```
CLEAR STORAGE 1     ,008015,022026,030037,044,049,053053N000000N00001026                                  1
CLEAR STORAGE 2     L068116,105106,110117B101/I9I#071029C029056B026/B001/0991,001/001117I0?                2
BOOTSTRAP           ,008015,022029,036040,047054,061068,072/061039             ,0010011040                3

                         FORTRAN COMPILER -- CONSTANTS PHASE TWO -- 18                              PAGE    1

 SEQ PG LIN  LABEL  OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

 101               JOB   FORTRAN COMPILER -- CONSTANTS PHASE TWO -- 18
 102               CTL   6611
 103         *
 104         * SAME AS VARIABLES PHASE TWO.  THE TABLE OF SIMPLE VARIABLES
 105         * IS DESTROYED
 106         *
 107         X1     EQU   89                                                      0089
 108         X2     EQU   94                                                      0094
 109         X3     EQU   99                                                      0099
 110         *
 111         * ON ENTRY, 83 IS THE TOP OF CODE AND X2 IS ONE BELOW THE
 112         * BOTTOM OF CODE, AT THE TOP OF MEMORY.
 113         *
 114         BOTADR EQU   2599  BOTTOM OF WORKING CORE                          2599
 115         *
 116         * STUFF IN THE RESIDENT AREA
 117         *
 118         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                     0110
 119         SNAPSH EQU   333  CORE DUMP SNAPSHOT                               0333
 120         TOPCOR EQU   688  TOP CORE ADDRESS FROM PARAM CARD                 0688
 121         IMOD   EQU   690  INTEGER MODULUS -- NUMBER OF DIGITS              0690
 122         MANTIS EQU   692  FLOATING POINT MANTISSA DIGITS & 2 FOR EXP       0692
 123         LOADNX EQU   700  LOAD NEXT OVERLAY                                0700
 124         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                    0707
 125         TPREAD EQU   780  TAPE READ INSTRUCTION IN OVERLAY LOADER          0780
 126         CLRBOT EQU   833  BOTTOM OF CORE TO CLEAR IN OVERLAY LOADER        0833
 127         *
 128               ORG   838                                                            0838
 129         LOADDD EQU   *&1          LOAD ADDRESS                             0838
 130    840  TOPCOD DCW   #3  TOP OF CODE & X00 - 1                          3  0840                       4
 131    845  DIFF   DCW   #5  TOP OF CORE - TOPCOD AS FIVE DIGITS            5  0845                       4
 132    848  BNDRY  DCW   #3                                                  3  0848                       4
 133         *
 134         * CLEAR FROM THE BOTTOM OF CODE DOWN TO BOTADR & 1
 135         *
 136    849  BEGINN MCW   X2,X3                                               7  0849  M 094 099            4
 137    856         SW    GM                                                  4  0856  , T33                4
 138    860  CLRL   CS    0&X3                                                4  0860  / 0?0                4
 139    864         SBR   X3                                                  4  0864  H 099                4
 140    868         C     X3,BOTCLR                                           7  0868  C 099 T68            5
 141    875         BU    CLRL                                                5  0875  B 860 /              5
 142         *
 143         * MOVE CODE BACK DOWN TO BOTADR-2
 144         *
 145    880         SBR   X1,BOTADR  WHY NOT                                  7  0880  H 089 N99            5
 146    887         MN    0&X1         JUST                                   4  0887  D 0|0                5
 147    891         SAR   X1             SAR  X1,BOTADR-1?                    4  0891  Q 089                5
```

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SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
148    895  MOVE   MCM   0&X2                                              4  0895  P 0!0               5
149    899         SAR   SX2&6                                             4  0899  Q 921               5
150    903         MCM   0&X2,1&X1                                         7  0903  P 0!0 0|1           6
151    910         MN                                                      1  0910  D                   6
152    911         SBR   X1                                              4  0911  H 089               6
153    915  SX2    SBR   X2,0-0                                          7  0915  H 094 000           6
154    922         BCE   MOVE,0&X1,|  DO NOT SET WM UNDER RM            8  0922  B 895 0|0 |         6
155    930         MN    0&X2                                            4  0930  D 0!0               6
156    934         CW                                                    1  0934  )                   6
157    935         SW    0&X1  UNDER GM                                  4  0935  , 0|0               7
158    939         C     X2,TOPCOR                                       7  0939  C 094 688           7
159    946         BU    MOVE                                            5  0946  B 895 /             7
160    951         CW    0&X2                                            4  0951  ) 0!0               7
161    955         CW                                                    1  0955  )                   7
162    956         SBR   TOPCOD,1&X1  TOPCOD IS                          7  0956  H 840 0|1           7
163    963         MN    K99,TOPCOD     NOW TOP OF                       7  0963  D T32 840           7
164    970         MN                     CODE & X00 - 1                 1  0970  D                   8
165         *
166         * CLEAR FROM TOP OF CORE DOWN TO TOPCOD & 1
167         *
168    971         MCW   83,X3                                           7  0971  M 083 099           8
169    978  CLRL2  CS    0&X3                                            4  0978  / 0?0               8
170    982         SBR   X3                                              4  0982  H 099               8
171    986         C     X3,TOPCOD                                       7  0986  C 099 840           8
172    993         BU    CLRL2                                           5  0993  B 978 /             8
173    998         MCW   KLESS,0&X3                                      7  0998  M T69 0?0           8
174  1 005         MCW   83,TOCONV                                       7  1005  M 083 T30           9
175  1 012         B     CONV                                            4  1012  B S56               9
176  1 016         MCW   CONV5,DIFF                                      7  1016  M T74 845           9
177  1 023         MCW   TOPCOD,TOCONV                                   7  1023  M 840 T30           9
178  1 030         B     CONV                                            4  1030  B S56               9
179  1 034         S     CONV5,DIFF                                      7  1034  S T74 845           9
180  1 041         A     DIFF-1,W6                                       7  1041  A 844 T80          10
181  1 048         A     W6                                              4  1048  A T80              10
182  1 052         A     DIFF-1,W6                                       7  1052  A 844 T80          10
183  1 059         A     CONV5,W6  DIFF * 1.3                            7  1059  A T74 T80          10
184         *
185         * CONVERT DIFF * 1.3 TO MACHINE ADDRESS
186         *
187  1 066         MCW   W6-3,X3                                         7  1066  M T77 099          10
188  1 073         A     X3                                              4  1073  A 099              10
189  1 077         MZ    ZONES&X3,W6-2                                   7  1077  Y TC4 T78          11
190  1 084         MZ    ZONES&1&X3,W6                                   7  1084  Y TC5 T80          11
191  1 091         MCW   W6,X3                                           7  1091  M T80 099          11
192         *
193  1 098         SW    2&X3                                            4  1098  , 0?2              11
194  1 102         MCW   KLESS                                           4  1102  M T69              11
195  1 106         SBR   BNDRY                                           4  1106  H 848              11
196  1 110         MCW   X1,X2                                           7  1110  M 089 094          12
197  1 117         MN    0&X2                                            4  1117  D 0!0              12
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SEQ PG LIN  LABEL  OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 121         SAR   X1                                                 4  1121  Q 089               12
199  1 125         MCW   83,X3                                              7  1125  M 083 099           12
200  1 132         LCA   GM,1&X3                                            7  1132  L T33 0?1           12
201  1 139         CS    299                                                4  1139  / 299               12
202  1 143         MCW   MANTIS,X3                                         7  1143  M 692 099           13
203  1 150         MCW   KZ1        AND A ZERO                              4  1150  M T81               13
204  1 154         SW    200                                                4  1154  , 200               13
205  1 158         MCW   83,*&7                                             7  1158  M 083 /71           13
206  1 165         LCA   199&X3,0   SPACE FOR A FP NUMBER                   7  1165  L 1I9 000           13
207  1 172         SBR   83                                                 4  1172  H 083               13
208  1 176         SBR   SPINT&6                                            4  1176  H /94               13
209  1 180         MN    IMOD,X3                                            7  1180  D 690 099           14
210  1 187         MN                                                       1  1187  D                   14
211  1 188  SPINT  LCA   199&X3,0   SPACE FOR AN INTEGER                    7  1188  L 1I9 000           14
212  1 195         SBR   X3                                                 4  1195  H 099               14
213  1 199         SBR   142                                                4  1199  H 142               14
214  1 203         LCA   K1,0&X3                                            7  1203  L T82 0?0           14
215  1 210         SBR   157                                                4  1210  H 157               14
216  1 214         LCA   K15100                                             4  1214  L T85               15
217  1 218         SBR   83                                                 4  1218  H 083               15
218         *
219         * DONE
220         *
221  1 222         BSS   SNAPSH,C                                           5  1222  B 333 C             15
222  1 227         SBR   TPREAD&6,BEGINN                                    7  1227  H 786 849           15
223  1 234         SBR   CLRBOT                                             4  1234  H 833               15
224  1 238         SBR   CLEARL&3,GMWM                                     7  1238  H 710 T97           15
225  1 245         LCA   CONST3,PHASID                                      7  1245  L T94 110           15
226  1 252         B     LOADNX                                             4  1252  B 700               16
227         *
228         * CONVERT TOCONV FROM MACHINE ADDRESS FORMAT TO FIVE-DIGIT
229         * FORMAT IN CONV5
230         *
231  1 256  CONV   SBR   CONVX&3                                            4  1256  H T25               16
232  1 260         MN    TOCONV,CONV5                                       7  1260  D T30 T74           16
233  1 267         MN                                                       1  1267  D                   16
234  1 268         MN                                                       1  1268  D                   16
235  1 269         MCW                                                      1  1269  M                   16
236  1 270         MZ    TOCONV,K99                                         7  1270  Y T30 T32           16
237  1 277         MZ    TOCONV-2,K99-1                                     7  1277  Y T28 T31           17
238  1 284         NOP   K99-1                                             4  1284  N T31               17
239  1 288         SAR   X3                                                 4  1288  Q 099               17
240  1 292  CONVL  C     4&X3,K99                                           7  1292  C 0?4 T32           17
241  1 299         SAR   X3                                                 4  1299  Q 099               17
242  1 303         A     KP1,CONV5-3                                        7  1303  A T95 T71           17
243  1 310         BU    CONVL                                              5  1310  B S92 /             17
244  1 315         MZ    KB1,CONV5-3                                        7  1315  Y T96 T71           18
245  1 322  CONVX  B     0                                                  4  1322  B 000               18
246         *
247         * DATA
```

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SEQ PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD

248         *
249  1 330  TOCONV  DCW   @0J   @                                             5  1330                      18
250  1 332  K99     DCW   99                                                  2  1332                      18
251  1 333  GM      DC    @}@                                                 1  1333              GMARK   18
252         ZONES   EQU   *&1                                                    1334
253  1 365          DC    @99Z9R9I99ZZZRZIZ9RZRRRIR9IZIRIII@                 32  1365                      19
254  1 368  BOTCLR  DSA   BOTADR  CLEAR DOWN TO HERE                          3  1368  N99                 19
255  1 369  KLESS   DCW   @<@                                                 1  1369                      19
256  1 374  CONV5   DCW   #5                                                  5  1374                      20
257  1 380  W6      DCW   #6                                                  6  1380                      20
258  1 381  KZ1     DCW   0                                                   1  1381                      20
259  1 382  K1      DCW   @1@                                                 1  1382                      20
260  1 385  K15100  DSA   15100                                             3  1385  A0?                 20
261  1 394  CONST3  DCW   @CONST TRI@                                        9  1394                      20
262  1 395  KP1     DCW   &1                                                  1  1395                      20
263  1 396  KB1     DCW   #1                                                  1  1396                      21
264  1 397  GMWM    DCW   @}@                                                 1  1397              GMARK   21
265                 ORG   201                                                       0201
266    203          DSA   LOADDD    LOAD ADDRESS FOR CARD-TO-TAPE PROGRAM     3  0203  838                 22
267                 EX    BEGINN                                                    B 849                 23
268                 END                                                             / 000 080
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
BEGINN	849	BNDRY	848	BOTADR	2599	BOTCLR	1368	CLEARL	707	CLRBOT	833	CLRL	860
CLRL2	978	CONST3	1394	CONV	1256	CONV5	1374	CONVL	1292	CONVX	1322	DIFF	845
GM	1333	GMWM	1397	IMOD	690	K1	1382	K15100	1385	K99	1332	KB1	1396
KLESS	1369	KP1	1395	KZ1	1381	LOADDD	838	LOADNX	700	MANTIS	692	MOVE	895
PHASID	110	SNAPSH	333	SPINT	1188	SX2	915	TOCONV	1330	TOPCOD	840	TOPCOR	688
TPREAD	780	W6	1380	X1	89	X2	94	X3	99	ZONES	1334		