```
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 -- ARITH PHASE FOUR -- PHASE 36                          PAGE    1

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

 101               JOB   FORTRAN COMPILER -- ARITH PHASE FOUR -- PHASE 36
 102               CTL   6611
 103         *
 104         * STRINGS GENERATED BY ARITH PHASE TWO ARE OPTIMIZED TO REDUCE
 105         * THE NUMBER OF TEMPORARY STORAGE AREAS FOR EACH STATEMENT.
 106         *
 107         * ON ENTRY, X1 IS THE TOP OF THE TOPMOST STATEMENT IN LOW CORE
 108         * THAT IS NEITHER AN ASSIGNMENT NOR IF STATEMENT, X2 IS THE TOP
 109         * OF THE TOPMOST STATEMENT IN HIGH CORE THAT IS NEITHER AN
 110         * ASSIGNMENT NOR IF STATEMENT, X3 IS THE TOP OF THE PREFIX OF
 111         * THE TOPMOST STATEMENT IN HIGH COORE THAT IS EITHER AN
 112         * ASSIGNMENT OR IF STATEMENT, AND 81-83 IS THE GMWM ABOVE THE
 113         * TOPMOST STATEMENT IN HIGH CORE.
 114         *
 115         X1     EQU   89                                                  0089
 116         X2     EQU   94                                                  0094
 117         X3     EQU   99                                                  0099
 118         *
 119         * STUFF IN THE RESIDENT AREA
 120         *
 121         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                   0110
 122         SAWNEG EQU   123  SAW NEGATION OPERATOR (UNARY MINUS) IF NO WM    0123
 123         SNAPSH EQU   333  CORE DUMP SNAPSHOT                             0333
 124         LOADNX EQU   700  LOAD NEXT OVERLAY                              0700
 125         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                   0707
 126         *
 127         * RUNTIME ADDRESSES
 128         *
 129         ARITF  EQU   700                                                 0700
 130         *
 131               ORG   838                                                        0838
 132         LOADDD EQU   *&1          LOAD ADDRESS                           0838
 133    838  BEGINN BCE   DONE,X2,.                                      8   0838  B R37 094 .          4
 134    846         SW    GM                                            4   0846  , K40                4
 135    850         SBR   SX3,0&X3                                      7   0850  H R62 0?0            4
 136    857         SBR   X1,1&X1                                       7   0857  H 089 0|1            4
 137    864         SBR   X2,1&X2                                       7   0864  H 094 0!1            4
 138    871  LOOP   S     WRKTOP                                        4   0871  S N72                4
 139    875         C     X2,SX3                                        7   0875  C 094 R62            5
 140    882         BE    DONE                                          5   0882  B R37 S              5
 141    887         MCW   KB4,3021                                      7   0887  M ?45 ?21            5
 142    894         SBR   SX1,0&X1                                      7   0894  H R65 0|0            5
 143    901  OUTER  MCW   KB4,OP2                                       7   0901  M ?45 R66            5
 144    908         CW    FLAG                                          4   0908  ) R36                5
 145    912         B     SETUP                                         4   0912  B N73                6
 146    916         BCE   TESTEQ,W18A-2,<                              8   0916  B 974 ?61 <          6
 147    924  MIDDLE BCE   1166,W18B-2,<                                8   0924  B /66 ?86 <          6
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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD

148    932          BCE   1733,1&X2,}                                   8  0932  B X33 0!1 } GMARK    6
149    940          BW    1302,FLAG                                     8  0940  V T02 R36 1          6
150    948  INNER   A     K3999,2972                                    7  0948  A R69 R72            7
151    955          MCW   2972,X3                                      7  0955  M R72 099            7
152    962          BCE   INNER,WORK&X3,1                             8  0962  B 948 KD1 1          7
153    970          B     OUTER                                       4  0970  B 901                7
154    974  TESTEQ  BCE   MIDDLE,OP,#                                 8  0974  B 924 ?64 #          7
155    982          BCE   1328,OP,.  WAS **                           8  0982  B T28 ?64 .          8
156    990          B     2758                                        4  0990  B P58                8
157    996          DSA   W18A                                        3  0996  ?63                  8
158    997          B     2837                                        4  0997  B Q37                8
159  1 001          MN    KP1,WORK&X1                                 7  1001  D R73 KU1            8
160  1 008          LCA   0&X3,W35                                    7  1008  L 0?0 ?08            8
161  1 015          SAR   X1                                          4  1015  Q 089                8
162  1 019  MOVE13  C     X1,X2    MOVE                               7  1019  C 089 094            9
163  1 026          BE    M13X       0&X1                            5  1026  B |54 S              9
164  1 031          LCA   0&X1,0&X3    UP TO                         7  1031  L 0|0 0?0            9
165  1 038          SAR   X1             0&X3                        4  1038  Q 089                9
166  1 042          C     0&X3             UNTIL                     4  1042  C 0?0                9
167  1 046          SAR   X3                 X1 EQUAL X2             4  1046  Q 099                9
168  1 050          B     MOVE13                                      4  1050  B |19                9
169  1 054  M13X    C     0&X2                                        4  1054  C 0!0               10
170  1 058          SAR   X1                                          4  1058  Q 089               10
171  1 062          BW    2928,FLAG                                   8  1062  V R28 R36 1         10
172  1 070          BCE   1101,W18B,*                                 8  1070  B /01 ?88 *         10
173  1 078          BCE   1695,OP,#                                   8  1078  B W95 ?64 #         10
174  1 086          LCA   W18B,0&X3                                   7  1086  L ?88 0?0           10
175  1 093          SBR   X3                                          4  1093  H 099               11
176  1 097          CW    1&X3                                        4  1097  ) 0?1               11
177  1 101          LCA   OP,0&X3                                     7  1101  L ?64 0?0           11
178  1 108          SBR   X3                                          4  1108  H 099               11
179  1 112          CW    1&X3                                        4  1112  ) 0?1               11
180  1 116          LCA   W35,0&X3                                    7  1116  L ?08 0?0           11
181  1 123          SBR   X3                                          4  1123  H 099               11
182  1 127          SBR   X2                                          4  1127  H 094               12
183  1 131          LCA   0&X1,0&X3                                   7  1131  L 0|0 0?0           12
184  1 138          SAR   X1                                          4  1138  Q 089               12
185  1 142          C     0&X3                                        4  1142  C 0?0               12
186  1 146          SAR   X3                                          4  1146  Q 099               12
187  1 150          BCE   1162,1&X1,}                                 8  1150  B /62 0|1 } GMARK   12
188  1 158          B     1131                                        4  1158  B /31               12
189  1 162          B     901                                         4  1162  B 901               13
190  1 166          BCE   1178,OP2,                                   8  1166  B /78 R66           13
191  1 174          B     1496                                        4  1174  B U96               13
192  1 178          BCE   1663,OP,#                                   8  1178  B W63 ?64 #         13
193  1 186          BCE   1214,OP,&                                   8  1186  B S14 ?64 &         13
194  1 194          BCE   1214,OP,*                                   8  1194  B S14 ?64 *         14
195  1 202          BCE   1239,OP,-                                   8  1202  B S39 ?64 -         14
196  1 210          B     1527                                        4  1210  B V27               14
197  1 214          LCA   W18A,W35    SWAP                            7  1214  L ?63 ?08           14
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SEQ PG LIN  LABEL  OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
198  1 221         LCA   W18B,W18A     W18A                             7  1221  L ?88 ?63           14
199  1 228         LCA   W35,W18B        AND W18B                      7  1228  L ?08 ?88           15
200  1 235         B     974                                           4  1235  B 974               15
201  1 239         BW    1379,FLAG                                     8  1239  V T79 R36 1         15
202  1 247         LCA   W18A,0&X2                                     7  1247  L ?63 0!0           15
203  1 254         LCA   KPLUS                                        4  1254  L ?09               15
204  1 258         SBR   X2                                            4  1258  H 094               15
205  1 262         CW    2&X2,SAWNEG                                   7  1262  ) 0!2 123           16
206  1 269         LCA   W18B,W18A                                     7  1269  L ?88 ?63           16
207  1 276         LCA   KSTAR3,W18B                                   7  1276  L ?12 ?88           16
208  1 283         MCW   NOP,OP                                        7  1283  M ?13 ?64           16
209  1 290         CW    SAWNEG                                        4  1290  ) 123               16
210  1 294         SW    FLAG                                          4  1294  , R36               16
211  1 298         B     974                                           4  1298  B 974               17
212        *
213  1 302         BCE   1328,W18B,*                                   8  1302  B T28 ?88 *         17
214  1 310         MCW   OP,1324                                       7  1310  M ?64 T24           17
215  1 317         BCE   1391,3017,0                                   8  1317  B T91 ?17 0         17
216  1 325         B                                                   1  1325  B                   17
217  1 326         B                                                   1  1326  B                   17
218  1 327         B                                                   1  1327  B                   17
219  1 328         BW    *&5,FLAG                                      8  1328  V T40 R36 1         18
220  1 336         B     INNER                                         4  1336  B 948               18
221  1 340         B     1379                                          4  1340  B T79               18
222  1 344         BW    1360,2&X2                                     8  1344  V T60 0!2 1         18
223  1 352         SBR   X2                                            4  1352  H 094               18
224  1 356         B     1344                                          4  1356  B T44               18
225  1 360         SBR   X2,1&X2                                      7  1360  H 094 0!1           18
226  1 367         BCE   1733,1&X2,}  GMARK                           8  1367  B X33 0!1 } GMARK   19
227  1 375         B     INNER                                         4  1375  B 948               19
228        *
229  1 379         SBR   1390                                          4  1379  H T90               19
230  1 383         CW    1&X2                                          4  1383  ) 0!1               19
231  1 387         B     0                                             4  1387  B 000               19
232        *
233  1 391         BCE   1403,OP2,                                     8  1391  B U03 R66           19
234  1 399         B     1440                                          4  1399  B U40               19
235  1 403         MCW   OP,OP2                                        7  1403  M ?64 R66           20
236  1 410         CW    1&X2                                          4  1410  ) 0!1               20
237  1 414         LCA   W18B,0&X2                                     7  1414  L ?88 0!0           20
238  1 421         SBR   X2                                            4  1421  H 094               20
239  1 425         CW    KEEPWM                                        4  1425  ) ?18               20
240  1 429         SBR   RWM1&3,1&X2  REMEMBER WHERE TO CLEAR WM       7  1429  H O17 0!1           20
241  1 436         B     908                                           4  1436  B 908               20
242  1 440         BCE   1476,OP2,&                                    8  1440  B U76 R66 &         21
243  1 448         BCE   1476,OP2,-                                    8  1448  B U76 R66 -         21
244  1 456         BCE   1410,OP,*                                     8  1456  B U10 ?64 *         21
245  1 464         BCE   1410,OP,/                                     8  1464  B U10 ?64 /         21
246  1 472         B     1328                                          4  1472  B T28               21
247  1 476         BCE   1410,OP,&                                     8  1476  B U10 ?64 &         22
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SEQ  PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD

248   1 484         BCE   1410,OP,-                                   8  1484  B U10 ?64 -         22
249   1 492         B     1328                                        4  1492  B T28               22
250   1 496         MCW   OP,1510                                     7  1496  M ?64 V10           22
251   1 503         BCE   1575,OP2,0                                 8  1503  B V75 R66 0         22
252   1 511         BCE   1555,OP2,&                                 8  1511  B V55 R66 &         23
253   1 519         BCE   1555,OP2,-                                 8  1519  B V55 R66 -         23
254   1 527         BCE   1733,1&X2,}                                8  1527  B X33 0!1 } GMARK   23
255   1 535         BW    1328,FLAG                                  8  1535  V T28 R36 1         23
256   1 543         BW    INNER,1&X2                                 8  1543  V 948 0!1 1         24
257   1 551         B     1328                                       4  1551  B T28               24
258   1 555         BCE   1575,OP,&                                  8  1555  B V75 ?64 &         24
259   1 563         BCE   1575,OP,-                                  8  1563  B V75 ?64 -         24
260   1 571         B     1527                                       4  1571  B V27               24
261   1 575         BCE   1328,OP,@                                  8  1575  B T28 ?64 @         25
262   1 583         BW    1379,FLAG                                  8  1583  V T79 R36 1         25
263   1 591         C     0&X2,KB4                                   7  1591  C 0!0 ?45           25
264   1 598         SAR   X3                                         4  1598  Q 099               25
265   1 602         MCW   0&X3,0&X2                                  7  1602  M 0?0 0!0           25
266   1 609         SBR   X2                                         4  1609  H 094               25
267   1 613         BCE   1644,OP,-                                  8  1613  B W44 ?64 -         26
268   1 621         MCW   OP,0&X2                                    7  1621  M ?64 0!0           26
269   1 628         MCW   W18B                                       4  1628  M ?88               26
270   1 632         C     0&X2                                       4  1632  C 0!0               26
271   1 636         SBR   X2                                         4  1636  H 094               26
272   1 640         B     901                                        4  1640  B 901               26
273   1 644         LCA   KPLUS,0&X2                                 7  1644  L ?09 0!0           26
274   1 651         SBR   X2                                         4  1651  H 094               27
275   1 655         SW    FLAG                                       4  1655  , R36               27
276   1 659         B     1269                                       4  1659  B S69               27
277   1 663         B     2758                                       4  1663  B P58               27
278   1 669         DSA   W18B                                       3  1669  ?88                 27
279   1 670         MCW   W18B,3021                                  7  1670  M ?88 ?21           27
280   1 677         MCW   3091,2972                                  7  1677  M ?91 R72           27
281   1 684         A     KP1,2972                                   7  1684  A R73 R72           28
282   1 691         B     997                                        4  1691  B 997               28
283   1 695         LCA   W35,0&X3                                  7  1695  L ?08 0?0           28
284   1 702         SBR   X2                                         4  1702  H 094               28
285   1 706         LCA   OP                                         4  1706  L ?64               28
286   1 710         SBR   X3                                         4  1710  H 099               28
287   1 714         CW    1&X3                                       4  1714  ) 0?1               28
288   1 718         LCA   W18A,0&X3                                  7  1718  L ?63 0?0           29
289   1 725         LCA   GM                                         4  1725  L K40               29
290   1 729         B     901                                        4  1729  B 901               29
291   1 733         MCW   SX1,X1                                     7  1733  M R65 089           29
292   1 740         SBR   3024,0&X2                                  7  1740  H ?24 0!0           29
293   1 747         BCE   1887,2&X2,,                                8  1747  B Y87 0!2 ,         29
294   1 755         BCE   1887,3019,<                                8  1755  B Y87 ?19 <         30
295   1 763         BCE   1887,0&X2,$                                8  1763  B Y87 0!0 $         30
296   1 771         BCE   1887,W18A,$                                8  1771  B Y87 ?63 $         30
297   1 779         BM    1807,3062                                  8  1779  V Y07 ?62 K         30
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SEQ PG LIN  LABEL  OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
298  1 787         BM    1887,3087                                    8  1787  V Y87 ?87 K         31
299  1 795         BWZ   1887,3087,S                                  8  1795  V Y87 ?87 S         31
300  1 803         B     1823                                         4  1803  B Y23               31
301  1 807         BWZ   1887,3087,2                                  8  1807  V Y87 ?87 2         31
302  1 815         BWZ   1887,3087,B                                  8  1815  V Y87 ?87 B         31
303  1 823         B     1887                                         4  1823  B Y87               32
304  1 827         LCA   W18A                                         4  1827  L ?63               32
305  1 831         LCA   W18B                                         4  1831  L ?88               32
306  1 835         LCA   LCA                                          4  1835  L ?25               32
307  1 839         SBR   X3                                           4  1839  H 099               32
308  1 843         CW    2&X3,5&X3                                    7  1843  ) 0?2 0?5           32
309  1 850         MZ    1852,3&X3                                    7  1850  Y Y52 0?3           32
310  1 857         MZ    1859,6&X3                                    7  1857  Y Y59 0?6           33
311  1 864         SBR   X1,6&X1                                     7  1864  H 089 0|6           33
312  1 871         LCA   6&X2                                        4  1871  L 0!6               33
313  1 875         LCA                                                1  1875  L                   33
314  1 876         SBR   X2,6&X2                                     7  1876  H 094 0!6           33
315  1 883         B     LOOP                                         4  1883  B 871               33
316  1 887         MCW   3027,3021                                   7  1887  M ?27 ?21           33
317  1 894         MCW   A001,X3                                     7  1894  M ?30 099           34
318  1 901         MCW   3027,3032                                   7  1901  M ?27 ?32           34
319  1 908         SBR   X1,4&X1                                     7  1908  H 089 0|4           34
320  1 915         LCA   BARITF&3                                    4  1915  L ?36               34
321  1 919         BCE   1963,WORK&X3,0                              8  1919  B Z63 KD1 0         34
322  1 927         A     KP1,3032                                     7  1927  A R73 ?32           35
323  1 934         MCW   3032,3021                                   7  1934  M ?32 ?21           35
324  1 941         MZ    3031,3021                                    7  1941  Y ?31 ?21           35
325  1 948         A     KP1,X3                                       7  1948  A R73 099           35
326  1 955         SW    FLAG                                         4  1955  , R36               35
327  1 959         B     1919                                         4  1959  B Z19               35
328  1 963         LCA   ASSIGN,4&X1                                 7  1963  L ?37 0|4           36
329  1 970         LCA   3021                                         4  1970  L ?21               36
330  1 974         CW    4&X1                                         4  1974  ) 0|4               36
331  1 978         C     0&X1,BARITF&3                                7  1978  C 0|0 ?36           36
332  1 985         BE    1994                                         5  1985  B Z94 S             36
333  1 990         CW    1&X1                                         4  1990  ) 0|1               36
334  1 994         LCA   GM,1&X2                                     7  1994  L K40 0!1           36
335  2 001         C     0&X2                                         4  2001  C 0!0               37
336  2 005         SAR   X2                                           4  2005  Q 094               37
337  2 009         BCE   2139,0&X2,#                                 8  2009  B J39 0!0 #         37
338  2 017         BCE   2147,1&X2,$                                 8  2017  B J47 0!1 $         37
339  2 025         MZ    2&X2,2&X1                                    7  2025  Y 0!2 0|2           37
340  2 032         SBR   X1,4&X1                                     7  2032  H 089 0|4           37
341  2 039  MORE   MCM   1&X2,1&X1                                   7  2039  P 0!1 0|1           38
342  2 046         MN                                                 1  2046  D                   38
343  2 047         SBR   X1                                           4  2047  H 089               38
344  2 051         MCM   1&X2                                         4  2051  P 0!1               38
345  2 055         MN                                                 1  2055  D                   38
346  2 056         SAR   X2                                           4  2056  Q 094               38
347  2 060         BCE   MORE,0&X2,|                                 8  2060  B !39 0!0 |         38
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SEQ  PG LIN  LABEL   OP    OPERANDS                                          SFX CT  LOCN  INSTRUCTION TYPE  CARD
348   2 068          C     0&X2                                                 4  2068  C 0!0               39
349   2 072          SAR   X2                                                   4  2072  Q 094               39
350   2 076          MCW   X3,SX3A                                              7  2076  M 099 ?40           39
351   2 083          MCW   3041,0&X1                                            7  2083  M ?41 0|0           39
352   2 090          LCA   0&X2                                                 4  2090  L 0!0               39
353   2 094          SBR   X3                                                   4  2094  H 099               39
354   2 098          CW    0&X1,1&X3                                            7  2098  ) 0|0 0?1           39
355   2 105          C     0&X2                                                 4  2105  C 0!0               40
356   2 109          SAR   X3                                                   4  2109  Q 099               40
357   2 113          BCE   2158,0&X3,}                                         8  2113  B J58 0?0 } GMARK   40
358   2 121          SBR   X2,0&X3                                             7  2121  H 094 0?0           40
359   2 128          MCW   SX3A,X3                                             7  2128  M ?40 099           40
360   2 135          B     1927                                                 4  2135  B Z27               40
361   2 139          CW    1&X2                                                 4  2139  ) 0!1               40
362   2 143          B     2001                                                 4  2143  B !01               41
363   2 147          MZ    3&X2,2&X1                                            7  2147  Y 0!3 0|2           41
364   2 154          B     2032                                                 4  2154  B !32               41
365   2 158          C     0&X1,KB4                                             7  2158  C 0|0 ?45           41
366   2 165          SAR   X1                                                   4  2165  Q 089               41
367   2 169          LCA   3041,0&X1                                            7  2169  L ?41 0|0           41
368   2 176          MCW   0&X2                                                 4  2176  M 0!0               41
369   2 180          MCW   3024,X2                                              7  2180  M ?24 094           42
370   2 187          BW    2217,6&X2                                            8  2187  V K17 0!6 1         42
371   2 195          SW    3&X2                                                 4  2195  , 0!3               42
372   2 199          SBR   X1,9&X1                                             7  2199  H 089 0|9           42
373   2 206          LCA   11&X2                                                4  2206  L 0J1               42
374   2 210          SBR   X2,11&X2                                            7  2210  H 094 0J1           42
375   2 217          SBR   X1,6&X1                                             7  2217  H 089 0|6           43
376   2 224          LCA   6&X2                                                 4  2224  L 0!6               43
377   2 228          LCA                                                        1  2228  L                   43
378   2 229          SBR   X2,6&X2                                            7  2229  H 094 0!6           43
379   2 236          B     LOOP                                                 4  2236  B 871               43
380   2 240  GM      DC    @}@                                                  1  2240              GMARK   43
381          WORK    EQU   *&1                                                    2241
382   2 290          DCW   #50                                                 50  2290                      45
383   2 340          DC    #50                                                 50  2340                      47
384   2 390          DC    #50                                                 50  2390                      49
385   2 440          DC    #50                                                 50  2440                      51
386   2 490          DC    #50                                                 50  2490                      53
387   2 540          DC    #50                                                 50  2540                      55
388   2 572  WRKTOP  DC    #32                                                 32  2572                      56
389          *
390          * SKIP SUBSCRIPT IF PRESENT.  COPY THE NEXT OPERAND INTO W18A
391          * AND  THE NEXT OPERATOR INTO OP.  BUMP X2 BY 4.  IF THE
392          * OPERAND AFTER THE OPERATOR HAS A WORD MARK, PUT STARS INTO
393          * W3B, ELSE SKIP ANOTHER SUBSCRIPT IF PRESENT AND PUT THE
394          * NEXT OPERAND INTO W3B AND BUMP X3 BY THREE.
395          *
396   2 573  SETUP   SBR   SETUPX&3                                             4  2573  H P27               56
397   2 577          BCE   SKPSUB,1&X2,$                                        8  2577  B P28 0!1 $         57
```

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SEQ PG LIN  LABEL   OP    OPERANDS                                  SFX CT  LOCN  INSTRUCTION TYPE  CARD
398  2 585          LCA   3&X2,W18A                                      7  2585  L 0!3 ?63          57
399  2 592          MCW   4&X2,OP                                        7  2592  M 0!4 ?64          57
400  2 599          SBR   X2,4&X2                                        7  2599  H 094 0!4          57
401  2 606          BW    *&5,KEEPWM                                     8  2606  V O18 ?18 1        57
402  2 614  RWM1    CW    0                                              4  2614  ) 000              58
403  2 618          SW    KEEPWM                                         4  2618  , ?18              58
404  2 622          BW    GOTWM,1&X2                                     8  2622  V O72 0!1 1        58
405  2 630          SW    1&X2                                           4  2630  , 0!1              58
406  2 634          SBR   RWM2&3,1&X2  REMEMBER WHERE TO CLEAR WM       7  2634  H P23 0!1          58
407  2 641          MN    0&X2,*&15                                      7  2641  D 0!0 O62          58
408  2 648          MZ    0&X2,*&8                                       7  2648  Y 0!0 O62          59
409  2 655          BCE   GOTOP,OPS,0  &-*@.#                           8  2655  B O83 ?70 0        59
410  2 663          CHAIN 5                                                                 MACRO
411                 BCE                                                  1  2663  B           GEN    59
412                 BCE                                                  1  2664  B           GEN    59
413                 BCE                                                  1  2665  B           GEN    59
414                 BCE                                                  1  2666  B           GEN    59
415                 BCE                                                  1  2667  B           GEN    59
416  2 668          SW    FLAG                                           4  2668  , R36              60
417  2 672  GOTWM    LCA   KSTAR3,W18B                                   7  2672  L ?12 ?88          60
418  2 679          B     SETUPX                                         4  2679  B P24              60
419  2 683  GOTOP    BCE   SKPSUB,1&X2,$                                8  2683  B P28 0!1 $        60
420  2 691          LCA   3&X2,W18B                                      7  2691  L 0!3 ?88          60
421  2 698          SBR   X2,3&X2                                        7  2698  H 094 0!3          60
422  2 705          BW    RWM2,1&X2                                      8  2705  V P20 0!1 1        61
423  2 713          SW    1&X2,FLAG                                      7  2713  , 0!1 R36          61
424  2 720  RWM2    CW    0                                              4  2720  ) 000              61
425  2 724  SETUPX  B     0                                              4  2724  B 000              61
426         *
427         * SKIP SUBSCRIPT
428         *
429  2 728  SKPSUB  SBR   SKPSUX&3                                       4  2728  H P57              61
430  2 732          SBR   X2,8&X2                                        7  2732  H 094 0!8          61
431  2 739          BCE   SKPSUX,3&X2,$                                 8  2739  B P54 0!3 $        62
432  2 747          SBR   X2,6&X2                                        7  2747  H 094 0!6          62
433  2 754  SKPSUX  B     0                                              4  2754  B 000              62
434         *
435  2 758          SBR   X1                                             4  2758  H 089              62
436  2 762          SBR   2836,3&X1                                      7  2762  H Q36 0|3          62
437  2 769          MCW   2&X1,X1                                        7  2769  M 0|2 089          62
438  2 776          MN    0&X1,3091                                      7  2776  D 0|0 ?91          63
439  2 783          MN                                                   1  2783  D                  63
440  2 784          MCW   3092                                           4  2784  M ?92              63
441  2 788          BWZ   2833,0&X1,2                                    8  2788  V Q33 0|0 2        63
442  2 796          A     KP100,3091                                     7  2796  A ?95 ?91          63
443  2 803          BWZ   2833,0&X1,S                                    8  2803  V Q33 0|0 S        63
444  2 811          A     KP100,3091                                     7  2811  A ?95 ?91          64
445  2 818          BM    2833,0&X1                                      8  2818  V Q33 0|0 K        64
446  2 826          A     KP100,3091                                     7  2826  A ?95 ?91          64
447  2 833          B     0                                              4  2833  B 000              64
```

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SEQ PG LIN  LABEL   OP    OPERANDS                                    SFX CT  LOCN  INSTRUCTION TYPE  CARD
448         *
449  2 837          SBR   2873                                          4  2837  H Q73               64
450  2 841          SBR   X3,0&X2                                       7  2841  H 099 0!0           64
451  2 848          MCW   2972,X1                                       7  2848  M R72 089           65
452  2 855          BW    2890,FLAG                                     8  2855  V Q90 R36 1         65
453  2 863          C     X1,3091                                       7  2863  C 089 ?91           65
454  2 870          BE    0                                             5  2870  B 000 S             65
455  2 875          BCE   2917,WORK&X1,1                                8  2875  B R17 KU1 1         65
456  2 883          A     K3999,X1                                      7  2883  A R69 089           66
457  2 890          BW    2906,2&X3                                     8  2890  V R06 0?2 1         66
458  2 898          SBR   X3                                            4  2898  H 099               66
459  2 902          B     2890                                          4  2902  B Q90               66
460  2 906          SBR   X3,1&X3                                      7  2906  H 099 0?1           66
461  2 913          B     2863                                          4  2913  B Q63               66
462  2 917          A     K3999,X1                                      7  2917  A R69 089           67
463  2 924          B     2863                                          4  2924  B Q63               67
464  2 928          CW    1&X3                                          4  2928  ) 0?1               67
465  2 932          B     1070                                          4  2932  B |70               67
466         *
467  2 936  FLAG   DC    #1                                            1  2936                      67
468  2 937  DONE   BSS   SNAPSH,C                                      5  2937  B 333 C             67
469  2 942          SBR   CLEARL&3,GMWM                                7  2942  H 710 A03           67
470  2 949          LCA   ARITH5,PHASID                                7  2949  L A02 110           67
471  2 956          B     LOADNX                                        4  2956  B 700               68
472         *
473         * DATA
474         *
475  2 962  SX3    DCW   #3                                            3  2962                      68
476  2 965  SX1    DCW   #3                                            3  2965                      68
477  2 966  OP2    DCW   #1                                            1  2966                      68
478  2 969  K3999  DSA   3999                                          3  2969  I99                 68
479  2 972          DCW   #3                                            3  2972                      68
480  2 973  KP1    DCW   &1                                            1  2973                      68
481  3 008  W35    DCW   #35                                          35  3008                      69
482  3 009  KPLUS  DCW   @&@                                           1  3009                      69
483  3 012  KSTAR3 DCW   @***@                                         3  3012                      69
484  3 013  NOP    NOP                                                 1  3013  N                   70
485  3 017          DCW   @&-*@@                                        4  3017                      70
486  3 018  KEEPWM DCW   #1                                            1  3018                      70
487  3 021          DCW   #3                                            3  3021                      70
488  3 024          DCW   #3                                            3  3024                      70
489  3 025  LCA    LCA                                                 1  3025  L                   70
490  3 027          DCW   @01@                                          2  3027                      70
491  3 030  A001   DSA   1                                             3  3030  001                 71
492  3 032          DCW   #2                                            2  3032                      71
493  3 033  BARITF B     ARITF  ENTRY TO THE ARITHMETIC INTERPRETER     4  3033  B 700               71
494  3 037  ASSIGN DCW   @#@                                           1  3037                      71
495  3 040  SX3A   DCW   #3                                            3  3040                      71
496  3 041          DCW   @|@                                           1  3041                      71
497  3 045  KB4    DCW   #4                                            4  3045                      71
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD

498  3 063  W18A    DCW   #18                                              18  3063                      72
499  3 064  OP      DCW   #1                                                1  3064                      72
500  3 070  OPS     DCW   @&-*@.#@                                          6  3070                      72
501  3 088  W18B    DCW   #18                                             18  3088                      73
502  3 091          DCW   #3                                               3  3091                      73
503  3 092          DCW   @0@                                              1  3092                      73
504  3 095  KP100   DCW   &100                                            3  3095                      73
505  3 102  ARITH5  DCW   @ARITH 5@                                       7  3102                      73
506  3 103  GMWM    DCW   @}@                                              1  3103             GMARK    73
507                 ORG   201                                                     0201
508    203          DSA   LOADDD    LOAD ADDRESS FOR CARD-TO-TAPE PROGRAM   3  0203  838                74
509                 EX    BEGINN                                                  B 838                75
510                 END                                                           / 000 080
```

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
A001	3030	ARITF	700	ARITH5	3102	ASSIGN	3037	BARITF	3033	BEGINN	838	CLEARL	707
DONE	2937	FLAG	2936	GM	2240	GMWM	3103	GOTOP	2683	GOTWM	2672	INNER	948
K3999	2969	KB4	3045	KEEPWM	3018	KP1	2973	KP100	3095	KPLUS	3009	KSTAR3	3012
LCA	3025	LOADDD	838	LOADNX	700	LOOP	871	M13X	1054	MIDDLE	924	MORE	2039
MOVE13	1019	NOP	3013	OP	3064	OP2	2966	OPS	3070	OUTER	901	PHASID	110
RWM1	2614	RWM2	2720	SAWNEG	123	SETUP	2573	SETUPX	2724	SKPSUB	2728	SKPSUX	2754
SNAPSH	333	SX1	2965	SX3	2962	SX3A	3040	TESTEQ	974	W18A	3063	W18B	3088
W35	3008	WORK	2241	WRKTOP	2572	X1	89	X2	94	X3	99		