

6.3 / I-10 ¹	Fresh Kills Landfill 6 NYCRR Part 360 Permit Application March 15, 1996 APPENDIX CATEGORY 6.3, REFERENCE I-10¹	Appendix Category 6
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FRESH KILLS

CONTRACT No. 901 - 9260

Leachate Mitigation System Project

IT PROJECT No. 529363

Final Hydrogeological Report

Volume XXXIV

Attachments 19, 20, 21, 22

Date: November 26, 1993

Document No. 529363 - 01814

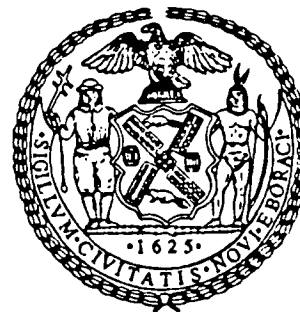
Submitted to:

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

**In Compliance With the Order on Consent:
NYSDEC Case No. D2-9001-89-03, Appendix A - 6**

Prepared for:

**CITY OF NEW YORK
DEPARTMENT OF SANITATION
NEW YORK, NEW YORK**



Prepared by



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

With



Wehran EnviroTech



O'BRIEN & GERE

FRESH KILLS

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ATTACHMENT 19

**Landfill Section 6/7: Two Dimensional (Cross Sectional)
Transient Model Input**

C.....HST DATA-INPUT FORM

C.... NOTES:

C.... INPUT LINES ARE DENOTED BY C.N1.N2.N3 WHERE
 C.... N1 IS THE READ GROUP NUMBER, N2.N3 IS THE RECORD NUMBER
 C.... A LETTER INDICATES AN EXCLUSIVE RECORD SELECTION MUST BE MADE
 C.... I.E. A OR B OR C

C.... (O) - OPTIONAL DATA WITH CONDITIONS FOR REQUIREMENT
 C.... A RECORD NUMBER IN SQUARE BRACKETS IS THE RECORD WHERE THAT
 C.... PARAMETER IS FIRST SET

C.....INPUT BY I,J,K RANGE FORMAT IS;

C.0.1.. I1,I2,J1,J2,K1,K2

C.0.2.. VAR1,IMOD1,[VAR2,IMOD2,VAR3,IMOD3]

C.... USE AS MANY OF LINE 0.1 & 0.2 SETS AS NECESSARY

C.... END WITH LINE 0.3

C.0.3.. 0 / THE SPACE IS REQUIRED

C.... {NNN} - INDICATES THAT THE DEFAULT NUMBER, NNN, IS USED IF A ZERO
 C.... IS ENTERED FOR THAT VARIABLE

C.... (T/F) - INDICATES A LOGICAL VARIABLE

C.... [I] - INDICATES AN INTEGER VARIABLE

C-----

C.....START OF THE DATA FILE

C.....DIMENSIONING DATA - READ1

C.1.1 .. TITLE LINE 1

CROSS SECTIONAL MODEL SECTION 6/7

C.1.2 .. TITLE LINE 2

RUN # 1

C.3 .. RESTR(T/F),TIMRST

F,0.

C.1.4 .. HEAT,SOLUTE,EEUNIT,CYLIND,SCALMF; ALL (T/F)

F,1,1,F,1

C.1.5 .. NX,NY,NZ,NHCN

33,2,42,0

C.1.6 .. NPTCBC,NFBC,NAIFC,NLBC,NHCBC,NWEL

0,62,0,170,0,0

C.1.7 .. NPMZ

143

C.1.8 .. SLMETH[1],LCROSD(T/F)

1,F

C.1.9 .. IBC BY I,J,K RANGE {0.1-0.3} ,WITH NO IMOD PARAMETER, FOR EXCLUDED

C.... CELLS

0 /

C.1.10 .. RDECHO(T/F)

T

C.....STATIC DATA - READ2

C.....OUTPUT INFORMATION

C.2.1 .. PRTR(T/F)

F

C.....COORDINATE GEOMETRY INFORMATION

C..... RECTANGULAR COORDINATES

C.2.2A.1 .. UNIGRX,UNIGRY,UNIGRZ; ALL (T/F);(O) - NOT CYLIND [1.4]

F,T,F

C.2.2A.2A .. X(1),X(NX);(O) - UNIGRX [2.2A.1]

C.2.2A.2B .. X(1);(O) - NOT UNIGRX [2.2A.1]

0,200,400,500,600,700,800,900,1000,1100,1200,1300,1400,1500,1600,1700,1800
 1900,2000,2100,2200,2300,2400,2500,2600,2700,2800,2900,3000,3100,3200,3300
 3400

C.2.2A.3A .. Y(1),Y(NY);(O) - UNIGRY [2.2A.1]

0,1.

C.2.2A.3B .. Y(J);(O) - NOT UNIGRY [2.2A.1]

C.2.2A.4A .. Z(1),Z(NZ);(O) - UNIGRZ [2.2A.1]

C.2.2A.4B .. Z(K);(O) - NOT UNIGRZ [2.2A.1]

-100,-97.5,-95,-92.5,-90,-87.5,-85,-82.5,-80,-77.5,-75,-72.5,-70,-67.5,-65,-62

2

-60,-57.5,-55,-52.5,-50,-47.5,-45,-42.5,-40,-37.5,-35,-32.5,-30,-27.5,-25,-22.5,-20,-17.5,-15,-12.5,-10,-7.5,-5,-2.5,0,10
CYLINDRICAL COORDINATES
C.2.2B.1A .. R(1),R(NR),ARGRID(T/F);(O) - CYLIND [1.4]
C.2.2B.1B .. R(1);(O) - CYLIND [1.4] AND NOT ARGRID [2.2B.1A]
C.2.2B.2 .. UNIGRZ(T/F);(O) - CYLIND [1.4]
C.2.2B.3A .. Z(1),Z(NZ);(O) - UNIGRZ [2.2B.3A],CYLIND [1.4]
C.2.2B.3B .. Z(K);(O) - NOT UNIGRZ [2.2B.3A],CYLIND [1.4]
C.2.3.1 .. TILT(T/F);(O) - NOT CYLIND [1.4]
F
C.2.3.2 .. THETAZ,THETYZ,THETZZ;(O) - TILT [2.3.1] AND NOT CYLIND [1.4]
C.....FLUID PROPERTY INFORMATION
C.2.4.1 .. BP
3.16E-16
C.2.4.2 .. PO,TO,W0,DENFO
0,68,0,62.4
C.2.4.3 .. W1,DENF1;(O) - SOLUTE [1.4]
1,62.4
C.2.5.1 .. NOTV0,TVF0(1),VISTF0(1),I=1 TO NOTV0;(O) - HEAT [1.4] OR
C... HEAT [1.4] AND SOLUTE [1.4] OR NOT HEAT AND NOT SOLUTE [1.4]
C.2.5.2 .. NOTV1,TVF1(1),VISTF1(1),I=1 TO NOTV1;(O) - SOLUTE [1.4] AND
C.. HEAT [1.4]
C.2.5.3 .. NOCV,TRVIS,CVIS(1),VISCTR(1),I=1 TO NOCV;(O) - SOLUTE [1.4]
2,68,0,1.003,1,1.003
C.....REFERENCE CONDITION INFORMATION
C.2.6.1 .. PAATM
0
C.2.6.2 .. POR,TOH
0,68
C.....FLUID THERMAL PROPERTY INFORMATION
C.2.7 .. CPF,KTHF,BT;(O) - HEAT [1.4]
C.....SOLUTE INFORMATION
C.2.8 .. DM,DECLAM;(O) - SOLUTE [1.4]
1E-10,0
C.....POROUS MEDIA ZONE INFORMATION
C.2.9.1 .. 1PMZ,11Z(1PMZ),12Z(1PMZ),J1Z(1PMZ),J2Z(1PMZ),K1Z(1PMZ),K2Z(1PMZ)
C.....USE AS MANY 2.9.1 LINES AS NECESSARY
C.2.9.2 .. END WITH 0 /
C-----
C***** REFUSE LAYER *****
1,1,3,1,2,40,42
2,1,2,1,2,39,40
3,4,33,1,2,41,42
4,4,8,1,2,40,41
5,6,29,1,2,38,40
6,6,28,1,2,37,38
7,7,26,1,2,36,37
8,8,25,1,2,35,36
9,15,24,1,2,34,35
10,5,6,1,2,39,40
11,29,30,1,2,39,40
C***** GLACIOLACUSTRINE LAYER *****
12,3,4,1,2,40,41
13,2,5,1,2,38,40
14,1,2,1,2,38,39
15,5,6,1,2,38,39
16,1,6,1,2,34,38
17,6,7,1,2,34,37
18,7,8,1,2,34,36
19,8,15,1,2,34,35
20,24,28,1,2,34,35
21,25,28,1,2,35,36
22,26,29,1,2,36,37
23,28,29,1,2,37,38
24,1,27,1,2,31,34
C***** UPPER SAND LAYER - CONTINUOUS *****

25,1,10,1,2,30,31
26,10,19,1,2,30,31
27,19,26,1,2,30,31
28,1,10,1,2,29,30
29,10,19,1,2,29,30
30,19,26,1,2,29,30

C***** END OF UPPER SAND *****

31,1,23,1,2,24,29
32,23,24,1,2,26,29
33,24,25,1,2,27,29

C***** LOWER SAND UNIT - DISCONTINUOUS *****

34,1,10,1,2,23,24
35,10,19,1,2,23,24
36,19,22,1,2,23,24

C***** END OF LOWER SAND *****

37,3,18,1,2,21,23
38,18,20,1,2,22,23
39,4,15,1,2,19,21
40,15,16,1,2,20,21
41,5,12,1,2,18,19
42,7,11,1,2,17,18

C***** GLACIAL TILL *****

43,1,2,1,2,21,23
44,2,3,1,2,19,23
45,3,4,1,2,18,21
46,4,5,1,2,17,19
47,5,6,1,2,16,18
48,6,7,1,2,15,18
49,7,11,1,2,14,17
50,11,12,1,2,14,18
51,12,15,1,2,14,19
52,15,16,1,2,14,20
53,16,18,1,2,14,21
54,18,19,1,2,14,22
55,19,20,1,2,15,22
56,20,21,1,2,16,23
57,21,22,1,2,17,23
58,22,23,1,2,18,24
59,23,24,1,2,20,26
60,24,25,1,2,22,27
61,25,26,1,2,25,29
62,26,27,1,2,27,31
63,27,28,1,2,30,34
64,28,29,1,2,32,36
65,29,30,1,2,34,39
66,30,31,1,2,37,41
67,31,33,1,2,38,41

C***** RESIDUAL CLAY LAYER *****

68,1,2,1,2,13,21
69,2,3,1,2,11,19
70,3,4,1,2,10,18
71,4,5,1,2,9,17
72,5,6,1,2,8,16
73,6,7,1,2,7,15
74,7,9,1,2,6,14
75,9,10,1,2,7,14
76,10,11,1,2,8,14
77,11,13,1,2,9,14
78,13,14,1,2,10,14
79,14,15,1,2,11,14
80,15,16,1,2,12,14
81,16,18,1,2,13,14

C***** WEATHERED BEDROCK *****

82,1,2,1,2,8,13
83,2,3,1,2,7,11

85,4,5,1,2,6,10
86,5,6,1,2,4,8
87,6,7,1,2,3,7
88,7,9,1,2,2,6
89,9,10,1,2,3,7
90,10,11,1,2,4,8
91,11,13,1,2,5,9
92,13,14,1,2,6,10
93,14,15,1,2,7,11
94,15,16,1,2,8,12
95,16,18,1,2,9,13
96,18,19,1,2,10,14
97,19,20,1,2,11,15
98,20,21,1,2,12,16
99,21,22,1,2,13,17
100,22,23,1,2,14,18
101,23,24,1,2,15,20
102,24,25,1,2,17,22
103,25,26,1,2,18,25
104,26,27,1,2,21,27
105,27,28,1,2,24,30
106,28,29,1,2,27,32
107,29,30,1,2,29,34
108,30,31,1,2,31,37
109,31,33,1,2,34,38

C***** COMPETENT BEDROCK LAYER *****

110,1,2,1,2,1,8
111,2,3,1,2,1,7
112,3,4,1,2,1,6
113,4,5,1,2,1,5
114,5,6,1,2,1,4
115,6,7,1,2,1,3
116,7,9,1,2,1,2
117,9,10,1,2,1,3
118,10,11,1,2,1,4
119,11,13,1,2,1,5
120,13,14,1,2,1,6
121,14,15,1,2,1,7
122,15,16,1,2,1,8
123,16,18,1,2,1,9
124,18,19,1,2,1,10
125,19,20,1,2,1,11
126,20,21,1,2,1,12
127,21,22,1,2,1,13
128,22,23,1,2,1,14
129,23,24,1,2,1,15
130,24,25,1,2,1,17
131,25,26,1,2,1,18
132,26,27,1,2,1,21
133,27,28,1,2,1,24
134,28,29,1,2,1,27
135,29,30,1,2,1,29
136,30,31,1,2,1,31
137,31,33,1,2,1,34

C ***** NEW REFUSE ZONES *****

138,8,12,1,2,40,41
139,12,16,1,2,40,41
140,16,20,1,2,40,41
141,20,24,1,2,40,41
142,24,28,1,2,40,41
143,28,30,1,2,40,41

0 /

C.....POROUS MEDIA PROPERTY INFORMATION

C.2.10.1 .. KXX(IPMZ),KYY(IPMZ),KZZ(IPMZ),IPMZ=1 TO NPMZ [1.7]

C***** REFUSE LAYER *****

2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-13,2.89E-13,2.89E-13
 2.89E-14,2.89E-14,2.89E-14
 2.89E-14,2.89E-14,2.89E-14
 C ***** NEW REFUSE ZONES *****
 5.14E-11,5.14E-11,5.14E-12
 5.14E-11,5.14E-11,5.14E-12
 5.14E-11,5.14E-11,5.14E-12
 5.14E-11,5.14E-11,5.14E-12
 5.14E-11,5.14E-11,5.14E-12
 5.14E-11,5.14E-11,5.14E-12
 C.2.10.2 .. POROS(1PMZ),1PMZ=1 TO NPMZ [1.7]
 C***** REFUSE LAYER *****
 .417
 .417
 .417
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 .417
 .417
 .417
 .417
 .417
 C***** GLACIOLACUSTRINE LAYER *****
 .05
 .05
 .05
 .05
 .05
 .05
 .05
 .05
 .05
 .05
 .05
 C***** UPPER SAND LAYER - CONTINUOUS *****
 .05
 .05
 .05
 .05
 .05
 .05
 C***** END OF UPPER SAND *****
 .05
 .05
 .05
 C***** LOWER SAND UNIT - DISCONTINUOUS *****
 .05
 .05
 .05
 C***** END OF LOWER SAND *****
 .05

2

.40

.05

. 25

9

[illegible]

.417
.417
.417
.417
.417
.417

[illegible]

1.27E-3
1.27E-3
1.27E-3
1.27E-3
1.27E-3
1.27E-3
1.27E-3
1.27E-3
1.27E-3

1.27E-3

C***** WEATHERED BEDROCK *****

1.04E-6

1.04E-6

1.04E-6

1.04E-6

1.04E-6

1.04E-6

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C***** COMPETENT BEDROCK LAYER *****

1.04E-6

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1.04E-6

1.04E-6

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1.04E-6

C ***** NEW REFUSE ZONES *****

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

1.45E-2

KB

[illegible][illegible]

10., 1.
10., 1.
10., 1.
10., 1.
10., 1.
10., 1.

15


```
C... AND WRCALC(WQMETH(2,14,3) / 300)
C.....BOUNDARY CONDITION INFORMATION
C..... SPECIFIED VALUE B.C.
C.2.15 .. IBC BY 1,J,K RANGE (0.1-0.3) WITH NO INPD PARAMETER;(10) -
C... NPICBC [1.6] = 0
C..... SPECIFIED FLUX B.C.
C.2.16 .. IBC BY 1,J,K RANGE (0.1-0.3) WITH NO INPD PARAMETER;(10) -
C... NFBC [1.6] = 0
1,33,1,2,42,42
300200
0 /
C..... AQUIFER AND RIVER LEAKAGE B.C.
C.2.17.1 .. IBC BY 1,J,K RANGE (0.1-0.3) WITH NO INPD PARAMETER;(10) -
C... NLBC [1.6] = 0
1,1,1,2,1,41
100300
33,33,1,2,1,41
100300
0 /
C.2.17.2 .. RLBC,BBLBC,ZELBC BY 1,J,K RANGE (0.1-0.3);(10) - NLBC [1.6] = 0
C..... RIVER LEAKAGE B.C.
1,1,1,2,1,1
1.96E-12,1,1,1,-100,1
1,1,1,2,2,2
1.96E-12,1,1,1,-97.5,1
1,1,1,2,3,3
1.96E-12,1,1,1,-95,1
1,1,1,2,4,4
1.96E-12,1,1,1,-92.5,1
1,1,1,2,5,5
1.96E-12,1,1,1,-90,1
1,1,1,2,6,6
1.96E-12,1,1,1,-87.5,1
1,1,1,2,7,7
1.96E-12,1,1,1,-85,1
1,1,1,2,8,8
1.96E-12,1,1,1,-82.5,1
1,1,1,2,9,9
1.96E-12,1,1,1,-80,1
1,1,1,2,10,10
1.96E-12,1,1,1,-77.5,1
1,1,1,2,11,11
1.96E-12,1,1,1,-75,1
1,1,1,2,12,12
1.96E-12,1,1,1,-72.5,1
1,1,1,2,13,13
2.75E-16,1,1,1,-70,1
1,1,1,2,14,14
2.75E-16,1,1,1,-67.5,1
1,1,1,2,15,15
2.75E-16,1,1,1,-65,1
1,1,1,2,16,16
2.75E-16,1,1,1,-62.5,1
1,1,1,2,17,17
2.75E-16,1,1,1,-60,1
1,1,1,2,18,18
2.75E-16,1,1,1,-57.5,1
1,1,1,2,19,19
2.75E-16,1,1,1,-55,1
1,1,1,2,20,20
2.75E-16,1,1,1,-52.5,1
1,1,1,2,21,21
2.89E-13,1,1,1,-50,1
1,1,1,2,22,22
2.17E-14,1,1,1,-47.5,1
1,1,1,2,23,23
```

2.78E-15,1,1,1,-45,1
1,1,1,2,24,24
2.78E-15,1,1,1,-42.5,1
1,1,1,2,25,25
2.78E-15,1,1,1,-40,1
1,1,1,2,26,26
2.78E-15,1,1,1,-37.5,1
1,1,1,2,27,27
2.78E-15,1,1,1,-35,1
1,1,1,2,28,28
2.78E-15,1,1,1,-32.5,1
1,1,1,2,29,29
2.78E-15,1,1,1,-30,1
1,1,1,2,30,30
2.78E-15,1,1,1,-27.5,1
1,1,1,2,31,31
2.78E-15,1,1,1,-25,1
1,1,1,2,32,32
2.78E-15,1,1,1,-22.5,1
1,1,1,2,33,33
2.78E-15,1,1,1,-20,1
1,1,1,2,34,34
2.78E-15,1,1,1,-17.5,1
1,1,1,2,35,35
2.78E-15,1,1,1,-15,1
1,1,1,2,36,36
2.78E-15,1,1,1,-12.5,1
1,1,1,2,37,37
2.78E-15,1,1,1,-10,1
1,1,1,2,38,38
2.78E-15,1,1,1,-7.5,1
1,1,1,2,39,39
5.14E-11,1,1,1,-5,1
1,1,1,2,40,40
5.14E-11,1,1,1,-2.5,1
1,1,1,2,41,41
5.14E-11,1,1,1,0.,1
1,1,1,2,42,42
5.14E-11,1,1,1,10,1
33,33,1,2,1,1
1.96E-12,1,1,1,-100,1
33,33,1,2,2,2
1.96E-12,1,1,1,-97.5,1
33,33,1,2,3,3
1.96E-12,1,1,1,-95,1
33,33,1,2,4,4
1.96E-12,1,1,1,-92.5,1
33,33,1,2,5,5
1.96E-12,1,1,1,-90,1
33,33,1,2,6,6
1.96E-12,1,1,1,-87.5,1
33,33,1,2,7,7
1.96E-12,1,1,1,-85,1
33,33,1,2,8,8
1.96E-12,1,1,1,-82.5,1
33,33,1,2,9,9
1.96E-12,1,1,1,-80,1
33,33,1,2,10,10
1.96E-12,1,1,1,-77.5,1
33,33,1,2,11,11
1.96E-12,1,1,1,-75,1
33,33,1,2,12,12
1.96E-12,1,1,1,-72.5,1
33,33,1,2,13,13
1.96E-12,1,1,1,-70,1
33,33,1,2,14,14

```
1.96E-12,1,1,1,-67.5,1
33,33,1,2,15,15
1.96E-12,1,1,1,-65,1
33,33,1,2,16,16
1.96E-12,1,1,1,-62.5,1
33,33,1,2,17,17
1.96E-12,1,1,1,-60,1
33,33,1,2,18,18
1.96E-12,1,1,1,-57.5,1
33,33,1,2,19,19
1.96E-12,1,1,1,-55,1
33,33,1,2,20,20
1.96E-12,1,1,1,-52.5,1
33,33,1,2,21,21
1.96E-12,1,1,1,-50,1
33,33,1,2,22,22
1.96E-12,1,1,1,-47.5,1
33,33,1,2,23,23
1.96E-12,1,1,1,-45,1
33,33,1,2,24,24
1.96E-12,1,1,1,-42.5,1
33,33,1,2,25,25
1.96E-12,1,1,1,-40,1
33,33,1,2,26,26
1.96E-12,1,1,1,-37.5,1
33,33,1,2,27,27
1.96E-12,1,1,1,-35,1
33,33,1,2,28,28
1.96E-12,1,1,1,-32.5,1
33,33,1,2,29,29
1.96E-12,1,1,1,-30,1
33,33,1,2,30,30
1.96E-12,1,1,1,-27.5,1
33,33,1,2,31,31
1.96E-12,1,1,1,-25,1
33,33,1,2,32,32
1.96E-12,1,1,1,-22.5,1
33,33,1,2,33,33
1.96E-12,1,1,1,-20,1
33,33,1,2,34,34
1.96E-12,1,1,1,-17.5,1
33,33,1,2,35,35
1.96E-12,1,1,1,-15,1
33,33,1,2,36,36
1.96E-12,1,1,1,-12.5,1
33,33,1,2,37,37
1.96E-12,1,1,1,-10,1
33,33,1,2,38,38
2.17E-14,1,1,1,-7.5,1
33,33,1,2,39,39
2.17E-14,1,1,1,-5,1
33,33,1,2,40,40
2.17E-14,1,1,1,-2.5,1
33,33,1,2,41,41
1.11E-10,1,1,1,0,1
33,33,1,2,42,42
5.14E-11,1,1,1,10,1
0 /
C.2.17.3 .. 11,12,J1,J2,KRBC,BBRBC,ZERBC;(O) - NLBC [1.6] > 0
3,3,1,2,9.E-12,1.,-3.0
4,4,1,2,9.E-12,1.,-3.0
29,29,1,2,7.91E-13,1.,0.0
0 /
C.2.17.4 .. END WITH 0 /
C..... AQUIFER INFLUENCE FUNCTIONS
C.2.18.1 .. IBC BY 1,J,K RANGE {0.1-0.3} WITH NO IMOD PARAMETER;(O) -
```

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C.1. NAIFC [1.6] > 0
C.2.18.2 .. CNAIFC BY 1,J,K RANGE {0.1-0.3};(O) - NAIFC [1.6] > 0
C.2.18.3 .. IAIF;(O) - NAIFC [1.6] > 0
C. .... TRANSIENT, CARRIER-TRACT A.I.F.
C.2.18.4 .. KOAR,ABOAR,VISOAR,PORGAR,BOAR,RIOAR,ANGUAR;(O) -
C. .. IAIF [2.18.3] = 2
C. .... HEAT CONDUCTION B.C.
C.2.19.1 .. IBC BY 1,J,K RANGE {0.1-0.3}, WITH NO TMOU PARAMETER, F.F.
C. .. HCBC NODES;(O) - HEAT [1.4] AND SHCBC [1.6] > 0
C.2.19.2 .. ZHCBC(K);(O) - HEAT [1.4] AND SHCBC [1.6] > 0
C.2.19.3 .. CBTHC BY 1,J,K RANGE {0.1-0.3} FOR HCBC NODES;(O) -
C. .. HEAT [1.4] AND SHCBC [1.6] > 0
C.2.19.4 .. LKHCBC BY 1,J,K RANGE {0.1-0.3} FOR HCBC NODES;(O) -
C. .. HEAT [1.4] AND SHCBC [1.6] > 0
C. .... FREE SURFACE B.C.
C.2.20 .. PRESUR(T/F),PRICCM(1/F)
F,T
C. .... INITIAL CONDITION INFORMATION
C.2.21.1 .. ICHYDP,ICT,ICC; ALL (1/F); IF NOT HEAT, ICT = F, IF NOT SOLUTE,
T,F,F
C. .... ICC=F
C.2.21.2 .. ICHWT(T/F);(O) - PRESUR [2.20]
CF
C.2.21.3A .. ZPINIT,PINIT;(O) - ICHYDP [2.21.1] AND NOT ICHWT [2.21.2]
0.0,0
C.2.21.3B .. P BY 1,J,K RANGE {0.1-0.3};(O) - NOT ICHYDP [2.21.1] AND
C. .. NOT ICHWT [2.21.2]
C.2.21.3C .. HWT BY 1,J,K RANGE {0.1-0.3};(O) - PRESUR [2.20] AND
C. .. ICHWT [2.21.2]
C.2.21.4A .. NZTPRO,ZT(1),IVD(1),I=1,NZTPRO;(O) - HEAT [1.4] AND NOT
C. .. ICT [2.21.1], LIMIT OF 10
C.2.21.4B .. T BY 1,J,K RANGE {0.1-0.3};(O) - HEAT [1.4] AND ICT [2.21.1]
C.2.21.5 .. NZTPHC, ZTHC(1),IVZHC(1);(O) - HEAT [1.4] AND SHCBC [1.6] > 0,
C. .. LIMIT OF 5
C.2.21.6 .. C BY 1,J,K RANGE {0.1-0.3};(O) - SOLUTE [1.4] AND ICC [2.21.1]
C. .... CALCULATION INFORMATION
C.2.22.1 .. FDSMTH,FDTMTH
0.0,1.0
C.2.22.2 .. TOLDEN(.001),MAXITN(5)
.001,5
C.2.22.3 .. NTSOPT(5),EPSSOR(.00001),EPSOMG(.2),MAXI1(50),MAXI12(10.1);
C. .. (O) - SLMETH [1.8] = 2
C. .... OUTPUT INFORMATION
C.2.23.1 .. PRTPMP,PRTFP,PRTIC,PRTBC,PRISLM,PRIWEL; ALL (1/F)
F,F,F,F,F,F
C.2.23.2 .. IPRPTC,PRIDV(1/F);(O) - PRTIC [2.23.1]
C200,F
C.2.23.3 .. ORENPR(1);(O) - NOT CYLIND [1.4]
13
C.2.23.4 .. PLTZON(T/F);(O) - PRTPMP [2.23.1]
CF
C.2.23.5 .. OCPLOT(T/F)
T
C-----
C. .... TRANSIENT DATA - READ3
C.3.1 .. THRU(T/F)
F
C. .... IF THRU IS TRUE PROCEED TO RECORD 3.99
C. .... THE FOLLOWING IS FOR NOT THRU
C. .... SOURCE-SINK WELL INFORMATION
C.3.2.1 .. RDWFLO(T/F),RDWHD(T/F);(O) - NWEL [1.6] > 0
C.3.2.2 .. IWEL,QW,PWSUR,PWKT,TWSRKT,CWKT;(O) - RDWFLO [3.2.1] OR
C. .. RDWHD [3.2.1]
C. .... USE AS MANY 3.2.2 LINES AS NECESSARY
C.3.2.3 .. END WITH 0 /
C. .... BOUNDARY CONDITION INFORMATION

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C..... SPECIFIED VALUE B.C.
C.3.3.1 .. RDSPBC,RDSTBC,RDSCBC,ALL(1/7);(0) - NOT CYLIND [1.4] AND
C.. NPTCBC [1.6] > 0
C.3.3.2 .. PNP B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDSPEC [3.3.1]
C.3.3.3 .. ISBC BY 1,J,K RANGE {0.1-0.3};(0) - RDSPEC [3.3.1] AND
C.. HEAT [1.4]
C.3.3.4 .. CSBC BY 1,J,K RANGE {0.1-0.3}; (0) - RDSPEC [3.3.1] AND
C.. SOLUTE [1.4]
C.3.3.5 .. INF B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDSIBC [3.3.1] AND
C.. HEAT [1.4]
C.3.3.6 .. CNP B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDSIBC [3.3.1] AND
C.. SOLUTE [1.4]
C..... SPECIFIED FLUX
C.3.4.1 .. RDFLAQ,RDFLAH,RDFLAS,ALL(1/7);(0) - NFBC [1.6] > 0
1,F,F
C.3.4.2 .. QFFX,QFFY,QFFZ B.C. BY 1,J,K RANGE {0.1-0.3};(0) -
C.. RDFLAQ [3.4.1]
1,33,1,2,42,42
0,1,0,1,-3.24E-3,1
0 /
C.3.4.3 .. UDENBC BY 1,J,K RANGE {0.1-0.3};(0) - RDFLAQ [3.4.1]
1,33,1,2,42,42
62.4,1
0 /
C.3.4.4 .. IFLX B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDFLAQ [3.4.1] AND
C.. HEAT [1.4]
C.3.4.5 .. CFLX B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDFLAQ [3.4.1] AND
C.. SOLUTE [1.4]
1,33,1,2,42,42
1.0,1
0 /
C.3.4.6 .. QHFX,QHFX,QHFZ B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDFLAH [3.4.5]
C.3.4.7 .. QSFY,QSFY,QSFZ B.C. BY 1,J,K RANGE {0.1-0.3};(0) - RDFLAS [3.4.1]
C..... LEAKAGE BOUNDARY
C.3.5.1 .. RDLBC(1/7);(0) - NLBC [1.6] > 0
1
C.3.5.2 .. PHILBC,DENLBC,VISLBC BY 1,J,K RANGE {0.1-0.3};(0) - RDLBC [3.5.1]
33,33,1,2,1,34
200.2529,1,62.4,1,1.003,1
33,33,1,2,35,37
340.2529,1,62.4,1,1.003,1
33,33,1,2,38,38
363.8965,1,62.4,1,1.003,1
33,33,1,2,39,39
397.0023,1,62.4,1,1.003,1
33,33,1,2,40,40
404.6459,1,62.4,1,1.003,1
33,33,1,2,41,41
442.7517,1,62.4,1,1.003,1
1,1,1,2,1,12
108.8278,1,62.4,1,1.003,1
1,1,1,2,13,20
92.3229,1,62.4,1,1.003,1
1,1,1,2,21,22
98.1447,1,62.4,1,1.003,1
1,1,1,2,23,38
80.4288,1,62.4,1,1.003,1
1,1,1,2,39,41
65.2696,1,62.4,1,1.003,1
0 /
C.3.5.3 .. FLBC BY 1,J,K RANGE {0.1-0.3};(0) - RDLBC [3.5.1] AND HEAT [1.4]
C.3.5.4 .. CLBC BY 1,J,K RANGE {0.1-0.3};(0) - RDLBC [3.5.1] AND SOLUTE [1.4]
C..... RIVER LEAKAGE
1,1,1,2,1,42
0.0,1
33,33,1,2,1,42

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0.0.1
0 /
C.3.5.5 .. 11,12,J1,J2,HREC,GENRBC,VISRBC,IRBC,CRBC;(O) - RDLBC [3.5.1]
C.....USE AS MANY 3.5.5 LINES AS NECESSARY
3,3,1,2,-2,62.4,1.003,68,0
4,4,1,2,-2,62.4,1.003,68,0
29,29,1,2,1,62.4,1.003,68,0
0 /
C.3.5.6 .. END WITH 0 /
C..... A.I.F. B.C.
C.3.6.1 .. RDAIF(1/F);(O) - RDAIF [3.6.1]
C.3.6.2 .. DENOAR BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1]
C.3.6.3 .. IAIIF BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1] AND HEAT [1.4]
C.3.6.4 .. CAIF BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1] AND SOLUTE [1.4]
C.....CALCULATION INFORMATION
C.3.7.1 .. RDCALC(1/F)
1
C.3.7.2 .. AUTOIS(1/F);(O) - RDCALC [3.7.1]
1
C.3.7.3.A .. DELTIM;(O) - RDCALC [3.7.1] AND NOT AUTOIS [3.7.2]
C.3.7.3.B .. DPTAS(5E4),DTIAS(5.),DCIAS(.25),DIIIMN(1.E4),DIIIMX(1.E7);
C.. (O) - RDCALC [3.7.1] AND AUTOIS [3.7.2]
2.0,5.,.10,30.,365.0
C.3.7.4 .. TIMCHG
C.....OUTPUT INFORMATION
9490.
C.3.8.1 .. PRIVEL,PRIDV,PRISLM,PRIKD,PRIPIC,PRIGFB,PRIWEL,PRIBCF; ALL [1]
0,0,-1,0,-1,-1,0,-1
C.3.8.2 .. IPRPIC;(O) - IF PRIPIC [3.8.1] NOT = 0
201
C.3.8.3 .. CHKPID(1/F),NISCHK,SAVLDO(1/F)
F,-1,F
C.....CONTOUR MAP INFORMATION
C.3.9.1 .. RDMPDI,PRIMPD; ALL (1/F)
1,T
C.3.9.2 .. MAPPIC,PRIMAP[1];(O) - RDMPDI [3.9.1]
101,-1
C.3.9.3 .. YPOSUP(1/F),ZPOSUP(1/F),LENAX,LENAY,LENAZ;(O) - RDMPDI [3.9.1]
F,1,12,0,12
C.3.9.4 .. IMAPI{1},IMAP2{N1},JMAPI{1},JMAP2{N1},KMAPI{1},KMAP2{N2},AMIN,
C.. AMAX,NMPZON(5);(O) - RDMPDI [3.9.1]
1,33,1,2,1,42,0,0,1
1,33,1,2,1,42,0.,1.,10
C.....ONE OF THE 3.9.4 LINES REQUIRED FOR EACH DEPENDENT VARIABLE
C..... TO BE MAPPED
C.....END OF FIRST SET OF TRANSIENT INFORMATION
C - - - - -
C.....READ SETS OF READ3 DATA AT EACH TIMCHG UNTIL THRU (LINES 3.N1,N2)
C.....END OF CALCULATION LINES FOLLOW, THRU=.TRUE.
C.3.99.1 .. THRU
T
C.....TEMPORAL PLOT INFORMATION
C.3.99.2 .. PLOTWP,PLOTWT,PLOTWC; ALL (1/F)
C.....PLOT INFORMATION;(O) - PLOTWP [3.99] OR PLOTWT [3.99] OR PLOTWC [3.99]
F,F,F
C.4.1 .. IWEL,RDPLTP(T/F)
C.4.2 .. IDLAB
C.4.3 .. NTHPTO,NTHPTC,PWMIN,PWMAX,PSMIN,PSMAX,TWMIN,TWMAX,TSMIN,TSMAX,
C.. CMIN,CMAX;(O) - RDPLTP [4.1]
C.4.4 .. TO,POW,POS,TOW,TOS,COW
C.....USE AS MANY 4.4 LINES AS NECESSARY
C.4.5 .. END WITH -1. /
C.....READ DATA FOR ADDITIONAL WELLS, 4.1-4.5 LINES
C.4.6 .. END WITH 0 /
C.....END OF DATA FILE

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20.0

ATTACHMENT 20

**Landfill Section 6/7: Two Dimensional (Cross Sectional)
Transient Model Output**

**Summary Output (Solute)
For Final Time Increment
Base Simulation**

678525. DAT

1	5000.00	1.413487E-05	0.417000	1.347090E-02
2	500.000	3.136471E-07	0.417000	5.539542E-05
3	25000.0	0.365299	0.417000	44.17.55
4	1000.00	0.851373	0.417000	346.652
5	11500.0	0.545052	0.417000	2515.54
6	5500.00	0.691577	0.417000	1555.13
7	4750.00	0.584307	0.417000	1553.52
8	4250.00	0.917759	0.417000	1626.50
9	2250.00	0.999646	0.417000	137.919
10	250.000	0.999994	0.417000	104.249
11	250.000	1.000009	0.417000	104.259
105	1000.00	0.559750	0.417000	233.430
109	1000.00	1.464158	0.417000	133.566
145	1000.00	0.323142	0.417000	135.895
141	1000.00	0.151059	0.417000	62.2914
142	1000.00	0.213379	0.417000	89.1877
143	500.000	0.774383	0.417000	152.501
12	250.000	0.475722	5.000000E-02	5.94653
13	2000.00	0.435022	5.000000E-02	43.5092
14	500.000	2.930904E-07	5.000000E-02	7.327260E-06
15	250.000	0.999973	5.000000E-02	12.4934
16	7000.00	0.192691	5.000000E-02	67.4417
17	750.000	0.795121	5.000000E-02	29.5545
18	500.000	0.932344	5.000000E-02	23.3086
19	1750.00	0.999902	5.000000E-02	97.4915
20	1000.00	0.554541	5.000000E-02	27.7270
21	750.000	0.763544	5.000000E-02	29.5079
22	750.000	0.975235	5.000000E-02	32.8450
23	250.000	1.000009	5.000000E-02	12.5012
24	21000.0	0.421990	5.000000E-02	443.090
25	2750.00	2.225072E-02	5.000000E-02	3.05947
26	2250.00	0.144340	5.000000E-02	15.2393
27	1750.00	3.750974E-02	5.000000E-02	5.53201
28	2750.00	0.054610E-03	5.000000E-02	0.933894
29	2250.00	4.853348E-02	5.000000E-02	5.46002
30	1750.00	2.894094E-02	5.000000E-02	2.53233
31	30000.0	2.752426E-03	5.000000E-02	4.12854
32	750.000	2.086411E-03	5.000000E-02	7.824040E-02
33	500.000	9.784771E-04	5.000000E-02	2.446193E-02
34	2750.00	1.126692E-07	5.000000E-02	1.549202E-05
35	2250.00	2.473670E-06	5.000000E-02	2.782978E-04
36	750.000	1.072198E-06	5.000000E-02	4.020744E-05
37	7500.00	1.151795E-07	5.000000E-02	4.319231E-05
38	500.000	2.312619E-07	5.000000E-02	5.781547E-06
39	5500.00	6.440469E-10	5.000000E-02	1.771129E-07
40	250.000	4.278248E-09	5.000000E-02	5.347810E-05
41	1750.00	1.678134E-12	5.000000E-02	1.469367E-10
42	1000.00	9.793024E-14	5.000000E-02	4.396512E-12
43	1000.00	2.077445E-25	0.400000	8.309779E-23
44	2000.00	1.908919E-20	0.400000	1.527135E-17
45	750.000	2.352935E-20	0.400000	3.553908E-18
46	500.000	2.655515E-20	0.400000	5.311631E-18
47	500.000	2.379736E-19	0.400000	5.757472E-17
48	750.000	6.459363E-17	0.400000	1.937809E-14
49	3000.00	1.524139E-16	0.400000	1.142897E-12
50	1000.00	5.347317E-14	0.400000	2.138927E-11
51	3750.00	1.491793E-12	0.400000	2.237689E-09
52	1500.00	5.080036E-11	0.400000	3.048022E-08

54	2000.00	3.019153E-09	0.400000	2.475323E-06
55	1750.00	1.156314E-09	0.400000	3.034798E-07
56	1750.00	1.013555E-09	0.400000	7.095115E-06
57	1500.00	3.234895E-09	0.400000	1.344937E-06
58	1500.00	2.062431E-09	0.400000	1.249455E-06
59	1500.00	1.091233E-09	0.400000	3.547401E-14
60	1250.00	3.670620E-09	0.400000	1.355911E-03
61	1000.00	2.878293E-09	0.400000	1.161317E-02
62	1000.00	1.322283E-04	0.400000	5.252703E-02
63	1000.00	4.641066E-03	0.400000	1.155640
64	1000.00	0.107729	0.400000	46.0915
65	1250.00	0.427531	0.400000	273.765
66	1000.00	0.543996	0.400000	277.596
67	1500.00	0.1334407	0.400000	200.644
68	4000.00	3.325102E-25	5.000000E-02	5.655205E-25
69	4000.00	1.421138E-25	5.000000E-02	3.854475E-24
70	2500.00	3.493470E-25	5.000000E-02	3.493470E-25
71	2000.00	3.540399E-24	5.000000E-02	3.540399E-22
72	2000.00	3.432905E-23	5.000000E-02	3.432905E-21
73	2000.00	3.040575E-22	5.000000E-02	3.040575E-20
74	4000.00	3.351170E-21	5.000000E-02	6.702340E-19
75	1750.00	1.524323E-20	5.000000E-02	1.338167E-18
76	1500.00	2.351862E-21	5.000000E-02	2.213399E-18
77	2500.00	3.092311E-20	5.000000E-02	4.240399E-18
78	1000.00	2.878255E-20	5.000000E-02	1.433142E-18
79	750.000	6.553335E-20	5.000000E-02	2.456252E-18
80	500.000	1.024938E-19	5.000000E-02	2.562345E-18
81	500.000	4.297446E-20	5.000000E-02	1.074362E-18
82	2500.00	0.000000E+00	0.250000	0.000000E+00
83	2500.00	0.000000E+00	0.250000	0.000000E+00
84	1000.00	0.000000E+00	0.250000	0.000000E+00
85	1000.00	0.000000E+00	0.250000	0.000000E+00
86	1000.00	0.000000E+00	0.250000	0.000000E+00
87	1000.00	1.227970E-37	0.250000	3.059925E-35
88	2000.00	1.137273E-35	0.250000	5.686394E-33
89	1000.00	3.422630E-33	0.250000	2.105658E-30
90	1000.00	1.668415E-30	0.250000	4.221039E-28
91	2000.00	3.163753E-29	0.250000	4.531376E-25
92	1000.00	3.860892E-27	0.250000	3.651654E-25
93	1000.00	5.806922E-25	0.250000	1.451701E-22
94	1000.00	2.898014E-23	0.250000	1.245035E-21
95	2000.00	3.167487E-22	0.250000	1.593744E-19
96	1000.00	1.925105E-21	0.250000	4.312762E-19
97	1000.00	1.073044E-20	0.250000	2.635111E-18
98	1000.00	1.087749E-19	0.250000	2.719372E-17
99	1000.00	6.838771E-19	0.250000	1.709593E-16
100	1000.00	4.361127E-18	0.250000	1.090232E-15
101	1250.00	7.561348E-16	0.250000	2.362921E-13
102	1250.00	9.480945E-14	0.250000	2.962795E-11
103	1750.00	1.461838E-11	0.250000	5.395540E-09
104	1500.00	5.669987E-11	0.250000	2.126245E-09
105	1500.00	9.392380E-09	0.250000	3.522143E-06
106	1250.00	3.824255E-07	0.250000	1.195980E-04
107	1250.00	5.812069E-06	0.250000	1.816272E-03
108	1500.00	4.614672E-03	0.250000	1.73050
109	2000.00	1.725865E-02	0.250000	5.62933
110	3500.00	0.000000E+00	0.150000	0.000000E+00
111	3000.00	0.000000E+00	0.150000	0.000000E+00
112	1250.00	0.000000E+00	0.150000	0.000000E+00
113	1000.00	0.000000E+00	0.150000	0.000000E+00
114	750.000	0.000000E+00	0.150000	0.000000E+00
115	500.000	0.000000E+00	0.150000	0.000000E+00
116	500.000	0.000000E+00	0.150000	0.000000E+00
117	500.000	1.759749E-38	0.150000	1.379912E-36
118	750.000	3.536440E-36	0.150000	3.979495E-34

120	1250.00	5.197298E-33	0.150000	9.744935E-31
121	1500.00	6.611566E-31	0.150000	1.487692E-28
122	1750.00	3.209510E-29	0.150000	5.424963E-27
123	4000.00	2.874471E-28	0.150000	1.724583E-26
124	2250.00	5.428673E-28	0.150000	1.632177E-26
125	2500.00	1.613945E-27	0.150000	5.062293E-26
126	2750.00	1.070121E-26	0.150000	4.414249E-24
127	3000.00	3.210239E-26	0.150000	1.444607E-23
128	3250.00	1.008298E-25	0.150000	4.905704E-23
129	3500.00	2.001597E-25	0.150000	1.150633E-22
130	4000.00	2.056690E-23	0.150000	1.234014E-20
131	4250.00	1.202934E-24	0.150000	7.868701E-22
132	5000.00	1.415558E-21	0.150000	1.061669E-19
133	5750.00	2.022114E-18	0.150000	1.744074E-16
134	6500.00	3.679895E-16	0.150000	3.587810E-12
135	7000.00	1.721192E-13	0.150000	1.807251E-10
136	7500.00	7.673644E-12	0.150000	8.632850E-09
137	18500.0	6.374238E-05	0.150000	0.170137

***** REFUSE LAYER *****		PERCENTAGE = 90.18	SOLUTE = .1417E+05
***** GLACIOLACUSTRINE LAYER **		PERCENTAGE = 5.450	SOLUTE = 856.7
***** GLACIAL TILL *****		PERCENTAGE = 4.307	SOLUTE = 677.0
***** RESIDUAL CLAY LAYER *****		PERCENTAGE = .1020E-18	SOLUTE = .1603E-16
***** WEATHERED BEDROCK *****		PERCENTAGE = .6592E-01	SOLUTE = 10.36
***** COMPETENT BEDROCK LAYER *		PERCENTAGE = .1082E-02	SOLUTE = .1701
TOTAL PERCENTAGE = 100.0		TOTAL SOLUTE = .1572E+05	

**Full Output (Head/Flux/Solute)
For Final Time Increment**

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*****
*
*   THREE DIMENSIONAL FLOW, HEAT AND SOLUTE
*   TRANSPORT SIMULATOR - POSTED RELEASE - 1.4
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CROSS SECTIONAL MODEL SECTION 5/7
 RUN # 1

*** FUNDAMENTAL INFORMATION ***

CARTESIAN COORDINATES
 ISOTHERMAL SIMULATION
 SOLUTE TRANSPORT SIMULATION
 INPUT DATA IS EXPECTED IN ENGLISH UNITS
 SOLUTE CONCENTRATION IS EXPRESSED AS SCALED MASS FRACTION WITH RANGE 10-1

*** PROBLEM DIMENSIONING INFORMATION ***

NUMBER OF NODES IN X-DIRECTION	NA ...	33
NUMBER OF NODES IN Y-DIRECTION	NY ...	2
NUMBER OF NODES IN Z-DIRECTION	NZ ...	42
NUMBER OF POROUS MEDIA ZONES	NPMZ ...	143
NUMBER OF SPECIFIED PRESSURE, TEMPERATURE OR MASS FRACTION B.C.	NPTCBC ..	1
NUMBER OF SPECIFIED FLUX B.C. CELLS (FLOW, HEAT OR SOLUTE)	NFBC ...	62
NUMBER OF HEAT CONDUCTION B.C. CELLS	NHCBC ...	1
NUMBER OF NODES OUTSIDE REGION FOR EACH HEAT CONDUCTION B.C. CELL	NHCN ...	1
NUMBER OF AQUIFER INFLUENCE FUNCTION CELLS	NAIFC ...	1
NUMBER OF LEAKAGE CELLS	NLBC ...	17
NUMBER OF WELLS	NWEL ...	1

DIRECT 04 SOLVER IS SELECTED

ABBREVIATED DIAGONAL CROSS-DISPERSIVITY COEFFICIENT STORAGE ALLOCATED

THE A4 ARRAY IN 0405 IS DIMENSIONED 158258 ELEMENTS

THE TOTAL STORAGE REQUIRED BY THE DIRECT METHOD IS 152112 ELEMENTS

THE TOTAL STORAGE REQUIRED BY THE ITERATIVE METHOD IS 19404 ELEMENTS

TOTAL LENGTH OF LABELED COMMON BLOCKS 6631 BYTES

	REQUIRED	COMPILED
LENGTH OF VARIABLE LENGTH REAL ARRAY (VPA ARRAY)	247114 ELEMENTS	500000 ELEMENTS
LENGTH OF VARIABLE LENGTH INTEGER ARRAY (IVPA ARRAY)	23755 ELEMENTS	35000 ELEMENTS

*** TIME INVARIANT OR STATIC DATA ***

X-DIRECTION NODE COORDINATES (FT)

1	2	3	4	5	6	7	8	9	10
0.00	200.00	400.00	500.00	600.00	700.00	800.00	900.00	1000.00	1100.00
11	12	13	14	15	16	17	18	19	20
1200.00	1300.00	1400.00	1500.00	1600.00	1700.00	1800.00	1900.00	2000.00	2100.00
21	22	23	24	25	26	27	28	29	30
2200.00	2300.00	2400.00	2500.00	2600.00	2700.00	2800.00	2900.00	3000.00	3100.00

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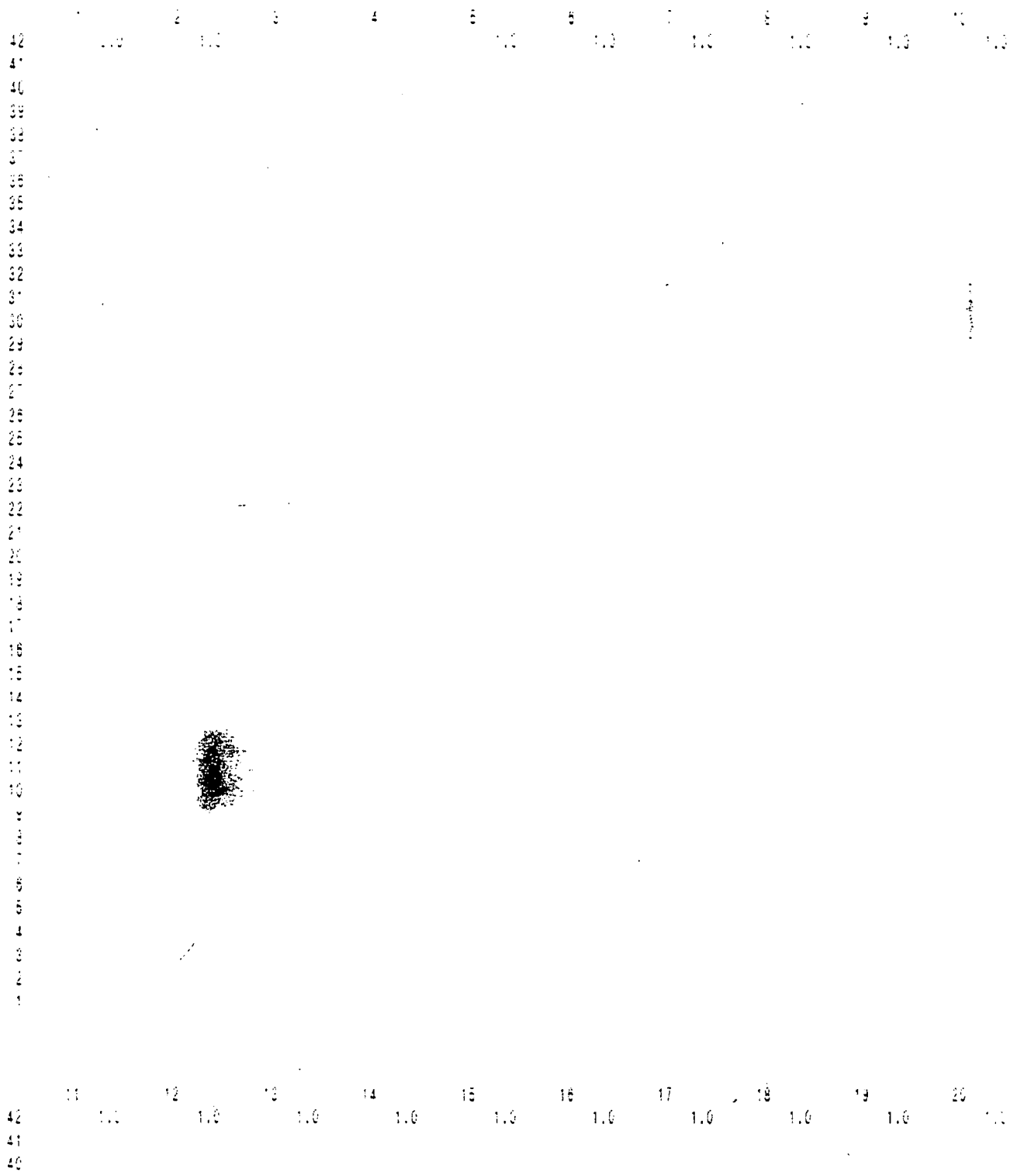


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ASSOCIATED BOUNDARY SCALED MASS FRACTIONS FOR INFLOW -
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21	22	23	24	25	26	27	28	29	30
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
42	41	40	39	38	37	36	35	34	33
32	31	30	29	28	27	26	25	24	23
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VERTICAL SLICES

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36 80.43
35 80.43
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23 80.43
22 88.14
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42	142.3
41	404.3
40	397.3
39	363.3
38	340.3
37	340.3
36	340.3
35	200.3
34	200.3
33	200.3
32	200.3
31	200.3
30	200.3
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	1	2	3	4	5	6	7	8
42			-64.35	-64.35				
41	85.27							
40	85.27							
39	85.27							
38	80.43							
37	80.43							
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22	49.14
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14	49.32
13	49.32
12	103.3
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41			442.9
40			404.6
39			397.0
38			363.9
37			340.3
36			340.3
35			340.3
34			280.3
33			280.3
32			280.3
31			200.3
30			200.3

28	200.0
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LE-NAGE BOUNDARY SCALED MASS FRACTIONS FOR INFLOW 1 - 1

VERTICAL SLICES

42	0.0
41	0.0
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39	0.0
38	0.0
37	0.0
36	0.0
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33	0.0
32	0.0
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42	37	32	27
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9			0.0
8			0.0

*** CALCULATION INFORMATION ***

AUTOMATIC TIME STEP CONTROL PARAMETERS

MAXIMUM PRESSURE CHANGE ALLOWED PER TIME STEP..... DPAS 2.0 PSI
MAXIMUM TEMPERATURE CHANGE ALLOWED PER TIME STEP..... DTTAS 5.0 DEG.F
MAXIMUM SCALED MASS FRACTION CHANGE ALLOWED PER TIME STEP .. DOTAS 1.0E-01 -
MINIMUM TIME STEP REQUIRED DTMIN 30. 0
MAXIMUM TIME STEP ALLOWED DTMAX 3.65E+12 0
TIME AT WHICH NEXT SET OF TIME VARYING
PARAMETERS WILL BE READ TIMCHG 3.199E+08 1/S : 3.44E+03 10

*** MAPPING DATA ***

LENGTH OF X-AXIS12.0 IN.
LENGTH OF Y-AXIS12.0 IN.
LENGTH OF Z-AXIS12.0 IN.
X-AXIS IS POSITIVE DOWNWARD
Y-AXIS IS POSITIVE UPWARD

MAP NO.	I1	I2	J1	J2	K1	K2	MINIMUM VALUE OF VARIABLE	MAXIMUM VALUE OF VARIABLE	NUMBER OF ZONES
1	1	33	1	1	1	42	0.00E+00	0.00E+00	1
3	1	33	1	1	1	42	0.00E+00	1.0	10

*** OUTPUT AT END OF TIME STEP NO. 36 ***

TIME 3.199E+08 1/S : 3.44E+03 10
CURRENT TIME STEP LENGTH 1.437E+07 1/S : 166. 0
NO. OF P,T,C LOOP ITERATIONS USED 1
MAXIMUM CHANGE IN PRESSURE 2.2200E-03 (PSI) AT LOCATION 10. 100
MAXIMUM CHANGE IN SCALED MASS FRACTION 1.4754E-02 1- AT LOCATION 10. 100.

PRESSURE (PSI)

VERTICAL SLICES

1	2	3	4	5	6	7	8	9	10
42 -0.4700	-4.0804	-6.1875	-6.1483	-6.3506	-3.0981	-2.6003	-2.0243	-1.6361	-1.2346
41 0.85816	0.24965	-0.81408	-0.65767	0.33945	1.2397	1.8286	2.3030	2.6391	3.0305
40 1.9523	1.3327	0.27097	0.43227	1.4775	2.3277	2.9126	3.3662	3.7711	4.1124
39 3.0385	2.4170	1.4075	1.5572	1.5662	3.4174	3.9973	4.4699	4.8554	5.1945
38 4.1695	3.5244	2.5444	2.7017	3.6741	4.6115	5.0527	5.5542	5.9360	6.2770
37 5.2767	4.6315	3.6507	3.8355	4.7820	5.6954	6.1667	6.6381	7.0185	7.3595
36 6.3833	5.7393	4.7567	4.9590	5.8900	6.8270	7.2550	7.7245	8.1018	8.4427
35 7.4923	6.8459	5.8525	6.1020	6.9931	7.7537	8.3394	8.8102	9.1951	9.5250
34 8.6045	7.9545	6.9561	7.2345	8.1050	8.9766	9.4239	9.8882	10.259	10.595
33 9.7089	9.0621	8.0234	8.3555	9.2145	9.9637	10.509	10.956	11.333	11.654

37	7.6317	8.3878	8.4858
36	8.6108	9.4494	9.5092
35	9.6255	10.632	10.649
34	10.777	11.874	11.889
33	11.855	12.696	11.890
32	12.941	13.719	12.516
31	14.023	14.774	13.547
30	15.102	15.829	14.616
29	16.181	16.886	15.699
28	17.261	17.944	16.762
27	18.339	19.004	17.865
26	19.419	20.064	18.946
25	20.496	21.125	20.032
24	21.577	22.186	21.115
23	22.657	23.251	22.195
22	23.736	24.318	23.272
21	24.816	25.389	24.356
20	25.896	26.446	25.446
19	26.976	27.516	26.531
18	28.056	28.584	27.616
17	29.137	29.654	28.696
16	30.217	30.724	29.772
15	31.296	31.795	30.856
14	32.379	32.867	31.949
13	33.460	33.940	33.032
12	34.541	35.014	34.116
11	35.622	36.089	35.199
10	36.704	37.165	36.282
9	37.786	38.241	37.366
8	38.867	39.316	38.449
7	39.949	40.396	39.532
6	41.032	41.476	40.616
5	42.114	42.556	41.699
4	43.197	43.636	42.782
3	44.280	44.717	43.866
2	45.363	45.794	44.949
1	46.446	46.872	46.032

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42	-3.4700	-4.0894	-5.1875	-5.1466	-3.9558	-3.0961	-2.5033	-2.0243	-1.6361	-1.2946
41	3.96916	0.24855	-0.81406	-0.65767	0.38945	1.2397	1.8286	2.3050	2.6891	3.0305
40	1.9523	1.3327	0.27097	0.43227	1.4715	2.3277	2.9126	3.3862	3.7711	4.1124
39	3.0365	2.4170	1.4078	1.5672	2.5662	3.4174	3.9973	4.4699	4.8534	5.1946
38	4.1595	3.5244	2.5444	2.7017	3.6741	4.5115	5.0827	5.5542	5.9350	6.2770
37	5.2767	4.6318	3.6807	3.8356	4.7820	5.5934	6.1667	6.5391	7.0169	7.3596
36	6.3895	5.7393	4.8167	4.9690	5.9900	6.5910	7.2550	7.7245	8.1016	8.4427
35	7.4383	6.8469	5.9525	6.1020	6.9981	7.7897	8.3394	8.8102	9.1851	9.5260
34	8.5046	7.9545	7.0881	7.2345	8.1063	8.8766	9.4239	9.8832	10.259	10.556
33	9.7069	9.0621	8.2234	8.3665	9.2145	9.9697	10.509	10.956	11.333	11.664
32	10.912	10.170	9.3586	9.4933	10.323	11.063	11.593	12.044	12.407	12.734
31	11.916	11.277	10.493	10.630	11.431	12.156	12.679	13.122	13.481	13.803
30	13.017	12.395	11.628	11.760	12.540	13.260	13.763	14.201	14.555	14.872
29	14.121	13.493	12.763	12.891	13.645	14.344	14.848	15.279	15.629	15.942
28	15.225	14.597	13.897	14.021	14.757	15.437	15.933	16.357	16.704	17.011
27	16.333	15.709	15.031	15.151	15.866	16.531	17.018	17.436	17.778	18.081
26	17.443	16.816	16.165	16.280	16.975	17.628	18.103	18.515	18.853	19.151
25	18.557	17.924	17.299	17.411	18.084	18.720	19.193	19.594	19.927	20.221
24	19.676	19.032	18.433	18.538	19.193	19.816	20.274	20.672	21.002	21.291
23	20.802	20.140	19.566	19.667	20.302	20.909	21.359	21.751	22.077	22.361
22	21.939	21.225	20.655	20.755	21.411	22.004	22.445	22.831	23.151	23.431
21	22.976	22.310	21.743	21.843	22.520	23.100	23.531	23.910	24.226	24.501
20	24.071	23.397	22.830	22.930	23.600	24.195	24.617	24.989	25.302	25.571
19	25.168	24.484	23.916	24.016	24.739	25.290	25.703	26.069	26.377	26.642

21	22	23	24	25	26	27	28	29	30
42-0.31973	-0.146353	-0.65775	-0.35632	-1.1731	-1.5501	-2.0161	-2.5473	-3.0340	-2.2100
41 4.0050	3.6552	3.6672	3.4232	3.1473	2.7775	2.3101	1.7577	1.1637	2.1232
40 5.0866	4.9370	4.7430	4.5217	4.2807	3.9209	3.5424	3.1531	2.7515	3.1470
39 6.1756	6.0130	5.6311	5.2045	4.7341	4.2180	3.6562	3.0581	2.4333	4.2455
38 7.2511	7.0013	6.4135	5.8875	5.3180	4.7027	4.0402	3.3403	2.6023	5.4311
37 8.3336	8.1836	7.4960	6.7716	6.0024	5.1851	4.3214	3.4122	2.5571	6.7335
36 9.4161	9.2663	8.4789	7.6557	6.7875	5.8603	4.8921	3.8823	2.9293	8.0359
35 10.499	10.350	9.462	8.5402	7.5623	6.5235	5.3555	4.1501	3.0045	9.3383
34 11.533	11.433	10.445	9.4225	8.3339	7.1733	5.9309	4.6359	3.4073	10.6407
33 12.566	12.477	11.419	10.361	9.2225	8.0023	6.7021	5.3325	4.0023	11.9431
32 13.554	13.402	12.314	11.217	10.051	8.7823	7.4421	6.0021	4.5523	13.2455
31 14.539	14.397	13.289	12.194	10.999	9.6823	8.3021	6.8021	5.2523	14.5479
30 15.523	15.372	14.242	13.124	11.934	10.5823	9.1521	7.5821	5.9523	15.8503
29 16.511	16.355	15.217	14.090	12.857	11.444	10.022	8.3521	6.6523	17.1527
28 17.497	17.341	16.191	15.075	13.764	12.322	10.807	9.0821	7.3523	18.4551
27 18.482	18.325	17.165	15.951	14.651	13.192	11.602	9.8394	8.0523	19.7575
26 19.465	19.311	18.040	16.819	15.539	14.068	12.574	10.688	8.7523	21.0600
25 20.454	20.295	20.022	19.935	19.965	19.769	19.659	19.551	19.473	22.3624
24 21.444	21.281	21.173	21.071	20.948	20.853	20.741	20.635	20.565	23.6648
23 22.426	22.352	22.254	22.145	22.031	21.936	21.825	21.719	21.652	24.9672
22 23.503	23.423	23.329	23.222	23.115	23.020	22.909	22.803	22.733	26.2696
21 24.579	24.505	24.405	24.305	24.198	24.103	23.992	23.887	23.825	27.5720
20 25.655	25.581	25.481	25.381	25.282	25.187	25.076	24.971	24.911	28.8744
19 26.732	26.658	26.558	26.472	26.385	26.270	26.159	26.055	25.997	30.1768
18 27.809	27.734	27.647	27.555	27.449	27.353	27.243	27.139	27.083	31.4792
17 28.885	28.815	28.721	28.619	28.512	28.437	28.326	28.223	28.169	32.7816
16 29.969	29.901	29.814	29.723	29.618	29.520	29.409	29.307	29.254	34.0840
15 31.052	30.984	30.895	30.805	30.699	30.603	30.493	30.391	30.339	35.3864
14 32.135	32.066	31.961	31.889	31.783	31.685	31.575	31.475	31.425	36.6888
13 33.219	33.151	33.054	32.973	32.866	32.770	32.660	32.558	32.510	37.9912
12 34.302	34.234	34.148	34.056	33.949	33.853	33.743	33.642	33.595	39.2936
11 35.385	35.318	35.221	35.129	35.033	34.936	34.827	34.725	34.679	40.5960
10 36.469	36.401	36.314	36.222	36.118	36.020	35.910	35.810	35.764	41.8984
9 37.552	37.484	37.395	37.305	37.201	37.103	36.994	36.893	36.849	43.2008
8 38.635	38.567	38.461	38.369	38.263	38.166	38.077	37.977	37.933	44.5032
7 39.718	39.651	39.554	39.472	39.387	39.270	39.160	39.061	39.017	45.8056
6 40.802	40.734	40.645	40.555	40.450	40.353	40.244	40.144	40.101	47.1080
5 41.885	41.817	41.721	41.639	41.533	41.436	41.327	41.228	41.185	48.4104
4 42.969	42.901	42.814	42.722	42.617	42.520	42.411	42.311	42.269	49.7128
3 44.052	44.034	43.939	43.836	43.710	43.603	43.494	43.395	43.353	51.0152
2 45.135	45.167	44.981	44.889	44.784	44.688	44.577	44.478	44.436	52.3176
1 46.218	46.151	46.065	45.972	45.867	45.770	45.661	45.561	45.520	53.6200

31	32	33
42-0.37921	0.37090	1.4988
41 3.4439	4.6998	5.9345
40 4.4493	5.5819	6.4240
39 5.4439	6.4241	6.9104
38 6.4506	7.2955	7.3744
37 7.5317	8.3578	8.4506
36 8.6136	9.4494	9.5092
35 9.6955	10.532	10.549
34 10.777	11.614	11.559
33 11.858	12.665	11.560
32 12.940	13.719	12.516
31 14.023	14.774	13.547
30 15.102	15.829	14.615
29 16.181	16.886	15.699
28 17.260	17.944	16.782
27 18.339	19.004	17.855
26 19.419	20.064	18.946
25 20.498	21.125	20.032

23	22.657	23.251	22.133
22	23.706	24.315	23.232
21	24.315	25.037	24.365
20	25.036	25.445	25.445
19	25.475	27.178	26.632
18	25.055	25.554	27.616
17	23.737	23.654	28.895
16	20.277	20.724	29.782
15	31.033	31.705	30.255
14	32.979	32.957	31.949
13	33.430	33.940	33.022
12	34.547	35.074	34.715
11	35.822	35.033	35.133
10	36.704	37.165	35.232
9	37.735	39.241	37.355
8	38.357	39.315	38.445
7	39.249	40.335	39.532
6	41.032	41.475	41.675
5	42.774	42.555	41.833
4	43.137	43.535	42.732
3	44.230	44.777	43.555
2	45.555	45.733	44.949
1	46.445	46.552	45.532

FLUID HEAD (BASED ON LOCAL CELL P.C. CONDITIONS) (FT)
 MAXIMUM SPATIAL DENSITY VARIATION $1.02E-12$ (LB/FT**3)

VERTICAL SLICES

J = 1

42	1.15	1.55	-1.37	-1.58	0.32	2.35	4.23	5.33	5.22	5.17
41	2.00	1.67	-1.65	-1.52	0.90	2.66	4.22	5.31	5.21	5.15
40	2.07	1.63	-1.67	-1.51	0.37	2.37	4.22	5.31	5.20	5.15
39	2.07	1.63	-1.75	-1.35	0.92	2.59	4.22	5.31	5.20	5.15
38	2.10	0.63	-1.53	-1.27	0.95	2.91	4.23	5.32	5.23	5.15
37	2.13	0.69	-1.51	-1.15	1.03	2.92	4.23	5.32	5.25	5.15
36	2.24	0.74	-1.38	-1.03	1.09	2.94	4.24	5.33	5.26	5.15
35	2.30	0.80	-1.26	-0.92	1.15	2.96	4.24	5.33	5.25	5.15
34	2.35	0.86	-1.14	-0.81	1.21	2.98	4.25	5.32	5.17	5.15
33	2.40	0.91	-1.02	-0.69	1.26	3.01	4.25	5.31	5.15	5.15
32	2.45	0.97	-0.90	-0.58	1.32	3.03	4.25	5.29	5.13	5.15
31	2.49	1.02	-0.79	-0.47	1.38	3.05	4.25	5.28	5.11	5.15
30	2.54	1.07	-0.67	-0.35	1.44	3.08	4.25	5.27	5.09	5.15
29	2.59	1.12	-0.55	-0.25	1.50	3.10	4.25	5.25	5.07	5.15
28	2.64	1.17	-0.43	-0.14	1.55	3.12	4.27	5.25	5.05	5.15
27	2.69	1.22	-0.31	-0.04	1.61	3.15	4.27	5.24	5.03	5.15
26	2.75	1.31	-0.20	0.07	1.67	3.17	4.27	5.22	5.00	5.15
25	2.82	1.36	-0.08	0.17	1.73	3.20	4.28	5.21	5.98	5.15
24	2.91	1.42	0.04	0.28	1.79	3.22	4.28	5.20	5.95	5.15
23	3.00	1.49	0.15	0.38	1.85	3.25	4.29	5.19	5.94	5.15
22	3.07	1.48	0.16	0.49	1.91	3.23	4.29	5.18	5.92	5.15
21	3.02	1.45	0.17	0.59	1.97	3.30	4.30	5.17	5.91	5.14
20	3.05	1.49	0.18	0.60	2.03	3.33	4.31	5.17	5.89	5.17
19	3.08	1.50	0.19	0.62	2.09	3.36	4.31	5.16	5.87	5.15
18	3.11	1.54	0.21	0.63	2.10	3.39	4.32	5.15	5.85	5.15
17	3.15	2.19	0.73	0.84	2.10	3.39	4.32	5.14	5.83	5.14
16	3.20	2.53	1.25	1.12	2.11	3.39	4.32	5.14	5.83	5.14
15	3.25	2.88	1.77	1.61	2.47	3.40	4.32	5.14	5.83	5.14
14	3.32	3.22	2.29	2.10	2.92	3.55	4.32	5.14	5.83	5.17
13	3.39	3.57	2.81	2.58	3.15	3.71	4.38	5.12	5.75	5.17
12	3.33	3.57	3.33	3.07	3.54	3.96	4.44	5.10	5.67	5.17

10	3.38	3.57	3.55	4.04	4.25	4.15	4.55	5.07	5.57	5.55
9	3.38	3.57	3.55	4.04	4.25	4.54	4.50	5.08	5.44	5.55
8	3.38	3.57	3.55	4.04	4.25	4.49	4.59	5.04	5.35	5.55
7	3.38	3.57	3.55	4.04	4.25	4.49	4.75	5.03	5.25	5.55
6	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55
5	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55
4	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55
3	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55
2	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55
1	3.38	3.57	3.55	4.04	4.25	4.50	4.75	5.02	5.23	5.55

42	7.70	8.22	8.78	9.19	9.45	9.67	9.75	9.77	9.69	9.52
41	7.65	8.27	8.77	9.17	9.45	9.65	9.74	9.75	9.67	9.50
40	7.65	8.27	8.77	9.15	9.45	9.55	9.74	9.75	9.67	9.50
39	7.65	8.27	8.75	9.15	9.45	9.54	9.74	9.74	9.66	9.49
38	7.67	8.27	8.75	9.15	9.45	9.54	9.73	9.74	9.66	9.49
37	7.67	8.25	8.75	9.15	9.45	9.54	9.73	9.74	9.65	9.49
36	7.67	8.25	8.75	9.15	9.45	9.54	9.73	9.74	9.66	9.49
35	7.67	8.25	8.75	9.15	9.45	9.54	9.73	9.74	9.65	9.49
34	7.55	8.27	8.69	9.07	9.45	9.54	9.73	9.74	9.66	9.49
33	7.55	8.15	8.52	8.92	9.34	9.45	9.55	9.51	9.43	9.25
32	7.54	8.09	8.54	8.99	9.22	9.33	9.40	9.28	9.20	9.01
31	7.50	8.04	8.47	8.91	9.10	9.15	9.23	9.35	8.97	8.78
30	7.45	7.93	8.40	8.72	8.92	9.03	9.06	8.92	8.75	8.54
29	7.41	7.93	8.33	8.63	8.83	8.97	8.99	8.99	8.92	8.31
28	7.37	7.87	8.25	8.54	8.75	8.72	8.73	8.97	8.29	8.07
27	7.32	7.82	8.19	8.45	8.63	8.57	8.55	8.14	8.07	7.84
26	7.25	7.75	8.12	8.37	8.51	8.42	8.40	7.91	7.94	7.60
25	7.24	7.70	8.05	8.28	8.39	8.25	8.23	7.55	7.52	7.37
24	7.19	7.55	7.95	8.25	8.27	8.11	8.05	7.45	7.39	7.15
23	7.15	7.59	7.91	8.11	8.15	7.95	7.90	7.22	7.15	6.91
22	7.11	7.54	7.84	8.02	8.04	7.81	7.74	6.99	6.94	6.67
21	7.07	7.49	7.77	7.94	7.92	7.65	7.57	6.95	6.92	6.55
20	7.03	7.43	7.70	7.85	7.81	7.53	7.55	6.94	6.91	6.53
19	6.99	7.38	7.63	7.77	7.79	7.52	7.55	6.93	6.99	6.52
18	6.94	7.37	7.63	7.75	7.75	7.51	7.54	6.91	6.97	6.50
17	6.94	7.37	7.52	7.75	7.77	7.50	7.53	6.89	6.85	6.73
16	6.94	7.35	7.52	7.75	7.77	7.59	7.52	6.87	6.84	6.77
15	6.93	7.35	7.52	7.74	7.75	7.58	7.51	6.85	6.83	6.77
14	6.93	7.35	7.51	7.74	7.75	7.57	7.50	6.84	6.83	6.77
13	6.70	7.09	7.26	7.29	7.15	6.69	6.73	6.33	6.53	6.77
12	6.47	6.81	6.91	6.55	6.55	6.59	6.75	6.53	6.53	6.77
11	6.24	6.55	6.57	6.40	6.55	6.59	6.75	6.53	6.53	6.77
10	6.01	6.22	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
9	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
8	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
7	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
6	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
5	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
4	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
3	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
2	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77
1	5.79	6.01	6.22	6.40	6.55	6.59	6.75	6.53	6.53	6.77

42	9.25	8.92	8.48	7.95	7.23	6.42	5.35	4.12	2.31	4.89
41	9.24	8.90	8.45	7.94	7.25	6.41	5.33	4.13	2.70	4.84
40	9.24	8.89	8.45	7.93	7.25	6.41	5.33	4.13	2.74	4.81
39	9.24	8.89	8.45	7.93	7.25	6.41	5.33	4.14	2.75	4.80
38	9.23	8.89	8.45	7.93	7.25	6.41	5.33	4.14	2.77	5.17

36	9.23	8.38	8.45	7.94	7.27	6.42	5.34	4.33	3.75	3.35
35	9.23	8.38	8.45	7.94	7.27	6.27	5.33	4.32	3.81	3.35
34	9.23	8.38	8.45	7.94	7.25	6.13	5.33	4.31	3.81	3.35
33	9.00	8.65	8.21	7.69	6.93	6.04	5.38	4.38	3.87	3.33
32	8.78	8.43	7.95	7.44	6.68	5.83	5.38	4.37	3.86	3.33
31	8.55	8.20	7.69	7.19	6.39	5.69	5.35	4.34	3.82	3.33
30	8.33	7.97	7.44	6.94	6.15	5.63	5.35	4.34	3.82	3.33
29	8.10	7.74	7.19	6.69	5.90	5.64	5.35	4.34	3.82	3.33
28	7.88	7.52	6.94	6.44	5.65	5.63	5.35	4.33	3.81	3.34
27	7.65	7.29	6.69	6.19	5.37	5.62	5.35	4.33	3.80	3.34
26	7.43	7.06	6.44	6.16	5.35	5.62	5.35	4.34	3.82	3.32
25	7.20	6.84	6.40	6.14	5.34	5.62	5.35	4.35	3.81	3.31
24	6.98	6.61	6.37	6.12	5.34	5.62	5.35	4.35	3.81	3.31
23	6.75	6.38	6.35	6.11	5.34	5.62	5.35	4.35	3.81	3.31
22	6.74	6.38	6.33	6.10	5.34	5.62	5.35	4.37	3.83	3.33
21	6.72	6.35	6.32	6.09	5.34	5.62	5.35	4.35	3.82	3.33
20	6.70	6.33	6.31	6.09	5.34	5.62	5.35	4.35	3.82	3.33
19	6.69	6.32	6.31	6.09	5.34	5.62	5.35	4.35	3.82	3.33
18	6.67	6.31	6.30	6.09	5.34	5.62	5.37	5.13	5.00	5.47
17	6.66	6.31	6.30	6.09	5.34	5.62	5.37	5.13	5.00	5.47
16	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.01	5.46
15	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.01	5.46
14	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.02	5.46
13	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.02	5.46
12	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.02	5.46
11	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.03	5.46
10	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.13	5.03	5.44
9	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.03	5.44
8	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.03	5.44
7	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.44
6	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.44
5	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.44
4	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.43
3	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.43
2	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.43
1	6.65	6.30	6.30	6.09	5.34	5.62	5.37	5.14	5.04	5.43

	31	32	33
42	7.97	10.86	13.46
41	7.95	10.85	13.69
40	7.77	10.33	12.32
39	7.58	9.82	10.95
38	7.39	9.31	9.52
37	7.38	9.31	9.50
36	7.38	9.31	9.44
35	7.37	9.31	9.34
34	7.37	9.31	9.20
33	7.36	9.23	6.91
32	7.36	9.16	6.38
31	7.36	9.09	6.26
30	7.35	9.02	6.23
29	7.34	8.97	6.23
28	7.33	8.91	6.23
27	7.32	8.85	6.23
26	7.31	8.80	6.23
25	7.30	8.75	6.23
24	7.29	8.70	6.23
23	7.28	8.66	6.23
22	7.27	8.61	6.22
21	7.27	8.57	6.22
20	7.26	8.53	6.22
19	7.25	8.50	6.22
18	7.24	8.46	6.22

16	7.23	8.40	6.22
15	7.22	8.37	6.22
14	7.22	8.35	6.22
13	7.21	8.32	6.22
12	7.21	8.30	6.22
11	7.20	8.28	6.22
10	7.20	8.26	6.22
9	7.19	8.25	6.22
8	7.19	8.23	6.22
7	7.19	8.22	6.22
6	7.18	8.21	6.22
5	7.18	8.20	6.22
4	7.18	8.19	6.22
3	7.18	8.19	6.22
2	7.18	8.19	6.22
1	7.18	8.19	6.22

J = 2

	1	2	3	4	5	6	7	8	9	10
42	1.39	1.68	-1.97	-1.88	0.39	2.36	4.23	5.33	6.22	7.01
41	2.00	0.67	-1.55	-1.52	0.46	2.85	4.22	5.31	6.21	6.99
40	2.01	0.68	-1.67	-1.50	0.31	2.37	4.22	5.31	6.20	6.99
39	2.01	0.68	-1.73	-1.38	0.92	2.89	4.22	5.31	6.20	6.99
38	2.10	0.66	-1.63	-1.27	0.93	2.91	4.23	5.32	6.20	6.99
37	2.13	0.69	-1.51	-1.15	1.05	2.92	4.23	5.32	6.20	6.98
36	2.24	0.74	-1.38	-1.00	1.09	2.94	4.24	5.33	6.20	6.99
35	2.30	0.80	-1.25	-0.92	1.15	2.95	4.24	5.33	6.20	6.98
34	2.35	0.86	-1.14	-0.81	1.21	2.98	4.25	5.32	6.17	6.95
33	2.40	0.91	-1.02	-0.69	1.28	3.01	4.25	5.31	6.15	6.92
32	2.45	0.97	-0.90	-0.58	1.32	3.03	4.25	5.29	6.13	6.89
31	2.49	1.02	-0.79	-0.47	1.35	3.05	4.25	5.28	6.11	6.86
30	2.54	1.08	-0.67	-0.35	1.44	3.08	4.26	5.27	6.09	6.82
29	2.59	1.14	-0.55	-0.25	1.50	3.10	4.26	5.26	6.07	6.79
28	2.64	1.19	-0.43	-0.14	1.55	3.12	4.27	5.25	6.05	6.76
27	2.69	1.25	-0.31	-0.04	1.57	3.15	4.27	5.24	6.03	6.72
26	2.75	1.31	-0.20	0.07	1.67	3.17	4.27	5.22	6.00	6.69
25	2.82	1.36	-0.09	0.17	1.73	3.21	4.28	5.21	5.98	6.65
24	2.91	1.42	0.04	0.29	1.79	3.22	4.28	5.20	5.96	6.61
23	3.00	1.48	0.15	0.38	1.85	3.25	4.29	5.19	5.94	6.57
22	3.01	1.49	0.16	0.49	1.91	3.28	4.29	5.18	5.92	6.53
21	3.02	1.48	0.17	0.59	1.97	3.30	4.30	5.17	5.91	6.54
20	3.05	1.49	0.18	0.60	2.00	3.33	4.31	5.17	5.89	6.51
19	3.05	1.50	0.19	0.62	2.09	3.35	4.31	5.16	5.87	6.48
18	3.11	1.84	0.21	0.63	2.10	3.39	4.32	5.15	5.85	6.45
17	3.15	2.19	0.73	0.64	2.10	3.39	4.32	5.14	5.83	6.42
16	3.20	2.54	1.25	1.12	2.11	3.39	4.32	5.14	5.83	6.42
15	3.25	2.89	1.77	1.61	2.47	3.40	4.32	5.14	5.83	6.42
14	3.32	3.24	2.29	2.10	2.92	3.55	4.32	5.14	5.82	6.41
13	3.38	3.57	2.81	2.59	3.16	3.71	4.38	5.12	5.75	6.27
12	3.38	3.57	3.33	3.07	3.54	3.86	4.44	5.10	5.67	6.12
11	3.38	3.57	3.85	3.55	3.99	4.02	4.50	5.09	5.59	5.95
10	3.38	3.57	3.35	4.04	4.25	4.18	4.55	5.07	5.51	5.80
9	3.38	3.57	3.85	4.04	4.25	4.34	4.63	5.06	5.44	5.65
8	3.38	3.57	3.85	4.04	4.25	4.49	4.69	5.04	5.36	5.50
7	3.38	3.57	3.85	4.04	4.25	4.49	4.75	5.03	5.29	5.35
6	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35
5	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35
4	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35
3	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35
2	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35
1	3.38	3.57	3.85	4.04	4.25	4.50	4.75	5.02	5.29	5.35

42	7.70	8.24	8.79	9.34	9.89	10.44	10.99	11.54	12.09	12.64
41	7.69	8.23	8.78	9.33	9.88	10.43	10.98	11.53	12.08	12.63
40	7.68	8.22	8.77	9.32	9.87	10.42	10.97	11.52	12.07	12.62
39	7.67	8.21	8.76	9.31	9.86	10.41	10.96	11.51	12.06	12.61
38	7.66	8.20	8.75	9.30	9.85	10.40	10.95	11.50	12.05	12.60
37	7.65	8.19	8.74	9.29	9.84	10.39	10.94	11.49	12.04	12.59
36	7.64	8.18	8.73	9.28	9.83	10.38	10.93	11.48	12.03	12.58
35	7.63	8.17	8.72	9.27	9.82	10.37	10.92	11.47	12.02	12.57
34	7.62	8.16	8.71	9.26	9.81	10.36	10.91	11.46	12.01	12.56
33	7.61	8.15	8.70	9.25	9.80	10.35	10.90	11.45	12.00	12.55
32	7.60	8.14	8.69	9.24	9.79	10.34	10.89	11.44	11.99	12.54
31	7.59	8.13	8.68	9.23	9.78	10.33	10.88	11.43	11.98	12.53
30	7.58	8.12	8.67	9.22	9.77	10.32	10.87	11.42	11.97	12.52
29	7.57	8.11	8.66	9.21	9.76	10.31	10.86	11.41	11.96	12.51
28	7.56	8.10	8.65	9.20	9.75	10.30	10.85	11.40	11.95	12.50
27	7.55	8.09	8.64	9.19	9.74	10.29	10.84	11.39	11.94	12.49
26	7.54	8.08	8.63	9.18	9.73	10.28	10.83	11.38	11.93	12.48
25	7.53	8.07	8.62	9.17	9.72	10.27	10.82	11.37	11.92	12.47
24	7.52	8.06	8.61	9.16	9.71	10.26	10.81	11.36	11.91	12.46
23	7.51	8.05	8.60	9.15	9.70	10.25	10.80	11.35	11.90	12.45
22	7.50	8.04	8.59	9.14	9.69	10.24	10.79	11.34	11.89	12.44
21	7.49	8.03	8.58	9.13	9.68	10.23	10.78	11.33	11.88	12.43
20	7.48	8.02	8.57	9.12	9.67	10.22	10.77	11.32	11.87	12.42
19	7.47	8.01	8.56	9.11	9.66	10.21	10.76	11.31	11.86	12.41
18	7.46	8.00	8.55	9.10	9.65	10.20	10.75	11.30	11.85	12.40
17	7.45	7.99	8.54	9.09	9.64	10.19	10.74	11.29	11.84	12.39
16	7.44	7.98	8.53	9.08	9.63	10.18	10.73	11.28	11.83	12.38
15	7.43	7.97	8.52	9.07	9.62	10.17	10.72	11.27	11.82	12.37
14	7.42	7.96	8.51	9.06	9.61	10.16	10.71	11.26	11.81	12.36
13	7.41	7.95	8.50	9.05	9.60	10.15	10.70	11.25	11.80	12.35
12	7.40	7.94	8.49	9.04	9.59	10.14	10.69	11.24	11.79	12.34
11	7.39	7.93	8.48	9.03	9.58	10.13	10.68	11.23	11.78	12.33
10	7.38	7.92	8.47	9.02	9.57	10.12	10.67	11.22	11.77	12.32
9	7.37	7.91	8.46	9.01	9.56	10.11	10.66	11.21	11.76	12.31
8	7.36	7.90	8.45	9.00	9.55	10.10	10.65	11.20	11.75	12.30
7	7.35	7.89	8.44	8.99	9.54	10.09	10.64	11.19	11.74	12.29
6	7.34	7.88	8.43	8.98	9.53	10.08	10.63	11.18	11.73	12.28
5	7.33	7.87	8.42	8.97	9.52	10.07	10.62	11.17	11.72	12.27
4	7.32	7.86	8.41	8.96	9.51	10.06	10.61	11.16	11.71	12.26
3	7.31	7.85	8.40	8.95	9.50	10.05	10.60	11.15	11.70	12.25
2	7.30	7.84	8.39	8.94	9.49	10.04	10.59	11.14	11.69	12.24
1	7.29	7.83	8.38	8.93	9.48	10.03	10.58	11.13	11.68	12.23

21	22	23	24	25	26	27	28	29	30
42	8.26	8.92	8.48	7.95	7.42	6.89	6.36	5.82	5.29
41	8.24	8.90	8.46	7.94	7.40	6.87	6.34	5.80	5.27
40	8.24	8.89	8.45	7.93	7.39	6.86	6.33	5.79	5.26
39	8.24	8.89	8.45	7.93	7.39	6.86	6.33	5.79	5.26
38	8.23	8.89	8.45	7.93	7.39	6.86	6.33	5.79	5.26
37	8.23	8.89	8.45	7.93	7.39	6.86	6.33	5.79	5.26
36	8.23	8.88	8.45	7.94	7.37	6.84	6.34	5.78	5.25
35	8.23	8.88	8.45	7.94	7.37	6.84	6.34	5.78	5.25
34	8.23	8.88	8.45	7.94	7.36	6.83	6.35	5.81	5.25
33	8.23	8.85	8.45	7.89	6.93	6.49	6.36	5.86	5.25
32	8.19	8.43	7.95	7.44	6.60	6.33	6.36	5.81	5.25
31	8.15	7.91	7.59	7.19	6.33	6.36	6.36	5.81	5.25
30	8.13	7.37	7.44	6.94	6.15	6.36	6.36	5.81	5.25
29	8.10	7.74	7.19	6.69	6.33	6.34	6.36	5.81	5.25
28	7.86	7.52	6.94	6.44	6.30	6.33	6.36	5.81	5.25
27	7.65	7.29	6.89	6.19	6.37	6.32	6.36	5.81	5.25
26	7.43	7.05	6.44	6.15	6.35	6.32	6.36	5.82	5.25
25	7.20	6.84	6.40	6.14	6.34	6.32	6.36	5.82	5.25
24	6.99	6.61	6.37	6.12	6.34	6.32	6.36	5.82	5.25

22	6.74	6.68	6.66	6.64	6.64	6.62	6.66	6.72	6.72
21	6.72	6.68	6.62	6.62	6.64	6.62	6.66	6.72	6.72
20	6.70	6.68	6.60	6.60	6.64	6.62	6.66	6.72	6.72
19	6.68	6.62	6.60	6.60	6.64	6.62	6.66	6.72	6.72
18	6.67	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
17	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
16	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
15	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
14	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
13	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
12	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
11	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
10	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
9	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
8	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
7	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
6	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
5	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
4	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
3	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
2	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72
1	6.66	6.60	6.60	6.60	6.64	6.62	6.67	6.72	6.72

42	7.97	7.96	7.96
41	7.96	7.96	7.96
40	7.97	7.96	7.96
39	7.96	7.96	7.96
38	7.96	7.97	7.96
37	7.96	7.97	7.96
36	7.96	7.97	7.96
35	7.97	7.96	7.94
34	7.97	7.96	7.91
33	7.96	7.96	7.91
32	7.96	7.96	7.96
31	7.96	7.96	7.96
30	7.96	7.96	7.96
29	7.94	7.97	7.96
28	7.96	7.97	7.96
27	7.96	7.96	7.96
26	7.97	7.96	7.96
25	7.96	7.96	7.96
24	7.29	8.70	6.20
23	7.29	8.66	6.20
22	7.27	8.61	6.22
21	7.27	8.57	6.22
20	7.26	8.53	6.22
19	7.26	8.50	6.22
18	7.24	8.46	6.22
17	7.24	8.43	6.22
16	7.26	8.40	6.22
15	7.22	8.37	6.22
14	7.22	8.36	6.22
13	7.21	8.32	6.22
12	7.21	8.31	6.22
11	7.21	8.29	6.22
10	7.21	8.28	6.22
9	7.19	8.26	6.22
8	7.19	8.23	6.22
7	7.19	8.22	6.22
6	7.19	8.21	6.22
5	7.19	8.21	6.22
4	7.19	8.21	6.22

Source: *Source: 42nd Annual Report*

OPTICAL SLICES

[illegible]

	1	2	3	4	5	6	7	8	9	10
42	0.94467	0.94504	0.94546	0.94583	0.94621	0.94657	0.94692	0.94727	0.94761	0.94795
43	0.94730	0.94764	0.94798	0.94832	0.94865	0.94898	0.94931	0.94964	0.94997	0.95030
44	0.94964	0.94996	0.95028	0.95060	0.95092	0.95124	0.95156	0.95188	0.95220	0.95252
45	0.95284	0.95316	0.95348	0.95379	0.95411	0.95442	0.95474	0.95505	0.95537	0.95568
46	0.95599	0.95630	0.95661	0.95692	0.95723	0.95754	0.95785	0.95816	0.95847	0.95878
47	0.95909	0.95939	0.95969	0.95999	0.96029	0.96059	0.96089	0.96119	0.96149	0.96179
48	0.96209	0.96238	0.96268	0.96298	0.96328	0.96357	0.96387	0.96417	0.96446	0.96476
49	0.96506	0.96535	0.96565	0.96594	0.96624	0.96653	0.96683	0.96712	0.96742	0.96771
50	0.96801	0.96830	0.96859	0.96889	0.96918	0.96947	0.96977	0.97006	0.97036	0.97065
51	0.97095	0.97124	0.97153	0.97183	0.97212	0.97241	0.97271	0.97300	0.97329	0.97359
52	0.97388	0.97417	0.97446	0.97476	0.97505	0.97534	0.97564	0.97593	0.97622	0.97652
53	0.97681	0.97710	0.97739	0.97769	0.97798	0.97827	0.97856	0.97886	0.97915	0.97944
54	0.97974	0.98003	0.98032	0.98061	0.98091	0.98120	0.98149	0.98178	0.98208	0.98237
55	0.98266	0.98296	0.98325	0.98354	0.98384	0.98413	0.98442	0.98472	0.98501	0.98530
56	0.98560	0.98589	0.98618	0.98647	0.98677	0.98706	0.98735	0.98765	0.98794	0.98823

31	0.00000	0.00000	0.00000
32	0.00000	0.00000	0.00000
33	0.00000	0.00000	0.00000
34	0.00000	0.00000	0.00000
35	0.00000	0.00000	0.00000
36	0.00000	0.00000	0.00000
37	0.00000	0.00000	0.00000
38	0.00000	0.00000	0.00000
39	0.00000	0.00000	0.00000
40	0.00000	0.00000	0.00000
41	0.00000	0.00000	0.00000
42	0.00000	0.00000	0.00000
43	0.00000	0.00000	0.00000
44	0.00000	0.00000	0.00000
45	0.00000	0.00000	0.00000
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55	0.00000	0.00000	0.00000
56	0.00000	0.00000	0.00000
57	0.00000	0.00000	0.00000
58	0.00000	0.00000	0.00000
59	0.00000	0.00000	0.00000
60	0.00000	0.00000	0.00000
61	0.00000	0.00000	0.00000
62	0.00000	0.00000	0.00000
63	0.00000	0.00000	0.00000
64	0.00000	0.00000	0.00000
65	0.00000	0.00000	0.00000
66	0.00000	0.00000	0.00000
67	0.00000	0.00000	0.00000
68	0.00000	0.00000	0.00000
69	0.00000	0.00000	0.00000
70	0.00000	0.00000	0.00000
71	0.00000	0.00000	0.00000
72	0.00000	0.00000	0.00000
73	0.00000	0.00000	0.00000
74	0.00000	0.00000	0.00000
75	0.00000	0.00000	0.00000
76	0.00000	0.00000	0.00000
77	0.00000	0.00000	0.00000
78	0.00000	0.00000	0.00000
79	0.00000	0.00000	0.00000
80	0.00000	0.00000	0.00000
81	0.00000	0.00000	0.00000
82	0.00000	0.00000	0.00000
83	0.00000	0.00000	0.00000
84	0.00000	0.00000	0.00000
85	0.00000	0.00000	0.00000
86	0.00000	0.00000	0.00000
87	0.00000	0.00000	0.00000
88	0.00000	0.00000	0.00000
89	0.00000	0.00000	0.00000
90	0.00000	0.00000	0.00000
91	0.00000	0.00000	0.00000
92	0.00000	0.00000	0.00000
93	0.00000	0.00000	0.00000
94	0.00000	0.00000	0.00000
95	0.00000	0.00000	0.00000
96	0.00000	0.00000	0.00000
97	0.00000	0.00000	0.00000
98	0.00000	0.00000	0.00000
99	0.00000	0.00000	0.00000
100	0.00000	0.00000	0.00000

*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	8.924312E+02 (LB/D)	1.660078E+03 LB
FLUID OUTFLOW	8.923674E+02 (LB/D)	1.649993E+03 LB
CHANGE IN FLUID IN REGION	6.379226E+02 (LB/D)	1.080491E+03 LB
RESIDUAL IMBALANCE	-2.649454E+01 (LB/D)	-4.035152E+02 LB
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	5.369103E+02 (LB/D)	8.749046E+03 LB
SOLUTE OUTFLOW	5.367126E+02 (LB/D)	8.669907E+03 LB
CHANGE IN SOLUTE IN REGION	5.160760E+01 (LB/D)	8.414382E+03 LB
RESIDUAL IMBALANCE	5.647678E+05 (LB/D)	8.390493E+03 LB
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

FLUID IN FLOW	8.40362E+06	16
FLUID OUT FLOW	8.40362E+06	16
CHANGE IN FLUID IN REGION	8.40362E+06	16
FLUID IN REGION	8.40362E+06	16
RESIDUAL IMBALANCE	-1.24474E+06	16
FRACTIONAL IMBALANCE	1.469E-05	

SOLUTE INFLOW	8.884088E-14	13
SOLUTE OUTFLOW	8.884088E-14	13
CHANGE IN SOLUTE IN REGION	1.677768E-01	13
SOLUTE IN REGION	1.677768E-01	13
PERCENTAGE IMBALANCE.....	4.851684E-01	13
FRACTIONAL IMBALANCE	0.0001	

CUMULATIVE SPECIFIED FUEL FLOWS NET INFLOW	0.000000E+00	13
CUMULATIVE FUEL BURN FLOWS NET INFLOW	5.085593E+16	13
CUMULATIVE LEAKAGE BURN FLOWS NET INFLOW	-6.450000E+06	13
CUMULATIVE FUELLED INFLOW LEAKAGE FLOWS NET INFLOW	1.000000E+00	13

CUMULATIVE SPECIFIED CELL OF ASSOCIATED WITH-	
SPECIFIED CELL SOLUTE NET INFLOW	0.000000E+00
CUMULATIVE FLOW BVC SOLUTE NET INFLOW	0.000000E+00
CUMULATIVE LEAKAGE BVC SOLUTE NET INFLOW	-0.000000E+00
CUMULATIVE ASSOCIATED INFLUENCE SOLUTE NET INFLOW	0.000000E+00

SPECIFIED FLOW B.C. FLOW RATES
POSITIVE IS INTO THE REGION

— 455 —

1970-1975

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42	10.17	10.17	5.054
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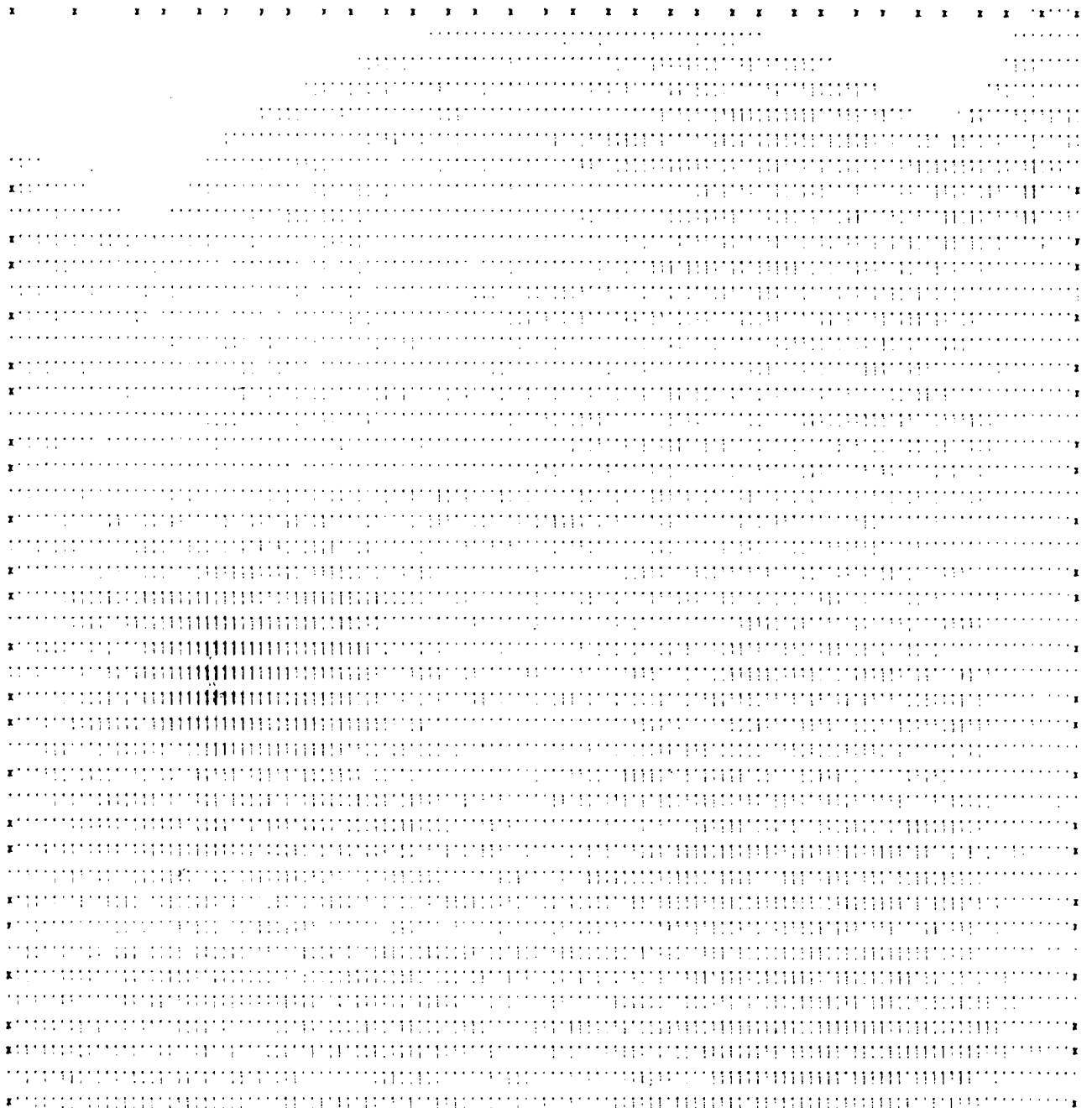
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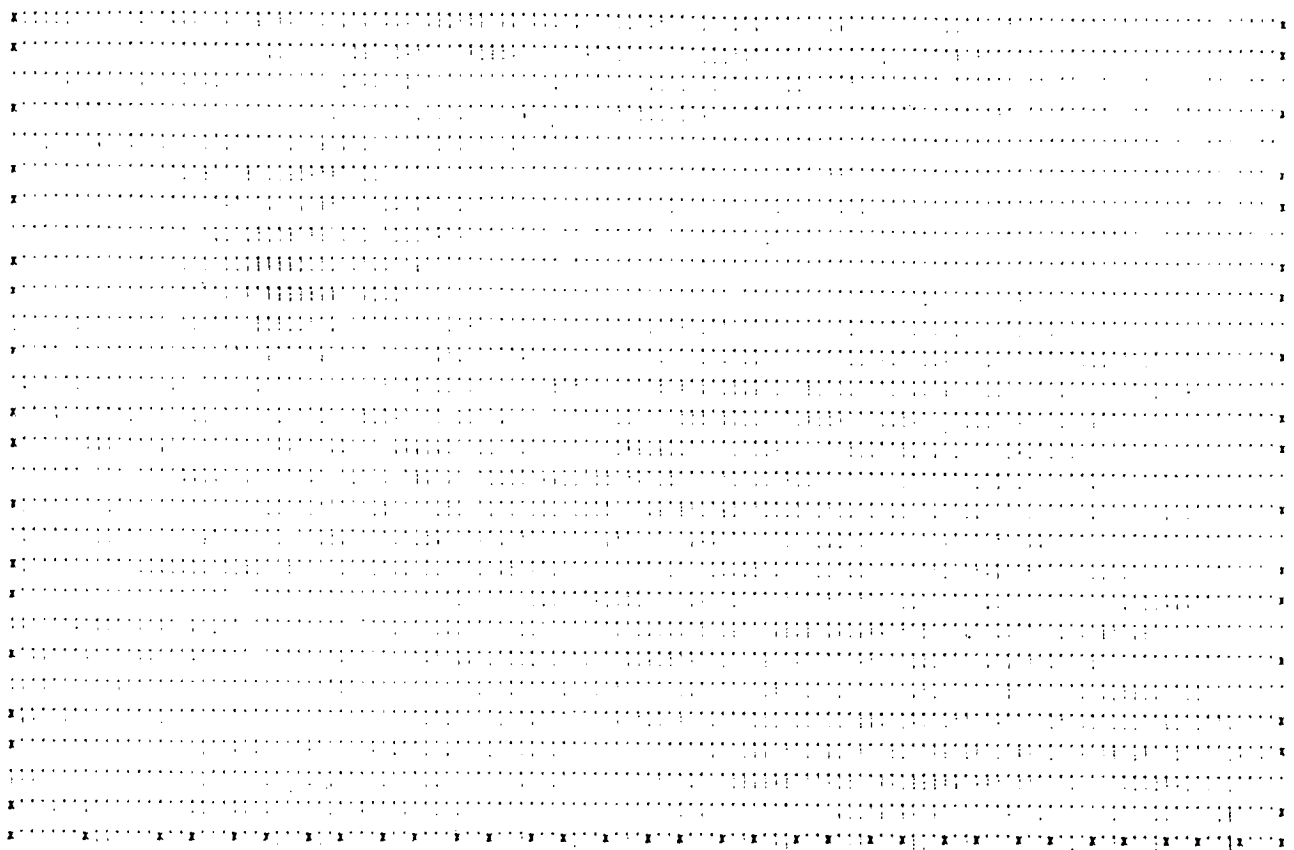
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REF ID: A6498 - FOR INFO

VERTICAL CROSS-SECTION OF SIMULATION REGION - PRESS.PRS

PAGE 1





MAP LEGEND
HORIZONTAL GRID NODE RANGE, FROM 1 TO 66
VERTICAL GRID NODE RANGE, FROM 1 TO 42
DEPENDENT VARIABLE RANGE MAP C-19A101P

-8.000E+01 - 1.000E+01
1.000E+01 - 8.000E+01

GRID NODE LOCATIONS ACROSS THE PAGE

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427.	487.	547.	607.	667.	727.	787.	847.	907.	967.	1.027E+03	1.087E+03	1.147E+03	1.207E+03	1.267E+03	1.327E+03
132.	192.	252.	312.	372.	432.	492.	552.	612.	672.	732.	792.	852.	912.	972.	1.032E+03

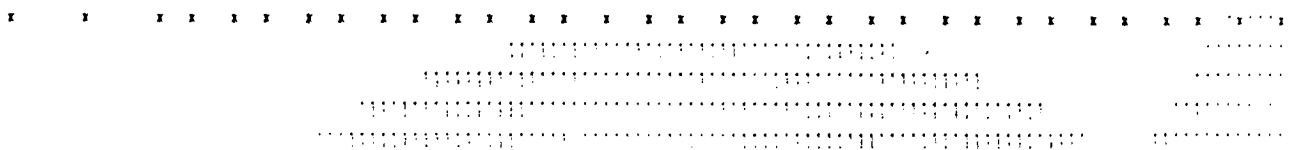
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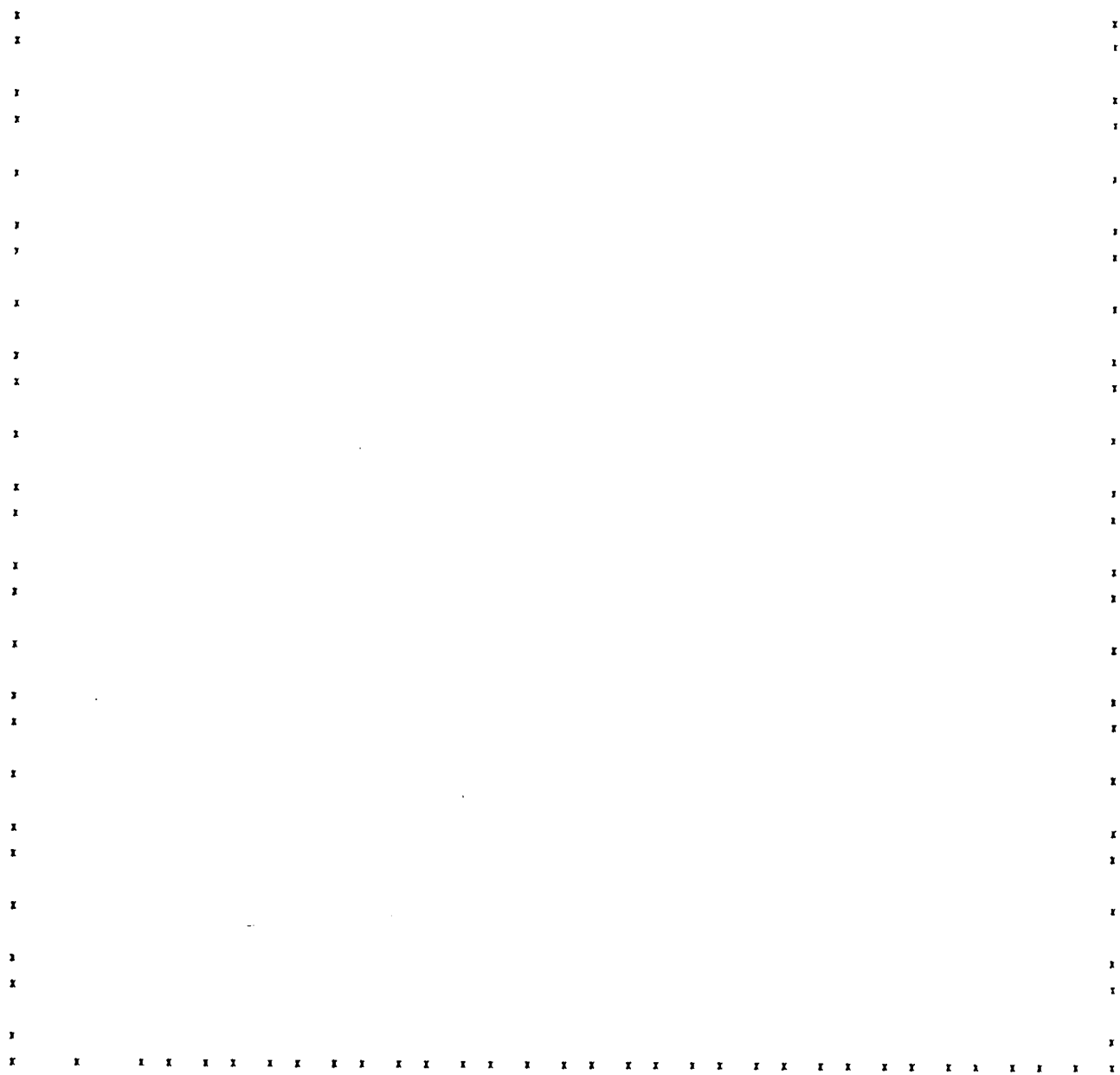
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-20.0	-19.2	-18.4	-17.6	-16.8	-16.0	-15.2	-14.4	-13.6	-12.8	-12.0	-11.2	-10.4	-9.6	-8.8	-8.0
-7.2	-6.4	-5.6	-4.8	-4.0	-3.2	-2.4	-1.6	-0.8	0.0	0.8	1.6	2.4	3.2	4.0	4.8
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VERTICAL PLANE AT ROW NO. 2

VERTICAL CROSS-SECTION OF SIMULATION REGION - PRESSURES



[illegible]



MAP LEGEND
 HORIZONTAL GRID NODE RANGE, FROM 1 TO 66
 VERTICAL GRID NODE RANGE, FROM 1 TO 42
 DEPENDENT VARIABLE RANGE MAP CHARACTER

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7.000E-01 - 8.000E-01	4
8.000E-01 - 9.000E-01	
9.000E-01 - 1.000E+00	5

GRID NODE LOCATIONS ACROSS THE PAGE

1.000E+00	51.0	122.	162.	193.	213.	244.	274.	305.	335.	365.	395.
427.	457.	488.	519.	549.	579.	610.	640.	671.	701.	732.	762.
792.	823.	853.	884.	914.	945.	975.	1.000E+00	1.000E+00			



MAP LEGEND
HORIZONTAL SPID NODE RANGE FROM 171.00
VERTICAL SPID NODE RANGE FROM 171.42
DEPENDENT VARIABLE RANGE MAP C-14-107P

171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00
171.00-171.00 = 171.00-171.00

SPID NODE LOCATIONS ACROSS THE PAGE
171.00-171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00
171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00
171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00 171.00

SPID NODE LOCATIONS ALONG THE PAGE

AXIS IS POSITIVE UP THE PAGE

-10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0
-10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0
-10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0
-10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0 -10.0

***** JOB COMPLETED *****
LAST TIME PLANE CALCULATED 171.00-171.00
LAST TIME PLANE INDEX 171.00

ATTACHMENT 21

**Landfill Section 1/9: Two Dimensional
(Cross Sectional) Steady State Model Input**

C.....HST DATA-INPUT FORM

C.... NOTES:

C.... INPUT LINES ARE DENOTED BY C.N1.N2.N3 WHERE

C.... N1 IS THE READ GROUP NUMBER, N2.N3 IS THE RECORD NUMBER

C.... A LETTER INDICATES AN EXCLUSIVE RECORD SELECTION MUST BE MADE

C.... I.E. A OR B OR C

C.... (O) - OPTIONAL DATA WITH CONDITIONS FOR REQUIREMENT

C.... A RECORD NUMBER IN SQUARE BRACKETS IS THE RECORD WHERE THAT

C.... PARAMETER IS FIRST SET

C.....INPUT BY 1,J,K RANGE FORMAT IS;

C.0.1.. 11,12,J1,J2,K1,K2

C.0.2.. VAR1,IMOD1,[VAR2,IMOD2,VAR3,IMOD3]

C.... USE AS MANY OF LINE 0.1 & 0.2 SETS AS NECESSARY

C.... END WITH LINE 0.3

C.0.3.. 0 / THE SPACE IS REQUIRED

C.... {NNN} - INDICATES THAT THE DEFAULT NUMBER, NNN, IS USED IF A ZERO

C.... IS ENTERED FOR THAT VARIABLE

C.... (T/F) - INDICATES A LOGICAL VARIABLE

C.... [1] - INDICATES AN INTEGER VARIABLE

C-----

C.....START OF THE DATA FILE

C...X..DIMENSIONING DATA - READ1

C.1.1 .. TITLE LINE 1

FRESKILLS LANDFILL SECTION 1/9 CROSS-SECTIONAL SIMULATION

C.1.2 .. TITLE LINE 2

SENSITIVITY ANALYSIS BASE

C.1.3 .. RESTRI(T/F),TIMRST

F,0

C.1.4 .. HEAT,SOLUTE,EEUNIT,CYLIND,SCALMF; ALL (T/F)

F,1,1,F,1

C.1.5 .. NX,NY,NZ,NHCN

35,2,61,0

C.1.6 .. NPTCBC,NFBC,NAIFC,NLBC,NHCBC,NWEL

0,70,0,216,0,0

C.1.7 .. NPMZ

192

C.1.8 .. SLMETH[1],LCROSD(T/F)

1,F

C.1.9 .. IBC BY 1,J,K RANGE {0.1-0.3} ,WITH NO IMOD PARAMETER, FOR EXCLUDED

C.... CELLS

1,13,1,2,61,61

-1

1,9,1,2,60,60

-1

1,8,1,2,59,59

-1

1,6,1,2,58,58

-1

1,5,1,2,57,57

-1

1,3,1,2,56,56

-1

1,1,1,2,55,55

-1

19,35,1,2,61,61

-1

20,35,1,2,60,60

-1

22,35,1,2,59,59

-1

24,35,1,2,58,58

-1

26,35,1,2,57,57

28,35,1,2,56,56

-1

30,35,1,2,55,55

-1

0 /

C.1.10 .. RDECHO(T/F)

T

C-----

C.....STATIC DATA - READ2

C.....OUTPUT INFORMATION

C.2.1 .. PRTR(T/F)

F

C.....COORDINATE GEOMETRY INFORMATION

C..... RECTANGULAR COORDINATES

C.2.2A.1 .. UNIGRX,UNIGRY,UNIGRZ; ALL (T/F);(O) - NOT CYLIND [1.4]

F,F,F

C.2.2A.2A .. X(1),X(NX);(O) - UNIGRX [2.2A.1]

0,200,400,600,800,1000,1200,1400,1600,1800,2000,2200,2400,2600,2800

3000,3200,3400,3600,3800,4000,4200,4400,4600,4800,5000,5200,5400,5600

5800,6000,6200,6400,6600,6800

C.2.2A.2B .. X(1);(O) - NOT UNIGRX [2.2A.1]

C.2.2A.3A .. Y(1),Y(NY);(O) - UNIGRY [2.2A.1]

0,1

C.2.2A.3B .. Y(1);(O) - NOT UNIGRY [2.2A.1]

C.2.2A.4A .. Z(1),Z(NZ);(O) - UNIGRZ [2.2A.1]

C.2.2A.4B .. Z(1);(O) - NOT UNIGRZ [2.2A.1]

-180,-150,-140,-130,-120,-117.5,-115,-122.5,-110,-107.5,-105,-102.5,-100

-97.5,-95,-92.5,-90,-87.5,-85,-82.5,-80,-77.5,-75,-72.5,-70,-67.5,-65,-62.5

-60,-57.5,-55,-52.5,-50,-47.5,-45,-42.5,-40,-37.5,-35,-32.5,-30,-27.5,-25,-22.5

-20,-17.5,-15,-12.5,-10,-7.5,-5,-2.5,0,10,20,30,40,50,60,70,80

C.....CYLINDRICAL COORDINATES

C.2.2B.1A .. R(1),R(NR),ARGRID(T/F);(O) - CYLIND [1.4]

C.2.2B.1B .. R(1);(O) - CYLIND [1.4] AND NOT ARGRID [2.2B.1A]

C.2.2B.2 .. UNIGRZ(T/F);(O) - CYLIND [1.4]

C.2.2B.3A .. Z(1),Z(NZ);(O) - UNIGRZ [2.2B.3A],CYLIND [1.4]

C.2.2B.3B .. Z(1);(O) - NOT UNIGRZ [2.2B.3A],CYLIND [1.4]

C.2.3.1 .. TILT(T/F);(O) - NOT CYLIND [1.4]

F

C.2.3.2 .. THETXZ,THEYXZ,THETZZ;(O) - TILT [2.3.1] AND NOT CYLIND [1.4]

C.....FLUID PROPERTY INFORMATION

C.2.4.1 .. BP

3.16E-16

C.2.4.2 .. P0,T0,W0,DENF0

0,68,0,62.4

C.2.4.3 .. W1,DENF1;(O) - SOLUTE [1.4]

1,62.4

C.2.5.1 .. NOTV0,TVF0(1),VISTF0(1),I=1 TO NOTV0;(O) - HEAT [1.4] OR

C... HEAT [1.4] AND SOLUTE [1.4] OR NOT HEAT AND NOT SOLUTE [1.4]

C.2.5.2 .. NOTV1,TVF1(1),VISTF1(1),I=1 TO NOTV1;(O) - SOLUTE [1.4] AND

C... HEAT [1.4]

C.2.5.3 .. NOCV,TRVIS,CVIS(1),VISCTR(1),I=1 TO NOCV;(O) - SOLUTE [1.4]

2,68,0,1.003,1,1.003

C.....REFERENCE CONDITION INFORMATION

C.2.6.1 .. PAATM

0.0

C.2.6.2 .. POH,TOH

0,68

C.....FLUID THERMAL PROPERTY INFORMATION

C.2.7 .. CFF,KTHF,BF;(O) - HEAT [1.4]

C.....SOLUTE INFORMATION

C.2.8 .. DM,DECLAM;(O) - SOLUTE [1.4]

5.86E-11,0.0

C.....POROUS MEDIA ZONE INFORMATION

C.2.9.1 .. 1PMZ,I1Z(1PMZ),I2Z(1PMZ),J1Z(1PMZ),J2Z(1PMZ),K1Z(1PMZ),K2Z(1PMZ)

C.....USE AS MANY 2.9.1 LINES AS NECESSARY

C***** REFUSE *****

1,14,18,1,2,60,61
2,10,19,1,2,59,60
3,9,21,1,2,58,59
4,7,23,1,2,57,58
5,6,25,1,2,56,57
6,4,27,1,2,55,56
7,2,29,1,2,54,55
8,1,35,1,2,53,54
9,1,11,1,2,52,53
10,1,10,1,2,51,52
11,2,9,1,2,50,51
12,2,8,1,2,49,50
13,2,7,1,2,48,49
14,3,7,1,2,47,48
15,3,6,1,2,46,47
16,4,5,1,2,45,46
17,11,27,1,2,51,53
18,12,26,1,2,50,51
19,12,25,1,2,48,50
20,13,24,1,2,47,48
21,32,35,1,2,52,53

C***** RECENT SAND *****

22,1,2,1,2,47,51
23,2,3,1,2,45,48
24,3,4,1,2,44,46
25,4,5,1,2,44,45
26,5,6,1,2,45,46
27,6,7,1,2,46,47
28,7,8,1,2,47,49
29,8,9,1,2,48,50
30,9,10,1,2,49,51
31,10,11,1,2,50,52
32,11,12,1,2,48,51
33,12,13,1,2,47,48
34,2,3,1,2,37,38
35,28,29,1,2,51,52
36,27,30,1,2,50,51
37,27,29,1,2,49,50
38,27,29,1,2,44,45
39,25,30,1,2,43,44
40,22,31,1,2,42,43
41,19,20,1,2,39,41
42,20,31,1,2,40,42
43,31,32,1,2,40,42
44,20,31,1,2,38,40
45,20,30,1,2,37,38
46,21,30,1,2,36,37
47,22,29,1,2,34,36
48,23,29,1,2,33,34
49,23,26,1,2,32,33

C***** GLACIAL TILL/CRETACEOUS CLAY *****

50,1,2,1,2,34,47
51,2,3,1,2,38,45
52,2,3,1,2,33,37
53,6,7,1,2,45,46
54,5,7,1,2,44,45
55,3,7,1,2,33,44
56,10,11,1,2,49,50
57,9,11,1,2,48,49
58,8,12,1,2,47,48
59,7,14,1,2,32,47
60,14,19,1,2,29,47
61,15,19,1,2,27,29
62,16,19,1,2,24,27

64,17,18,1,2,21,22
 65,19,20,1,2,41,47
 66,19,20,1,2,23,39
 67,20,22,1,2,42,47
 68,22,24,1,2,43,47
 69,24,25,1,2,43,48
 70,25,26,1,2,44,50
 71,26,27,1,2,44,51
 72,27,28,1,2,51,53
 73,28,29,1,2,52,53
 74,29,30,1,2,51,53
 75,27,29,1,2,45,49
 76,29,30,1,2,44,50
 77,30,31,1,2,43,53
 78,31,32,1,2,42,53
 79,32,35,1,2,26,52
 80,20,21,1,2,23,37
 81,21,22,1,2,24,36
 82,22,23,1,2,25,34
 83,23,26,1,2,26,32
 84,26,29,1,2,26,33
 85,28,32,1,2,26,33
 86,29,30,1,2,33,36
 87,30,31,1,2,33,38
 88,31,32,1,2,33,40
 89,30,35,1,2,25,26
 90,31,35,1,2,24,25
 91,33,35,1,2,23,24
 92,23,24,1,2,14,15
 93,24,26,1,2,15,16
 94,26,27,1,2,16,17
 95,27,29,1,2,17,18
 96,29,30,1,2,16,17
 97,30,31,1,2,15,16
 98,31,32,1,2,13,15
 99,32,33,1,2,12,13
 100,33,34,1,2,11,12
 101,34,35,1,2,10,11

C***** CRETACEOUS SAND *****

102,1,2,1,2,33,34
 103,1,7,1,2,32,33
 104,3,14,1,2,31,32
 105,7,14,1,2,30,31
 106,11,14,1,2,29,30
 107,12,15,1,2,27,29
 108,12,16,1,2,26,27
 109,13,16,1,2,24,27
 110,14,17,1,2,23,24
 111,15,17,1,2,21,23
 112,16,17,1,2,19,21
 113,17,18,1,2,18,21
 114,18,19,1,2,16,22
 115,19,20,1,2,15,23
 116,20,21,1,2,13,23
 117,13,30,1,2,25,26
 118,22,31,1,2,24,25
 119,21,33,1,2,23,34
 120,21,35,1,2,18,23
 121,21,27,1,2,17,18
 122,21,26,1,2,16,17
 123,21,24,1,2,15,16
 124,21,22,1,2,12,15
 125,22,23,1,2,10,15
 126,23,24,1,2,9,14
 127,24,25,1,2,9,15

129,26,27,1,2,12,16
130,27,28,1,2,13,17
131,28,29,1,2,14,17
132,29,30,1,2,13,16
133,30,31,1,2,12,15
134,31,32,1,2,11,13
135,32,33,1,2,10,12
136,33,34,1,2,9,11
137,34,35,1,2,7,10
138,29,35,1,2,17,18
139,30,35,1,2,16,17
140,31,35,1,2,15,16
141,32,35,1,2,13,15
142,33,35,1,2,12,13
143,34,35,1,2,11,12

C***** RECENT CLAY *****

144,1,2,1,2,31,32
145,1,7,1,2,30,31
146,1,11,1,2,29,30
147,1,12,1,2,26,29
148,1,9,1,2,25,26
149,1,8,1,2,24,25
150,2,6,1,2,23,24
151,2,5,1,2,22,23
152,1,3,1,2,21,22
153,11,12,1,2,25,26
154,12,13,1,2,19,26
155,13,14,1,2,15,24
156,14,15,1,2,9,23
157,15,16,1,2,4,21
158,16,17,1,2,3,19
159,17,18,1,2,2,18
160,18,19,1,2,2,16
161,19,20,1,2,3,15
162,20,21,1,2,3,13
163,21,22,1,2,3,12
164,22,23,1,2,3,10
165,23,25,1,2,4,9
166,25,26,1,2,4,11
167,26,27,1,2,5,12
168,27,28,1,2,5,13
169,28,29,1,2,5,14
170,29,30,1,2,5,13
171,30,31,1,2,5,12
172,31,32,1,2,5,11
173,32,33,1,2,5,10
174,33,34,1,2,5,9
175,34,35,1,2,5,8

C***** BEDROCK *****

176,1,2,1,2,21,24
177,5,6,1,2,21,23
178,6,8,1,2,21,24
179,8,9,1,2,21,25
180,9,11,1,2,21,26
181,11,12,1,2,21,25
182,1,12,1,2,19,21
183,1,13,1,2,15,19
184,1,14,1,2,9,15
185,1,15,1,2,1,9
186,15,16,1,2,1,4
187,16,17,1,2,1,3
188,17,19,1,2,1,2
189,19,23,1,2,1,3
190,23,26,1,2,1,4
191,26,35,1,2,1,5

[illegible]

***** CRETACEOUS SAND UNIT *****

[illegible]

41

[illegible][illegible]


```

0 /
C..... AQUIFER AND RIVER LEAKAGE B.C.
C.2.17.1 .. IBC BY 1,J,K RANGE {0.1-0.3} WITH NO IMOD PARAMETER;(0) -
1,1,1,2,1,54
100300
35,35,1,2,1,54
100300
0 /
C.. NLBC [1.6] >0
CSSSSSSSSSS UP GRADIENT $$$$$$$$$$$$$$$$$$
C***** REFUSE UNIT *****
1,1,1,2,54,54
4.42E-11,1,1.,1,10.,1
1,1,1,2,53,53
4.42E-11,1,1.,1,0.,1
1,1,1,2,52,52
4.42E-15,1,1.,1,-2.5,1
1,1,1,2,51,51
4.42E-15,1,1.,1,-5.0,1
C***** RECENT SAND UNIT *****
1,1,1,2,50,50
5.86-11,1,1.,1,-7.5,1
1,1,1,2,49,49
5.86-11,1,1.,1,-10.0,1
1,1,1,2,48,48
5.86-11,1,1.,1,-12.5,1
1,1,1,2,47,47
5.86-11,1,1.,1,-15.0,1
C***** GLACIAL TILL/CRETACEOUS SAND *****
1,1,1,2,46,46
1.927E-15,1,1.,1,-17.5,1
1,1,1,2,45,45
1.927E-15,1,1.,1,-20.0,1
1,1,1,2,44,44
1.927E-15,1,1.,1,-22.5,1
1,1,1,2,43,43
1.927E-15,1,1.,1,-25.0,1
1,1,1,2,42,42
1.927E-15,1,1.,1,-27.5,1
1,1,1,2,41,41
1.927E-15,1,1.,1,-30.0,1
1,1,1,2,40,40
1.927E-15,1,1.,1,-32.5,1
1,1,1,2,39,39
1.927E-15,1,1.,1,-35.0,1
1,1,1,2,38,38
1.927E-15,1,1.,1,-37.5,1
1,1,1,2,37,37
1.927E-15,1,1.,1,-40.0,1
1,1,1,2,36,36
1.927E-15,1,1.,1,-42.5,1
1,1,1,2,35,35
1.927E-15,1,1.,1,-45.0,1
C***** CRETACEOUS SAND *****
1,1,1,2,34,34
10.17E-11,1,1.,1,-47.5,1
1,1,1,2,33,33
10.17E-11,1,1.,1,-50.0,1
1,1,1,2,32,32
10.17E-11,1,1.,1,-52.5,1
C***** CRETACEOUS CLAY *****
1,1,1,2,31,31
6.67E-15,1,1.,1,-55.0,1
1,1,1,2,30,30
6.67E-15,1,1.,1,-57.5,1

```

6.67E-15,1,1.,1,-60.0,1
 1,1,1,2,28,28
 6.67E-15,1,1.,1,-62.5,1
 1,1,1,2,27,27
 6.67E-15,1,1.,1,-65.0,1
 1,1,1,2,26,26
 6.67E-15,1,1.,1,-67.5,1
 1,1,1,2,25,25
 6.67E-15,1,1.,1,-70.0,1
 1,1,1,2,24,24
 6.67E-15,1,1.,1,-72.5,1

C***** BEDROCK UNIT *****

1,1,1,2,23,23
 1.70E-14,1,1.,1,-75.0,1
 1,1,1,2,22,22
 1.70E-14,1,1.,1,-77.5,1
 1,1,1,2,21,21
 1.70E-14,1,1.,1,-80.0,1
 1,1,1,2,20,20
 1.70E-14,1,1.,1,-82.5,1
 1,1,1,2,19,19
 1.70E-14,1,1.,1,-85.0,1
 1,1,1,2,18,18
 1.70E-14,1,1.,1,-87.5,1
 1,1,1,2,17,17
 1.70E-14,1,1.,1,-90.0,1
 1,1,1,2,16,16
 1.70E-14,1,1.,1,-92.5,1
 1,1,1,2,15,15
 1.70E-14,1,1.,1,-95.0,1
 1,1,1,2,14,14
 1.70E-14,1,1.,1,-97.5,1
 1,1,1,2,13,13
 1.70E-14,1,1.,1,-100.0,1
 1,1,1,2,12,12
 1.70E-14,1,1.,1,-102.5,1
 1,1,1,2,11,11
 1.70E-14,1,1.,1,-105.0,1
 1,1,1,2,10,10
 1.70E-14,1,1.,1,-107.5,1
 1,1,1,2,9,9
 1.70E-14,1,1.,1,-110.0,1
 1,1,1,2,8,8
 1.70E-14,1,1.,1,-112.5,1
 1,1,1,2,7,7
 1.70E-14,1,1.,1,-115.0,1
 1,1,1,2,6,6
 1.70E-14,1,1.,1,-117.5,1
 1,1,1,2,5,5
 1.70E-14,1,1.,1,-120.0,1
 1,1,1,2,4,4
 1.70E-14,1,1.,1,-130.0,1
 1,1,1,2,3,3
 1.70E-14,1,1.,1,-140.0,1
 1,1,1,2,2,2
 1.70E-14,1,1.,1,-150.0,1
 1,1,1,2,1,1
 1.70E-14,1,1.,1,-180.0,1

C\$\$\$\$\$\$\$\$\$ DOWN GRADIENT \$\$\$\$\$\$\$\$\$\$

C***** REFUSE UNIT *****

35,35,1,2,54,54
 4.42E-11,1,1.,1,10.0,1
 35,35,1,2,53,53
 4.42E-11,1,1.,1,0.0,1
 35,35,1,2,52,52

C***** GLACIAL TILL/RECENT CLAY UNIT *****

35,35,1,2,51,51
 1.927E-15,1,1.,1,-5.0,1
 35,35,1,2,50,50
 1.927E-15,1,1.,1,-7.50,1
 35,35,1,2,49,49
 1.927E-15,1,1.,1,-10.0,1
 35,35,1,2,48,48
 1.927E-15,1,1.,1,-12.5,1
 35,35,1,2,47,47
 1.927E-15,1,1.,1,-15.0,1
 35,35,1,2,46,46
 1.927E-15,1,1.,1,-17.5,1
 35,35,1,2,45,45
 1.927E-15,1,1.,1,-20.0,1
 35,35,1,2,44,44
 1.927E-15,1,1.,1,-22.5,1
 35,35,1,2,43,43
 1.927E-15,1,1.,1,-25.0,1
 35,35,1,2,42,42
 1.927E-15,1,1.,1,-27.5,1
 35,35,1,2,41,41
 1.927E-15,1,1.,1,-30.0,1
 35,35,1,2,40,40
 1.927E-15,1,1.,1,-32.5,1
 35,35,1,2,39,39
 1.927E-15,1,1.,1,-35.0,1
 35,35,1,2,38,38
 1.927E-15,1,1.,1,-37.5,1
 35,35,1,2,37,37
 1.927E-15,1,1.,1,-40.0,1
 35,35,1,2,36,36
 1.927E-15,1,1.,1,-42.5,1
 35,35,1,2,35,35
 1.927E-15,1,1.,1,-45.0,1
 35,35,1,2,34,34
 1.927E-15,1,1.,1,-47.5,1
 35,35,1,2,33,33
 1.927E-15,1,1.,1,-50.0,1
 35,35,1,2,32,32
 1.927E-15,1,1.,1,-52.5,1
 35,35,1,2,31,31
 1.927E-15,1,1.,1,-55.0,1
 35,35,1,2,30,30
 1.927E-15,1,1.,1,-57.5,1
 35,35,1,2,29,29
 1.927E-15,1,1.,1,-60.0,1
 35,35,1,2,28,28
 1.927E-15,1,1.,1,-62.5,1
 35,35,1,2,27,27
 1.927E-15,1,1.,1,-65.0,1
 35,35,1,2,26,26
 1.927E-15,1,1.,1,-67.5,1
 35,35,1,2,25,25
 1.927E-15,1,1.,1,-70.0,1
 35,35,1,2,24,24
 1.927E-15,1,1.,1,-72.5,1
 35,35,1,2,23,23
 1.927E-15,1,1.,1,-75.0,1

C***** CRETACEOUS SAND *****

35,35,1,2,22,22
 10.17E-11,1,1.,1,-77.5,1
 35,35,1,2,21,21
 10.17E-11,1,1.,1,-80.0,1
 35,35,1,2,20,20

35,35,1,2,19,19
 10.17E-11,1,1.,1,-85.0,1
 35,35,1,2,18,18
 10.17E-11,1,1.,1,-87.5,1
 35,35,1,2,17,17
 10.17E-11,1,1.,1,-90.0,1
 35,35,1,2,16,16
 10.17E-11,1,1.,1,-92.5,1
 35,35,1,2,15,15
 10.17E-11,1,1.,1,-95.0,1
 35,35,1,2,14,14
 10.17E-11,1,1.,1,-97.5,1
 35,35,1,2,13,13
 10.17E-11,1,1.,1,-100.0,1
 35,35,1,2,12,12
 10.17E-11,1,1.,1,-102.5,1
 35,35,1,2,11,11
 10.17E-11,1,1.,1,-105.0,1
 35,35,1,2,10,10
 10.17E-11,1,1.,1,-107.5,1
 35,35,1,2,9,9
 10.17E-11,1,1.,1,-110.0,1
 35,35,1,2,8,8
 10.17E-11,1,1.,1,-112.5,1
 35,35,1,2,7,7
 10.17E-11,1,1.,1,-115.0,1

C***** CRETACEOUS CLAY UNIT *****

35,35,1,2,6,6
 6.67E-15,1,1.,1,-117.5,1
 35,35,1,2,5,5
 6.67E-15,1,1.,1,-120.0,1

C***** BEDROCK UNIT *****

35,35,1,2,4,4
 1.70E-14,1,1.,1,-130.0,1
 35,35,1,2,3,3
 1.70E-14,1,1.,1,-140.0,1
 35,35,1,2,2,2
 1.70E-14,1,1.,1,-150.0,1
 35,35,1,2,1,1
 1.70E-14,1,1.,1,-180.0,1

0 /

C.2.17.2 .. KLBC,BBLBC,ZELBC BY 1,J,K RANGE {0.1-0.3};(O) - NLBC [1.6] > 0

C..... RIVER LEAKAGE B.C.

C.2.17.3 .. 11,12,J1,J2,KRBC,BBRBC,ZERBC;(O) - NLBC [1.6] > 0

0 /

C.2.17.4 .. END WITH 0 /

C..... AQUIFER INFLUENCE FUNCTIONS

C.2.18.1 .. 1BC BY 1,J,K RANGE {0.1-0.3} WITH NO IMOD PARAMETER;(O) -
 C.. NAIFC [1.6] > 0

C.2.18.2 .. UVAIFC BY 1,J,K RANGE {0.1-0.3};(O) - NAIFC [1.6] > 0

C.2.18.3 .. 1AIF;(O) - NAIFC [1.6] > 0

C.....TRANSIENT, CARTER-TRACY A.1.F.

C.2.18.4 .. KOAR,ABOAR,VISOAR,POROAR,BOAR,RIOAR,ANGOAR;(O) -

C.. 1AIF [2.18.3] = 2

C..... HEAT CONDUCTION B.C.

C.2.19.1 .. 1BC BY 1,J,K RANGE {0.1-0.3} ,WITH NO IMOD PARAMETER ,FOR

C.. HCBC NODES;(O) - HEAT [1.4] AND NHCBC [1.6] > 0

C.2.19.2 .. ZHCBC(K);(O) - HEAT [1.4] AND NHCBC [1.6] > 0

C.2.19.3 .. UDTTHC BY 1,J,K RANGE {0.1-0.3} FOR HCBC NODES;(O) -

C.. HEAT [1.4] AND NHCBC [1.6] > 0

C.2.19.4 .. UKHCBC BY 1,J,K RANGE {0.1-0.3} FOR HCBC NODES;(O) -

C.. HEAT [1.4] AND NHCBC [1.6] > 0

C.....FREE SURFACE B.C.

C.2.20 .. FRESUR(T/F),PRTCCM(T/F)

F,T

26

```

C.2.21.1 .. ICHYDP,ICT,ICC; ALL (T/F);IF NOT.HEAT, ICT = F, IF NOT.SOLUTE,
C...      ICC=F
T,F,F
C.2.21.2 .. ICHWT(T/F);(O) - FRESUR [2.20]
C.2.21.3A .. ZPINIT,PINIT;(O) - ICHYDP [2.21.1] AND NOT ICHWT [2.21.2]
80.0,0.0
C.2.21.3B .. P BY 1,J,K RANGE {0.1-0.3};(O) - NOT ICHYDP [2.21.1] AND
C...      NOT ICHWT [2.21.2]
C.2.21.3C .. HWT BY 1,J,K RANGE {0.1-0.3};(O) - FRESUR [2.20] AND
C...      ICHWT [2.21.2]
C.2.21.4A .. NZTPRO,ZT(1),TVD(1),I=1,NZTPRO;(O) - HEAT [1.4] AND NOT
C...      ICT [2.21.1], LIMIT OF 10
C.2.21.4B .. T BY 1,J,K RANGE {0.1-0.3};(O) - HEAT [1.4] AND ICT [2.21.1]
C.2.21.5 .. NZTPHC, ZTHC(1),TVZHC(1);(O) - HEAT [1.4] AND NHCBC [1.6] >0,
C...      LIMIT OF 5
C.2.21.6 .. C BY 1,J,K RANGE {0.1-0.3};(O) - SOLUTE [1.4] AND ICC [2.21.1]
C.....CALCULATION INFORMATION
C.2.22.1 .. FDSMTH,FDTMTH
0.0,1.0
C.2.22.2 .. TOLDEN{.001},MAXITN{5}
.001,5
C.2.22.3 .. NTSOPT{5},EPSSOR{.00001},EPSOMG{.2},MAXIT1{50},MAXIT2{100};
C...      (O) - SLMETH [1.8] = 2
C.....OUTPUT INFORMATION
C.2.23.1 .. PRTPMP,PRTEP,PR TIC,PR TBC,PR TSLM,PR TWEL; ALL (T/F)
F,F,F,F,F,F
C.2.23.2 .. IPRPTC,PRTDV(T/F);(O) - PR TIC [2.23.1]
C.2.23.3 .. ORENPR[1];(O) - NOT CYLIND [1.4]
13
C.2.23.4 .. PLTZON(T/F);(O) - PRTPMP [2.23.1]
C.2.23.5 .. OCPLOT(T/F)
F
C-----
C..... TRANSIENT DATA - READ3
C.3.1 .. THRU(T/F)
F
C.....IF THRU IS TRUE PROCEED TO RECORD 3.99
C.....THE FOLLOWING IS FOR NOT THRU
C.....SOURCE-SINK WELL INFORMATION
C.3.2.1 .. RDWFLO(T/F),RDWHD(T/F);(O) - NWEL [1.6] > 0
C.3.2.2 .. IWEL,QWV,PWSUR,PWKT,TWSRKT,CWKT;(O) - RDWFLO [3.2.1] OR
C...      RDWHD [3.2.1]
C.....USE AS MANY 3.2.2 LINES AS NECESSARY
C.3.2.3 .. END WITH 0 /
C.....BOUNDARY CONDITION INFORMATION
C.....      SPECIFIED VALUE B.C.
C.3.3.1 .. RDSPBC,RDSTBC,RDSCBC,ALL(T/F);(O) - NOT CYLIND [1.4] AND
C...      NFBC [1.6] > 0
C.3.3.2 .. PNP BY 1,J,K RANGE {0.1-0.3};(O) - RDSPBC [3.3.1]
C.3.3.3 .. TSBC BY 1,J,K RANGE {0.1-0.3};(O) - RDSPBC [3.3.1] AND
C...      HEAT [1.4]
C.3.3.4 .. CSBC BY 1,J,K RANGE {0.1-0.3}; (O) - RDSPBC [3.3.1] AND
C...      SOLUTE [1.4]
C.3.3.5 .. TNP B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDSTBC [3.3.1] AND
C...      HEAT [1.4]
C.3.3.6 .. CNP B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDSCBC [3.3.1] AND
C...      SOLUTE [1.4]
C.....      SPECIFIED FLUX
C.3.4.1 .. RDFLXQ,RDFLXH,RDFLXS,ALL(T/F);(O) - NFBC [1.6] > 0
T,F,F
C.3.4.2 .. QFFX,QFFY,QFFZ B.C. BY 1,J,K RANGE {0.1-0.3};(O) -
C...      RDFLXQ [3.4.1]
1,1,1,2,54,54
0.0,1,0.0,1,-4.21E-3,1
2,3,1,2,55,55

```

4,5,1,2,56,56
0.0,1,0.0,1,-4.21E-3,1
6,6,1,2,57,57
0.0,1,0.0,1,-4.21E-3,1
7,8,1,2,58,58
0.0,1,0.0,1,-4.21E-3,1
9,9,1,2,59,59
0.0,1,0.0,1,-4.21E-3,1
10,13,1,2,60,60
0.0,1,0.0,1,-4.21E-3,1
14,18,1,2,61,61
0.0,1,0.0,1,-4.21E-3,1
19,19,1,2,60,60
0.0,1,0.0,1,-4.21E-3,1
20,21,1,2,59,59
0.0,1,0.0,1,-4.21E-3,1
22,23,1,2,58,58
0.0,1,0.0,1,-4.21E-3,1
24,25,1,2,57,57
0.0,1,0.0,1,-4.21E-3,1
26,27,1,2,56,56
0.0,1,0.0,1,-4.21E-3,1
28,29,1,2,55,55
0.0,1,0.0,1,-4.21E-3,1
30,35,1,2,54,54
0.0,1,0.0,1,-4.21E-3,1
0 /

C.3.4.3 .. UDENBC BY 1,J,K RANGE {0.1-0.3};(O) - RDFLXQ [3.4.1]

1,1,1,2,54,54
62.4,1
2,3,1,2,55,55
62.4,1
4,5,1,2,56,56
62.4,1
6,6,1,2,57,57
62.4,1
7,8,1,2,58,58
62.4,1
9,9,1,2,59,59
62.4,1
10,13,1,2,60,60
62.4,1
14,18,1,2,61,61
62.4,1
19,19,1,2,60,60
62.4,1
20,21,1,2,59,59
62.4,1
22,23,1,2,58,58
62.4,1
24,25,1,2,57,57
62.4,1
26,27,1,2,56,56
62.4,1
28,29,1,2,55,55
62.4,1
30,35,1,2,54,54
62.4,1
0 /

C.3.4.4 .. TFLX B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDFLXQ [3.4.1] AND
C.. HEAT [1.4]

C.3.4.5 .. CFLX B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDFLXQ [3.4.1] AND
C.. SOLUTE [1.4]

1,1,1,2,54,54
1.0,1

1.0,1
 4,5,1,2,56,56
 1.0,1
 6,6,1,2,57,57
 1.0,1
 7,8,1,2,58,58
 1.0,1
 9,9,1,2,59,59
 1.0,1
 10,13,1,2,60,60
 1.0,1
 14,18,1,2,61,61
 1.0,1
 19,19,1,2,60,60
 1.0,1
 20,21,1,2,59,59
 1.0,1
 22,23,1,2,58,58
 1.0,1
 24,25,1,2,57,57
 1.0,1
 26,27,1,2,56,56
 1.0,1
 28,29,1,2,55,55
 1.0,1
 30,35,1,2,54,54
 1.0,1

0 /

C.3.4.6 .. QHFX,QHFX,QHFX B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDLX [3.4.5]

C.3.4.7 .. QSFY,QSFY,QSFY B.C. BY 1,J,K RANGE {0.1-0.3};(O) - RDLXS [3.4.1]

C..... LEAKAGE BOUNDARY

C.3.5.1 .. RDLBC(T/F);(O) - NLBC [1.6] > 0

T

C.3.5.2 .. PHILBC,DENLBC,VISLBC BY 1,J,K RANGE {0.1-0.3};(O) - RDLBC [3.5.1]

1,1,1,2,47,54
 82.3894,1,62.4,1,1.003,1
 1,1,1,2,45,46
 79.6289,1,62.4,1,1.003,1
 1,1,1,2,43,44
 52.8683,1,62.4,1,1.003,1
 1,1,1,2,40,42
 26.1078,1,62.4,1,1.003,1
 1,1,1,2,37,39
 -0.6527,1,62.4,1,1.003,1
 1,1,1,2,34,36
 -27.4132,1,62.4,1,1.003,1
 1,1,1,2,32,33
 -54.8264,1,62.4,1,1.003,1
 1,1,1,2,30,31
 -45.3623,1,62.4,1,1.003,1
 1,1,1,2,28,29
 -35.8983,1,62.4,1,1.003,1
 1,1,1,2,26,27
 -26.4342,1,62.4,1,1.003,1
 1,1,1,2,24,25
 -16.9701,1,62.4,1,1.003,1
 1,1,1,2,1,23
 30.8323,1,62.4,1,1.003,1
 35,35,1,2,52,54
 80.9600,1,62.4,1,1.003,1
 35,35,1,2,48,51
 73.4280,1,62.4,1,1.003,1
 35,35,1,2,44,47
 51.8893,1,62.4,1,1.003,1
 35,35,1,2,40,43

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35,35,1,2,36,39
8.81139,1,62.4,1,1.003,1
35,35,1,2,32,35
-12.7276,1,62.4,1,1.003,1
35,35,1,2,28,31
-34.2665,1,62.4,1,1.003,1
35,35,1,2,23,27
-55.8055,1,62.4,1,1.003,1
C***** SALTWATER INTRUSION *****
35,35,1,2,7,22
-33.9971,1,62.4,1,1.003,1
C*****
35,35,1,2,5,6
-7.1797,1,62.4,1,1.003,1
35,35,1,2,1,4
60.9642,1,62.4,1,1.003,1
0 /
C.3.5.3 .. TLBC BY 1,J,K RANGE {0.1-0.3};(O) - RDLBC [3.5.1] AND HEAT [1.4]
C.3.5.4 .. CLBC BY 1,J,K RANGE {0.1-0.3};(O) - RDLBC [3.5.1] AND SOLUTE [1.4]
0 /
C..... RIVER LEAKAGE
C.3.5.5 .. I1,I2,J1,J2,HRBC,DENRBC,VISRBC,TRBC,CRBC;(O) - RDLBC [3.5.1]
C.....USE AS MANY 3.5.5 LINES AS NECESSARY
C.3.5.6 .. END WITH 0 /
0 /
C..... A.I.F. B.C.
C.3.6.1 .. RDAIF(T/F);(O) - NAIFC [1.6] > 0
C.3.6.2 .. DENCAR BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1]
C.3.6.3 .. TAIF BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1] AND HEAT [1.4]
C.3.6.4 .. CAIF BY 1,J,K RANGE {0.1-0.3};(O) - RDAIF [3.6.1] AND SOLUTE [1.4]
C.....CALCULATION INFORMATION
C.3.7.1 .. RDCALC(T/F)
F
C.3.7.2 .. AUTOTS(T/F);(O) - RDCALC [3.7.1]
F
C.3.7.3.A .. DELTIM;(O) - RDCALC [3.7.1] AND NOT AUTOTS [3.7.2]
7600
C.3.7.3.B .. DPTAS{5E4},DTAS{5.},DCTAS{.25},DTIMMN{1.E4},DTIMMX{1.E7};
C.. (O) - RDCALC [3.7.1] AND AUTOTS [3.7.2]
C5E4,5.,.1,5.,365
C.3.7.4 .. TIMCHG
7600
C.....OUTPUT INFORMATION
C.3.8.1 .. PRIVEL,PRIDV,PRISLM,PRIKD,PRIPTC,PRIGFB,PRIWEL,PRIBCF; ALL [1]
0,-1,-1,0,-1,-1,0,-1
C.3.8.2 .. IPRPTC;(O) - IF PRIPTC [3.8.1] NOT = 0
201
C.3.8.3 .. CHKPT(T/F),NTSCHK,SAVLDO(T/F)
F,-1,F
C.....CONTOUR MAP INFORMATION
C.3.9.1 .. RDMPDT,PRTMPD; ALL (T/F)
F,T
C.3.9.2 .. MAPPTC,PRIMAP[1];(O) - RDMPDT [3.9.1]
101,-1
C.3.9.3 .. YPOSUP(T/F),ZPOSUP(T/F),LENAX,LENAY,LENAZ;(O) - RDMPDT [3.9.1]
F,T,12,0,12
C.3.9.4 .. IMAP1{1},IMAP2{NX},JMAP1{1},JMAP2{NY},KMAP1{1},KMAP2{NZ},AMIN,
C.. AMAX,NMPZON{5};(O) - RDMPDT [3.9.1]
1,35,1,2,1,61,0,0,1
1,35,1,2,1,61,0.,1.,10
C.....ONE OF THE 3.9.4 LINES REQUIRED FOR EACH DEPENDENT VARIABLE
C..... TO BE MAPPED
C.....END OF SECOND SET OF TRANSIENT INFORMATION
C - - - - -
C.....READ SETS OF READ3 DATA AT EACH TIMCHG UNTIL THRU (LINES 3.N1,N2)

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C.3.99.1 .. THRU

F

C.....TEMPORAL PLOT INFORMATION

C.3.99.2 .. PLOTWP,PLOTWT,PLOTWC; ALL (T/F)

F,F,F

C.....PLOT INFORMATION;(O) - PLOTWP [3.99] OR PLOTWT [3.99] OR PLOTWC [3.99]

C.4.1 .. IWEL,RDPLTP(T/F)

C.4.2 .. IDLAB

C.4.3 .. NTHPTO,NTHPTC,PWMIN,PWMAX,PSMIN,PSMAX,TWMIN,TWMAX,TSMIN,TSMAX,

C.. CMIN,CMAX;(O) - RDPLTP [4.1]

C.4.4 .. TO,POW,POS,TOW,TOS,COW

C.....USE AS MANY 4.4 LINES AS NECESSARY

C.4.5 .. END WITH -1. /

C.....READ DATA FOR ADDITIONAL WELLS, 4.1-4.5 LINES

C.4.6 .. END WITH 0 /

C.....END OF DATA FILE

30

SEWS ANML. Run #1

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP

RATES

AMOUNTS

FLUID INFLOW	2.101238E+03 (LB/D)	5.082591E+05 (LB)
FLUID OUTFLOW	2.101238E+03 (LB/D)	5.082591E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	7.957849E-13 (LB/D)	1.924888E-10 (LB)
FRACTIONAL IMBALANCE		0.0000

SOLUTE INFLOW	1.418601E+03 (LB/D)	3.431392E+05 (LB)
SOLUTE OUTFLOW	8.209848E+02 (LB/D)	1.985843E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.976166E+02 (LB/D)	1.445548E+05 (LB)
RESIDUAL IMBALANCE	-8.183321E-11 (LB/D)	-1.979427E-08 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

AMOUNTS

FLUID INFLOW	1.596940E+07 (LB)	210116/day
FLUID OUTFLOW	1.596940E+07 (LB)	
CHANGE IN FLUID IN REGION	-9.923965E-04 (LB)	
FLUID IN REGION	1.951930E+07 (LB)	
RESIDUAL IMBALANCE	-1.412406E-05 (LB)	
FRACTIONAL IMBALANCE	0.0000	

SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.416693E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.364675E+06 (LB)
SOLUTE IN REGION	6.364675E+06 (LB)
RESIDUAL IMBALANCE	-1.529645E-07 (LB)
FRACTIONAL IMBALANCE	0.0000

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH

SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.416693E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

368.38

360.85

360.85

1108.08

1422.86

$$= 77.57\% - 100 = 22.12\% \text{ leaks out}$$

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

SENS ANM

Run #1

FLUID (LB/D)

VERTICAL SLICES

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	1	2	3	4	5	6	7	8	9	10
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54	-70.17									
53	-77.78									
52	-30.29									
51	-29.38									
50	-38.74									
49	-38.49									
48	-38.20									
47	-37.87									
46	1.2027E-03									
45	4.7118E-03									
44	-1.4686E-03									
43	2.1561E-03									
42	-3.9606E-03									
41	-3.2292E-04									
40	3.3298E-03									
39	-2.7412E-03									
38	9.6055E-04									
37	4.6971E-03									
36	-1.2661E-03									
35	2.5666E-03									
34	340.8									
33	-182.8									
32	-179.5									
31	-3.4164E-03									
30	-7.9858E-03									
29	-2.7180E-03									
28	-1.0187E-02									
27	-8.4186E-03									
26	-2.0943E-02									
25	-2.7165E-02									
24	-5.2794E-02									
23	1.7194E-02									
22	2.2098E-02									
21	1.9124E-02									
20	1.1081E-02									
19	9.6259E-03									
18	8.3574E-03									
17	7.2506E-03									
16	6.2843E-03									
15	5.4398E-03									
14	4.7008E-03									
13	4.0533E-03									
12	3.4848E-03									
11	2.9843E-03									
10	2.5423E-03									
9	6.4507E-03									

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-31.10
-2.4268E-03
-7.5470E-04
9.3124E-04
2.6622E-03
-3.4230E-03
-1.6545E-03
1.0704E-04
1.8945E-03
-4.1524E-03
-2.3628E-03
-5.9700E-04
1.1779E-03
-4.8985E-03
-3.1562E-03
-1.4561E-03
2.3335E-04
-5.9500E-03
-4.3380E-03
-2.7941E-03
-1.2900E-03
-7.6911E-03
-6.3337E-03
-5.0862E-03
-3.9258E-03
-1.0725E-02
-9.8268E-03
-9.1094E-03
-8.5600E-03
-8.1694E-03
-9.268
-9.190
-9.118
-9.050
-8.985
-8.923
-8.860
-8.797
-8.732
-8.665
-8.593
-8.515
-4.725
-14.19
-3.550
-4.567
-1.2293E-02

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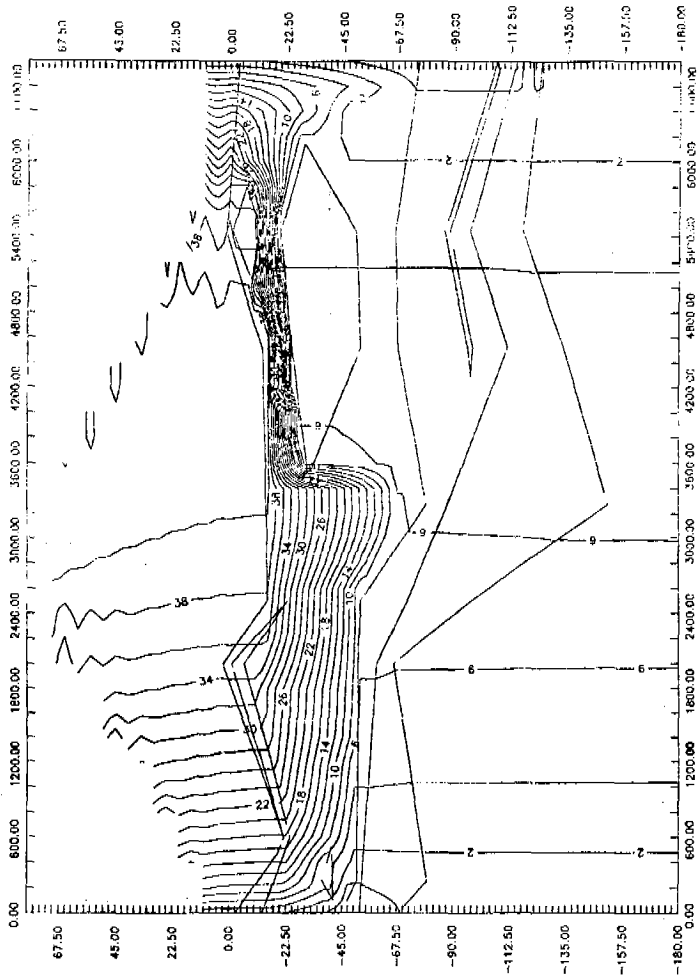
-78.07
-84.02
-31.10
-2.4268E-03
-7.5470E-04
9.3124E-04
2.6622E-03
-3.4230E-03
-1.6545E-03
1.0704E-04
1.8945E-03
-4.1524E-03
-2.3628E-03
-5.9700E-04
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-3.1562E-03
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-4.3380E-03
-2.7941E-03
-1.2900E-03
-7.6911E-03
-6.3337E-03
-5.0862E-03
-3.9258E-03
-1.0725E-02
-9.8268E-03
-9.1094E-03
-8.5600E-03
-8.1694E-03
-9.268
-9.190
-9.118
-9.050
-8.985
-5.923
-8.860
-8.797
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-8.665
-8.593
-8.515
-4.725
-14.19
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-1.2293E-02
-0.1541
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8.9401E-02
0.1077

VERTICAL SLICES

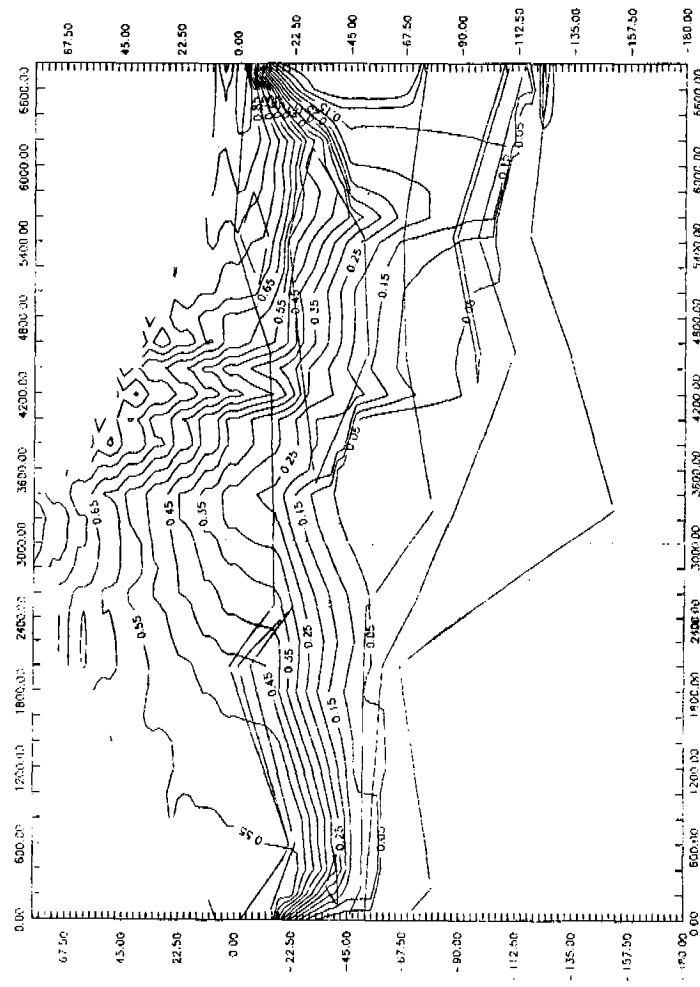
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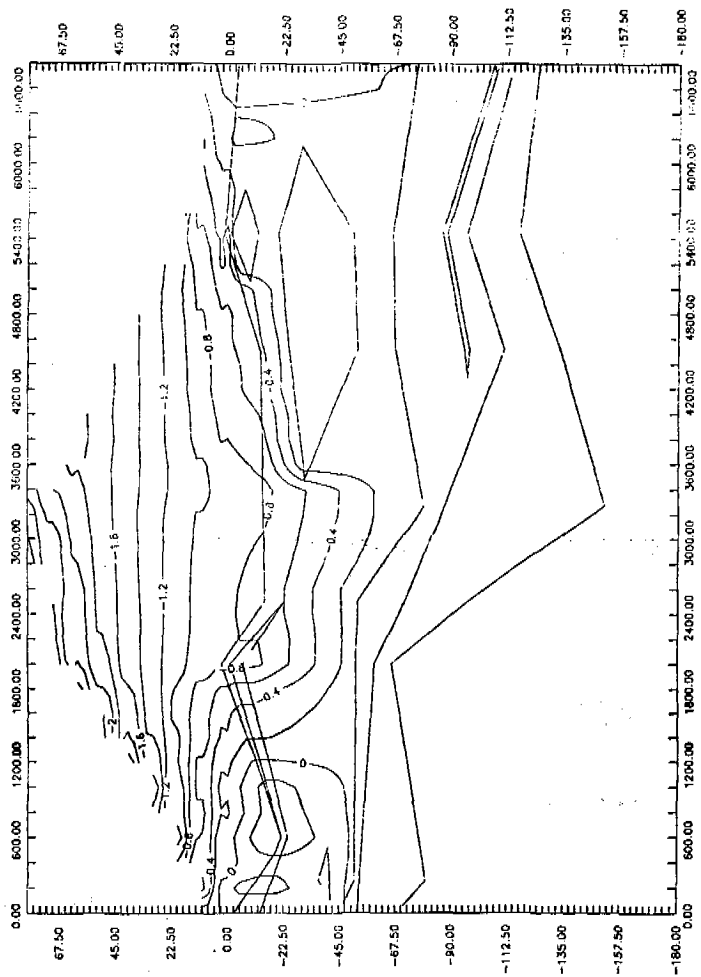
XS19 SENSITIVITY ANALYSIS RUN2, HEAD



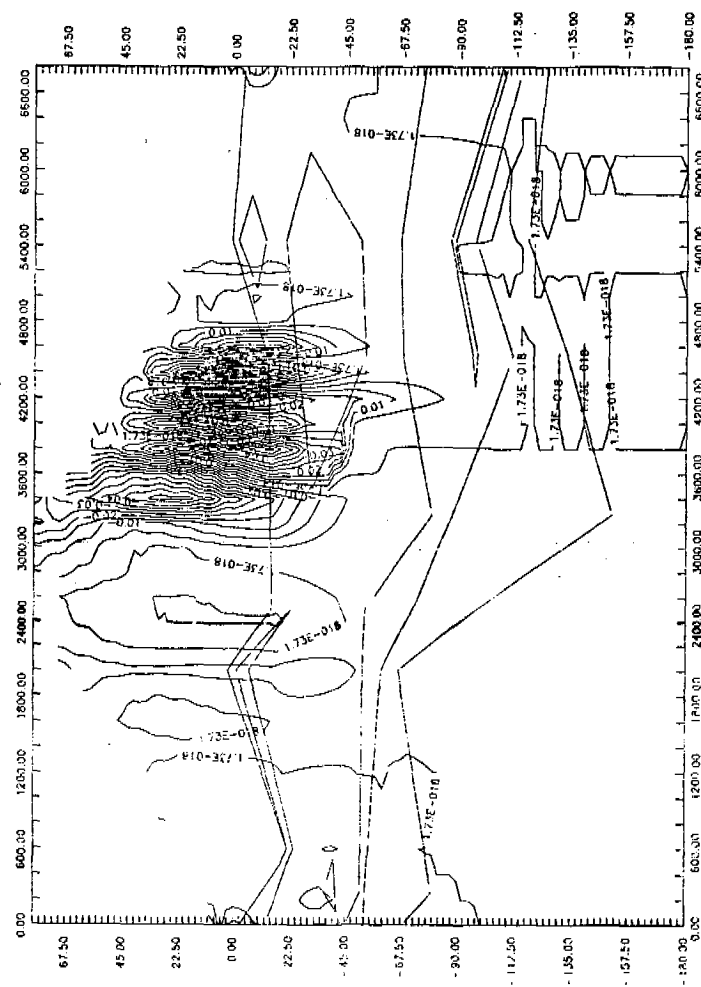
XS19 SENSITIVITY ANALYSIS RUN2, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN2, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN2, MASS-FRACTION



*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP

RATES

AMOUNTS

FLUID INFLOW	2.101212E+03 (LB/D)	5.427766E+05 (LB)
FLUID OUTFLOW	2.101212E+03 (LB/D)	5.427766E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.987115E-12 (LB/D)	-5.133036E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.664474E+05 (LB)
SOLUTE OUTFLOW	8.188610E+02 (LB/D)	2.115249E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.997405E+02 (LB/D)	1.549225E+05 (LB)
RESIDUAL IMBALANCE	2.906156E-11 (LB/D)	7.507065E-09 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

AMOUNTS

FLUID INFLOW	1.596921E+07 (LB)
FLUID OUTFLOW	1.596921E+07 (LB)
CHANGE IN FLUID IN REGION	-9.883188E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-6.847470E-06 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.404842E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.376526E+06 (LB)
SOLUTE IN REGION	6.376526E+06 (LB)
RESIDUAL IMBALANCE	-1.303791E-07 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	<u>1.078137E+07 (LB)</u>
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.404842E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

1/9 Sens. Anal
Run #2

FLUID (LB/D)

VERTICAL SLICES

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53	-76.69									
52	-29.60									
51	-27.79									
50	-36.70									
49	-36.50									
48	-36.25									
47	-35.94									
46	1.2603E-03									
45	4.7638E-03									
44	-1.4219E-03									
43	2.1975E-03									
42	-3.9242E-03									
41	-2.9151E-04									
40	3.3565E-03									
39	-2.7193E-03									
38	9.7791E-04									
37	4.7100E-03									
36	-1.2575E-03									
35	2.5708E-03									
34	340.7									
33	-182.9									
32	-179.5									
31	-3.4170E-03									
30	-7.9862E-03									
29	-2.7184E-03									
28	-1.0187E-02									
27	-8.4192E-03									
26	-2.0944E-02									
25	-2.7166E-02									
24	-5.2796E-02									
23	1.7188E-02									
22	2.2090E-02									
21	1.9116E-02									
20	1.1075E-02									
19	9.6200E-03									
18	8.3514E-03									
17	7.2445E-03									
16	6.2782E-03									
15	5.4336E-03									
14	4.6947E-03									
13	4.0472E-03									
12	3.4786E-03									
11	2.9782E-03									
10	2.5362E-03									
9	6.4326E-03									
8	8.2197E-04									

358.71 x 2 =
717.42

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-85.45
-85.34
-23.51
-2.1385E-03
-5.0334E-04
1.1504E-03
2.8533E-03
-3.2564E-03
-1.5093E-03
2.3367E-04
2.0049E-03
-4.0561E-03
-2.2790E-03
-5.2397E-04
1.2415E-03
-4.8433E-03
-3.1082E-03
-1.4144E-03
2.6938E-04
-5.9189E-03
-4.3113E-03
-2.7713E-03
-1.2707E-03
-7.6749E-03
-6.3203E-03
-5.0753E-03
-3.9172E-03
-1.0718E-02
-9.8225E-03
-4.1071E-03
-8.5596E-03
-8.1707E-03
-9.341
-9.262
-9.190
-9.121
-9.056
-8.990
-8.930
-8.866
-8.801
-8.733
-8.660
-8.582
-4.762
-14.30
-3.577
-4.603
-1.2296E-02
-0.1542

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8.7555E-02
0.1076
4.2402E-02

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47 -35.94
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44 -1.4219E-03
43 2.1975E-03
42 -3.9242E-03
41 -2.9151E-04
40 3.3565E-03
39 -2.7193E-03
38 9.7791E-04
37 4.7100E-03
36 -1.2575E-03
35 2.5708E-03
34 340.7
33 -182.9
32 -179.5
31 -3.4170E-03
30 -7.9862E-03
29 -2.7184E-03
28 -1.0187E-02
27 -8.4192E-03
26 -2.0944E-02
25 -2.7166E-02
24 -5.2796E-02
23 1.7188E-02
22 2.2090E-02
21 1.9116E-02
20 1.1075E-02
19 9.6200E-03
18 8.3514E-03
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16 6.2782E-03
15 5.4336E-03
14 4.6947E-03
13 4.0472E-03
12 3.4786E-03
11 2.9782E-03
10 2.5362E-03
9 6.4326E-03
8 8.2197E-04
7 1.5634E-03
6 1.3444E-03
5 2.8816E-03
4 2.4887E-03

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-23.51
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-5.0334E-04
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-1.5093E-03
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2.0049E-03
-4.0561E-03
-2.2790E-03
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1.2415E-03
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-1.2707E-03
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-6.3203E-03
-5.0753E-03
-3.9172E-03
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-9.1071E-03
-6.5596E-03
-8.1707E-03
-9.341
-9.262
-9.190
-9.121
-9.056
-6.993
-6.930
-6.600
-6.801
-6.733
-6.660
-8.582
-4.762
-14.30
-3.577
-4.603
-1.2296E-02
-0.1542
0.1494
6.9353E-02
0.1070
4.2402E-02

VERTICAL SLICES

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52				-21.51
51				-1.4379E-03
50				-2.2564E-04
49				0.0000E+00
48				0.0000E+00
47				-2.7249E-04
46				-6.3565E-05
45				0.0000E+00
44				0.0000E+00
43				-1.6690E-05
42				-4.0731E-06
41				-3.9942E-07
40				0.0000E+00
39				-6.9846E-07
38				-1.9837E-07
37				-4.0501E-08
36				0.0000E+00
35				-3.6768E-08
34				-1.2795E-08
33				-4.2950E-09
32				-1.4219E-09
31				-1.1110E-08
30				-1.9429E-08
29				-4.4007E-08
28				-1.1637E-07
27				-1.2456E-06
26				-5.3432E-06
25				-2.6324E-05
24				-1.4656E-04
23				-3.3008E-04
22				-1.068
21				-1.063
20				-1.057
19				-1.051
18				-1.044
17				-1.036
16				-1.027
15				-1.018
14				-1.009
13				-0.9979
12				-0.9862
11				-0.9737
10				-0.9549
9				-1.591
8				-0.3935
7				-0.5117
6				-4.9209E-04
5				-9.7939E-04
4				0.0000E+00
3				0.0000E+00
2				0.0000E+00

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53	-44.68
52	-17.13
51	-16.06
50	-21.20
49	-21.06
48	-20.89
47	-20.68
46	0.0000E+00
45	0.0000E+00
44	-3.4175E-04
43	0.0000E+00
42	-4.5219E-04
41	-2.2095E-05
40	0.0000E+00
39	-8.2327E-05
38	0.0000E+00
37	0.0000E+00
36	-9.6974E-06
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32	-1.384
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29	-4.8148E-08
28	-2.5312E-08
27	-3.4165E-09
26	-1.4232E-09
25	-3.5479E-10
24	-8.4706E-11
23	0.0000E+00
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-79.25
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-1.4379E-03
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-4.3008E-04
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*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

179 JENS. ANAL. RUN 20

	RATES	AMOUNTS
FLUID INFLOW	2.084534E+03 (LB/D)	2.971106E+05 (LB)
FLUID OUTFLOW	2.084534E+03 (LB/D)	2.971106E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.800674E-12 (LB/D)	2.566518E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	2.021947E+05 (LB)
SOLUTE OUTFLOW	7.387366E+02 (LB/D)	1.052929E+05 (LB)
CHANGE IN SOLUTE IN REGION	6.798648E+02 (LB/D)	9.690180E+04 (LB)
RESIDUAL IMBALANCE	-1.350505E-11 (LB/D)	-1.924888E-09 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.584245E+07 (LB)
FLUID OUTFLOW	1.584245E+07 (LB)
CHANGE IN FLUID IN REGION	-7.025401E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-7.820693E-06 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	3.408037E+06 (LB)
CHANGE IN SOLUTE IN REGION	7.373330E+06 (LB)
SOLUTE IN REGION	7.373330E+06 (LB)
RESIDUAL IMBALANCE	-4.106429E-09 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-3.408037E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

1/9 Sens. Anal
Run #3

FLUID (LB/D)

VERTICAL SLICES

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53	-11.33									
52	-4.359									
51	-4.194									
50	-54.98									
49	-54.41									
48	-53.86									
47	-53.35									
46	7.1540E-04									
45	4.2444E-03									
44	-1.9175E-03									
43	1.7252E-03									
42	-4.3732E-03									
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40	2.9583E-03									
39	-3.0883E-03									
38	6.4198E-04									
37	4.4121E-03									
36	-1.5119E-03									
35	2.3642E-03									
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32	-187.8									
31	-3.7668E-03									
30	-8.2317E-03									
29	-2.9166E-03									
28	-1.0382E-02									
27	-8.6540E-03									
26	-2.1272E-02									
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23	1.5137E-02									
22	1.9003E-02									
21	1.6001E-02									
20	8.9662E-03									
19	7.4849E-03									
18	6.1950E-03									
17	5.0716E-03									
16	4.0933E-03									
15	3.2411E-03									
14	2.4987E-03									
13	1.8520E-03									
12	1.2864E-03									
11	7.9732E-04									
10	3.6924E-04									
9	-1.1870E-05									
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7	-5.4185E-04									

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-6.3221E-03
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-4.3516E-03
-2.3722E-03
-8.2459E-03
-6.3024E-03
-4.4026E-03
-2.5148E-03
-8.5009E-03
-6.6928E-03
-4.9538E-03
-3.2554E-03
-9.4631E-03
-7.9130E-03
-6.4734E-03
-5.1214E-03
-1.1729E-02
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47	-8.4549E-03
46	-6.4661E-03
45	-4.4876E-03
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43	-8.3221E-03
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31	-9.4631E-03
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29	-6.4734E-03
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27	-1.1729E-02
26	-1.0641E-02
25	-9.7333E-03
24	-8.9940E-03
23	-8.4138E-03
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47	-31.61
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45	0.0000E+00
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43	0.0000E+00
42	-5.3549E-04
41	-5.7980E-05
40	0.0000E+00
39	-1.0250E-04
38	0.0000E+00
37	0.0000E+00
36	-1.9617E-05
35	0.0000E+00
34	0.0000E+00
33	-4.706
32	-4.867
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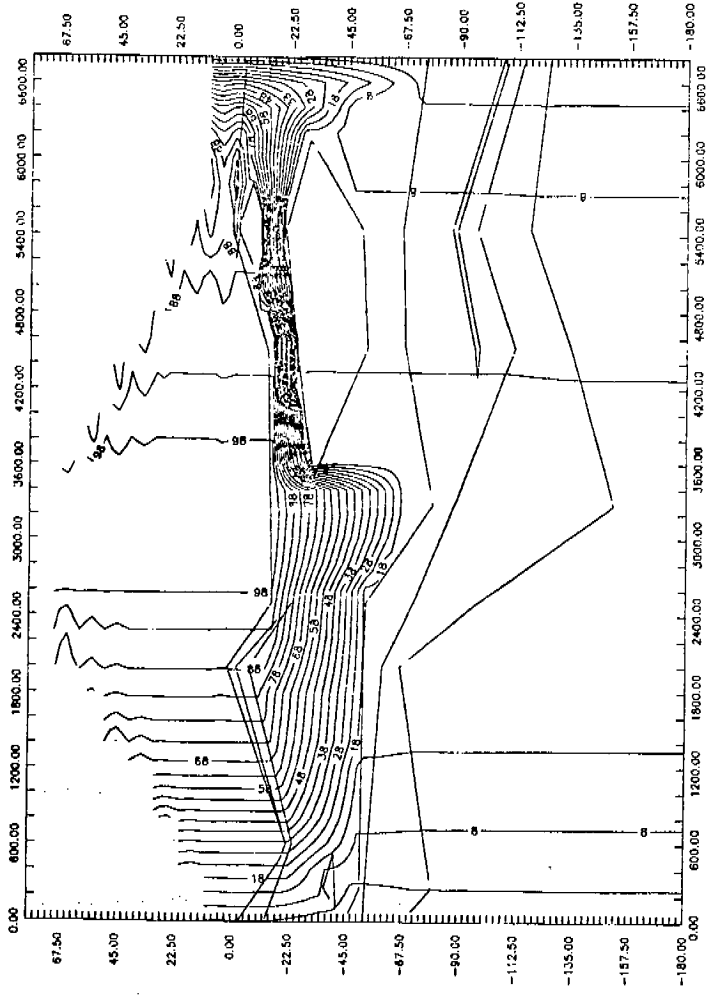
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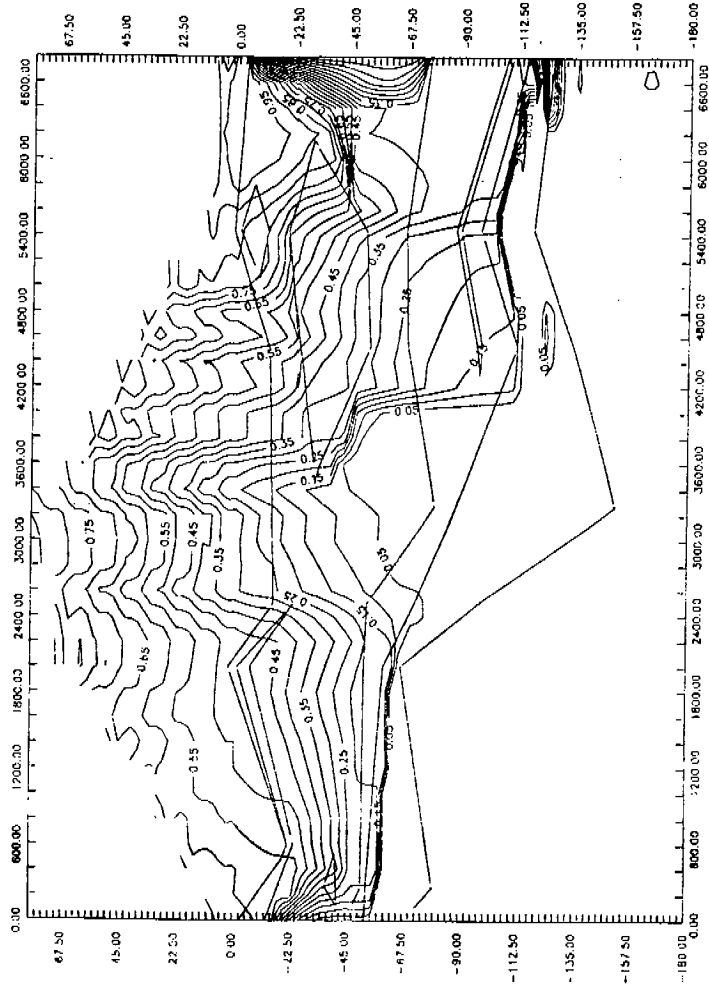
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-1.6567E-03
-5.9677E-04
-1.2026E-03
-5.5514E-04
-2.3439E-04
-8.2215E-05
-1.8545E-04
-9.9367E-05
-5.0196E-05
-2.0669E-05
-5.5301E-05
-3.2435E-05
-1.7302E-05
-7.5155E-06
-1.9334E-05
-1.1470E-05
-6.4020E-06
-3.2272E-06
-7.5252E-06
-5.4572E-06
-4.5939E-06
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-2.4773E-05
-6.6252E-05
-1.2822E-04
-8.2334E-04
-3.0106E-03
-1.965
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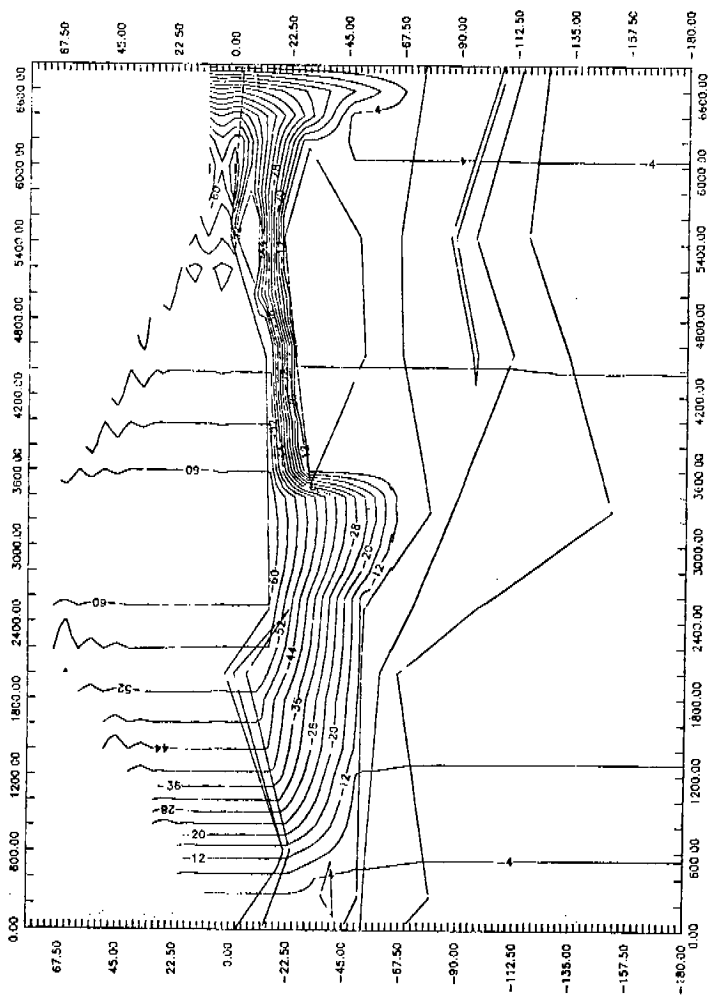
XS19 SENSITIVITY ANALYSIS RUN3, HEAD



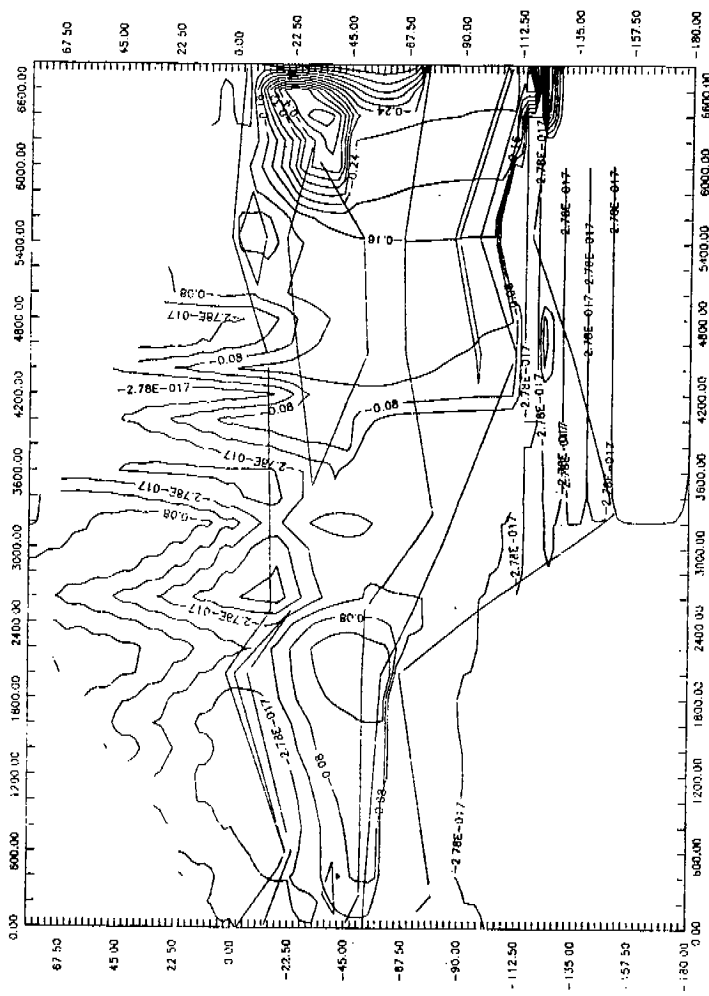
XS19 SENSITIVITY ANALYSIS RUN3, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN20, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN3, MASS-FRACTION



1/9 Son S. Anal *run 24*

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	2.098854E+03 (LB/D)	4.431960E+05 (LB)
FLUID OUTFLOW	2.098854E+03 (LB/D)	4.431960E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.215432E-12 (LB/D)	-2.566518E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	2.995532E+05 (LB)
SOLUTE OUTFLOW	8.145963E+02 (LB/D)	1.720109E+05 (LB)
CHANGE IN SOLUTE IN REGION	6.040052E+02 (LB/D)	1.275423E+05 (LB)
RESIDUAL IMBALANCE	1.975077E-12 (LB/D)	4.170591E-10 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.595129E+07 (LB)
FLUID OUTFLOW	1.595129E+07 (LB)
CHANGE IN FLUID IN REGION	-9.597504E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-5.202845E-06 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.368787E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.412580E+06 (LB)
SOLUTE IN REGION	6.412580E+06 (LB)
RESIDUAL IMBALANCE	-1.006075E-07 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	<u>1.078137E+07</u> (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.368787E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

14223616/d

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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51	-27.78									
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48	-36.95									
47	-36.68									
46	1.2229E-03									
45	4.7162E-03									
44	-1.4770E-03									
43	2.1375E-03									
42	-3.9870E-03									
41	-3.5508E-04									
40	3.2940E-03									
39	-2.7789E-03									
38	9.2284E-04									
37	4.6611E-03									
36	-1.2985E-03									
35	2.5389E-03									
34	339.6									
33	-184.0									
32	-180.7									
31	-3.4663E-03									
30	-8.0207E-03									
29	-2.7460E-03									
28	-1.0214E-02									
27	-8.4513E-03									
26	-2.0988E-02									
25	-2.7234E-02									
24	-5.2905E-02									
23	1.6910E-02									
22	2.1671E-02									
21	1.8694E-02									
20	1.0789E-02									
19	9.3306E-03									
18	8.0591E-03									
17	6.9501E-03									
16	5.9821E-03									
15	5.1365E-03									
14	4.3972E-03									
13	3.7498E-03									
12	3.1819E-03									
11	2.6827E-03									
10	2.2426E-03									
9	5.5596E-03									
8	5.5447E-04									

337.95 x 2 = 675.9

6 1.0534E-03
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-1.2296E-05
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-4.2852E-03
-2.4990E-03
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47	-36.68
46	1.2229E-03
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42	-3.9870E-03
41	-3.5508E-04
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34	339.6
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27	-8.4513E-03
26	-2.0988E-02
25	-2.7234E-02
24	-5.2905E-02
23	1.6910E-02
22	2.1671E-02
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13	3.7498E-03
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9	5.5596E-03
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27	-1.0765E-02
26	-9.8784E-03
25	-9.1524E-03
24	-6.5942E-03
23	-8.1948E-03
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21	-10.51
20	-10.43
19	-10.35
18	-10.28
17	-10.20
16	-10.13
15	-10.06
14	-9.986
13	-9.908
12	-9.826
11	-9.737
10	-5.399
9	-16.21
8	-4.054
7	-5.219
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4	0.1486
3	8.8527E-02
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1	4.1167E-02

VERTICAL SLICES

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37	0.0000E+00
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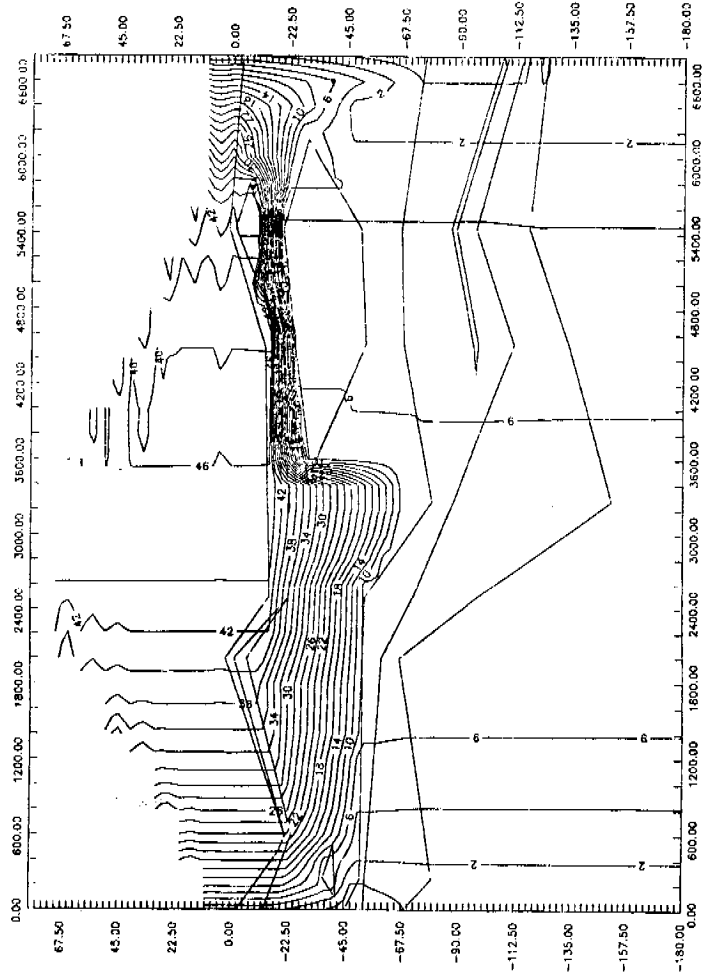
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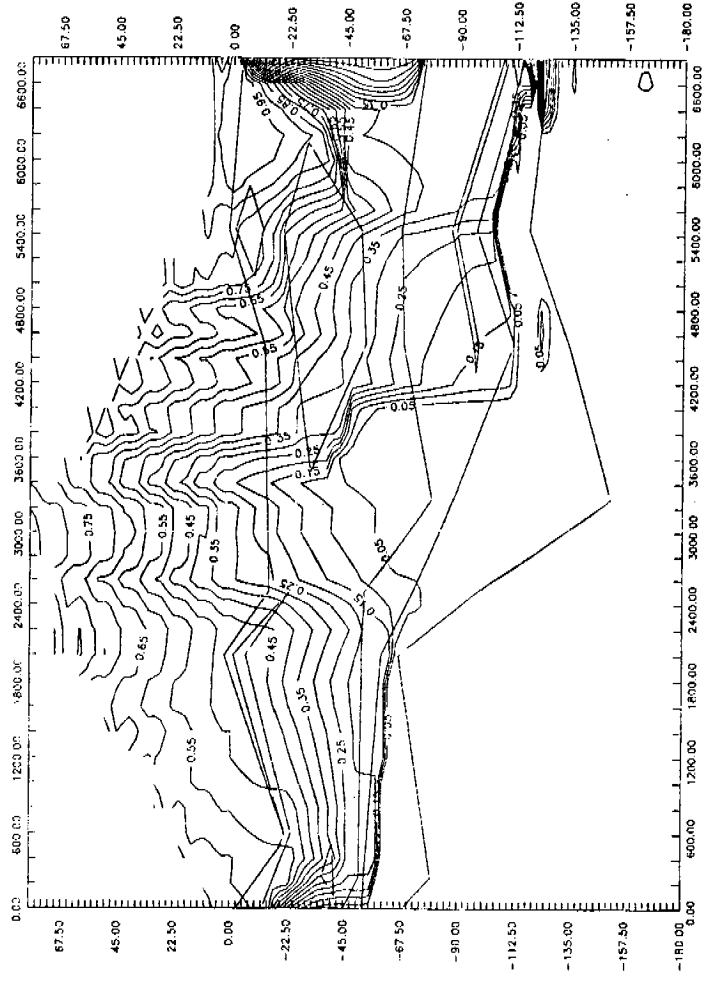
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-0.7168E-05
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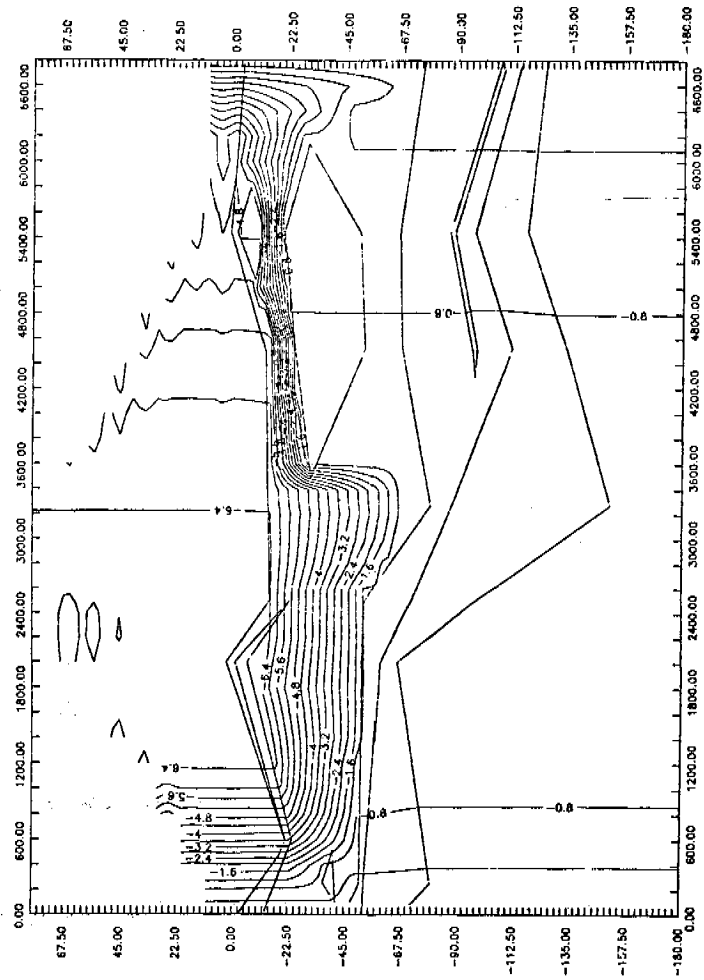
XS19 SENSITIVITY ANALYSIS RUN4, HEAD



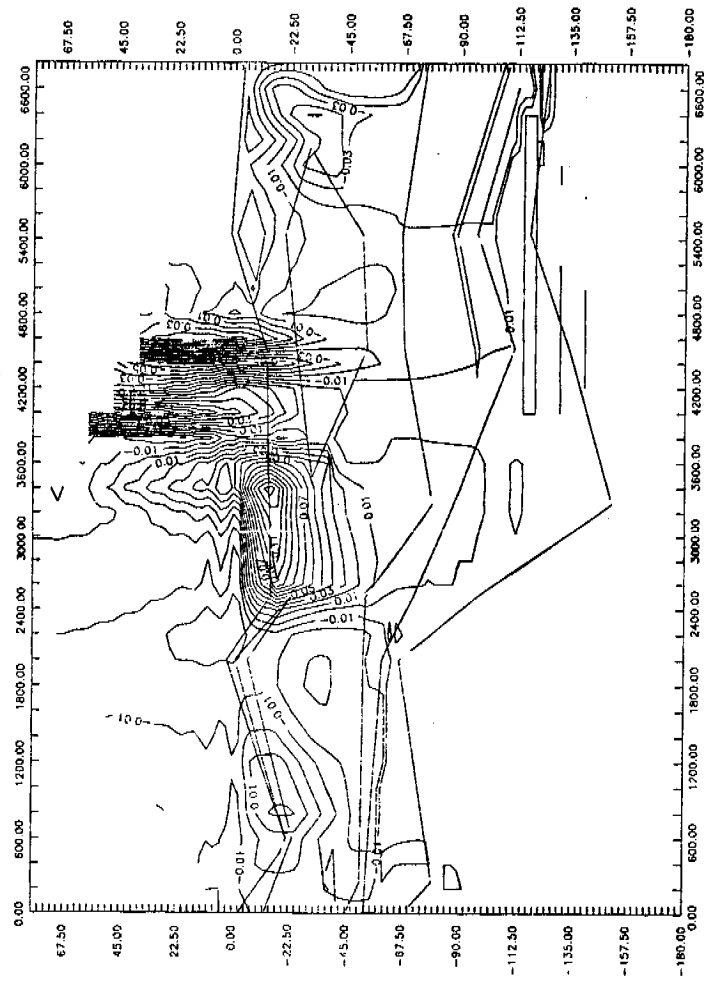
XS19 SENSITIVITY ANALYSIS RUN4, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE--RUN4, HEAD



XS19 SENSITIVITY ANALYSIS BASE--RUN4, MASS-FRACTION



*** GLOBAL FLOW BALANCE SUMMARY ***

1/9 Run # 5

CURRENT TIME STEP	RATES		AMOUNTS	
FLUID INFLOW	2.098563E+03	(LB/D)	4.864043E+05	(LB)
FLUID OUTFLOW	2.098563E+03	(LB/D)	4.864043E+05	(LB)
CHANGE IN FLUID IN REGION	0.000000E+00	(LB/D)	0.000000E+00	(LB)
RESIDUAL IMBALANCE	-2.768272E-13	(LB/D)	-6.416295E-11	(LB)
FRACTIONAL IMBALANCE			0.0000	
SOLUTE INFLOW	1.418601E+03	(LB/D)	3.288031E+05	(LB)
SOLUTE OUTFLOW	8.139451E+02	(LB/D)	1.886560E+05	(LB)
CHANGE IN SOLUTE IN REGION	6.046564E+02	(LB/D)	1.401471E+05	(LB)
RESIDUAL IMBALANCE	1.439502E-11	(LB/D)	3.336473E-09	(LB)
FRACTIONAL IMBALANCE			0.0000	

CUMULATIVE SUMMARY

	AMOUNTS	
FLUID INFLOW	1.594907E+07	(LB)
FLUID OUTFLOW	1.594907E+07	(LB)
CHANGE IN FLUID IN REGION	-9.545229E-04	(LB)
FLUID IN REGION	1.951930E+07	(LB)
RESIDUAL IMBALANCE	-4.416464E-06	(LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.376409E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.404959E+06	(LB)
SOLUTE IN REGION	6.404959E+06	(LB)
RESIDUAL IMBALANCE.....	-7.288911E-08	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

142286/15/day

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH SPECIFIED P CELL SOLUTE NET INFLOW.....	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.376409E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE - LOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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1.3369E-03
2.9817E-03
-3.1767E-03
-1.4704E-03
2.3868E-04
1.4821E-05

$143.89 \times 2 = 387.78$

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-3.1767E-03
-1.4704E-03
2.3868E-04
1.9821E-03
-4.1015E-03
-2.3423E-03
-6.0135E-04
1.1535E-03

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42 -4.7176E-04
41 -2.6807E-05
40 0.0000E+00
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38 0.0000E+00
37 0.0000E+00
36 -1.1126E-05
35 0.0000E+00
34 0.0000E+00
33 -1.747
32 -1.809
31 -4.3644E-06
30 -1.2386E-06
29 -6.3777E-08
28 -3.3495E-08
27 -4.5601E-09
26 -1.9086E-09
25 -4.7861E-10
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2 -7.8279E-42
1 -2.4179E-46

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-2.5052E-04
-5.7935E-05
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-1.6020E-05
-4.0798E-06
-4.6643E-07

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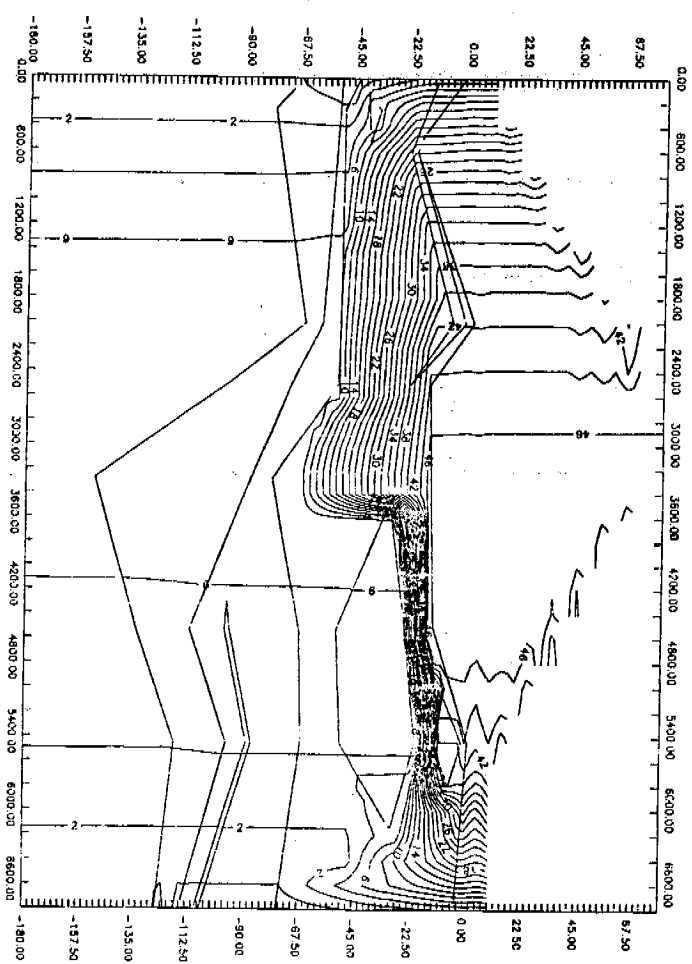
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-1.0890E-04
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-2.5052E-04
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-1.6020E-05
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-6.1213E-08

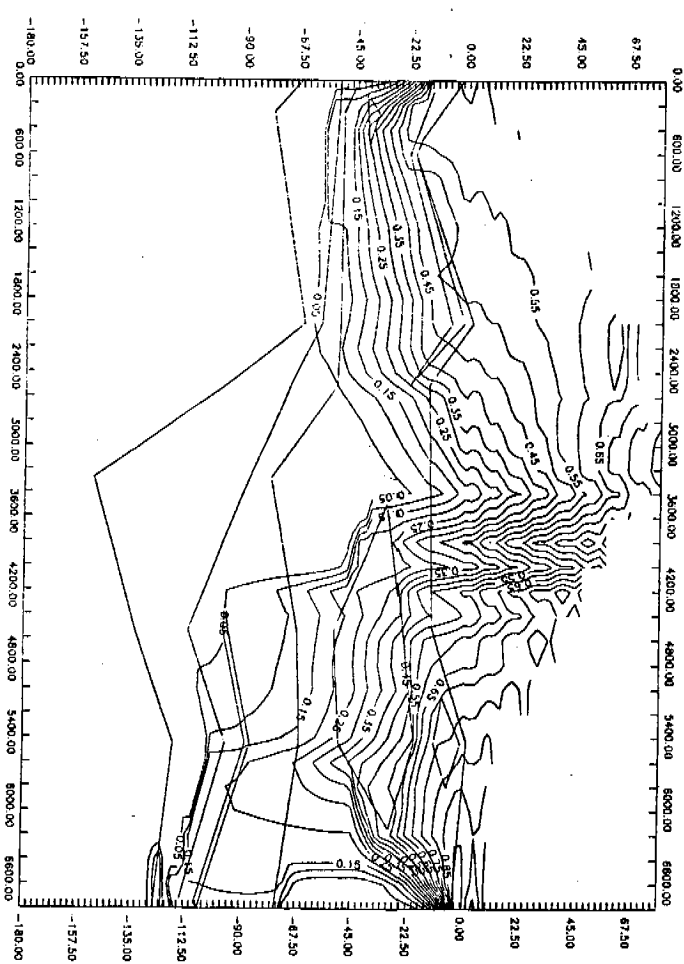
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-2.6183E-08
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-8.4101E-08
-2.0164E-07
-1.9876E-06
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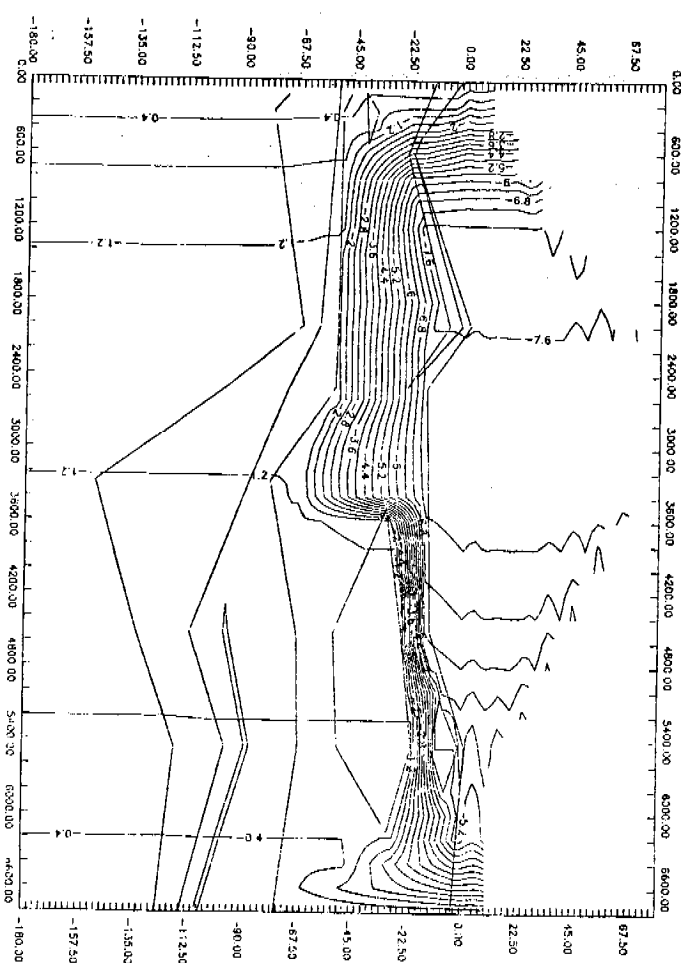
XS19 SENSITIVITY ANALYSIS RUN5, HEAD



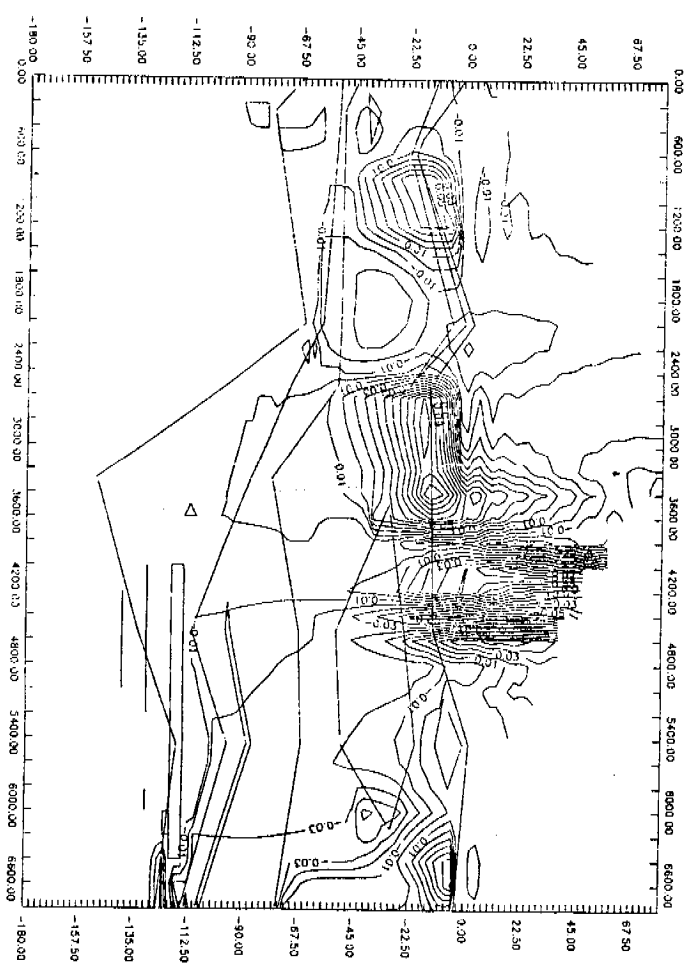
XS19 SENSITIVITY ANALYSIS RUN5, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN5, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN5, MASS-FRACTION



1/9 Sens Anal Run # 86

*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.098540E+03 (LB/D)	5.186865E+05 (LB)
FLUID OUTFLOW	2.098540E+03 (LB/D)	5.186865E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.297976E-12 (LB/D)	-3.208147E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.506292E+05 (LB)
SOLUTE OUTFLOW	8.136946E+02 (LB/D)	2.011171E+05 (LB)
CHANGE IN SOLUTE IN REGION	6.049069E+02 (LB/D)	1.495120E+05 (LB)
RESIDUAL IMBALANCE	-4.867410E-11 (LB/D)	-1.203055E-08 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.594890E+07 (LB)
FLUID OUTFLOW	1.594890E+07 (LB)
CHANGE IN FLUID IN REGION	-9.539275E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-1.171769E-05 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.374680E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.406688E+06	(LB)
SOLUTE IN REGION	6.406688E+06	(LB)
RESIDUAL IMBALANCE	-1.288392E-07	(LB)
FRACTIONAL IMBALANCE	0.0000	
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.374680E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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54	-75.05									
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51	-26.96									
50	-35.96									
49	-36.01									
48	-35.91									

307.25 x 2 = 614.50

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1.3681E-03
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-3.1531E-03
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2.5050E-04

$194.01 \times 2 = 388.02$

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-1.7613E-03
-2.1231E-04
1.3661E-02
3.0089E-03
-3.1531E-03
-1.4499E-03
2.5650E-04
1.9976E-03
-4.0881E-03
-2.3307E-03
-5.9126E-04

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-2.4568E-04
-5.6339E-05
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-1.5702E-05
-0.4700E-00

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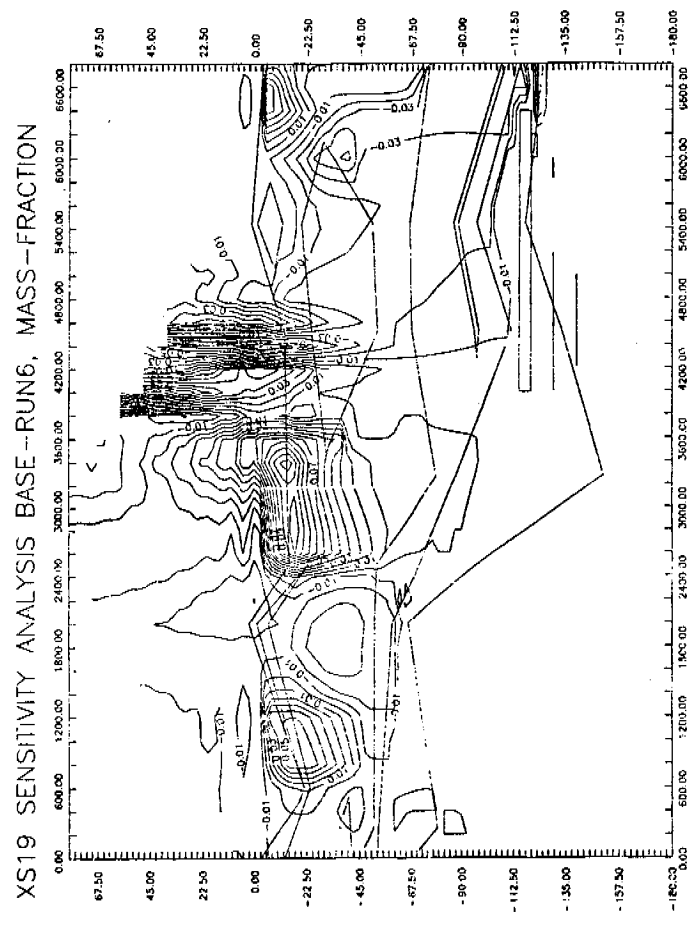
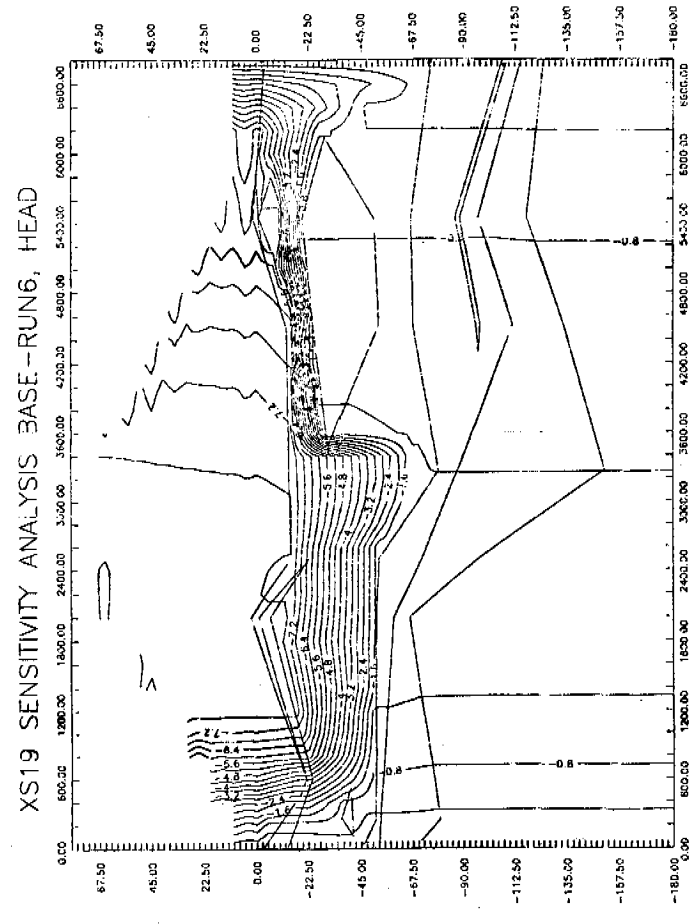
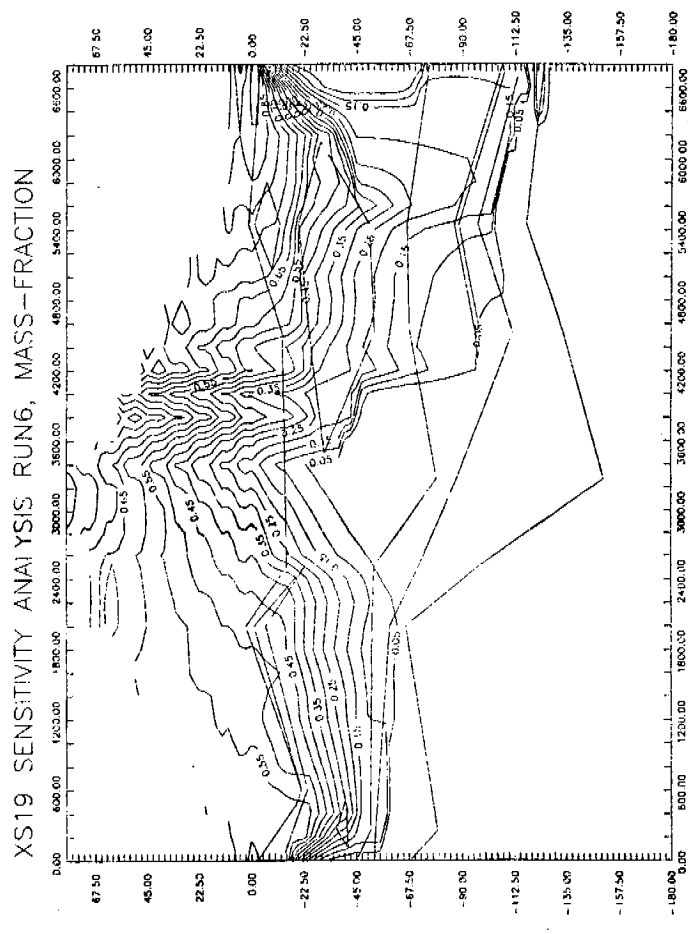
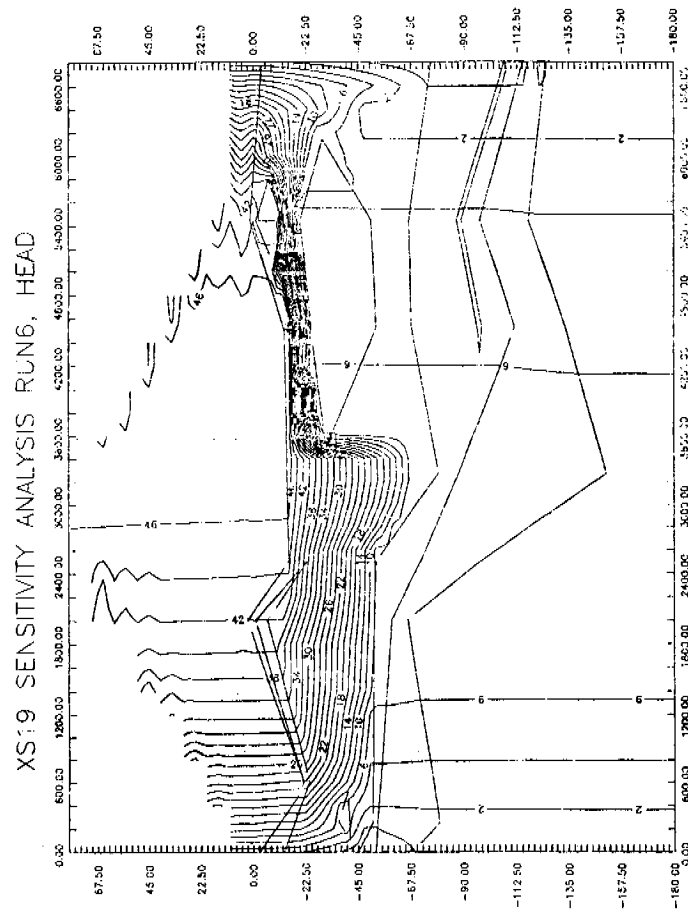
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-2.4568E-04
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-8.2224E-07
-2.5921E-07

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36	0.0000E+00
35	-6.3498E-08
34	-2.4571E-08
33	-9.3558E-09
32	-3.5554E-09
31	-2.6208E-08
30	-4.1740E-08
29	-6.4194E-08
28	-2.0181E-07
27	-1.9393E-06
26	-8.0954E-06
25	-3.8049E-05
24	-2.0092E-04
23	-1.1899E-03
22	-1.571
21	-1.563
20	-1.554
19	-1.544
18	-1.533
17	-1.522
16	-1.511
15	-1.498
14	-1.484
13	-1.470
12	-1.454
11	-1.436
10	-0.7785
9	-1.353
8	-0.5821
7	-0.7567
6	-6.4688E-04
5	-1.3406E-03
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00



*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

Yq Run #7

	RATES	AMOUNTS
FLUID INFLOW	2.098376E+03 (LB/D)	5.700881E+05 (LB)
FLUID OUTFLOW	2.098376E+03 (LB/D)	5.700881E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.180852E-12 (LB/D)	3.208147E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.854066E+05 (LB)
SOLUTE OUTFLOW	8.114795E+02 (LB/D)	2.204633E+05 (LB)
CHANGE IN SOLUTE IN REGION	6.071220E+02 (LB/D)	1.649433E+05 (LB)
RESIDUAL IMBALANCE	-2.172768E-11 (LB/D)	-5.902991E-09 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.594765E+07 (LB)
FLUID OUTFLOW	1.594765E+07 (LB)
CHANGE IN FLUID IN REGION	-9.490778E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-5.050907E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.361460E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.419908E+06	(LB)
SOLUTE IN REGION	6.419908E+06	(LB)
RESIDUAL IMBALANCE.....	-1.442383E-07	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW.....	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.361460E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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54	-88.66									
53	-64.74									
52	-13.46									
51	-26.02									
50	-34.71									
49	-34.76									
48	-34.67									
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$$331.44 \times 2 = 662.88$$

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-81.63
-11.34
-1.7150E-03
-1.7160E-04
1.4039E-03
3.0404E-03
-3.1255E-03
-1.4256E-03
2.7785E-04
2.0105E-05

194.87 x 2 = 389.74

42	-2.3162E-03
41	-5.7863E-04
40	1.1732E-03
39	-4.9217E-03
38	-3.1940E-03
37	-1.5051E-03
36	1.7601E-04
35	-6.0131E-03
34	-4.4047E-03
33	-2.8627E-03
32	-1.3587E-03
31	-7.7587E-03
30	-6.3989E-03
29	-5.1482E-03
28	-3.9837E-03
27	-1.0778E-02
26	-9.8749E-03
25	-9.1521E-03
24	-8.5970E-03
23	-8.2005E-03
22	-10.90
21	-10.81
20	-10.72
19	-10.64
18	-10.57
17	-10.49
16	-10.42
15	-10.35
14	-10.27
13	-10.19
12	-10.11
11	-10.01
10	-5.552
9	-10.67
8	-4.168
7	-5.366
6	-1.2365E-02
5	-0.1544
4	0.1484
3	8.6327E-02
2	0.1055
1	4.0845E-02

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-21.63
-11.34
-1.7150E-03
-1.7160E-04
1.4039E-03
3.0404E-03
-3.1255E-03
-1.4256E-03
2.785E-04
2.0163E-03
-4.0716E-03
-2.3162E-03
-5.7863E-04
1.1752E-03

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-74.54
-10.35
-1.151e-03
-7.4014E-05
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0.0000E+00
-2.3862E-04
-5.3770E-05
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-1.5146E-05
-3.8440E-06
-4.2864E-07

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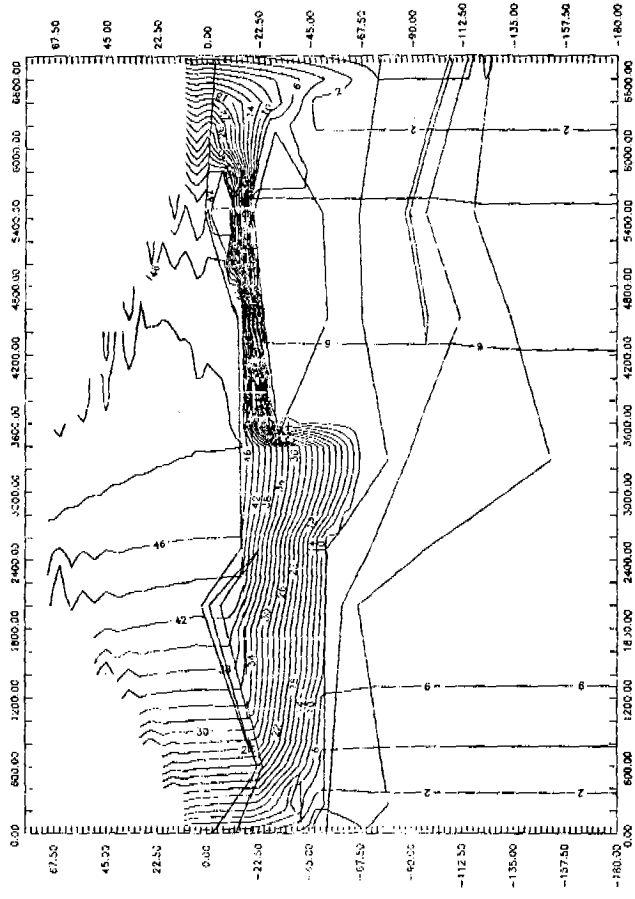
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-74.54
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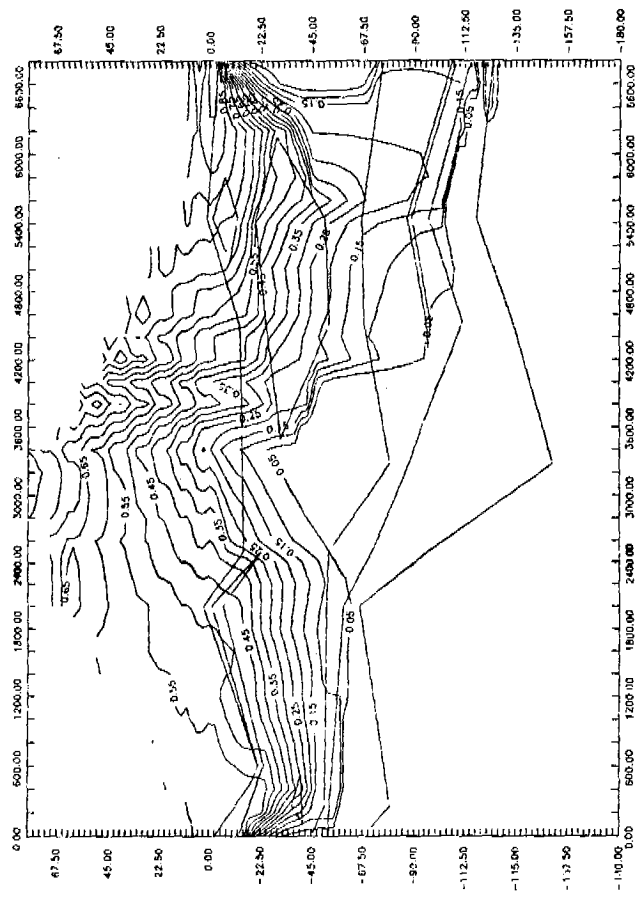
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-6.2176E-08
-2.4085E-08
-9.2063E-09
-3.5300E-09
-2.6342E-08
-4.2192E-08
-8.5293E-08
-2.0458E-07
-2.0159E-06
-8.1956E-06
-3.8467E-05
-2.0279E-04
-1.1986E-03
-1.599
-1.590
-1.581
-1.571
-1.560
-1.549
-1.537
-1.524
-1.511
-1.496
-1.479
-1.462
-0.7926
-2.396
-0.5926
-0.7704
-6.5254E-04
-1.3557E-03
0.0000E+00
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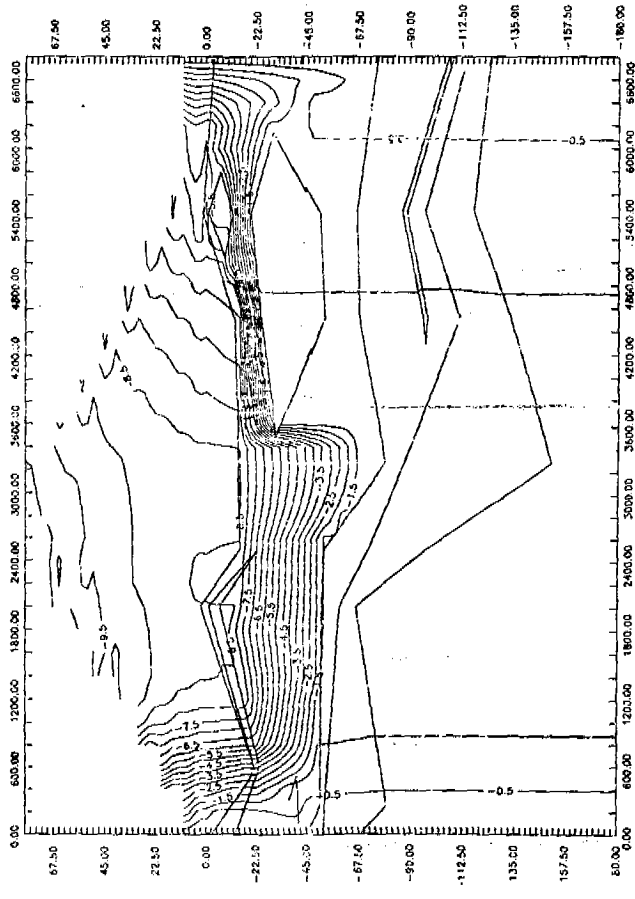
XS19 SENSITIVITY ANALYSIS RUN7, HEAD



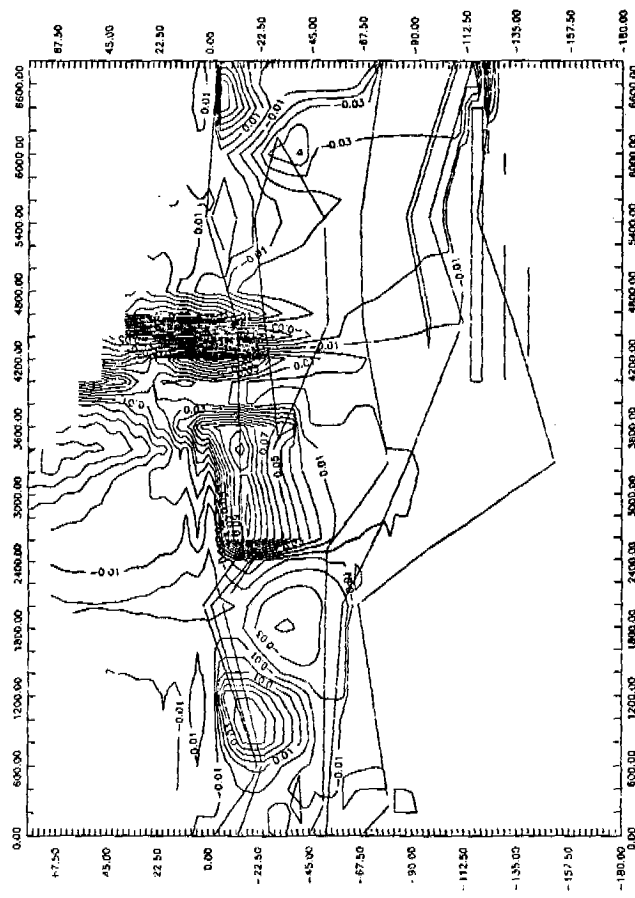
XS19 SENSITIVITY ANALYSIS RUN7, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN7, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN7, MASS-FRACTION



1/9 Sens Anal Trun #8

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP

RATES

AMOUNTS

FLUID INFLOW	2.101517E+03 (LB/D)	4.842346E+05 (LB)
FLUID OUTFLOW	2.101517E+03 (LB/D)	4.842346E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.392295E-12 (LB/D)	3.208147E-10 (LB)
FRACTIONAL IMBALANCE		0.0000

SOLUTE INFLOW	1.418601E+03 (LB/D)	3.268762E+05 (LB)
SOLUTE OUTFLOW	8.212568E+02 (LB/D)	1.892352E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.973447E+02 (LB/D)	1.376410E+05 (LB)
RESIDUAL IMBALANCE	-4.981076E-09 (LB/D)	-1.147747E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

AMOUNTS

FLUID INFLOW	1.597152E+07 (LB)
FLUID OUTFLOW	1.597152E+07 (LB)
CHANGE IN FLUID IN REGION	-9.957104E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-5.964587E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.420977E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.360391E+06	(LB)
SOLUTE IN REGION	6.360391E+06	(LB)
RESIDUAL IMBALANCE	-2.481258E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.069147E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.331075E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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	1	2	3	4	5	6	7	8	9	10
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54	-61.90									
53	-75.25									
52	-29.90									
51	-29.70									
50	-39.07									
49	-38.76									
48	-36.43									

35109 x 2 = 702.18

46 1.1993E-03
45 4.7114E-03
44 -1.4666E-03
43 2.1599E-03
42 -3.9555E-03
41 -3.1699E-04
40 3.3362E-03
39 -2.7347E-03
38 9.6677E-04
37 4.7028E-03
36 -1.2612E-03
35 2.5704E-03
34 340.9
33 -182.7
32 -179.4
31 -3.4106E-03
30 -7.9817E-03
29 -2.7148E-03
28 -1.0184E-02
27 -8.4149E-03
26 -2.0937E-02
25 -2.7157E-02
24 -5.2782E-02
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22 2.2147E-02
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19 9.6596E-03
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9 6.5520E-03
8 8.5859E-04
7 1.6024E-03
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-34.28
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-8.5787E-04
8.4235E-04
2.5857E-03
-3.4887E-03
-1.7110E-03
5.8729E-05

$192 \times 2 = 384$

42 -3.9555E-03
41 -3.1699E-04
40 3.3362E-03
39 -2.7347E-03
38 9.6677E-04
37 4.7028E-03
36 -1.2612E-03
35 2.5704E-03
34 340.9
33 -182.7
32 -179.4
31 -3.4106E-03
30 -7.9817E-03
29 -2.7148E-03
28 -1.0184E-02
27 -8.4149E-03
26 -2.0937E-02
25 -2.7157E-02
24 -5.2782E-02
23 1.7226E-02
22 2.2147E-02
21 1.9173E-02
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19 9.6596E-03
18 8.3914E-03
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16 6.3187E-03
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13 4.0879E-03
12 3.5192E-03
11 3.0186E-03
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-4.1876E-03
-2.3928E-03
-6.2238E-04

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-1.7449E-03
-3.9738E-04
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-3.1482E-04
-7.8656E-05
0.0000E+00
0.0000E+00
-1.9254E-05
-4.1039E-06

40	0.0000E+00
39	-7.7475E-07
38	-2.1788E-07
37	-4.4557E-08
36	0.0000E+00
35	-3.8171E-08
34	-1.3149E-08
33	-4.3613E-09
32	-1.4226E-09
31	-1.0721E-08
30	-1.8646E-08
29	-4.2327E-08
28	-1.1234E-07
27	-1.2045E-06
26	-5.1807E-06
25	-2.5588E-05
24	-1.4286E-04
23	-9.0929E-04
22	-1.024
21	-1.019
20	-1.013
19	-1.007
18	-1.000
17	-0.9927
16	-0.9847
15	-0.9759
14	-0.9664
13	-0.9560
12	-0.9448
11	-0.9326
10	-0.9023
9	-1.524
8	-0.3767
7	-0.4899
6	-4.7916E-04
5	-4.4775E-04
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00

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38 0.0000E+00
37 0.0000E+00
36 -9.7599E-06
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34 0.0000E+00
33 -1.271
32 -1.316
31 -3.1502E-06
30 -9.0228E-07
29 -4.5844E-08
28 -2.4139E-08
27 -3.2595E-09
26 -1.3586E-09
25 -3.3878E-10
24 -8.0883E-11
23 0.0000E+00
22 0.0000E+00
21 0.0000E+00
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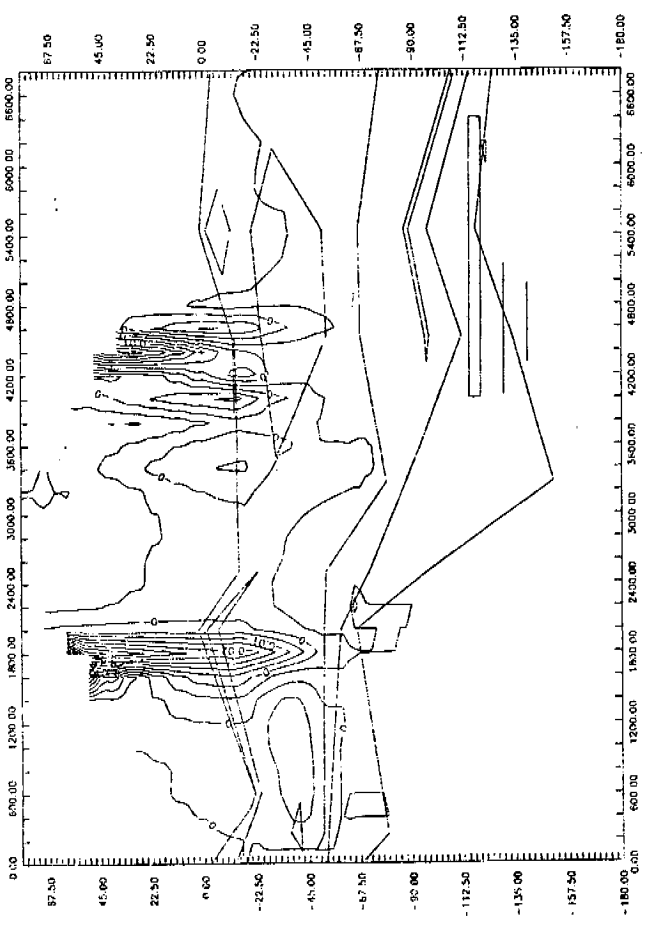
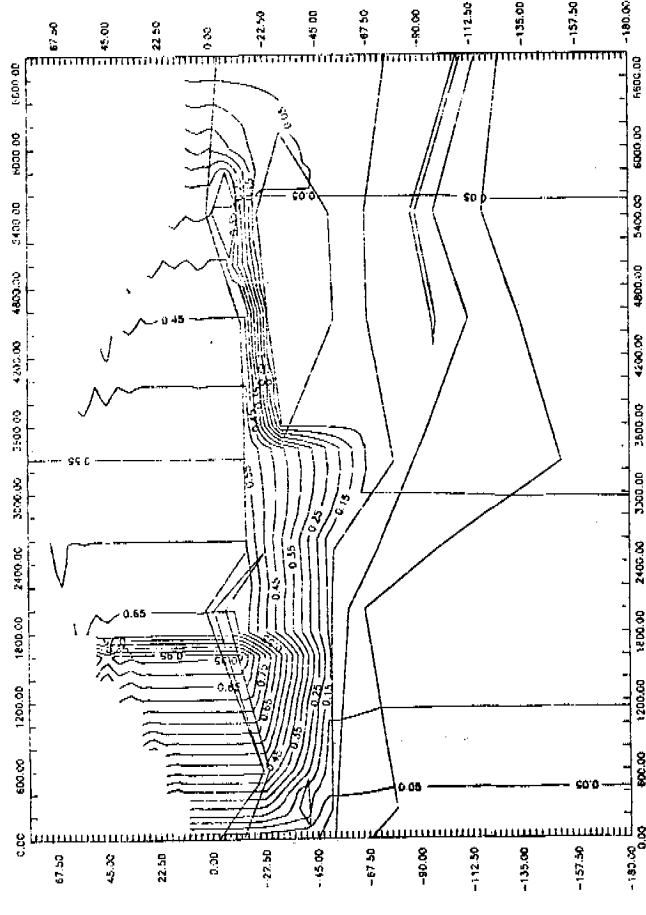
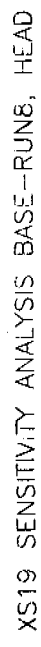
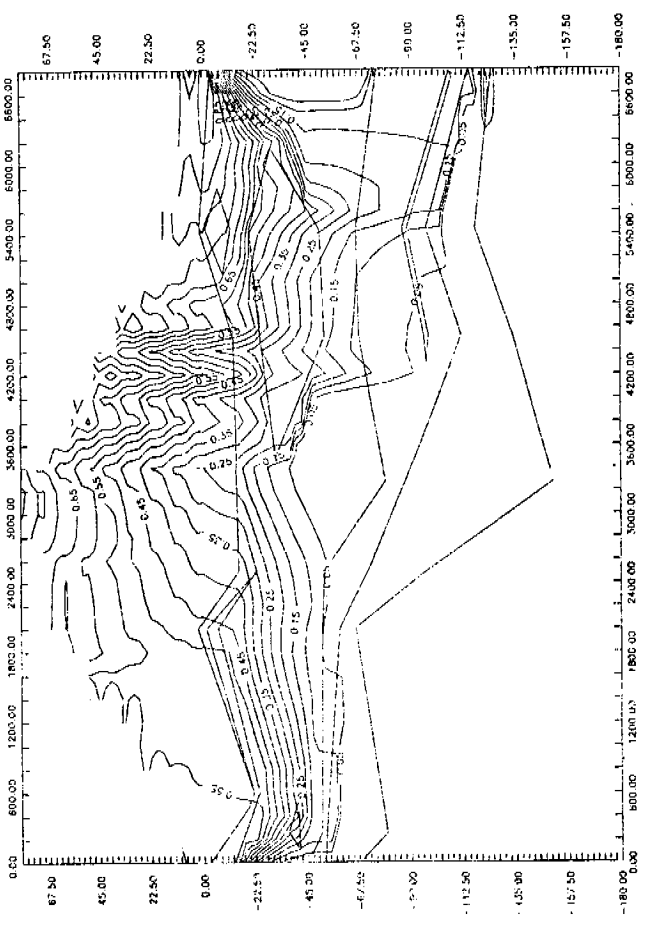
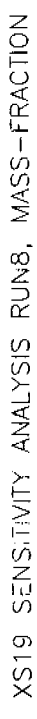
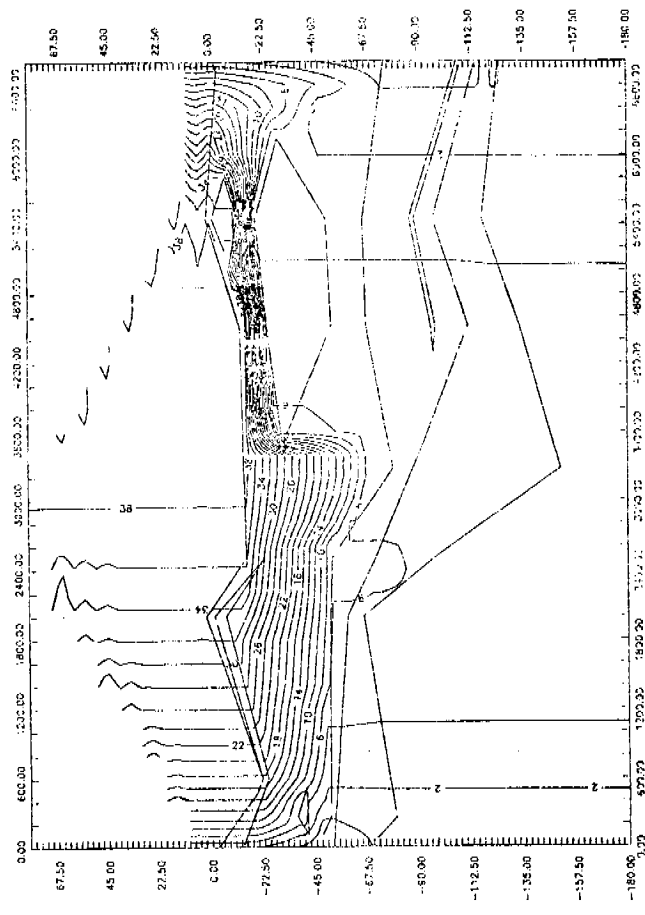
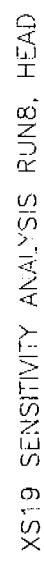
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*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

1/9 Run 9

	RATES	AMOUNTS
FLUID INFLOW	2.100678E+03 (LB/D)	5.144406E+05 (LB)
FLUID OUTFLOW	2.100678E+03 (LB/D)	5.144406E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.572026E-12 (LB/D)	-3.849777E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.474051E+05 (LB)
SOLUTE OUTFLOW	8.296288E+02 (LB/D)	2.031700E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.889726E+02 (LB/D)	1.442351E+05 (LB)
RESIDUAL IMBALANCE	-1.021817E-11 (LB/D)	-2.502355E-09 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.596515E+07 (LB)
FLUID OUTFLOW	1.596515E+07 (LB)
CHANGE IN FLUID IN REGION	-9.400313E-04 (LB)
FLUID IN REGION	1.951930E+07 (LB)
RESIDUAL IMBALANCE	-6.332113E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.506587E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.274781E+06	(LB)
SOLUTE IN REGION	6.274781E+06	(LB)
RESIDUAL IMBALANCE.....	-8.212857E-08	(LB)
FRACTIONAL IMBALANCE	0.0000	
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.078137E+07	(LB) 142286
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.078137E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW.....	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.078137E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.506587E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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54	-120.1									
53	-146.3									
52	-3.6454E-03									
51	-1.4327E-03									
50	-18.82									
49	-18.64									
48	-18.47									

340.02 x 2 = 680.24

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-2.9220E-03
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$208.48 \times 2 = 417.35$

42 -3.5291E-03
41 5.8966E-05
40 3.6605E-03
39 -2.4632E-03
38 1.1846E-03
37 4.8663E-03
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34 340.5
33 -183.1
32 -179.8
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29 -2.7263E-03
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27 -8.4308E-03
26 -2.0961E-02
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16 6.1605E-03
15 5.3155E-03
14 4.5763E-03
13 3.9288E-03
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4.1713E-04
2.1306E-03
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-5.1768E-04

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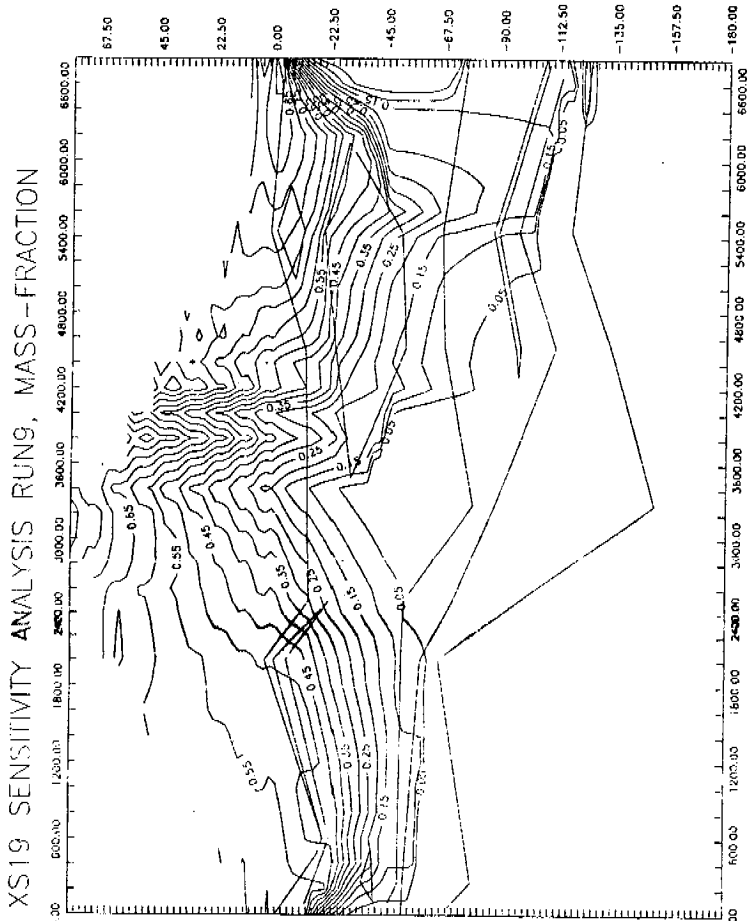
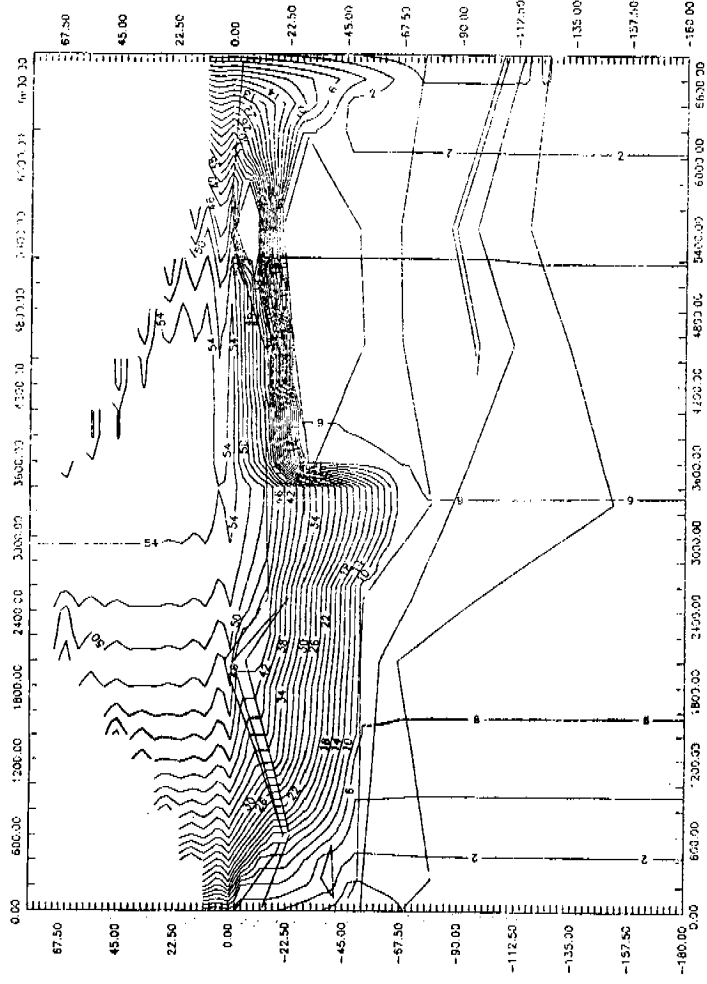
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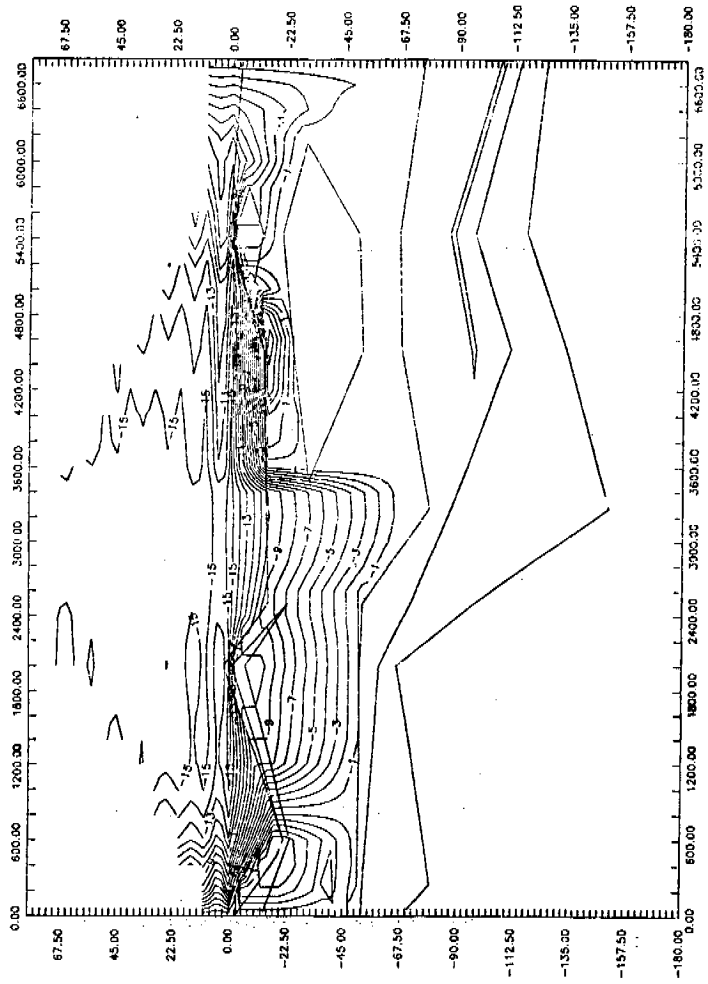
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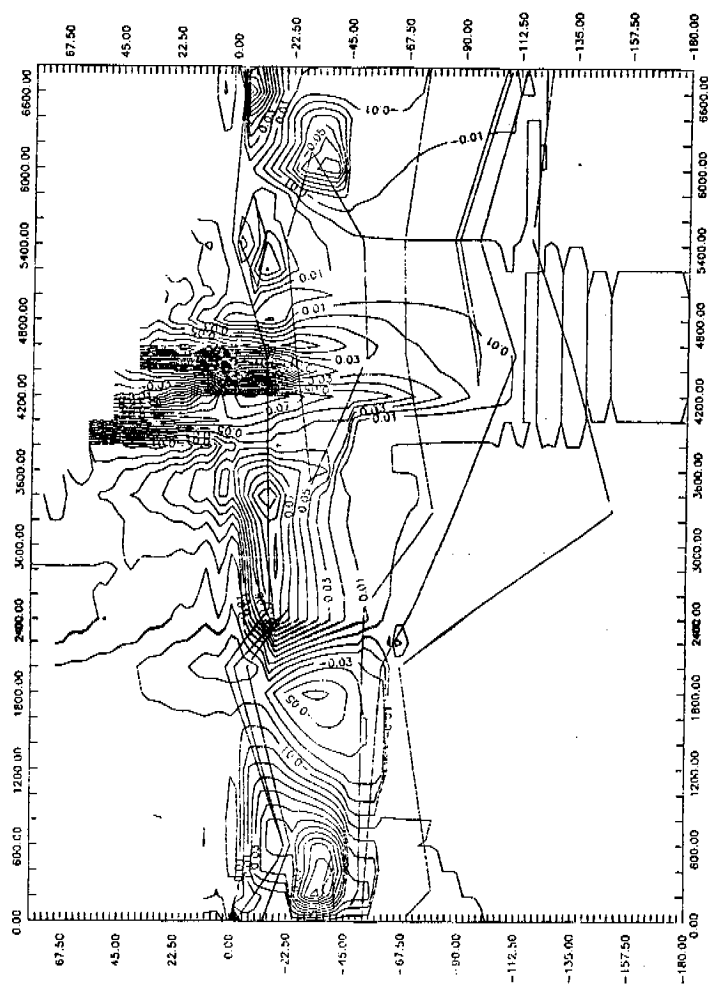
XS19 SENSITIVITY ANALYSIS RUN9, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN9, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN9, MASS-FRACTION



1/9 Sans Anal
 Run #
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*** GLOBAL FLOW BALANCE SUMMARY ***
 CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.102054E+03 (LB/D)	5.124957E+05 (LB)
FLUID OUTFLOW	2.102054E+03 (LB/D)	5.124957E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	2.105367E-12 (LB/D)	5.133036E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.458652E+05 (LB)
SOLUTE OUTFLOW	8.476149E+02 (LB/D)	2.066546E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.709866E+02 (LB/D)	1.392106E+05 (LB)
RESIDUAL IMBALANCE	-4.894320E-09 (LB/D)	-1.193270E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597560E+07 (LB)
FLUID OUTFLOW	1.597560E+07 (LB)
CHANGE IN FLUID IN REGION	-9.557630E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-6.919332E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.628937E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.152430E+06	(LB)
SOLUTE IN REGION	6.152430E+06	(LB)
RESIDUAL IMBALANCE	-2.412219E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

1392.33

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.069365E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.541221E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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-2.9195E-06

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33	-1.0843E-08
32	-3.6118E-09
31	-2.2635E-08
30	-3.1770E-08
29	-5.9980E-08
28	-1.3936E-07
27	-1.3790E-06
26	-5.7216E-06
25	-2.7778E-05
24	-1.5302E-04
23	-9.5700E-04
22	-1.019
21	-1.014
20	-1.009
19	-1.003
18	-0.9962
17	-0.9888
16	-0.9807
15	-0.9719
14	-0.9623
13	-0.9518
12	-0.9404
11	-0.9281
10	-0.4992
9	-1.515
8	-0.3744
7	-0.4871
6	-5.0355E-04
5	-9.9622E-04
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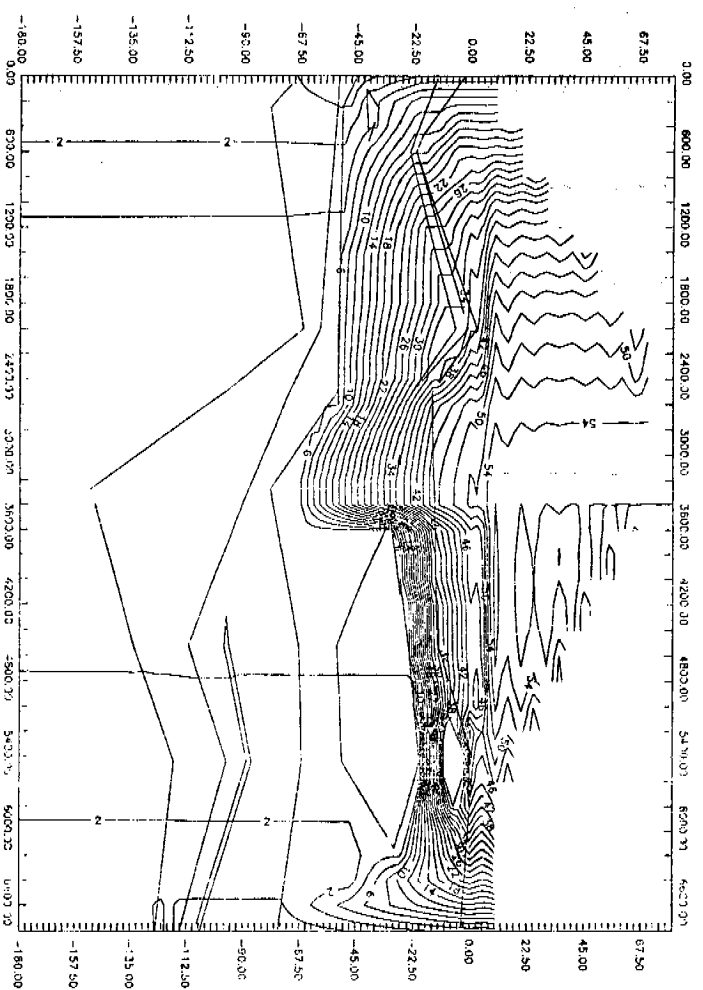
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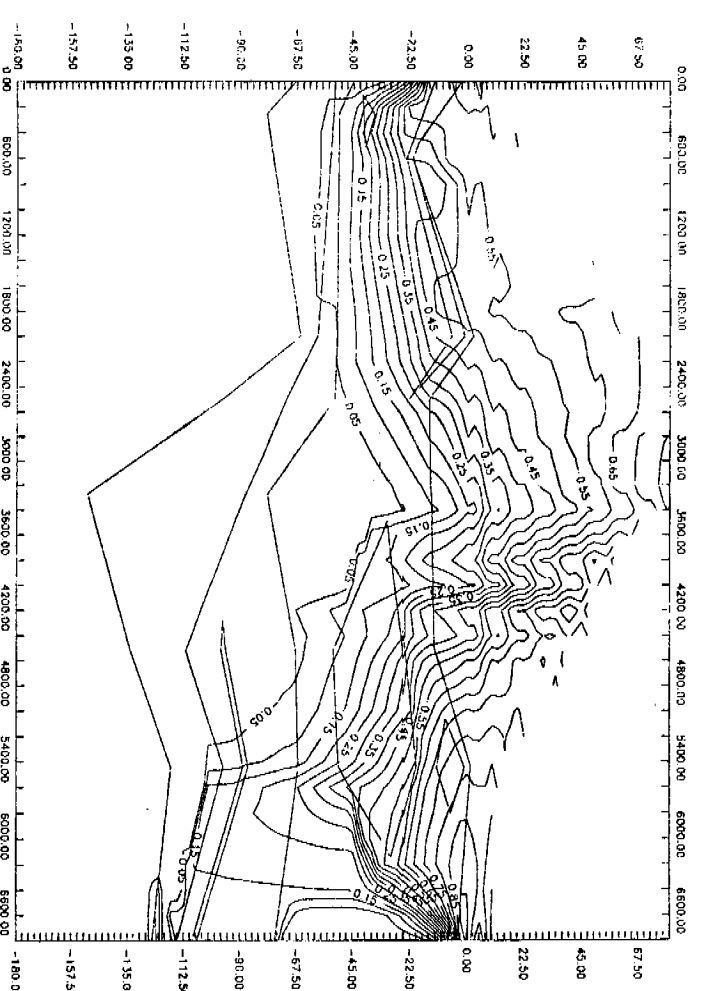
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-7.5320E-07
-2.5480E-07

37	-6.2914E-06
36	0.0000E+00
35	-7.4006E-08
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33	-1.0843E-08
32	-3.6118E-09
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30	-3.1770E-08
29	-5.9980E-08
28	-1.3936E-07
27	-1.3790E-06
26	-5.7216E-06
25	-2.7778E-05
24	-1.5302E-04
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22	-1.019
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20	-1.009
19	-1.003
18	-0.9962
17	-0.9888
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15	-0.9719
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13	-0.9518
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10	-0.4992
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8	-0.3744
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4	0.0000E+00
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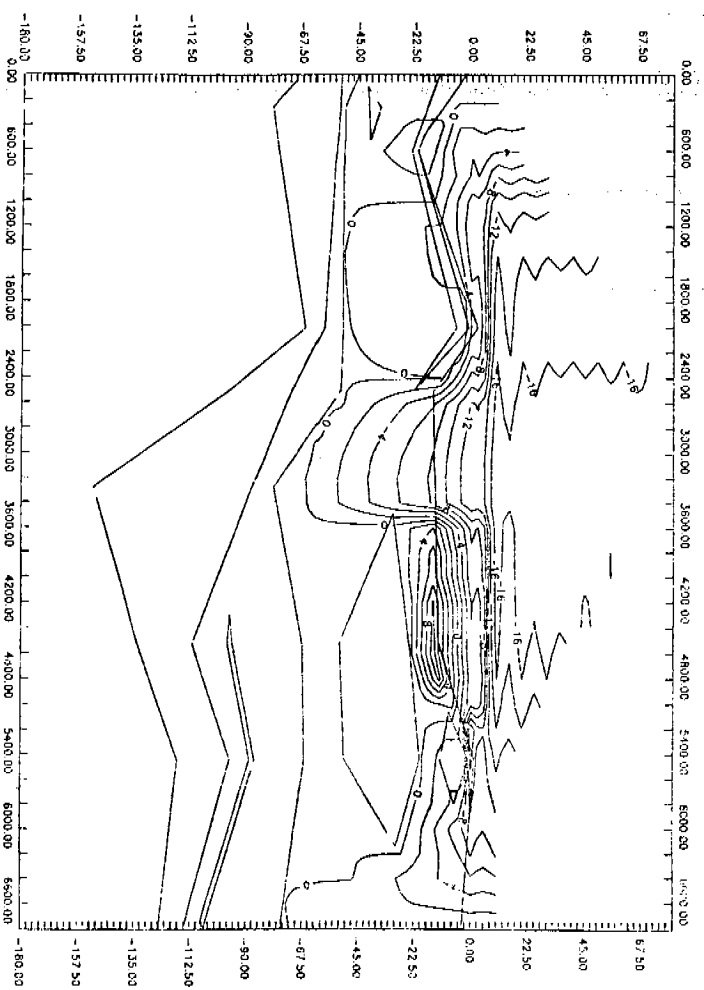
XS19 SENSITIVITY ANALYSIS RUN10, HEAD



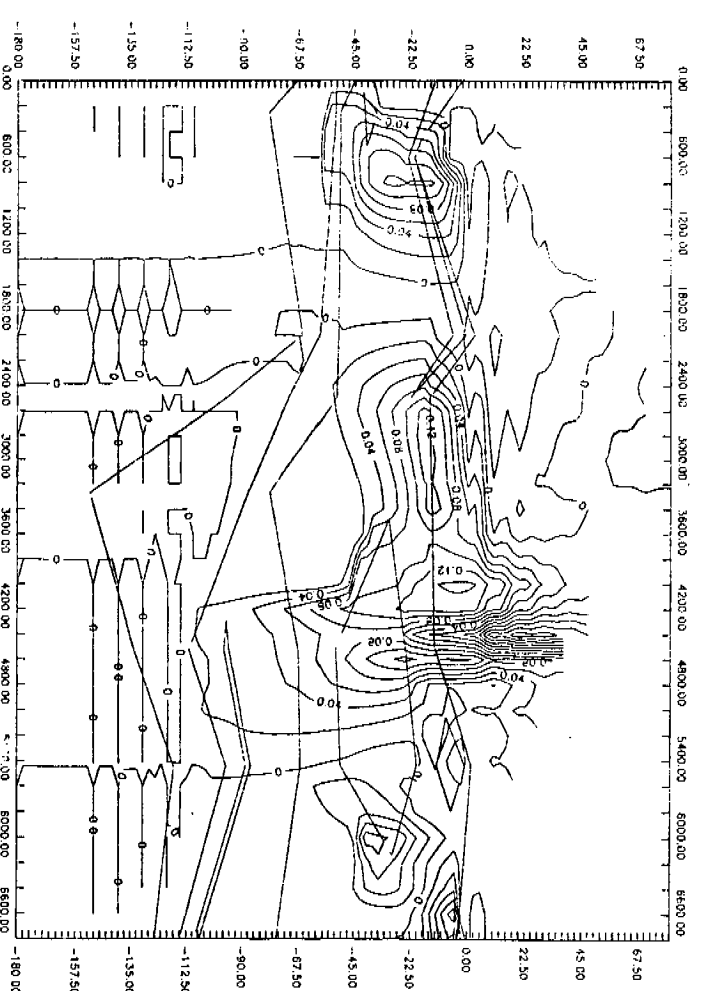
XS19 SENSITIVITY ANALYSIS RUN10, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN10, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN10, MASS-FRACTION



*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

1/9 RUN # 11

	RATES	AMOUNTS
FLUID INFLOW	2.101780E+03 (LB/D)	4.904419E+05 (LB)
FLUID OUTFLOW	2.101780E+03 (LB/D)	4.904419E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	0.000000E+00 (LB/D)	0.000000E+00 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.310249E+05 (LB)
SOLUTE OUTFLOW	8.560583E+02 (LB/D)	1.997577E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.625432E+02 (LB/D)	1.312672E+05 (LB)
RESIDUAL IMBALANCE	-5.010764E-09 (LB/D)	-1.169241E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597353E+07 (LB)
FLUID OUTFLOW	1.597353E+07 (LB)
CHANGE IN FLUID IN REGION	-5.459281E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-1.104121E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.680037E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.101331E+06	(LB)
SOLUTE IN REGION	6.101331E+06	(LB)
RESIDUAL IMBALANCE	-2.399284E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.069391E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.592579E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

POSITIVE IS INTO THE REGION
FLUID (LB/D)

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46 1.2688E-03
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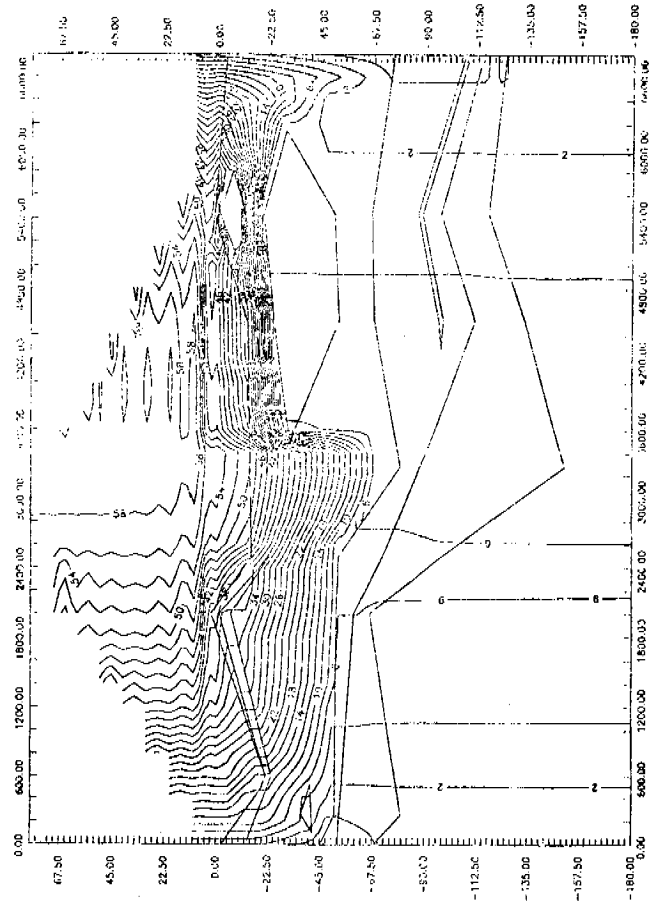
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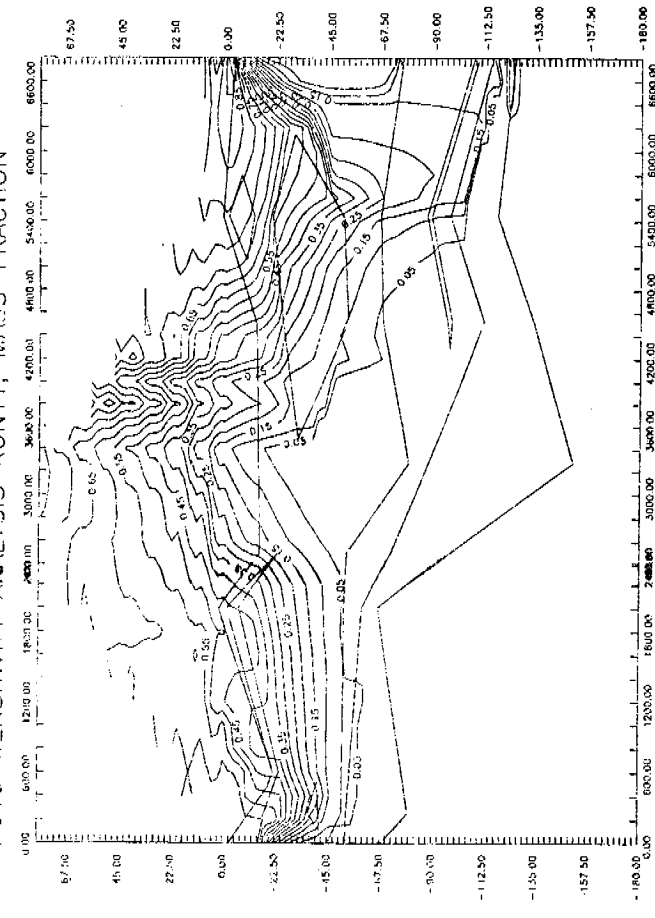
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-3.7151E-05
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-1.1436E-05
-2.9975E-06

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38	-2.7305E-07
37	-6.8614E-08
36	0.0000E+00
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34	-3.2539E-08
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30	-3.6612E-08
29	-6.8457E-08
28	-1.5738E-07
27	-1.5390E-06
26	-6.3264E-06
25	-3.0414E-05
24	-1.6560E-04
23	-1.0200E-03
22	-1.123
21	-1.118
20	-1.112
19	-1.105
18	-1.098
17	-1.090
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12	-1.037
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7	-0.5377
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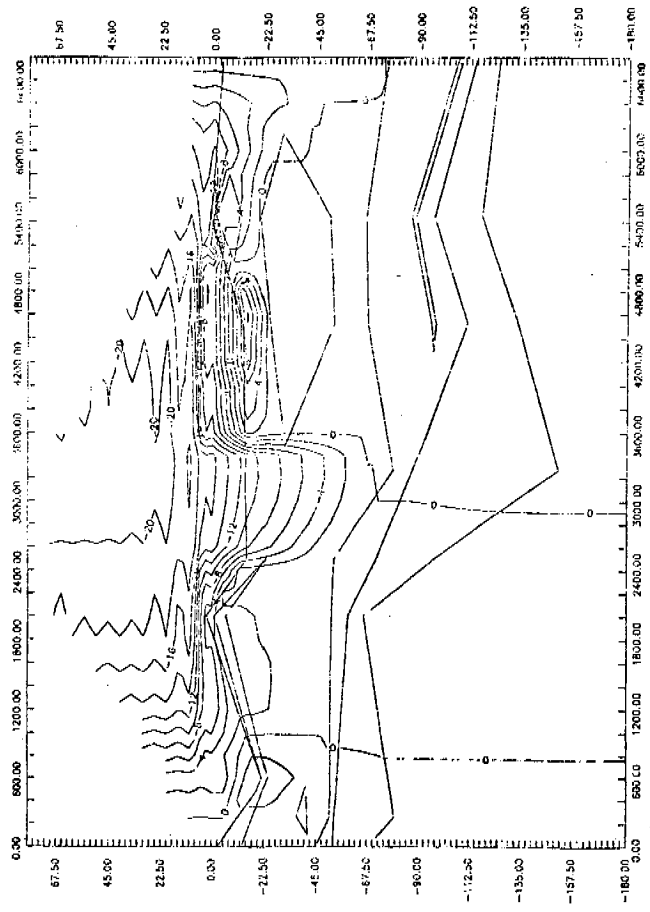
XS19 SENSITIVITY ANALYSIS RUN11, HEAD



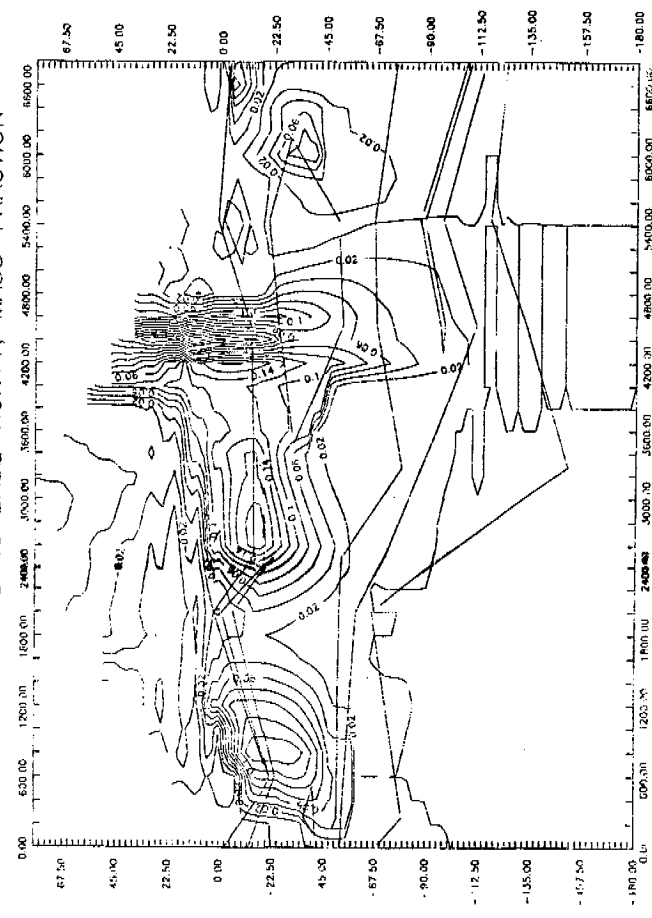
XS19 SENSITIVITY ANALYSIS RUN11, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN11, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN11, MASS-FRACTION



SEWS. ANAL
Run # 12

*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.101680E+03 (LB/D)	4.764345E+05 (LB)
FLUID OUTFLOW	2.101680E+03 (LB/D)	4.764345E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.132160E-12 (LB/D)	-2.566518E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.215859E+05 (LB)
SOLUTE OUTFLOW	8.640564E+02 (LB/D)	1.958748E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.545451E+02 (LB/D)	1.257111E+05 (LB)
RESIDUAL IMBALANCE	-5.059339E-09 (LB/D)	-1.146913E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597276E+07 (LB)
FLUID OUTFLOW	1.597276E+07 (LB)
CHANGE IN FLUID IN REGION	-9.409922E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB) <u>1392.33</u>
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW.....	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW.....	1.069322E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.623490E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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54	-57.79									
53	-70.13									
52	-27.85									
51	-27.65									
50	-36.38									
49	-30.08									
48	-35.11									

372.09 = 654.18

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-1.5111E-03
1.6143E-04
1.6764E-03
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-2.9482E-03
-1.2853E-03
3.8714E-04

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-5.4845E-04

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-1.7693E-04
-3.7377E-05
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-1.1529E-05
-5.0442E-06

39 -9.1548E-05
 38 0.0000E+00
 37 0.0000E+00
 36 -9.2541E-06
 35 0.0000E+00
 34 0.0000E+00
 33 -0.6951
 32 -0.7199
 31 -1.5608E-06
 30 -4.1898E-07
 29 -2.0302E-08
 28 -1.0319E-08
 27 -1.3556E-09
 26 -5.5305E-10
 25 -1.3573E-10
 24 -3.1914E-11
 23 0.0000E+00
 22 0.0000E+00
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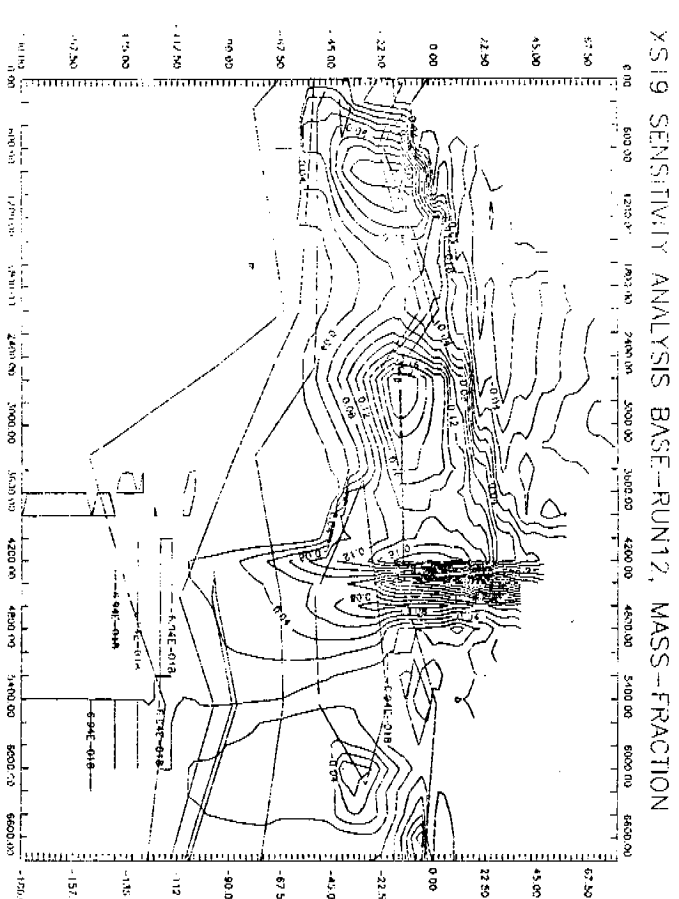
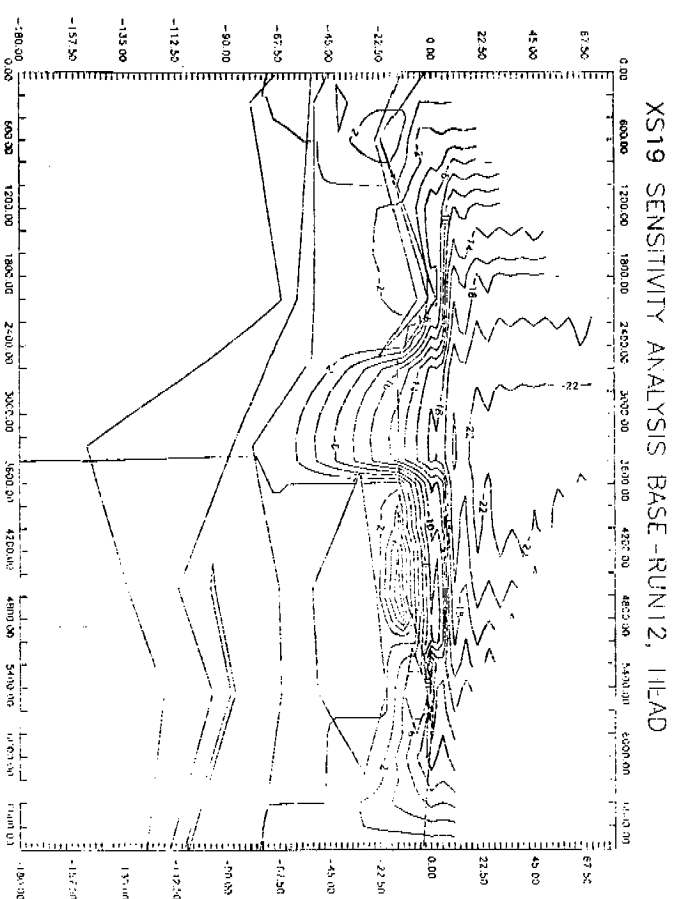
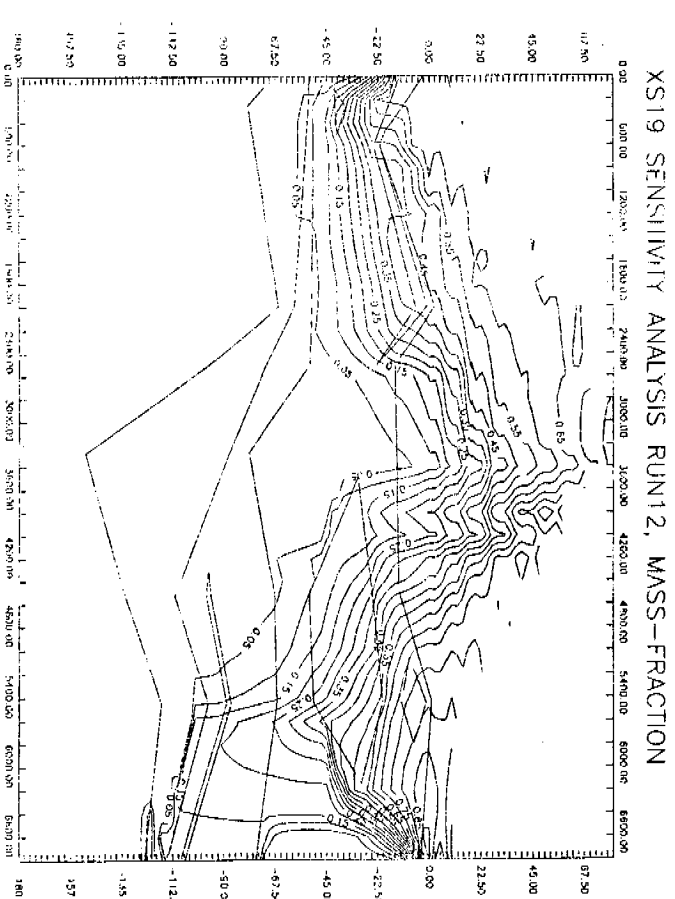
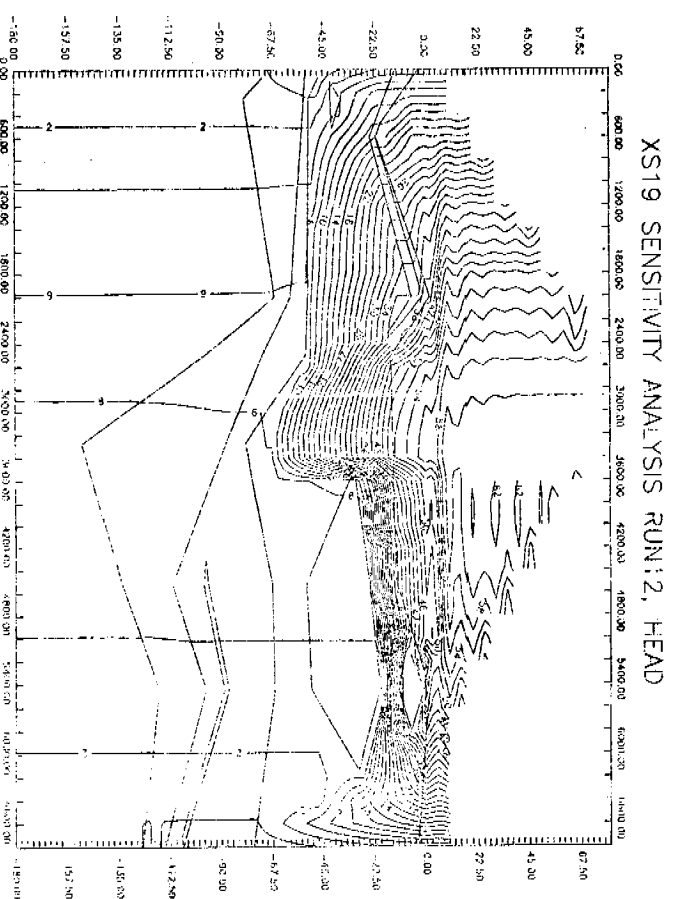
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-1.1529E-05
-3.0442E-06
-3.5110E-07
0.0000E+00
-8.2242E-07
-2.6427E-07

37	-7.2102E-00
36	0.0000E+00
35	-8.5996E-08
34	-3.4601E-08
33	-1.3127E-08
32	-4.5289E-09
31	-2.6393E-08
30	-3.9686E-08
29	-7.3781E-08
28	-1.6856E-07
27	-1.6368E-06
26	-6.6906E-06
25	-3.1972E-05
24	-1.7284E-04
23	-1.0547E-03
22	-1.185
21	-1.179
20	-1.173
19	-1.166
18	-1.158
17	-1.150
16	-1.140
15	-1.130
14	-1.119
13	-1.108
12	-1.095
11	-1.081
10	-0.5827
9	-1.706
8	-0.4365
7	-0.5078
6	-5.6108E-04
5	-1.1285E-03
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00



1/9 Sens Anal Run # 13

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	2.101473E+03 (LB/D)	4.617019E+05 (LB)
FLUID OUTFLOW	2.101473E+03 (LB/D)	4.617019E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	2.920428E-13 (LB/D)	6.416295E-11 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.116723E+05 (LB)
SOLUTE OUTFLOW	8.720269E+02 (LB/D)	1.915877E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.465746E+02 (LB/D)	1.200846E+05 (LB)
RESIDUAL IMBALANCE	-5.291523E-09 (LB/D)	-1.162568E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597119E+07 (LB)
FLUID OUTFLOW	1.597119E+07 (LB)
CHANGE IN FLUID IN REGION	-9.325042E-04 (LB)
FLUID IN REGION	1.930629E+07 (LB)

FRACTIONAL IMBALANCE	0.0000	
SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.739898E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.041469E+06	(LB)
SOLUTE IN REGION	6.041469E+06	(LB)
RESIDUAL IMBALANCE.....	-2.521552E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW.....	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.068959E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.648124E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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53	-68.14									
52	-27.06									
51	-26.86									
50	-35.33									
49	-35.05									
48	-34.74									

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1.6644E-03
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-2.9648E-03
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-2.9648E-03
-1.3035E-03
3.6770E-04
2.0794E-03
-4.0305E-03
-2.2951E-03
-5.6974E-04

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41 -2.0272E-05
40 0.0000E+00
39 -9.2212E-05
38 0.0000E+00
37 0.0000E+00
36 -9.2293E-06
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34 0.0000E+00
33 -0.6655
32 -0.6891
31 -1.4857E-06
30 -3.9675E-07
29 -1.9177E-08
28 -9.7180E-09
27 -1.2745E-09
26 -5.1915E-10
25 -1.2729E-10
24 -2.9905E-11
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-1.1693E-04
-3.7742E-05
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-1.1602E-05
-3.1120E-06

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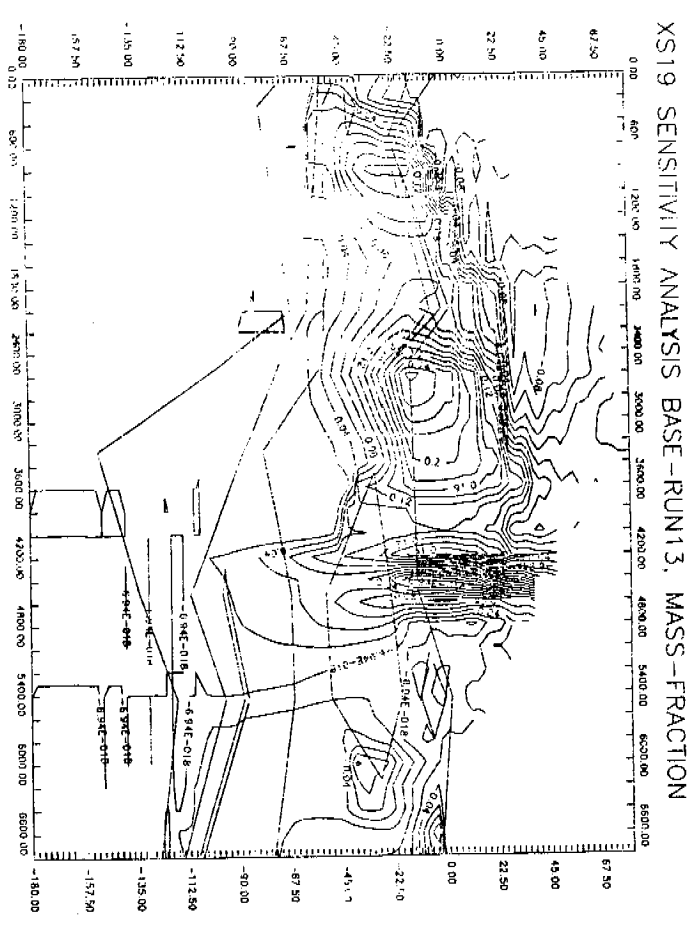
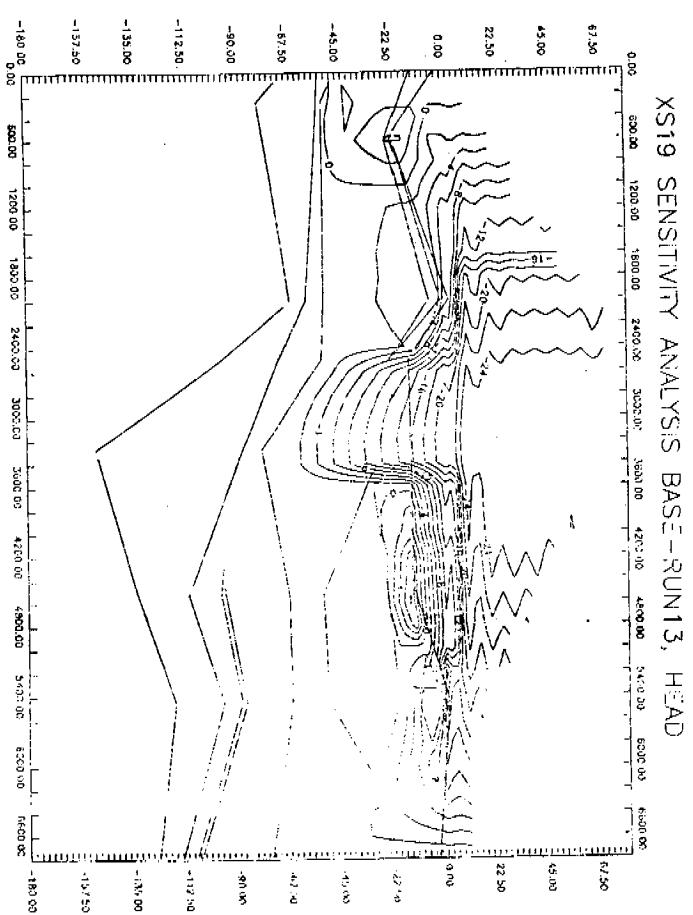
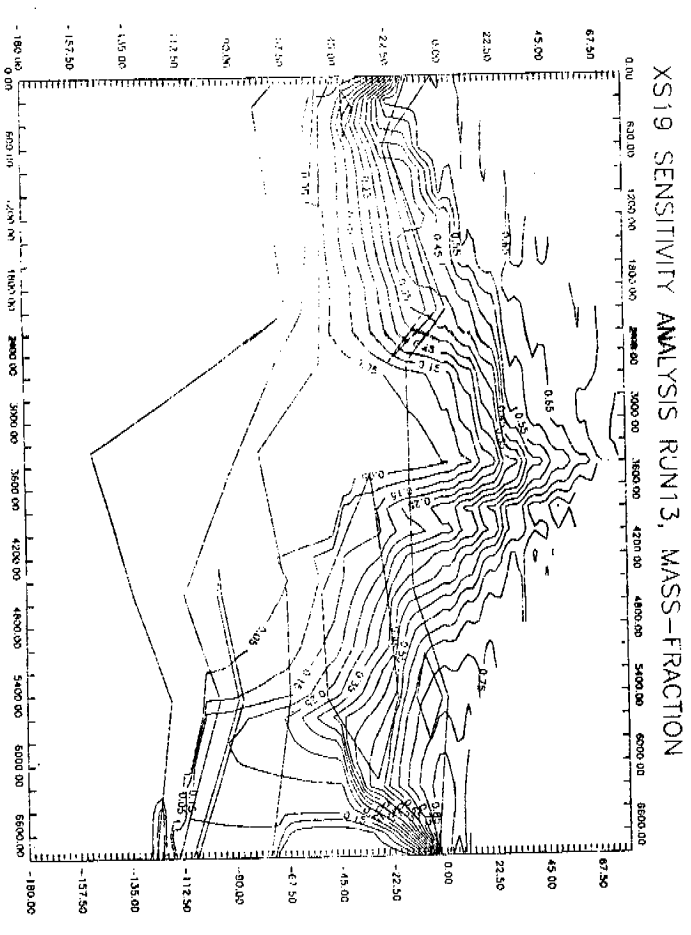
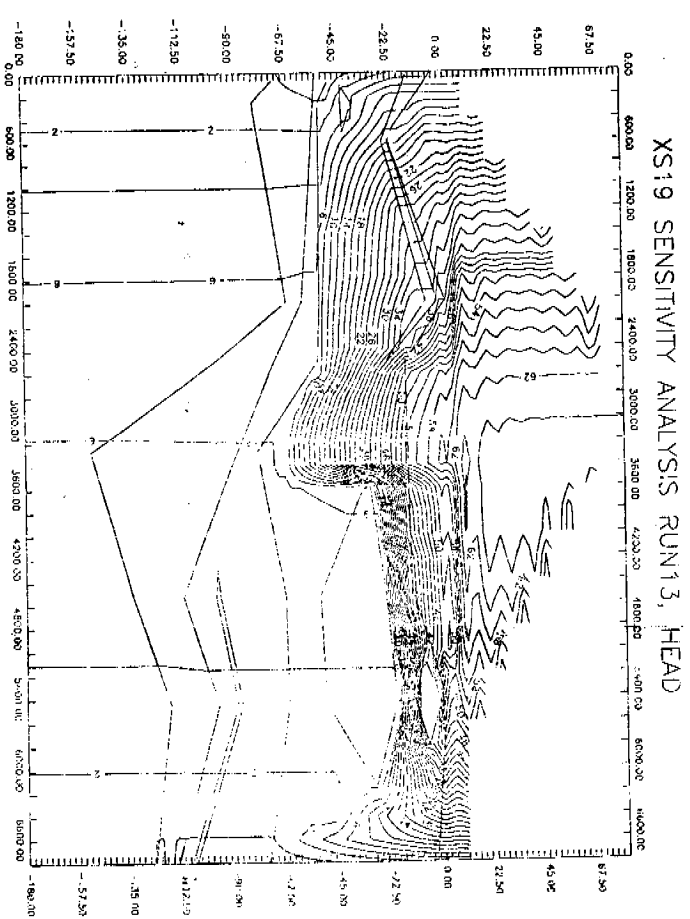
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49				0.0000E+00
48				0.0000E+00
47				-1.7693E-04
46				-3.7742E-05
45				0.0000E+00
44				0.0000E+00
43				-1.1682E-05
42				-3.1228E-06
41				-3.7451E-07
40				0.0000E+00
39				-8.6734E-07
38				-3.0304E-07

37	-7.8557E-06
36	0.0000E+00
35	-9.4059E-08
34	-3.8239E-08
33	-1.4710E-08
32	-5.1774E-09
31	-3.2401E-08
30	-4.5132E-08
29	-8.3112E-08
28	-1.8796E-07
27	-1.8041E-06
26	-7.3069E-06
25	-3.4572E-05
24	-1.8468E-04
23	-1.1096E-03
22	-1.289
21	-1.282
20	-1.275
19	-1.267
18	-1.259
17	-1.250
16	-1.240
15	-1.229
14	-1.217
13	-1.205
12	-1.191
11	-1.176
10	-0.6350
9	-1.923
8	-0.4753
7	-0.0104
6	-5.9428E-04
5	-1.2079E-03
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00



*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

Yq Run 14

	RATES	AMOUNTS
FLUID INFLOW	2.101430E+03 (LB/D)	4.601045E+05 (LB)
FLUID OUTFLOW	2.101430E+03 (LB/D)	4.601045E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-8.791522E-13 (LB/D)	-1.924888E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.106003E+05 (LB)
SOLUTE OUTFLOW	8.713087E+02 (LB/D)	1.907715E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.472927E+02 (LB/D)	1.198288E+05 (LB)
RESIDUAL IMBALANCE	-5.271104E-09 (LB/D)	-1.154099E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597087E+07 (LB)
FLUID OUTFLOW	1.597087E+07 (LB)
CHANGE IN FLUID IN REGION	-9.311080E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-9.606990E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.735971E+06	(LB)
CHANGE IN SOLUTE IN REGION	6.045396E+06	(LB)
SOLUTE IN REGION	6.045396E+06	(LB)
RESIDUAL IMBALANCE	-2.519910E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	

CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.068954E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.644144E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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	1	2	3	4	5	6	7	8	9	10
61										
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59										
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55										
54	-62.94									
53	-68.40									
52	-26.52									
51	-25.61									
50	-33.77									
49	-33.54									
48	-33.29									

317.00 x 2 = 634.12

46 1.3560E-03
45 4.8577E-03
44 -1.3308E-03
43 2.2852E-03
42 -3.8410E-03
41 -2.1378E-04
40 3.4276E-03
39 -2.6560E-03
38 1.0319E-03
37 4.7532E-03
36 -1.2271E-03
35 2.5873E-03
34 340.9
33 -182.7
32 -179.4
31 -3.4127E-03
30 -7.9835E-03
29 -2.7166E-03
28 -1.0186E-02
27 -8.4183E-03
26 -2.0943E-02
25 -2.7165E-02
24 -5.2795E-02
23 1.7192E-02
22 2.2095E-02
21 1.9121E-02
20 1.1078E-02
19 9.6234E-03
18 8.3548E-03
17 7.2480E-03
16 6.2816E-03
15 5.4370E-03
14 4.6981E-03
13 4.0505E-03
12 3.4819E-03
11 2.9614E-03
10 2.5394E-03
9 6.4419E-03
8 8.2465E-04
7 1.5663E-03
6 1.3474E-03
5 2.8891E-03
4 2.5008E-03
3 1.2524E-03
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-106.9
-114.1
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-1.3156E-03
1.5292E-04
1.6646E-03
3.2468E-03
-2.9650E-03
-1.3037E-03
5.6741E-04

$$221.17 \times 2 = 442.34$$

42 -3.8410E-03
41 -2.1378E-04
40 3.4276E-03
39 -2.6560E-03
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37 4.7532E-03
36 -1.2271E-03
35 2.5873E-03
34 340.9
33 -182.7
32 -179.4
31 -3.4127E-03
30 -7.9835E-03
29 -2.7166E-03
28 -1.0186E-02
27 -8.4183E-03
26 -2.0943E-02
25 -2.7165E-02
24 -5.2795E-02
23 1.7192E-02
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20 1.1078E-02
19 9.6234E-03
18 8.3548E-03
17 7.2480E-03
16 6.2816E-03
15 5.4370E-03
14 4.6981E-03
13 4.0505E-03
12 3.4819E-03
11 2.9814E-03
10 2.5394E-03
9 6.4419E-03
8 8.2465E-04
7 1.5663E-03
6 1.3474E-03
5 2.8891E-03
4 2.5008E-03
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-2.4650E-03
-1.3037E-03
3.6741E-04
2.0790E-03
-4.0310E-03
-2.2935E-03
-5.7024E-04

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43	0.0000E+00
42	-5.0012E-04
41	-1.8334E-05
40	0.0000E+00
39	-9.0544E-05
38	0.0000E+00
37	0.0000E+00
36	-9.0575E-06
35	0.0000E+00
34	0.0000E+00
33	-0.6654
32	-0.6890
31	-1.4812E-06
30	-3.9460E-07
29	-1.9042E-08
28	-9.6355E-09
27	-1.2624E-09
26	-5.1375E-10
25	-1.2589E-10
24	-2.9559E-11
23	0.0000E+00
22	0.0000E+00
21	0.0000E+00
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2	0.0000E+00
1	-1.3596E-48

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-102.6
-0.1446
-7.9247E-04
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-1.7427E-04
-3.7128E-05
0.0000E+00
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-1.1496E-05
-3.9788E-06

40	0.0000E+00
39	-8.6279E-07
38	-3.0274E-07
37	-7.8266E-08
36	0.0000E+00
35	-9.4097E-08
34	-3.8283E-08
33	-1.4742E-08
32	-5.1993E-09
31	-3.2588E-08
30	-4.5436E-08
29	-8.3685E-08
28	-1.8921E-07
27	-1.8152E-06
26	-7.3475E-06
25	-3.4740E-05
24	-1.8542E-04
23	-1.1128E-03
22	-1.296
21	-1.290
20	-1.283
19	-1.275
18	-1.267
17	-1.257
16	-1.247
15	-1.237
14	-1.225
13	-1.212
12	-1.198
11	-1.183
10	-0.6390
9	-1.935
8	-0.4783
7	-0.6222
6	-5.9635E-04
5	-1.2131E-03
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
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54	-43.68
53	-44.56
52	-17.13
51	-16.46
50	-21.61
49	-21.39
48	-21.17
47	-20.93
46	0.0000E+00
45	0.0000E+00
44	-3.5910E-04
43	0.0000E+00
42	-5.0012E-04
41	-1.6334E-05

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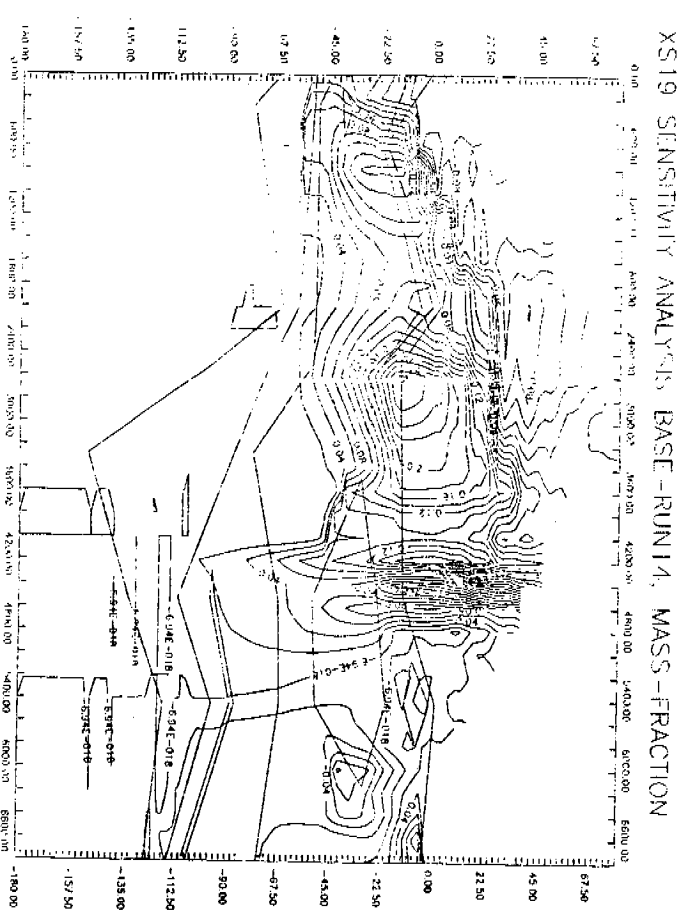
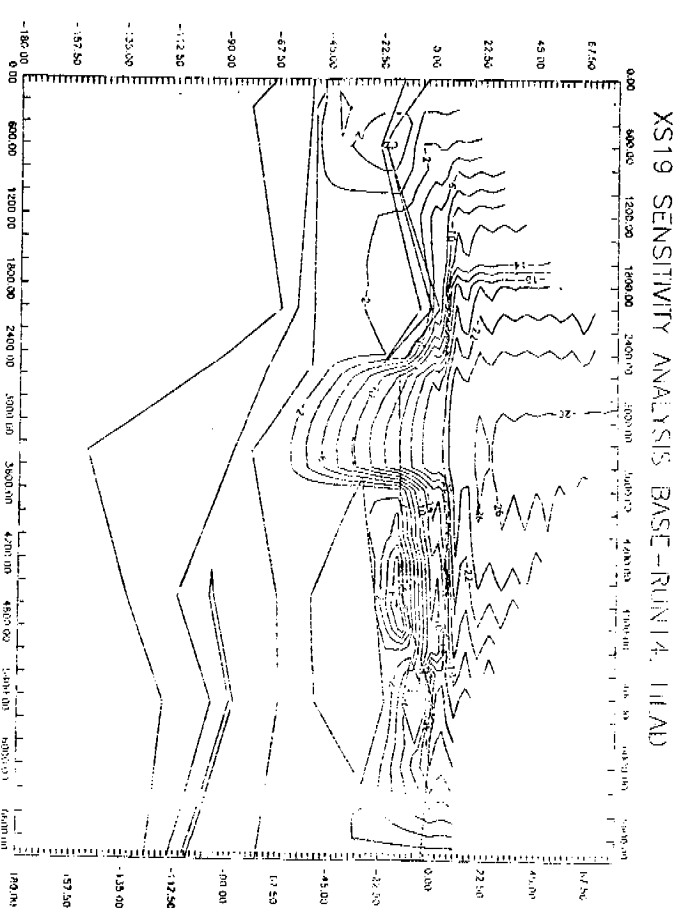
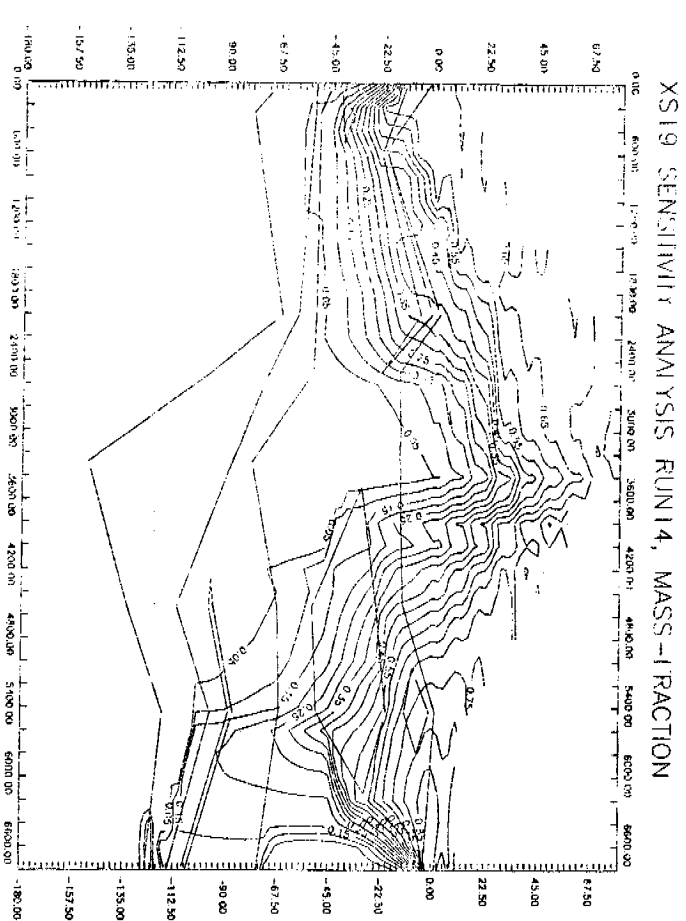
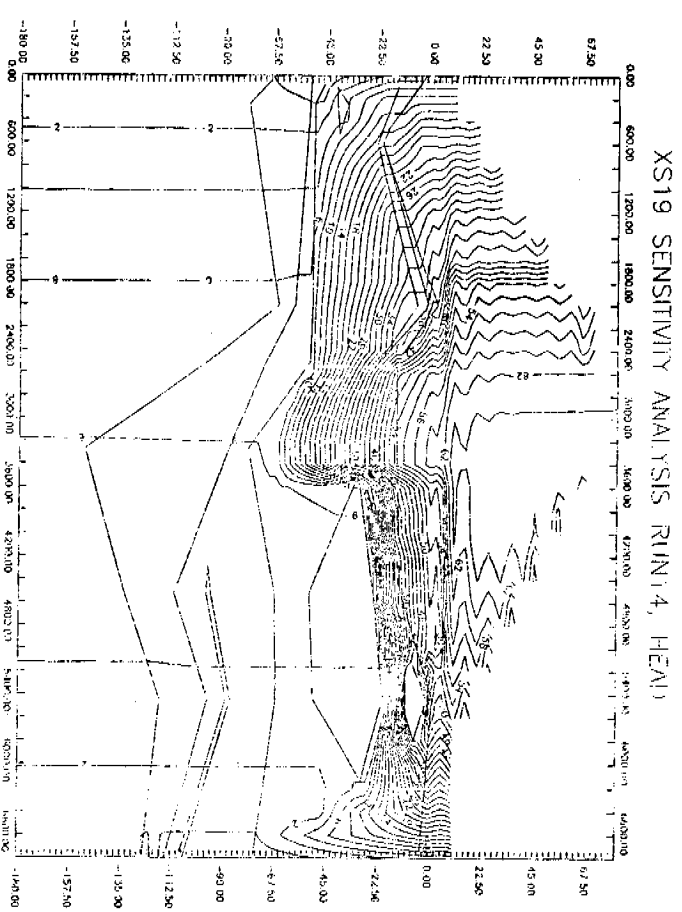
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-96.82
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-3.7066E-07
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-8.6279E-07
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37	-7.8200E-06
36	0.0000E+00
35	-9.4057E-08
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33	-1.4742E-08
32	-5.1993E-09
31	-3.2588E-08
30	-4.5436E-08
29	-8.3685E-08
28	-1.8921E-07
27	-1.8152E-06
26	-7.3475E-06
25	-3.4740E-05
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23	-1.1128E-03
22	-1.296
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19	-1.275
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16	-1.247
15	-1.237
14	-1.225
13	-1.212
12	-1.198
11	-1.183
10	-0.6390
9	-1.935
8	-0.4783
7	-0.6222
6	-5.9635E-04
5	-1.1131E-03
4	0.0000E+00
3	0.0000E+00
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1	0.0000E+00



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*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.101741E+03 (LB/D)	3.192066E+05 (LB)
FLUID OUTFLOW	2.101741E+03 (LB/D)	3.192066E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.267398E-12 (LB/D)	1.924888E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	2.154532E+05 (LB)
SOLUTE OUTFLOW	8.762729E+02 (LB/D)	1.330859E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.423286E+02 (LB/D)	8.236735E+04 (LB)
RESIDUAL IMBALANCE	-5.287373E-09 (LB/D)	-8.030313E-07 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597323E+07 (LB)
FLUID OUTFLOW	1.597323E+07 (LB)
CHANGE IN FLUID IN REGION	-9.385119E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-7.452990E-06 (LB)

SOLUTE INFLOW	1.078137E+07	(LB)
SOLUTE OUTFLOW	4.781532E+06	(LB)
CHANGE IN SOLUTE IN REGION	5.999836E+06	(LB)
SOLUTE IN REGION	5.999836E+06	(LB)
RESIDUAL IMBALANCE	-2.528636E-05	(LB)
FRACTIONAL IMBALANCE	0.0000	
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07	(LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07	(LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00	(LB)

CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH		
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00	(LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.068917E+07	(LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.689332E+06	(LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00	(LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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54	-62.20									
53	-67.50									
52	-26.16									
51	-25.27									
50	-33.31									
49	-33.09									
48	-32.84									
47	-32.55									

312.92 x 2 = 625.84

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-2.7017E-03
-1.0240E-03
6.6841E-04
2.4065E-03
-3.6710E-03
-1.8943E-03
-1.2402E-04
1.6725E-05

$231.62 \times 2 = 463.24$

41 -2.0325E-04
40 3.4373E-03
39 -2.6472E-03
38 1.0397E-03
37 4.7598E-03
36 -1.2216E-03
35 2.5915E-03
34 341.0
33 -182.6
32 -179.3
31 -3.4061E-03
30 -7.9789E-03
29 -2.7129E-03
28 -1.0182E-02
27 -8.4138E-03
26 -2.0936E-02
25 -2.7156E-02
24 -5.2780E-02
23 1.7230E-02
22 2.2153E-02
21 1.9180E-02
20 1.1118E-02
19 9.6638E-03
18 8.3957E-03
17 7.2891E-03
16 6.3229E-03
15 5.4785E-03
14 4.7396E-03
13 4.0921E-03
12 3.5234E-03
11 3.0227E-03
10 2.5804E-03
9 6.5639E-03
8 8.6204E-04
7 1.6062E-03
6 1.3880E-03
5 2.9923E-03
4 2.6742E-03
3 1.4305E-03
2 1.3724E-03
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-101.3
-37.51
-2.7017E-03
-1.0240E-03
6.6841E-04
2.4065E-03
-3.6710E-03
-1.8943E-03
-1.2402E-04
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-4.3649E-03
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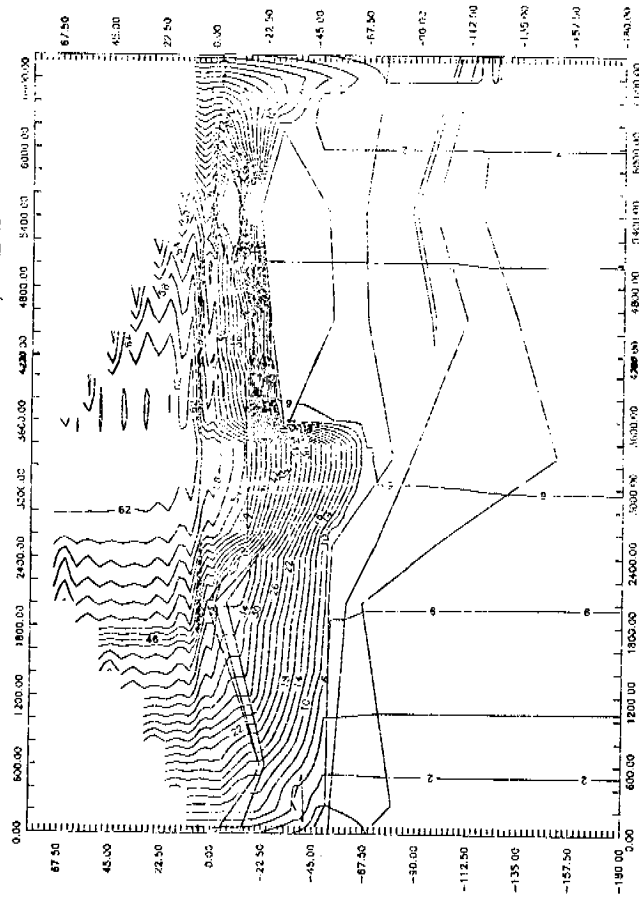
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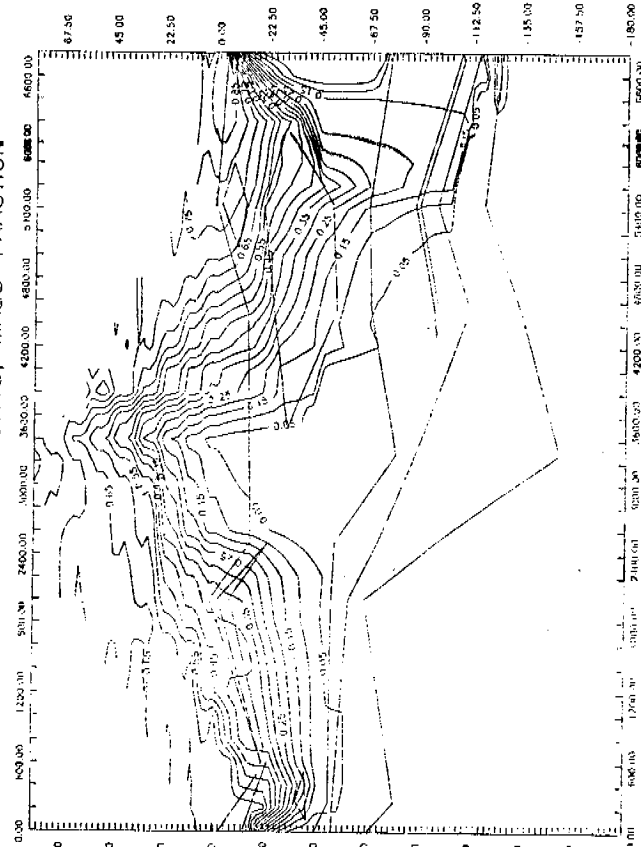
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26	-6.2876E-06
25	-3.0198E-05
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23	-9.9999E-04
22	-1.117
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18	-1.091
17	-1.083
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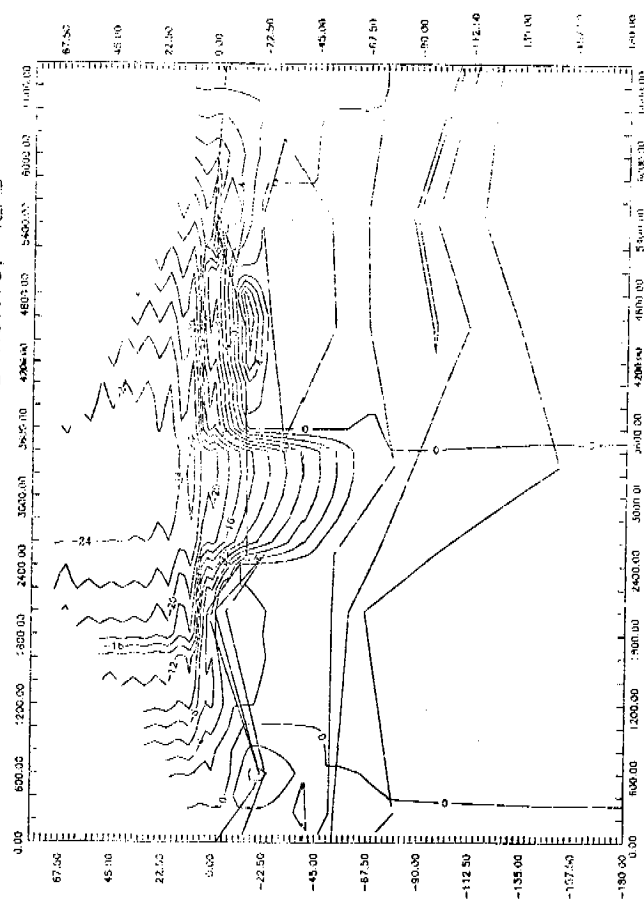
XS19 SENSITIVITY ANALYSIS RUN15, HEAD



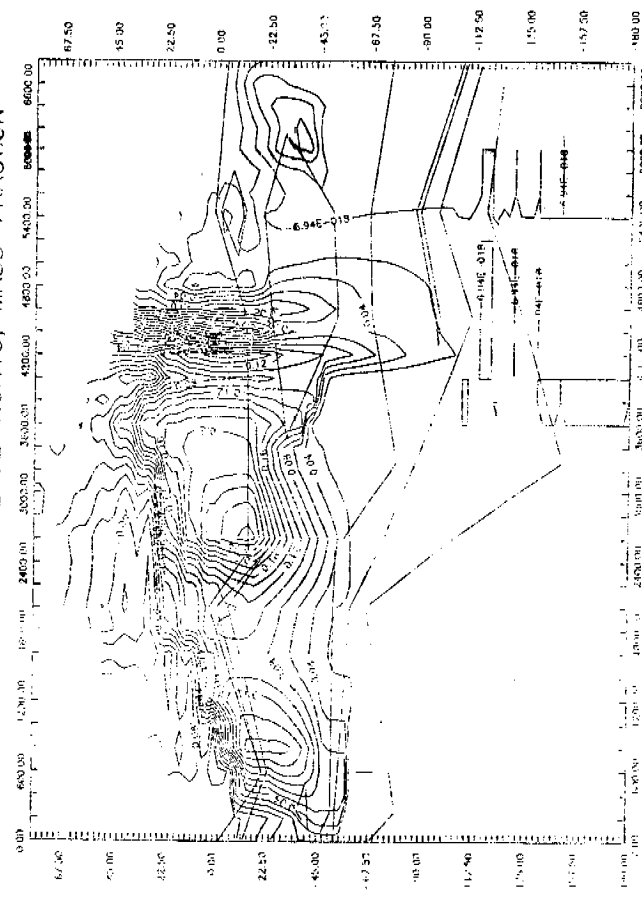
XS19 SENSITIVITY ANALYSIS RUN15, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN15, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN15, MASS-FRACTION



1/9 Sens And
Run 16

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	2.101065E+03 (LB/D)	3.318579E+05 (LB)
FLUID OUTFLOW	2.101065E+03 (LB/D)	3.318579E+05 (LB)
CHANGE IN FLUID IN REGION	0.800000E+00 (LB/D)	0.800000E+00 (LB)
RESIDUAL IMBALANCE	-4.062296E-13 (LB/D)	-6.416295E-11 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	2.240645E+05 (LB)
SOLUTE OUTFLOW	8.754602E+02 (LB/D)	1.382767E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.431413E+02 (LB/D)	8.578780E+04 (LB)
RESIDUAL IMBALANCE	-4.791580E-09 (LB/D)	-7.568180E-07 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.596809E+07 (LB)
FLUID OUTFLOW	1.596809E+07 (LB)
CHANGE IN FLUID IN REGION	-9.420763E-04 (LB)
FLUID IN REGION	1.950629E+07 (LB)
RESIDUAL IMBALANCE	-2.055062E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.822841E+06 (LB)
CHANGE IN SOLUTE IN REGION	5.958526E+06 (LB)
SOLUTE IN REGION	5.958526E+06 (LB)
RESIDUAL IMBALANCE	-2.360786E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.069561E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.737089E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

1/9 Sens. Anal
Run 17

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5 2.7254E-03
4 2.2270E-03
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1 -5.0594E-04

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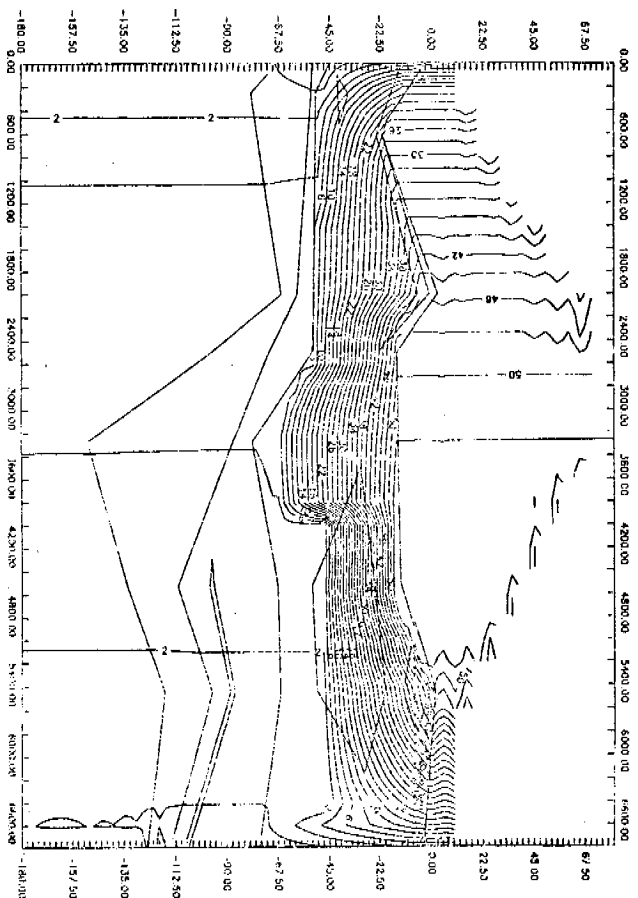
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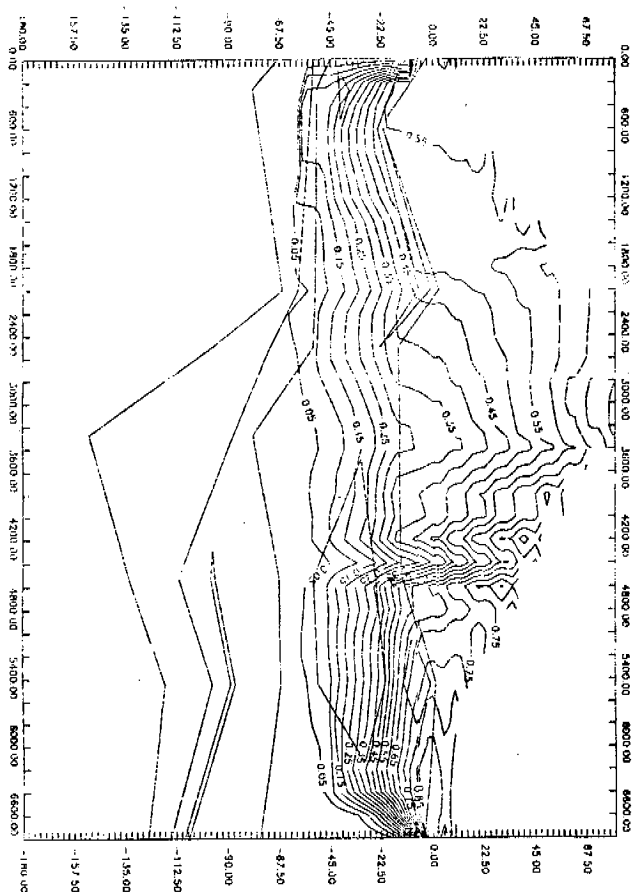
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16				-6.2543E-02
15				-6.1680E-02
14				-6.0475E-02
13				-5.9247E-02
12				-5.8005E-02
11				-5.6778E-02
10				-5.5524E-02
9				-5.4272E-02
8				-5.3020E-02
7				-5.1768E-02
6				-5.0516E-02
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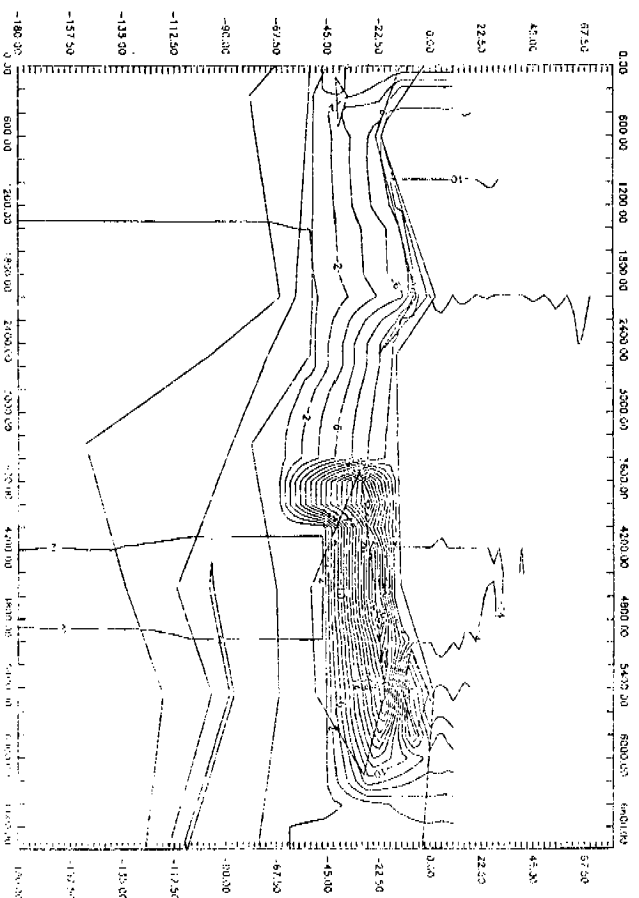
XS19 SENSITIVITY ANALYSIS RUN16, HEAD



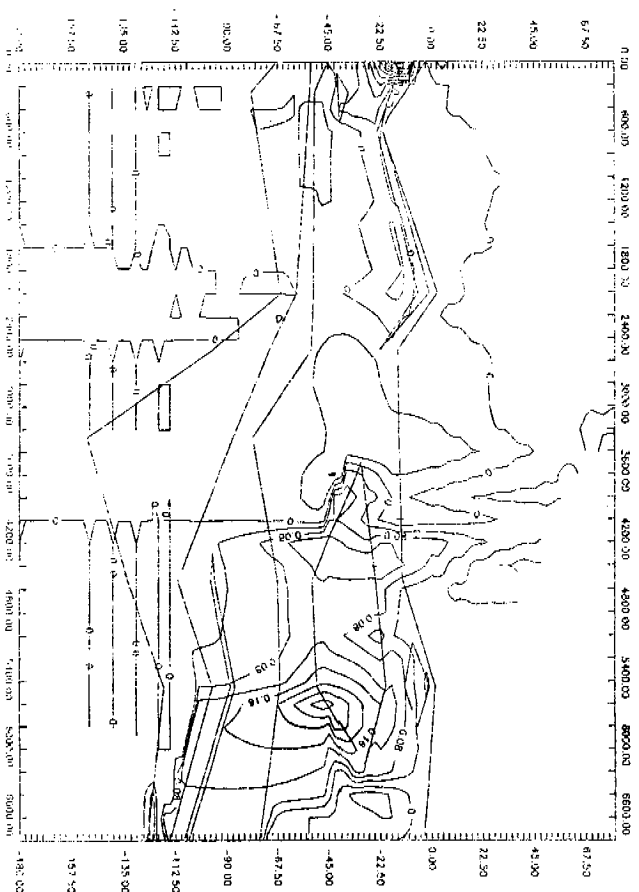
XS19 SENSITIVITY ANALYSIS RUN16, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN16, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN16, MASS-FRACTION



1/9 Sens
Aval
Run 17

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	7.325184E+03 (LB/D)	1.907740E+06 (LB)
FLUID OUTFLOW	7.325184E+03 (LB/D)	1.907740E+06 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-1.970941E-12 (LB/D)	-5.133036E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.874074E+03 (LB/D)	4.880760E+05 (LB)
SOLUTE OUTFLOW	1.282393E+03 (LB/D)	3.339811E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.916811E+02 (LB/D)	1.540949E+05 (LB)
RESIDUAL IMBALANCE	-4.783720E-09 (LB/D)	-1.245852E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	5.567138E+07 (LB)
FLUID OUTFLOW	5.567138E+07 (LB)
CHANGE IN FLUID IN REGION	-1.017134E-03 (LB)
FLUID IN REGION	1.964981E+07 (LB)
RESIDUAL IMBALANCE	-1.781369E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.424296E+07 (LB)
SOLUTE OUTFLOW	7.815456E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.427504E+06 (LB)
SOLUTE IN REGION	6.427504E+06 (LB)
RESIDUAL IMBALANCE	-2.390968E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.069496E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.267460E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

8 -2.1261E-03
7 -1.6070E-03
6 -1.0012E-03
5 -5.5019E-03
4 -1.1117E-02
3 -1.2649E-02
2 -2.7109E-02
1 -2.1302E-02

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47				-3.3953E-03
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45				1.4604E-04
44				1.9373E-02
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42				-2.3152E-03
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37				-1.4082E-03
36				2.7993E-04
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32				-1.2514E-02
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27				-1.0700E-02
26				-9.8048E-02
25				-9.0904E-02
24				-8.5441E-02
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21				-8.519
20				-8.452
19				-8.390
18				-8.330
17				-8.271
16				-8.213
15				-8.155
14				-8.095
13				-8.032
12				-7.966
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10				-4.382
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8				-3.293
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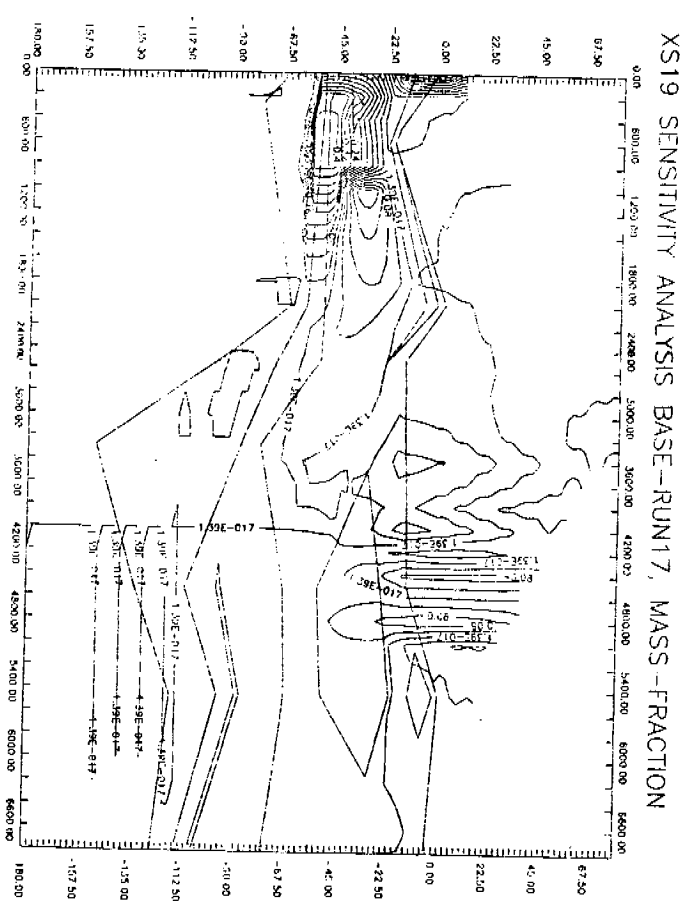
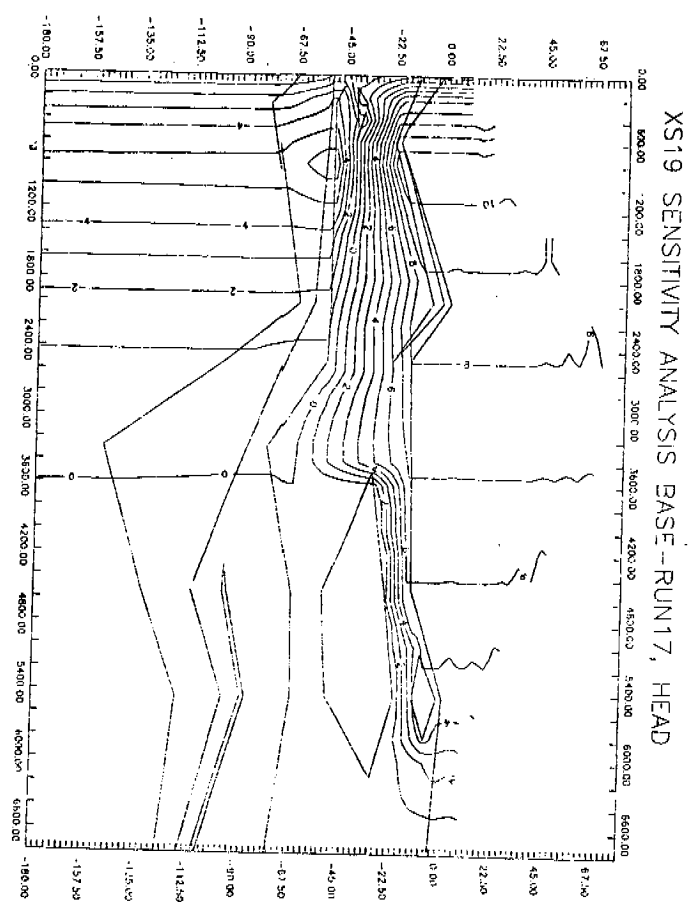
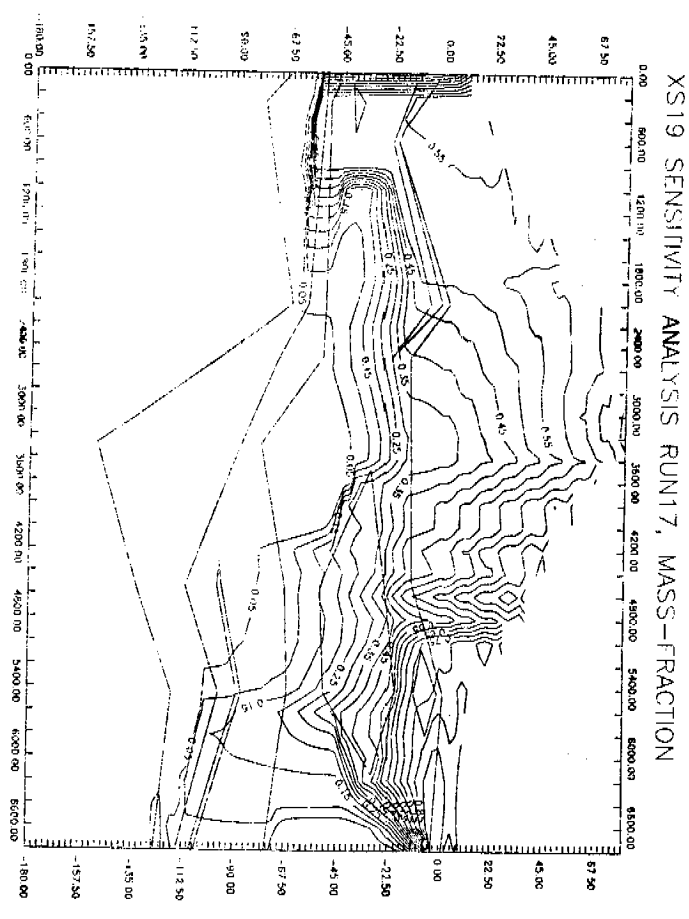
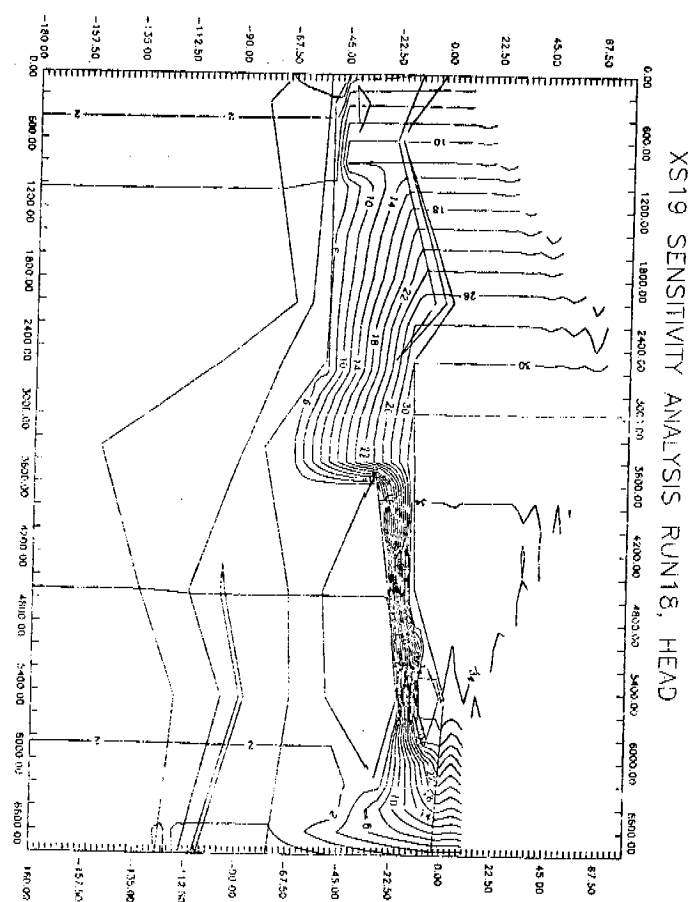
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1/9 SEUSAWAL
RUN 18

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	5.495052E+03 (LB/D)	1.749671E+06 (LB)
FLUID OUTFLOW	5.495052E+03 (LB/D)	1.749671E+06 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-8.060460E-13 (LB/D)	-2.566518E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.704649E+03 (LB/D)	5.427745E+05 (LB)
SOLUTE OUTFLOW	1.121268E+03 (LB/D)	3.570211E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.833813E+02 (LB/D)	1.857535E+05 (LB)
RESIDUAL IMBALANCE	-4.006049E-09 (LB/D)	-1.275559E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	4.176238E+07 (LB)
FLUID OUTFLOW	4.176238E+07 (LB)
CHANGE IN FLUID IN REGION	-1.024513E-03 (LB)
FLUID IN REGION	1.961861E+07 (LB)
RESIDUAL IMBALANCE	-1.873353E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.295533E+07 (LB)
SOLUTE OUTFLOW	6.597804E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.357525E+06 (LB)
SOLUTE IN REGION	6.357525E+06 (LB)
RESIDUAL IMBALANCE	-1.783525E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.071656E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.359040E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

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4 1.3590E-03
3 8.5190E-05
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15				-7.753
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45	1.3266E-04
44	1.9249E-03
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20	-8.032
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18	-7.919
17	-7.863
16	-7.808
15	-7.753
14	-7.696
13	-7.636
12	-7.573
11	-7.504
10	-4.167
9	-12.51
8	-5.132
7	-4.026
6	-1.2245E-02
5	-0.1540
4	0.1502
3	9.0124E-02
2	0.1091

VERTICAL SLICES

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43	0.0000E+00
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1 -1.0705E-48

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3					0.0000E+00

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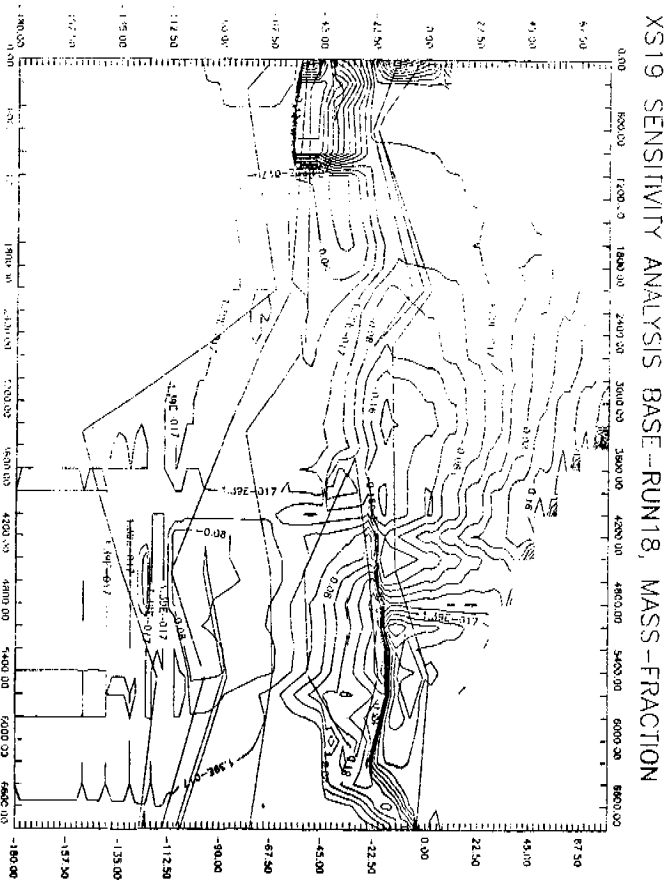
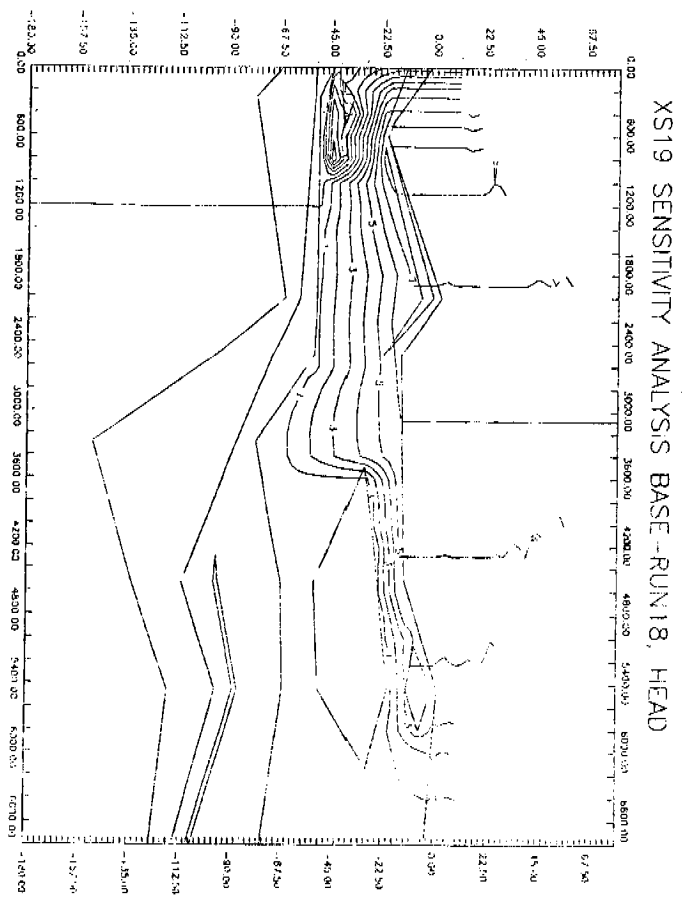
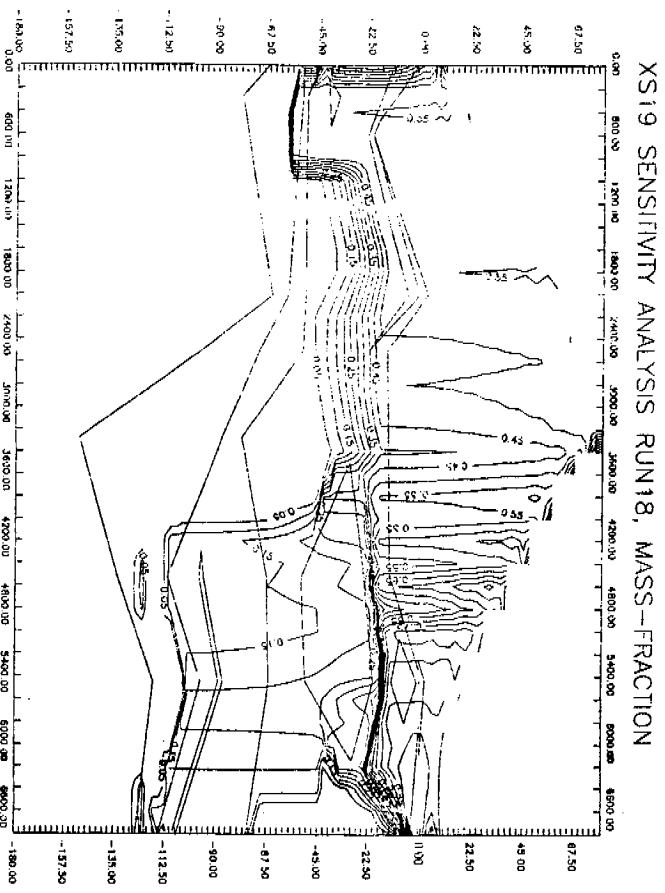
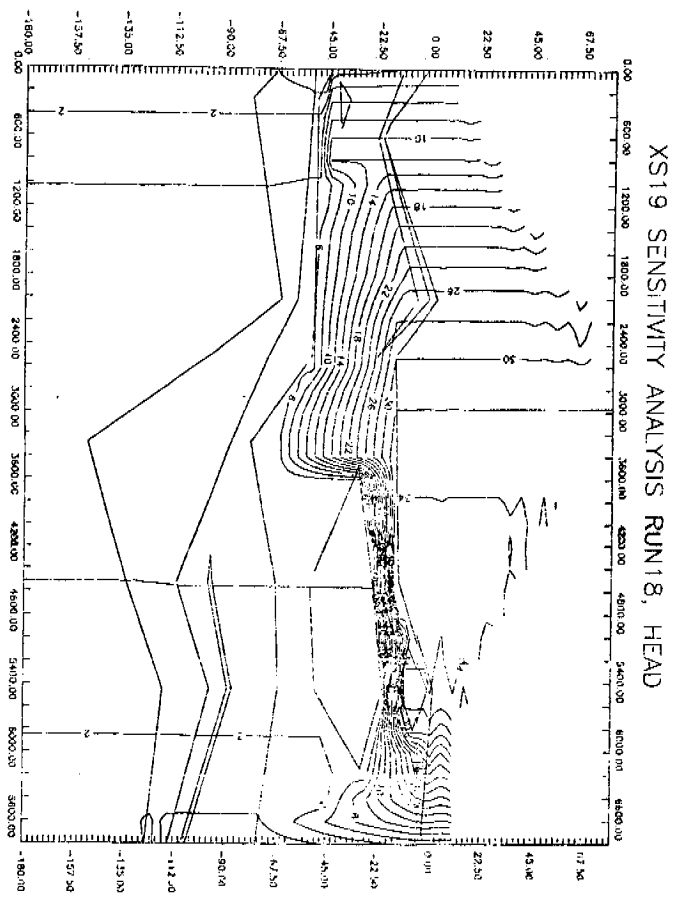
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54	-63.94
53	-76.95
52	-30.47
51	-1.3145E-03
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49	0.0000E+00
48	0.0000E+00
47	-2.0860E-05
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44	0.0000E+00
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38	-3.1263E-10
37	-5.2000E-11
36	0.0000E+00
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33	-1.1673E-09
32	-8.6988E-10
31	-7.4827E-09
30	-7.7931E-09
29	-1.3611E-09
28	-6.4237E-09
27	-2.1403E-08
26	-4.6931E-08
25	-1.9398E-07
24	-1.9004E-05
23	-2.5625E-04
22	-0.5711
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14	-0.6291
13	-0.6224
12	-0.6156
11	-0.6087
10	-0.6024
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8	-0.6422
7	-0.4066
6	-1.0623E-04
5	-2.4133E-05
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00



1/9 SENS. ANM
Run 19

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	5.481526E+03 (LB/D)	1.565343E+06 (LB)
FLUID OUTFLOW	5.481526E+03 (LB/D)	1.565343E+06 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.797489E-12 (LB/D)	5.133036E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.701460E+03 (LB/D)	4.858810E+05 (LB)
SOLUTE OUTFLOW	1.118675E+03 (LB/D)	3.194568E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.827850E+02 (LB/D)	1.664242E+05 (LB)
RESIDUAL IMBALANCE	-4.034688E-09 (LB/D)	-1.152174E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	4.165959E+07 (LB)
FLUID OUTFLOW	4.165959E+07 (LB)
CHANGE IN FLUID IN REGION	-1.023158E-03 (LB)
FLUID IN REGION	1.958585E+07 (LB)
RESIDUAL IMBALANCE	-1.841323E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.293109E+07 (LB)
SOLUTE OUTFLOW	6.592651E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.338443E+06 (LB)
SOLUTE IN REGION	6.338443E+06 (LB)
RESIDUAL IMBALANCE	-1.763198E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.071645E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.378008E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

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7 0.07400
8 9.0273E-04
7 1.6492E-03
6 1.4320E-03
5 3.1048E-03
4 2.8640E-03
3 1.6268E-03
2 1.7734E-03
1 5.0612E-04

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53				-81.97
52				-32.49
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50				-7.8252E-04
49				9.1612E-04
48				2.6578E-03
47				-3.4184E-03
46				-1.6425E-03
45				1.2528E-04
44				1.9178E-03
43				-4.1250E-03
42				-2.3323E-03
41				-5.6405E-04
40				1.2126E-03
39				-4.8626E-03
38				-3.1195E-03
37				-1.4190E-03
36				2.7027E-04
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34				-4.2019E-03
33				-2.7589E-03
32				-1.2558E-03
31				-7.6581E-03
30				-6.2020E-03
29				-5.0559E-03
28				-3.8970E-02
27				-1.0698E-02
26				-9.8013E-03
25				-9.0856E-03
24				-8.5379E-03
23				-8.1489E-03
22				-9.192
21				-9.131
20				-8.027
19				-8.007
18				-7.950
17				-7.894
16				-7.839
15				-7.780
14				-7.726
13				-7.666
12				-7.602
11				-7.532
10				-4.183
9				-12.56
8				-3.144
7				-4.044

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4 2.8640E-03
3 1.6268E-03
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SOLUTE (LB/O)

VERTICAL SLICES

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8				-0.3487
7				-0.4127
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54	141.4
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48	0.0000E+00
47	0.0000E+00
46	0.0000E+00
45	0.0000E+00
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43	0.0000E+00
42	-40.44
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40	-33.01
39	-82.06
38	-82.27
37	-83.19
36	-2.3119E-03
35	-4.5920E-04
34	0.0000E+00
33	-2.315
32	-2.964
31	-1.6382E-06
30	-9.5170E-08
29	-8.8652E-10
28	-7.8533E-11
27	-1.7008E-12
26	-1.1128E-13
25	-4.6128E-15
24	-1.9175E-16
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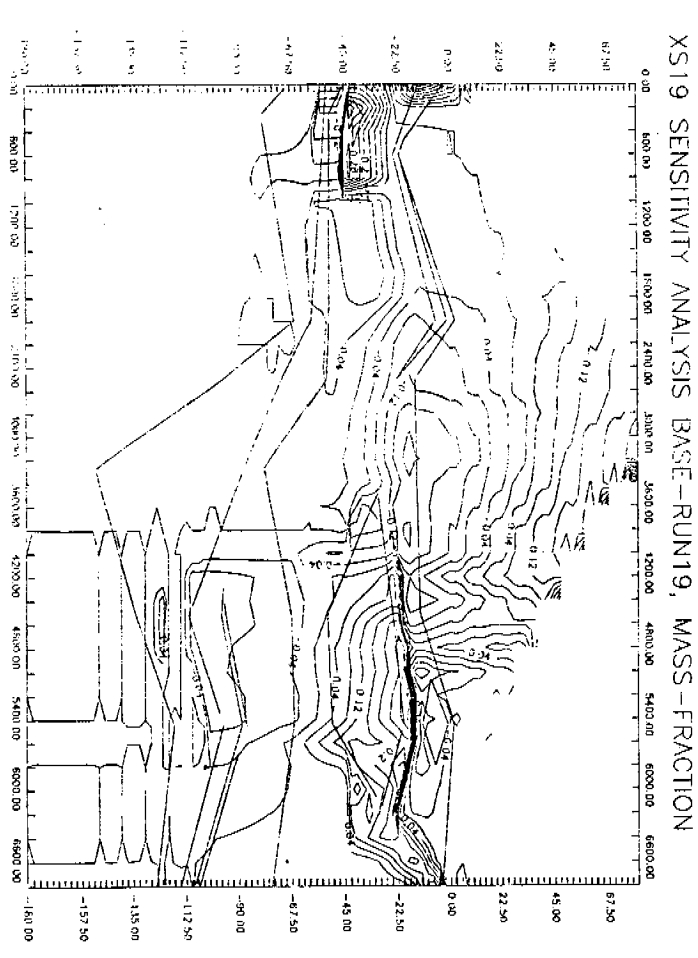
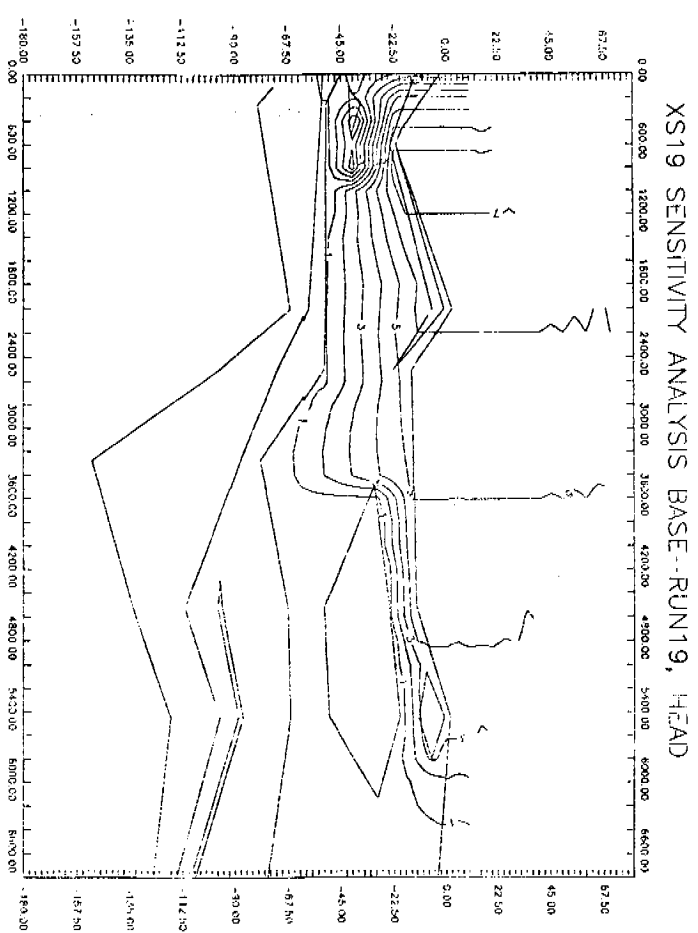
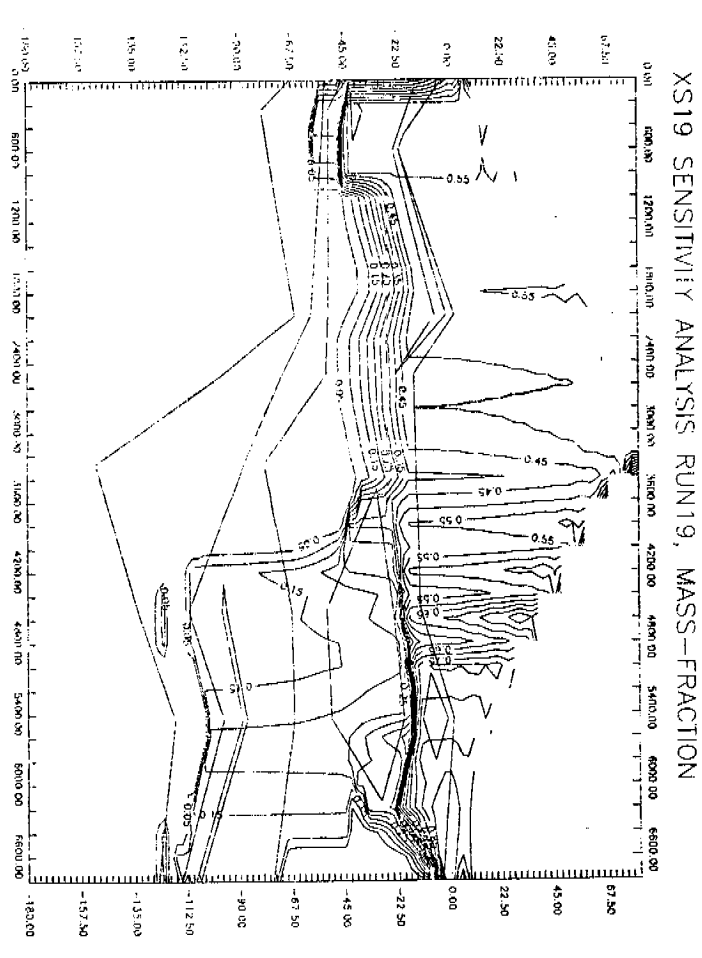
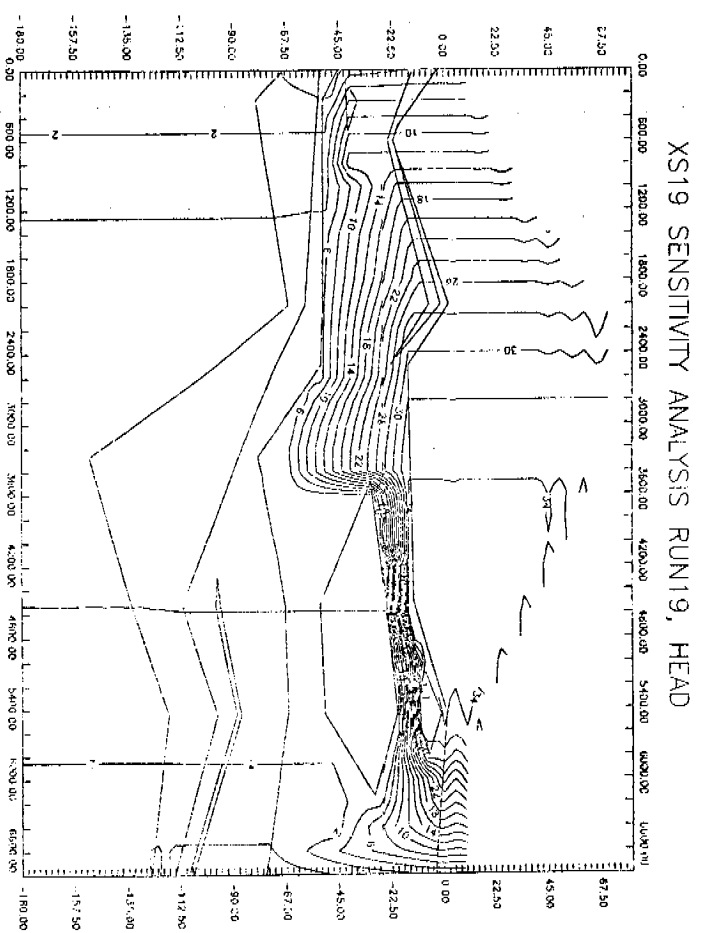
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1/4 SEW. AREA.
Run 20

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	4.701997E+03 (LB/D)	3.462145E+05 (LB)
FLUID OUTFLOW	4.701997E+03 (LB/D)	3.462145E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	5.228447E-12 (LB/D)	3.849777E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.630636E+03 (LB/D)	1.200660E+05 (LB)
SOLUTE OUTFLOW	1.047852E+03 (LB/D)	7.715474E+04 (LB)
CHANGE IN SOLUTE IN REGION	5.827845E+02 (LB/D)	4.291122E+04 (LB)
RESIDUAL IMBALANCE	-4.327411E-09 (LB/D)	-3.186332E-07 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	3.573517E+07 (LB)
FLUID OUTFLOW	3.573517E+07 (LB)
CHANGE IN FLUID IN REGION	-1.018903E-03 (LB)
FLUID IN REGION	1.954997E+07 (LB)
RESIDUAL IMBALANCE	-1.814631E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.239283E+07 (LB)
SOLUTE OUTFLOW	6.068546E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.324284E+06 (LB)
SOLUTE IN REGION	6.324284E+06 (LB)
RESIDUAL IMBALANCE	-1.806007E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.071629E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.392002E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

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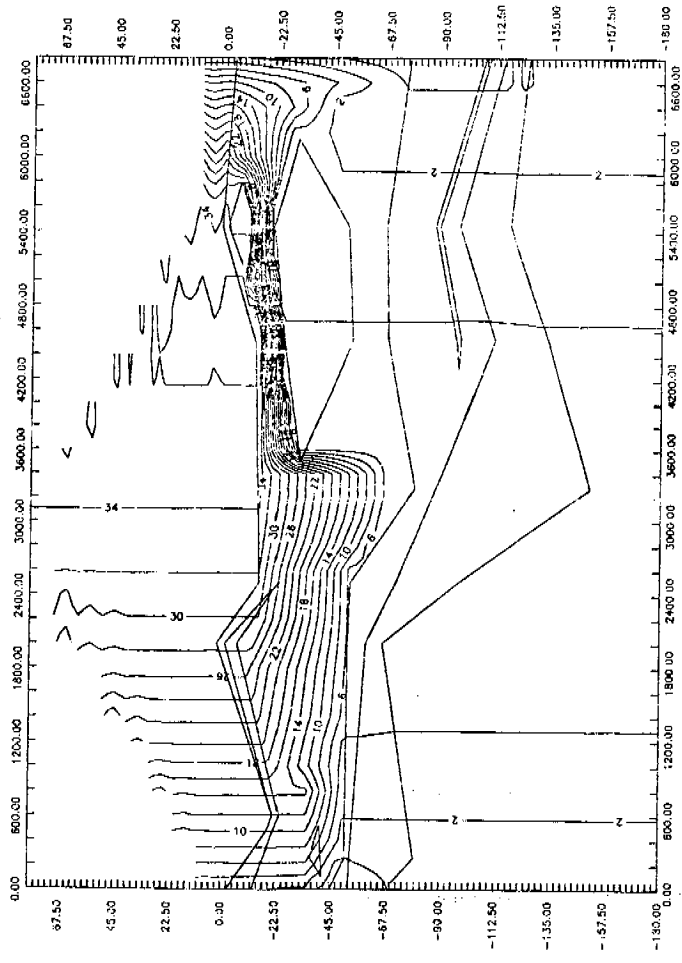
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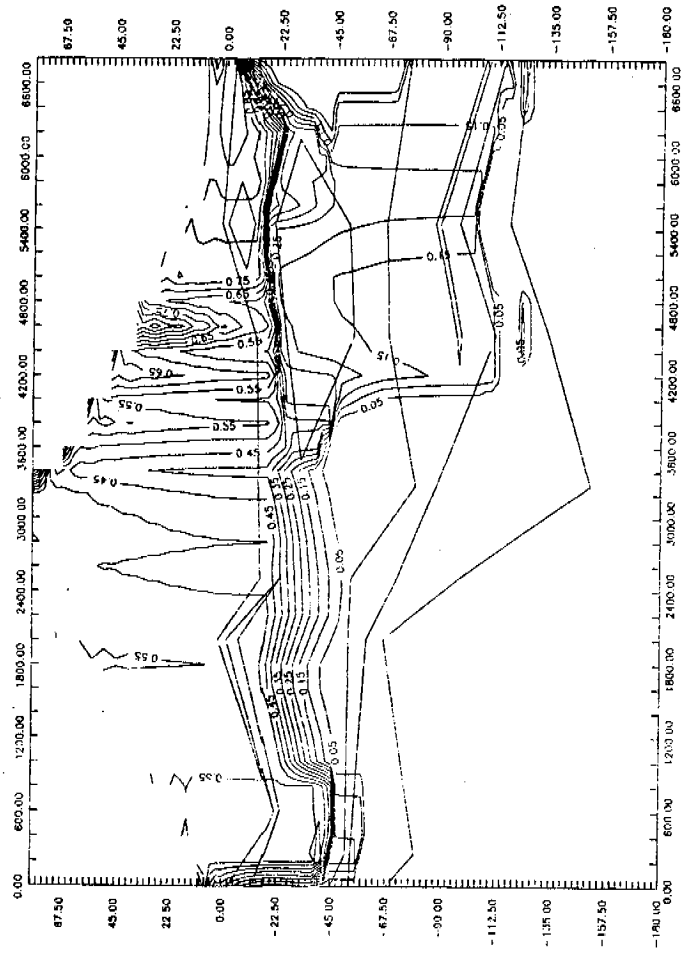
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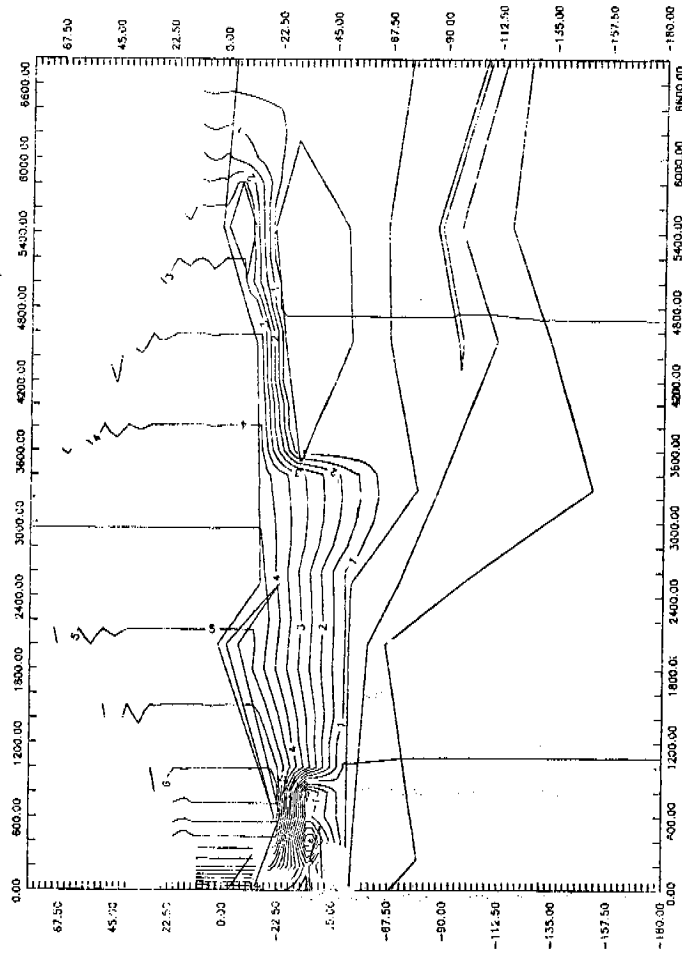
XS19 SENSITIVITY ANALYSIS RUN20, HEAD



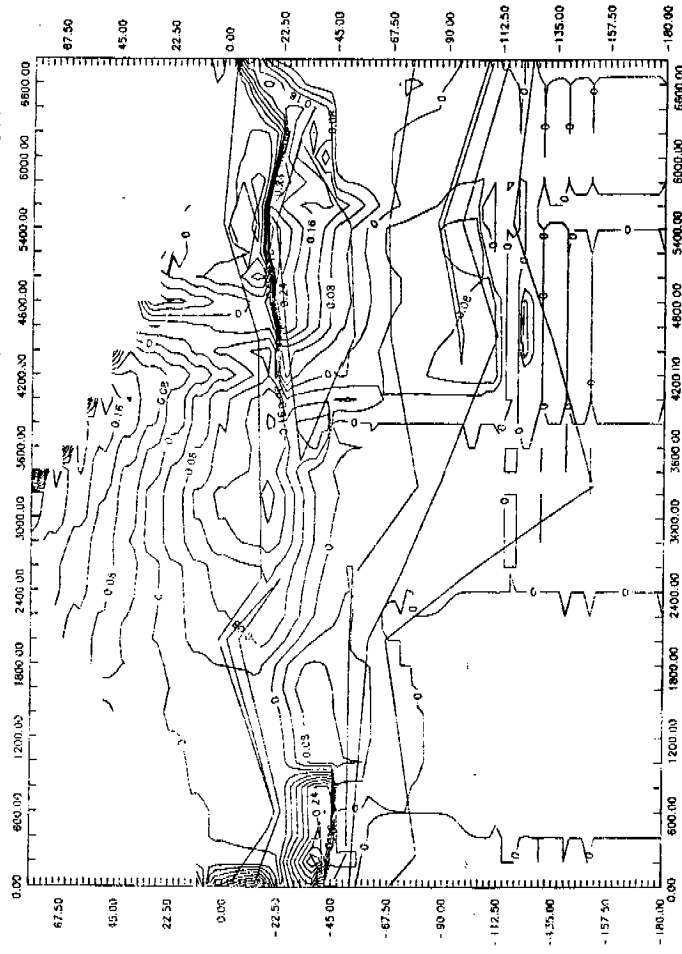
XS19 SENSITIVITY ANALYSIS RUN20, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN20, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN20, MASS-FRACTION



1/9 Saw. ANAL
Run 21

*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	3.717143E+03 (LB/D)	4.292840E+05 (LB)
FLUID OUTFLOW	3.717143E+03 (LB/D)	4.292840E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-3.333498E-12 (LB/D)	-3.849777E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.540278E+03 (LB/D)	1.778830E+05 (LB)
SOLUTE OUTFLOW	9.571689E+02 (LB/D)	1.105411E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.831092E+02 (LB/D)	6.734188E+04 (LB)
RESIDUAL IMBALANCE	-4.155344E-09 (LB/D)	-4.798907E-07 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	2.825028E+07 (LB)
FLUID OUTFLOW	2.825028E+07 (LB)
CHANGE IN FLUID IN REGION	-1.013516E-03 (LB)
FLUID IN REGION	1.951253E+07 (LB)
RESIDUAL IMBALANCE	-1.836395E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.170611E+07 (LB)
SOLUTE OUTFLOW	5.395702E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.310407E+06 (LB)
SOLUTE IN REGION	6.310407E+06 (LB)
RESIDUAL IMBALANCE	-1.793893E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.071610E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.405692E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

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Run 21

VERTICAL SLICES

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54	60.84
53	96.89
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50	72.89
49	82.03
48	93.18
47	106.6
46	91.70
45	109.8
44	-167.7
43	-149.8
42	-432.4
41	-424.6
40	-0.2191
39	-0.5142
38	-1.0651E-03
37	0.2858
36	-4.3350E-03
35	1.0550E-03
34	341.5
33	-182.1
32	-178.8
31	-3.3855E-03
30	-7.9644E-03
29	-2.7011E-03
28	-1.0170E-02
27	-8.3995E-03
26	-2.0916E-02
25	-2.7125E-02
24	-5.2731E-02
23	1.7356E-02
22	2.2343E-02
21	1.9371E-02
20	1.1248E-02
19	9.7950E-03
18	8.5281E-03
17	7.4226E-03
16	6.4571E-03
15	5.6132E-03
14	4.8745E-03
13	4.2269E-03
12	3.6579E-03
11	3.1566E-03
10	2.7135E-03

8 9.8338E-04
7 1.7355E-03
6 1.5200E-03
5 3.3283E-03
4 3.2371E-03
3 2.0087E-03
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-3.4447E-03
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1.0041E-04
1.8937E-03
-4.1484E-03
-2.3548E-03
-5.8577E-04
1.1917E-03
-4.8826E-03
-3.1387E-03
-1.4374E-03
2.5285E-04
-5.9306E-03
-4.3177E-03
-2.7738E-03
-1.2699E-03
-7.6713E-03
-6.3144E-03
-5.0674E-03
-3.9676E-03
-1.0707E-02
-9.8102E-03
-9.0936E-03
-8.5451E-03
-8.1553E-03
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4 3.2371E-03
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-5.8577E-04

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-4.8826E-03

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-1.4374E-03

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-5.9300E-03

-4.5177E-03

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-1.2699E-03

-7.6713E-03

-6.2144E-03

-5.0674E-03

-3.9076E-03

-1.0707E-02

-9.8102E-03

-9.0936E-03

-8.5451E-03

-8.1553E-03

-8.531

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VERTICAL SLICES

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48	0.0000E+00
47	0.0000E+00
46	0.0000E+00
45	0.0000E+00
44	-37.57
43	-34.77
42	-103.5
41	-104.1
40	-5.2137E-02
39	-0.1174
38	-7.5772E-06
37	0.0000E+00
36	-5.5706E-06
35	0.0000E+00
34	0.0000E+00
33	-0.9603
32	-1.237
31	-5.0033E-07
30	-2.3241E-08
29	-1.7517E-10
28	-1.3481E-11
27	-2.5333E-13
26	-1.4676E-14
25	-5.4746E-16
24	-2.0540E-17
23	0.0000E+00
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47				-2.1228E-05
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45				0.0000E+00
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39				-1.9569E-09
38				-3.7307E-10
37				-6.3112E-11
36				0.0000E+00
35				-9.4046E-10
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32				-1.0211E-09
31				-3.1434E-09
30				-3.1214E-09
29				-3.6291E-09
28				-1.3419E-09
27				-1.5109E-09
26				-3.6199E-09
25				-3.7038E-07
24				-1.0711E-03
23				-4.0195E-04
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21				-0.9762
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12				-0.9184
11				-0.9109
10				-0.9031
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36 -5.5706E-0e
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33 -0.9602
32 -1.237
31 -5.0023E-07
30 -2.3241E-0E
29 -1.7517E-10
28 -1.3481E-11
27 -2.8333E-12
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*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.101641E+03 (LB/D)	4.867804E+05 (LB)
FLUID OUTFLOW	2.101641E+03 (LB/D)	4.867804E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	0.000000E+00 (LB/D)	0.000000E+00 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.285754E+05 (LB)
SOLUTE OUTFLOW	8.628157E+02 (LB/D)	1.998447E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.557858E+02 (LB/D)	1.287307E+05 (LB)
RESIDUAL IMBALANCE	-5.329154E-09 (LB/D)	-1.234335E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597246E+07 (LB)
FLUID OUTFLOW	1.597246E+07 (LB)
CHANGE IN FLUID IN REGION	-9.955379E-04 (LB)
FLUID IN REGION	1.852012E+07 (LB)
RESIDUAL IMBALANCE	-2.165730E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.566722E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.214645E+06 (LB)
SOLUTE IN REGION	6.214645E+06 (LB)
RESIDUAL IMBALANCE	-2.595109E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.068692E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.472274E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (L8/D)

VERTICAL SLICES

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7 1.6183E-03
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-2.5553E-03
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-3.4966E-03
-1.7185E-03
5.1451E-05
1.8462E-03
-4.1942E-03
-2.3991E-03
-6.2842E-04
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-4.9220E-03
-1.1753E-03
-1.4754E-03
-1.1551E-04
-5.9625E-03
-4.3455E-03
-1.8629E-03
-1.2972E-03
-7.6701E-03
-5.3151E-03
-5.0596E-03
-3.4251E-03
-1.0725E-03
-9.8270E-03
-9.1089E-03
-5.5557E-03
-5.1672E-03
-5.150
-5.076
-5.005
-5.935
-5.514
-5.512
-5.751
-5.685
-5.535
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54	-61.72
53	-75.03
52	-29.81
51	-29.61
50	-38.96
49	-38.65
48	-38.32
47	-37.97
46	1.2029E-03
45	4.7149E-03
44	-1.4632E-03
43	2.1632E-03
42	-3.9524E-03
41	-3.1403E-04
40	3.3390E-03
39	-2.7322E-03
38	9.6912E-04
37	4.7049E-03
36	-1.2594E-03
35	2.6719E-03
34	341.0
33	-182.6
32	-179.3
31	-3.4080E-03
30	-7.9799E-03
29	-2.7133E-03
28	-1.0182E-02
27	-3.4131E-03
26	-2.0935E-02
25	-2.7153E-02
24	-5.2776E-02
23	1.7242E-02
22	2.2170E-02
21	1.9197E-02
20	1.1130E-02
19	9.6757E-03
18	8.4076E-03
17	7.3012E-03
16	6.3352E-03
15	5.4908E-03
14	4.7520E-03
13	4.1045E-03
12	3.5358E-03
11	3.0251E-03
10	2.5927E-03
9	6.6007E-04
8	8.7352E-03
7	1.6183E-03
6	1.4004E-03
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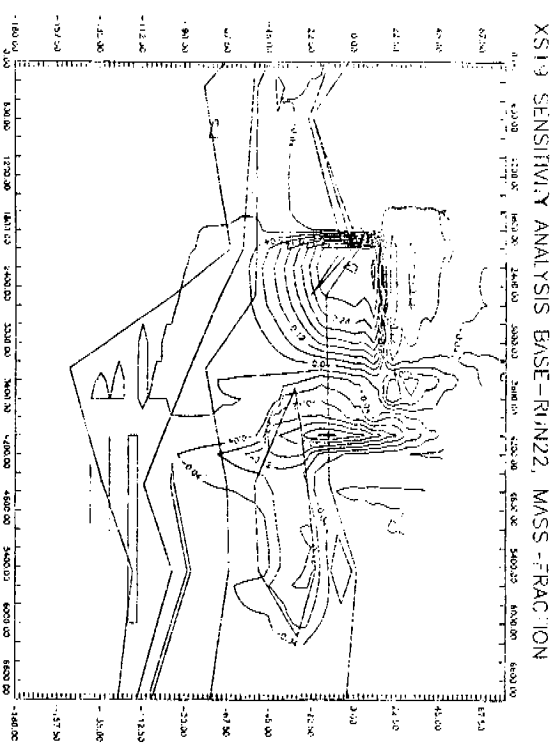
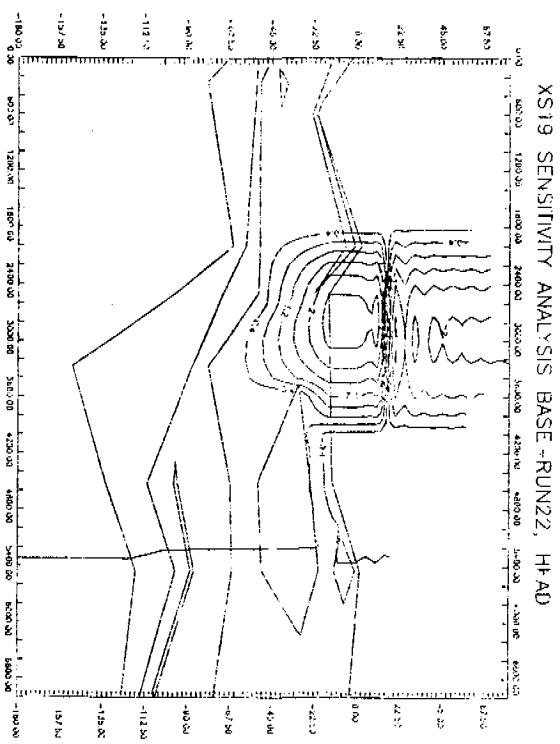
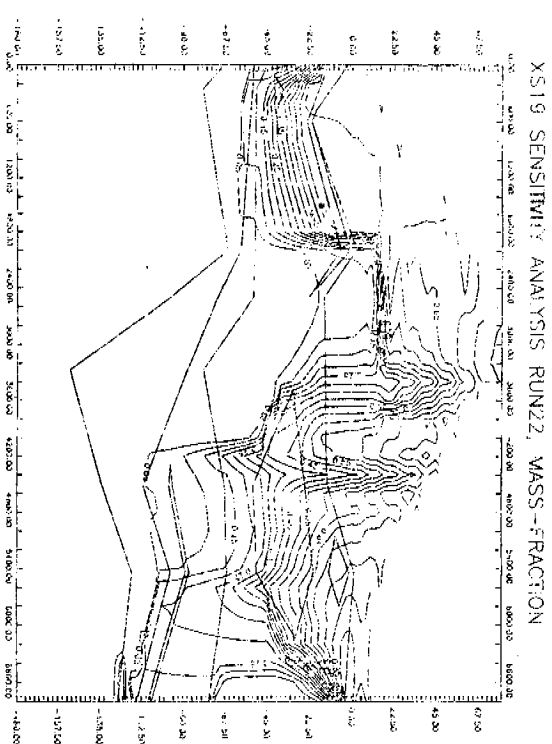
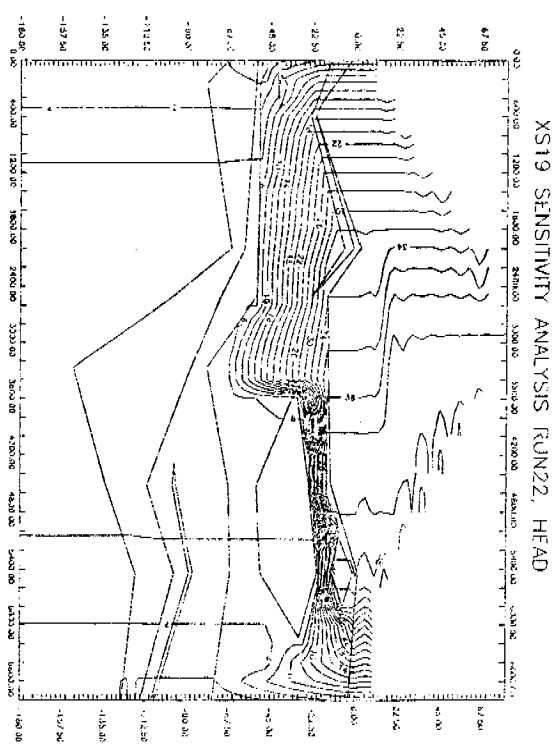
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Run 23

*** GLOBAL FLOW BALANCE SUMMARY ***
CURRENT TIME STEP

	RATES	AMOUNTS
FLUID INFLOW	2.101806E+03 (LB/D)	4.836469E+05 (LB)
FLUID OUTFLOW	2.101806E+03 (LB/D)	4.836469E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	1.394179E-12 (LB/D)	3.208147E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.264346E+05 (LB)
SOLUTE OUTFLOW	8.771864E+02 (LB/D)	2.018495E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.414151E+02 (LB/D)	1.245851E+05 (LB)
RESIDUAL IMBALANCE	-5.342076E-09 (LB/D)	-1.229266E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597372E+07 (LB)
FLUID OUTFLOW	1.597372E+07 (LB)
CHANGE IN FLUID IN REGION	-9.954168E-04 (LB)
FLUID IN REGION	1.836774E+07 (LB)
RESIDUAL IMBALANCE	-2.269623E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.627791E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.153577E+06 (LB)
SOLUTE IN REGION	6.153577E+06 (LB)
RESIDUAL IMBALANCE	-2.570111E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P-CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.068774E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.534159E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

Run 23

VERTICAL SLICES

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45 4.7108E-03
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43 2.1601E-03
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6 1.4231E-03
5 3.0818E-03
4 2.8245E-03
3 1.5853E-03
2 1.6876E-03
1 4.3960E-04

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52	-34.60
51	-2.5599E-03
50	-8.7083E-04
49	8.2984E-04
48	2.5737E-03
47	-3.5002E-03
46	-1.7220E-03
45	4.8241E-05
44	1.8433E-03
43	-4.1970E-03
42	-2.4016E-03
41	-6.3068E-04
40	1.1487E-03
39	-4.9237E-03
38	-3.1779E-03
37	-1.4746E-03
36	2.1759E-04
35	-5.9633E-03
34	-4.3490E-03
33	-2.8032E-03
32	-1.2972E-03
31	-7.6967E-03
30	-6.3378E-03
29	-5.0888E-03
28	-3.9271E-03
27	-1.0725E-02
26	-9.8257E-03
25	-9.1071E-03
24	-8.5566E-03
23	-8.1648E-03
22	-9.032
21	-8.956
20	-8.886
19	-8.820
18	-8.757
17	-8.695
16	-8.634
15	-8.573
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5				-1.2028E-03
4				0.0000E+00

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25	-3.6690E-10
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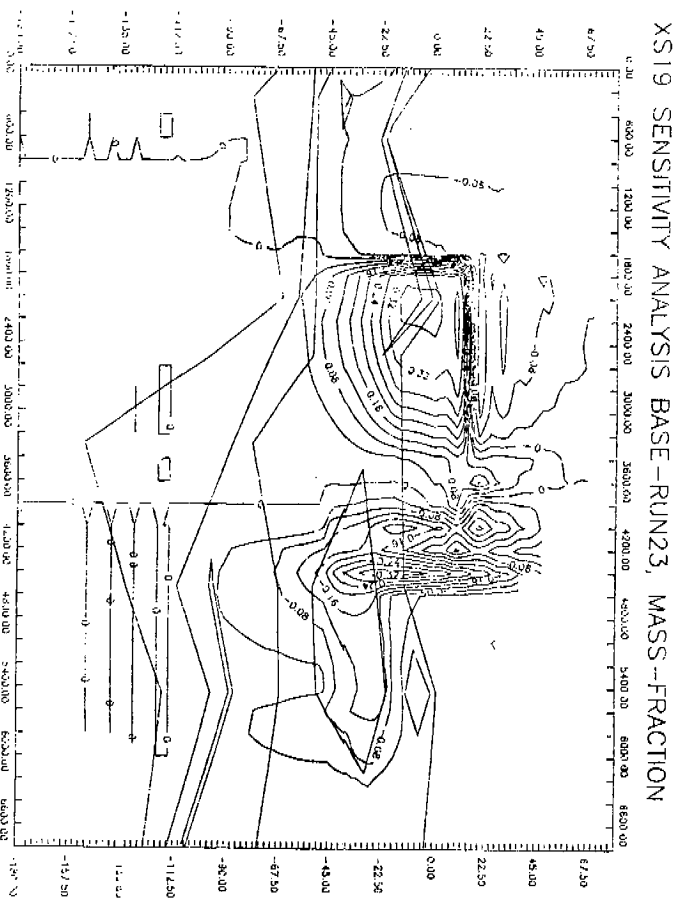
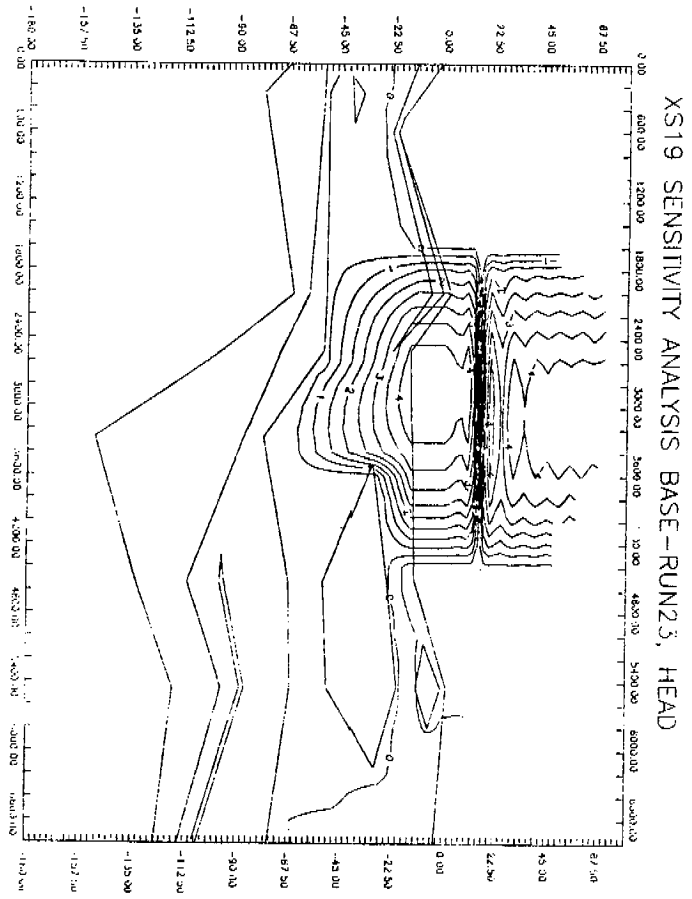
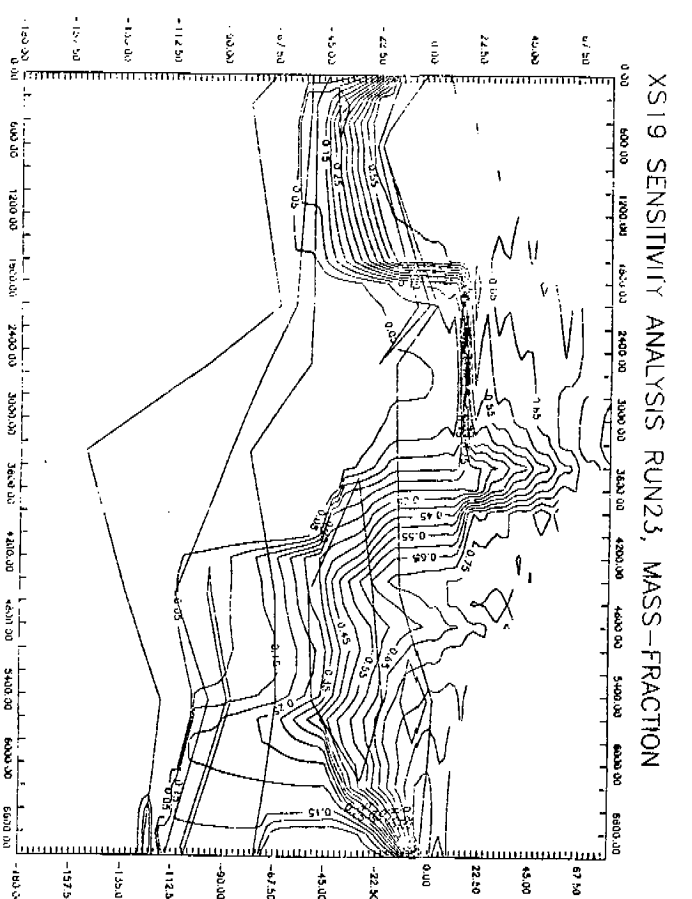
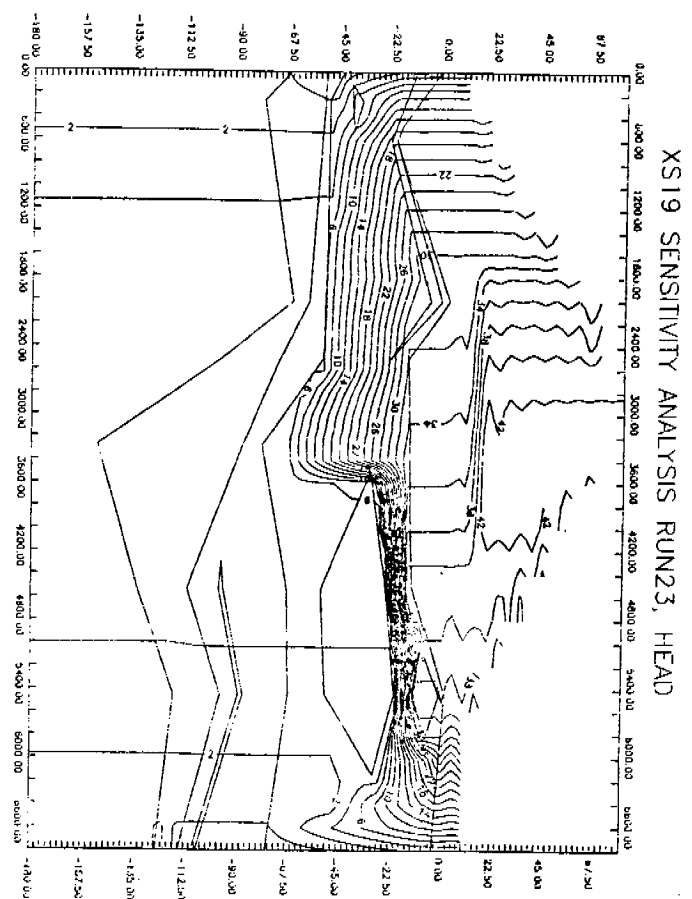
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48	0.0000E+00
47	-3.1710E-04
46	-7.9480E-05
45	0.0000E+00
44	0.0000E+00
43	-1.9418E-05
42	-4.8404E-06
41	-5.4182E-07
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37	-4.6153E-08
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33	-4.8150E-09
32	-1.7119E-09
31	-1.3993E-08
30	-2.5070E-08
29	-5.6971E-08
28	-1.5025E-07
27	-1.5960E-06
26	-6.7816E-06
25	-3.2976E-05
24	-1.8046E-04
23	-1.1184E-03
22	-1.243
21	-1.237
20	-1.230
19	-1.223
18	-1.215
17	-1.206
16	-1.196
15	-1.186
14	-1.174
13	-1.162
12	-1.148
11	-1.134
10	-0.6112
9	-1.853
8	-0.4578
7	-0.5957
6	-5.9553E-04
5	-1.2028E-03
4	0.0000E+00
3	0.0000E+00
2	0.0000E+00
1	0.0000E+00



1/9 Sens. Anal
Run 24

*** GLOBAL FLOW BALANCE SUMMARY ***

CURRENT TIME STEP	RATES	AMOUNTS
FLUID INFLOW	2.101804E+03 (LB/D)	4.675713E+05 (LB)
FLUID OUTFLOW	2.101804E+03 (LB/D)	4.675713E+05 (LB)
CHANGE IN FLUID IN REGION	0.000000E+00 (LB/D)	0.000000E+00 (LB)
RESIDUAL IMBALANCE	-8.652665E-13 (LB/D)	-1.924888E-10 (LB)
FRACTIONAL IMBALANCE		0.0000
SOLUTE INFLOW	1.418601E+03 (LB/D)	3.155848E+05 (LB)
SOLUTE OUTFLOW	8.877401E+02 (LB/D)	1.974883E+05 (LB)
CHANGE IN SOLUTE IN REGION	5.308614E+02 (LB/D)	1.180964E+05 (LB)
RESIDUAL IMBALANCE	-6.056433E-09 (LB/D)	-1.347326E-06 (LB)
FRACTIONAL IMBALANCE		0.0000

CUMULATIVE SUMMARY

	AMOUNTS
FLUID INFLOW	1.597370E+07 (LB)
FLUID OUTFLOW	1.597370E+07 (LB)
CHANGE IN FLUID IN REGION	-9.903125E-04 (LB)
FLUID IN REGION	1.796139E+07 (LB)
RESIDUAL IMBALANCE	-2.434496E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
SOLUTE INFLOW	1.078137E+07 (LB)
SOLUTE OUTFLOW	4.683131E+06 (LB)
CHANGE IN SOLUTE IN REGION	6.098236E+06 (LB)
SOLUTE IN REGION	6.098236E+06 (LB)
RESIDUAL IMBALANCE	-3.024385E-05 (LB)
FRACTIONAL IMBALANCE	0.0000
CUMULATIVE SPECIFIED P CELL FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. FLUID NET INFLOW	1.058171E+07 (LB)
CUMULATIVE LEAKAGE B.C. FLUID NET INFLOW	-1.058171E+07 (LB)
CUMULATIVE AQUIFER INFLUENCE FLUID NET INFLOW	0.000000E+00 (LB)
CUMULATIVE SPECIFIED C CELL OR ASSOCIATED WITH	
SPECIFIED P CELL SOLUTE NET INFLOW	0.000000E+00 (LB)
CUMULATIVE FLUX B.C. SOLUTE NET INFLOW	1.067153E+07 (LB)
CUMULATIVE LEAKAGE B.C. SOLUTE NET INFLOW	-4.573296E+06 (LB)
CUMULATIVE AQUIFER INFLUENCE SOLUTE NET INFLOW	0.000000E+00 (LB)

AQUIFER OR RIVER LEAKAGE FLOW RATES
POSITIVE IS INTO THE REGION

FLUID (LB/D)

VERTICAL SLICES

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47 -37.43
46 1.2199E-03
45 4.7310E-03
44 -1.4481E-03
43 2.1772E-03
42 -3.9395E-03
41 -3.0235E-04
40 3.3494E-03
39 -2.7230E-03
38 9.7690E-04
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36 -1.2546E-03
35 2.5751E-03
34 341.0
33 -182.6
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31 -3.4046E-03
30 -7.9775E-03
29 -2.7114E-03
28 -1.0180E-02
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16 6.3557E-03
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14 4.7726E-03
13 4.1251E-03
12 3.5563E-03
11 3.0555E-03
10 2.6131E-03
9 6.6612E-03

7 1.6380E-03
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4.2489E-02

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39 -2.7230E-03
38 9.7690E-04
37 4.7112E-03
36 -1.2546E-03
35 2.5751E-03
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33 -182.6
32 -179.2
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17 7.3216E-03
16 6.3557E-03
15 5.5114E-03
14 4.7726E-03
13 4.1251E-03
12 3.5563E-03
11 3.0555E-03
10 2.6131E-03
9 6.6612E-03
8 8.9205E-04
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19	-9.034
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16	-8.845
15	-8.782
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13	-8.650
12	-8.578
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VERTICAL SLICES

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48	-24.62
47	-24.34
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45	0.0000E+00
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43	0.0000E+00
42	-5.0115E-04
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39	-9.0003E-05
38	0.0000E+00
37	0.0000E+00
36	-1.0458E-05
35	0.0000E+00
34	0.0000E+00
33	-1.440
32	-1.491
31	-3.5011E-06
30	-9.8970E-07
29	-4.9692E-08
28	-2.5964E-08
27	-3.4819E-09
26	-1.4442E-09
25	-3.5875E-10
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14				-1.260
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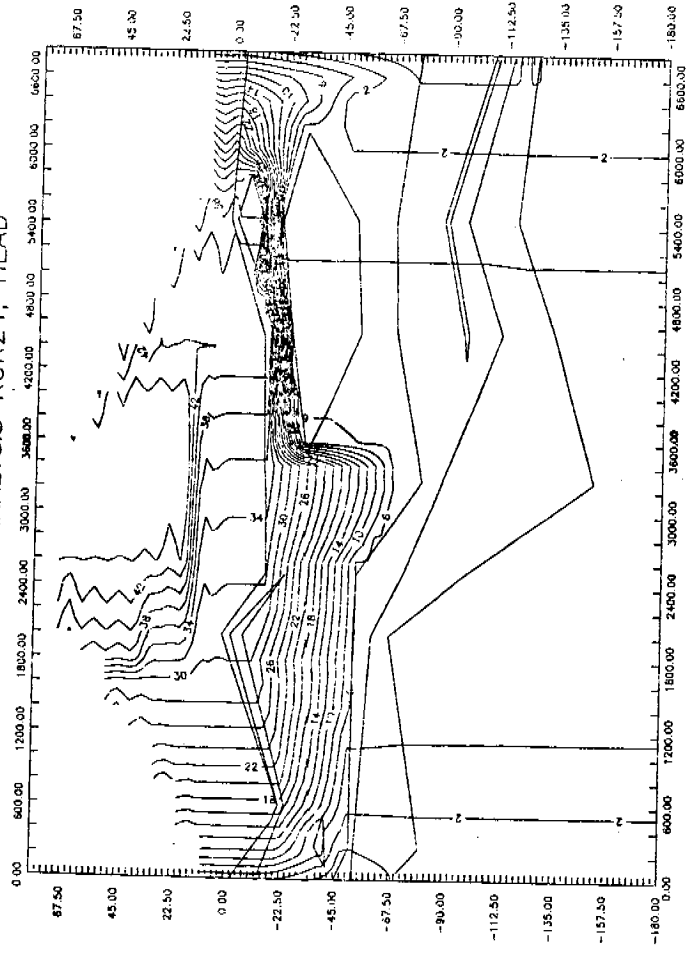
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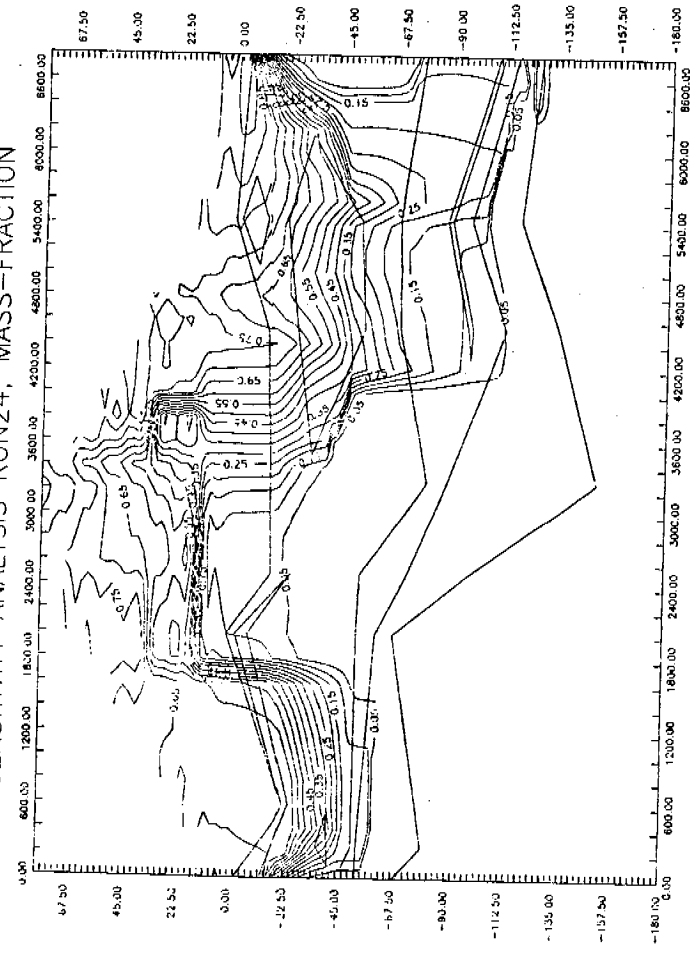
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54	-67.88
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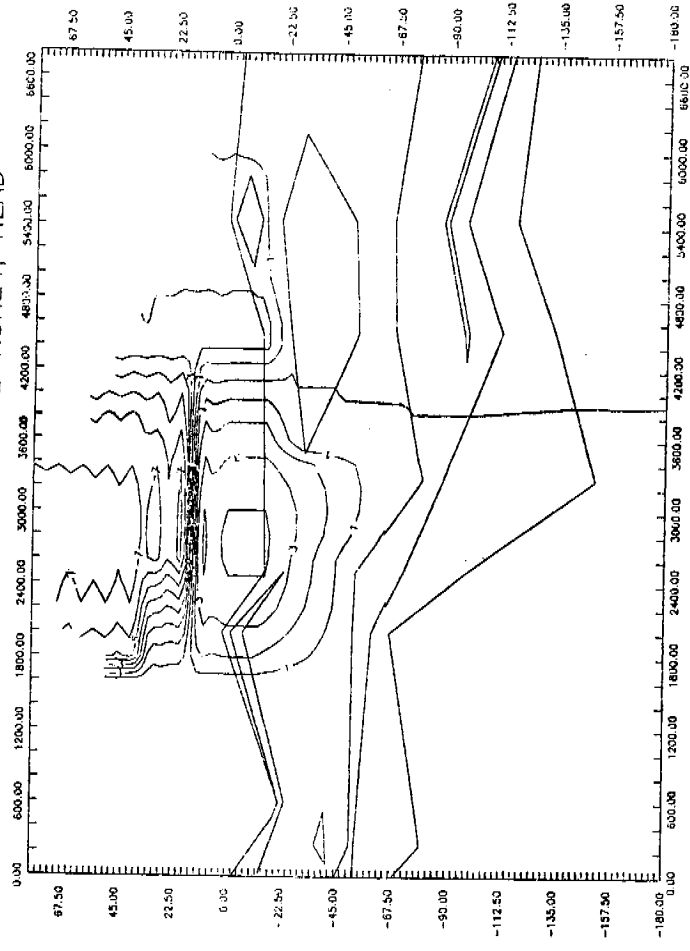
XS19 SENSITIVITY ANALYSIS RUN24, HEAD



XS19 SENSITIVITY ANALYSIS RUN24, MASS-FRACTION



XS19 SENSITIVITY ANALYSIS BASE-RUN24, HEAD



XS19 SENSITIVITY ANALYSIS BASE-RUN24, MASS-FRACTION

