156.39
*	0.300	895.	0.0	0.0	2999.3	3095.0	3008.88	3008.88	3010.49	177.94	13.54	581.40	232.02
	0.300	40.	0.0	0.0	2999.3	950.0	3007.19	0.0	3007.66	57.00	6.58	339.43	125.83
	0.300	40.	0.0	0.0	2999.3	1640.0	3008.47	0.0	3009.04	65.56	7.94	518.35	202.54
	0.300	40.	0.0	0.0	2999.3	2010.0	3008.97	0.0	3009.62	70.74	8.60	595.97	238.99
	0.300	40.	0.0	0.0	2999.3	3095.0	3010.23	0.0	3011.03	81.50	10.14	801.60	342.84
	0.300	12.	3004.8	3004.2	2999.3	950.0	3007.20	0.0	3007.66	56.26	6.54	341.52	126.65
	0.300	12.	3004.8	3004.2	2999.3	1640.0	3008.47	0.0	3009.04	64.98	7.91	520.34	203.45
	0.300	12.	3004.8	3004.2	2999.3	2010.0	3008.98	0.0	3009.62	70.09	8.57	598.23	240.08
*	0.300	12.	3004.8	3004.2	2999.3	3095.0	3010.23	0.0	3011.03	80.67	10.10	804.91	344.59

L03

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10K*S	VCH	AREA	.01K
	0.300	10.	0.0	0.0	3000.0	950.0	3007.25	0.0	3007.72	60.78	6.74	341.05	121.85
	0.300	10.	0.0	0.0	3000.0	1640.0	3008.54	0.0	3009.11	67.40	8.05	521.98	199.76
	0.300	10.	0.0	0.0	3000.0	2010.0	3009.05	0.0	3009.69	71.90	8.70	600.94	237.04
	0.300	10.	0.0	0.0	3000.0	3095.0	3010.32	0.0	3011.11	81.25	10.21	810.18	343.37
	0.320	100.	0.0	0.0	3000.0	945.0	3007.91	0.0	3008.20	35.31	5.50	430.74	159.03
	0.320	100.	0.0	0.0	3000.0	1635.0	3009.28	0.0	3009.65	41.23	6.71	636.99	254.63
	0.320	100.	0.0	0.0	3000.0	2005.0	3009.85	0.0	3010.27	44.09	7.27	730.93	301.94
	0.320	100.	0.0	0.0	3000.0	3085.0	3011.25	0.0	3011.77	49.94	8.54	993.30	436.56
*	0.370	250.	0.0	0.0	3015.2	945.0	3021.22	3021.22	3022.54	190.97	10.28	188.56	68.38
*	0.370	250.	0.0	0.0	3015.2	1630.0	3022.63	3022.63	3023.84	154.30	10.94	364.38	131.22
*	0.370	250.	0.0	0.0	3015.2	1995.0	3023.07	3023.07	3024.38	162.77	11.75	424.55	156.37
*	0.370	250.	0.0	0.0	3015.2	3075.0	3023.95	3023.95	3025.72	205.41	14.33	553.73	214.55

HANEY CREEK

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	0.010	975.	2931.0	0.0	0.0	0.0	42.91	0.0
*	0.010	1680.	2933.0	2.1	0.0	0.0	121.55	0.0
*	0.010	2065.	2933.8	0.7	0.0	0.0	142.25	0.0
*	0.010	3170.	2935.0	1.2	0.0	0.0	154.84	0.0
	0.010	975.	2932.6	0.0	1.7	0.0	101.27	40.00
	0.010	1680.	2934.5	1.9	1.5	0.0	149.59	40.00
	0.010	2065.	2935.1	0.6	1.3	0.0	155.58	40.00
	0.010	3170.	2936.4	1.3	1.4	0.0	168.81	40.00
	0.010	975.	2932.6	0.0	-0.0	0.0	27.00	1.00
	0.010	1680.	2934.3	1.7	-0.2	0.0	108.01	1.00
	0.010	2065.	2934.9	0.6	-0.2	0.0	153.82	1.00
	0.010	3170.	2936.4	1.5	0.0	0.0	168.94	1.00
	0.010	975.	2932.7	0.0	0.1	0.0	27.00	12.00
	0.010	1680.	2934.9	2.2	0.6	0.0	153.22	12.00
	0.010	2065.	2935.5	0.7	0.6	0.0	159.88	12.00
	0.010	3170.	2936.8	1.3	0.4	0.0	172.93	12.00
	0.010	975.	2932.6	0.0	-0.1	0.0	29.00	1.00
	0.010	1680.	2935.2	2.5	0.3	0.0	156.59	1.00
	0.010	2065.	2935.7	0.5	0.2	0.0	162.03	1.00
	0.010	3170.	2936.8	1.0	-0.0	0.0	172.62	1.00
	0.010	975.	2932.7	0.0	0.0	0.0	103.48	10.00
	0.010	1680.	2935.1	2.5	-0.1	0.0	156.03	10.00
	0.010	2065.	2935.7	0.5	-0.1	0.0	161.45	10.00
	0.010	3170.	2936.7	1.0	-0.1	0.0	171.90	10.00
*	0.020	975.	2934.7	0.0	2.0	0.0	43.00	50.00
*	0.020	1680.	2936.7	2.0	1.6	0.0	120.71	50.00
*	0.020	2065.	2937.5	0.8	1.8	0.0	142.34	50.00
*	0.020	3170.	2938.7	1.2	2.0	0.0	154.93	50.00
*	0.080	970.	2942.6	0.0	7.9	0.0	39.34	270.00
*	0.080	1670.	2944.7	2.1	8.0	0.0	166.92	270.00
*	0.080	2050.	2945.2	0.5	7.7	0.0	169.57	270.00
*	0.080	3155.	2946.1	0.9	7.4	0.0	174.18	270.00
	0.080	970.	2944.4	0.0	1.8	0.0	162.29	60.00
	0.080	1670.	2945.7	1.3	1.0	0.0	171.99	60.00
	0.080	2050.	2946.1	0.4	0.8	0.0	173.85	60.00
	0.080	3155.	2947.0	1.0	0.9	0.0	178.74	60.00
	0.080	970.	2945.1	0.0	0.6	0.0	168.80	25.00
	0.080	1670.	2945.9	0.8	0.2	0.0	172.76	25.00
	0.080	2050.	2946.1	0.3	0.1	0.0	174.17	25.00
	0.080	3155.	2947.1	0.9	0.0	0.0	178.82	25.00
	0.080	970.	2945.1	0.0	0.0	0.0	105.68	15.00
	0.080	1670.	2945.8	0.8	-0.0	0.0	107.71	15.00

A04

0.080	2050.	2946.1	0.3	-0.0	0.0	108.40	15.00
0.080	3155.	2947.0	0.9	-0.1	0.0	177.79	15.00

B04

BO4

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	0.090	970.	2945.1	0.0	-0.0	0.0	27.65	30.00
*	0.090	1670.	2946.7	1.7	0.9	0.0	104.73	30.00
*	0.090	2050.	2947.3	0.6	1.2	0.0	106.21	30.00
*	0.090	3155.	2948.4	1.2	1.5	0.0	109.29	30.00
	0.150	960.	2949.4	0.0	4.4	0.0	24.67	210.00
	0.150	1660.	2951.0	1.5	4.3	0.0	28.32	210.00
	0.150	2035.	2951.7	0.7	4.4	0.0	31.24	210.00
	0.150	3135.	2953.3	1.6	4.8	0.0	94.37	210.00
	0.150	960.	2950.2	0.0	0.8	0.0	25.43	60.00
	0.150	1660.	2952.2	2.0	1.3	0.0	32.20	60.00
	0.150	2035.	2953.1	0.9	1.5	0.0	49.54	60.00
	0.150	3135.	2955.6	2.4	2.3	0.0	144.78	60.00
*	0.150	960.	2954.0	0.0	3.8	0.0	119.25	12.00
	0.150	1660.	2954.8	0.8	2.6	0.0	132.52	12.00
	0.150	2035.	2955.1	0.3	2.0	0.0	137.43	12.00
	0.150	3135.	2955.8	0.7	0.3	0.0	149.82	12.00
	0.150	960.	2954.1	0.0	0.0	0.0	119.69	15.00
	0.150	1660.	2954.9	0.8	0.1	0.0	133.37	15.00
	0.150	2035.	2955.2	0.3	0.1	0.0	138.77	15.00
	0.150	3135.	2956.0	0.8	0.2	0.0	152.44	15.00
*	0.300	950.	3005.9	0.0	51.8	0.0	105.14	895.00
*	0.300	1640.	3007.2	1.4	52.3	0.0	132.46	895.00
*	0.300	2010.	3007.7	0.5	52.5	0.0	139.27	895.00
*	0.300	3095.	3008.9	1.1	52.9	0.0	154.49	895.00
	0.300	950.	3007.2	0.0	1.3	0.0	131.93	40.00
	0.300	1640.	3008.5	1.3	1.2	0.0	148.94	40.00
	0.300	2010.	3009.0	0.5	1.2	0.0	155.74	40.00
	0.300	3095.	3010.2	1.3	1.4	0.0	172.47	40.00
	0.300	950.	3007.2	0.0	0.0	0.0	132.14	12.00
	0.300	1640.	3008.5	1.3	0.0	0.0	149.12	12.00
	0.300	2010.	3009.0	0.5	0.0	0.0	155.93	12.00
*	0.300	3095.	3010.2	1.3	0.0	0.0	172.72	12.00
	0.300	950.	3007.3	0.0	0.1	0.0	132.83	10.00
	0.300	1640.	3008.5	1.3	0.1	0.0	149.91	10.00
	0.300	2010.	3009.1	0.5	0.1	0.0	156.78	10.00
	0.300	3095.	3010.3	1.3	0.1	0.0	173.69	10.00
	0.320	945.	3007.9	0.0	0.7	0.0	141.55	100.00
	0.320	1635.	3009.3	1.4	0.7	0.0	159.83	100.00
	0.320	2005.	3009.9	0.6	0.8	0.0	167.49	100.00
	0.320	3085.	3011.2	1.4	0.9	0.0	215.17	100.00
*	0.370	945.	3021.2	0.0	13.3	0.0	109.43	250.00
*	0.370	1630.	3022.6	1.4	13.4	0.0	135.16	250.00
*	0.370	1995.	3023.1	0.4	13.2	0.0	140.98	250.00
*	0.370	3075.	3023.9	0.9	12.7	0.0	152.72	250.00

CO4

SUMMARY OF ERRORS

SUMMARY OF ERRORS

```
CAUTION  SECNO=    0.010  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.010  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.010  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.010  PROFILE= 4  CRITICAL DEPTH ASSUMED

CAUTION  SECNO=    0.020  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.020  PROFILE= 1
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.020  PROFILE= 1
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.020  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.020  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.020  PROFILE= 3
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.020  PROFILE= 3
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.020  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.020  PROFILE= 4
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.020  PROFILE= 4
 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO=    0.080  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.080  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.080  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.080  PROFILE= 4  CRITICAL DEPTH ASSUMED

CAUTION  SECNO=    0.090  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.090  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.090  PROFILE= 4  CRITICAL DEPTH ASSUMED

CAUTION  SECNO=    0.150  PROFILE= 1  HYDRAULIC JUMP D.S.

CAUTION  SECNO=    0.300  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.300  PROFILE= 1
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.300  PROFILE= 1
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.300  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.300  PROFILE= 2
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.300  PROFILE= 2
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.300  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.300  PROFILE= 3
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.300  PROFILE= 3
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.300  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.300  PROFILE= 4
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.300  PROFILE= 4
 20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION  SECNO=    0.300  PROFILE= 4  HYDRAULIC JUMP D.S.

CAUTION  SECNO=    0.370  PROFILE= 1  CRITICAL DEPTH ASSUMED
```



```
CAUTION  SECNO=    0.370  PROFILE= 1
```

D04

```
CAUTION  SECNO=    0.370  PROFILE= 1
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 1
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.370  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.370  PROFILE= 2
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 2
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.370  PROFILE= 3  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.370  PROFILE= 3
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 3
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.370  PROFILE= 4  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.370  PROFILE= 4
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 4
 20 TRIALS ATTEMPTED TO BALANCE WSEL
```

E04

HANEY CREEK

E04

HANEY CREEK

YANCEY CO NC FEMA STUDY

	500 YR FLOOD		100 YR FLOOD		50 YR FLOOD		10 YR FLOOD	
MILE	Q	ELEV	Q	ELEV	Q	ELEV	Q	ELEV
0.010	3170.	2935.0	2065.	2933.8	1680.	2933.0	975.	2931.0
0.010	3170.	2936.7	2065.	2935.7	1680.	2935.1	975.	2932.7
0.020	3170.	2938.7	2065.	2937.5	1680.	2936.7	975.	2934.7
0.080	3155.	2946.1	2050.	2945.2	1670.	2944.7	970.	2942.6
0.080	3155.	2947.0	2050.	2946.1	1670.	2945.8	970.	2945.1
0.090	3155.	2948.4	2050.	2947.3	1670.	2946.7	970.	2945.1
0.150	3135.	2953.3	2035.	2951.7	1660.	2951.0	960.	2949.4
0.150	3135.	2956.0	2035.	2955.2	1660.	2954.9	960.	2954.1
0.300	3095.	3008.9	2010.	3007.7	1640.	3007.2	950.	3005.9
0.300	3095.	3010.3	2010.	3009.1	1640.	3008.5	950.	3007.3
0.320	3085.	3011.2	2005.	3009.9	1635.	3009.3	945.	3007.9
0.370	3075.	3023.9	1995.	3023.1	1630.	3022.6	945.	3021.2

A01

THIS RUN EXECUTED 07/03/81 8:38:31

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**************************************************

T1      YANCEY CO NC FEMA STUDY                                                  5
T2      100 YR FLOOD                                                            10
T3      HANEY CREEK                          100 YR FLOODWAY                    15

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC   HVINS      Q      WSEL     FQ
         0.      4.      0.      0. 0.02618      0.     0.0       0.     0.0     0.0     20

J2  NPROF   IPLOT   PRFVS   XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE
         0.      0.     -1.      0.      0.     0.0     0.0      0.      0.      0.     25

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     110.00     0.0  200.00     0.0     0.0     0.0     0.0     0.0     0.0     0.0     30

  QT      5.    975.   1680.   2065.   3170.   2065.      0.      0.      0.      0.     35
  NC  0.150   0.150   0.055     0.1     0.5                                             40
  ET      0.     0.0     0.0     0.0     0.0    7.11  350.00  390.00     0.0     0.0     45


  X1   0.01      12.    366.    384.      0.      0.      0.     0.0     0.0      0.     50
  GR 2946.0     200.  2933.3   277.  2931.6   340.  2932.4    345.  2928.7    366.     55
  GR 2925.7     372.  2925.0   377.  2928.2   384.  2928.9    390.  2932.3    400.     60
  GR 2933.7     416.  2946.0   467.     0.0      0.     0.0      0.     0.0      0.     65
  NC  0.120   0.120   0.040     0.0     0.0                                             70
  ET      0.     0.0     0.0     0.0     0.0    7.11  350.00  390.00     0.0     0.0     75


  X1   0.01      13.    355.    384.     40.     40.     40.     0.0     0.0      0.     80
  X3     10.      0.0     0.0      0.     0.0      0.     0.0  2932.6  2932.3             85
  GR 2946.0     200.  2933.3   277.  2931.6   340.  2932.4    345.  2930.6    355.     90
  GR 2928.7     366.  2925.7   372.  2925.0   377.  2928.2    384.  2928.6    390.     95
  GR 2932.3     400.  2933.7   416.  2946.0   467.     0.0      0.     0.0      0.    100
  ET      0.     0.0     0.0     0.0     0.0    7.11  350.00  390.00     0.0     0.0    105


  X1   0.01      17.    355.    384.      1.      1.      1.     0.0     0.0      0.    110
  BT    4.0   355.0  2934.6     0.0   355.0  2934.6  2933.7   384.0  2932.8   2931.5    115
  BT  384.0  2932.8     0.0     0.0     0.0     0.0     0.0     0.0     0.0      0.0    120
  GR 2946.0     200.  2933.3   277.  2933.1   286.  2934.8    328.  2934.6    355.    125
  GR 2931.5     355.  2930.5   360.  2933.4   360.  2933.3    362.  2925.5    362.    130
  GR 2925.0     375.  2925.3   381.  2926.3   384.  2932.8    384.  2933.0    408.    135
  GR 2933.7     416.  2946.0   467.     0.0      0.     0.0      0.     0.0      0.    140
  ET      0.     0.0     0.0     0.0     0.0    7.11  350.00  390.00     0.0     0.0    145


  X1   0.01       0.      0.      0.     12.     12.     12.     0.0     0.0      0.    150
  X2      0.     0.0      0.     0.0     0.0     0.0      1.     0.0     0.0      0.    155
```

B01

B01

```
ET     0.    0.0     0.0     0.0     0.0    7.11  350.00  390.00    0.0     0.0     160

X1   0.01     13.    355.    384.     1.     1.     1.      0.0     0.0      0.     165
X3     10.     0.0     0.0     0.     0.0    0.     0.0  2933.1  2932.8              170
GR 2946.0    200.  2933.3    277.  2931.6   340.  2932.4    345.  2930.6    355.    175
GR 2928.7    366.  2925.7    372.  2925.0   377.  2928.2    384.  2928.6    390.    180
GR 2932.3    400.  2933.7    416.  2946.0   467.     0.0      0.     0.0      0.     185
ET     0.    0.0     0.0     0.0     0.0    7.11  350.00  390.00    0.0     0.0     190

X1   0.01     12.    366.    384.    10.    10.    10.      0.0     0.0      0.     195
GR 2946.0    200.  2933.3    277.  2931.6   340.  2932.4    345.  2928.7    366.    200
GR 2925.7    372.  2925.0    377.  2928.2   384.  2928.9    390.  2932.3    400.    205
GR 2933.7    416.  2946.0    467.     0.0     0.     0.0      0.     0.0      0.     210
NC 0.150   0.150   0.055     0.0     0.8                                            215
ET     0.    0.0     0.0     0.0     0.0    7.11  350.00  390.00    0.0     0.0     220

X1   0.02      0.      0.      0.     50.    50.    50.      0.0     3.70     0.     225
QT      5.    970.   1670.   2050.  3155.  2050.     0.      0.      0.      0.     230
NC 0.100   0.150   0.050     0.0     0.0                                            235
ET     0.    0.0     0.0     0.0     0.0    7.11  250.00  330.00    0.0     0.0     240

X1   0.08     18.    298.    322.    270.   270.   270.      0.0     0.0      0.     245
GR 2957.5    200.  2943.7    222.  2943.5   270.  2943.0    287.  2943.5    298.    250
GR 2937.5    307.  2937.2    310.  2937.1   314.  2937.0    317.  2941.9    322.    255
GR 2944.6    387.  2951.3    410.  2951.4   417.  2949.2    430.  2949.5    460.    260
GR 2955.7    500.  2956.3    583.  2957.4   589.     0.0      0.     0.0      0.     265
NC   0.0     0.0   0.040     0.0     0.5                                            270
ET     0.    0.0     0.0     0.0     0.0    7.11  250.00  330.00    0.0     0.0     275

X1   0.08      0.      0.      0.     60.    60.    60.      0.0     0.0      0.     280
X3     10.     0.0     0.0     0.     0.0    0.     0.0  2941.5  2943.8              285
SB   1.25    1.60    3.00      0.    4.00   0.01  22.00     0.0  2937.0  2937.0     290
ET     0.    0.0     0.0     0.0     0.0    7.11  250.00  330.00    0.0     0.0     295

X1   0.08      0.      0.      0.     25.    25.    25.      0.0     0.0      0.     300
X2      0.    0.0      1.  2942.5  2942.0   0.0     0.     0.0     0.0      0.     305
X3     10.     0.0     0.0     0.     0.0    0.     0.0  2942.0  2944.3              310
BT   15.0   200.0  2957.5     0.0   222.0  2943.7    0.0   270.0  2943.5     0.0    315
BT  287.0  2943.0     0.0   298.0  2943.5     0.0  300.0  2942.0     0.0   314.0    320
BT 2943.9     0.0   402.0  2948.6     0.0   410.0  2951.3     0.0   417.0  2951.4    325
BT    0.0   430.0  2949.2     0.0   460.0  2949.5    0.0   500.0  2955.7     0.0    330
BT  583.0  2956.3     0.0   589.0  2957.4     0.0    0.0     0.0     0.0     0.0    335
ET     0.    0.0     0.0     0.0     0.0    7.11  250.00  330.00    0.0     0.0     340

X1   0.08     19.    298.    327.    15.    15.    15.      0.0     0.0      0.     345
GR 2957.5    200.  2943.7    222.  2943.5   270.  2943.0    287.  2943.5    298.    350
GR 2937.5    307.  2937.2    310.  2937.1   314.  2937.0    317.  2946.5    327.    355
GR 2946.5    343.  2946.5    393.  2951.3   410.  2951.4    417.  2949.2    430.    360
GR 2949.5    460.  2955.7    500.  2956.3   583.  2957.4    589.     0.0      0.     365
NC 0.150   0.150   0.060     0.0     0.8                                            370
ET     0.    0.0     0.0     0.0     0.0    7.11  250.00  330.00    0.0     0.0     375
```

C01

C01

```
X1   0.09     0.     0.     0.    30.    30.    30.    0.0    2.00     0.   380
QT      5.   960.  1660.  2035.  3135.  2035.     0.     0.     0.     0.   385
NC  0.080  0.130  0.055    0.0   0.8                                        390
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 390.00   0.0    0.0   395

X1   0.15    14.   312.   344.   210.   210.   210.    0.0   -0.50     0.   400
GR 2964.5   200.  2963.7  202.  2962.7  293.  2952.5   312.  2941.5   325.  405
GR 2941.5   330.  2953.6  344.  2953.5  367.  2953.8   377.  2953.8   397.  410
GR 2952.1   399.  2958.0  488.  2958.0  555.  2964.5   572.    0.0     0.  415
NC   0.0    0.0    0.0    0.0   0.5                                        420
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 390.00   0.0    0.0   425

X1   0.15    14.   312.   344.    60.    60.    60.    0.0    0.0      0.   430
GR 2964.5   200.  2963.7  202.  2962.7  293.  2952.5   312.  2941.5   325.  435
GR 2941.5   330.  2953.6  344.  2953.5  367.  2953.8   377.  2953.8   397.  440
GR 2952.1   399.  2958.0  488.  2958.0  555.  2964.5   572.    0.0     0.  445
SB   1.25   1.60   3.00     0.   5.00   0.30   28.00    0.0  2941.5  2941.5  450
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 390.00   0.0    0.0   455

X1   0.15     0.     0.     0.    12.    12.    12.    0.0    0.0      0.   460
X2      0.   0.0      1.  2947.5  2951.3   0.0     0.    0.0    0.0     0.   465
BT   14.0  200.0  2964.5    0.0   202.0  2963.7    0.0  293.0  2962.7    0.0  470
BT  313.0 2951.7    0.0  326.0  2951.3    0.0  342.0 2952.0    0.0  344.0  475
BT 2953.6    0.0  367.0 2953.5    0.0  377.0 2953.8    0.0  397.0 2953.8  480
BT    0.0  399.0 2952.1    0.0  488.0 2958.0    0.0  555.0 2958.0    0.0  485
BT  572.0 2964.5    0.0    0.0    0.0    0.0    0.0    0.0    0.0    0.0  490
NC  0.120  0.120  0.050    0.0    0.0                                        495
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 390.00   0.0    0.0   500

X1   0.15    14.   312.   344.    15.    15.    15.    0.0    0.0      0.   505
GR 2964.5   200.  2963.7  202.  2962.7  293.  2952.5   312.  2941.5   325.  510
GR 2941.5   330.  2953.6  344.  2953.5  367.  2953.8   377.  2953.8   397.  515
GR 2952.1   399.  2958.0  488.  2958.0  555.  2964.5   572.    0.0     0.  520
QT      5.   950.  1640.  2010.  3095.  2010.     0.     0.     0.     0.   525
NC  0.150  0.150  0.055    0.0   0.8                                        530
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 370.00   0.0    0.0   535

X1   0.30    14.   320.   335.   895.   895.   895.    0.0    0.0      0.   540
GR 3020.5   200.  3017.5  213.  3010.9  266.  3010.5   293.  3005.8   298.  545
GR 3005.4   316.  3002.0  320.  2999.3  323.  2999.3   327.  3003.3   335.  550
GR 3006.5   420.  3013.5  506.  3017.5  537.  3020.5   577.    0.0     0.  555
NC   0.0    0.0    0.0    0.0   0.5                                        560
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 370.00   0.0    0.0   565

X1   0.30     0.     0.     0.    40.    40.    40.    0.0    0.0      0.   570
X3     10.   0.0    0.0     0.   0.0     0.    0.0  3004.8 3004.3           575
SB   1.25   1.60   3.00     0.   15.00  0.30   72.00    0.0  2999.3  2999.3  580
ET      0.   0.0    0.0    0.0   0.0    7.11  310.00 370.00   0.0    0.0   585

X1   0.30     0.     0.     0.    12.    12.    12.    0.0    0.0      0.   590
X2      0.   0.0      1.  3004.2  3004.8   0.0     0.    0.0    0.0     0.   595
X3     10.   0.0    0.0     0.   0.0     0.    0.0  3005.3 3004.8           600
BT   12.0  200.0  3020.5    0.0   213.0  3017.5    0.0  266.0 3010.9    0.0  605
```

D01

D01

```
BT  293.0  3010.5     0.0   298.0  3005.8     0.0   316.0  3005.4     0.0   345.0     610
BT 3005.0     0.0   370.0  3004.8     0.0   420.0  3006.5     0.0   506.0  3013.5     615
BT    0.0   537.0  3017.5     0.0   577.0  3020.5     0.0     0.0     0.0     0.0     620
ET     0.    0.0     0.0     0.0     0.0     7.11  310.00  370.00     0.0     0.0     625

X1   0.30    14.    320.    335.    10.     10.     10.     0.0     0.0      0.     630
GR 3020.5   200.  3017.5   213.  3010.9   266.  3010.5   293.  3005.8   298.     635
GR 3005.4   316.  3002.0   320.  3000.0   327.  3000.8   331.  3003.3   335.     640
GR 3006.5   420.  3013.5   506.  3017.5   537.  3020.5   577.     0.0     0.     645
QT     5.   945.  1635.  2005.  3085.  2005.     0.      0.      0.      0.     650
ET     0.    0.0     0.0     0.0     0.0     7.11  310.00  370.00     0.0     0.0     655

X1   0.32     0.      0.      0.    100.    100.    100.     0.0     0.0      0.     660
QT     5.   945.  1630.  1995.  3075.  1995.     0.      0.      0.      0.     665
ET     0.    0.0     0.0     0.0     0.0     7.11  310.00  370.00     0.0     0.0     670

X1   0.37     0.      0.      0.    250.    250.    250.     0.0    15.20     0.     675
EJ                                                                                  680
```

E01

```
*PROF 1

CCHV=   0.100 CEHV=   0.500
*SECNO .010
2096 WSEL NOT GIVEN,AVG OF MAX,MIN USED
    HANEY CREEK                    100 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3720 CRITICAL DEPTH ASSUMED
      0.01     2065.       314.      1546.      205.       1.62          0       142.
   2933.78  2933.78        161.       132.       76.       0.50         12    2928.70
      8.78      0.0        1.94      11.72      2.71        0.0    2935.40    2928.20
  0.014656      0.0       0.150      0.055     0.150        0.0        0.0     274.08
              2925.00          0.         0.         0.      101.       41.     416.34         0.


*SECNO .010

3301 HV CHANGED MORE THAN HVINS

      0.01     2065.       291.      1561.      213.       0.63          3       156.
   2935.09      0.0        227.       215.       124.      -0.99          0    2930.60
     10.09      0.0        1.28       7.25       1.72       0.22    2935.72    2928.20
  0.002830    0.039       0.120      0.040     0.120        0.10      -0.00     266.17
              2925.00          40.        40.        40.      103.       52.     421.75         0.


*SECNO .010

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

      0.01     2065.       134.      1748.      183.       0.99          2       154.
   2934.91      0.0         70.       203.       64.       0.37          0    2934.60
      9.91      0.0        1.92       8.63       2.86       0.01    2935.91    2932.80
  0.023535    0.038       0.120      0.040     0.120        0.18     -31.70     267.21
              2925.00          1.         1.         1.      102.       52.     421.03         0.


*SECNO .010

*** GR CARDS REPEATED

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

      0.01     2065.       240.      1593.      232.       0.65          3       160.
   2935.51      0.0        123.       220.       87.      -0.35          0    2934.60
     10.51      0.0        1.95       7.25       2.68       0.22    2936.16    2932.80
  0.014889    0.038       0.120      0.040     0.120        0.03     -31.70     263.62
              2925.00          12.        12.        12.      106.       54.     423.49         1.


*SECNO .010
    HANEY CREEK                    100 YR FLOOD          07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
```



```
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
```

DEPTH / SLOPE	WSELK / WTN / ELMIN	VLOB / XNL / XLOBL	VCH / XNCH / XLCH	VROB / XNR / XLOBR	HL / OLOSS / WSDL	EG / CORAR / WSDR	LEFT/RIGHT SSTA / ENDST	VOL
0.01	2065.	345.	1494.	226.	0.47	2	162.	
2935.72	0.0	284.	234.	149.	-0.18	0	2930.60	
10.72	0.0	1.21	6.40	1.52	0.00	2936.18	2928.20	
0.001974	0.037	0.120	0.040	0.120	0.02	-0.00	262.34	
	2925.00	1.	1.	1.	107.	55.	424.37	1.

*SECNO .010

0.01	2065.	514.	1305.	246.	0.62	2	161.	
2935.66	0.0	345.	166.	144.	0.15	0	2928.70	
10.66	0.0	1.49	7.87	1.71	0.02	2936.28	2928.20	
0.002580	0.037	0.120	0.040	0.120	0.08	-0.00	262.68	
	2925.00	10.	10.	10.	112.	49.	424.13	1.

CCHV= 0.100 CEHV= 0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK 100 YR FLOOD 07/03/81

MILE / ELEV / DEPTH / SLOPE	Q / CRIWS / WSELK / WTN / ELMIN	QLOB / ALOB / VLOB / XNL / XLOBL	QCH / ACH / VCH / XNCH / XLCH	QROB / AROB / VROB / XNR / XLOBR	HV / DHV / HL / OLOSS / WSDL	ITRIAL / IDC / EG / CORAR / WSDR	TOPWID / BANK ELEV / LEFT/RIGHT SSTA / ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.02	2065.	315.	1544.	206.	1.61	20	142.	
2937.49	2937.49	162.	132.	76.	0.99	12	2932.40	
8.79	0.0	1.94	11.69	2.70	0.26	2939.10	2931.90	
0.014560	0.044	0.150	0.055	0.150	0.79	0.0	274.03	
	2928.70	50.	50.	50.	101.	41.	416.37	1.

*SECNO .080

HANEY CREEK 100 YR FLOOD 07/03/81

MILE / ELEV / DEPTH / SLOPE	Q / CRIWS / WSELK / WTN / ELMIN	QLOB / ALOB / VLOB / XNL / XLOBL	QCH / ACH / VCH / XNCH / XLCH	QROB / AROB / VROB / XNR / XLOBR	HV / DHV / HL / OLOSS / WSDL	ITRIAL / IDC / EG / CORAR / WSDR	TOPWID / BANK ELEV / LEFT/RIGHT SSTA / ENDST	VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.08	2050.	316.	1517.	217.	1.17	4	170.	
2945.22	2945.22	135.	152.	129.	-0.44	10	2943.50	
8.22	0.0	2.34	9.99	1.68	3.53	2946.39	2941.90	
0.011773	0.048	0.100	0.050	0.150	0.04	-0.00	219.57	
	2937.00	270.	270.	270.	90.	79.	389.14	4.

CCHV= 0.100 CEHV= 0.500
*SECNO .080

```
CCHV=   0.100 CEHV=   0.500
*SECNO .080

*** GR CARDS REPEATED
     0.08     2050.       375.      1432.      243.       0.76          2     174.
  2946.07      0.0        202.       172.      187.      -0.40          0   2943.50
     9.07      0.0        1.85       8.31      1.30       0.41    2946.84   2941.90
 0.004404     0.047      0.100      0.040     0.150       0.04      -0.00    218.21
           2937.00        60.        60.       60.        92.        82.    392.07        4.


SPECIAL BRIDGE

SB    HK        XKOR      COFQ      RDLEN      BWC        BWP      BAREA       SS
     1.25       1.60      3.00       0.0       4.00       0.01     22.00       0.0
   ELCHU     ELCHD
  2937.00   2937.00

*SECNO .080

*** GR CARDS REPEATED
 PRESS FLOW BECAUSE EGLWC OF   2946.84  EXCEEDS 1.5 DEPTH
    HANEY CREEK                100 YR FLOOD          07/03/81
   MILE      Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV      CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH     WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE     WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
             ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

PRESSURE AND WEIR FLOW

    EGPRS     EGLWC        H3      QWEIR        QPR      BAREA      TAREA      ELLC
  3161.80   2946.84      0.01     1917.       124.        22.        22.    2942.50

    ELTRD
  2942.00


     0.08     2050.       382.      1421.      247.       0.73          3     174.
  2946.14      0.0        208.       174.      192.      -0.03          0   2943.50
     9.14      0.0        1.84       8.18      1.29       0.03    2946.87   2941.90
 0.004212     0.046      0.100      0.040     0.150       0.0       -0.00    218.11
           2937.00        25.        25.       25.        92.        82.    392.28        5.

*SECNO .080
     0.08     2050.       441.      1609.        0.       0.96          2     108.
  2946.10      0.0        204.       183.        0.       0.22          0   2943.50
     9.10      0.0        2.16       8.78      0.0        0.07    2947.05   2946.50
 0.005931     0.046      0.100      0.040     0.150       0.11      -0.00    218.18
           2937.00        15.        15.       15.        94.        14.    326.58        5.

CCHV=   0.100 CEHV=   0.800
*SECNO .090

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS
```

```
  HANEY CREEK                       100 YR FLOOD        07/03/81
 MILE       Q          QLOB         QCH        QROB       HV         ITRIAL     TOPWID
 ELEV       CRIWS      ALOB         ACH        AROB       DHV        IDC        BANK ELEV
 DEPTH      WSELK      VLOB         VCH        VROB       HL         EG      LEFT/RIGHT
 SLOPE      WTN        XNL          XNCH       XNR        OLOSS      CORAR      SSTA
            ELMIN      XLOBL        XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
     0.09      2050.        311.      1739.         0.      1.57          2       106.
  2947.27    2947.27        139.       160.         0.      0.61         12    2945.50
     8.27        0.0        2.24      10.88        0.0      0.31    2948.84    2948.50
 0.023371      0.047       0.150      0.060      0.150      0.49      -0.00     219.49
             2939.00         30.        30.        30.       93.        13.     325.71        5.

CCHV=    0.100 CEHV=    0.800
*SECNO .150

3265 DIVIDED FLOW

     0.15      2035.          0.      2035.         0.      1.84          2        31.
  2951.68        0.0          0.       187.         0.      0.27          0    2952.00
    10.68        0.0         0.0      10.90       0.02      4.46    2953.52    2953.10
 0.019368      0.049       0.080      0.055      0.130      0.22      -0.00     312.38
             2941.00        210.       210.       210.       16.        72.     400.18        6.

CCHV=    0.100 CEHV=    0.500
*SECNO .150

3265 DIVIDED FLOW

     0.15      2035.          0.      2027.         7.      1.36          2        50.
  2953.14        0.0          0.       216.         9.     -0.49          0    2952.50
    11.64        0.0        0.90       9.37       0.82      0.93    2954.50    2953.60
 0.012596      0.050       0.080      0.055      0.130      0.05      -0.00     310.81
             2941.50         60.        60.        60.       17.        87.     414.66        7.


SPECIAL BRIDGE

SB     HK        XKOR      COFQ       RDLEN      BWC        BWP       BAREA       SS
     1.25        1.60      3.00       0.0        5.00       0.30      28.00       0.0
   ELCHU     ELCHD
  2941.50   2941.50

*SECNO .150

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

  HANEY CREEK                       100 YR FLOOD        07/03/81
 MILE       Q          QLOB         QCH        QROB       HV         ITRIAL     TOPWID
 ELEV       CRIWS      ALOB         ACH        AROB       DHV        IDC        BANK ELEV
 DEPTH      WSELK      VLOB         VCH        VROB       HL         EG      LEFT/RIGHT
 SLOPE      WTN        XNL          XNCH       XNR        OLOSS      CORAR      SSTA
```

SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA

	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3084.37	2954.87	0.37	1748.	288.	28.	28.	2947.50

ELTRD
2951.30

0.15	2035.	9.	1873.	153.	0.64	3	137.	
2955.12	0.0	6.	280.	150.	-0.72	0	2952.50	
13.62	0.0	1.40	6.70	1.02	1.27	2955.76	2953.60	
0.004677	0.050	0.080	0.055	0.130	0.0	-0.00	307.12	
	2941.50	12.	12.	12.	21.	117.	444.55	7.

*SECNO .150

0.15	2035.	6.	1869.	161.	0.63	2	139.	
2955.20	0.0	7.	282.	158.	-0.02	0	2952.50	
13.70	0.0	0.85	6.62	1.01	0.06	2955.83	2953.60	
0.003735	0.049	0.120	0.050	0.120	0.00	-0.00	306.97	
	2941.50	15.	15.	15.	21.	118.	445.74	7.

CCHV= 0.100 CEHV= 0.800
*SECNO .300

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK			100 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

0.30	2010.	127.	1259.	625.	1.39	20	139.	
3007.74	3007.74	57.	107.	251.	0.77	12	3002.00	
8.44	0.0	2.24	11.81	2.49	6.11	3009.13	3003.30	
0.016518	0.052	0.150	0.055	0.150	0.61	-0.00	295.94	
	2999.30	895.	895.	895.	32.	108.	435.21	16.

CCHV= 0.100 CEHV= 0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

0.30	2010.	163.	1076.	771.	0.64	3	156.	
3008.97	0.0	87.	125.	384.	-0.75	0	3002.00	
9.67	0.0	1.87	8.60	2.01	0.41	3009.62	3003.30	
0.007074	0.052	0.150	0.055	0.150	0.07	-0.00	294.63	
	2999.30	40.	40.	40.	33.	123.	450.37	16.

2999.30 40. 40. 40. 33. 123. 450.37 16.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3009.62 HIGHER THAN COMPUTED ENERGY OF 3009.29
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3028.34	3009.66	0.04	1758.	255.	72.	72.	3004.20

ELTRD
3004.80

0.30	2010.	163.	1074.	773.	0.64	2	156.	
3008.98	0.0	88.	125.	385.	-0.01	0	3002.00	
9.68	0.0	1.87	8.57	2.00	0.0	3009.62	3003.30	
0.007009	0.052	0.150	0.055	0.150	0.0	-0.00	294.61	
	2999.30	12.	12.	12.	33.	123.	450.54	16.

*SECNO .300

HANEY CREEK			100 YR FLOOD		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
0.30	2010.	170.	1035.	805.	0.64	0	157.	
3009.05	0.0	89.	119.	393.	-0.00	0	3002.00	
9.05	0.0	1.91	8.70	2.05	0.07	3009.69	3003.30	
0.007190	0.052	0.150	0.055	0.150	0.00	-0.00	294.54	
	3000.00	10.	10.	10.	33.	124.	451.33	16.

*SECNO .320

*** GR CARDS REPEATED

0.32	2005.	185.	952.	868.	0.41	2	167.	
3009.85	0.0	110.	131.	490.	-0.22	0	3002.00	
9.85	0.0	1.68	7.27	1.77	0.55	3010.27	3003.30	
0.004409	0.052	0.150	0.055	0.150	0.02	-0.00	293.69	
	3000.00	100.	100.	100.	34.	134.	461.18	18.

*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

K01

HANEY CREEK 100 YR FLOOD 07/03/81

MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL
3685 20 TRIALS ATTEMPTED WSEL,CWSEL								
3693 PROBABLE MINIMUM SPECIFIC ENERGY								
3720 CRITICAL DEPTH ASSUMED								
0.37	1995.	137.	1189.	669.	1.32	20	141.	
3023.07	3023.07	60.	101.	264.	0.90	14	3017.20	
7.87	0.0	2.29	11.75	2.54	1.90	3024.38	3018.50	
0.016277	0.053	0.150	0.055	0.150	0.45	-0.00	295.80	
	3015.20	250.	250.	250.	32.	109.	436.78	21.

L01

L01

THIS RUN EXECUTED 07/03/81 8:38:36

```
**********************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION -  50,51,52,53,54
**********************************************************

T1      YANCEY CO NC FEMA STUDY                                          685
T2      100 YR FLOODWAY                                                  690
T3      HANEY CREEK                                                      695

J1  ICHECK     INQ    NINV    IDIR    STRT  METRIC   HVINS      Q      WSEL     FQ

        0.      6.      0.      0. 0.0          0.     0.0       0. 2934.78    0.0     700

J2  NPROF   IPLOT   PRFVS   XSECV   XSECH      FN   ALLDC     IBW   CHNIM ITRACE

       15.      0.     -1.      0.      0.    0.0     0.0      0.      0.      0.     705
```

M01

```
*PROF 2

CCHV=   0.100 CEHV=   0.500
*SECNO .010
    HANEY CREEK                    100 YR FLOODWAY      07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3470 ENCROACHMENT STATIONS=     350.0     390.0  TYPE=     1  TARGET=      40.000
     0.01     2065.      203.     1773.      89.      1.88          0       40.
  2934.78      0.0        75.      150.      37.      0.50          0     2928.70
     9.78   2933.78       2.72     11.83     2.38     0.0      2936.66    2928.20
 0.012585     0.0        0.150     0.055    0.150     0.0        -0.00    350.00
             2925.00       0.        0.       0.       25.        15.     390.00        0.

*SECNO .010

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     350.0     390.0  TYPE=     1  TARGET=      40.000
     0.01     2065.       32.     1963.      70.      0.98          3       40.
  2935.99      0.0        25.      241.      46.     -0.90          0     2930.60
    10.99   2935.09       1.29     8.13      1.55     0.22      2936.97    2928.20
 0.003049     0.039      0.120     0.040    0.120     0.09       -0.00    350.00
             2925.00       40.      40.      40.      20.        20.     390.00        0.

*SECNO .010
     3700.   BRIDGE STENCL=    350.00    STENCR=    390.00

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

3470 ENCROACHMENT STATIONS=     350.0     390.0  TYPE=     1  TARGET=      40.000
     0.01     2065.       12.     2001.      52.      1.12          2       40.
  2935.92      0.0         7.      232.      19.      0.15          0     2934.60
    10.92   2934.91       1.78     8.63      2.80     0.01      2937.05    2932.80
 0.019664     0.038      0.120     0.040    0.120     0.07      -31.70    350.00
             2925.00        1.       1.       1.       20.        20.     390.00        0.

*SECNO .010

*** GR CARDS REPEATED

3370 NORMAL BRIDGE,NRD=  4 MIN ELTRD= 2932.80 MAX ELLC= 2933.70

3470 ENCROACHMENT STATIONS=     350.0     390.0  TYPE=     1  TARGET=      40.000
     0.01     2065.       15.     1994.      56.      1.03          2       40.
  2936.25      0.0         8.      241.      21.     -0.10          0     2934.60
    11.25   2935.51       1.86     8.26      2.73     0.22      2937.28    2932.80
 0.017060     0.038      0.120     0.040    0.120     0.01      -31.70    350.00
```

```
               2925.00       12.        12.        12.        20.        20.    390.00          0.

*SECNO .010
    HANEY CREEK                       100 YR FLOODWAY      07/03/81
   MILE        Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV        CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH       WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
   SLOPE       WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
               ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST        VOL

3470 ENCROACHMENT STATIONS=       350.0      390.0  TYPE=      1  TARGET=       40.000
     0.01      2065.        33.      1963.        70.       0.89          2        40.
  2936.41       0.0         27.       254.        48.      -0.14          0    2930.60
    11.41    2935.72       1.22       7.74       1.45       0.01    2937.30    2928.20
 0.002587      0.037      0.120      0.040      0.120       0.01      -0.00     350.00
             2925.00         1.         1.         1.        20.        20.    390.00          0.

*SECNO .010

3470 ENCROACHMENT STATIONS=       350.0      390.0  TYPE=      1  TARGET=       40.000
     0.01      2065.       211.      1772.        81.       1.37          2        40.
  2936.20       0.0         97.       176.        46.       0.48          0    2928.70
    11.20    2935.66       2.17      10.10       1.77       0.03    2937.57    2928.20
 0.003934      0.037      0.120      0.040      0.120       0.24      -0.00     350.00
             2925.00        10.        10.        10.        25.        15.    390.00          0.

CCHV=   0.100 CEHV=   0.800
*SECNO .020

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                       100 YR FLOODWAY      07/03/81
   MILE        Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV        CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH       WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
   SLOPE       WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
               ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST        VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=       350.0      390.0  TYPE=      1  TARGET=       40.000
     0.02      2065.       163.      1814.        88.       2.93          2        40.
  2937.05    2937.05        52.       124.        29.       1.56         19    2932.40
     8.35    2937.49       3.14      14.61       3.05       0.40    2939.98    2931.90
 0.024689      0.044      0.150      0.055      0.150       1.25      -0.00     350.00
             2928.70        50.        50.        50.        25.        15.    390.00          1.

*SECNO .080

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                       100 YR FLOODWAY      07/03/81
```

```
     MILE        Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
     ELEV        CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
     DEPTH       WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
     SLOPE       WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
                 ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=       250.0      330.0  TYPE=      1  TARGET=        80.000
      0.08       2050.       239.      1757.        54.       1.83          5        80.
   2945.17    2945.17         87.       151.        25.      -1.10          8    2943.50
      8.17    2945.22        2.76      11.66       2.18       5.34    2947.00    2941.90
  0.016198      0.048       0.100      0.050      0.150       0.11      -0.00     250.00
              2937.00        270.       270.       270.        60.        20.     330.00         2.

 CCHV=   0.100 CEHV=   0.500
 *SECNO .080

 *** GR CARDS REPEATED

 3301 HV CHANGED MORE THAN HVINS

 3470 ENCROACHMENT STATIONS=       250.0      330.0  TYPE=      1  TARGET=        80.000
      0.08       2050.       324.      1675.        50.       1.09          3        80.
   2946.48        0.0        149.       182.        35.      -0.74          0    2943.50
      9.48    2946.07        2.17       9.20       1.42       0.50    2947.57    2941.90
  0.005017      0.047       0.100      0.040      0.150       0.07      -0.00     250.00
              2937.00         60.        60.        60.        60.        20.     330.00         3.


 SPECIAL BRIDGE

 SB     HK        XKOR       COFQ       RDLEN       BWC        BWP       BAREA        SS
      1.25        1.60       3.00        0.0        4.00       0.01      22.00        0.0
     ELCHU      ELCHD
   2937.00    2937.00

 *SECNO .080
      3700.     BRIDGE STENCL=      250.00      STENCR=      330.00

 *** GR CARDS REPEATED
  PRESS FLOW BECAUSE EGLWC OF      2947.58    EXCEEDS 1.5 DEPTH
     HANEY CREEK                  100 YR  FLOODWAY       07/03/81
     MILE        Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
     ELEV        CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
     DEPTH       WSELK      VLOB       VCH        VROB       HL         EG      LEFT/RIGHT
     SLOPE       WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
                 ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

 PRESSURE AND WEIR FLOW

     EGPRS      EGLWC         H3      QWEIR        QPR      BAREA      TAREA       ELLC
   3162.21    2947.58       0.01      1903.       152.        22.        22.    2942.50

     ELTRD
   2942.00
```

```
3470 ENCROACHMENT STATIONS=      250.0     330.0  TYPE=      1  TARGET=       80.000
      0.08      2050.       339.      1661.       51.      1.01         3        80.
   2946.66       0.0        158.       186.       37.     -0.08         0   2943.50
      9.66   2946.14        2.14       8.91     1.38      0.10   2947.67   2941.90
 0.004561     0.046       0.100      0.040    0.150       0.0     -0.00    250.00
            2937.00         25.        25.       25.       60.       20.    330.00        3.

*SECNO .080

3470 ENCROACHMENT STATIONS=      250.0     330.0  TYPE=      1  TARGET=       80.000
      0.08      2050.       374.      1675.       0.      0.85         2        80.
   2946.90       0.0        170.       206.       1.     -0.16         0   2943.50
      9.90   2946.10        2.21       8.12     0.33      0.07   2947.75   2946.50
 0.004415     0.046       0.100      0.040    0.150      0.02     -0.00    250.00
            2937.00         15.        15.       15.       63.       17.    330.00        3.


CCHV=   0.100 CEHV=   0.800
*SECNO .090

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

    HANEY CREEK                  100 YR FLOODWAY      07/03/81
   MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
   ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
   DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
   SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
              ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=      250.0     330.0  TYPE=      1  TARGET=       80.000
      0.09      2050.       215.      1835.       0.      1.86         2        76.
   2947.24   2947.24         90.       159.       0.      1.01        12   2945.50
      8.24   2947.27        2.41      11.54      0.0      0.27   2949.10   2948.50
 0.026490     0.047       0.150      0.060    0.150      0.81     -0.00    250.00
            2939.00         30.        30.       30.       63.       13.    325.67        3.


CCHV=   0.100 CEHV=   0.800
*SECNO .150

3470 ENCROACHMENT STATIONS=      310.0     390.0  TYPE=      1  TARGET=       80.000
      0.15      2035.         0.      2035.       0.      1.72         2        30.
   2951.89       0.0          0.       193.       0.     -0.14         0   2952.00
     10.89   2951.68          0.0      10.52      0.0      4.50   2953.61   2953.10
 0.017660     0.049       0.080      0.055    0.130      0.01     -0.00    312.12
            2941.00        210.       210.      210.       16.       15.    342.61        4.


CCHV=   0.100 CEHV=   0.500
*SECNO .150
```

```
3470 ENCROACHMENT STATIONS=      310.0     390.0  TYPE=      1  TARGET=       80.000
      0.15      2035.         0.     2035.        0.      1.36          2        33.
   2953.17       0.0          0.      217.        0.     -0.36          0    2952.50
     11.67   2953.14       0.92       9.36       0.0      0.88    2954.53    2953.60
  0.012499     0.050      0.080      0.055     0.130      0.04      -0.00     310.75
             2941.50        60.        60.       60.       17.        16.     343.51        5.


SPECIAL BRIDGE

SB    HK         XKOR       COFQ      RDLEN        BWC        BWP      BAREA        SS
      1.25       1.60       3.00       0.0        5.00       0.30      28.00       0.0
    ELCHU      ELCHD
  2941.50    2941.50

*SECNO .150
     3700.   BRIDGE STENCL=     310.00    STENCR=     390.00

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

     HANEY CREEK                         100 YR FLOODWAY       07/03/81
    MILE       Q          QLOB       QCH        QROB       HV         ITRIAL     TOPWID
    ELEV       CRIWS      ALOB       ACH        AROB       DHV        IDC        BANK ELEV
    DEPTH      WSELK      VLOB       VCH        VROB       HL         EG       LEFT/RIGHT
    SLOPE      WTN        XNL        XNCH       XNR        OLOSS      CORAR      SSTA
               ELMIN      XLOBL      XLCH       XLOBR      WSDL       WSDR       ENDST      VOL

PRESSURE AND WEIR FLOW

     EGPRS      EGLWC         H3      QWEIR        QPR      BAREA      TAREA       ELLC
   3084.41    2954.90       0.37      1714.       324.        28.        28.    2947.50

     ELTRD
   2951.30


3470 ENCROACHMENT STATIONS=      310.0     390.0  TYPE=      1  TARGET=       80.000
      0.15      2035.         7.     1905.      123.      0.57          2        80.
   2955.93       0.0          6.      306.      105.     -0.79          0    2952.50
     14.43   2955.12       1.29       6.23      1.16      1.96    2956.49    2953.60
  0.003597     0.050      0.080      0.055     0.130       0.0      -0.00     310.00
             2941.50        12.        12.       12.       18.        62.     390.00        5.

*SECNO .150

3470 ENCROACHMENT STATIONS=      310.0     390.0  TYPE=      1  TARGET=       80.000
      0.15      2035.         5.     1906.      124.      0.56          2        80.
   2955.98       0.0          6.      307.      108.     -0.00          0    2952.50
     14.48   2955.20       0.78       6.21      1.15      0.05    2956.54    2953.60
  0.002929     0.049      0.120      0.050     0.120      0.00      -0.00     310.00
             2941.50        15.        15.       15.       18.        62.     390.00        5.

CCHV=    0.100 CEHV=    0.800
*SECNO .300
```

3301 HV CHANGED MORE THAN HVINS

HANEY CREEK			100 YR FLOODWAY		07/03/81			
MILE	Q	QLOB	QCH	QROB	HV	ITRIAL	TOPWID	
ELEV	CRIWS	ALOB	ACH	AROB	DHV	IDC	BANK ELEV	
DEPTH	WSELK	VLOB	VCH	VROB	HL	EG	LEFT/RIGHT	
SLOPE	WTN	XNL	XNCH	XNR	OLOSS	CORAR	SSTA	
	ELMIN	XLOBL	XLCH	XLOBR	WSDL	WSDR	ENDST	VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 310.0 370.0 TYPE= 1 TARGET= 60.000

0.30	2010.	78.	1485.	447.	2.34	20	60.	
3007.64	3007.64	29.	105.	129.	1.78	14	3002.00	
8.34	3007.74	2.71	14.13	3.47	5.73	3009.98	3003.30	
0.024079	0.052	0.150	0.055	0.150	1.42	-0.00	310.00	
	2999.30	895.	895.	895.	18.	42.	370.00	12.

CCHV= 0.100 CEHV= 0.500
*SECNO .300

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 310.0 370.0 TYPE= 1 TARGET= 60.000

0.30	2010.	102.	1374.	534.	1.17	3	60.	
3009.49	0.0	47.	133.	194.	-1.17	0	3002.00	
10.19	3008.97	2.15	10.34	2.76	0.57	3010.67	3003.30	
0.009439	0.052	0.150	0.055	0.150	0.12	-0.00	310.00	
	2999.30	40.	40.	40.	18.	42.	370.00	12.

SPECIAL BRIDGE

SB	HK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS
	1.25	1.60	3.00	0.0	15.00	0.30	72.00	0.0

ELCHU	ELCHD
2999.30	2999.30

*SECNO .300
3700. BRIDGE STENCL= 310.00 STENCR= 370.00

*** GR CARDS REPEATED
6870 D.S. ENERGY OF 3010.67 HIGHER THAN COMPUTED ENERGY OF 3010.31
PRESSURE AND WEIR FLOW

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TAREA	ELLC
3028.86	3010.77	0.11	1598.	412.	72.	72.	3004.20

ELTRD
3004.80

3470 ENCROACHMENT STATIONS= 310.0 370.0 TYPE= 1 TARGET= 60.000

```
3470 ENCROACHMENT STATIONS=     310.0     370.0  TYPE=     1  TARGET=      60.000
      0.30     2010.      102.     1373.      535.     1.17         3        60.
   3009.50        0.       47.      133.      194.    -0.00         0   3002.00
     10.20   3008.98      2.15     10.33      2.76      0.0   3010.67   3003.30
  0.009397    0.052     0.150     0.055     0.150      0.0     -0.00    310.00
              2999.30       12.       12.       12.       18.       42.    370.00        12.


*SECNO .300
     HANEY CREEK                    100 YR FLOODWAY      07/03/81
    MILE       Q          QLOB      QCH        QROB       HV         ITRIAL     TOPWID
    ELEV       CRIWS      ALOB      ACH        AROB       DHV        IDC        BANK ELEV
    DEPTH      WSELK      VLOB      VCH        VROB       HL         EG       LEFT/RIGHT
    SLOPE      WTN        XNL       XNCH       XNR        OLOSS      CORAR      SSTA
               ELMIN      XLOBL     XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3470 ENCROACHMENT STATIONS=     310.0     370.0  TYPE=     1  TARGET=      60.000
      0.30     2010.      107.     1345.      558.     1.20         1        60.
   3009.58        0.       48.      127.      197.     0.04         0   3002.00
      9.58   3009.05      2.21     10.59      2.83     0.10   3010.78   3003.30
  0.009770    0.052     0.150     0.055     0.150     0.02     -0.00    310.00
              3000.00       10.       10.       10.       18.       42.    370.00        12.

*SECNO .320

*** GR CARDS REPEATED

3470 ENCROACHMENT STATIONS=     310.0     370.0  TYPE=     1  TARGET=      60.000
      0.32     2005.      115.     1305.      585.     0.86         2        60.
   3010.71        0.       60.      144.      236.    -0.34         0   3002.00
     10.71   3009.85      1.92     9.07       2.48     0.76   3011.57   3003.30
  0.006066    0.052     0.150     0.055     0.150     0.03     -0.00    310.00
              3000.00      100.      100.      100.       18.       42.    370.00        13.


*SECNO .370

*** GR CARDS REPEATED

3301 HV CHANGED MORE THAN HVINS

     HANEY CREEK                    100 YR FLOODWAY      07/03/81
    MILE       Q          QLOB      QCH        QROB       HV         ITRIAL     TOPWID
    ELEV       CRIWS      ALOB      ACH        AROB       DHV        IDC        BANK ELEV
    DEPTH      WSELK      VLOB      VCH        VROB       HL         EG       LEFT/RIGHT
    SLOPE      WTN        XNL       XNCH       XNR        OLOSS      CORAR      SSTA
               ELMIN      XLOBL     XLCH       XLOBR      WSDL       WSDR       ENDST       VOL

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     310.0     370.0  TYPE=     1  TARGET=      60.000
      0.37     1995.       85.     1430.      480.     2.33        20        60.
   3022.99   3022.99       30.      100.      134.     1.46        19   3017.20
      7.79   3023.07      2.79     14.29      3.58     2.70   3025.32   3018.50
  0.024418    0.053     0.150     0.055     0.150     0.73     -0.00    310.00
```



```
              3015.20      250.      250.      250.       18.       42.    370.00        15.
```

G02

3015.20	250.	250.	250.	18.	42.	370.00	15.

H02

THIS RUN EXECUTED 07/03/81 8:38:39

```
**************************************************
  HEC2 RELEASE DATED NOV 76 UPDATED JULY1979
  ERROR CORR -  01,02,03
  MODIFICATION - 50,51,52,53,54
**************************************************
```

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER
INDICATES MESSAGE IN SUMMARY OF ERRORS LIST/

HANEY CREEK

SUMMARY PRINTOUT TABLE 110

	SECNO	CWSEL	DIFKWS	EG	TOPWID	PERENC	STENCL	STENCR	STCHL	STCHR	QLOB	QCH	QROB
*	0.010	2933.78	0.0	2935.40	142.	0.	0.	0.	366.	384.	314.	1546.	205.
	0.010	2934.78	1.00	2936.66	40.	40.	350.	390.	366.	384.	203.	1773.	89.
	0.010	2935.09	0.0	2935.72	156.	0.	0.	0.	355.	384.	291.	1561.	213.
	0.010	2935.99	0.90	2936.97	40.	40.	350.	390.	355.	384.	32.	1963.	70.
	0.010	2934.91	0.0	2935.91	154.	0.	0.	0.	355.	384.	134.	1748.	183.
	0.010	2935.92	1.01	2937.05	40.	40.	350.	390.	355.	384.	12.	2001.	52.
	0.010	2935.51	0.0	2936.16	160.	0.	0.	0.	355.	384.	240.	1593.	232.
	0.010	2936.25	0.74	2937.28	40.	40.	350.	390.	355.	384.	15.	1994.	56.
	0.010	2935.72	0.0	2936.18	162.	0.	0.	0.	355.	384.	345.	1494.	226.
	0.010	2936.41	0.70	2937.30	40.	40.	350.	390.	355.	384.	33.	1963.	70.
	0.010	2935.66	0.0	2936.28	161.	0.	0.	0.	366.	384.	514.	1305.	246.
	0.010	2936.20	0.54	2937.57	40.	40.	350.	390.	366.	384.	211.	1772.	81.
*	0.020	2937.49	0.0	2939.10	142.	0.	0.	0.	366.	384.	315.	1544.	206.
*	0.020	2937.05	-0.44	2939.98	40.	40.	350.	390.	366.	384.	163.	1814.	88.
*	0.080	2945.22	0.0	2946.39	170.	0.	0.	0.	298.	322.	316.	1517.	217.
*	0.080	2945.17	-0.05	2947.00	80.	80.	250.	330.	298.	322.	239.	1757.	54.
	0.080	2946.07	0.0	2946.84	174.	0.	0.	0.	298.	322.	375.	1432.	243.
	0.080	2946.48	0.41	2947.57	80.	80.	250.	330.	298.	322.	324.	1675.	50.
	0.080	2946.14	0.0	2946.87	174.	0.	0.	0.	298.	322.	382.	1421.	247.
	0.080	2946.66	0.52	2947.67	80.	80.	250.	330.	298.	322.	339.	1661.	51.
	0.080	2946.10	0.0	2947.05	108.	0.	0.	0.	298.	327.	441.	1609.	0.
	0.080	2946.90	0.80	2947.75	80.	80.	250.	330.	298.	327.	374.	1675.	0.
*	0.090	2947.27	0.0	2948.84	106.	0.	0.	0.	298.	327.	311.	1739.	0.
*	0.090	2947.24	-0.04	2949.10	76.	80.	250.	330.	298.	327.	215.	1835.	0.
	0.150	2951.68	0.0	2953.52	31.	0.	0.	0.	312.	344.	0.	2035.	0.
	0.150	2951.89	0.21	2953.61	30.	80.	310.	390.	312.	344.	0.	2035.	0.

	SECNO	CWSEL	DIFKWS	EG	TOPWID	PERENC	STENCL	STENCR	STCHL	STCHR	QLOB	QCH	QROB
	0.150	2953.14	0.0	2954.50	50.	0.	0.	0.	312.	344.	0.	2027.	7.
	0.150	2953.17	0.04	2954.53	33.	80.	310.	390.	312.	344.	0.	2035.	0.
	0.150	2955.12	0.0	2955.76	137.	0.	0.	0.	312.	344.	9.	1873.	153.
	0.150	2955.93	0.81	2956.49	80.	80.	310.	390.	312.	344.	7.	1905.	123.
	0.150	2955.20	0.0	2955.83	139.	0.	0.	0.	312.	344.	6.	1869.	161.
	0.150	2955.98	0.78	2956.54	80.	80.	310.	390.	312.	344.	5.	1906.	124.
*	0.300	3007.74	0.0	3009.13	139.	0.	0.	0.	320.	335.	127.	1259.	625.
*	0.300	3007.64	-0.10	3009.98	60.	60.	310.	370.	320.	335.	78.	1485.	447.
	0.300	3008.97	0.0	3009.62	156.	0.	0.	0.	320.	335.	163.	1076.	771.
	0.300	3009.49	0.52	3010.67	60.	60.	310.	370.	320.	335.	102.	1374.	534.
	0.300	3008.98	0.0	3009.62	156.	0.	0.	0.	320.	335.	163.	1074.	773.
	0.300	3009.50	0.52	3010.67	60.	60.	310.	370.	320.	335.	102.	1373.	535.
	0.300	3009.05	0.0	3009.69	157.	0.	0.	0.	320.	335.	170.	1035.	805.
	0.300	3009.57	0.52	3010.78	60.	60.	310.	370.	320.	335.	107.	1345.	558.
	0.320	3009.85	0.0	3010.27	167.	0.	0.	0.	320.	335.	185.	952.	868.
	0.320	3010.71	0.86	3011.57	60.	60.	310.	370.	320.	335.	115.	1305.	585.
*	0.370	3023.07	0.0	3024.38	141.	0.	0.	0.	320.	335.	137.	1189.	669.
*	0.370	3022.99	-0.07	3025.32	60.	60.	310.	370.	320.	335.	85.	1430.	480.

SUMMARY OF ERRORS

CAUTION SECNO= 0.010 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 0.020 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 0.020 PROFILE= 1
PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 0.020 PROFILE= 1
20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 0.020 PROFILE= 2 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 0.080 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 0.080 PROFILE= 2 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 0.090 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 0.090 PROFILE= 2 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 0.300 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 0.300 PROFILE= 1
PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 0.300 PROFILE= 1
20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO= 0.300 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 0.300 PROFILE= 2
PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 0.300 PROFILE= 2
20 TRIALS ATTEMPTED TO BALANCE WSEL

```
 20 TRIALS ATTEMPTED TO BALANCE WSEL
```

J02

```
CAUTION  SECNO=    0.370  PROFILE= 1  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.370  PROFILE= 1
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 1
 20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION  SECNO=    0.370  PROFILE= 2  CRITICAL DEPTH ASSUMED
CAUTION  SECNO=    0.370  PROFILE= 2
 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION  SECNO=    0.370  PROFILE= 2
 20 TRIALS ATTEMPTED TO BALANCE WSEL
```

K02

FLOODWAY DATA, HANEY CREEK
PROFILE NO. 2

STATION	FLOODWAY WIDTH (FT)	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
0.010	40.	262.	7.9	2934.8	2933.8	1.0
0.010	40.	312.	6.6	2936.0	2935.1	0.9
0.010	40.	257.	8.0	2935.9	2934.9	1.0
0.010	40.	270.	7.6	2936.3	2935.5	0.8
0.010	40.	329.	6.3	2936.4	2935.7	0.7
0.010	40.	319.	6.5	2936.2	2935.7	0.5
0.020	40.	205.	10.1	2937.5	2937.5	0.0
0.080	80.	262.	7.8	2945.2	2945.2	0.0
0.080	80.	367.	5.6	2946.5	2946.1	0.4
0.080	80.	381.	5.4	2946.7	2946.1	0.6
0.080	80.	377.	5.4	2946.9	2946.1	0.8
0.090	80.	248.	8.3	2947.3	2947.3	0.0
0.150	80.	193.	10.5	2951.9	2951.7	0.2
0.150	80.	218.	9.3	2953.2	2953.1	0.1
0.150	80.	417.	4.9	2955.9	2955.1	0.8
0.150	80.	421.	4.8	2956.0	2955.2	0.8
0.300	60.	263.	7.6	3007.7	3007.7	0.0
0.300	60.	374.	5.4	3009.5	3009.0	0.5
0.300	60.	374.	5.4	3009.5	3009.0	0.5
0.300	60.	372.	5.4	3009.6	3009.1	0.5
0.320	60.	440.	4.6	3010.7	3009.9	0.8
0.370	60.	265.	7.5	3023.1	3023.1	0.0

..