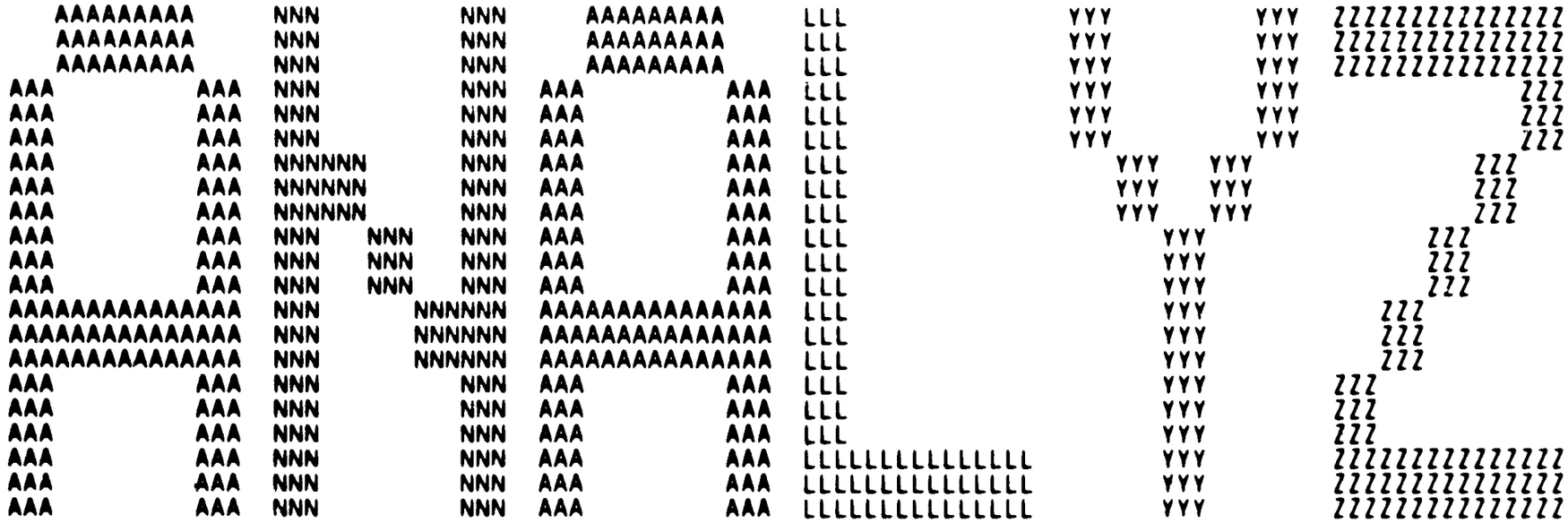
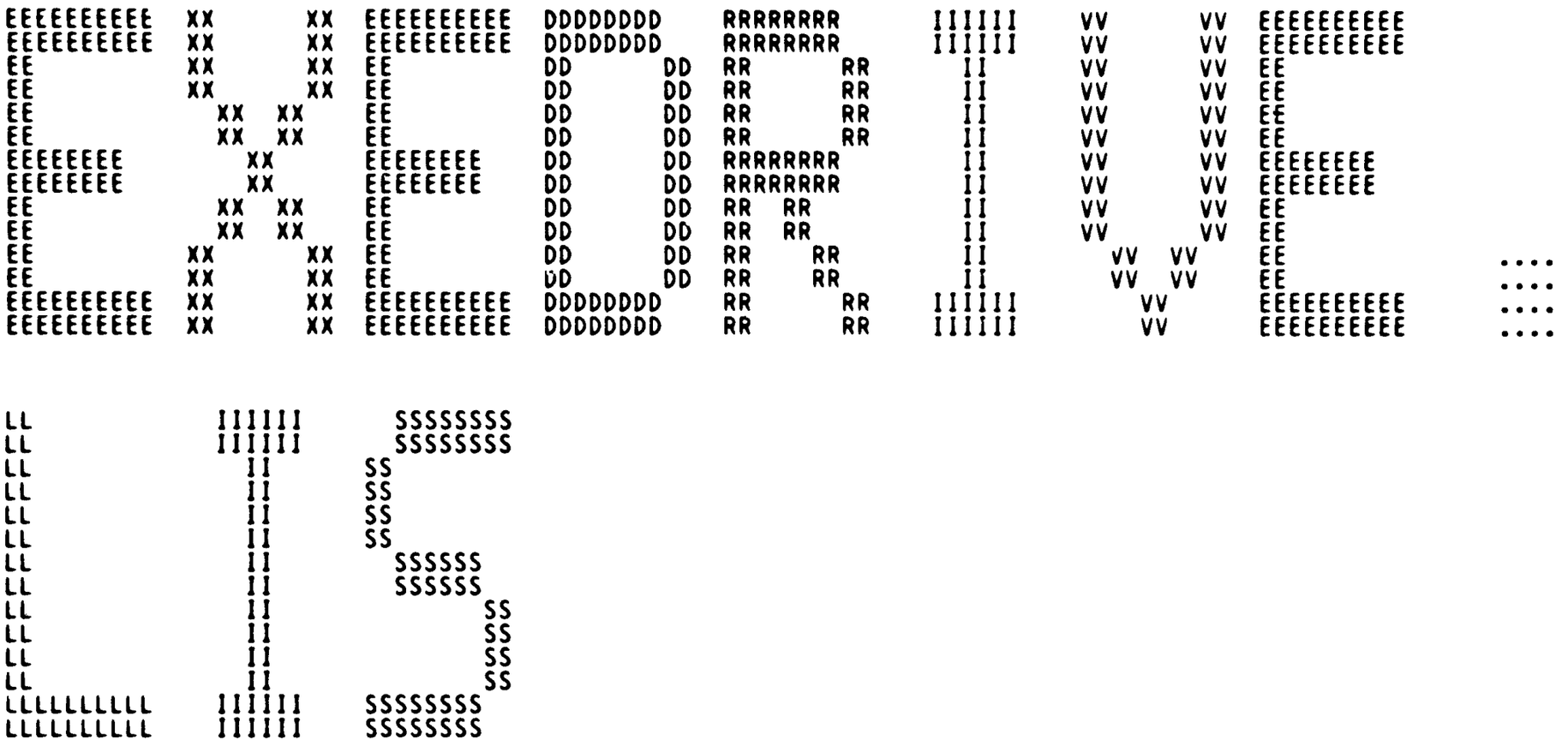


```
                                    J  4




   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL              YYY         YYY  ZZZZZZZZZZZZZZZ
   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL              YYY         YYY  ZZZZZZZZZZZZZZZ
   AAAAAAAAA     NNN         NNN     AAAAAAAAA     LLL              YYY         YYY  ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL              YYY         YYY              ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL              YYY         YYY              ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL              YYY         YYY              ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                 YYY   YYY              ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                 YYY   YYY              ZZZ
AAA         AAA  NNNNNN      NNN  AAA         AAA  LLL                 YYY   YYY              ZZZ
AAA         AAA  NNN   NNN   NNN  AAA         AAA  LLL                    YYY              ZZZ
AAA         AAA  NNN   NNN   NNN  AAA         AAA  LLL                    YYY              ZZZ
AAA         AAA  NNN   NNN   NNN  AAA         AAA  LLL                    YYY              ZZZ
AAAAAAAAAAAAAAA  NNN      NNNNNN  AAAAAAAAAAAAAAA  LLL                    YYY           ZZZ
AAAAAAAAAAAAAAA  NNN      NNNNNN  AAAAAAAAAAAAAAA  LLL                    YYY           ZZZ
AAAAAAAAAAAAAAA  NNN      NNNNNN  AAAAAAAAAAAAAAA  LLL                    YYY           ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                    YYY        ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                    YYY        ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLL                    YYY        ZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL        YYY        ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL        YYY        ZZZZZZZZZZZZZZZ
AAA         AAA  NNN         NNN  AAA         AAA  LLLLLLLLLLLLLLL        YYY        ZZZZZZZZZZZZZZZ
```


EEEEEEEEEE XX XX EEEEEEEEEE DDDDDDDD RRRRRRRR IIIIII VV VV EEEEEEEEEE
EEEEEEEEEE XX XX EEEEEEEEEE DDDDDDDD RRRRRRRR IIIIII VV VV EEEEEEEEEE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EEEEEEEE XX EEEEEEEE DD DD RRRRRRRR II VV VV EEEEEEEE
EEEEEEEE XX EEEEEEEE DD DD RRRRRRRR II VV VV EEEEEEEE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EE XX XX EE DD DD RR RR II VV VV EE
EEEEEEEEEE XX XX EEEEEEEEEE DDDDDDDD RR RR IIIIII VV EEEEEEEEEE
EEEEEEEEEE XX XX EEEEEEEEEE DDDDDDDD RR RR IIIIII VV EEEEEEEEEE
LL IIIIII SSSSSSSS
LL IIIIII SSSSSSSS
LL II SS
LL II SS
LL II SS
LL II SS
LL II SSSSSS
LL II SSSSSS
LL II SS
LL II SS
LL II SS
LL II SS
LLLLLLLLLL IIIIII SSSSSSSS
LLLLLLLLLL IIIIII SSSSSSSS

```
;  1     0001  0 %title 'EXEDRIVE - Drive Analysis of Image Files'
;  2     0002  0       module exedrive (
;  3     0003  1                       ident='V04-000') = begin
;  4     0004  1
;  5     0005  1 !
;  6     0006  1 !*****************************************************************************
;  7     0007  1 !*                                                                           *
;  8     0008  1 !*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
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; 24     0024  1 !*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                 *
; 25     0025  1 !*                                                                           *
; 26     0026  1 !*                                                                           *
; 27     0027  1 !*****************************************************************************
; 28     0028  1 !
; 29     0029  1
; 30     0030  1 !++
; 31     0031  1 ! Facility:     VAX/VMS Analyze Facility, Image File Analyzer
; 32     0032  1 !
; 33     0033  1 ! Abstract:     This module is the main control for the analysis of image
; 34     0034  1 !               files.
; 35     0035  1 !
; 36     0036  1 !
; 37     0037  1 ! Environment:
; 38     0038  1 !
; 39     0039  1 ! Author: Paul C. Anagnostopoulos, Creation Date: 31 March 1981
; 40     0040  1 !
; 41     0041  1 ! Modified By:
; 42     0042  1 !
; 43     0043  1 !       V03-002 DGB0068         Donald G. Blair         03-Jul-1984
; 44     0044  1 !               Allow the /NOOUTPUT qualifier.
; 45     0045  1 !
; 46     0046  1 !       V03-001 PCA1011         Paul C. Anagnostopoulos  1-Apr-1983
; 47     0047  1 !               Change the message prefix to ANLOBJ$_ to ensure that
; 48     0048  1 !               message symbols are unique across all ANALYZEs.  This
; 49     0049  1 !               is necessitated by the new merged message files.
; 50     0050  1 !--
```

```
;    52          0051  1 %sbttl 'Module Declarations'
;    53          0052  1 !
;    54          0053  1 ! Libraries and Requires:
;    55          0054  1 !
;    56          0055  1
;    57          0056  1 library 'starlet';
;    58          0057  1 require 'objexereq';
;    59          0493  1
;    60          0494  1 !
;    61          0495  1 ! Table of Contents:
;    62          0496  1 !
;    63          0497  1                                                                                                 ;
;    64          0498  1 forward routine
;    65          0499  1         anl$image: novalue,
;    66          0500  1         anl$image_positionals: novalue,                                                         ;
;    67          0501  1         anl$image2: novalue;                                                                    ;
;    68          0502  1
;    69          0503  1 !
;    70          0504  1 ! External References:
;    71          0505  1 !
;    72          0506  1
;    73          0507  1 external routine
;    74          0508  1         anl$error_count,                                                                        ;
;    75          0509  1         anl$format_error,                                                                       ;
;    76          0510  1         anl$format_hex,                                                                         ;
;    77          0511  1         anl$format_line,                                                                        ;
;    78          0512  1         anl$image_fixup_info,                                                                   ;
;    79          0513  1         anl$image_gst,                                                                          ;
;    80          0514  1         anl$image_header,                                                                       ;
;    81          0515  1         anl$image_patch_text,                                                                   ;
;    82          0516  1         anl$open_next_image_file,                                                               ;
;    83          0517  1         anl$prepare_report_file,                                                                ;
;    84          0518  1         anl$report_line,                                                                        ;
;    85          0519  1         cli$get_value: addressing_mode(general),                                                ;
;    86          0520  1         cli$present: addressing_mode(general),                                                  ;
;    87          0521  1         str$trim: addressing_mode(general);                                                     ;
;    88          0522  1
;    89          0523  1 external
;    90          0524  1         anl$gb_interactive: byte;                                                               ;
;    91          0525  1
;    92          0526  1 !
;    93          0527  1 ! Own Variables:
;    94          0528  1 !
;    95          0529  1 ! The following variables contain various positional qualifier values.
;    96          0530  1
;    97          0531  1 own
;    98          0532  1         fixup_section_flag: byte,                                                               ;
;    99          0533  1         gst_flag: byte,                                                                         ;
;   100          0534  1         patch_text_flag: byte;                                                                  ;
```

```
;  102          0535  1 %sbttl 'ANL$IMAGE - Control Analysis of Image Files'
;  103          0536  1 !++
;  104          0537  1 ! Functional Description:
;  105          0538  1 !       This routine is responsible for controlling the analysis of image
;  106          0539  1 !       files.
;  107          0540  1 !
;  108          0541  1 ! Formal Parameters:
;  109          0542  1 !       none
;  110          0543  1 !
;  111          0544  1 ! Implicit Inputs:
;  112          0545  1 !       global data
;  113          0546  1 !
;  114          0547  1 ! Implicit Outputs:
;  115          0548  1 !       global data
;  116          0549  1 !
;  117          0550  1 ! Returned Value:
;  118          0551  1 !       none
;  119          0552  1 !
;  120          0553  1 ! Side Effects:
;  121          0554  1 !
;  122          0555  1 !--
;  123          0556  1
;  124          0557  1
;  125          0558  2 global routine anl$image: novalue = begin
;  126          0559  2
;  127          0560  2 own
;  128          0561  2         own_described_buffer(report_file_spec,nam$c_maxrss);
;  129          0562  2
;  130          0563  2 local
;  131          0564  2         status: long;
;  132          0565  2
;  133          0566  2
;  134          0567  2 ! Get the global qualifiers that can be specified for ANALYZE/OBJECT.
;  135          0568  2 ! The first one is the /INTERACTIVE qualifier.
;  136          0569  2
;  137          0570  2 anl$gb_interactive = cli$present(describe('INTERACTIVE'));
;  138          0571  2
;  139          0572  2 ! If the user wants us to generate output, get the name of the report
;  140          0573  2 ! file.  If this is an interactive session, we always use SYS$OUTPUT.
;  141          0574  2
;  142          0575  2 if cli$present(describe('OUTPUT')) then
;  143          0576  2         if .anl$gb_interactive then
;  144          0577  2                 ch$copy(10,uplit byte ('SYS$OUTPUT'),
;  145          0578  2                         ' ',.report_file_spec[len],.report_file_spec[ptr])
;  146          0579  2         else
;  147          0580  2                 cli$get_value(describe('OUTPUT'),report_file_spec);
;  148          0581  2
;  149          0582  2 ! We go into a loop, once through for each image file.
;  150          0583  2
;  151          0584  3 loop (
;  152          0585  3         local
;  153          0586  3                 local_described_buffer(resultant_file_spec,nam$c_maxrss);
;  154          0587  3
;  155          0588  3         status = anl$open_next_image_file(resultant_file_spec);
;  156          0589  3
;  157          0590  3 exitif (not .status);
;  158          0591  3
```

```
;  159          0592  3          ! Prepare the file to receive the image analysis report.
;  160          0593  3
;  161          0594  3          anl$prepare_report_file(report_file_spec,resultant_file_spec,an\obj$_exeheading);
;  162          0595  3
;  163          0596  3          ! Analyze the image file.
;  164          0597  3
;  165          0598  3          anl$image2();
;  166          0599  2 );
;  167          0600  2
;  168          0601  2 return;
;  169          0602  2
;  170          0603  1 end;

;                                                                .TITLE  EXEDRIVE EXEDRIVE - Drive Analysis of Image Fil
                                                                         es
                                                                .IDENT  \V04-000\

                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

                45  56  49  54  43  41  52  45  54  4E  49  00000 P.AAB:  .ASCII  \INTERACTIVE\                          ;
                                                            0000B        .BLKB   1
                                                  0000000B  0000C P.AAA:  .LONG   11                                    ;
                                                  00000000' 00010        .ADDRESS P.AAB                                 ;
                                    54  55  50  54  55  4F  00014 P.AAD:  .ASCII  \OUTPUT\                              ;
                                                            0001A        .BLKB   2
                                                  00000006  0001C P.AAC:  .LONG   6                                     ;
                                                  00000000' 00020        .ADDRESS P.AAD                                 ;
                    54  55  50  54  55  4F  24  53  59  53  00024 P.AAE:  .ASCII  \SYS$OUTPUT\                          ;
                                    54  55  50  54  55  4F  0002E P.AAG:  .ASCII  \OUTPUT\                              ;
                                                  00000006  00034 P.AAF:  .LONG   6                                     ;
                                                  00000000' 00038        .ADDRESS P.AAG                                 ;

                                                                .PSECT  $OWN$,NOEXE,2

                                                00000 FIXUP_SECTION_FLAG:
                                                                .BLKB   1
                                                00001 GST_FLAG:
                                                                .BLKB   1
                                                00002 PATCH_TEXT_FLAG:
                                                                .BLKB   1
                                                00003           .BLKB   1
                                      000000FF  00004 REPORT_FILE_SPEC:
                                                                .LONG   255
                                      00000000' 00008           .ADDRESS REPORT_FILE_SPEC+8                            ;
                                                0000C           .BLKB   255

                                                                .EXTRN  ANLOBJ$_OK, ANLOBJ$_ANYTHING
                                                                .EXTRN  ANLOBJ$_DATATYPE
                                                                .EXTRN  ANLOBJ$_ERRORCOUNT
                                                                .EXTRN  ANLOBJ$_ERRORNONE
                                                                .EXTRN  ANLOBJ$_ERRORS, ANLOBJ$_EXEFIXA
                                                                .EXTRN  ANLOBJ$_EXEFIXAIMAGE
                                                                .EXTRN  ANLOBJ$_EXEFIXALINE
                                                                .EXTRN  ANLOBJ$_EXEFIXCOUNT
                                                                .EXTRN  ANLOBJ$_EXEFIXEXTRA
                                                                .EXTRN  ANLOBJ$_EXEFIXFIXED
```

```
        .EXTRN  ANLOBJ$_EXEFIXFLAGS
        .EXTRN  ANLOBJ$_EXEFIXG
        .EXTRN  ANLOBJ$_EXEFIXGIMAGE
        .EXTRN  ANLOBJ$_EXEFIXGLINE
        .EXTRN  ANLOBJ$_EXEFIXLIST
        .EXTRN  ANLOBJ$_EXEFIXNAME
        .EXTRN  ANLOBJ$_EXEFIXNAMEO
        .EXTRN  ANLOBJ$_EXEFIXP
        .EXTRN  ANLOBJ$_EXEFIXPSECT
        .EXTRN  ANLOBJ$_EXEFIXUP
        .EXTRN  ANLOBJ$_EXEFIXUPNONE
        .EXTRN  ANLOBJ$_EXEGST, ANLOBJ$_EXEHDR
        .EXTRN  ANLOBJ$_EXEHDRACTIVE
        .EXTRN  ANLOBJ$_EXEHDRBLKCOUNT
        .EXTRN  ANLOBJ$_EXEHDRCHANCOUNT
        .EXTRN  ANLOBJ$_EXEHDRCHANDEF
        .EXTRN  ANLOBJ$_EXEHDRDECECO
        .EXTRN  ANLOBJ$_EXEHDRDMT
        .EXTRN  ANLOBJ$_EXEHDRDST
        .EXTRN  ANLOBJ$_EXEHDRFILEID
        .EXTRN  ANLOBJ$_EXEHDRFIXED
        .EXTRN  ANLOBJ$_EXEHDRFLAGS
        .EXTRN  ANLOBJ$_EXEHDRGBLIDENT
        .EXTRN  ANLOBJ$_EXEHDRGST
        .EXTRN  ANLOBJ$_EXEHDRIDENT
        .EXTRN  ANLOBJ$_EXEHDRIMAGEID
        .EXTRN  ANLOBJ$_EXEHDRISD
        .EXTRN  ANLOBJ$_EXEHDRISDBASE
        .EXTRN  ANLOBJ$_EXEHDRISDCOUNT
        .EXTRN  ANLOBJ$_EXEHDRISDFLAGS
        .EXTRN  ANLOBJ$_EXEHDRISDGBLNAM
        .EXTRN  ANLOBJ$_EXEHDRISDNUM
        .EXTRN  ANLOBJ$_EXEHDRISDPFCDEF
        .EXTRN  ANLOBJ$_EXEHDRISDPFCSIZ
        .EXTRN  ANLOBJ$_EXEHDRISDTYPE
        .EXTRN  ANLOBJ$_EXEHDRISDVBN
        .EXTRN  ANLOBJ$_EXEHDRLINKID
        .EXTRN  ANLOBJ$_EXEHDRMATCH
        .EXTRN  ANLOBJ$_EXEHDRNAME
        .EXTRN  ANLOBJ$_EXEHDRNOPATCH
        .EXTRN  ANLOBJ$_EXEHDRPAGECOUNT
        .EXTRN  ANLOBJ$_EXEHDRPAGEDEF
        .EXTRN  ANLOBJ$_EXEHDRPATCH
        .EXTRN  ANLOBJ$_EXEHDRPATCHDATE
        .EXTRN  ANLOBJ$_EXEHDRPRIV
        .EXTRN  ANLOBJ$_EXEHDRROPATCH
        .EXTRN  ANLOBJ$_EXEHDRRWPATCH
        .EXTRN  ANLOBJ$_EXEHDRSYMDBG
        .EXTRN  ANLOBJ$_EXEHDRSYSVER
        .EXTRN  ANLOBJ$_EXEHDRTEXTVBN
        .EXTPN  ANLOBJ$_EXEHDRTIME
        .EXTRN  ANLOBJ$_EXEHDRTYPEEXE
        .EXTRN  ANLOBJ$_EXEHDRTYPELIM
        .EXTRN  ANLOBJ$_EXEHDRUSERECO
        .EXTRN  ANLOBJ$_EXEHDRXFER1
        .EXTRN  ANLOBJ$_EXEHDRXFER2
        .EXTRN  ANLOBJ$_EXEHDRXFER3
```

```
        .EXTRN  ANLOBJ$_EXEHEADING
        .EXTRN  ANLOBJ$_EXEPATCH
        .EXTRN  ANLOBJ$_FLAG, ANLOBJ$_HEXDATA
        .EXTRN  ANLOBJ$_HEXHEADING1
        .EXTRN  ANLOBJ$_HEXHEADING2
        .EXTRN  ANLOBJ$_INDMSGSEC
        .EXTRN  ANLOBJ$_INTERACT
        .EXTRN  ANLOBJ$_MASK, ANLOBJ$_OBJCPRREC
        .EXTRN  ANLOBJ$_OBJDBGREC
        .EXTRN  ANLOBJ$_OBJENV, ANLOBJ$_OBJEOMFLAGS
        .EXTRN  ANLOBJ$_OBJEOMREC
        .EXTRN  ANLOBJ$_OBJEOMSEVABT
        .EXTRN  ANLOBJ$_OBJEOMSEVERR
        .EXTRN  ANLOBJ$_OBJEOMSEVIGN
        .EXTRN  ANLOBJ$_OBJEOMSEVRES
        .EXTRN  ANLOBJ$_OBJEOMSEVSUC
        .EXTRN  ANLOBJ$_OBJEOMSEVWRN
        .EXTRN  ANLOBJ$_OBJEOMWREC
        .EXTRN  ANLOBJ$_OBJFADPASSMECH
        .EXTRN  ANLOBJ$_OBJGSDENV
        .EXTRN  ANLOBJ$_OBJGSDENVFLAGS
        .EXTRN  ANLOBJ$_OBJGSDENVPAR
        .EXTRN  ANLOBJ$_OBJGSDEPM
        .EXTRN  ANLOBJ$_OBJGSDEPMW
        .EXTRN  ANLOBJ$_OBJGSDIDC
        .EXTRN  ANLOBJ$_OBJGSDIDCENT
        .EXTRN  ANLOBJ$_OBJGSDIDCFLAGS
        .EXTRN  ANLOBJ$_OBJGSDIDCMATCH
        .EXTRN  ANLOBJ$_OBJGSDIDCOBJ
        .EXTRN  ANLOBJ$_OBJGSDIDCVALA
        .EXTRN  ANLOBJ$_OBJGSDIDCVALB
        .EXTRN  ANLOBJ$_OBJGSDLEPM
        .EXTRN  ANLOBJ$_OBJGSDLPRO
        .EXTRN  ANLOBJ$_OBJGSDLSY
        .EXTRN  ANLOBJ$_OBJGSDPRO
        .EXTRN  ANLOBJ$_OBJGSDPROW
        .EXTRN  ANLOBJ$_OBJGSDPSC
        .EXTRN  ANLOBJ$_OBJGSDPSCALIGN
        .EXTRN  ANLOBJ$_OBJGSDPSCALLOC
        .EXTRN  ANLOBJ$_OBJGSDPSCBASE
        .EXTRN  ANLOBJ$_OBJGSDPSCFLAGS
        .EXTRN  ANLOBJ$_OBJGSDREC
        .EXTRN  ANLOBJ$_OBJGSDSPSC
        .EXTRN  ANLOBJ$_OBJGSDSYM
        .EXTRN  ANLOBJ$_OBJGSDSYMW
        .EXTRN  ANLOBJ$_OBJGTXREC
        .EXTRN  ANLOBJ$_OBJHDRIGNREC
        .EXTRN  ANLOBJ$_OBJHEADING
        .EXTRN  ANLOBJ$_OBJLITINDEX
        .EXTRN  ANLOBJ$_OBJLNKREC
        .EXTRN  ANLOBJ$_OBJLNMREC
        .EXTRN  ANLOBJ$_OBJMHDCREATE
        .EXTRN  ANLOBJ$_OBJMHDNAME
        .EXTRN  ANLOBJ$_OBJMHDPATCH
        .EXTRN  ANLOBJ$_OBJMHDREC
        .EXTRN  ANLOBJ$_OBJMHDRECSIZ
        .EXTRN  ANLOBJ$_OBJMHDSTRLVL
```

```
.EXTRN  ANLOBJ$_OBJMHDVERSION
.EXTRN  ANLOBJ$_OBJMTCCORRECT
.EXTRN  ANLOBJ$_OBJMTCINPUT
.EXTRN  ANLOBJ$_OBJMTCNAME
.EXTRN  ANLOBJ$_OBJMTCREC
.EXTRN  ANLOBJ$_OBJMTCSEQNUM
.EXTRN  ANLOBJ$_OBJMTCUIC
.EXTRN  ANLOBJ$_OBJMTCVERSION
.EXTRN  ANLOBJ$_OBJMTCWHEN
.EXTRN  ANLOBJ$_OBJPROARGCOUNT
.EXTRN  ANLOBJ$_OBJPROARGNUM
.EXTRN  ANLOBJ$_OBJPSECT
.EXTRN  ANLOBJ$_OBJSRCREC
.EXTRN  ANLOBJ$_OBJSTATHEADING1
.EXTRN  ANLOBJ$_OBJSTATHEADING2
.EXTRN  ANLOBJ$_OBJSTATLINE
.EXTRN  ANLOBJ$_OBJSTATTOTAL
.EXTRN  ANLOBJ$_OBJSYMBOL
.EXTRN  ANLOBJ$_OBJSYMFLAGS
.EXTRN  ANLOBJ$_OBJTIRARGINDEX
.EXTRN  ANLOBJ$_OBJTIRCMD
.EXTRN  ANLOBJ$_OBJTIRCMDSTK
.EXTRN  ANLOBJ$_OBJTBTREC
.EXTRN  ANLOBJ$_OBJTIRREC
.EXTRN  ANLOBJ$_OBJTIRSTOIM
.EXTRN  ANLOBJ$_OBJTIRVIELD
.EXTRN  ANLOBJ$_OBJTTLREC
.EXTRN  ANLOBJ$_OBJVALUE
.EXTRN  ANLOBJ$_OBJUVALUE
.EXTRN  ANLOBJ$_PROTECTION
.EXTRN  ANLOBJ$_SEVERITY
.EXTRN  ANLOBJ$_TEXT, ANLOBJ$_TEXTHDR
.EXTRN  ANLOBJ$_NOSUCHMOD
.EXTRN  ANLOBJ$_BADDATE
.EXTRN  ANLOBJ$_BADHDRBLKCOUNT
.EXTRN  ANLOBJ$_BADSEVERITY
.EXTRN  ANLOBJ$_BADSYMIST
.EXTRN  ANLOBJ$_BADSYMCHAR
.EXTRN  ANLOBJ$_BADSYMLEN
.EXTRN  ANLOBJ$_EXEBADFIXUPEND
.EXTRN  ANLOBJ$_EXEBADFIXUPISD
.EXTRN  ANLOBJ$_EXEBADFIXUPVBN
.EXTRN  ANLOBJ$_EXEBADISDS1
.EXTRN  ANLOBJ$_EXEBADISDTYPE
.EXTRN  ANLOBJ$_EXEBADMATCH
.EXTRN  ANLOBJ$_EXEBADPATCHLEN
.EXTRN  ANLOBJ$_EXEBADOBJ
.EXTRN  ANLOBJ$_EXEBADTYPE
.EXTRN  ANLOBJ$_EXEBADXFERO
.EXTRN  ANLOBJ$_EXEHDRISDLONG
.EXTRN  ANLOBJ$_EXEHDRLONG
.EXTRN  ANLOBJ$_EXEISDLENDZRO
.EXTRN  ANLOBJ$_EXEISDLENGBL
.EXTRN  ANLOBJ$_EXEISDLENPRIV
.EXTRN  ANLOBJ$_EXENOTNATIVE
.EXTRN  ANLOBJ$_EXTRABYTES
.EXTRN  ANLOBJ$_FIELDFIT
```

```
                                                        .EXTRN  ANLOBJ$_FLAGERROR
                                                        .EXTRN  ANLOBJ$_NOTOK, ANLOBJ$_OBJBADIDCMATCH
                                                        .EXTRN  ANLOBJ$_OBJBADNUM
                                                        .EXTRN  ANLOBJ$_OBJBADPOP
                                                        .EXTRN  ANLOBJ$_OBJBADPUSH
                                                        .EXTRN  ANLOBJ$_OBJBADTYPE
                                                        .EXTRN  ANLOBJ$_OBJBADVIELD
                                                        .EXTRN  ANLOBJ$_OBJEOMBADSEV
                                                        .EXTRN  ANLOBJ$_OBJEOMMISSING
                                                        .EXTRN  ANLOBJ$_OBJFADBADAVC
                                                        .EXTRN  ANLOBJ$_OBJFADBADRBC
                                                        .EXTRN  ANLOBJ$_OBJGSDBADALIGN
                                                        .EXTRN  ANLOBJ$_OBJGSDBADSUBTYP
                                                        .EXTRN  ANLOBJ$_OBJHDRRES
                                                        .EXTRN  ANLOBJ$_OBJMHDBADRECSIZ
                                                        .EXTRN  ANLOBJ$_OBJMHDBADSTRLVL
                                                        .EXTRN  ANLOBJ$_OBJMHDMISSING
                                                        .EXTRN  ANLOBJ$_OBJNONTIRCMD
                                                        .EXTRN  ANLOBJ$_OBJNOPSC
                                                        .EXTRN  ANLOBJ$_OBJNULLREC
                                                        .EXTRN  ANLOBJ$_OBJPOSPACE
                                                        .EXTRN  ANLOBJ$_OBJPROMINMAX
                                                        .EXTRN  ANLOBJ$_OBJPSCABSLEN
                                                        .EXTRN  ANLOBJ$_OBJRECTOOBIG
                                                        .EXTRN  ANLOBJ$_OBJTIRRES
                                                        .EXTRN  ANLOBJ$_OBJUNDEFENV
                                                        .EXTRN  ANLOBJ$_OBJUNDEFLIT
                                                        .EXTRN  ANLOBJ$_OBJUNDEFPSC
                                                        .EXTRN  ANALYZE$_FACILITY
                                                        .EXTRN  ANL$ERROR_COUNT
                                                        .EXTRN  ANL$FORMAT_ERROR
                                                        .EXTRN  ANL$FORMAT_HEX, ANL$FORMAT_LINE
                                                        .EXTRN  ANL$IMAGE_FIXUP_INFO
                                                        .EXTRN  ANL$IMAGE_GST, ANL$IMAGE_HEADER
                                                        .EXTRN  ANL$IMAGE_PATCH_TEXT
                                                        .EXTRN  ANL$OPEN_NEXT_IMAGE_FILE
                                                        .EXTRN  ANL$PREPARE_REPORT_FILE
                                                        .EXTRN  ANL$REPORT_LINE
                                                        .EXTRN  CLI$GET_VALUE, CLI$PRESENT
                                                        .EXTRN  STR$TRIM, ANL$GB_INTERACTIVE

                                                        .PSECT  $CODE$,NOWRT,2

                                 00FC 00000             .ENTRY  ANL$IMAGE, Save R2,R3,R4,R5,R6,R7          ; 0558
                57     0000'  CF   9E 00002             MOVAB   REPORT_FILE_SPEC, R7                        ;
                56 00000000G  00   9E 00007             MOVAB   CLI$PRESENT, R6                             ;
                5E     FEF8   CE   9E 0000E             MOVAB   -264(SP), SP                                ;
                       0000'  CF   9F 00013             PUSHAB  P.AAA                                       ; 0570
                66            01   FB 00017             CALLS   #1, CLI$PRESENT                             ;
          0000G CF            50   90 0001A             MOVB    R0, ANL$GB_INTERACTIVE                      ;
                       0000'  CF   9F 0001F             PUSHAB  P.AAC                                       ; 0575
                66            01   FB 00023             CALLS   #1, CLI$PRESENT                             ;
                1D            50   E9 00026             BLBC    R0, 2$                                      ;
                0B     0000G  CF   E9 00029             BLBC    ANL$GB_INTERACTIVE, 1$                      ; 0576
67      20    0000' CF            0A   2C 0002E             MOVC5   #10, P.AAE, #32, REPORT_FILE_SPEC, -        ; 0578
                         04   B7      00035                     @REPORT_FILE_SPEC+4                         ;
                              0D   11 00037             BRB     2$                                          ; 0577
```

```
                                                57  DD 00039 1$:     PUSHL   R7                                      ; 0580
                                          0000'     CF  9F 0003B     PUSHAB  P.AAF                                   ;
                                00000000G   00      02  FB 0003F     CALLS   #2, CLI$GET_VALUE                       ;
                                            6E    FF    8F  9A 00046 2$:     MOVZBL  #255, RESULTANT_FILE_SPEC       ; 0586
                                      04    AE    08    AE  9E 0004A     MOVAB   RESULTANT_FILE_SPEC+8, -        ;
                                                                           RESULTANT_FILE_SPEC+4                   ;
                                                5E  DD 0004F     PUSHL   SP                                      ; 0588
                                    0000G   CF          01  FB 00051     CALLS   #1, ANL$OPEN_NEXT_IMAGE_FILE            ;
                                            52          50  D0 00056     MOVL    R0, STATUS                          ;
                                            17          52  E9 00059     BLBC    STATUS, 3$                          ; 0590
                                                000000000G  8F  DD 0005C     PUSHL   #ANLOBJ$_EXEHEADING             ; 0594
                                                      04    AE  9F 00062     PUSHAB  RESULTANT_FILE_SPEC             ;
                                                57  DD 00065     PUSHL   R7                                      ;
                                    0000G   CF          03  FB 00067     CALLS   #3, ANL$PREPARE_REPORT_FILE             ;
                                    0000V   CF          00  FB 0006C     CALLS   #0, ANL$IMAGE2                          ; 0598
                                                D3      11  00071     BRB     2$                                      ; G580
                                                        04  00073 3$:     RET                                     ; 0603

; Routine Size:  116 bytes,    Routine Base:  $CODE$ + 0000
```

```
;  172          0604  1 %sbttl 'ANL$IMAGE_POSITIONALS - Process Positional Qualifiers'
;  173          0605  1 !++
;  174          0606  1 ! Functional Description:
;  175          0607  1 !       This routine is called by the EXEINPUT module whenever it scans
;  176          0608  1 !       off the next file spec from the command line.  We need to process
;  177          0609  1 !       positional qualifiers.
;  178          0610  1 !
;  179          0611  1 ! Formal Parameters:
;  180          0612  1 !       none
;  181          0613  1 !
;  182          0614  1 ! Implicit Inputs:
;  183          0615  1 !       global data
;  184          0616  1 !
;  185          0617  1 ! Implicit Outputs:
;  186          0618  1 !       global data
;  187          0619  1 !
;  188          0620  1 ! Returned Value:
;  189          0621  1 !       none
;  190          0622  1 !
;  191          0623  1 ! Side Effects:
;  192          0624  1 !
;  193          0625  1 !--
;  194          0626  1
;  195          0627  1
;  196          0628  2 global routine anl$image_positionals: novalue = begin
;  197          0629  2
;  198          0630  2 local
;  199          0631  2         all_portions: byte;
;  200          0632  2
;  201          0633  2
;  202          0634  2 ! We process the qualifiers that specify which portions of the image are
;  203          0635  2 ! to be analyzed.  If none are specified, we analyze everything.  If any are
;  204          0636  2 ! specified, we analyze only those specified.
;  205          0637  2
;  206          0638  2 all_portions = not cli$present(describe('FIXUP_SECTION')) and
;  207          0639  2                not cli$present(describe('GST')) and
;  208          0640  2                not cli$present(describe('HEADER')) and
;  209          0641  2                not cli$present(describe('PATCH_TEXT'));
;  210          0642  2
;  211          0643  2 fixup_section_flag = .all_portions or cli$present(describe('FIXUP_SECTION'));
;  212          0644  2 gst_flag = .all_portions or cli$present(describe('GST'));
;  213          0645  2 patch_text_flag = .all_portions or cli$present(describe('PATCH_TEXT'));
;  214          0646  2
;  215          0647  2 return;
;  216          0648  2
;  217          0649  1 end;


                                                                .PSECT  $PLIT$,NOWRT,NOEXE,2

        4E  4F  49  54  43  45  53  5F  50  55  58  49  46  0003C P.AAI:   .ASCII  \FIXUP_SECTION\                          ;
                                                            00049         .BLKB   3
                                                  0000000D  0004C P.AAH:   .LONG   13                                     ;
                                                  00000000' 00050         .ADDRESS P.AAI                                  ;
                                                54  53  47  00054 P.AAK:   .ASCII  \GST\                                  ;
                                                            00057         .BLKB   1
```

```
                                   00000003  00058 P.AAJ:  .LONG    3                                   ;
                                   00000000' 0005C         .ADDRESS P.AAK                               ;
                       52 45 44 41 45 48  00060 P.AAM:  .ASCII   \HEADER\                            ;
                                          00066         .BLKB    2
                                   00000006  00068 P.AAL:  .LONG    6                                   ;
                                   00000000' 0006C         .ADDRESS P.AAM                               ;
           54 58 45 54 5F 48 43 54 41 50  00070 P.AAO:  .ASCII   \PATCH_TEXT\                        ;
                                          0007A         .BLKB    2
                                   0000000A  0007C P.AAN:  .LONG    10                                  ;
                                   00000000' 00080         .ADDRESS P.AAO                               ;
  4E 4F 49 54 43 45 53 5F 50 55 58 49 46  00084 P.AAQ:  .ASCII   \FIXUP_SECTION\                     ;
                                          00091         .BLKB    3
                                   0000000D  00094 P.AAP:  .LONG    13                                  ;
                                   00000000' 00098         .ADDRESS P.AAQ                               ;
                                54 53 47  0009C P.AAS:  .ASCII   \GST\                               ;
                                          0009F         .BLKB    1
                                   00000003  000A0 P.AAR:  .LONG    3                                   ;
                                   00000000' 000A4         .ADDRESS P.AAS                               ;
           54 58 45 54 5F 48 43 54 41 50  000A8 P.AAU:  .ASCII   \PATCH_TEXT\                        ;
                                          000B2         .BLKB    2
                                   0000000A  000B4 P.AAT:  .LONG    10                                  ;
                                   00000000' 000B8         .ADDRESS P.AAU                               ;


                                                        .PSECT   $CODE$,NOWRT,2

                                      007C 00000        .ENTRY   ANL$IMAGE_POSITIONALS, Save R2,R3,R4,R5,R6   ; 0628
                      56      0000'  CF  9E 00002        MOVAB    P.AAH, R6                            ;
                      55 00000000G   00  9E 00007        MOVAB    CLI$PRESENT, R5                      ;
                                     56  DD 0000E        PUSHL    R6                                   ; 0638
                      65             01  FB 00010        CALLS    #1, CLI$PRESENT                      ;
                      52             50  D0 00013        MOVL     R0, R2                               ;
                              0C     A6  9F 00016        PUSHAB   P.AAJ                                ; 0639
                      65             01  FB 00019        CALLS    #1, CLI$PRESENT                      ;
                      53             50  D0 0001C        MOVL     R0, R3                               ;
                      53             52  C8 0001F        BISL2    R2, R3                               ;
                              1C     A6  9F 00022        PUSHAB   P.AAL                                ; 0640
                      65             01  FB 00025        CALLS    #1, CLI$PRESENT                      ;
                      52             50  D0 00028        MOVL     R0, R2                               ;
                      52             53  C8 0002B        BISL2    R3, R2                               ;
                              30     A6  9F 0002E        PUSHAB   P.AAN                                ; 0641
                      65             01  FB 00031        CALLS    #1, CLI$PRESENT                      ;
                      50             52  C8 00034        BISL2    R2, R0                               ;
                      54             50  92 00037        MCOMB    R0, ALL_PORTIONS                     ; 0640
                              48     A6  9F 0003A        PUSHAB   P.AAP                                ; 0643
                      65             01  FB 0003D        CALLS    #1, CLI$PRESENT                      ;
    0000'  CF         50             54  89 00040        BISB3    ALL_PORTIONS, R0, FIXUP_SECTION_FLAG ;
                              54     A6  9F 00046        PUSHAB   P.AAR                                ; 0644
                      65             01  FB 00049        CALLS    #1, CLI$PRESENT                      ;
    0000'  CF         50             54  89 0004C        BISB3    ALL_PORTIONS, R0, GST_FLAG           ;
                              68     A6  9F 00052        PUSHAB   P.AAT                                ; 0645
                      65             01  FB 00055        CALLS    #1, CLI$PRESENT                      ;
    0000'  CF         50             54  89 00058        BISB3    ALL_PORTIONS, R0, PATCH_TEXT_FLAG    ;
                                     04 0005E        RET                                           ; 0649

; Routine Size:  95 bytes,    Routine Base:  $CODE$ + 0074
```

```
;  219          0650  1 %sbttl 'ANL$IMAGE2: Produce Analysis of One Image'
;  220          0651  1 !++
;  221          0652  1 ! Functional Description:
;  222          0653  1 !       This routine is responsible for producing the analysis report for
;  223          0654  1 !       one image.
;  224          0655  1 !
;  225          0656  1 ! Formal Parameters:
;  226          0657  1 !       none
;  227          0658  1 !
;  228          0659  1 ! Implicit Inputs:
;  229          0660  1 !       global data
;  230          0661  1 !
;  231          0662  1 ! Implicit Outputs:
;  232          0663  1 !       global data
;  233          0664  1 !
;  234          0665  1 ! Returned Value:
;  235          0666  1 !       none
;  236          0667  1 !
;  237          0668  1 ! Side Effects:
;  238          0669  1 !
;  239          0670  1 !--
;  240          0671  1
;  241          0672  1
;  242          0673  2 global routine anl$image2: novalue = begin
;  243          0674  2
;  244          0675  2 local
;  245          0676  2         hp: ref block[,byte],
;  246          0677  2         continue: long,
;  247          0678  2         image_base: long, fixup_size: long, fixup_vbn: long;
;  248          0679  2
;  249          0680  2
;  250          0681  2 ! As we analyze each portion of the image, we get a return status that tells
;  251          0682  2 ! us whether or not to continue (false if interactive and user says quit).
;  252          0683  2 ! We always analyze the image header.
;  253          0684  2 ! The header analysis routine will return info about the starting address
;  254          0685  2 ! of the image and its fixup section.
;  255          0686  2
;  256          0687  2 continue = anl$image_header(image_base,fixup_size,fixup_vbn);
;  257          0688  2
;  258          0689  2 ! Now if the user wants us to print the patch text, let's do it.
;  259          0690  2
;  260          0691  2 if .continue and .patch_text_flag then
;  261          0692  2         continue = anl$image_patch_text();
;  262          0693  2
;  263          0694  2 ! Now if the user wants us to analyze the global symbol table, let's do it.
;  264          0695  2
;  265          0696  2 if .continue and .gst_flag then
;  266          0697  2         continue = anl$image_gst();
;  267          0698  2
;  268          0699  2 ! If the user wants us to analyze the fixup section, do it.
;  269          0700  2
;  270          0701  2 if .continue and .fixup_section_flag then
;  271          0702  2         continue = anl$image_fixup_info(.image_base,.fixup_size,.fixup_vbn);
;  272          0703  2
;  273          0704  2 ! Tell the user how many errors were uncovered.
;  274          0705  2
;  275          0706  2 anl$report_line(-1);
```

```
0707   2 anl$report_line(-1);
0708   2 anl$report_line(-1);
0709   2 anl$error_count();
0710   2
0711   2 ! Finally, print the command line that was used to generate the report.
0712   2
0713   3 begin
0714   3 local
0715   3         local_described_buffer(command_line,80);
0716   3
0717   3 cli$get_value(describe('$LINE'),command_line);
0718   3 anl$format_line(0,0,anlobj$_anything,command_line);
0719   2 end;
0720   2
0721   2 return;
0722   2
0723   1 end;


                                                        .PSECT  $PLIT$,NOWRT,NOEXE,2

            45  4E  49  4C  24  000BC P.AAW:   .ASCII  \$LINE\                      ;
                                000C1          .BLKB   3
                     00000005   000C4 P.AAV:   .LONG   5                             ;
                     00000000'  000C8          .ADDRESS P.AAW                        ;


                                                        .PSECT  $CODE$,NOWRT,2

                            0004 00000          .ENTRY  ANL$IMAGE2, Save R2          ; 0673
           52     0000G  CF   9E 00002          MOVAB   ANL$REPORT_LINE, R2          ;
           5E        9C  AE   9E 00007          MOVAB   -100(SP), SP                 ;
                          5E  DD 0000B          PUSHL   SP                           ; 0687
                     08   AE  9F 0000D          PUSHAB  FIXUP_SIZE                   ;
                     10   AE  9F 00010          PUSHAB  IMAGE_BASE                   ;
    0000G  CF             03  FB 00013          CALLS   #3, ANL$IMAGE_HEADER         ;
           2C             50  E9 00018          BLBC    CONTINUE, 3$                 ; 0691
           05     0000'   CF  E9 0001B          BLBC    PATCH_TEXT_FLAG, 1$          ;
    0000G  CF             00  FB 00020          CALLS   #0, ANL$IMAGE_PATCH_TEXT     ; 0692
           1F             50  E9 00025 1$:      BLBC    CONTINUE, 3$                 ; 0696
           05     0000'   CF  E9 00028          BLBC    GST_FLAG, 2$                 ;
    0000G  CF             00  FB 0002D          CALLS   #0, ANL$IMAGE_GST            ; 0697
           12             50  E9 00032 2$:      BLBC    CONTINUE, 3$                 ; 0701
           0D     0000'   CF  E9 00035          BLBC    FIXUP_SECTION_FLAG, 3$       ;
                          6E  DD 0003A          PUSHL   FIXUP_VBN                    ; 0702
                     08   AE  DD 0003C          PUSHL   FIXUP_SIZE                   ;
                     10   AE  DD 0003F          PUSHL   IMAGE_BASE                   ;
    0000G  CF             03  FB 00042          CALLS   #3, ANL$IMAGE_FIXUP_INFO     ;
           7E             01  CE 00047 3$:      MNEGL   #1, -(SP)                    ; 0706
           62             01  FB 0004A          CALLS   #1, ANL$REPORT_LINE          ;
           7E             01  CE 0004D          MNEGL   #1, -(SP)                    ; 0707
           62             01  FB 00050          CALLS   #1, ANL$REPORT_LINE          ;
           7E             01  CE 00053          MNEGL   #1, -(SP)                    ; 0708
           62             01  FB 00056          CALLS   #1, ANL$REPORT_LINE          ;
    0000G  CF             00  FB 00059          CALLS   #0, ANL$ERROR_COUNT          ; 0709
```

```
                  0C   AE        50   8F   9A 0005E        MOVZBL  #80, COMMAND_LINE                    ; 0715
                  10   AE        14   AE   9E 00063        MOVAB   COMMAND_LINE+8, COMMAND_LINE+4       ;
                                 0C   AE   9F 00068        PUSHAB  COMMAND_LINE                         ; 0717
                              0000'   CF   9F 0006B        PUSHAB  P.AAV                                ;
           00000000G   00             02   FB 0006F        CALLS   #2, CLI$GET_VALUE                    ;
                                 0C   AE   9F 00076        PUSHAB  COMMAND_LINE                         ; 0718
                         00000000G    8F   DD 00079        PUSHL   #ANLOBJ$_ANYTHING                    ;
                                      7E   7C 0007F        CLRQ    -(SP)                                ;
               0000G   CF             04   FB 00081        CALLS   #4, ANL$FORMAT_LINE                  ;
                                           04 00086        RET                                          ; 0723

; Routine Size:  135 bytes,    Routine Base:  $CODE$ + 00D3


;  293         0724  1
;  294         0725  0 end eludom




;                                  PSECT SUMMARY
;
;       Name                          Bytes                          Attributes
;
;   $OWN$                              267  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $PLIT$                             204  NOVEC,NOWRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)
;   $CODE$                             346  NOVEC,NOWRT,  RD ,  EXE,NOSHR,  LCL,  REL,  CON,NOPIC,ALIGN(2)




;                             Library Statistics
;
;                                          -------- Symbols --------      Pages       Processing
;       File                               Total    Loaded   Percent     Mapped      Time
;
;  _$255$DUA28:[SYSLIB]STARLET.L32;1        9776       11         0        581        00:01.0




;                                  COMMAND QUALIFIERS

;       BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:EXEDRIVE/OBJ=OBJ$:EXEDRIVE MSRC$:EXEDRIVE/UPDATE=(ENH$:EXEDRIVE)

; Size:          346 code + 471 data bytes
; Run Time:         00:10.2
; Elapsed Time:     00:36.2
; Lines/CPU Min:     4260
; Lexemes/CPU-Min: 14362
; Memory Used:  135 pages
; Compilation Complete
```

SETSHOAL
CLS

OBJEXEREQ
REQ

EXEFIXUP
CLS

ANALYZRMS
MAP

SHOWACL
CLS

EXESTUFF
CLS

ANALYZ

EXEINPUT
CLS

ANALYZOBJ
MAP

EXEDRIVE
CLS

RMSREQ
REQ