```
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN         NNN     000000000     FFFFFFFFFFFFFFF  FFFFFFFFFFFFFFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRR         RRR  UUU         UUU  NNNNNN      NNN  000         000  FFF              FFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRRRRRRRRRRR     UUU         UUU  NNN   NNN   NNN  000         000  FFFFFFFFFFFF     FFFFFFFFFFFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR   RRR        UUU         UUU  NNN      NNNNNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR      RRR     UUU         UUU  NNN         NNN  000         000  FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
RRR         RRR  UUUUUUUUUUUUUUU  NNN         NNN     000000000     FFF              FFF
```

```
_$2

Sym
---
NDX
NDX
NUM
NUM
OPE
OUT
PAC
PAC
PAC
PAC
PAC
PAC
PAC
PAD
PAG
PAG
PAG
PAG
PAG
PAG
PAG
PER
PUT
RCO
RIN

RLI
RNO
RNO
RTY
SAV
STR
STR
STR
STR
STR
STR

STR
STR
STR
STR
STR
STR
STR
STR
STR
STR
STR
STR
STR
STR
```

FILEID**RNOVMS


```
RRRRRRRR    NN        NN    000000    VV        VV  MM        MM   SSSSSSSS
RRRRRRRR    NN        NN    000000    VV        VV  MM        MM   SSSSSSSS
RR      RR  NN        NN  00      00  VV        VV  MMMM    MMMM SS
RR      RR  NN        NN  00      00  VV        VV  MMMM    MMMM SS
RR      RR  NNNN      NN  00      00  VV        VV  MM  MM  MM   SS
RR      RR  NNNN      NN  00      00  VV        VV  MM  MM  MM   SS
RRRRRRRR    NN  NN    NN  00      00  VV        VV  MM        MM   SSSSSS
RRRRRRRR    NN  NN    NN  00      00  VV        VV  MM        MM   SSSSSS
RR  RR      NN    NNNN    00      00  VV        VV  MM        MM         SS
RR  RR      NN    NNNN    00      00  VV        VV  MM        MM         SS
RR    RR    NN        NN  00      00    VV    VV    MM        MM         SS   ....
RR    RR    NN        NN  00      00    VV    VV    MM        MM         SS   ....
RR      RR  NN        NN    000000        VV        MM        MM SSSSSSSS     ....
RR      RR  NN        NN    000000        VV        MM        MM SSSSSSSS     ....

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
```

```
0 %TITLE 'RNOVMS - DSR VMS Command Line Interface'
0 MODULE RNOVMS ( IDENT = 'V04-000',
0                 ADDRESSING_MODE( EXTERNAL=LONG_RELATIVE,
0                                  NONEXTERNAL=LONG_RELATIVE )
0                 ) =
1 BEGIN
1
1 !
1 !****************************************************************************
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1 !*                                                                          *
1 !****************************************************************************
1 !
1
1 !++
1 !
1 ! FACILITY:      DSR (Digital Standard RUNOFF) / DSRPLUS
1 !
1 ! ABSTRACT:
1 !
1 !        This module is the DSR VMS Command Line interface module.
1 !
1 ! ENVIRONMENT:  VAX/VMS User Mode
1 !
1 ! AUTHOR:  Ray Marshall,        CREATION DATE:  23 August 1981
1 !
```

```
%SBTTL 'Revision History'
!
! MODIFIED BY:
!
!       026     REM00026        Ray Marshall    31-May-1984
!               Added a dot to a reference to dbg2 where it gets bit 15 set on
!                 the user saying /DEC_INTERNAL=OUTPUT_LINE_NUMBER.  Dbg2 was
!                 being loaded with its own address!
!
!       025     REM00025        Ray Marshall    17-May-1984
!               Added parameter OUTPUT_LINE_NUMBER to /DEC_INTERNAL.  This
!                 parameter sets bit 15 of debug flag word number 2.  The
!                 meaning of this bit is to force output line numbers to be put
!                 into the left margin of each line of text in the output file.
!                 Not controlled by any special parameter is but 14 which will
!                 prefix the line number with the internal output page number
!                 followed by a period.  This second bit will have to be set by
!                 the /DEC_INTERNAL=DBG2=%X4000 qualifier.
!
!       024     REM00024        Ray Marshall    11-April-1984
!               Make /DEVICE return an error for invalid entries.
!               Conditionalized the DIABLO, FLIP, & VT100 parameters of the
!                 /DEVICE qualifier for DSRPLUS only.  This way, with the
!                 change mentioned in the above entry, they will now yeald
!                 errors when given to DSR.
!               Made some changes towards making the /FORM work better when
!                 /SIMULATE isn't specified.  These are incomplete and mostly
!                 commented out for now.  The variable to look for to get to
!                 this new work is FORM_QUALIFIER.
!
!       023     REM00023        Ray Marshall    24-March-1984
!               Fixed definition of LIB$FIND_FILE_END.
!
!       022     REM00022        Ray Marshall    15-March-1984
!               Added logic to initialize and cleanup for LIB$FIND_FILE.  This
!                 routine is now called from RUNOFF.BLI to support search-lists
!                 as implemented in VMS V4.
!
!       021     REM00021        Ray Marshall    5-December-1983
!               Add [NO]LOAD parameter to the /DEVICE qualifier and make it
!                 related to the LN01[E] parameter.
!
!       020     REM00020        Ray Marshall    13-September-1983
!               Increase the logical name buffer size from 64 to 256 to
!                 accommodate the larger file specifications for VMS V4.0.
!               Add [NO]HEADER parameter to the /DEVICE qualifier and make it
!                 related to the LN01[E] parameter.
!
!       019     KAD00019        Keith Dawson    2-Jun-1983
!               Set bits RNO$V_S_RIGHT and RNO$V_S_DOWN if the qualifiers
!                 were explicitly given.
!
!       018     REM00018        Ray Marshall    24-May-1983
!               Modify exit logic so that if one of several calls to RUNOFF
!                 returns a failure, we will also return to VMS with a failure
!                 status code.
!
```

```
!	017	REM00017	Ray Marshall	11-May-1983
!		Removed the check for error returns from the call to RUNOFF.
!		  This will allow a list of input files to continue being
!		  processed if one in the middle has errors.
!
!	016	REM00016	Ray Marshall	10-May-1983
!		Added call to SYS$PURGWS to purge the user's working set.
!		Removed the .L32 extensions from all LIBRARY commands.
!		Deconditionalized the /DEBUG=SAVE_RESTORE parameter logic to
!		  allow it to be compiled into DSR as well as DSRPLUS.
!		Many small changes to the TPARSE tables to catch unprocessed
!		  parameter text and report it as an error.
!		Single character parameter processing for all "character"
!		  expecting qualifiers has been moved out of the TPARSE tables.
!		  Now, if the parameter string is just one (1) character long,
!		  that character will be put directly into it's proper resultant
!		  field and TPARSE will not be called.
!		Removed %O, %D, & %X logic from /DEVICE TPARSE tables because
!		  it was never used.
!
!	015	KAD00015	Keith Dawson	14-Apr-1983
!		Support /DEVICE=FLIP.
!
!	014	KAD00014	Keith Dawson	20-Mar-1983
!		Removed LN01 conditionals and all references to .BIX
!		  and .BTC files.
!		Removed /OVERPRINT.
!		Changed GCA_FLIP bit to (.gca_op_dev EQL op_dev_flip).
!
!	013	KAD00013	Keith Dawson	07-Mar-1983
!		Global edit of all modules. Updated module names, idents,
!		copyright dates. Changed require files to BLISS library.
!
!--
```

```
%SBTTL 'Module Level Declarations'

!  This literal prevents the new RNODAT from being compiled in. It also
!  prevents any reference to it.

LITERAL
    NEW_RNODAT_MODULE = 1;       ! Allow the new RNODAT.

!
! TABLE OF CONTENTS:
!

FORWARD ROUTINE

    rnocli,                      ! DSR VMS command interface routine
    call_tparse,                 ! Causes TPARSE to put data into command table
    save_value,                  ! Used by TPARSE to store a DBG1 or DBG2 value
    set_output_device_code       !

%IF NEW_RNODAT_MODULE %THEN ,
    rnodat : NOVALUE
%FI                          ;

!
! INCLUDE FILES:
!

LIBRARY 'SYS$LIBRARY:STARLET';  ! System macros
LIBRARY 'SYS$LIBRARY:TPAMAC';   ! TPARSE macros

LIBRARY 'NXPORT:XPORT';                      ! XPORT Library
REQUIRE 'REQ:RNODEF';                        ! RUNOFF variant definitions

undeclare %quote $descriptor;

%IF DSRPLUS %THEN
LIBRARY 'REQ:DPLLIB';                        ! DSRPLUS BLISS Library
%ELSE
LIBRARY 'REQ:DSRLIB';                        ! DSR BLISS Library
%FI

STRUCTURE
    BBLOCK [O, P, S, E; N] =
              [N]
              (BBLOCK + O) <P, S, E>;
!
! MACROS:
!
!
!       Define internal descripters
!
MACRO           ! (n,'text')
    CSTRING[] =  %STRING( %CHAR(%CHARCOUNT(%REMAINING)),%REMAINING)%,

    string_descr [] = (uplit (%charcount (%remaining),
                               ch$ptr (uplit (%string (%remaining))))%,
    swch_automatic =  string_descr('AUTOMATIC') %,
```

```
        swch_backspace =  string_descr('BACKSPACE') %,
        swch_bold =  string_descr('BOLD') %,
        swch_change =  string_descr('CHANGE_BARS') %,
        swch_contents =  string_descr('CONTENTS') %,
        swch_cross_reference =  string_descr('CROSS_REFERENCE') %,
        swch_dec_internal =  string_descr('DEC_INTERNAL') %,
        swch_debug =  string_descr('DEBUG') %,
        swch_device =  string_descr('DEVICE') %,
        swch_down =  string_descr('DOWN') %,
        swch_form_size =  string_descr('FORM_SIZE') %,
        swch_index =  string_descr('INDEX') %,
        swch_input =  string_descr('P1') %,
        swch_intermediate =  string_descr('INTERMEDIATE') %,
        swch_log =  string_descr('LOG') %,
        swch_messages =  string_descr('MESSAGES') %,
        swch_output =  string_descr('OUTPUT') %,
        swch_pages =  string_descr('PAGES') %,
        swch_pause =  string_descr('PAUSE') %,
        swch_right =  string_descr('RIGHT') %,
        swch_separate =  string_descr('SEPARATE_UNDERLINE') %,
        swch_sequence =  string_descr('SEQUENCE') %,
        swch_simulate =  string_descr('SIMULATE') %,
        swch_spacing =  string_descr('NONSPACING_UNDERLINE') %,
        swch_underline =  string_descr('UNDERLINE_CHARACTER') %,
        swch_variant =  string_descr('VARIANT') %;

    !
    ! EQUATED SYMBOLS:
    !

    LITERAL
        yes = 1,                        ! Used to turn indicators on
        no = 0,                         ! Used to turn indicators off
        logical_name_buffer_length = 256;

    $LITERAL        ! Literals used to dispatch within the SAVE_VALUE routine
        sv_byte_value        = $DISTINCT,
        sv_dev_header        = $DISTINCT,
        sv_dev_noheader      = $DISTINCT,
        sv_dev_italic        = $DISTINCT,
        sv_dev_landscape     = $DISTINCT,
        sv_dev_load          = $DISTINCT,
        sv_dev_noload        = $DISTINCT,
        sv_dev_portrait      = $DISTINCT,
        sv_dev_underline     = $DISTINCT,
        sv_di_dbg1           = $DISTINCT,
        sv_di_dbg2           = $DISTINCT,
        sv_output_line_numbers = $DISTINCT;

    $LITERAL
        swch_id_automatic    = $DISTINCT,
        swch_id_backspace    = $DISTINCT,
        swch_id_bold         = $DISTINCT,
        swch_id_change       = $DISTINCT,
        swch_id_contents     = $DISTINCT,
        swch_id_cross_reference = $DISTINCT,
        swch_id_dec_internal= $DISTINCT,
```

```
	swch_id_debug        = $DISTINCT,
	swch_id_device       = $DISTINCT,
	swch_id_down         = $DISTINCT,
	swch_id_form_size    = $DISTINCT,
	swch_id_index        = $DISTINCT,
	swch_id_input        = $DISTINCT,
	swch_id_intermediate = $DISTINCT,
	swch_id_log          = $DISTINCT,
	swch_id_messages     = $DISTINCT,
	swch_id_output       = $DISTINCT,
	swch_id_pages        = $DISTINCT,
	swch_id_pause        = $DISTINCT,
	swch_id_right        = $DISTINCT,
	swch_id_separate     = $DISTINCT,
	swch_id_sequence     = $DISTINCT,
	swch_id_simulate     = $DISTINCT,
	swch_id_spacing      = $DISTINCT,
	swch_id_underline    = $DISTINCT,
	swch_id_variant      = $DISTINCT;

!
! OWN STORAGE:
!
OWN

	runoff_command :  $RNO_CMD, ! DSR command information block
	swch_id,                    ! Will contain value assigned to the swch_xxx
	                            !    names assigned previously.  This is used
	                            !    within common routines to know which
	                            !    qualifier is being processed.
	ln01_option_used,           ! True if an LN01 option is specified
	ws_limits : VECTOR[2] INITIAL (0,%X'7FFFFFFF');

!
! EXTERNAL REFERENCES:
!
EXTERNAL ROUTINE
	RUNOFF,                                          ! Transportable DSR entry point

	SYS$PURGWS : ADDRESSING_MODE(GENERAL),           ! Purge working set
%IF NEW_RNODAT_MODULE %THEN
	SYS$NUMTIM,
%FI
	CLI$GET_VALUE : ADDRESSING_MODE(GENERAL),        ! Gets switch value
	CLI$PRESENT : ADDRESSING_MODE(GENERAL),          ! Checks for switch
	LIB$CVT_DTB : ADDRESSING_MODE(GENERAL),          ! Converts decimal ASCII string to integer
	LIB$TPARSE : ADDRESSING_MODE(GENERAL),           ! Table driven parser
	LIB$LP_LINES : ADDRESSING_MODE(GENERAL),         ! Get default printer paper length
	LIB$FIND_FILE_END :       ! NEEDED to free memory used by LIB$FIND_FILE.
	    WEAK  ADDRESSING_MODE(GENERAL);

EXTERNAL LITERAL
U %IF DSRPLUS %THEN
U	dsrplus$_facility;        ! Our facility number
%ELSE
	runoff$_facility;         ! Our facility number
%FI
```

```
1
1 ! The following system literals are also used, but defined in STARLET:
1 !
1 !     ss$_badparam,                ! "bad parameter value"
1 !     sts$k_severe;                ! code for SEVERE (or fatal) error status
1
1 EXTERNAL LITERAL                     ! Value returned by CLI$PRESENT
1      CLI$_ABSENT,                    ! Qualifier totally absent
1      CLI$_PRESENT,                   !       Present and asserted (on verb)
1      CLI$_DEFAULTED,                 !       absent, but defaulted in CLD
1      CLI$_NEGATED,                   !       present and negated (on verb)
1
1                   ! Additional values for VMS V3.1 or later
1
1      CLI$_LOCPRES : WEAK ,           !       present and asserted on parameter
1      CLI$_LOCNEG : WEAK ;            !       present and negated on parameter
1
1 EXTERNAL
1      lffctx;                         ! LIB$FIND_FILE context cell
1
```

```
    1 %SBTTL 'TPARSE state tables'
    1 !
    1 !      Build a (MASK,ADDR) pair for TPARSE bit-mask table entries
    1 !
    1 MACRO
    1     xmask_[i,p,s,e]       =       (1^((p)+(s))) - (1^(p)) %,
    1     mask_[]               =       (0 OR xmask_(%REMAINING)) %,
    1     tpmsk_(o,p,s,e,base)  =       mask_(o,p,s,e) , (base) + %UPVAL*(o) %,
    1     tpmskf_(fld,base)     =       tpmsk_(%FIELDEXPAND(fld), base) %;
    1
    1 !
    1 !      Tables to parse /DEBUG
    1 !
    1 $init_state(debug_states,debug_keys);
P   1 $state(,
P   1     ('ALL',               tpa$_exit,,tpmsk_(%FIELDEXPAND(rno$v_deb_cond,0),
P   1                                       %FIELDEXPAND(rno$v_deb_cond,1),
P   1                                       6,0,              runoff_command)),
P   1     ('CONDITIONALS',      tpa$_exit,,tpmskf_(rno$v_deb_cond,    runoff_command)),
P   1     ('CONTENTS',          tpa$_exit,,tpmskf_(rno$v_deb_cont,    runoff_command)),
U   1 %IF DSRPLUS %THEN
U   1     ('CROSS_REFERENCES',tpa$_exit,,tpmskf_(rno$v_deb_cros,    runoff_command)),
P   1 %FI
P   1     ('FILES',             tpa$_exit,,tpmskf_(rno$v_deb_files,   runoff_command)),
P   1     ('INDEX',             tpa$_exit,,tpmskf_(rno$v_deb_index,   runoff_command)),
P   1     ('SAVE_RESTORE',      tpa$_exit,,tpmskf_(rno$v_deb_save,    runoff_command))
    1     );
    1 !
    1 !      Tables to parse /MESSAGES
    1 !
    1 $init_state(messages_states,messages_keys);
P   1 $state(,
P   1     ('OUTPUT',            tpa$_exit,,tpmskf_(rno$v_msg_out,     runoff_command)),
P   1     ('USER',              tpa$_exit,,tpmskf_(rno$v_msg_user,    runoff_command)),
P   1     (tpa$_lambda,tpa$_exit,)
    1     );
    1 !
    1 !      Tables to parse /DEVICE
    1 !
    1 $init_state(device_states,device_keys);
P   1 $state(dev_options,
U   1 %IF dsrplus %THEN
U   1     ('DIABLO',            tpa$_exit,set_output_device_code,,,op_dev_diablo),
P   1 %FI
P   1     ('LINEPRINTER',       tpa$_exit,set_output_device_code,,,op_dev_line_printer),
U   1 %IF dsrplus %THEN
U   1     ('VT100',             tpa$_exit,set_output_device_code,,,op_dev_vt100),
U   1     ('FLIP',              tpa$_exit,set_output_device_code,,,op_dev_flip),
P   1 %FI
P   1     ('LN01',              tpa$_exit,set_output_device_code,,,op_dev_ln01),
P   1     ('LN01E',             tpa$_exit,set_output_device_code,,,op_dev_ln01e),
P   1     ('UNDERLINE',         tpa$_exit,save_value,,,sv_dev_underline),
P   1     ('ITALIC',            tpa$_exit,save_value,,,sv_dev_italic),
P   1     ('PORTRAIT',          tpa$_exit,save_value,,,sv_dev_portrait),
P   1     ('LANDSCAPE',         tpa$_exit,save_value,,,sv_dev_landscape),
P   1     ('HEADER',            tpa$_exit,save_value,,,sv_dev_header),
P   1     ('NOHEADER',          tpa$_exit,save_value,,,sv_dev_noheader),
```

```
	('LOAD',		tpa$_exit,save_value,,,sv_dev_load),
	('NOLOAD',		tpa$_exit,save_value,,,sv_dev_noload),
	(tpa$_lambda,		tpa$_fail,)
	);
!
!	Tables to parse /DEC_INTERNAL
!
$init_state(dec_internal_states,dec_internal_keys);
$state(options,
	(',',			options),
	('DBG1',		dbg1,,,,sv_di_dbg1),
	('DBG2',		dbg1,,,,sv_di_dbg2),
	('FLIP',		options,set_output_device_code,,,op_dev_flip),
	('VT100',		options,set_output_device_code,,,op_dev_vt100),
	('OUTPUT_LINE_NUMBER',		options,save_value,,,sv_output_line_numbers),
	(tpa$_lambda,tpa$_exit,)
	);

$state(,
	('%',		which_base),
	(tpa$_lambda,tpa$_exit,)
	);

$state(dbg1,
	('='),
	(':'),
	(',',		options)
	);
$state(,
	('%',		which_base),
	(tpa$_hex,		options,save_value),
	(tpa$_lambda,options)
	);
$state(which_base,
	('X',			hex_num),
	('O',			oct_num),
	('D',			dec_num),
	(tpa$_hex,		options,save_value),
	(tpa$_lambda,options)
	);
$state(hex_num,
	(tpa$_hex,options,save_value));
$state(oct_num,
	(tpa$_octal,options,save_value));
$state(dec_num,
	(tpa$_decimal,options,save_value));
!
!	Tables to parse /CHANGE_BARS, /UNDERLINE_CHARACTER,
!			/NONSPACING_UNDERLINE, & /SEPARATE_UNDERLINE.
!
!	For that matter, with the appropriate changes made to routine
!	SAVE_VALUE, these tables will handle any qualifier that expects to
!	be given a single character or the numeric value representing that
!	character.
!
$init_state(chars_states,chars_keys);
```

```
$state(,
    ('%',               chars_which_base,,,,sv_byte_value),
    (tpa$_eos,          tpa$_exit,),
    (tpa$_lambda,       tpa$_fail,)
    );
$state(chars_which_base,
    ('X',               chars_hex_num),
    ('O',               chars_oct_num),
    ('D',               chars_dec_num),
    (tpa$_decimal,      chars_done,save_value),
    (tpa$_hex,          chars_done,save_value),
    (tpa$_lambda,       tpa$_fail,)
    );
$state(chars_hex_num,
    (tpa$_hex,          chars_done,save_value));
$state(chars_oct_num,
    (tpa$_octal,        chars_done,save_value));
$state(chars_dec_num,
    (tpa$_decimal,      chars_done,save_value));
$state(chars_done,
    (tpa$_eos,          tpa$_exit,),
    (tpa$_lambda,       tpa$_fail,)
    );
```

```
1 %SBTTL 'RNOCLI -- Header and local storage'
1 GLOBAL ROUTINE RNOCLI =
1 !++
1 !
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This routine uses the VMS DCL CLE routines to obtain command
1 !       line information which is in turn passed to the DSR application
1 !       in a transportable manner.
1 !
1 ! FORMAL PARAMETERS:    None
1 !
1 ! IMPLICIT INPUTS:      None
1 !
1 ! IMPLICIT OUTPUTS:     None
1 !
1 ! COMPLETION CODES:
1 !
1 !       completion code from DSR
1 !
1 ! SIDE EFFECTS:         None
1 !--
1
2     BEGIN
2
2     LOCAL
2         desc :                    ! Descriptor work area for translating #'s
2             $STR_DESCRIPTOR(CLASS=DYNAMIC),
2         flag_state,               ! Presence/absence implicit/explicit of /FLAG
2         status,                   ! Temporary routine completion code
2         exit_status,              ! Final status for return to VMS
2         form_qualifier,           ! Used to save the status of /FORM
2         temp;                     ! Real temporary storage!
```

```
%SBTTL 'RNOCLI -- Initialization'
!
! Misc. internal initalization
!
! Initialize the DSR command block.
!
    $STR_DESC_INIT( DESCRIPTOR = desc,  CLASS = DYNAMIC);

    exit_status = %X'10000001';         ! Initialize to normal return status.
                                        ! Bit # 28 is also set to prevent VMS
                                        ! from outputting any exit message on
                                        ! our behalf.

    lffctx = 0;           ! Initialize the LIB$FIND_FILE context cell

    WHILE       CLI$GET_VALUE(swch_input,desc)
    DO
        BEGIN

            BEGIN
            MAP runoff_command :  VECTOR;

            INCR index FROM 0 TO RNO$K_CMD_LEN / %UPVAL - 1 DO
                runoff_command[.index] = false;
            END;

        runoff_command[RNO$C_UNDERLINE] = %X'FF';
!
! Complete the DSR command block (RNOCMD) from the information returned by
! the DCL CLI.
!
!       NOTE :  Some RNOCMD fields are set by qualifier action routines.
!

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[RNO$T_INPUT],
                CLASS = DYNAMIC);

        $STR_COPY(STRING = desc, TARGET = runoff_command[RNO$T_INPUT] );

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[RNO$T_OUTPUT],
                CLASS = DYNAMIC);

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[RNO$T_INTERMEDIATE],
                CLASS = DYNAMIC);

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[RNO$T_PAGES],
                CLASS = DYNAMIC);

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[RNO$T_VARIANT],
                CLASS = DYNAMIC);

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[rno$t_drop_rec],
                CLASS = DYNAMIC);

P       $STR_DESC_INIT( DESCRIPTOR = runoff_command[rno$t_program_name],
                CLASS = DYNAMIC);
```

```
$STR_DESC_INIT( DESCRIPTOR = runoff_command[rno$t_program_filename],
        CLASS = DYNAMIC);
```

```
%SBTTL 'RNOCLI -- /AUTO /CROSS /BACK /PAUSE /SEQ /SEQ /SIM /LOG'
!
!       Pickup switch settings and setup command table accordingly
!
!       Process switches without values:  /CROSSREF /AUTOMATIC
!                                         /BACKSPACE /PAUSE /SEQUENCE
!                                         /SIMULATE /LOG

%IF DSRPLUS %THEN

        temp = cli$present(swch_cross_reference);

        SELECT .temp OF
            SET

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_cross_reference] = true;

            [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                runoff_command[rno$v_cross_reference] = false;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                runoff_command[rno$v_cross_reference] = true;

            TES;

        temp = cli$present(swch_automatic);

        SELECT .temp OF
            SET

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_automatic] = true;

            [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                runoff_command[rno$v_automatic] = false;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                runoff_command[rno$v_automatic] = true;

            TES;
%FI
        temp = cli$present(swch_backspace);

        SELECT .temp OF
            SET

            [CLI$_ABSENT, CLI$_DEFAULTED] :
                runoff_command[rno$v_s_backspace] = false;

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_backspace] = true;

            [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                runoff_command[rno$v_backspace] = false;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
```

```
                    runoff_command[rno$v_backspace] = true;

                TES;

            temp = cli$present(swch_log);

            SELECT .temp OF
                SET

                [CLI$_ABSENT, CLI$_DEFAULTED] :
                    runoff_command[rno$v_s_log] = false;

                [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                    runoff_command[rno$v_s_log] = true;

                [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$v_log] = false;

                [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                    runoff_command[rno$v_log] = true;

                TES;

            temp = cli$present(swch_pause);

            SELECT .temp OF
                SET

                [CLI$_ABSENT, CLI$_DEFAULTED] :
                    runoff_command[rno$v_s_pause] = false;

                [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                    runoff_command[rno$v_s_pause] = true;

                [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$v_pause] = false;

                [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                    runoff_command[rno$v_pause] = true;

                TES;
!
            temp = cli$present(swch_sequence);

            SELECT .temp OF
                SET

                [CLI$_ABSENT, CLI$_DEFAULTED] :
                    runoff_command[rno$v_s_sequence] = false;

                [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                    runoff_command[rno$v_s_sequence] = true;

                [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$v_sequence] = false;

                [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
```

```
                runoff_command[rno$v_sequence] = true;

            TES;

        temp = cli$present(swch_simulate);

        SELECT .temp OF
            SET

            [CLI$_ABSENT, CLI$_DEFAULTED] :
                runoff_command[rno$v_s_simulate] = false;

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_simulate] = true;

            [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                runoff_command[rno$v_simulate] = false;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                runoff_command[rno$v_simulate] = true;

            TES;
```

```
%SBTTL 'RNOCLI -- /OUTPUT /INTERMEDIATE'
!
!       Process switchs specifying files: /OUTPUT /INTERMEDIATE
!       The input file(s) [currently identified as INFIL] will be processed
!       last.
!
        temp = cli$present(swch_output);

!       First, initialize all flags affected by this switch:

        runoff_command[rno$v_s_output] = false;
        runoff_command[rno$v_output] = false;
        runoff_command[rno$v_quick] = false;

        SELECT .temp OF
            SET

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_output] = true;

            [CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$v_quick] = true;

            [CLI$_PRESENT, CLI$_LOCPRES
%IF NOT DSRPLUS %THEN                    , CLI$_DEFAULTED %FI    ] :
                    runoff_command[rno$v_output] = true;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                cli$get_value(swch_output,runoff_command[rno$t_output]);

            TES;

        temp = cli$present(swch_intermediate);

        SELECT .temp OF
            SET

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_intermediate] = true;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                runoff_command[rno$v_intermediate] = true;

            [CLI$_DEFAULTED, CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                cli$get_value(swch_intermediate,runoff_command[rno$t_intermediate]);

            TES;
```

```
%SBTTL 'RNOCLI -- /CHANGE /UNDER /SEPARATE /NONSPACING'
!
!       Process switches passing ASCII characters: /CHANGE_BARS
!               /UNDERLINE_CHARACTER /SEPARATE_UNDERLINE /NONSPACING_UNDERLINE
!

        temp = cli$present(swch_change);

        SELECT .temp OF
            SET

            [CLI$_ABSENT, CLI$_DEFAULTED] :
                runoff_command[rno$v_s_change] = false;

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_change] = true;

            [CLI$_ABSENT] :
                runoff_command[rno$c_change] = %X'FF';

            [CLI$_NEGATED, CLI$_LOCNEG] :
                BEGIN
                runoff_command[rno$c_change] = 0;
                runoff_command[rno$v_change] = false;
                END;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                BEGIN
                runoff_command[rno$v_change] = true;
                swch_id = swch_id_change;
                IF cli$get_value(swch_change,desc) THEN
                    IF .desc[str$h_length] EQL 1 THEN
                        runoff_command[rno$c_change] = CH$RCHAR(.desc[str$a_pointer])
                    ELSE

                        ( IF NOT (status = call_tparse( desc
                                                        ,chars_states
                                                        ,chars_keys) )
                            THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
                                         %ELSE          runoff$_facility %FI ^16
                                                OR ss$_badparam
                                                OR sts$k_severe)  )

                ELSE
                    runoff_command[rno$c_change] = %C'|';
                END;

            [CLI$_DEFAULTED, CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                BEGIN
                runoff_command[rno$v_chng_char] = true;
                IF .runoff_command[rno$c_change] EQL 0 THEN
                    runoff_command[rno$v_change] = false;
                END;

            TES;

        temp = cli$present(swch_underline);
```

```
    3
    3 !        First, initialize all flags affected by this switch:
    3
    3          runoff_command[rno$v_s_underline] = false;
    3          runoff_command[rno$v_underline] = false;
    3          runoff_command[rno$v_und_char] = false;
    3
    3          SELECT .temp OF
    3              SET
    3
    3              [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
    3                  runoff_command[rno$v_s_underline] = true;
    3
    3              [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
    4                  BEGIN
    4                  runoff_command[rno$v_underline] = true;
    4                  runoff_command[rno$v_und_char] = true;
    4                  IF cli$get_value(swch_underline,desc) THEN
    4                      IF .desc[str$h_length] EQL 1 THEN
    4                          runoff_command[rno$c_underline] = CH$RCHAR(.desc[str$a_pointer])
    4                      ELSE
    5                          BEGIN
    5                          swch_id = swch_id_underline;
    6                          IF NOT (status = call_tparse( desc
    6                                                       ,chars_states
    6                                                       ,chars_keys) )
  U 6                              THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
    6                                           %ELSE          runoff$_facility %FI ^16
    6                                               OR ss$_badparam
    6                                               OR sts$k_severe)
    5                          END
    4                  ELSE
    4                      runoff_command[rno$c_underline] = %C'_';
    4
    3                  END;
    3
    3              TES;
    3
    3          temp = cli$present(swch_separate);
    3
    3 !        First, initialize all flags affected by this switch except for the
    3 !                underline character flag:
    3
    3          runoff_command[rno$v_s_und_separ] = false;
    3          runoff_command[rno$v_und_separ] = false;
    3
    3          SELECT .temp OF
    3              SET
    3
    3              [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
    3                  runoff_command[rno$v_s_und_separ] = true;
    3
    3              [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
    4                  BEGIN
    4                  runoff_command[rno$v_und_separ] = true;
    4                  runoff_command[rno$v_underline] = true;
    4                  runoff_command[rno$v_und_char] = true;
```

```
                IF cli$get_value(swch_separate,desc) THEN
                    IF .desc[str$h_length] EQL 1 THEN
                        runoff_command[rno$c_underline] = CH$RCHAR(.desc[str$a_pointer])
                    ELSE
                        BEGIN
                        swch_id = swch_id_separate;
                        IF NOT (status = call_tparse( desc
                                                     ,chars_states
                                                     ,chars_keys) )
                            THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
                                         %ELSE        runoff$_facility %FI ^16
                                                OR ss$_badparam
                                                OR sts$k_severe)
                        END
                ELSE
                    runoff_command[rno$c_underline] = %C'-';
                END;

            TES;

        temp = cli$present(swch_spacing);

!       First, initialize all flags affected by this switch except for the
!               underline character flag:

        runoff_command[rno$v_s_und_nonsp] = false;
        runoff_command[rno$v_und_nonsp] = false;

        SELECT .temp OF
            SET

            [CLI$_NEGATED, CLI$_PRESENT, CLI$_LOCPRES, CLI$_LOCNEG] :
                runoff_command[rno$v_s_und_nonsp] = true;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                BEGIN
                runoff_command[rno$v_und_nonsp] = true;
                runoff_command[rno$v_underline] = true;
                runoff_command[rno$v_und_char] = true;
                IF cli$get_value(swch_spacing,desc) THEN
                    IF .desc[str$h_length] EQL 1 THEN
                        runoff_command[rno$c_underline] = CH$RCHAR(.desc[str$a_pointer])
                    ELSE
                        BEGIN
                        swch_id = swch_id_underline;
                        IF NOT (status = call_tparse( desc
                                                     ,chars_states
                                                     ,chars_keys) )
                            THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
                                         %ELSE        runoff$_facility %FI ^16
                                                OR ss$_badparam
                                                OR sts$k_severe)
                        END
                ELSE
                    runoff_command[rno$c_underline] = 7;
                END;
```

```
        TES;

    IF .runoff_command[RNO$C_UNDERLINE] EQLU %X'FF'
    THEN
        runoff_command[RNO$C_UNDERLINE] = no
    ELSE
        runoff_command[RNO$V_UND_CHAR] = yes;
```

```
3 %SBTTL 'RNOCLI -- /PAGES /VARIANT'
3 !
3 !         Process switches passing ASCII strings parsed by DSR:
3 !
3 !                             /PAGES  /VARIANT
3 !
3           temp = cli$present(swch_pages);
3
3           SELECT .temp OF
3               SET
3
3               [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] : false;
3               [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
3                   cli$get_value(swch_pages,runoff_command[rno$t_pages]);
3
3               TES;
3
3           temp = cli$present(swch_variant);
3
3           SELECT .temp OF
3               SET
3
3               [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] : false;
3               [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
3                   cli$get_value(swch_variant,runoff_command[rno$t_variant]);
3
3               TES;
```

```
%SBTTL 'RNOCLI -- /BOLD /DOWN /RIGHT'
!
!       Process switches passing numeric arguments:  /BOLD /DOWN /RIGHT

        temp = cli$present(swch_bold);

        SELECT .temp OF
            SET

            [CLI$_ABSENT] :
                    runoff_command[rno$h_bold] = 1;

            [CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$h_bold] = 0;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                IF cli$get_value(swch_bold,desc) THEN
                    BEGIN
                    status = lib$cvt_dtb(.desc[str$h_length],
                                         .desc[str$a_pointer],
                                         temp);
                    runoff_command[rno$h_bold] = .temp
                    END
                ELSE
                    runoff_command[rno$h_bold] = 1;

            TES;

        temp = cli$present(swch_down);

        SELECT .temp OF
            SET

            [CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
                    runoff_command[rno$h_down] = 0;

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                IF cli$get_value(swch_down,desc) THEN
                    BEGIN
                    status = lib$cvt_dtb(.desc[str$h_length],
                                         .desc[str$a_pointer],
                                         temp);
                    runoff_command[rno$h_down] = .temp
                    END
                ELSE
                    runoff_command[rno$h_down] = 5;

            [CLI$_NEGATED, CLI$_LOCNEG, CLI$_PRESENT, CLI$_LOCPRES] :
                runoff_command[rno$v_s_down] = true;

            TES;

        form_qualifier = cli$present(swch_form_size);

        SELECT .form_qualifier OF
            SET
```

```
		[CLI$_ABSENT] :
			runoff_command[rno$h_form_size] = lib$lp_lines();

		[CLI$_NEGATED, CLI$_LOCNEG] :
		    runoff_command[rno$h_form_size] = 0;

		[CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
		    IF cli$get_value(swch_form_size,desc) THEN
			BEGIN
			status = lib$cvt_dtb(.desc[str$h_length],
					     .desc[str$a_pointer],
					     temp);
			runoff_command[rno$h_form_size] = .temp
			END
		    ELSE
			BEGIN
			runoff_command[rno$h_form_size] = lib$lp_lines();
			form_qualifier = CLI$_ABSENT		! so /DEV works right.
			END;
		TES;

	    temp = cli$present(swch_right);

	    SELECT .temp OF
		SET

		[CLI$_ABSENT, CLI$_NEGATED, CLI$_LOCNEG] :
		    runoff_command[rno$h_right] = 0;

		[CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
		    IF cli$get_value(swch_right,desc) THEN
			BEGIN
			status = lib$cvt_dtb(.desc[str$h_length],
					     .desc[str$a_pointer],
					     temp);
			runoff_command[rno$h_right] = .temp
			END
		    ELSE
			runoff_command[rno$h_right] = 5;

		[CLI$_NEGATED, CLI$_LOCNEG, CLI$_PRESENT, CLI$_LOCPRES] :
		    runoff_command[rno$v_s_right] = true;

		TES;
```

```
%SBTTL 'RNOCLI -- /DEBUG /DEVICE /MESSAGES /DEC_INTERNAL'
!
!       Process switches passing lists of arguments: /DEBUG /DEVICE /MESSAGES
!                                                    and /DEC_INTERNAL
!
        temp = cli$present(swch_debug);

!       First initialize all bits that can be set by this qualifier:

        runoff_command[rno$v_deb_cond] = false;
        runoff_command[rno$v_deb_cont] = false;
        runoff_command[rno$v_deb_files] = false;
        runoff_command[rno$v_deb_index] = false;
        runoff_command[rno$v_deb_cros] = false;
        runoff_command[rno$v_deb_save] = false;

        SELECT .temp OF
            SET

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                WHILE cli$get_value(swch_debug,desc)
                DO call_tparse(desc,debug_states,debug_keys);

            TES;

        temp = cli$present(swch_device);

!       First, initialize all items that can be set by this qualifier:

        runoff_command[rno$v_4_out_format] = op_dev_line_printer;
        runoff_command[rno$v_ln01_port_land] = true;     ! 1 ==> portrait
        runoff_command[rno$v_ln01_ital_under] = true;    ! 1 ==> italics
        runoff_command[rno$v_ln01_header] = true;        ! 1 ==> O/P header info.
        runoff_command[rno$v_ln01_load] = true;          ! 1 ==> O/P font load OCS

        SELECT .temp OF
            SET

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                WHILE cli$get_value(swch_device,desc)
                DO
                    IF NOT (status = call_tparse( desc
                                                ,device_states
                                                ,device_keys) )
                        THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
                                    %ELSE          runoff$_facility %FI ^16
                                        OR ss$_badparam
                                        OR sts$k_severe);
            TES;
%(
        IF .form_qualifier EQL CLI$_ABSENT  THEN    ! If we used LIB$LP_LINES
            IF  .runoff_command[rno$v_4_out_format] EQL op_dev_ln01
                                                OR
                .runoff_command[rno$v_4_out_format] EQL op_dev_ln01e
            THEN
                runoff_command[rno$h_form_size] = 255
            ELSE
```

```
                runoff_command[rno$h_form_size] = .runoff_command[rno$h_form_size] - 6;
)%
        temp = cli$present(swch_messages);

!       First initialize all bits that can be set by this qualifier:

        runoff_command[rno$v_msg_out] = false;
        runoff_command[rno$v_msg_user] = false;

        SELECT .temp OF
            SET

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                WHILE cli$get_value(swch_messages,desc)
                DO  IF NOT (status = call_tparse( desc
                                                 ,messages_states
                                                 ,messages_keys) )
                        THEN RETURN (%IF DSRPLUS %THEN dsrplus$_facility
                                     %ELSE              runoff$_facility %FI ^16
                                           OR ss$_badparam
                                           OR sts$k_severe)

            TES;

        temp = cli$present(swch_dec_internal);

!       First, initialize all items that can be set by this qualifier:
!
!       RNO$V_4_OUT_FORMAT has already been initialized by the processing
!       of the /DEVICE qualifier.

        runoff_command[rno$h_dbg1] = 0;
        runoff_command[rno$h_dbg2] = 0;

        SELECT .temp OF
            SET

            [CLI$_DEFAULTED, CLI$_PRESENT, CLI$_LOCPRES] :
                WHILE cli$get_value(swch_dec_internal,desc)
                DO call_tparse(desc,dec_internal_states,dec_internal_keys);

            TES;
```

```
  3 %SBTTL 'RNOCLI -- final error checking'
  3
  3         !  If an LN01 option was used without specifying an LN01,
  3         !       report the error and exit with a fatal status.
  3
  3         IF .ln01_option_used
  3                 AND NOT
  4           (.runoff_command[rno$v_4_out_format] EQL op_dev_ln01
  4          OR .runoff_command[rno$v_4_out_format] EQL op_dev_ln01e)
  4
  3         THEN
  4             RETURN (                        !  Our facility name
U 4                 %IF DSRPLUS %THEN       dsrplus$_facility
  4                 %ELSE           runoff$_facility   %FI   ^ 16)
  3                 OR shr$_confqual             !  shared message from VMS-land
  3                 OR sts$k_severe;             !  force FATAL status
```

```
%SBTTL 'RNOCLI -- Point to dropped record file if present'
!
! This logic is to support dropped statistical records from DSR and DSRPLUS.
! It looks for the existance of the logical "DSR$STATISTICAL_RECORDS" and, if
! present, sets up the descriptor RNO$T_DROP_REC to be pointing to the fully
! translated name.
!
! If the logical does not exist, then the descriptor RNO$T_DROP_REC will be
! left in its initialized state.
!
    BEGIN
    LOCAL
        assign_status,
        trnlog_status,
        tt_buf_desc : BLOCK [8, BYTE],
        tt_name_string : VECTOR [logical_name_buffer_length, BYTE],
        tt_name_desc : BLOCK [8, BYTE],
        logtab;

    ! Put "canned" logical name into buffer

    CH$MOVE (23, UPLIT ('DSR$STATISTICAL_RECORDS'), tt_name_string);

    ! Initialize descriptor to be pointing to the "canned" logical

    tt_name_desc [dsc$w_length] = 23;
    tt_name_desc [dsc$b_dtype] = dsc$k_dtype_t;
    tt_name_desc [dsc$b_class] = dsc$k_class_s;
    tt_name_desc [dsc$a_pointer] = tt_name_string [0];

    ! The same buffer will be receiving the system's translation of the logical
    ! names. Initialize the destination descriptor to point to the same buffer,
    ! but to indicate that buffer's full length.

    tt_buf_desc [dsc$w_length] = logical_name_buffer_length;
    tt_buf_desc [dsc$b_dtype] = dsc$k_dtype_t;
    tt_buf_desc [dsc$b_class] = dsc$k_class_s;
    tt_buf_desc [dsc$a_pointer] = tt_name_string [0];

    ! Before we attempt to translate, we first determine just which logical
    ! name table(s) we will look at (or which one(s) we will ignore).

    BEGIN
    LOCAL
        foo;

        foo = .runoff_command[rno$h_dbg1];

        IF .foo<13,1> THEN
            logtab = 0          !  This says we look at all tables
        ELSE
            logtab = 6          !  This says we only look at the system table.
    END;

    ! To see if the "canned" logical name is defined, perform one initial
    ! translation and look at the returned status.
```

```
trnlog_status = $trnlog (     lognam = tt_name_desc
                             ,rsllen = tt_name_desc [dsc$w_length]
                             ,rslbuf = tt_buf_desc
                             ,dsbmsk = .logtab);! Don't look at process or
                                                ! group logical name tables

IF .trnlog_status EQL ss$_normal  THEN  ! If we are not told that no
    BEGIN                               ! translation took place, then we
                                        ! must assume (at least initially)
                                        ! that a logical was defined, and
                                        ! we must process it.

    ! However, if the return status wasn't "normal", then something went
    ! wrong and we must abort processing of the logical.

    ! Do the logical name translation up to 9 more times to be sure we have
    ! the real destination.

    INCR i FROM 1 TO 9 DO

        IF (trnlog_status =
            $trnlog ( lognam = tt_name_desc
                     ,rsllen = tt_name_desc [dsc$w_length]
                     ,rslbuf = tt_buf_desc
                     ,dsbmsk = 6 )          ! Don't look at process or
                                            ! group logical name tables

                                              ) EQL ss$_notran
        THEN
            EXITLOOP;

    $STR_COPY(  STRING = tt_name_desc
               ,TARGET = runoff_command[rno$t_drop_rec] )

    END
END;
```

```
3 %SBTTL 'RNOCLI -- DSR invocation and exit'
3 !
3 ! Call the DSR application to process a single command line.
3 !
3
3 %IF NEW_RNODAT_MODULE %THEN
3         rnodat ( runoff_command );              ! Pickup current date & time
3 %FI
3
3         status =  RUNOFF( runoff_command );     ! Pass the DSR application the address
3                                                 ! of the complete command information block.
3
3         IF NOT .status                          ! If DSR returns a failure
3         THEN                                    ! completion code, save it for
3             exit_status = .status;              ! final exit later.
3
2         END;            ! end of WHILE --- DO against input filename list
2 !
2 ! Tell the RTL to dump any LIB$FIND_FILE context that it may still have
2 ! lying around.
2 !
2     IF LIB$FIND_FILE_END NEQA 0 THEN
2         LIB$FIND_FILE_END(lffctx);
2 !
2 ! Purge the working set to free up space for other users.
2 !
2     SYS$PURGWS(ws_limits);
2 !
2 ! Return to the system.
2 !
2     RETURN .exit_status                         ! Return the final DSR completion code to the caller.
2
1     END;                            ! End of routine RNOCLI

                                                  .TITLE  RNOVMS RNOVMS - DSR VMS Command Line Interface
                                                  .IDENT  \V04-000\

                                                  .PSECT  _LIB$KEY1$,NOWRT,  SHR,  PIC,1

                                   00000 ;TPA$KEYST0
                                         U.2:     .BLKB   0
                         4C  4C  41  00000 ;TPA$KEYST
                                         U.4:     .ASCII  \ALL\                               ;
                                 FF  00003        .BYTE   -1                                  ;
                                     00004 ;TPA$KEYST0
                                         U.9:     .BLKB   0
 53  4C  41  4E  4F  49  54  49  44  4E  4F  43  00004 ;TPA$KEYST
                                         U.11:    .ASCII  \CONDITIONALS\                      ;
                                 FF  00010        .BYTE   -1                                  ;
                                     00011 ;TPA$KEYST0
                                         U.16:    .BLKB   0
         53  54  4E  45  54  4E  4F  43  00011 ;TPA$KEYST
                                         U.18:    .ASCII  \CONTENTS\                          ;
                                 FF  00019        .BYTE   -1                                  ;
                                     0001A ;TPA$KEYST0
                                         U.23:    .BLKB   0
```

```
                              53 45 4C 49 46  0001A ;TPA$KEYST
                                                    U.25:    .ASCII  \FILES\                    ;
                                          FF  0001F          .BYTE   -1                         ;
                                              00020 ;TPA$KEYSTO
                                                    U.30:    .BLKB   0
                           58 45 44 4E 49     00020 ;TPA$KEYST
                                                    U.32:    .ASCII  \INDEX\                    ;
                                          FF  00025          .BYTE   -1                         ;
                                              00026 ;TPA$KEYSTO
                                                    U.37:    .BLKB   0
   45 52 4F 54 53 45 52 5F 45 56 41 53        00026 ;TPA$KEYST
                                                    U.39:    .ASCII  \SAVE_RESTORE\             ;
                                          FF  00032          .BYTE   -1                         ;
                                          FF  00033 ;TPA$KEYFILL
                                                    U.44:    .BYTE   -1                         ;
                                              00034 ;TPA$KEYSTO
                                                    U.46:    .BLKB   0
                        54 55 50 54 55 4F     00034 ;TPA$KEYST
                                                    U.48:    .ASCII  \OUTPUT\                   ;
                                          FF  0003A          .BYTE   -1                         ;
                                              0003B ;TPA$KEYSTO
                                                    U.53:    .BLKB   0
                              52 45 53 55     0003B ;TPA$KEYST
                                                    U.55:    .ASCII  \USER\                     ;
                                          FF  0003F          .BYTE   -1                         ;
                                          FF  00040 ;TPA$KEYFILL
                                                    U.62:    .BYTE   -1                         ;
                                              00041 ;TPA$KEYSTO
                                                    U.64:    .BLKB   0
      52 45 54 4E 49 52 50 45 4E 49 4C        00041 ;TPA$KEYST
                                                    U.66:    .ASCII  \LINEPRINTER\              ;
                                          FF  0004C          .BYTE   -1                         ;
                                              0004D ;TPA$KEYSTO
                                                    U.72:    .BLKB   0
                              31 30 4E 4C     0004D ;TPA$KEYST
                                                    U.74:    .ASCII  \LN01\                     ;
                                          FF  00051          .BYTE   -1                         ;
                                              00052 ;TPA$KEYSTO
                                                    U.80:    .BLKB   0
                           45 31 30 4E 4C     00052 ;TPA$KEYST
                                                    U.82:    .ASCII  \LN01E\                    ;
                                          FF  00057          .BYTE   -1                         ;
                                              00058 ;TPA$KEYSTO
                                                    U.88:    .BLKB   0
               45 4E 49 4C 52 45 44 4E 55     00058 ;TPA$KEYST
                                                    U.90:    .ASCII  \UNDERLINE\                ;
                                          FF  00061          .BYTE   -1                         ;
                                              00062 ;TPA$KEYSTO
                                                    U.96:    .BLKB   0
                        43 49 4C 41 54 49     00062 ;TPA$KEYST
                                                    U.98:    .ASCII  \ITALIC\                   ;
                                          FF  00068          .BYTE   -1                         ;
                                              00069 ;TPA$KEYSTO
                                                    U.104:   .BLKB   0
                  54 49 41 52 54 52 4F 50     00069 ;TPA$KEYST
                                                    U.106:   .ASCII  \PORTRAIT\                 ;
                                          FF  00071          .BYTE   -1                         ;
```

```
                                    00072 ;TPA$KEYST0
                                          U.112:  .BLKB   0
            45 50 41 43 53 44 4E 41 4C  00072 ;TPA$KEYST
                                          U.114:  .ASCII  \LANDSCAPE\                         ;
                                    FF  0007B         .BYTE   -1                              ;
                                        0007C ;TPA$KEYST0
                                          U.120:  .BLKB   0
                     52 45 44 41 45 48  0007C ;TPA$KEYST
                                          U.122:  .ASCII  \HEADER\                            ;
                                    FF  00082         .BYTE   -1                              ;
                                        00083 ;TPA$KEYST0
                                          U.128:  .BLKB   0
               52 45 44 41 45 48 4F 4E  00083 ;TPA$KEYST
                                          U.130:  .ASCII  \NOHEADER\                          ;
                                    FF  0008B         .BYTE   -1                              ;
                                        0008C ;TPA$KEYST0
                                          U.136:  .BLKB   0
                           44 41 4F 4C  0008C ;TPA$KEYST
                                          U.138:  .ASCII  \LOAD\                              ;
                                    FF  00090         .BYTE   -1                              ;
                                        00091 ;TPA$KEYST0
                                          U.144:  .BLKB   0
                     44 41 4F 4C 4F 4E  00091 ;TPA$KEYST
                                          U.146:  .ASCII  \NOLOAD\                            ;
                                    FF  00097         .BYTE   -1                              ;
                                    FF  00098 ;TPA$KEYFILL
                                          U.154:  .BYTE   -1                                  ;
                                        00099 ;TPA$KEYST0
                                          U.158:  .BLKB   0
                           31 47 42 44  00099 ;TPA$KEYST
                                          U.160:  .ASCII  \DBG1\                              ;
                                    FF  0009D         .BYTE   -1                              ;
                                        0009E ;TPA$KEYST0
                                          U.166:  .BLKB   0
                           32 47 42 44  0009E ;TPA$KEYST
                                          U.168:  .ASCII  \DBG2\                              ;
                                    FF  000A2         .BYTE   -1                              ;
                                        000A3 ;TPA$KEYST0
                                          U.173:  .BLKB   0
                           50 49 4C 46  000A3 ;TPA$KEYST
                                          U.175:  .ASCII  \FLIP\                              ;
                                    FF  000A7         .BYTE   -1                              ;
                                        000A8 ;TPA$KEYST0
                                          U.181:  .BLKB   0
                        30 30 31 54 56  000A8 ;TPA$KEYST
                                          U.183:  .ASCII  \VT100\                             ;
                                    FF  000AD         .BYTE   -1                              ;
                                        000AE ;TPA$KEYST0
                                          U.189:  .BLKB   0
4D 55 4E 5F 45 4E 49 4C 5F 54 55 50 54 55 4F  000AE ;TPA$KEYST
                                          U.191:  .ASCII  \OUTPUT_LINE_NUMBER\                ;
                              52 45 42  000BD                                                 ;
                                    FF  000C0         .BYTE   -1                              ;
                                    FF  000C1 ;TPA$KEYFILL
                                          U.199:  .BYTE   -1                                  ;

                                                  .PSECT  _LIB$STATE$,NOWRT, SHR, PIC,1
```

```
                  00000 DEBUG_STATES::
                                 .BLKB   0
          7100    00000 ;TPA$TYPE
                        U.5:     .WORD   28928                                      ;
      00000000*   00002 ;TPA$ADDR
                        U.6:     .LONG   <<<RUNOFF_COMMAND+76>-U.6>-4>              ;
      00007E00    00006 ;TPA$MASK
                        U.7:     .LONG   32256                                      ;
          FFFF    0000A ;TPA$TARGET
                        U.8:     .WORD   -1                                         ;
          7101    0000C ;TPA$TYPE
                        U.12:    .WORD   28929                                      ;
      00000000*   0000E ;TPA$ADDR
                        U.13:    .LONG   <<<RUNOFF_COMMAND+76>-U.13>-4>             ;
      00000200    00012 ;TPA$MASK
                        U.14:    .LONG   512                                        ;
          FFFF    00016 ;TPA$TARGET
                        U.15:    .WORD   -1                                         ;
          7102    00018 ;TPA$TYPE
                        U.19:    .WORD   28930                                      ;
      00000000*   0001A ;TPA$ADDR
                        U.20:    .LONG   <<<RUNOFF_COMMAND+76>-U.20>-4>             ;
      00000400    0001E ;TPA$MASK
                        U.21:    .LONG   1024                                       ;
          FFFF    00022 ;TPA$TARGET
                        U.22:    .WORD   -1                                         ;
          7103    00024 ;TPA$TYPE
                        U.26:    .WORD   28931                                      ;
      00000000*   00026 ;TPA$ADDR
                        U.27:    .LONG   <<<RUNOFF_COMMAND+76>-U.27>-4>             ;
      00001000    0002A ;TPA$MASK
                        U.28:    .LONG   4096                                       ;
          FFFF    0002E ;TPA$TARGET
                        U.29:    .WORD   -1                                         ;
          7104    00030 ;TPA$TYPE
                        U.33:    .WORD   28932                                      ;
      00000000*   00032 ;TPA$ADDR
                        U.34:    .LONG   <<<RUNOFF_COMMAND+76>-U.34>-4>             ;
      00002000    00036 ;TPA$MASK
                        U.35:    .LONG   8192                                       ;
          FFFF    0003A ;TPA$TARGET
                        U.36:    .WORD   -1                                         ;
          7505    0003C ;TPA$TYPE
                        U.40:    .WORD   29957                                      ;
      00000000*   0003E ;TPA$ADDR
                        U.41:    .LONG   <<<RUNOFF_COMMAND+76>-U.41>-4>             ;
      00004000    00042 ;TPA$MASK
                        U.42:    .LONG   16384                                      ;
          FFFF    00046 ;TPA$TARGET
                        U.43:    .WORD   -1                                         ;
                  00048 MESSAGES_STATES::
                                 .BLKB   0
          7100    00048 ;TPA$TYPE
                        U.49:    .WORD   28928                                      ;
      00000000*   0004A ;TPA$ADDR
                        U.50:    .LONG   <<<RUNOFF_COMMAND+76>-U.50>-4>             ;
```

```
 00100000  0004E ;TPA$MASK
                 U.51:    .LONG   1048576                                ;
     FFFF  00052 ;TPA$TARGET
                 U.52:    .WORD   -1                                     ;
     7101  00054 ;TPA$TYPE
                 U.56:    .WORD   28929                                  ;
00000000*  00056 ;TPA$ADDR
                 U.57:    .LONG   <<<RUNOFF_COMMAND+76>-U.57>-4>         ;
 00200000  0005A ;TPA$MASK
                 U.58:    .LONG   2097152                                ;
     FFFF  0005E ;TPA$TARGET
                 U.59:    .WORD   -1                                     ;
     15F6  00060 ;TPA$TYPE
                 U.60:    .WORD   5622                                   ;
     FFFF  00062 ;TPA$TARGET
                 U.61:    .WORD   -1                                     ;
           00064 DEVICE_STATES::
                          .BLKB   0
           00064 DEV_OPTIONS:
                          .BLKB   0
     9300  00064 ;TPA$TYPE
                 U.67:    .WORD   -27904                                 ;
       01  00066 ;TPA$FLAGS2
                 U.68:    .BYTE   1                                      ;
 00000000  00067 ;TPA$PARAM
                 U.69:    .LONG   0                                      ;
00000000V  0006B ;TPA$ACTION
                 U.70:    .LONG   <<SET_OUTPUT_DEVICE_CODE-U.70>-4>      ;
     FFFF  0006F ;TPA$TARGET
                 U.71:    .WORD   -1                                     ;
     9301  00071 ;TPA$TYPE
                 U.75:    .WORD   -27903                                 ;
       01  00073 ;TPA$FLAGS2
                 U.76:    .BYTE   1                                      ;
 00000004  00074 ;TPA$PARAM
                 U.77:    .LONG   4                                      ;
00000000V  00078 ;TPA$ACTION
                 U.78:    .LONG   <<SET_OUTPUT_DEVICE_CODE-U.78>-4>      ;
     FFFF  0007C ;TPA$TARGET
                 U.79:    .WORD   -1                                     ;
     9302  0007E ;TPA$TYPE
                 U.83:    .WORD   -27902                                 ;
       01  00080 ;TPA$FLAGS2
                 U.84:    .BYTE   1                                      ;
 00000005  00081 ;TPA$PARAM
                 U.85:    .LONG   5                                      ;
00000000V  00085 ;TPA$ACTION
                 U.86:    .LONG   <<SET_OUTPUT_DEVICE_CODE-U.86>-4>      ;
     FFFF  00089 ;TPA$TARGET
                 U.87:    .WORD   -1                                     ;
     9303  0008B ;TPA$TYPE
                 U.91:    .WORD   -27901                                 ;
       01  0008D ;TPA$FLAGS2
                 U.92:    .BYTE   1                                      ;
 00000009  0008E ;TPA$PARAM
                 U.93:    .LONG   9                                      ;
00000000V  00092 ;TPA$ACTION
```

```
                            U.94:    .LONG   <<SAVE_VALUE-U.94>-4>       ;
           FFFF  00096 ;TPA$TARGET
                            U.95:    .WORD   -1                          ;
           9304  00098 ;TPA$TYPE
                            U.99:    .WORD   -27900                      ;
             01  0009A ;TPA$FLAGS2
                            U.100:   .BYTE   1                           ;
       00000004  0009B ;TPA$PARAM
                            U.101:   .LONG   4                           ;
      00000000V  0009F ;TPA$ACTION
                            U.102:   .LONG   <<SAVE_VALUE-U.102>-4>      ;
           FFFF  000A3 ;TPA$TARGET
                            U.103:   .WORD   -1                          ;
           9305  000A5 ;TPA$TYPE
                            U.107:   .WORD   -27899                      ;
             01  000A7 ;TPA$FLAGS2
                            U.108:   .BYTE   1                           ;
       00000008  000A8 ;TPA$PARAM
                            U.109:   .LONG   8                           ;
      00000000V  000AC ;TPA$ACTION
                            U.110:   .LONG   <<SAVE_VALUE-U.110>-4>      ;
           FFFF  000B0 ;TPA$TARGET
                            U.111:   .WORD   -1                          ;
           9306  000B2 ;TPA$TYPE
                            U.115:   .WORD   -27898                      ;
             01  000B4 ;TPA$FLAGS2
                            U.116:   .BYTE   1                           ;
       00000005  000B5 ;TPA$PARAM
                            U.117:   .LONG   5                           ;
      00000000V  000B9 ;TPA$ACTION
                            U.118:   .LONG   <<SAVE_VALUE-U.118>-4>      ;
           FFFF  000BD ;TPA$TARGET
                            U.119:   .WORD   -1                          ;
           9307  000BF ;TPA$TYPE
                            U.123:   .WORD   -27897                      ;
             01  000C1 ;TPA$FLAGS2
                            U.124:   .BYTE   1                           ;
       00000002  000C2 ;TPA$PARAM
                            U.125:   .LONG   2                           ;
      00000000V  000C6 ;TPA$ACTION
                            U.126:   .LONG   <<SAVE_VALUE-U.126>-4>      ;
           FFFF  000CA ;TPA$TARGET
                            U.127:   .WORD   -1                          ;
           9308  000CC ;TPA$TYPE
                            U.131:   .WORD   -27896                      ;
             01  000CE ;TPA$FLAGS2
                            U.132:   .BYTE   1                           ;
       00000003  000CF ;TPA$PARAM
                            U.133:   .LONG   3                           ;
      00000000V  000D3 ;TPA$ACTION
                            U.134:   .LONG   <<SAVE_VALUE-U.134>-4>      ;
           FFFF  000D7 ;TPA$TARGET
                            U.135:   .WORD   -1                          ;
           9309  000D9 ;TPA$TYPE
                            U.139:   .WORD   -27895                      ;
             01  000DB ;TPA$FLAGS2
                            U.140:   .BYTE   1                           ;
```

```
 00000006  000DC ;TPA$PARAM
                 U.141:   .LONG    6                                      ;
 00000000V 000E0 ;TPA$ACTION
                 U.142:   .LONG    <<SAVE_VALUE-U.142>-4>                 ;
     FFFF  000E4 ;TPA$TARGET
                 U.143:   .WORD    -1                                     ;
     930A  000E6 ;TPA$TYPE
                 U.147:   .WORD    -27894                                 ;
       01  000E8 ;TPA$FLAGS2
                 U.148:   .BYTE    1                                      ;
 00000007  000E9 ;TPA$PARAM
                 U.149:   .LONG    7                                      ;
 00000000V 000ED ;TPA$ACTION
                 U.150:   .LONG    <<SAVE_VALUE-U.150>-4>                 ;
     FFFF  000F1 ;TPA$TARGET
                 U.151:   .WORD    -1                                     ;
     15F6  000F3 ;TPA$TYPE
                 U.152:   .WORD    5622                                   ;
     FFFE  000F5 ;TPA$TARGET
                 U.153:   .WORD    -2                                     ;
           000F7          .BLKB    1
           000F8 DEC_INTERNAL_STATES::
                          .BLKB    0
           000F8 OPTIONS:.BLKB     0
     102C  000F8 ;TPA$TYPE
                 U.156:   .WORD    4140                                   ;
    0000*  000FA ;TPA$TARGET
                 U.157:   .WORD    <<OPTIONS-U.157>-2>                    ;
     1300  000FC ;TPA$TYPE
                 U.161:   .WORD    4864                                   ;
       01  000FE ;TPA$FLAGS2
                 U.162:   .BYTE    1                                      ;
 0000000A  000FF ;TPA$PARAM
                 U.163:   .LONG    10                                     ;
    0000*  00103 ;TPA$TARGET
                 U.165:   .WORD    <<U.164-U.165>-2>                      ;
     1301  00105 ;TPA$TYPE
                 U.169:   .WORD    4865                                   ;
       01  00107 ;TPA$FLAGS2
                 U.170:   .BYTE    1                                      ;
 0000000B  00108 ;TPA$PARAM
                 U.171:   .LONG    11                                     ;
    0000*  0010C ;TPA$TARGET
                 U.172:   .WORD    <<U.164-U.172>-2>                      ;
     9302  0010E ;TPA$TYPE
                 U.176:   .WORD    -27902                                 ;
       01  00110 ;TPA$FLAGS2
                 U.177:   .BYTE    1                                      ;
 00000002  00111 ;TPA$PARAM
                 U.178:   .LONG    2                                      ;
 00000000V 00115 ;TPA$ACTION
                 U.179:   .LONG    <<SET_OUTPUT_DEVICE_CODE-U.179>-4>     ;
    0000*  00119 ;TPA$TARGET
                 U.180:   .WORD    <<OPTIONS-U.180>-2>                    ;
     9303  0011B ;TPA$TYPE
                 U.184:   .WORD    -27901                                 ;
       01  0011D ;TPA$FLAGS2
```

```
                              U.185:  .BYTE   1                                      ;
 00000003 0011E  ;TPA$PARAM
                              U.186:  .LONG   3                                      ;
 0000000V 00122  ;TPA$ACTION
                              U.187:  .LONG   <<SET_OUTPUT_DEVICE_CODE-U.187>-4>     ;
     0000* 00126 ;TPA$TARGET
                              U.188:  .WORD   <<OPTIONS-U.188>-2>                    ;
      9304 00128 ;TPA$TYPE
                              U.192:  .WORD   -27900                                 ;
        01 0012A ;TPA$FLAGS2
                              U.193:  .BYTE   1                                      ;
 0000000C 0012B  ;TPA$PARAM
                              U.194:  .LONG   12                                     ;
 0000000V 0012F  ;TPA$ACTION
                              U.195:  .LONG   <<SAVE_VALUE-U.195>-4>                 ;
     0000* 00133 ;TPA$TARGET
                              U.196:  .WORD   <<OPTIONS-U.196>-2>                    ;
      15F6 00135 ;TPA$TYPE
                              U.197:  .WORD   5622                                   ;
      FFFF 00137 ;TPA$TARGET
                              U.198:  .WORD   -1                                     ;
      1025 00139 ;TPA$TYPE
                              U.200:  .WORD   4133                                   ;
     0000* 0013B ;TPA$TARGET
                              U.202:  .WORD   <<U.201-U.202>-2>                      ;
      15F6 0013D ;TPA$TYPE
                              U.203:  .WORD   5622                                   ;
      FFFF 0013F ;TPA$TARGET
                              U.204:  .WORD   -1                                     ;
           00141 ;DBG1
                              U.164:  .BLKB   0
      003D 00141 ;TPA$TYPE
                              U.205:  .WORD   61                                     ;
      003A 00143 ;TPA$TYPE
                              U.206:  .WORD   58                                     ;
      142C 00145 ;TPA$TYPE
                              U.207:  .WORD   5164                                   ;
     0000* 00147 ;TPA$TARGET
                              U.208:  .WORD   <<OPTIONS-U.208>-2>                    ;
      1025 00149 ;TPA$TYPE
                              U.209:  .WORD   4133                                   ;
     0000* 0014B ;TPA$TARGET
                              U.210:  .WORD   <<U.201-U.210>-2>                      ;
      91F5 0014D ;TPA$TYPE
                              U.211:  .WORD   -28171                                 ;
 0000000V 0014F  ;TPA$ACTION
                              U.212:  .LONG   <<SAVE_VALUE-U.212>-4>                 ;
     0000* 00153 ;TPA$TARGET
                              U.213:  .WORD   <<OPTIONS-U.213>-2>                    ;
      15F6 00155 ;TPA$TYPE
                              U.214:  .WORD   5622                                   ;
     0000* 00157 ;TPA$TARGET
                              U.215:  .WORD   <<OPTIONS-U.215>-2>                    ;
           00159 ;WHICH_BASE
                              U.201:  .BLKB   0
      1058 00159 ;TPA$TYPE
                              U.216:  .WORD   4184                                   ;
```

```
     0000*  0015B  ;TPA$TARGET
                   U.218:  .WORD   <<U.217-U.218>-2>            ;
      104F  0015D  ;TPA$TYPE
                   U.219:  .WORD   4175                         ;
     0000*  0015F  ;TPA$TARGET
                   U.221:  .WORD   <<U.220-U.221>-2>            ;
      1044  00161  ;TPA$TYPE
                   U.222:  .WORD   4164                         ;
     0000*  00163  ;TPA$TARGET
                   U.224:  .WORD   <<U.223-U.224>-2>            ;
      91F5  00165  ;TPA$TYPE
                   U.225:  .WORD   -28171                       ;
 00000000V  00167  ;TPA$ACTION
                   U.226:  .LONG   <<SAVE_VALUE-U.226>-4>       ;
     0000*  0016B  ;TPA$TARGET
                   U.227:  .WORD   <<OPTIONS-U.227>-2>          ;
      15F6  0016D  ;TPA$TYPE
                   U.228:  .WORD   5622                         ;
     0000*  0016F  ;TPA$TARGET
                   U.229:  .WORD   <<OPTIONS-U.229>-2>          ;
            00171  ;HEX_NUM
                   U.217:  .BLKB   0
      95F5  00171  ;TPA$TYPE
                   U.230:  .WORD   -27147                       ;
 00000000V  00173  ;TPA$ACTION
                   U.231:  .LONG   <<SAVE_VALUE-U.231>-4>       ;
     0000*  00177  ;TPA$TARGET
                   U.232:  .WORD   <<OPTIONS-U.232>-2>          ;
            00179  ;OCT_NUM
                   U.220:  .BLKB   0
      95F4  00179  ;TPA$TYPE
                   U.233:  .WORD   -27148                       ;
 00000000V  0017B  ;TPA$ACTION
                   U.234:  .LONG   <<SAVE_VALUE-U.234>-4>       ;
     0000*  0017F  ;TPA$TARGET
                   U.235:  .WORD   <<OPTIONS-U.235>-2>          ;
            00181  ;DEC_NUM
                   U.223:  .BLKB   0
      95F3  00181  ;TPA$TYPE
                   U.236:  .WORD   -27149                       ;
 00000000V  00183  ;TPA$ACTION
                   U.237:  .LONG   <<SAVE_VALUE-U.237>-4>       ;
     0000*  00187  ;TPA$TARGET
                   U.238:  .WORD   <<OPTIONS-U.238>-2>          ;
            00189          .BLKB   3
            0018C  CHARS_STATES::
                           .BLKB   0
      1225  0018C  ;TPA$TYPE
                   U.240:  .WORD   4645                         ;
        01  0018E  ;TPA$FLAGS2
                   U.241:  .BYTE   1                            ;
  00000001  0018F  ;TPA$PARAM
                   U.242:  .LONG   1                            ;
     0000*  00193  ;TPA$TARGET
                   U.244:  .WORD   <<U.243-U.244>-2>            ;
      11F7  00195  ;TPA$TYPE
                   U.245:  .WORD   4599                         ;
```

```
           FFFF  00197 ;TPA$TARGET
                       U.246:  .WORD   -1                          ;
           15F6  00199 ;TPA$TYPE
                       U.247:  .WORD   5622                        ;
           FFFE  0019B ;TPA$TARGET
                       U.248:  .WORD   -2                          ;
                 0019D ;CHARS_WHICH_BASE
                       U.243:  .BLKB   0
           1058  0019D ;TPA$TYPE
                       U.249:  .WORD   4184                        ;
          0000*  0019F ;TPA$TARGET
                       U.251:  .WORD   <<U.250-U.251>-2>           ;
           104F  001A1 ;TPA$TYPE
                       U.252:  .WORD   4175                        ;
          0000*  001A3 ;TPA$TARGET
                       U.254:  .WORD   <<U.253-U.254>-2>           ;
           1044  001A5 ;TPA$TYPE
                       U.255:  .WORD   4164                        ;
          0000*  001A7 ;TPA$TARGET
                       U.257:  .WORD   <<U.256-U.257>-2>           ;
           91F3  001A9 ;TPA$TYPE
                       U.258:  .WORD   -28173                      ;
      00000000V  001AB ;TPA$ACTION
                       U.259:  .LONG   <<SAVE_VALUE-U.259>-4>      ;
          0000*  001AF ;TPA$TARGET
                       U.261:  .WORD   <<U.260-U.261>-2>           ;
           91F5  001B1 ;TPA$TYPE
                       U.262:  .WORD   -28171                      ;
      00000000V  001B3 ;TPA$ACTION
                       U.263:  .LONG   <<SAVE_VALUE-U.263>-4>      ;
          0000*  001B7 ;TPA$TARGET
                       U.264:  .WORD   <<U.260-U.264>-2>           ;
           15F6  001B9 ;TPA$TYPE
                       U.265:  .WORD   5622                        ;
           FFFE  001BB ;TPA$TARGET
                       U.266:  .WORD   -2                          ;
                 001BD ;CHARS_HEX_NUM
                       U.250:  .BLKB   0
           95F5  001BD ;TPA$TYPE
                       U.267:  .WORD   -27147                      ;
      00000000V  001BF ;TPA$ACTION
                       U.268:  .LONG   <<SAVE_VALUE-U.268>-4>      ;
          0000*  001C3 ;TPA$TARGET
                       U.269:  .WORD   <<U.260-U.269>-2>           ;
                 001C5 ;CHARS_OCT_NUM
                       U.253:  .BLKB   0
           95F4  001C5 ;TPA$TYPE
                       U.270:  .WORD   -27148                      ;
      00000000V  001C7 ;TPA$ACTION
                       U.271:  .LONG   <<SAVE_VALUE-U.271>-4>      ;
          0000*  001CB ;TPA$TARGET
                       U.272:  .WORD   <<U.260-U.272>-2>           ;
                 001CD ;CHARS_DEC_NUM
                       U.256:  .BLKB   0
           95F3  001CD ;TPA$TYPE
                       U.273:  .WORD   -27149                      ;
      00000000V  001CF ;TPA$ACTION
```

```
                      U.274:    .LONG   <<SAVE_VALUE-U.274>-4>                          ;
0000* 001D3 ;TPA$TARGET
                      U.275:    .WORD   <<U.260-U.275>-2>                               ;
      001D5 ;CHARS_DONE
                      U.260:    .BLKB   0
11F7  001D5 ;TPA$TYPE
                      U.276:    .WORD   4599                                            ;
FFFF  001D7 ;TPA$TARGET
                      U.277:    .WORD   -1                                              ;
15F6  001D9 ;TPA$TYPE
                      U.278:    .WORD   5622                                            ;
FFFE  001DB ;TPA$TARGET
                      U.279:    .WORD   -2                                              ;

                                .PSECT  _LIB$KEY0$,NOWRT,  SHR,  PIC,1

      00000 DEBUG_KEYS::
                                .BLKB   0
      00000 ;TPA$KEY0
                      U.1:      .BLKB   0
0000* 00000 ;TPA$KEY
                      U.3:      .WORD   <U.2-U.1>                                       ;
0000* 00002 ;TPA$KEY
                      U.10:     .WORD   <U.9-U.1>                                       ;
0000* 00004 ;TPA$KEY
                      U.17:     .WORD   <U.16-U.1>                                      ;
0000* 00006 ;TPA$KEY
                      U.24:     .WORD   <U.23-U.1>                                      ;
0000* 00008 ;TPA$KEY
                      U.31:     .WORD   <U.30-U.1>                                      ;
0000* 0000A ;TPA$KEY
                      U.38:     .WORD   <U.37-U.1>                                      ;
      0000C MESSAGES_KEYS::
                                .BLKB   0
      0000C ;TPA$KEY0
                      U.45:     .BLKB   0
0000* 0000C ;TPA$KEY
                      U.47:     .WORD   <U.46-U.45>                                     ;
0000* 0000E ;TPA$KEY
                      U.54:     .WORD   <U.53-U.45>                                     ;
      00010 DEVICE_KEYS::
                                .BLKB   0
      00010 ;TPA$KEY0
                      U.63:     .BLKB   0
0000* 00010 ;TPA$KEY
                      U.65:     .WORD   <U.64-U.63>                                     ;
0000* 00012 ;TPA$KEY
                      U.73:     .WORD   <U.72-U.63>                                     ;
0000* 00014 ;TPA$KEY
                      U.81:     .WORD   <U.80-U.63>                                     ;
0000* 00016 ;TPA$KEY
                      U.89:     .WORD   <U.88-U.63>                                     ;
0000* 00018 ;TPA$KEY
                      U.97:     .WORD   <U.96-U.63>                                     ;
0000* 0001A ;TPA$KEY
                      U.105:    .WORD   <U.104-U.63>                                    ;
0000* 0001C ;TPA$KEY
```

```
                                                U.113:  .WORD   <U.112-U.63>                    ;
                              0000* 0001E  ;TPA$KEY
                                                U.121:  .WORD   <U.120-U.63>                    ;
                              0000* 00020  ;TPA$KEY
                                                U.129:  .WORD   <U.128-U.63>                    ;
                              0000* 00022  ;TPA$KEY
                                                U.137:  .WORD   <U.136-U.63>                    ;
                              0000* 00024  ;TPA$KEY
                                                U.145:  .WORD   <U.144-U.63>                    ;
                                    00026          .BLKB   2
                                    00028  DEC_INTERNAL_KEYS::
                                                   .BLKB   0
                                    00028  ;TPA$KEY0
                                                U.155:  .BLKB   0
                              0000* 00028  ;TPA$KEY
                                                U.159:  .WORD   <U.158-U.155>                   ;
                              0000* 0002A  ;TPA$KEY
                                                U.167:  .WORD   <U.166-U.155>                   ;
                              0000* 0002C  ;TPA$KEY
                                                U.174:  .WORD   <U.173-U.155>                   ;
                              0000* 0002E  ;TPA$KEY
                                                U.182:  .WORD   <U.181-U.155>                   ;
                              0000* 00030  ;TPA$KEY
                                                U.190:  .WORD   <U.189-U.155>                   ;
                                    00032          .BLKB   2
                                    00034  CHARS_KEYS::
                                                   .BLKB   0
                                    00034  ;TPA$KEY0
                                                U.239:  .BLKB   0

                                                   .PSECT  $PLIT$,NOWRT,NOEXE,2

                      00  00  31  50  00000  P.AAB:   .ASCII  \P1\<0><0>                      ;
                           00000002  00004  P.AAA:   .LONG   2                               ;
                           00000000' 00008           .ADDRESS P.AAB                          ;
00  00  00  45  43  41  50  53  4B  43  41  42  0000C  P.AAD:   .ASCII  \BACKSPACE\<0><0><0>    ;
                           00000009  00018  P.AAC:   .LONG   9                               ;
                           00000000' 0001C           .ADDRESS P.AAD                          ;
                      00  47  4F  4C  00020  P.AAF:   .ASCII  \LOG\<0>                        ;
                           00000003  00024  P.AAE:   .LONG   3                               ;
                           00000000' 00028           .ADDRESS P.AAF                          ;
          00  00  00  45  53  55  41  50  0002C  P.AAH:   .ASCII  \PAUSE\<0><0><0>            ;
                           00000005  00034  P.AAG:   .LONG   5                               ;
                           00000000' 00038           .ADDRESS P.AAH                          ;
          45  43  4E  45  55  51  45  53  0003C  P.AAJ:   .ASCII  \SEQUENCE\                  ;
                           00000008  00044  P.AAI:   .LONG   8                               ;
                           00000000' 00048           .ADDRESS P.AAJ                          ;
          45  54  41  4C  55  4D  49  53  0004C  P.AAL:   .ASCII  \SIMULATE\                  ;
                           00000008  00054  P.AAK:   .LONG   8                               ;
                           00000000' 00058           .ADDRESS P.AAL                          ;
          00  00  54  55  50  54  55  4F  0005C  P.AAN:   .ASCII  \OUTPUT\<0><0>              ;
                           00000006  00064  P.AAM:   .LONG   6                               ;
                           00000000' 00068           .ADDRESS P.AAN                          ;
          00  00  54  55  50  54  55  4F  0006C  P.AAP:   .ASCII  \OUTPUT\<0><0>              ;
                           00000006  00074  P.AAO:   .LONG   6                               ;
                           00000000' 00078           .ADDRESS P.AAP                          ;
45  54  41  49  44  45  4D  52  45  54  4E  49  0007C  P.AAR:   .ASCII  \INTERMEDIATE\          ;
```

```
                                                0000000C   00088 P.AAQ:  .LONG    12
                                                00000000'  0008C         .ADDRESS P.AAR
            45  54  41  49  44  45  4D  52  45  54  4E  49  00090 P.AAT:  .ASCII   \INTERMEDIATE\
                                                0000000C   0009C P.AAS:  .LONG    12
                                                00000000'  000A0         .ADDRESS P.AAT
            00  53  52  41  42  5F  45  47  4E  41  48  43  000A4 P.AAV:  .ASCII   \CHANGE_BARS\<0>
                                                0000000B   000B0 P.AAU:  .LONG    11
                                                00000000'  000B4         .ADDRESS P.AAV
            00  53  52  41  42  5F  45  47  4E  41  48  43  000B8 P.AAX:  .ASCII   \CHANGE_BARS\<0>
                                                0000000B   000C4 P.AAW:  .LONG    11
                                                00000000'  000C8         .ADDRESS P.AAX
41  52  41  48  43  5F  45  4E  49  4C  52  45  44  4E  55  000CC P.AAZ:  .ASCII   \UNDERLINE_CHARACTER\<0>
                                    00  52  45  54  43  000DB
                                                00000013   000E0 P.AAY:  .LONG    19
                                                00000000'  000E4         .ADDRESS P.AAZ
41  52  41  48  43  5F  45  4E  49  4C  52  45  44  4E  55  000E8 P.ABB:  .ASCII   \UNDERLINE_CHARACTER\<0>
                                    00  52  45  54  43  000F7
                                                00000013   000FC P.ABA:  .LONG    19
                                                00000000'  00100         .ADDRESS P.ABB
4C  52  45  44  4E  55  5F  45  54  41  52  41  50  45  53  00104 P.ABD:  .ASCII   \SEPARATE_UNDERLINE\<0><0>
                                    00  00  45  4E  49  00113
                                                00000012   00118 P.ABC:  .LONG    18
                                                00000000'  0011C         .ADDRESS P.ABD
4C  52  45  44  4E  55  5F  45  54  41  52  41  50  45  53  00120 P.ABF:  .ASCII   \SEPARATE_UNDERLINE\<0><0>
                                    00  00  45  4E  49  0012F
                                                00000012   00134 P.ABE:  .LONG    18
                                                00000000'  00138         .ADDRESS P.ABF
45  44  4E  55  5F  47  4E  49  43  41  50  53  4E  4F  4E  0013C P.ABH:  .ASCII   \NONSPACING_UNDERLINE\
                                    45  4E  49  4C  52  0014B
                                                00000014   00150 P.ABG:  .LONG    20
                                                00000000'  00154         .ADDRESS P.ABH
45  44  4E  55  5F  47  4E  49  43  41  50  53  4E  4F  4E  00158 P.ABJ:  .ASCII   \NONSPACING_UNDERLINE\
                                    45  4E  49  4C  52  00167
                                                00000014   0016C P.ABI:  .LONG    20
                                                00000000'  00170         .ADDRESS P.ABJ
                        00  00  00  53  45  47  41  50  00174 P.ABL:  .ASCII   \PAGES\<0><0><0>
                                                00000005   0017C P.ABK:  .LONG    5
                                                00000000'  00180         .ADDRESS P.ABL
                        00  00  00  53  45  47  41  50  00184 P.ABN:  .ASCII   \PAGES\<0><0><0>
                                                00000005   0018C P.ABM:  .LONG    5
                                                00000000'  00190         .ADDRESS P.ABN
                        00  54  4E  41  49  52  41  56  00194 P.ABP:  .ASCII   \VARIANT\<0>
                                                00000007   0019C P.ABO:  .LONG    7
                                                00000000'  001A0         .ADDRESS P.ABP
                        00  54  4E  41  49  52  41  56  001A4 P.ABR:  .ASCII   \VARIANT\<0>
                                                00000007   001AC P.ABQ:  .LONG    7
                                                00000000'  001B0         .ADDRESS P.ABR
                                        44  4C  4F  42  001B4 P.ABT:  .ASCII   \BOLD\
                                                00000004   001B8 P.ABS:  .LONG    4
                                                00000000'  001BC         .ADDRESS P.ABT
                                        44  4C  4F  42  001C0 P.ABV:  .ASCII   \BOLD\
                                                00000004   001C4 P.ABU:  .LONG    4
                                                00000000'  001C8         .ADDRESS P.ABV
                                        4E  57  4F  44  001CC P.ABX:  .ASCII   \DOWN\
                                                00000004   001D0 P.ABW:  .LONG    4
                                                00000000'  001D4         .ADDRESS P.ABX
                                        4E  57  4F  44  001D8 P.ABZ:  .ASCII   \DOWN\
```

```
                                      00000004.  001DC P.ABY:   .LONG   4                                   ;
                                      00000000'  001E0          .ADDRESS P.ABZ                              ;
         00  00  00  45  5A  49  53  5F  4D  52  4F  46  001E4 P.ACB:   .ASCII  \FORM_SIZE\<0><0><0>        ;
                                      00000009.  001F0 P.ACA:   .LONG   9                                   ;
                                      00000000'  001F4          .ADDRESS P.ACB                              ;
         00  00  00  45  5A  49  53  5F  4D  52  4F  46  001F8 P.ACD:   .ASCII  \FORM_SIZE\<0><0><0>        ;
                                      00000009.  00204 P.ACC:   .LONG   9                                   ;
                                      00000000'  00208          .ADDRESS P.ACD                              ;
                     00  00  00  54  48  47  49  52  0020C P.ACF:   .ASCII  \RIGHT\<0><0><0>            ;
                                      00000005.  00214 P.ACE:   .LONG   5                                   ;
                                      00000000'  00218          .ADDRESS P.ACF                              ;
                     00  00  00  54  48  47  49  52  0021C P.ACH:   .ASCII  \RIGHT\<0><0><0>            ;
                                      00000005.  00224 P.ACG:   .LONG   5                                   ;
                                      00000000'  00228          .ADDRESS P.ACH                              ;
                     00  00  00  47  55  42  45  44  0022C P.ACJ:   .ASCII  \DEBUG\<0><0><0>            ;
                                      00000005.  00234 P.ACI:   .LONG   5                                   ;
                                      00000000'  00238          .ADDRESS P.ACJ                              ;
                     00  00  00  47  55  42  45  44  0023C P.ACL:   .ASCII  \DEBUG\<0><0><0>            ;
                                      00000005.  00244 P.ACK:   .LONG   5                                   ;
                                      00000000'  00248          .ADDRESS P.ACL                              ;
                     00  00  45  43  49  56  45  44  0024C P.ACN:   .ASCII  \DEVICE\<0><0>              ;
                                      00000006.  00254 P.ACM:   .LONG   6                                   ;
                                      00000000'  00258          .ADDRESS P.ACN                              ;
                     00  00  45  43  49  56  45  44  0025C P.ACP:   .ASCII  \DEVICE\<0><0>              ;
                                      00000006.  00264 P.ACO:   .LONG   6                                   ;
                                      00000000'  00268          .ADDRESS P.ACP                              ;
                     53  45  47  41  53  53  45  4D  0026C P.ACR:   .ASCII  \MESSAGES\                  ;
                                      00000008.  00274 P.ACQ:   .LONG   8                                   ;
                                      00000000'  00278          .ADDRESS P.ACR                              ;
                     53  45  47  41  53  53  45  4D  0027C P.ACT:   .ASCII  \MESSAGES\                  ;
                                      00000008.  00284 P.ACS:   .LONG   8                                   ;
                                      00000000'  00288          .ADDRESS P.ACT                              ;
             4C  41  4E  52  45  54  4E  49  5F  43  45  44  0028C P.ACV:   .ASCII  \DEC_INTERNAL\      ;
                                      0000000C.  00298 P.ACU:   .LONG   12                                  ;
                                      00000000'  0029C          .ADDRESS P.ACV                              ;
             4C  41  4E  52  45  54  4E  49  5F  43  45  44  002A0 P.ACX:   .ASCII  \DEC_INTERNAL\      ;
                                      0000000C.  002AC P.ACW:   .LONG   12                                  ;
                                      00000000'  002B0          .ADDRESS P.ACX                              ;
 4C  41  43  49  54  53  49  54  41  54  53  24  52  53  44  002B4 P.ACY:   .ASCII  \DSR$STATISTICAL_RECORDS\<0> ;
                 00  53  44  52  4F  43  45  52  5F  002C3                                                  ;

                                                          .PSECT  $OWN$,NOEXE,2

                                                 00000 RUNOFF_COMMAND:
                                                          .BLKB   100
                                                 00064 SWCH_ID:.BLKB   4
                                                 00068 LN01_OPTION_USED:
                                                          .BLKB   4
                         7FFFFFFF  00000000   0006C WS_LIMITS:
                                                          .LONG   0, 2147483647                     ;

                                                 $STR$DESC=          RUNOFF_COMMAND
                                                 $STR$BIN_DESC=      RUNOFF_COMMAND
                                                 $STR$TARGET=        RUNOFF_COMMAND
                                                 $STR$DESC=          RUNOFF_COMMAND+8
                                                 $STR$BIN_DESC=      RUNOFF_COMMAND+8
                                                 $STR$DESC=          RUNOFF_COMMAND+16
```

```
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+16
                                                $STR$DESC=          RUNOFF_COMMAND+48
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+48
                                                $STR$DESC=          RUNOFF_COMMAND+56
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+56
                                                $STR$DESC=          RUNOFF_COMMAND+24
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+24
                                                $STR$DESC=          RUNOFF_COMMAND+32
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+32
                                                $STR$DESC=          RUNOFF_COMMAND+40
                                                $STR$BIN_DESC=      RUNOFF_COMMAND+40
                                                $STR$TARGET=        RUNOFF_COMMAND+24
                                                      .EXTRN   RUNOFF, SYS$PURGWS
                                                      .EXTRN   SYS$NUMTIM, CLI$GET_VALUE
                                                      .EXTRN   CLI$PRESENT, LIB$CVT_DTB
                                                      .EXTRN   LIB$TPARSE, LIB$LP_LINES
                                                      .EXTRN   RUNOFF$_FACILITY
                                                      .EXTRN   CLI$_ABSENT, CLI$_PRESENT
                                                      .EXTRN   CLI$_DEFAULTED, CLI$_NEGATED
                                                      .EXTRN   LFFCTX, XST$COPY
                                                      .EXTRN   STR$FAILURE, SYS$TRNLOG
                                                      .WEAK    LIB$FIND_FILE_END
                                                      .WEAK    CLI$_LOCPRES, CLI$_LOCNEG

                                                      .PSECT   $CODE$,NOWRT,2

                                  0FFC 00000          .ENTRY   RNOCLI, Save R2,R3,R4,R5,R6,R7,R8,R9,R10,-  ; 0595
                                                               R11                                          ;
                    5B 00000000G   8F   D0 00002      MOVL     #CLI$_PRESENT, R11                           ;
                    5A 00000000'   EF   9E 00009      MOVAB    P.AAA, R10                                   ;
                    59 00000000'   EF   9E 00010      MOVAB    RUNOFF_COMMAND+76, R9                        ;
                    5E       FEE4  CE   9E 00017      MOVAB    -284(SP), SP                                 ;
              F8    AD 020E0000    8F   D0 0001C      MOVL     #34471936, $STR$DESC                         ; 0633
                          FC       AD   D4 00024      CLRL     $STR$DESC+4                                  ;
                    57 10000001    8F   D0 00027      MOVL     #268435457, EXIT_STATUS                      ; 0635
                       00000000G   EF   D4 0002E      CLRL     LFFCTX                                       ; 0640
                          F8       AD   9F 00034 1$:  PUSHAB   DESC                                         ; 0642
                                   5A   DD 00037      PUSHL    R10                                          ;
         00000000G  00             02   FB 00039      CALLS    #2, CLI$GET_VALUE                            ;
                    03             50   E8 00040      BLBS     R0, 2$                                       ;
                              0BC3      31 00043      BRW      137$                                         ;
                                   50   D4 00046 2$:  CLRL     INDEX                                        ; 0649
                           B4 A940      D4 00048 3$:  CLRL     RUNOFF_COMMAND[INDEX]                        ; 0650
      F8            50             05   F3 0004C      AOBLEQ   #5, INDEX, 3$                                ;
              09    A9             01   8E 00050      MNEGB    #1, RUNOFF_COMMAND+85                        ; 0653
              B4    A9 020E0000    8F   D0 00054      MOVL     #34471936, $STR$DESC                         ; 0663
                          B8       A9   D4 0005C      CLRL     $STR$DESC+4                                  ;
                       00000000G   EF   9F 0005F      PUSHAB   STR$FAILURE                                  ; 0665
                                   7E   D4 00065      CLRL     -(SP)                                        ;
                          B4       A9   9F 00067      PUSHAB   $STR$TARGET                                  ;
                          F8       AD   9F 0006A      PUSHAB   $STR$STRING                                  ;
                                   7E   D4 0006D      CLRL     -(SP)                                        ;
         00000000G  EF             05   FB 0006F      CALLS    #5, XST$COPY                                 ;
              BC    A9 020E0000    8F   D0 00076      MOVL     #34471936, $STR$DESC                         ; 0668
                          C0       A9   D4 0007E      CLRL     $STR$DESC+4                                  ;
              C4    A9 020E0000    8F   D0 00081      MOVL     #34471936, $STR$DESC                         ; 0671
                          C8       A9   D4 00089      CLRL     $STR$DESC+4                                  ;
```

```
              E4  A9 020E0000   8F  D0 0008C         MOVL    #34471936, $STR$DESC                   ; 0674
                           E8   A9  D4 00094         CLRL    $STR$DESC+4                            ;
              EC  A9 020E0000   8F  D0 00097         MOVL    #34471936, $STR$DESC                   ; 0677
                           F0   A9  D4 0009F         CLRL    $STR$DESC+4                            ;
              CC  A9 020E0000   8F  D0 000A2         MOVL    #34471936, $STR$DESC                   ; 0680
                           D0   A9  D4 000AA         CLRL    $STR$DESC+4                            ;
              D4  A9 020E0000   8F  D0 000AD         MOVL    #34471936, $STR$DESC                   ; 0683
                           D8   A9  D4 000B5         CLRL    $STR$DESC+4                            ;
              DC  A9 020E0000   8F  D0 000B8         MOVL    #34471936, $STR$DESC                   ; 0686
                           E0   A9  D4 000C0         CLRL    $STR$DESC+4                            ;
                           14   AA  9F 000C3         PUSHAB  P.AAC                                  ; 0730
       00000000G  00            01  FB 000C6         CALLS   #1, CLI$PRESENT                        ;
                  6E            50  D0 000CD         MOVL    R0, TEMP                               ;
       00000000G  8F            50  D1 000D0         CMPL    R0, #CLI$_ABSENT                       ; 0735
                                09  13 000D7         BEQL    4$                                     ;
       00000000G  8F            50  D1 000D9         CMPL    R0, #CLI$_DEFAULTED                    ;
                                03  12 000E0         BNEQ    5$                                     ;
                  69            08  8A 000E2 4$:     BICB2   #8, RUNOFF_COMMAND+76                  ; 0736
       00000000G  8F            50  D1 000E5 5$:     CMPL    R0, #CLI$_NEGATED                      ; 0738
                                17  13 000EC         BEQL    6$                                     ;
                  5B            50  D1 000EE         CMPL    R0, R11                                ;
                                12  13 000F1         BEQL    6$                                     ;
       00000000G  8F            50  D1 000F3         CMPL    R0, #CLI$_LOCPRES                      ;
                                09  13 000FA         BEQL    6$                                     ;
       00000000G  8F            50  D1 000FC         CMPL    R0, #CLI$_LOCNEG                       ;
                                03  12 00103         BNEQ    7$                                     ;
                  69            08  88 00105 6$:     BISB2   #8, RUNOFF_COMMAND+76                  ; 0739
       00000000G  8F            50  D1 00108 7$:     CMPL    R0, #CLI$_ABSENT                       ; 0741
                                12  13 0010F         BEQL    8$                                     ;
       00000000G  8F            50  D1 00111         CMPL    R0, #CLI$_NEGATED                      ;
                                09  13 00118         BEQL    8$                                     ;
       00000000G  8F            50  D1 0011A         CMPL    R0, #CLI$_LOCNEG                       ;
                                03  12 00121         BNEQ    9$                                     ;
                  69            04  8A 00123 8$:     BICB2   #4, RUNOFF_COMMAND+76                  ; 0742
       00000000G  8F            50  D1 00126 9$:     CMPL    R0, #CLI$_DEFAULTED                    ; 0744
                                0E  13 0012D         BEQL    10$                                    ;
                  5B            50  D1 0012F         CMPL    R0, R11                                ;
                                09  13 00132         BEQL    10$                                    ;
       00000000G  8F            50  D1 00134         CMPL    R0, #CLI$_LOCPRES                      ;
                                03  12 0013B         BNEQ    11$                                    ;
                  69            04  88 0013D 10$:    BISB2   #4, RUNOFF_COMMAND+76                  ; 0745
                           20   AA  9F 00140 11$:    PUSHAB  P.AAE                                  ; 0749
       00000000G  00            01  FB 00143         CALLS   #1, CLI$PRESENT                        ;
                  6E            50  D0 0014A         MOVL    R0, TEMP                               ;
       00000000G  8F            50  D1 0014D         CMPL    R0, #CLI$_ABSENT                       ; 0754
                                09  13 00154         BEQL    12$                                    ;
       00000000G  8F            50  D1 00156         CMPL    R0, #CLI$_DEFAULTED                    ;
                                04  12 0015D         BNEQ    13$                                    ;
              02  A9            08  8A 0015F 12$:    BICB2   #8, RUNOFF_COMMAND+78                  ; 0755
       00000000G  8F            50  D1 00163 13$:    CMPL    R0, #CLI$_NEGATED                      ; 0757
                                17  13 0016A         BEQL    14$                                    ;
                  5B            50  D1 0016C         CMPL    R0, R11                                ;
                                12  13 0016F         BEQL    14$                                    ;
       00000000G  8F            50  D1 00171         CMPL    R0, #CLI$_LOCPRES                      ;
                                09  13 00178         BEQL    14$                                    ;
       00000000G  8F            50  D1 0017A         CMPL    R0, #CLI$_LOCNEG                       ;
                                04  12 00181         BNEQ    15$                                    ;
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         02  A9       08  88 00183 14$:   BISB2   #8, RUNOFF_COMMAND+78          ; 0758
  00000000G  8F       50  D1 00187 15$:   CMPL    R0, #CLI$_ABSENT               ; 0760
                      12  13 0018E        BEQL    16$                            ;
  00000000G  8F       50  D1 00190        CMPL    R0, #CLI$_NEGATED              ;
                      09  13 00197        BEQL    16$                            ;
  00000000G  8F       50  D1 00199        CMPL    R0, #CLI$_LOCNEG               ;
                      04  12 001A0        BNEQ    17$                            ;
         02  A9       04  8A 001A2 16$:   BICB2   #4, RUNOFF_COMMAND+78          ; 0761
  00000000G  8F       50  D1 001A6 17$:   CMPL    R0, #CLI$_DEFAULTED            ; 0763
                      0E  13 001AD        BEQL    18$                            ;
             5B       50  D1 001AF        CMPL    R0, R11                        ;
                      09  13 001B2        BEQL    18$                            ;
  00000000G  8F       50  D1 001B4        CMPL    R0, #CLI$_LOCPRES              ;
                      04  12 001BB        BNEQ    19$                            ;
         02  A9       04  88 001BD 18$:   BISB2   #4, RUNOFF_COMMAND+78          ; 0764
                30    AA  9F 001C1 19$:   PUSHAB  P.AAG                          ; 0768
  00000000G  00       01  FB 001C4        CALLS   #1, CLI$PRESENT                ;
             6E       50  D0 001CB        MOVL    R0, TEMP                       ;
  00000000G  8F       50  D1 001CE        CMPL    R0, #CLI$_ABSENT               ; 0773
                      09  13 001D5        BEQL    20$                            ;
  00000000G  8F       50  D1 001D7        CMPL    R0, #CLI$_DEFAULTED            ;
                      05  12 001DE        BNEQ    21$                            ;
         03  A9  80   8F  8A 001E0 20$:   BICB2   #128, RUNOFF_COMMAND+79        ; 0774
  00000000G  8F       50  D1 001E5 21$:   CMPL    R0, #CLI$_NEGATED              ; 0776
                      17  13 001EC        BEQL    22$                            ;
             5B       50  D1 001EE        CMPL    R0, R11                        ;
                      12  13 001F1        BEQL    22$                            ;
  00000000G  8F       50  D1 001F3        CMPL    R0, #CLI$_LOCPRES              ;
                      09  13 001FA        BEQL    22$                            ;
  00000000G  8F       50  D1 001FC        CMPL    R0, #CLI$_LOCNEG               ;
                      05  12 00203        BNEQ    23$                            ;
         03  A9  80   8F  88 00205 22$:   BISB2   #128, RUNOFF_COMMAND+79        ; 0777
  00000000G  8F       50  D1 0020A 23$:   CMPL    R0, #CLI$_ABSENT               ; 0779
                      12  13 00211        BEQL    24$                            ;
  00000000G  8F       50  D1 00213        CMPL    R0, #CLI$_NEGATED              ;
                      09  13 0021A        BEQL    24$                            ;
  00000000G  8F       50  D1 0021C        CMPL    R0, #CLI$_LOCNEG               ;
                      05  12 00223        BNEQ    25$                            ;
         03  A9  40   8F  8A 00225 24$:   BICB2   #64, RUNOFF_COMMAND+79         ; 0780
  00000000G  8F       50  D1 0022A 25$:   CMPL    R0, #CLI$_DEFAULTED            ; 0782
                      0E  13 00231        BEQL    26$                            ;
             5B       50  D1 00233        CMPL    R0, R11                        ;
                      09  13 00236        BEQL    26$                            ;
  00000000G  8F       50  D1 00238        CMPL    R0, #CLI$_LOCPRES              ;
                      05  12 0023F        BNEQ    27$                            ;
         03  A9  40   8F  88 00241 26$:   BISB2   #64, RUNOFF_COMMAND+79         ; 0783
                 40   AA  9F 00246 27$:   PUSHAB  P.AAI                          ; 0787
  00000000G  00       01  FB 00249        CALLS   #1, CLI$PRESENT                ;
             6E       50  D0 00250        MOVL    R0, TEMP                       ;
  00000000G  8F       50  D1 00253        CMPL    R0, #CLI$_ABSENT               ; 0792
                      09  13 0025A        BEQL    28$                            ;
  00000000G  8F       50  D1 0025C        CMPL    R0, #CLI$_DEFAULTED            ;
                      04  12 00263        BNEQ    29$                            ;
         04  A9       04  8A 00265 28$:   BICB2   #4, RUNOFF_COMMAND+80          ; 0793
  00000000G  8F       50  D1 00269 29$:   CMPL    R0, #CLI$_NEGATED              ; 0795
                      17  13 00270        BEQL    30$                            ;
             5B       50  D1 00272        CMPL    R0, R11                        ;
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                                         12  13 00275           BEQL    30$                              ;
                  00000000G  8F          50  D1 00277           CMPL    R0, #CLI$_LOCPRES                ;
                                         09  13 0027E           BEQL    30$                              ;
                  00000000G  8F          50  D1 00280           CMPL    R0, #CLI$_LOCNEG                 ;
                                         04  12 00287           BNEQ    31$                              ;
                         04  A9          04  88 00289 30$:      BISB2   #4, RUNOFF_COMMAND+80            ; 0796
                  00000000G  8F          50  D1 0028D 31$:      CMPL    R0, #CLI$_ABSENT                 ; 0798
                                         12  13 00294           BEQL    32$                              ;
                  00000000G  8F          50  D1 00296           CMPL    R0, #CLI$_NEGATED                ;
                                         09  13 0029D           BEQL    32$                              ;
                  00000000G  8F          50  D1 0029F           CMPL    R0, #CLI$_LOCNEG                 ;
                                         04  12 002A6           BNEQ    33$                              ;
                         04  A9          02  8A 002A8 32$:      BICB2   #2, RUNOFF_COMMAND+80            ; 0799
                  00000000G  8F          50  D1 002AC 33$:      CMPL    R0, #CLI$_DEFAULTED              ; 0801
                                         0E  13 002B3           BEQL    34$                              ;
                             5B          50  D1 002B5           CMPL    R0, R11                          ;
                                         09  13 002B8           BEQL    34$                              ;
                  00000000G  8F          50  D1 002BA           CMPL    R0, #CLI$_LOCPRES                ;
                                         04  12 002C1           BNEQ    35$                              ;
                         04  A9          02  88 002C3 34$:      BISB2   #2, RUNOFF_COMMAND+80            ; 0802
                                   50    AA  9F 002C7 35$:      PUSHAB  P.AAK                            ; 0806
                  00000000G  00          01  FB 002CA           CALLS   #1, CLI$PRESENT                  ;
                             6E          50  D0 002D1           MOVL    R0, TEMP                         ;
                  00000000G  8F          50  D1 002D4           CMPL    R0, #CLI$_ABSENT                 ; 0811
                                         09  13 002DB           BEQL    36$                              ;
                  00000000G  8F          50  D1 002DD           CMPL    R0, #CLI$_DEFAULTED              ;
                                         04  12 002E4           BNEQ    37$                              ;
                         04  A9          10  8A 002E6 36$:      BICB2   #16, RUNOFF_COMMAND+80           ; 0812
                  00000000G  8F          50  D1 002EA 37$:      CMPL    R0, #CLI$_NEGATED                ; 0814
                                         17  13 002F1           BEQL    38$                              ;
                             5B          50  D1 002F3           CMPL    R0, R11                          ;
                                         12  13 002F6           BEQL    38$                              ;
                  00000000G  8F          50  D1 002F8           CMPL    R0, #CLI$_LOCPRES                ;
                                         09  13 002FF           BEQL    38$                              ;
                  00000000G  8F          50  D1 00301           CMPL    R0, #CLI$_LOCNEG                 ;
                                         04  12 00308           BNEQ    39$                              ;
                         04  A9          10  88 0030A 38$:      BISB2   #16, RUNOFF_COMMAND+80           ; 0815
                  00000000G  8F          50  D1 0030E 39$:      CMPL    R0, #CLI$_ABSENT                 ; 0817
                                         12  13 00315           BEQL    40$                              ;
                  00000000G  8F          50  D1 00317           CMPL    R0, #CLI$_NEGATED                ;
                                         09  13 0031E           BEQL    40$                              ;
                  00000000G  8F          50  D1 00320           CMPL    R0, #CLI$_LOCNEG                 ;
                                         04  12 00327           BNEQ    41$                              ;
                         04  A9          08  8A 00329 40$:      BICB2   #8, RUNOFF_COMMAND+80            ; 0818
                  00000000G  8F          50  D1 0032D 41$:      CMPL    R0, #CLI$_DEFAULTED              ; 0820
                                         0E  13 00334           BEQL    42$                              ;
                             5B          50  D1 00336           CMPL    R0, R11                          ;
                                         09  13 00339           BEQL    42$                              ;
                  00000000G  8F          50  D1 0033B           CMPL    R0, #CLI$_LOCPRES                ;
                                         04  12 00342           BNEQ    43$                              ;
                         04  A9          08  88 00344 42$:      BISB2   #8, RUNOFF_COMMAND+80            ; 0821
                                   60    AA  9F 00348 43$:      PUSHAB  P.AAM                            ; 0830
                  00000000G  00          01  FB 0034B           CALLS   #1, CLI$PRESENT                  ;
                             6E          50  D0 00352           MOVL    R0, TEMP                         ;
                         03  A9  010C    8F  AA 00355           BICW2   #268, RUNOFF_COMMAND+79          ; 0836
                             50          6E  D0 0035B           MOVL    TEMP, R0                         ; 0838
                  00000000G  8F          50  D1 0035E           CMPL    R0, #CLI$_NEGATED                ; 0841
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                              17 13 00365        BEQL    44$                        ;
                        5B    50 D1 00367        CMPL    R0, R11                    ;
                              12 13 0036A        BEQL    44$                        ;
              00000000G 8F    50 D1 0036C        CMPL    R0, #CLI$_LOCPRES          ;
                              09 13 00373        BEQL    44$                        ;
              00000000G 8F    50 D1 00375        CMPL    R0, #CLI$_LOCNEG           ;
                              04 12 0037C        BNEQ    45$                        ;
                     03 A9    08 88 0037E  44$:  BISB2   #8, RUNOFF_COMMAND+79      ; 0842
              00000000G 8F    50 D1 00382  45$:  CMPL    R0, #CLI$_NEGATED          ; 0844
                              09 13 00389        BEQL    46$                        ;
              00000000G 8F    50 D1 0038B        CMPL    R0, #CLI$_LOCNEG           ;
                              04 12 00392        BNEQ    47$                        ;
                     04 A9    01 88 00394  46$:  BISB2   #1, RUNOFF_COMMAND+80      ; 0845
                        5B    50 D1 00398  47$:  CMPL    R0, R11                    ; 0847
                              12 13 0039B        BEQL    48$                        ;
              00000000G 8F    50 D1 0039D        CMPL    R0, #CLI$_LOCPRES          ;
                              09 13 003A4        BEQL    48$                        ;
              00000000G 8F    50 D1 003A6        CMPL    R0, #CLI$_DEFAULTED        ;
                              04 12 003AD        BNEQ    49$                        ;
                     03 A9    04 88 003AF  48$:  BISB2   #4, RUNOFF_COMMAND+79      ; 0849
              00000000G 8F    50 D1 003B3  49$:  CMPL    R0, #CLI$_DEFAULTED        ; 0851
                              0E 13 003BA        BEQL    50$                        ;
                        5B    50 D1 003BC        CMPL    R0, R11                    ;
                              09 13 003BF        BEQL    50$                        ;
              00000000G 8F    50 D1 003C1        CMPL    R0, #CLI$_LOCPRES          ;
                              0D 12 003C8        BNEQ    51$                        ;
                          BC  A9 9F 003CA  50$:  PUSHAB  RUNOFF_COMMAND+8           ; 0852
                          70  AA 9F 003CD        PUSHAB  P.AAO                      ;
              00000000G 00    02 FB 003D0        CALLS   #2, CLI$GET_VALUE          ;
                        0084  CA 9F 003D7  51$:  PUSHAB  P.AAQ                      ; 0856
              00000000G 00    01 FB 003DB        CALLS   #1, CLI$PRESENT            ;
                        6E    50 D0 003E2        MOVL    R0, TEMP                   ;
              00000000G 8F    50 D1 003E5        CMPL    R0, #CLI$_NEGATED          ; 0861
                              17 13 003EC        BEQL    52$                        ;
                        5B    50 D1 003EE        CMPL    R0, R11                    ;
                              12 13 003F1        BEQL    52$                        ;
              00000000G 8F    50 D1 003F3        CMPL    R0, #CLI$_LOCPRES          ;
                              09 13 003FA        BEQL    52$                        ;
              00000000G 8F    50 D1 003FC        CMPL    R0, #CLI$_LOCNEG           ;
                              04 12 00403        BNEQ    53$                        ;
                     02 A9    02 88 00405  52$:  BISB2   #2, RUNOFF_COMMAND+78      ; 0862
              00000000G 8F    50 D1 00409  53$:  CMPL    R0, #CLI$_DEFAULTED        ; 0864
                              0E 13 00410        BEQL    54$                        ;
                        5B    50 D1 00412        CMPL    R0, R11                    ;
                              09 13 00415        BEQL    54$                        ;
              00000000G 8F    50 D1 00417        CMPL    R0, #CLI$_LOCPRES          ;
                              04 12 0041E        BNEQ    55$                        ;
                     02 A9    01 88 00420  54$:  BISB2   #1, RUNOFF_COMMAND+78      ; 0865
              00000000G 8F    50 D1 00424  55$:  CMPL    R0, #CLI$_DEFAULTED        ; 0867
                              20 13 0042B        BEQL    56$                        ;
              00000000G 8F    50 D1 0042D        CMPL    R0, #CLI$_NEGATED          ;
                              17 13 00434        BEQL    56$                        ;
                        5B    50 D1 00436        CMPL    R0, R11                    ;
                              12 13 00439        BEQL    56$                        ;
              00000000G 8F    50 D1 0043B        CMPL    R0, #CLI$_LOCPRES          ;
                              09 13 00442        BEQL    56$                        ;
              00000000G 8F    50 D1 00444        CMPL    R0, #CLI$_LOCNEG           ;
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                                   0E 12 0044B          BNEQ    57$                              ;
                           C4      A9 9F 0004D 56$:     PUSHAB  RUNOFF_COMMAND+16                ; 0868
                         0098      CA 9F 00450          PUSHAB  P.AAS                            ;
          00000000G  00            02 FB 00454          CALLS   #2, CLI$GET_VALUE                ;
                         00AC      CA 9F 0045B 57$:     PUSHAB  P.AAU                            ; 0877
          00000000G  00            01 FB 0045F          CALLS   #1, CLI$PRESENT                  ;
                     6E            50 D0 00466          MOVL    R0, TEMP                         ;
                     52            6E D0 00469          MOVL    TEMP, R2                         ; 0879
          00000000G  8F            52 D1 0046C          CMPL    R2, #CLI$_ABSENT                 ; 0882
                                   09 13 00473          BEQL    58$                              ;
          00000000G  8F            52 D1 00475          CMPL    R2, #CLI$_DEFAULTED              ;
                                   03 12 0047C          BNEQ    59$                              ;
                     69            20 8A 0047E 58$:     BICB2   #32, RUNOFF_COMMAND+76           ; 0883
          00000000G  8F            52 D1 00481 59$:     CMPL    R2, #CLI$_NEGATED                ; 0885
                                   17 13 00488          BEQL    60$                              ;
                     5B            52 D1 0048A          CMPL    R2, R11                          ;
                                   12 13 0048D          BEQL    60$                              ;
          00000000G  8F            52 D1 0048F          CMPL    R2, #CLI$_LOCPRES                ;
                                   09 13 00496          BEQL    60$                              ;
          00000000G  8F            52 D1 00498          CMPL    R2, #CLI$_LOCNEG                 ;
                                   03 12 0049F          BNEQ    61$                              ;
                     69            20 88 004A1 60$:     BISB2   #32, RUNOFF_COMMAND+76           ; 0886
          00000000G  8F            52 D1 004A4 61$:     CMPL    R2, #CLI$_ABSENT                 ; 0888
                                   04 12 004AB          BNEQ    62$                              ;
                 08  A9            01 8E 004AD          MNEGB   #1, RUNOFF_COMMAND+84            ; 0889
          00000000G  8F            52 D1 004B1 62$:     CMPL    R2, #CLI$_NEGATED                ; 0891
                                   09 13 004B8          BEQL    63$                              ;
          00000000G  8F            52 D1 004BA          CMPL    R2, #CLI$_LOCNEG                 ;
                                   06 12 004C1          BNEQ    64$                              ;
                           08      A9 94 004C3 63$:     CLRB    RUNOFF_COMMAND+84                ; 0893
                     69            10 8A 004C6          BICB2   #16, RUNOFF_COMMAND+76           ; 0894
          00000000G  8F            52 D1 004C9 64$:     CMPL    R2, #CLI$_DEFAULTED              ; 0897
                                   0E 13 004D0          BEQL    65$                              ;
                     5B            52 D1 004D2          CMPL    R2, R11                          ;
                                   09 13 004D5          BEQL    65$                              ;
          00000000G  8F            52 D1 004D7          CMPL    R2, #CLI$_LOCPRES                ;
                                   49 12 004DE          BNEQ    68$                              ;
                     69            10 88 004E0 65$:     BISB2   #16, RUNOFF_COMMAND+76           ; 0899
                 18  A9            04 D0 004E3          MOVL    #4, SWCH_ID                      ; 0900
                           F8      AD 9F 004E7          PUSHAB  DESC                             ; 0901
                         00C0      CA 9F 004EA          PUSHAB  P.AAW                            ;
          00000000G  00            02 FB 004EE          CALLS   #2, CLI$GET_VALUE                ;
                     2C            50 E9 004F5          BLBC    R0, 67$                          ;
                     01    F8      AD B1 004F8          CMPW    DESC, #1                         ; 0902
                                   07 12 004FC          BNEQ    66$                              ;
                 08  A9    FC      BD 90 004FE          MOVB    @DESC+4, RUNOFF_COMMAND+84       ; 0903
                                   24 11 00503          BRB     68$                              ;
                    00000000'      EF 9F 00505 66$:     PUSHAB  CHAR$_KEYS                       ; 0906
                    00000000'      EF 9F 0050B          PUSHAB  CHAR$_STATES                     ;
                           F8      AD 9F 00511          PUSHAB  DESC                             ;
          00000000V  EF            03 FB 00514          CALLS   #3, CALL_TPARSE                  ;
                     56            50 D0 0051B          MOVL    R0, STATUS                       ;
                     08            56 E8 0051E          BLBS    STATUS, 68$                      ;
                               05C9 31 00521            BRW     126$                             ; 0909
                 08  A9    7C      8F 90 00524 67$:     MOVB    #124, RUNOFF_COMMAND+84          ; 0915
          00000000G  8F            52 D1 00529 68$:     CMPL    R2, #CLI$_DEFAULTED              ; 0918
                                   20 13 00530          BEQL    69$                              ;
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00000000G   8F              52  D1 00532        CMPL    R2, #CLI$_NEGATED              ;
                            17  13 00539        BEQL    69$                            ;
            5B              52  D1 0053B        CMPL    R2, R11                        ;
                            12  13 0053E        BEQL    69$                            ;
00000000G   8F              52  D1 00540        CMPL    R2, #CLI$_LOCPRES              ;
                            09  13 00547        BEQL    69$                            ;
00000000G   8F              52  D1 00549        CMPL    R2, #CLI$_LOCNEG               ;
                            0C  12 00550        BNEQ    70$                            ;
            69        40    8F  88 00552 69$:   BISB2   #64, RUNOFF_COMMAND+76         ; 0920
                      08    A9  95 00556        TSTB    RUNOFF_COMMAND+84              ; 0921
                            03  12 00559        BNEQ    70$                            ;
            69              10  8A 0055B        BICB2   #16, RUNOFF_COMMAND+76         ; 0922
                    00DC    CA  9F 0055E 70$:   PUSHAB  P.AAY                          ; 0927
00000000G   00              01  FB 00562        CALLS   #1, CLI$PRESENT                ;
            6E              50  D0 00569        MOVL    R0, TEMP                       ;
       04   A9      0860    8F  AA 0056C        BICW2   #2144, RUNOFF_COMMAND+80       ; 0933
            50              6E  D0 00572        MOVL    TEMP, R0                       ; 0935
00000000G   8F              50  D1 00575        CMPL    R0, #CLI$_NEGATED              ; 0938
                            17  13 0057C        BEQL    71$                            ;
            5B              50  D1 0057E        CMPL    R0, R11                        ;
                            12  13 00581        BEQL    71$                            ;
00000000G   8F              50  D1 00583        CMPL    R0, #CLI$_LOCPRES              ;
                            09  13 0058A        BEQL    71$                            ;
00000000G   8F              50  D1 0058C        CMPL    R0, #CLI$_LOCNEG               ;
                            05  12 00593        BNEQ    72$                            ;
       04   A9        40    8F  88 00595 71$:   BISB2   #64, RUNOFF_COMMAND+80         ; 0939
00000000G   8F              50  D1 0059A 72$:   CMPL    R0, #CLI$_DEFAULTED            ; 0941
                            0E  13 005A1        BEQL    73$                            ;
            5B              50  D1 005A3        CMPL    R0, R11                        ;
                            09  13 005A6        BEQL    73$                            ;
00000000G   8F              50  D1 005A8        CMPL    R0, #CLI$_LOCPRES              ;
                            4C  12 005AF        BNEQ    76$                            ;
       04   A9      0820    8F  A8 005B1 73$:   BISW2   #2080, RUNOFF_COMMAND+80       ; 0944
                      F8    AD  9F 005B7        PUSHAB  DESC                           ; 0945
                    00F8    CA  9F 005BA        PUSHAB  P.ABA                          ;
00000000G   00              02  FB 005BE        CALLS   #2, CLI$GET_VALUE              ;
            30              50  E9 005C5        BLBC    R0, 75$                        ;
            01        F8    AD  B1 005C8        CMPW    DESC, #1                       ; 0946
                            07  12 005CC        BNEQ    74$                            ;
       09   A9        FC    BD  90 005CE        MOVB    @DESC+4, RUNOFF_COMMAND+85     ; 0947
                            28  11 005D3        BRB     76$                            ;
       18   A9              19  D0 005D5 74$:   MOVL    #25, SWCH_ID                   ; 0950
               00000000'    EF  9F 005D9        PUSHAB  CHARS_KEYS                     ; 0951
               00000000'    EF  9F 005DF        PUSHAB  CHARS_STATES                   ;
                      F8    AD  9F 005E5        PUSHAB  DESC                           ;
00000000V   EF              03  FB 005E8        CALLS   #3, CALL_TPARSE                ;
            56              50  D0 005EF        MOVL    R0, STATUS                     ;
            08              56  E8 005F2        BLBS    STATUS, 76$                    ;
                          04F5  31 005F5        BRW     126$                           ; 0954
       09   A9        5F    8F  90 005F8 75$:   MOVB    #95, RUNOFF_COMMAND+85         ; 0960
                    0114    CA  9F 005FD 76$:   PUSHAB  P.ABC                          ; 0966
00000000G   00              01  FB 00601        CALLS   #1, CLI$PRESENT                ;
            6E              50  D0 00608        MOVL    R0, TEMP                       ;
       04   A9      0180    8F  AA 0060B        BICW2   #384, RUNOFF_COMMAND+80        ; 0971
            50              6E  D0 00611        MOVL    TEMP, R0                       ; 0974
00000000G   8F              50  D1 00614        CMPL    R0, #CLI$_NEGATED              ; 0977
                            17  13 0061B        BEQL    77$                            ;
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                  5B           50  D1 0061D        CMPL    R0, R11                         ;
                               12  13 00620        BEQL    77$                             ;
       00000000G  8F           50  D1 00622        CMPL    R0, #CLI$_LOCPRES               ;
                               09  13 00629        BEQL    77$                             ;
       00000000G  8F           50  D1 0062B        CMPL    R0, #CLI$_LOCNEG                ;
                               04  12 00632        BNEQ    78$                             ;
              05  A9           01  88 00634 77$:   BISB2   #1, RUNOFF_COMMAND+81           ; 0978
       00000000G  8F           50  D1 00638 78$:   CMPL    R0, #CLI$_DEFAULTED             ; 0980
                               0E  13 0063F        BEQL    79$                             ;
                  5B           50  D1 00641        CMPL    R0, R11                         ;
                               09  13 00644        BEQL    79$                             ;
       00000000G  8F           50  D1 00646        CMPL    R0, #CLI$_LOCPRES               ;
                               4B  12 0064D        BNEQ    82$                             ;
              04  A9     08A0  8F  A8 0064F 79$:   BISW2   #2208, RUNOFF_COMMAND+80        ; 0984
                           F8  AD  9F 00655        PUSHAB  DESC                            ; 0985
                         0130  CA  9F 00658        PUSHAB  P.ABE                           ;
       00000000G  00           02  FB 0065C        CALLS   #2, CLI$GET_VALUE               ;
                  30           50  E9 00663        BLBC    R0, 81$                         ;
                  01       F8  AD  B1 00666        CMPW    DESC, #1                        ; 0986
                               07  12 0066A        BNEQ    80$                             ;
              09  A9       FC  BD  90 0066C        MOVB    @DESC+4, RUNOFF_COMMAND+85      ; 0987
                               27  11 00671        BRB     82$                             ;
              18  A9           15  D0 00673 80$:   MOVL    #21, SWCH_ID                    ; 0990
                    00000000'  EF  9F 00677        PUSHAB  CHARS_KEYS                      ; 0991
                    00000000'  EF  9F 0067D        PUSHAB  CHARS_STATES                    ;
                           F8  AD  9F 00683        PUSHAB  DESC                            ;
       00000000V  EF           03  FB 00686        CALLS   #3, CALL_TPARSE                 ;
                  56           50  D0 0068D        MOVL    R0, STATUS                      ;
                  07           56  E8 00690        BLBS    STATUS, 82$                     ;
                             0457  31 00693        BRW     126$                            ; 0994
              09  A9           2D  90 00696 81$:   MOVB    #45, RUNOFF_COMMAND+85          ; 1000
                         014C  CA  9F 0069A 82$:   PUSHAB  P.ABG                           ; 1005
       00000000G  00           01  FB 0069E        CALLS   #1, CLI$PRESENT                 ;
                  6E           50  D0 006A5        MOVL    R0, TEMP                        ;
              05  A9           06  8A 006A8        BICB2   #6, RUNOFF_COMMAND+81           ; 1011
                  50           6E  D0 006AC        MOVL    TEMP, R0                        ; 1013
       00000000G  8F           50  D1 006AF        CMPL    R0, #CLI$_NEGATED               ; 1016
                               17  13 006B6        BEQL    83$                             ;
                  5B           50  D1 006B8        CMPL    R0, R11                         ;
                               12  13 006BB        BEQL    83$                             ;
       00000000G  8F           50  D1 006BD        CMPL    R0, #CLI$_LOCPRES               ;
                               09  13 006C4        BEQL    83$                             ;
       00000000G  8F           50  D1 006C6        CMPL    R0, #CLI$_LOCNEG                ;
                               04  12 006CD        BNEQ    84$                             ;
              05  A9           04  88 006CF 83$:   BISB2   #4, RUNOFF_COMMAND+81           ; 1017
       00000000G  8F           50  D1 006D3 84$:   CMPL    R0, #CLI$_DEFAULTED             ; 1019
                               0E  13 006DA        BEQL    85$                             ;
                  5B           50  D1 006DC        CMPL    R0, R11                         ;
                               09  13 006DF        BEQL    85$                             ;
       00000000G  8F           50  D1 006E1        CMPL    R0, #CLI$_LOCPRES               ;
                               4B  12 006E8        BNEQ    88$                             ;
              04  A9     0A20  8F  A8 006EA 85$:   BISW2   #2592, RUNOFF_COMMAND+80        ; 1023
                           F8  AD  9F 006F0        PUSHAB  DESC                            ; 1024
                         0168  CA  9F 006F3        PUSHAB  P.ABI                           ;
       00000000G  00           02  FB 006F7        CALLS   #2, CLI$GET_VALUE               ;
                  30           50  E9 006FE        BLBC    R0, 87$                         ;
                  01       F8  AD  B1 00701        CMPW    DESC, #1                        ; 1025
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                                     07 12 00705          BNEQ    86$                               ;
          09  A9          FC   BD 90 00707          MOVB    @DESC+4, RUNOFF_COMMAND+85       ; 1026
                                     27 11 0070C          BRB     88$                               ;
          18  A9               19 D0 0070E 86$:     MOVL    #25, SWCH_ID                      ; 1029
                      00000000'  EF 9F 00712          PUSHAB  CHARS_KEYS                        ; 1030
                      00000000'  EF 9F 00718          PUSHAB  CHARS_STATES                      ;
                              F8 AD 9F 0071E          PUSHAB  DESC                              ;
    00000000V  EF              03 FB 00721          CALLS   #3, CALL_TPARSE                   ;
               56              50 D0 00728          MOVL    R0, STATUS                        ;
               07              56 E8 0072B          BLBS    STATUS, 88$                       ;
                           03BC 31 0072E          BRW     126$                              ; 1033
          09  A9               07 90 00731 87$:     MOVB    #7, RUNOFF_COMMAND+85            ; 1039
          FF  8F          09   A9 91 00735 88$:     CMPB    RUNOFF_COMMAND+85, #255          ; 1044
                               05 12 0073A          BNEQ    89$                               ;
                          09   A9 94 0073C          CLRB    RUNOFF_COMMAND+85                 ; 1046
                               04 11 0073F          BRB     90$                               ;
          05  A9               08 88 00741 89$:     BISB2   #8, RUNOFF_COMMAND+81            ; 1048
                        0178   CA 9F 00745 90$:     PUSHAB  P.ABK                             ; 1055
    00000000G  00              01 FB 00749          CALLS   #1, CLI$PRESENT                   ;
               6E              50 D0 00750          MOVL    R0, TEMP                          ;
    00000000G  8F              50 D1 00753          CMPL    R0, #CLI$_DEFAULTED               ; 1061
                               0E 13 0075A          BEQL    91$                               ;
               5B              50 D1 0075C          CMPL    R0, R11                           ;
                               09 13 0075F          BEQL    91$                               ;
    00000000G  8F              50 D1 00761          CMPL    R0, #CLI$_LOCPRES                 ;
                               0E 12 00768          BNEQ    92$                               ;
                          E4   A9 9F 0076A 91$:     PUSHAB  RUNOFF_COMMAND+48                 ; 1062
                        0188   CA 9F 0076D          PUSHAB  P.ABM                             ;
    00000000G  00              02 FB 00771          CALLS   #2, CLI$GET_VALUE                 ;
                        0198   CA 9F 00778 92$:     PUSHAB  P.ABO                             ; 1066
    00000000G  00              01 FB 0077C          CALLS   #1, CLI$PRESENT                   ;
               6E              50 D0 00783          MOVL    R0, TEMP                          ;
    00000000G  8F              50 D1 00786          CMPL    R0, #CLI$_DEFAULTED               ; 1072
                               0E 13 0078D          BEQL    93$                               ;
               5B              50 D1 0078F          CMPL    R0, R11                           ;
                               09 13 00792          BEQL    93$                               ;
    00000000G  8F              50 D1 00794          CMPL    R0, #CLI$_LOCPRES                 ;
                               0E 12 0079B          BNEQ    94$                               ;
                          EC   A9 9F 0079D 93$:     PUSHAB  RUNOFF_COMMAND+56                 ; 1073
                        01A8   CA 9F 007A0          PUSHAB  P.ABQ                             ;
    00000000G  00              02 FB 007A4          CALLS   #2, CLI$GET_VALUE                 ;
                        01B4   CA 9F 007AB 94$:     PUSHAB  P.ABS                             ; 1080
    00000000G  00              01 FB 007AF          CALLS   #1, CLI$PRESENT                   ;
               6E              50 D0 007B6          MOVL    R0, TEMP                          ;
    00000000G  8F              50 D1 007B9          CMPL    R0, #CLI$_ABSENT                  ; 1085
                               04 12 007C0          BNEQ    95$                               ;
          0A  A9               01 B0 007C2          MOVW    #1, RUNOFF_COMMAND+86            ; 1086
    00000000G  8F              50 D1 007C6 95$:     CMPL    R0, #CLI$_NEGATED                 ; 1088
                               09 13 007CD          BEQL    96$                               ;
    00000000G  8F              50 D1 007CF          CMPL    R0, #CLI$_LOCNEG                  ;
                               03 12 007D6          BNEQ    97$                               ;
                          0A   A9 B4 007D8 96$:     CLRW    RUNOFF_COMMAND+86                 ; 1089
    00000000G  8F              50 D1 007DB 97$:     CMPL    R0, #CLI$_DEFAULTED               ; 1091
                               0E 13 007E2          BEQL    98$                               ;
               5B              50 D1 007E4          CMPL    R0, R11                           ;
                               09 13 007E7          BEQL    98$                               ;
    00000000G  8F              50 D1 007E9          CMPL    R0, #CLI$_LOCPRES                 ;
```

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                                  2E  12 007F0           BNEQ    100$                                  ;
                          F8      AD  9F 007F2 98$:      PUSHAB  DESC                                  ; 1092
                        01C0      CA  9F 007F5           PUSHAB  P.ABU                                 ;
      00000000G  00               02  FB 007F9           CALLS   #2, CLI$GET_VALUE                     ;
                 19               50  E9 00800           BLBC    R0, 99$                               ;
                                  5E  DD 00803           PUSHL   SP                                    ; 1094
                          FC      AD  DD 00805           PUSHL   DESC+4                                ; 1095
                 7E       F8      AD  3C 00808           MOVZWL  DESC, -(SP)                           ; 1094
      00000000G  00               03  FB 0080C           CALLS   #3, LIB$CVT_DTB                       ;
                 56               50  D0 00813           MOVL    R0, STATUS                            ;
             0A  A9               6E  B0 00816           MOVW    TEMP, RUNOFF_COMMAND+86               ; 1097
                                  04  11 0081A           BRB     100$                                  ;
             0A  A9               01  B0 0081C 99$:      MOVW    #1, RUNOFF_COMMAND+86                 ; 1100
                        01CC      CA  9F 00820 100$:     PUSHAB  P.ABW                                 ; 1104
      00000000G  00               01  FB 00824           CALLS   #1, CLI$PRESENT                       ;
                 6E               50  D0 0082B           MOVL    R0, TEMP                              ;
                 52               6E  D0 0082E           MOVL    TEMP, R2                              ; 1106
      00000000G  8F               52  D1 00831           CMPL    R2, #CLI$_ABSENT                      ; 1109
                                  12  13 00838           BEQL    101$                                  ;
      00000000G  8F               52  D1 0083A           CMPL    R2, #CLI$_NEGATED                     ;
                                  09  13 00841           BEQL    101$                                  ;
      00000000G  8F               52  D1 00843           CMPL    R2, #CLI$_LOCNEG                      ;
                                  03  12 0084A           BNEQ    102$                                  ;
                          10      A9  B4 0084C 101$:     CLRW    RUNOFF_COMMAND+92                     ; 1110
      00000000G  8F               52  D1 0084F 102$:     CMPL    R2, #CLI$_DEFAULTED                   ; 1112
                                  0E  13 00856           BEQL    103$                                  ;
                 5B               52  D1 00858           CMPL    R2, R11                               ;
                                  09  13 0085B           BEQL    103$                                  ;
      00000000G  8F               52  D1 0085D           CMPL    R2, #CLI$_LOCPRES                     ;
                                  2E  12 00864           BNEQ    105$                                  ;
                          F8      AD  9F 00866 103$:     PUSHAB  DESC                                  ; 1113
                        01D8      CA  9F 00869           PUSHAB  P.ABY                                 ;
      00000000G  00               02  FB 0086D           CALLS   #2, CLI$GET_VALUE                     ;
                 19               50  E9 00874           BLBC    R0, 104$                              ;
                                  5E  DD 00877           PUSHL   SP                                    ; 1115
                          FC      AD  DD 00879           PUSHL   DESC+4                                ; 1116
                 7E       F8      AD  3C 0087C           MOVZWL  DESC, -(SP)                           ; 1115
      00000000G  00               03  FB 00880           CALLS   #3, LIB$CVT_DTB                       ;
                 56               50  D0 00887           MOVL    R0, STATUS                            ;
             10  A9               6E  B0 0088A           MOVW    TEMP, RUNOFF_COMMAND+92               ; 1118
                                  04  11 0088E           BRB     105$                                  ;
             10  A9               05  B0 00890 104$:     MOVW    #5, RUNOFF_COMMAND+92                 ; 1121
      00000000G  8F               52  D1 00894 105$:     CMPL    R2, #CLI$_NEGATED                     ; 1123
                                  17  13 0089B           BEQL    106$                                  ;
      00000000G  8F               52  D1 0089D           CMPL    R2, #CLI$_LOCNEG                      ;
                                  0E  13 008A4           BEQL    106$                                  ;
                 5B               52  D1 008A6           CMPL    R2, R11                               ;
                                  09  13 008A9           BEQL    106$                                  ;
      00000000G  8F               52  D1 008AB           CMPL    R2, #CLI$_LOCPRES                     ;
                                  04  12 008B2           BNEQ    107$                                  ;
             06  A9               10  88 008B4 106$:     BISB2   #16, RUNOFF_COMMAND+82                ; 1124
                        01EC      CA  9F 008B8 107$:     PUSHAB  P.ACA                                 ; 1128
      00000000G  00               01  FB 008BC           CALLS   #1, CLI$PRESENT                       ;
                 58               50  D0 008C3           MOVL    R0, FORM_QUALIFIER                    ;
                 52               58  D0 008C6           MOVL    FORM_QUALIFIER, R2                    ; 1130
      00000000G  8F               52  D1 008C9           CMPL    R2, #CLI$_ABSENT                      ; 1133
                                  0B  12 008D0           BNEQ    108$                                  ;
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 00000000G  00          00 FB 008D2         CALLS    #0, LIB$LP_LINES                   ; 1134
        14  A9          50 B0 008D9         MOVW     R0, RUNOFF_COMMAND+96              ;
 00000000G  8F          52 D1 008DD  108$:  CMPL     R2, #CLI$_NEGATED                  ; 1136
                        09 13 008E4         BEQL     109$                               ;
 00000000G  8F          52 D1 008E6         CMPL     R2, #CLI$_LOCNEG                   ;
                        03 12 008ED         BNEQ     110$                               ;
                    14  A9 B4 008EF  109$:  CLRW     RUNOFF_COMMAND+96                  ; 1137
 00000000G  8F          52 D1 008F2  110$:  CMPL     R2, #CLI$_DEFAULTED                ; 1139
                        0E 13 008F9         BEQL     111$                               ;
            5B          52 D1 008FB         CMPL     R2, R11                            ;
                        09 13 008FE         BEQL     111$                               ;
 00000000G  8F          52 D1 00900         CMPL     R2, #CLI$_LOCPRES                  ;
                        3C 12 00907         BNEQ     113$                               ;
                    F8  AD 9F 00909  111$:  PUSHAB   DESC                               ; 1140
                  0200  CA 9F 0090C         PUSHAB   P.ACC                              ;
 00000000G  00          02 FB 00910         CALLS    #2, CLI$GET_VALUE                  ;
            19          50 E9 00917         BLBC     R0, 112$                           ;
                        5E DD 0091A         PUSHL    SP                                 ; 1142
                    FC  AD DD 0091C         PUSHL    DESC+4                             ; 1143
            7E      F8  AD 3C 0091F         MOVZWL   DESC, -(SP)                        ; 1142
 00000000G  00          03 FB 00923         CALLS    #3, LIB$CVT_DTB                    ;
            56          50 D0 0092A         MOVL     R0, STATUS                         ;
        14  A9          6E B0 0092D         MOVW     TEMP, RUNOFF_COMMAND+96            ; 1145
                        12 11 00931         BRB      113$                               ;
 00000000G  00          00 FB 00933  112$:  CALLS    #0, LIB$LP_LINES                   ; 1149
        14  A9          50 B0 0093A         MOVW     R0, RUNOFF_COMMAND+96              ;
            58 00000000G 8F D0 0093E        MOVL     #CLI$_ABSENT, FORM_QUALIFIER       ; 1150
                  0210  CA 9F 00945  113$:  PUSHAB   P.ACE                              ; 1154
 00000000G  00          01 FB 00949         CALLS    #1, CLI$PRESENT                    ;
            6E          50 D0 00950         MOVL     R0, TEMP                           ;
            52          6E D0 00953         MOVL     TEMP, R2                           ; 1156
 00000000G  8F          52 D1 00956         CMPL     R2, #CLI$_ABSENT                   ; 1159
                        12 13 0095D         BEQL     114$                               ;
 00000000G  8F          52 D1 0095F         CMPL     R2, #CLI$_NEGATED                  ;
                        09 13 00966         BEQL     114$                               ;
 00000000G  8F          52 D1 00968         CMPL     R2, #CLI$_LOCNEG                   ;
                        03 12 0096F         BNEQ     115$                               ;
                    12  A9 B4 00971  114$:  CLRW     RUNOFF_COMMAND+94                  ; 1160
 00000000G  8F          52 D1 00974  115$:  CMPL     R2, #CLI$_DEFAULTED                ; 1162
                        0E 13 0097B         BEQL     116$                               ;
            5B          52 D1 0097D         CMPL     R2, R11                            ;
                        09 13 00980         BEQL     116$                               ;
 00000000G  8F          52 D1 00982         CMPL     R2, #CLI$_LOCPRES                  ;
                        2E 12 00989         BNEQ     118$                               ;
                    F8  AD 9F 0098B  116$:  PUSHAB   DESC                               ; 1163
                  0220  CA 9F 0098E         PUSHAB   P.ACG                              ;
 00000000G  00          02 FB 00992         CALLS    #2, CLI$GET_VALUE                  ;
            19          50 E9 00999         BLBC     R0, 117$                           ;
                        5E DD 0099C         PUSHL    SP                                 ; 1165
                    FC  AD DD 0099E         PUSHL    DESC+4                             ; 1166
            7E      F8  AD 3C 009A1         MOVZWL   DESC, -(SP)                        ; 1165
 00000000G  00          03 FB 009A5         CALLS    #3, LIB$CVT_DTB                    ;
            56          50 D0 009AC         MOVL     R0, STATUS                         ;
        12  A9          6E B0 009AF         MOVW     TEMP, RUNOFF_COMMAND+94            ; 1168
                        04 11 009B3         BRB      118$                               ;
        12  A9          05 B0 009B5  117$:  MOVW     #5, RUNOFF_COMMAND+94              ; 1171
 00000000G  8F          52 D1 009B9  118$:  CMPL     R2, #CLI$_NEGATED                  ; 1173
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                                    17 13 009C0           BEQL    119$                              ;
            0000000G  8F            52 D1 009C2           CMPL    R2, #CLI$_LOCNEG                  ;
                                    0E 13 009C9           BEQL    119$                              ;
                      5B            52 D1 009CB           CMPL    R2, R11                           ;
                                    09 13 009CE           BEQL    119$                              ;
            0000000G  8F            52 D1 009D0           CMPL    R2, #CLI$_LOCPRES                 ;
                                    04 12 009D7           BNEQ    120$                              ;
                  06  A9            20 88 009D9 119$:     BISB2   #32, RUNOFF_COMMAND+82            ; 1174
                           0230     CA 9F 009DD 120$:     PUSHAB  P.ACI                             ; 1183
            0000000G  00            01 FB 009E1           CALLS   #1, CLI$PRESENT                   ;
                      6E            50 D0 009E8           MOVL    R0, TEMP                          ;
                  01  A9     7E     8F 8A 009EB           BICB2   #126, RUNOFF_COMMAND+77           ; 1192
                      50            6E D0 009F0           MOVL    TEMP, R0                          ; 1194
            0000000G  8F            50 D1 009F3           CMPL    R0, #CLI$_DEFAULTED               ; 1197
                                    0E 13 009FA           BEQL    121$                              ;
                      5B            50 D1 009FC           CMPL    R0, R11                           ;
                                    09 13 009FF           BEQL    121$                              ;
            0000000G  8F            50 D1 00A01           CMPL    R0, #CLI$_LOCPRES                 ;
                                    29 12 00A08           BNEQ    122$                              ;
                             F8     AD 9F 00A0A 121$:     PUSHAB  DESC                              ; 1198
                           0240     CA 9F 00A0D           PUSHAB  P.ACK                             ;
            0000000G  00            02 FB 00A11           CALLS   #2, CLI$GET_VALUE                 ;
                      18            50 E9 00A18           BLBC    R0, 122$                          ;
                      00000000'     EF 9F 00A1B           PUSHAB  DEBUG_KEYS                        ; 1199
                      00000000'     EF 9F 00A21           PUSHAB  DEBUG_STATES                      ;
                             F8     AD 9F 00A27           PUSHAB  DESC                              ;
            0000000V  EF            03 FB 00A2A           CALLS   #3, CALL_TPARSE                   ;
                                    D7 11 00A31           BRB     121$                              ;
                           0250     CA 9F 00A33 122$:     PUSHAB  P.ACM                             ; 1203
            0000000G  00            01 FB 00A37           CALLS   #1, CLI$PRESENT                   ;
                      6E            50 D0 00A3E           MOVL    R0, TEMP                          ;
                  02  A9   03C0     8F AA 00A41           BICW2   #960, RUNOFF_COMMAND+78           ; 1207
                  06  A9            0F 88 00A47           BISB2   #15, RUNOFF_COMMAND+82            ; 1211
                      50            6E D0 00A4B           MOVL    TEMP, R0                          ; 1213
            0000000G  8F            50 D1 00A4E           CMPL    R0, #CLI$_DEFAULTED               ; 1216
                                    0E 13 00A55           BEQL    123$                              ;
                      5B            50 D1 00A57           CMPL    R0, R11                           ;
                                    09 13 00A5A           BEQL    123$                              ;
            0000000G  8F            50 D1 00A5C           CMPL    R0, #CLI$_LOCPRES                 ;
                                    2F 12 00A63           BNEQ    124$                              ;
                             F8     AD 9F 00A65 123$:     PUSHAB  DESC                              ; 1217
                           0260     CA 9F 00A68           PUSHAB  P.ACO                             ;
            0000000G  00            02 FB 00A6C           CALLS   #2, CLI$GET_VALUE                 ;
                      1E            50 E9 00A73           BLBC    R0, 124$                          ;
                      00000000'     EF 9F 00A76           PUSHAB  DEVICE_KEYS                       ; 1219
                      00000000'     EF 9F 00A7C           PUSHAB  DEVICE_STATES                     ;
                             F8     AD 9F 00A82           PUSHAB  DESC                              ;
            0000000V  EF            03 FB 00A85           CALLS   #3, CALL_TPARSE                   ;
                      56            50 D0 00A8C           MOVL    R0, STATUS                        ;
                      D3            56 E8 00A8F           BLBS    STATUS, 123$                      ;
                                    59 11 00A92           BRB     126$                              ; 1222
                           0270     CA 9F 00A94 124$:     PUSHAB  P.ACQ                             ; 1237
            0000000G  00            01 FB 00A98           CALLS   #1, CLI$PRESENT                   ;
                      6E            50 D0 00A9F           MOVL    R0, TEMP                          ;
                  02  A9            30 8A 00AA2           BICB2   #48, RUNOFF_COMMAND+78            ; 1242
                      50            6E D0 00AA6           MOVL    TEMP, R0                          ; 1244
            0000000G  8F            50 D1 00AA9           CMPL    R0, #CLI$_DEFAULTED               ; 1247
```

```
                                0E 13 00AB0         BEQL    125$                                          ;
                        5B      50 D1 00AB2         CMPL    R0, R11                                       ;
                                09 13 00AB5         BEQL    125$                                          ;
              00000000G 8F      50 D1 00AB7         CMPL    R0, #CLI$_LOCPRES                             ;
                                35 12 00ABE         BNEQ    127$                                          ;
                        F8      AD 9F 00AC0 125$:   PUSHAB  DESC                                          ; 1248
                        0280    CA 9F 00AC3         PUSHAB  P.ACS                                         ;
              00000000G 00      02 FB 00AC7         CALLS   #2, CLI$GET_VALUE                             ;
                        24      50 E9 00ACE         BLBC    R0, 127$                                      ;
                  00000000'     EF 9F 00AD1         PUSHAB  MESSAGES_KEYS                                 ; 1249
                  00000000'     EF 9F 00AD7         PUSHAB  MESSAGES_STATES                               ;
                        F8      AD 9F 00ADD         PUSHAB  DESC                                          ;
              00000000V EF      03 FB 00AE0         CALLS   #3, CALL_TPARSE                               ;
                        56      50 D0 00AE7         MOVL    R0, STATUS                                    ;
                        D3      56 E8 00AEA         BLBS    STATUS, 125$                                  ;
                        50 00000000* 8F D0 00AED 126$: MOVL #<<<RUNOFF$_FACILITY@16>!20>!4>, R0           ; 1252
                                04 00AF4            RET                                                   ;
                        0294    CA 9F 00AF5 127$:   PUSHAB  P.ACU                                         ; 1259
              00000000G 00      01 FB 00AF9         CALLS   #1, CLI$PRESENT                               ;
                        6E      50 D0 00B00         MOVL    R0, TEMP                                      ;
                        0C      A9 D4 00B03         CLRL    RUNOFF_COMMAND+88                             ; 1266
                        50      6E D0 00B06         MOVL    TEMP, R0                                      ; 1269
              00000000G 8F      50 D1 00B09         CMPL    R0, #CLI$_DEFAULTED                           ; 1272
                                0E 13 00B10         BEQL    128$                                          ;
                        5B      50 D1 00B12         CMPL    R0, R11                                       ;
                                09 13 00B15         BEQL    128$                                          ;
              00000000G 8F      50 D1 00B17         CMPL    R0, #CLI$_LOCPRES                             ;
                                29 12 00B1E         BNEQ    129$                                          ;
                        F8      AD 9F 00B20 128$:   PUSHAB  DESC                                          ; 1273
                        02A8    CA 9F 00B23         PUSHAB  P.ACW                                         ;
              00000000G 00      02 FB 00B27         CALLS   #2, CLI$GET_VALUE                             ;
                        18      50 E9 00B2E         BLBC    R0, 129$                                      ;
                  00000000'     EF 9F 00B31         PUSHAB  DEC_INTERNAL_KEYS                             ; 1274
                  00000000'     EF 9F 00B37         PUSHAB  DEC_INTERNAL_STATES                           ;
                        F8      AD 9F 00B3D         PUSHAB  DESC                                          ;
              00000000V EF      03 FB 00B40         CALLS   #3, CALL_TPARSE                               ;
                                D7 11 00B47         BRB     128$                                          ;
                        18  1C  A9 E9 00B49 129$:   BLBC    LN01_OPTION_USED, 130$                        ; 1282
  04        02  A9          04  06 ED 00B4D         CMPZV   #6, #4, RUNOFF_COMMAND+78, #4                 ; 1284
                                10 13 00B53         BEQL    130$                                          ;
  05        02  A9          04  06 ED 00B55         CMPZV   #6, #4, RUNOFF_COMMAND+78, #5                 ; 1285
                                08 13 00B5B         BEQL    130$                                          ;
                        50 00000000* 8F D0 00B5D    MOVL    #<<<RUNOFF$_FACILITY@16>!4832>!4>, R0         ; 1292
                                04 00B64            RET                                                   ;
            0C  AE  02B0    CA  17 28 00B65 130$:   MOVC3   #23, P.ACY, TT_NAME_STRING                    ; 1314
                    04  AE 010E0017 8F D0 00B6C     MOVL    #17694743, TT_NAME_DESC                       ; 1318
                    08  AE  0C  AE 9E 00B74         MOVAB   TT_NAME_STRING, TT_NAME_DESC+4                ; 1321
                    F0  AD 010E0100 8F D0 00B79     MOVL    #17694976, TT_BUF_DESC                        ; 1327
                    F4  AD  0C  AE 9E 00B81         MOVAB   TT_NAME_STRING, TT_BUF_DESC+4                 ; 1330
                        50  0C  A9 32 00B86         CVTWL   RUNOFF_COMMAND+88, FOO                        ; 1339
                04      50      0D E1 00B8A         BBC     #13, FOO, 131$                                ; 1341
                                50 D4 00B8E         CLRL    LOGTAB                                        ; 1342
                                03 11 00B90         BRB     132$                                          ;
                        50      06 D0 00B92 131$:   MOVL    #6, LOGTAB                                    ; 1344
                                50 DD 00B95 132$:   PUSHL   LOGTAB                                        ; 1353
                                7E 7C 00B97         CLRQ    -(SP)                                         ;
                        F0      AD 9F 00B99         PUSHAB  TT_BUF_DESC                                   ;
```

```
                              14  AE  9F 00B9C          PUSHAB  TT_NAME_DESC                           ;
                              18  AE  9F 00B9F          PUSHAB  TT_NAME_DESC                           ;
          00000000G  00           06  FB 00BA2          CALLS   #6, SYS$TRNLOG                         ;
                     01           50  D1 00BA9          CMPL    TRNLOG_STATUS, #1                      ; 1356
                                  3B  12 00BAC          BNEQ    135$                                   ;
                     52           01  D0 00BAE          MOVL    #1, I                                  ; 1369
                                  06  DD 00BB1 133$:    PUSHL   #6                                     ; 1375
                                  7E  7C 00BB3          CLRQ    -(SP)                                  ;
                              F0  AD  9F 00BB5          PUSHAB  TT_BUF_DESC                            ;
                              14  AE  9F 00BB8          PUSHAB  TT_NAME_DESC                           ;
                              18  AE  9F 00BBB          PUSHAB  TT_NAME_DESC                           ;
          00000000G  00           06  FB 00BBE          CALLS   #6, SYS$TRNLOG                         ;
          00000629   8F           50  D1 00BC5          CMPL    TRNLOG_STATUS, #1577                   ; 1378
                                  04  13 00BCC          BEQL    134$                                   ;
      DF             52           09  F3 00BCE          AOBLEQ  #9, I, 133$                            ; 1371
                       00000000G  EF  9F 00BD2 134$:    PUSHAB  STR$FAILURE                            ; 1383
                                  7E  D4 00BD8          CLRL    -(SP)                                  ;
                              CC  A9  9F 00BDA          PUSHAB  $STR$TARGET                            ;
                              10  AE  9F 00BDD          PUSHAB  $STR$STRING                            ;
                                  7E  D4 00BE0          CLRL    -(SP)                                  ;
          00000000G  EF           05  FB 00BE2          CALLS   #5, XST$COPY                           ;
                              B4  A9  9F 00BE9 135$:    PUSHAB  RUNOFF_COMMAND                         ; 1393
          00000000V  EF           01  FB 00BEC          CALLS   #1, RNODAT                             ;
                              B4  A9  9F 00BF3          PUSHAB  RUNOFF_COMMAND                         ; 1396
          00000000G  EF           01  FB 00BF6          CALLS   #1, RUNOFF                             ;
                     56           50  D0 00BFD          MOVL    R0, STATUS                             ;
                     03           56  E8 00C00          BLBS    STATUS, 136$                           ; 1399
                     57           56  D0 00C03          MOVL    STATUS, EXIT_STATUS                    ; 1401
                            F42B  31 00C06 136$:        BRW     1$                                     ; 0642
                  50 00000000G    00  9E 00C09 137$:    MOVAB   LIB$FIND_FILE_END, R0                  ; 1408
                                  0D  13 00C10          BEQL    138$                                   ;
                       00000000G  EF  9F 00C12          PUSHAB  LFFCTX                                 ; 1409
          00000000G  00           01  FB 00C18          CALLS   #1, LIB$FIND_FILE_END                  ;
                              20  A9  9F 00C1F 138$:    PUSHAB  WS_LIMITS                              ; 1413
          00000000G  00           01  FB 00C22          CALLS   #1, SYS$PURGWS                         ;
                     50           57  D0 00C29          MOVL    EXIT_STATUS, R0                        ; 1417
                                      04 00C2C          RET                                            ; 1419

; Routine Size:  3117 bytes,    Routine Base:  $CODE$ + 0000
```

```
%SBTTL 'CALL_TPARSE -- Routine to call LIB$TPARSE'
ROUTINE call_tparse(string,states,keys) =

!++
!
! FUNCTIONAL DESCRIPTION:
!
!       This routine calls tparse given the string, states, and keys
!
! FORMAL PARAMETERS:
!
!       string          Address of string descriptor for string to parse
!       states          Address of tparse states table
!       keys            Address of tparse keys table
!
! IMPLICIT INPUTS:      none
!
! IMPLICIT OUTPUTS:     none
!
! ROUTINE VALUE:
! COMPLETION CODES:     return code of LIB$TPARSE
!
! SIDE EFFECTS:         none known
!
!--
    BEGIN

    MAP string : REF BBLOCK;
    LOCAL
        status,
        tpablock : BBLOCK[tpa$k_length0];
!
!    Initialize the TPARSE block:
!
    CH$FILL(0,tpa$k_length0,tpablock);
    tpablock[tpa$l_count] = tpa$k_count0;
    tpablock[tpa$l_options] = tpa$m_abbrev;
    tpablock[tpa$l_stringcnt] = .string[dsc$w_length];
    tpablock[tpa$l_stringptr] = .string[dsc$a_pointer];
!
!    Envoke TPARSE and return with its return code:
!
    RETURN LIB$TPARSE(tpablock,.states,.keys)
    END;
```

```
                                       003C 00000 CALL_TPARSE:
                                                  .WORD   Save R2,R3,R4,R5                     ; 1421
                          5E        24  C2 00002  SUBL2   #36, SP
     24          00       6E        00  2C 00005  MOVC5   #0, (SP), #0, #36, TPABLOCK          ; 1454
                          6E           0000A
                          6E        08  D0 0000B  MOVL    #8, TPABLOCK                         ; 1455
                    04    AE        02  D0 0000E  MOVL    #2, TPABLOCK+4                       ; 1456
                          50   04   AC  D0 00012  MOVL    STRING, R0                           ; 1457
```

```
                    08   AE          60  3C 00016        MOVZWL  (R0), TPABLOCK+8               ;
                    0C   AE     04   A0  D0 0001A        MOVL    4(R0), TPABLOCK+12             ; 1458
                         7E     08   AC  7D 0001F        MOVQ    STATES, -(SP)                  ; 1462
                                08   AE  9F 00023        PUSHAB  TPABLOCK                       ;
              00000000G  00          03  FB 00026        CALLS   #3, LIB$TPARSE                 ;
                                         04 0002D        RET                                    ; 1463

; Routine Size:  46 bytes,    Routine Base:  $CODE$ + 0C2D

; 1349          1464  1
```

```
1 %SBTTL 'SAVE_VALUE -- store values decided by $TPARSE'
1 ROUTINE save_value =
2     BEGIN
2     BUILTIN AP;
2     MAP AP : REF BBLOCK;
2
2           SELECTONE .ap[tpa$l_param] OF
2           SET
2
2                 [sv_di_dbg1] : runoff_command[rno$h_dbg1] = .AP[TPA$L_NUMBER];
2
2                 [sv_di_dbg2] : runoff_command[rno$h_dbg2] = .AP[TPA$L_NUMBER];
2
3                 [sv_byte_value] : BEGIN
3
3                         SELECTONE .swch_id OF
3                         SET
3
3                           [swch_id_change] :
3                               runoff_command[rno$c_change] = .AP[TPA$L_NUMBER];
3
3                           [swch_id_underline,swch_id_spacing,swch_id_separate] :
3                               runoff_command[rno$c_underline] = .AP[TPA$L_NUMBER];
3
3                           [OTHERWISE] : RETURN 0;
3
3                         TES
2                         END;
2
2                 [sv_dev_landscape] :
3                           BEGIN
3                           runoff_command[rno$v_ln01_port_land] = 0;
3                           ln01_option_used = true
2                           END;
2
2                 [sv_dev_portrait] :
3                           BEGIN
3                           runoff_command[rno$v_ln01_port_land] = 1;
3                           ln01_option_used = true
2                           END;
2
2                 [sv_dev_underline] :
3                           BEGIN
3                           runoff_command[rno$v_ln01_ital_under] = 0;
3                           ln01_option_used = true
2                           END;
2
2                 [sv_dev_italic] :
3                           BEGIN
3                           runoff_command[rno$v_ln01_ital_under] = 1;
3                           ln01_option_used = true
2                           END;
2
2                 [sv_dev_header] :
3                           BEGIN
3                           runoff_command[rno$v_ln01_header] = true;
3                           ln01_option_used = true
```

```
; 1408      1522  2                          END;
; 1409      1523  2
; 1410      1524  2                  [sv_dev_noheader] :
; 1411      1525  3                          BEGIN
; 1412      1526  3                          runoff_command[rno$v_ln01_header] = false;
; 1413      1527  3                          ln01_option_used = true
; 1414      1528  2                          END;
; 1415      1529  2
; 1416      1530  2                  [sv_dev_load] :
; 1417      1531  3                          BEGIN
; 1418      1532  3                          runoff_command[rno$v_ln01_load] = true;
; 1419      1533  3                          ln01_option_used = true
; 1420      1534  2                          END;
; 1421      1535  2
; 1422      1536  2                  [sv_dev_noload] :
; 1423      1537  3                          BEGIN
; 1424      1538  3                          runoff_command[rno$v_ln01_load] = false;
; 1425      1539  3                          ln01_option_used = true
; 1426      1540  2                          END;
; 1427      1541  2
; 1428      1542  2                  [sv_output_line_numbers] :   ! generate output line numbers in the
; 1429      1543  2                                               ! output file.
; 1430      1544  2                          runoff_command[rno$h_dbg2] =
; 1431      1545  2                                  .runoff_command[rno$h_dbg2] + 1^15 ;
; 1432      1546  2
; 1433      1547  2                  [OTHERWISE] : RETURN 0;
; 1434      1548  2
; 1435      1549  2          TES;
; 1436      1550  2
; 1437      1551  2      1                       ! If we get back to here, return "SUCCESS"
; 1438      1552  2
; 1439      1553  1      END;                    ! End of routine SAVE_VALUE



                                       0004 00000 SAVE_VALUE:
                                                         .WORD   Save R2                                 ; 1466
                  52 00000000'    EF   9E 00002          MOVAB   RUNOFF_COMMAND+80, R2
                  51       20     AC   D0 00009          MOVL    32(AP), R1                              ; 1471
                  0A              51   D1 0000D          CMPL    R1, #10                                 ; 1474
                                  07   12 00010          BNEQ    1$
             08   A2       1C     AC   B0 00012          MOVW    28(AP), RUNOFF_COMMAND+88
                                  35   11 00017          BRB     5$
                  0B              51   D1 00019 1$:      CMPL    R1, #11                                 ; 1476
                                  07   12 0001C          BNEQ    2$
             0A   A2       1C     AC   B0 0001E          MOVW    28(AP), RUNOFF_COMMAND+90
                                  29   11 00023          BRB     5$
                  01              51   D1 00025 2$:      CMPL    R1, #1                                  ; 1478
                                  26   12 00028          BNEQ    6$
                  50       14     A2   D0 0002A          MOVL    SWCH_ID, R0                             ; 1480
                  04              50   D1 0002E          CMPL    R0, #4                                  ; 1483
                                  07   12 00031          BNEQ    3$
             04   A2       1C     AC   90 00033          MOVB    28(AP), RUNOFF_COMMAND+84               ; 1484
                                  7C   11 00038          BRB     16$
                  15              50   D1 0003A 3$:      CMPL    R0, #21                                 ; 1486
```

```
                                        0A  13 0003D           BEQL    4$                                            ;
                       18               50  D1 0003F           CMPL    R0, #24                                       ;
                                        74  19 00042           BLSS    17$                                           ;
                       19               50  D1 00044           CMPL    R0, #25                                       ;
                                        6F  14 00047           BGTR    17$                                           ;
              05       A2       1C      AC  90 00049 4$:       MOVB    28(AP), RUNOFF_COMMAND+85                     ; 1487
                                        6B  11 0004E 5$:       BRB     18$                                           ;
                       05               51  D1 00050 6$:       CMPL    R1, #5                                        ; 1494
                                        06  12 00053           BNEQ    7$                                            ;
              02       A2               02  8A 00055           BICB2   #2, RUNOFF_COMMAND+82                         ; 1496
                                        4B  11 00059           BRB     14$                                           ; 1497
                       08               51  D1 0005B 7$:       CMPL    R1, #8                                        ; 1500
                                        06  12 0005E           BNEQ    8$                                            ;
              02       A2               02  88 00060           BISB2   #2, RUNOFF_COMMAND+82                         ; 1502
                                        40  11 00064           BRB     14$                                           ; 1503
                       09               51  D1 00066 8$:       CMPL    R1, #9                                        ; 1506
                                        06  12 00069           BNEQ    9$                                            ;
              02       A2               01  8A 0006B           BICB2   #1, RUNOFF_COMMAND+82                         ; 1508
                                        35  11 0006F           BRB     14$                                           ; 1509
                       04               51  D1 00071 9$:       CMPL    R1, #4                                        ; 1512
                                        06  12 00074           BNEQ    10$                                           ;
              02       A2               01  88 00076           BISB2   #1, RUNOFF_COMMAND+82                         ; 1514
                                        2A  11 0007A           BRB     14$                                           ; 1515
                       02               51  D1 0007C 10$:      CMPL    R1, #2                                        ; 1518
                                        06  12 0007F           BNEQ    11$                                           ;
              02       A2               04  88 00081           BISB2   #4, RUNOFF_COMMAND+82                         ; 1520
                                        1F  11 00085           BRB     14$                                           ; 1521
                       03               51  D1 00087 11$:      CMPL    R1, #3                                        ; 1524
                                        06  12 0008A           BNEQ    12$                                           ;
              02       A2               04  8A 0008C           BICB2   #4, RUNOFF_COMMAND+82                         ; 1526
                                        14  11 00090           BRB     14$                                           ; 1527
                       06               51  D1 00092 12$:      CMPL    R1, #6                                        ; 1530
                                        06  12 00095           BNEQ    13$                                           ;
              02       A2               08  88 00097           BISB2   #8, RUNOFF_COMMAND+82                         ; 1532
                                        09  11 0009B           BRB     14$                                           ; 1533
                       07               51  D1 0009D 13$:      CMPL    R1, #7                                        ; 1536
                                        0A  12 000A0           BNEQ    15$                                           ;
              02       A2               08  8A 000A2           BICB2   #8, RUNOFF_COMMAND+82                         ; 1538
              18       A2               01  D0 000A6 14$:      MOVL    #1, LN01_OPTION_USED                          ; 1539
                                        0F  11 000AA           BRB     18$                                           ;
                       0C               51  D1 000AC 15$:      CMPL    R1, #12                                       ; 1542
                                        07  12 000AF           BNEQ    17$                                           ;
              0B       A2       80      8F  80 000B1           ADDB2   #128, RUNOFF_COMMAND+90                       ; 1545
                                        03  11 000B6 16$:      BRB     18$                                           ; 1544
                                        50  D4 000B8 17$:      CLRL    R0                                            ; 1547
                                            04 000BA           RET                                                   ;
                       50               01  D0 000BB 18$:      MOVL    #1, R0                                        ; 1553
                                            04 000BE           RET                                                   ;

; Routine Size:  191 bytes,    Routine Base:  $CODE$ + 0C5B
```

```
; 1441      1554  1 %SBTTL 'SET_OUTPUT_DEVICE_CODE -- store O/P device type codes determined by $TPARSE'
; 1442      1555  1 ROUTINE set_output_device_code =
; 1443      1556  2     BEGIN
; 1444      1557  2     BUILTIN AP;
; 1445      1558  2     MAP AP : REF BBLOCK;
; 1446      1559  2
; 1447      1560  2         runoff_command[rno$v_4_out_format] = .ap[tpa$l_param];
; 1448      1561  2
; 1449      1562  2     1                       ! Make it return "success"
; 1450      1563  2
; 1451      1564  1     END;                    ! End of routine SET_OUTPUT_DEVICE_CODE


                                         0000 00000 SET_OUTPUT_DEVICE_CODE:
                                                    .WORD   Save nothing                            ; 1555
00000000'  EF        04        06     20  AC  F0 00002   INSV    32(AP), #6, #4, RUNOFF_COMMAND+78     ; 1560
                               50         01  D0 0000C   MOVL    #1, R0                                ; 1564
                                          04 0000F       RET                                           ;

; Routine Size:  16 bytes,    Routine Base:  $CODE$ + 0D1A
```

```
%SBTTL 'RNODAT - Get current system date and time'
%IF NEW_RNODAT_MODULE %THEN
ROUTINE rnodat (runoff_command) : NOVALUE =

!++
!
! ABSTRACT:      Obtains the system date and time in a standard format.
!
!       This routine has been made a part of RNOVMS.B32 to move all system
!       related logic into one place. It was extracted from RNODAT.BLI which
!       was at IDENT 007 at the time. This work was done by Ray Marshall on
!       August 6, 1982.
!
! FUNCTIONAL DESCRIPTION:
!
!       This routine obtains the system date and time, breaks it
!       up into its constituents, and returns the results.
!
! FORMAL PARAMETERS:
!
!       RUNOFF_COMMAND -- the command tables into which the current system
!                         date and time will be stuffed.
!
! IMPLICIT INPUTS:       None
!
! IMPLICIT OUTPUTS:      None
!
! ROUTINE VALUE:
! COMPLETION CODES:      None
!
! SIDE EFFECTS:          None
!
!--
    BEGIN

    MAP
        runoff_command : REF $RNO_CMD;  ! Define control block data structure

    LOCAL
        TIME_32 : VECTOR [7,2];

    SYS$NUMTIM (TIME_32, 0);            !Get binary date as a short-word vector.

!               Convert the system's date and time to the structure setup
!               within our command tables:

    runoff_command[RNO$H_YEAR]          = .TIME_32[0];
    runoff_command[RNO$H_MONTH]         = .TIME_32[1];
    runoff_command[RNO$H_MONTHDAY]      = .TIME_32[2];
    runoff_command[RNO$H_HOURS]         = .TIME_32[3];
    runoff_command[RNO$H_MINUTES]       = .TIME_32[4];
    runoff_command[RNO$H_SECONDS]       = .TIME_32[5];

    END;                                ! End of RNODAT
```

```
                              0000 00000 RNODAT: .WORD    Save nothing                  ; 1567
              5E          10  C2 00002          SUBL2   #16, SP                       ;
                          7E  D4 00005          CLRL    -(SP)                         ; 1606
                   04     AE  9F 00007          PUSHAB  TIME_32                       ;
      00000000G    EF     02  FB 0000A          CALLS   #2, SYS$NUMTIM                ;
                   50  04 AC  D0 00011          MOVL    RUNOFF_COMMAND, R0            ; 1611
            40     A0     6E  7D 00015          MOVQ    TIME_32, 64(R0)               ;
            48     A0  08 AE  D0 00019          MOVL    TIME_32+8, 72(R0)             ; 1615
                              04 0001E          RET                                   ; 1618

; Routine Size:  31 bytes,    Routine Base:  $CODE$ + 0D2A

; 1507         1619  1 %FI
; 1508         1620  1
; 1509         1621  1 END                                   ! End of module
; 1510         1622  0 ELUDOM
```

; PSECT SUMMARY

Name	Bytes	Attributes						
OWN	116	NOVEC, WRT,	RD ,NOEXE,NOSHR,	LCL,	REL,	CON,NOPIC,ALIGN(2)		
_LIB$KEY0$	52	NOVEC,NOWRT,	RD , EXE, SHR,	LCL,	REL,	CON, PIC,ALIGN(1)		
_LIB$STATE$	477	NOVEC,NOWRT,	RD , EXE, SHR,	LCL,	REL,	CON, PIC,ALIGN(1)		
_LIB$KEY1$	194	NOVEC,NOWRT,	RD , EXE, SHR,	LCL,	REL,	CON, PIC,ALIGN(1)		
$PLIT$	716	NOVEC,NOWRT,	RD ,NOEXE,NOSHR,	LCL,	REL,	CON,NOPIC,ALIGN(2)		
$CODE$	3401	NOVEC,NOWRT,	RD , EXE,NOSHR,	LCL,	REL,	CON,NOPIC,ALIGN(2)		

; Library Statistics

File	-------- Symbols -------- Total	Loaded	Percent	Pages Mapped	Processing Time
_255DUA28:[SYSLIB]STARLET.L32;1	9776	24	0	581	00:01.1
_255DUA28:[SYSLIB]TPAMAC.L32;1	42	29	69	14	00:00.1
_255DUA28:[SYSLIB]XPORT.L32;1	590	36	6	252	00:00.6
_255DUA28:[RUNOFF.SRC]DSRLIB.L32;1	1248	103	8	86	00:01.0

; COMMAND QUALIFIERS

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

; Size:           3401 code + 1555 data bytes
; Run Time:          01:33.8
; Elapsed Time:      03:09.5
; Lines/CPU Min:      1038
; Lexemes/CPU-Min: 57185
; Memory Used:  749 pages
; Compilation Complete
```

0348 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY

RSDERM
LIS

RTERM
LIS

RNODEF
LIS

RUNOFF
LIS

RNOVMS
LIS

RSKIPS
LIS

RNODAT
LIS

SAVRES
LIS

RNOVRS
LIS

RNFERM
LIS