```
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
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                     FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18                          PAGE    1

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

101                JOB   FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18
102                CTL   6611
103         *
104         * CONSTANTS IN THE SOURCE PROGRAM ARE NOTED AND NORMALIZED
105         * AND/OR TRUNCATED.  THE ONLY WORD MARKS IN THE STATEMENT ARE
106         * UNDER THE GROUP MARKS THAT SEPARATE PREFIX FROM BODY AND
107         * ONE STATEMENT FROM ANOTHER.
108         *
109         X1     EQU   89                                                    0089
110         X2     EQU   94                                                    0094
111         X3     EQU   99                                                    0099
112         *
113         * ON ENTRY, X1 IS THE TOP OF CODE.
114         *
115         * ON EXIT, CODE IS MOVED UP TO THE TOP, 83 IS THE TOP OF
116         * CODE, AND X2 IS ONE BELOW THE BOTTOM OF CODE.
117         *
118         * STUFF IN THE RESIDENT AREA
119         *
120         PHASID EQU   110  PHASE ID, FOR SNAPSHOT DUMPS                     0110
121         GLOBER EQU   184  GLOBAL ERROR FLAG -- WM MEANS ERROR              0184
122         SNAPSH EQU   333  CORE DUMP SNAPSHOT                               0333
123         TOPCOR EQU   688  TOP CORE ADDRESS FROM PARAM CARD                 0688
124         IMOD   EQU   690  INTEGER MODULUS -- NUMBER OF DIGITS              0690
125         MANTIS EQU   692  FLOATING POINT MANTISSA DIGITS                   0692
126         LOADNX EQU   700  LOAD NEXT OVERLAY                                0700
127         CLEARL EQU   707  CS AT START OF OVERLAY LOADER                    0707
128         CDOVLY EQU   769  1 IF RUNNING FROM CARDS, N IF FROM TAPE          0769
129         LOADXX EQU   793  EXIT FROM OVERLAY LOADER                         0793
130         *
131                ORG   838                                                         0838
132         LOADDD EQU   *&1          LOAD ADDRESS                             0838
133     838 BEGINN CS    299                                             4  0838  / 299           4
134     842        SW    GM                                              4  0842  , L49           4
135     846        SW    200                                             4  0846  , 200           4
136     850        MCW   TOPCOR,X2                                       7  0850  M 688 094       4
137     857        MN    0&X2                                            4  0857  D 0!0           4
138     861        MN                                                    1  0861  D               4
139     862        SAR   X2         TOPCOR-2                             4  0862  Q 094           4
140     866        SBR   83         TOPCOR-2                             4  0866  H 083           5
141     870        LCA   GM,1&X2    GMWM TO TOPCOR-1                     7  0870  L L49 0!1       5
142     877 LOOP   BCE   DONE,0&X1, BOTTOM OF STATEMENTS IF BLANK        8  0877  B J53 0!0       5
143     885        MCW   0&X1,SEQCOD                                     7  0885  M 0!0 L53       5
144     892        LCA   0&X1,PREFIX                                     7  0892  L 0!0 L63       5
145     899        SAR   X1                                             4  0899  Q 089           5
146     903        SBR   SX1                                            4  0903  H L66           6
147     907        SBR   SX2,0&X2                                       7  0907  H L69 0!0       6
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                          FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18   PAGE   2

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

148   914   LCA   PREFIX,0&X2 MOVE PREFIX UP   7 0914 L L63 0!0   6
149   921   SBR   X2   4 0921 H 094   6
150   925   MCW   SEQCOD-3,*&8   7 0925 M L50 939   6
151   932   BCE   IO,CODES,0 INTERESTING STATEMENT?   8 0932 B 972 L79 0   6
152   940   CHAIN 9   MACRO
153   BCE   1 0940 B   GEN   6
154   BCE   1 0941 B   GEN   7
155   BCE   1 0942 B   GEN   7
156   BCE   1 0943 B   GEN   7
157   BCE   1 0944 B   GEN   7
158   BCE   1 0945 B   GEN   7
159   BCE   1 0946 B   GEN   7
160   BCE   1 0947 B   GEN   7
161   BCE   1 0948 B   GEN   8
162   949   LCA   0&X1,0&X2   MOVE STATEMENT BODY UP   7 0949 L 0|0 0!0   8
163   956   SAR   X1   4 0956 Q 089   8
164   960   C   0&X2   4 0960 C 0!0   8
165   964   SAR   X2   4 0964 Q 094   8
166   968   B   LOOP   4 0968 B 877   8
167   *
168   * I/O, IF, DO, ARITHEMTIC STATEMENT
169   *
170   972 IO   SBR   X3,CODTAB-4   7 0972 H 099 L07   8
171   979   MCW   SEQCOD-3,*&8   7 0979 M L50 993   9
172   986 SEARCH BCE   FOUND,4&X3,0   8 0986 B |02 0?4 0   9
173   994   SBR   X3   4 0994 H 099   9
174   998   B   SEARCH   4 0998 B 986   9
175   *
176   * FOUND THE STATEMENT CODE IN CODTAB. COPY THE INTERESTING
177   * PUNCTUATION AND THE COUNT TO PUNCNT. THE PUNCTUATION
178   * MARK IS WHAT IS SOUGHT IN THE STATEMENT. THE COUNT
179   * PART IS 2 MINUS THE NUMBER OF TIMES THE PUNCTUATION
180   * MARK MUST BE FOUND. IT STARTS AT 0, 1 OR 2, AND IS
181   * INCREMENTED UNTIL IT IS 2.
182   *
183 1 002 FOUND MCW   6&X3,PUNCNT   7 1002 M 0?6 L81   9
184 1 009   MCW   PUNCNT-1,SCHPUN&7   7 1009 M L80 |38   9
185 1 016 SCHCNT BCE   FOUND2,PUNCNT,2 FOUND IT ENOUGH TIMES?   8 1016 B |67 L81 2   10
186 1 024   A   K1,PUNCNT   7 1024 A L82 L81   10
187 1 031 SCHPUN BCE   GOTPUN,0&X1,0 FOUND THE DESIRED PUNCTUATION?   8 1031 B |55 0|0 0   10
188 1 039   BCE   FOUND2,0&X1,} FOUND GM?   8 1039 B |67 0|0 } GMARK   10
189 1 047   SBR   X1   4 1047 H 089   10
190 1 051   B   SCHPUN GO SEARCH FOR MORE PUNCTUATION   4 1051 B |31   10
191 1 055 GOTPUN MN   0&X1   4 1055 D 0|0   11
192 1 059   SAR   X1   4 1059 Q 089   11
193 1 063   B   SCHCNT GO TEST HAVE WE SEEN IT ENOUGH TIMES?   4 1063 B |16   11
194 1 067 FOUND2 BWZ   NOZONE,0&X1,3 DIGIT OR GMWM?   8 1067 V |91 0|0 3   11
195 1 075   SBR   X1   4 1075 H 089   11
196 1 079   BCE   SWITCH,1&X1,$ SUBSCRIPT?   8 1079 B /76 0|1 $ 11
197 1 087   B   FOUND2   4 1087 B |67   11

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

198  1 091  NOZONE BCE    ENDSTM,0&X1,}  GM MEANS END OF STATEMENT          8  1091  B J95 0|0 } GMARK    12
199  1 099         SBR    X1                                               4  1099  H 089               12
200  1 103         BCE    FOUND2,1&X1,#  ASSIGNMENT OPERATOR IS NOT A NUMBER 8  1103  B |67 0|1 #          12
201  1 111         BCE    FOUND2,1&X1,@  ATSIGN IS NOT A NUMBER            8  1111  B |67 0|1 @          12
202  1 119         MCW    2&X1,BEFORE                                      7  1119  M 0|2 L48           12
203  1 126         MCW       AT                                           1  1126  M                   12
204  1 127         MCW       AFTER                                        1  1127  M                   12
205  1 128         SAR    X1                                              4  1128  Q 089               13
206  1 132         MCW    BEFORE,*&8                                       7  1132  M L48 /46           13
207  1 139         BCE    FOUND3,OPPUN,0  CHAR BEFORE IS OPERATOR OR PUNCT? 8  1139  B S16 L93 0          13
208  1 147         CHAIN 10                                                            MACRO
209                BCE                                                    1  1147  B          GEN     13
210                BCE                                                    1  1148  B          GEN     13
211                BCE                                                    1  1149  B          GEN     13
212                BCE                                                    1  1150  B          GEN     13
213                BCE                                                    1  1151  B          GEN     14
214                BCE                                                    1  1152  B          GEN     14
215                BCE                                                    1  1153  B          GEN     14
216                BCE                                                    1  1154  B          GEN     14
217                BCE                                                    1  1155  B          GEN     14
218                BCE                                                    1  1156  B          GEN     14
219  1 157         BCE    ENDSTM,1&X1,}                                    8  1157  B J95 0|1 } GMARK    14
220  1 165  BACKSP SBR    X1,1&X1                                          7  1165  H 089 0|1           15
221  1 172         B      FOUND2                                          4  1172  B |67               15
222         *
223         * SUBSCRIPT BEGIN
224         *
225  1 176  SWITCH NOP    UNSW                                            4  1176  N /98               15
226  1 180         MCW    BRANCH,SWITCH                                    7  1180  M L94 /76           15
227  1 187         MCW    KB1,SWICH3&4   SET TO UNCONDITIONAL BRANCH       7  1187  M N04 !42           15
228  1 194         B      FOUND2                                          4  1194  B |67               15
229         *
230         * SUBSCRIPT END
231         *
232  1 198  UNSW   MCW    NOP,SWITCH                                       7  1198  M L95 /76           16
233  1 205         MCW    UNEQ,SWICH3&4  SET TO BRANCH UNEQUAL             7  1205  M L96 !42           16
234  1 212         B      FOUND2                                          4  1212  B |67               16
235         *
236         * FOUND A DIGIT PRECEDED BY AN OPERATOR OR PUNCTUATION IN OPPUN
237         *
238  1 216  FOUND3 BCE    DECMAL,3&X1,.  3&X1 = BEFORE                     8  1216  B K32 0|3 .          16
239  1 224         MCW    AFTER,*&8                                        7  1224  M L46 S38           16
240  1 231         BCE    BACKSP,ATHRUR,0  ?A-I!J-R ?                      8  1231  B /65 M16 0          17
241  1 239         CHAIN 19                                                            MACRO
242                BCE                                                    1  1239  B          GEN     17
243                BCE                                                    1  1240  B          GEN     17
244                BCE                                                    1  1241  B          GEN     17
245                BCE                                                    1  1242  B          GEN     17
246                BCE                                                    1  1243  B          GEN     17
247                BCE                                                    1  1244  B          GEN     17
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN  INSTRUCTION TYPE  CARD

248               BCE                                                       1  1245  B           GEN    18
249               BCE                                                       1  1246  B           GEN    18
250               BCE                                                       1  1247  B           GEN    18
251               BCE                                                       1  1248  B           GEN    18
252               BCE                                                       1  1249  B           GEN    18
253               BCE                                                       1  1250  B           GEN    18
254               BCE                                                       1  1251  B           GEN    18
255               BCE                                                       1  1252  B           GEN    19
256               BCE                                                       1  1253  B           GEN    19
257               BCE                                                       1  1254  B           GEN    19
258               BCE                                                       1  1255  B           GEN    19
259               BCE                                                       1  1256  B           GEN    19
260               BCE                                                       1  1257  B           GEN    19
261  1 258        BCE    TESTIF,3&X1,)                                      8  1258  B J83 0|3 )         19
262  1 266 MARK   SW     3&X1   WM ABOVE FIELD                             4  1266  , 0|3              20
263  1 270        MCW    SX1,X3                                             7  1270  M L66 099          20
264  1 277        LCA    0&X3,0&X2  MOVE UP STUFF ABOVE FIELD              7  1277  L 0?0 0!0          20
265  1 284        SBR    X2                                                 4  1284  H 094              20
266  1 288        MCW    KLESS,3&X1                                         7  1288  M M17 0|3          20
267  1 295        SBR    TLESS&6,3&X1                                       7  1295  H J17 0|3          20
268  1 302        CW     1&X2                                               4  1302  ) 0!1              21
269  1 306        LCA    KUNDER,0&X2  MARK TOP OF CONSTANT                 7  1306  L M18 0!0          21
270  1 313        SBR    X2                                                 4  1313  H 094              21
271  1 317        CW     1&X2                                               4  1317  ) 0!1              21
272  1 321        CW     FLAG                                               4  1321  ) N44              21
273  1 325        S      EXP                                                4  1325  S M20              21
274  1 329        S      SIGWID                                             4  1329  S M23              21
275  1 333        S      NLZ                                                4  1333  S M28              22
276  1 337        MCW    SW,SWNOP                                           7  1337  M M24 K64          22
277  1 344        MCW    NOP,ASN2                                           7  1344  M L95 T90          22
278  1 351        MCW    BRANCH,SWICH2                                      7  1351  M L94 U04          22
279  1 358        SBR    MAN&3,ADD                                          7  1358  H K75 L41          22
280  1 365        SBR    MSN&3,SUB                                          7  1365  H K46 L42          22
281  1 372        SBR    X1,2&X1                                            7  1372  H 089 0|2          23
282  1 379 ZSCAN  MCW    0&X1,AT                                            7  1379  M 0|0 L47          23
283  1 386        SAR    X1                                                 4  1386  Q 089              23
284  1 390 ASN2   NOP    KP1,EXP  ADD, SUB OR NOP                          7  1390  N M25 M20          23
285  1 397        A      KP1,NLZ                                            7  1397  A M25 M28          23
286  1 404 SWICH2 BCE    ZSCAN,AT,0                                         8  1404  B T79 L47 0        24
287  1 412        BCE    MSN,AT,.                                           8  1412  B K43 L47 .        24
288  1 420        BCE    MAN,SWICH2,B                                       8  1420  B K72 U04 B        24
289  1 428        A      KP1,SIGWID                                         7  1428  A M25 M23          24
290  1 435 TSTASG BCE    KLEFT,AT,#  CONSTANT ON LEFT SIDE OF EQUAL SIGN   8  1435  B X20 L47 #        24
291  1 443        BCE    *&9,AT,@    ORIGINALLY SLASH IN INPUT?            8  1443  B U59 L47 @        25
292  1 451        BWZ    ZSCAN,AT,2                                         8  1451  V T79 L47 2        25
293  1 459        C      MAN&3,ANOP                                         7  1459  C K75 L45          25
294  1 466        BU     GOTIK                                              5  1466  B Z31 /            25
295  1 471        BWZ    *&8,EXP,B                                          8  1471  V U86 M20 B        25
296  1 479        A      KP1,EXP                                            7  1479  A M25 M20          26
297  1 486        SW     2&X1                                               4  1486  , 0|2              26
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SEQ	PG	LIN	LABEL	OP	OPERANDS	SFX	CT	LOCN	INSTRUCTION TYPE	CARD
298	1	490		BCE	DEC2,2&X1,.		8	1490	B Y22 0|2 .	26
299	1	498	DECBAK	BCE	GOTEXP,AT,E		8	1498	B Y37 L47 E	26
300	1	506	EXPBAK	C	NLZ,KP01		7	1506	C M28 M30	26
301	1	513		NOP	SYNTAX		4	1513	N X84	26
302	1	517		NOP			1	1517	N	26
303	1	518		C	SIGWID,KPZ3		7	1518	C M23 M33	27
304	1	525		BU	GOTFPK		5	1525	B V49 /	27
305	1	530	SYNBAK	LCA	K15K,0&X2		7	1530	L M36 0!0	27
306	1	537		SBR	X2		4	1537	H 094	27
307	1	541		CW	1&X2		4	1541	) 0!1	27
308	1	545		B	TLESSX		4	1545	B J00	27
309			*							
310			* FOUND A FLOATING-POINT CONSTANT							
311			*							
312	1	549	GOTFPK	MCW	X1,SX1A		7	1549	M 089 M39	27
313	1	556		BW	*&8,FLAG		8	1556	V V71 N44 1	28
314	1	564		LCA	0&X3,1&X3		7	1564	L 0?0 0?1	28
315	1	571		MCW	SX1B,X1		7	1571	M M42 089	28
316	1	578		MCW	MANTIS,WIDTH		7	1578	M 692 M44	28
317	1	585		A	KP2,WIDTH		7	1585	A M45 M44	28
318	1	592		SBR	X3,198		7	1592	H 099 198	29
319	1	599		SW	200		4	1599	, 200	29
320	1	603	FLOOP	MCW	0&X1,AT USE THE		7	1603	M 0|0 L47	29
321	1	610		SAR	X1 PRINT AREA		4	1610	Q 089	29
322	1	614		MCW	AT,2&X3 TO REVERSE		7	1614	M L47 0?2	29
323	1	621		SBR	X3 THE CONSTANT		4	1621	H 099	29
324	1	625		BW	FINFK,1&X1 TO CORRECT		8	1625	V W52 0|1 1	30
325	1	633		S	KP1,WIDTH ORDER		7	1633	S M25 M44	30
326	1	640		C	WIDTH,KP00		7	1640	C M44 M47	30
327	1	647		BU	FLOOP		5	1647	B W03 /	30
328	1	652	FINFK	SBR	X3,1&X3 FINISHED WITH FLOATING POINT CONSTANT		7	1652	H 099 0?1	30
329	1	659	SKIP0	BCE	*&5,0&X3,0		8	1659	B W71 0?0 0	31
330	1	667		B	NOT0		4	1667	B W83	31
331	1	671		MN	0&X3		4	1671	D 0?0	31
332	1	675		SAR	X3		4	1675	Q 099	31
333	1	679		B	SKIP0		4	1679	B W59	31
334	1	683	NOT0	MN	0&X3		4	1683	D 0?0	31
335	1	687		SAR	X3		4	1687	Q 099	31
336	1	691		MCW	EXP,3&X3 MOVE EXPONENT		7	1691	M M20 0?3	32
337	1	698		MZ	ADD2,1&X3 ZONE FOR MANTISSA		7	1698	Y M48 0?1	32
338	1	705		LCA	3&X3,0&X2		7	1705	L 0?3 0!0	32
339	1	712		SBR	X2		4	1712	H 094	32
340	1	716		B	KFIN		4	1716	B !89	32
341			*							
342			* CONSTANT ON LEFT SIDE OF EQUAL SIGN							
343			*							
344	1	720	KLEFT	CS	332		4	1720	/ 332	32
345	1	724		CS			1	1724	/	32
346	1	725		SW	GLOBER		4	1725	, 184	33
347	1	729		MN	SEQCOD,256		7	1729	D L53 256	33

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

348  1 736          MN                                          1  1736  D                   33
349  1 737          MN                                          1  1737  D                   33
350  1 738          MCW   KLM1                                  4  1738  M M70               33
351  1 742          MCW   KLM2                                  4  1742  M N03               33
352  1 746          W                                          1  1746  2                   33
353  1 747          BCV   *&5                                   5  1747  B X56 @             34
354  1 752          B     *&3                                   4  1752  B X58               34
355  1 756          CC    1                                     2  1756  F 1                 34
356  1 758          MCW   SX2,X2                                7  1758  M L69 094           34
357  1 765          MCW   KB1,0&X2                              7  1765  M N04 0!0           34
358  1 772          C     0&X1                                  4  1772  C 0|0               34
359  1 776          SAR   X1                                    4  1776  Q 089               34
360  1 780          B     LOOP                                  4  1780  B 877               35
361          *
362          * SYNTAX ERROR FOR CONSTANT
363          *
364  1 784  SYNTAX CS    332                                    4  1784  / 332               35
365  1 788          CS                                          1  1788  /                   35
366  1 789          SW    GLOBER                                4  1789  , 184               35
367  1 793          MN    SEQCOD,241                            7  1793  D L53 241           35
368  1 800          MN                                          1  1800  D                   35
369  1 801          MN                                          1  1801  D                   35
370  1 802          MCW   ERR44                                 4  1802  M N42               36
371  1 806          W                                          1  1806  2                   36
372  1 807          BCV   *&5                                   5  1807  B Y16 @             36
373  1 812          B     *&3                                   4  1812  B Y18               36
374  1 816          CC    1                                     2  1816  F 1                 36
375  1 818          B     SYNBAK                                4  1818  B V30               36
376          *
377  1 822  DEC2   MCW   K0,2&X1                                7  1822  M N43 0|2           36
378  1 829          SW    FLAG                                  4  1829  , N44               37
379  1 833          B     DECBAK                                4  1833  B U98               37
380          *
381          * FLOATING-POINT EXPONENT
382          *
383  1 837  GOTEXP ZA    PZE,THEEXP                             7  1837  ? N45 N47           37
384  1 844          BWZ   EXPNS,0&X1,2                          8  1844  V Y63 0|0 2         37
385  1 852          MZ    0&X1,THEEXP   EXPONENT IS SIGNED      7  1852  Y 0|0 N47           37
386  1 859          SAR   X1                                    4  1859  Q 089               37
387  1 863  EXPNS  MN    0&X1                                   4  1863  D 0|0               37
388  1 867          SAR   X1                                    4  1867  Q 089               38
389  1 871          C     0&X1,Z                                7  1871  C 0|0 N48           38
390  1 878          BL    EXP2                                  5  1878  B Y94 T             38
391  1 883          MN    1&X1,THEEXP                           7  1883  D 0|1 N47           38
392  1 890          B     EXP3                                  4  1890  B Z12               38
393  1 894  EXP2   MN    1&X1,THEEXP-1                          7  1894  D 0|1 N46           38
394  1 901          MN    0&X1,THEEXP                           7  1901  D 0|0 N47           39
395  1 908          SAR   X1                                    4  1908  Q 089               39
396  1 912  EXP3   A     THEEXP,EXP                             7  1912  A N47 M20           39
397  1 919          MN    0&X1                                  4  1919  D 0|0               39
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SEQ PG LIN  LABEL   OP    OPERANDS                                        SFX CT  LOCN   INSTRUCTION TYPE  CARD

398  1 923          SAR   X1                                                 4  1923  Q 089              39
399  1 927          B     EXPBAK                                             4  1927  B V06              39
400         *
401         * FOUND INTEGER CONSTANT
402         *
403  1 931  GOTIK   C     SIGWID,KPZ3                                        7  1931  C M23 M33          39
404  1 938          BU    I2                                                 5  1938  B Z62 /            40
405  1 943          LCA   KB0,0&X2   ZERO CONSTANT                           7  1943  L N50 0!0          40
406  1 950          SBR   X2                                                 4  1950  H 094              40
407  1 954          CW    1&X2                                               4  1954  ) 0!1              40
408  1 958          B     TLESSX                                             4  1958  B J00              40
409  1 962  I2      MCW   X1,SX1A                                            7  1962  M 089 M39          40
410  1 969          MCW   SX1B,X3                                            7  1969  M M42 099          40
411  1 976          SW    0&X3                                               4  1976  , 0?0              41
412  1 980          SBR   X3,299                                            7  1980  H 099 299          41
413  1 987          MCW   IMOD,WIDTH                                         7  1987  M 690 M44          41
414  1 994  ILOOP   MCW   2&X1,AT  MOVE UP                                   7  1994  M 0|2 L47          41
415  2 001          SAR   X1        CONSTANT,                                4  2001  Q 089              41
416  2 005          MCW   AT,0&X3     REVERSING DIGITS                       7  2005  M L47 0?0          41
417  2 012          SBR   X3              TO CORRECT                         4  2012  H 099              42
418  2 016          BW    FINIK,1&X1      ORDER                              8  2016  V !43 0|1 1        42
419  2 024          S     KP1,WIDTH                                          7  2024  S M25 M44          42
420  2 031          C     WIDTH,KP00                                         7  2031  C M44 M47          42
421  2 038  SWICH3  BU    ILOOP                                              5  2038  B Z94 /            42
422  2 043  FINIK   SW    1&X3  FINISHED WITH INTEGER CONSTANT               4  2043  , 0?1              42
423  2 047          LCA   299,0&X2                                           7  2047  L 299 0!0          43
424  2 054          SBR   X2                                                 4  2054  H 094              43
425  2 058          CW    1&X3                                               4  2058  ) 0?1              43
426  2 062          C     SIGWID,KP001                                       7  2062  C M23 N53          43
427  2 069          BU    KFIN                                               5  2069  B !89 /            43
428  2 074          CW    1&X2                                               4  2074  ) 0!1              43
429  2 078          LCA   KB1A,0&X2                                          7  2078  L N54 0!0          43
430  2 085          SBR   X2                                                 4  2085  H 094              44
431  2 089  KFIN    CW    1&X2  FINISHED WITH INTEGER OR FP CONSTANT         4  2089  ) 0!1              44
432  2 093          MCW   SX1A,X1                                            7  2093  M M39 089          44
433  2 100  TLESSX  SBR   X1,1&X1                                            7  2100  H 089 0|1          44
434  2 107          SBR   SX1                                                4  2107  H L66              44
435  2 111  TLESS   BCE   FOUND2,0-0,<                                       8  2111  B |67 000 <        44
436         *
437         * PROGRAM IS TOO BIG
438         *
439  2 119          CS    332                                                4  2119  / 332              44
440  2 123          CS                                                       1  2123  /                  45
441  2 124          CC    1                                                  2  2124  F 1                45
442  2 126          MCW   ERROR2,270                                         7  2126  M N90 270          45
443  2 133          W                                                        1  2133  2                  45
444  2 134          CC    1                                                  2  2134  F 1                45
445  2 136          BCE   HALT,CDOVLY,1                                      8  2136  B J49 769 1        45
446  2 144          RWD   1                                                  5  2144  U %U1 R            45
447  2 149  HALT    H     HALT                                               4  2149  . J49              46
```

                        FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18   PAGE   8

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

```
448         *
449         * DONE
450         *
451  2 153  DONE   BSS    SNAPSH,C                                         5  2153  B 333 C          46
452  2 158         SBR    LOADXX&3,849                                     7  2158  H 796 849        46
453  2 165         SBR    CLEARL&3,GMWM                                    7  2165  H 710 O01        46
454  2 172         LCA    CONST2,PHASID                                    7  2172  L N99 110        46
455  2 179         B      LOADNX                                           4  2179  B 700            46
456         *
457         * CHECK FOR IF STATEMENT
458         *
459  2 183  TESTIF BCE    ENDSTM,SEQCOD-3,E  IF STATEMENT?                 8  2183  B J95 L50 E      47
460  2 191         B      MARK                                            4  2191  B S66            47
461         *
462         * END OF STATEMENT.  MOVE IT UP
463         *
464  2 195  ENDSTM MCW    SX1,X3                                           7  2195  M L66 099        47
465  2 202         LCA    0&X3,0&X2                                        7  2202  L 0?0 0!0        47
466  2 209         SAR    X3                                               4  2209  Q 099            47
467  2 213         C      0&X2                                             4  2213  C 0!0            47
468  2 217         SAR    X2                                               4  2217  Q 094            47
469  2 221         MCW    X3,X1                                            7  2221  M 099 089        48
470  2 228         B      LOOP                                             4  2228  B 877            48
471         *
472         * FP CONSTANT BEGINNING WITH A DECIMAL POINT
473         *
474  2 232  DECMAL SBR    X1,1&X1                                          7  2232  H 089 0|1        48
475  2 239         B      MARK                                            4  2239  B S66            48
476         *
477         * DECIMAL POINT
478         *
479  2 243  MSN    MCW    SUB2,ASN2  MOVE SUB OR NOP                       7  2243  M O00 T90        48
480  2 250         MCW    ANOP,MAN&3                                       7  2250  M L45 K75        48
481  2 257         MCW    X1,X3                                            7  2257  M 089 099        49
482  2 264  SWNOP  SW     FLAG  EITHER SW OR NOP                           4  2264  , N44            49
483  2 268         B      ZSCAN                                           4  2268  B T79            49
484         *
485  2 272  MAN    MCW    ADD2,ASN2  MOVE ADD OR NOP                       7  2272  M M48 T90        49
486  2 279         MCW    ANOP,MSN&3                                       7  2279  M L45 K46        49
487  2 286         MCW    NOP,SWICH2                                       7  2286  M L95 U04        49
488  2 293         SBR    SX1B,1&X1                                        7  2293  H M42 0|1        50
489  2 300         MCW    NOP,SWNOP                                        7  2300  M L95 K64        50
490  2 307         B      TSTASG                                          4  2307  B U35            50
491         *
492         * DATA
493         *
494         CODTAB EQU    *&1                                                 2311
495  2 340         DCW    @R 2E 2D#1L,15,0U,1P,16,01,13,1@                 30  2340                    51
496  2 341  ADD    A                                                       1  2341  A                51
497  2 342  SUB    S                                                       1  2342  S                51
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                      FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18                                    PAGE    9

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

 498  2 345  ANOP   DSA   NOP                                              3  2345  L95               51
 499  2 346  AFTER  DCW   #1     CHAR AFTER DIGIT                          1  2346                     51
 500  2 347  AT     DCW   #1     DIGIT                                     1  2347                     51
 501  2 348  BEFORE DCW   #1     CHAR BEFORE DIGIT                         1  2348                     51
 502  2 349  GM     DC    @}@    GM                                        1  2349            GMARK    51
 503  2 353  SEQCOD DCW   #4     STATEMENT CODE, SEQUENCE NUMBER           4  2353                     52
 504  2 363  PREFIX DCW   #10    ENTIRE STATEMENT PREFIX                  10  2363                     52
 505  2 366  SX1    DCW   #3                                               3  2366                     52
 506  2 369  SX2    DCW   #3                                               3  2369                     52
 507  2 379  CODES  DCW   @UPL3165DER@  I/O, DO, IF, ARITH CODES          10  2379                     52
 508  2 381  PUNCNT DCW   #2                                               2  2381                     52
 509  2 382  K1     DCW   1                                                1  2382                     52
 510  2 393  OPPUN  DCW   @)}@.#%$,*-&@  OPERATORS AND PUNCTUATION         11  2393                     53
 511  2 394  BRANCH B                                                      1  2394  B                  53
 512  2 395  NOP    NOP                                                    1  2395  N                  53
 513  2 396  UNEQ   DCW   @/@  D-MODIFIER FOR UNEQUAL BRANCH               1  2396                     53
 514  2 416  ATHRUR DCW   @?ABCDEFGHI!JKLMNOPQR@                          20  2416                     53
 515  2 417  KLESS  DCW   @<@                                              1  2417                     53
 516  2 418  KUNDER DCW   @_@                                              1  2418                     53
 517  2 420  EXP    DCW   #2                                               2  2420                     54
 518  2 423  SIGWID DCW   #3  SIGNIFICANT WIDTH OF CONSTANT                3  2423                     54
 519  2 424  SW     SW                                                     1  2424  ,                  54
 520  2 425  KP1    DCW   &1                                               1  2425                     54
 521  2 428  NLZ    DCW   #3  NUMBER OF LEADING ZEROS                      3  2428                     54
 522  2 430  KP01   DCW   &01                                             2  2430                     54
 523  2 433  KPZ3   DCW   &000                                             3  2433                     54
 524  2 436  K15K   DSA   15000                                            3  2436  ?0?               55
 525  2 439  SX1A   DCW   #3                                               3  2439                     55
 526  2 442  SX1B   DCW   #3                                               3  2442                     55
 527  2 444  WIDTH  DCW   #2  MANTIS OR IMOD                               2  2444                     55
 528  2 445  KP2    DCW   &2                                               1  2445                     55
 529  2 447  KP00   DCW   &00                                              2  2447                     55
 530  2 448  ADD2   A                                                      1  2448  A                  55
 531  2 470  KLM1   DCW   @EQUAL SIGN, STATEMENT @                        22  2470                     56
 532  2 503  KLM2   DCW   @ERROR 41 - CONSTANT LEFT SIDE OF @             33  2503                     57
 533  2 504  KB1    DCW   #1                                               1  2504                     57
 534  2 542  ERR44  DCW   @ERROR 44 - CONSTANT SYNTAX, STATEMENT @        38  2542                     58
 535  2 543  K0     DCW   0                                                1  2543                     58
 536  2 544  FLAG   DCW   #1                                               1  2544                     59
 537  2 545  PZE    DCW   &0                                               1  2545                     59
 538  2 547  THEEXP DCW   #2                                               2  2547                     59
 539  2 548  Z      DCW   @Z@                                              1  2548                     59
 540  2 550  KB0    DCW   @ 0@                                             2  2550                     59
 541  2 553  KP001  DCW   &001                                             3  2553                     59
 542  2 554  KB1A   DCW   #1                                               1  2554                     59
 543  2 590  ERROR2 DCW   @MESSAGE 2 - OBJECT PROGRAM TOO LARGE@          36  2590                     60
 544  2 599  CONST2 DCW   @CONST TWO@                                      9  2599                     61
 545  2 600  SUB2   S                                                      1  2600  S                  61
 546  2 601  GMWM   DCW   @}@                                              1  2601            GMARK    61
 547         ORG   201                                                            0201
```

SEQ	PG	LIN	LABEL	OP	OPERANDS		SFX	CT	LOCN	INSTRUCTION	TYPE	CARD
548	203			DSA	LOADDD	LOAD ADDRESS FOR CARD-TO-TAPE PROGRAM		3	0203	838		62
549				EX	BEGINN					B 838		63
550				END						/ 000 080		

FORTRAN COMPILER -- CONSTANTS PHASE ONE -- 18   PAGE   11

SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS	SYMBOL	ADDRESS
ADD	2341	ADD2	2448	AFTER	2346	ANOP	2345	ASN2	1390	AT	2347	ATHRUR	2416
BACKSP	1165	BEFORE	2348	BEGINN	838	BRANCH	2394	CDOVLY	769	CLEARL	707	CODES	2379
CODTAB	2311	CONST2	2599	DEC2	1822	DECBAK	1498	DECMAL	2232	DONE	2153	ENDSTM	2195
ERR44	2542	ERROR2	2590	EXP	2420	EXP2	1894	EXP3	1912	EXPBAK	1506	EXPNS	1863
FINFK	1652	FINIK	2043	FLAG	2544	FLOOP	1603	FOUND	1002	FOUND2	1067	FOUND3	1216
GLOBER	184	GM	2349	GMWM	2601	GOTEXP	1837	GOTFPK	1549	GOTIK	1931	GOTPUN	1055
HALT	2149	I2	1962	ILOOP	1994	IMOD	690	IO	972	K0	2543	K1	2382
K15K	2436	KB0	2550	KB1	2504	KB1A	2554	KFIN	2089	KLEFT	1720	KLESS	2417
KLM1	2470	KLM2	2503	KP00	2447	KP001	2553	KP01	2430	KP1	2425	KP2	2445
KPZ3	2433	KUNDER	2418	LOADDD	838	LOADNX	700	LOADXX	793	LOOP	877	MAN	2272
MANTIS	692	MARK	1266	MSN	2243	NLZ	2428	NOP	2395	NOT0	1683	NOZONE	1091
OPPUN	2393	PHASID	110	PREFIX	2363	PUNCNT	2381	PZE	2545	SCHCNT	1016	SCHPUN	1031
SEARCH	986	SEQCOD	2353	SIGWID	2423	SKIP0	1659	SNAPSH	333	SUB	2342	SUB2	2600
SW	2424	SWICH2	1404	SWICH3	2038	SWITCH	1176	SWNOP	2264	SX1	2366	SX1A	2439
SX1B	2442	SX2	2369	SYNBAK	1530	SYNTAX	1784	TESTIF	2183	THEEXP	2547	TLESS	2111
TLESSX	2100	TOPCOR	688	TSTASG	1435	UNEQ	2396	UNSW	1198	WIDTH	2444	X1	89
X2	94	X3	99	Z	2548	ZSCAN	1379								