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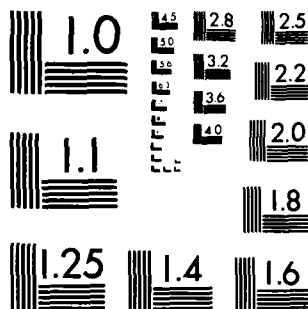
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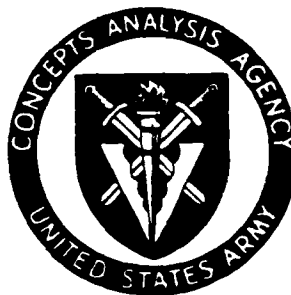
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STUDY REPORT
CAA-SR-84-1

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**OFFICER ASSIGNMENT SYSTEM STUDY
(OASYS)
VOLUME II - OASYS USER MANUAL**

MARCH 1984



PREPARED BY
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**PREPARED BY
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8120 WOODMONT AVENUE
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OASYS USER MANUAL

PREFACE

Volume II contains technical reference material for an ASCII FORTRAN programmer using a Sperry Computer System. This reference must be used in conjunction with Volume I of the Study Report by computer programmers working with OASYS. Volume I is a manager's guide to the Officer Assignment System.

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1. INTRODUCTION

OFFICER ASSIGNMENT SYSTEM (OASYS) STUDY VOLUME II - OASYS USER MANUAL

The OFFICER ASSIGNMENT SYSTEM consists of two models - the WOMEN OFFICER STRENGTH MODEL (WOSM) and the AGE BY GRADE AND PAIR MODEL (AGEBGPR). This manual represents the only documentation for either of the two models. The OASYS user should be familiar with personnel policies and changes made to those policies. Every effort has been made to ensure that policy changes will only affect the data files used; thus code changes should not be necessary.

All capitalized keywords used in this document represent the actual variable names used in the source code for both models and the auxiliary programs.

This document consists of six sections - input requirements and associated data preprocessors, WOSM run options, runstream description, the WOSM code, the MODIFY CONTINUATION RATES source code, and this introduction.

2. INPUT REQUIREMENTS

This section details all input files used to implement OASYS. The section is split into two subsections, the first being the WOMEN OFFICER STRENGTH MODEL input files, and the second deals with AGE BY GRADE AND PAIR input files. Each subsection contains documentation for the files used, their description, and a short description of the preprocessor or input routines used. Use this section as a guide for file preparation or as a manual for understanding the wOSM and AGE BGPR code.

2.1. WOMEN OFFICER STRENGTH MODEL (WOSM)

WOSM uses the following data files :

PERSACS OFFICER AUTHORIZATIONS
DUTY SPECIALTY INVENTORY
INSPEC/ADSPEC INVENTORY
SPECIALTY CODES
CASUALTY REPLACEMENT RATES
PREFERRED DISTRIBUTION RATES

2.1.1. PERSACS OFFICER AUTHORIZATIONS (AUTH)

2.1.1.1. FILE DESCRIPTION

The AUTH file contains authorizations data extracted from the PERSACS data base. It is important to the operation of this system that all valid three-digit specialty codes be represented in this file. Each three-digit specialty code (NOS) has four logical records of data images associated with it. These data images and their WOSM data names are :

Three-Digit Specialty Code ID	(NOS)
Total Authorizations	(STRTH)
Male-Only Authorizations	(COMBAT)
Long-Tour Authorizations	(LONG)
Short-Tour Authorizations	(SHORT)
CONUS Authorizations	(CONUS)
Male-Only Long-Tour Authorizations	(CBTLNG)
Male-Only Short-Tour Authorizations	(CBTSHT)
Male-Only CONUS Authorizations	(CBTCNS)
Total TAAADS Authorizations	(TAAADS)*
Long-Tour TAAADS Authorizations	(LTAADS)*
Short-Tour TAAADS Authorizations	(STAADS)*
CONUS TAAADS Authorizations	(CTAADS)*

*NOTE - TAAADS authorizations were not implemented in this version of WOSM; however, they were included for future use should the need arise.

2.1.1.2. RECORD DESCRIPTION

A logical record consists of four physical records. The first physical record has the following format :

NOS	COLUMNS 1 - 3
STRTH (LT - GEN)	COLUMNS 7 - 42
COMBAT (LT - GEN)	COLUMNS 43 - 78
LONG (LT - GEN)	COLUMNS 79 - 114

The second physical record contains :

SHORT (LT - GEN)	COLUMNS 7 - 42
CONUS (LT - GEN)	COLUMNS 43 - 78
CBTLNG (LT - GEN)	COLUMNS 79 - 114

The third physical record format is :

CBTSHT (LT - GEN)	COLUMNS 7 - 42
CBTCNS (LT - GEN)	COLUMNS 43 - 78
TAAADS (LT - GEN)	COLUMNS 79 - 114

The fourth and final physical record format is :

LTAADS (LT - GEN)	COLUMNS 7 - 42
STAADS (LT - GEN)	COLUMNS 43 - 78
CTAADS (LT - GEN)	COLUMNS 79 - 114

Note that each grade, LT through GEN, uses six fields. Also, this version of WOSM does not consider the grade of GEN for any of the computations; however, the GEN subfield must still be present since the preprocessor makes use of this field as a dummy field.

2.1.1.3. PREPROCESSOR

2.1.1.3.1. THE PROGRAM

The following ASCII FORTRAN program reads the PERSACS AUTH file and outputs a blank format, binary file - file 26. WOSM reads this binary file in the SUBROUTINE DATA.

```

      INTEGER CTRI,CTRO,COMBAT(6),LONG(6),STRTH(6),
1 SHORT(6),CONUS(6),CBTLNG(6),CBTSHT(6),CBTCNS(6),
2 TAADS(6),LTAADS(6),CTAADS(6),STAADS(6)
      CTRI=C
      CTRO=C
1      READ (10,3,END=2) NOS,STRTH,COMBAT,LONG
      READ (10,4) SHORT,CONUS,CBTLNG
      READ (10,4) CBTSHT,CBTCNS,TAADS
      READ (10,4) LTAADS,STAADS,CTAADS
      CTRI=CTRI+4
      WRITE (26) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,
1 CBTSHT,CBTCNS,TAADS,LTAADS,STAADS,CTAADS
      CTRO=CTRO+1
      GO TO 1
2      WRITE (6,5) CTRI,CTRO
      END FILE 26
      REWIND 26
      STOP
C
3      FORMAT (A3,3X,18I6)
4      FORMAT (6X,18I6)
5      FORMAT (1H0,4X,'FILE COMPLETE',4X,16,2X,'RECORDS READ',
14X,16,2X,'RECORDS WRITTEN')
      END

```

2.1.1.3.2. RUNSTREAM

In order to create the binary file 26 the following runstream must be used :

```

@ASG,T 10.
@ASG,T 26.
@ED AUTH.FILE,10.
EXIT
@XQT PREPROCESSOR.ABSOLUTE

```

2.1.2. DUTY SPECIALTY INVENTORY (DTSPEC)

2.1.2.1. FILE DESCRIPTION

The DTSPEC file contains the female officer population currently serving in a particular specialty. Also, the file contains the specialty's percentage in THS. This file contains a physical record for each valid three-digit specialty code (MOS). The data images associated with each record are :

Two-Digit Specialty Code ID	(ICMF)
Three-Digit Specialty Code ID	(MOS)
THS Percentage	(THSFAC)
Female Content By Grade	(CONTNT)

NOTE - Valid specialty codes in the AUTH file (NOS) are matched with valid specialty codes in the DTSPEC file (MOS). If a mis-match occurs, then the data for that specialty is skipped; hence, care should be taken when creating either of these two files. Also, the DTSPEC file can be used as a driver to selectively omit certain specialty codes from processing.

2.1.2.2. RECORD DESCRIPTION

A logical and physical record of the DTSPEC file consists of the following data formats :

ICMF	COLUMNS 1 - 2
MOS	COLUMNS 3 - 5
THSFAC	COLUMNS 10 - 11
CONTNT(LT - GEN)	COLUMNS 15 - 44

NOTE - As in the AUTH file the grade of GEN is not used.

2.1.2.3. INPUT ROUTINE

The DTSPEC file is entered into WOSM via the subroutine FILER. Refer to section 5 for information regarding this file and its input code.

2.1.2.3.1. RUNSTREAM

The following runstream creates file 25 for input into WOSM :

```
@ASG,T 25.
@ED DTSPEC.FILE,25.
EXIT
```

2.1.3. INSPEC/ADSPEC INVENTORY (DESIG)

2.1.3.1. FILE DESCRIPTION

The DESIG file contains the current female officer population by grade, year-of-service, primary specialty, and secondary specialty for grades LT through COL spanning over thirty years. Depending on the frequency of secondary specialties, a primary specialty can have from one to any number of logical records. The data images associated with a single physical record are :

Single-Digit Grade ID	(GRADE)
Two-Digit Year-Of-Service ID	(IYR)
Two-Digit Primary Specialty ID	(SPEC(1))
Two-Digit Secondary Specialty ID	(SPEC(I),I=2..11)
Four-Digit Population Amount	(INPUT(I),I=1..10)

NOTE - The number of additional specialties per physical record is limited to ten. If the number of additional specialties exceeds ten then a new physical record should be created with the same GRADE, IYR, and SPEC(1).

2.1.3.2. RECORD DESCRIPTION

A logical record can consist of any number of physical records where each physical record can contain from one to ten additional specialties. The following physical record description defines a variant number of additional specialties.

GRADE	COLUMNS 1
IYR	COLUMNS 2 - 3
SPEC(1)	COLUMNS 4 - 5
SPEC(2)	COLUMNS 7 - 8
INPUT(1)	COLUMNS 9 - 12
SPEC(3)	COLUMNS 14 - 15
INPUT(2)	COLUMNS 16 - 19
:	:
:	:

NOTE - The GRADE identifier is 1 = COL, 2 = LTC, ..., 5 = LT and the IYR identifier is 1 = present year, 2 = present year - 1, ..., 30 = present year - 29.

2.1.3.3. PREPROCESSOR

2.1.3.3.1. THE PROGRAM

The following ASCII FORTRAN program reads the DESIG file and produces an input file, file 12, for the WOSM model. The input file produced is the female officer population by primary specialty and grade.

```

PARAMETER NN=36,NT=NN+1
INTEGER INVPR(NT,6),A(NN),INV(5,NN,NN),SUMM(NN),
1 INVGR(NN,NN),I,J,K,NZERO,INVSUM,ICOL(6)
DATA (A(I),I=1,NN) /11,12,13,14,15,21,22,25,27,31,35,
136,37,41,42,43,44,45,46,48,49,51,52,53,54,71,72,73,74,
275,81,82,91,92,95,97/
NZERO=0
CALL INPRGR
DO 2 K=1,5
DO 1 I=1,NN
DO 1 J=1,NN
1 INVGR(I,J)=INV(6-K,I,J)

```

```

CALL SUM
INVPR(NT,K)=INVSUM
DO 2 I=1,NN
INVPR(I,K)=SUMM(I)
2 INVPR(I,6)=INVPR(I,6)+SUMM(I)
DO 3 I=1,5
3 INVPR(NT,6)=INVPR(NT,6)+INVPR(NT,I)
DO 5 I=1,NN
5 WRITE (12,14) A(I),(INVPR(I,J),J=5,1,1),NZERO
ENDFILE 12
WRITE(6,11)
WRITE(6,12)
DO 19 J=1,6
19 ICOL(J)=0
DO 20 I=1,NN
DO 21 J=1,5
ICOL(6)=ICOL(6)+INVPR(I,J)
21 ICOL(J)=ICOL(J)+INVPR(I,J)
20 WRITE(6,13) A(I),(INVPR(I,J),J=5,1,-1),NZERO,INVPR(I,6)
WRITE(6,26) (ICOL(J),J=5,1,-1),NZERO,ICOL(6)
WRITE(6,27)
WRITE(6,28) (INVPR(NT,I),I=5,1,-1),NZERO,INVPR(NT,6)
WRITE(6,29)
WRITE(6,30) (ICOL(I)-INVPR(NT,I),I=5,1,-1),NZERO,ICOL(6)
1-INVPR(NT,6)
WRITE (6,10)
STOP

C
14 FORMAT (12,1X,6I5)
10 FORMAT (1,1X,FEMALE CONTENT (LT-GEN) AT LOGICAL UNIT 12)
11 FORMAT (1,11X,TOTAL WOMEN OFFICERS DESIGNATED)
12 FORMAT (0,1X,SPEC,3X,LT,3X,CPT,3X,MAJ,3X,LTC,
13X,COL,3X,GEN,5X,ROW TOT)
13 FORMAT (1,2X,12,1X,6I6,6X,16)
26 FORMAT(0,1X,TOTAL,6I6,6X,16)
27 FORMAT(0,1X,ACTUAL)
28 FORMAT(0,1X,INVNT,6I6,6X,16)
29 FORMAT(0,1X,ADSPEC)
30 FORMAT(0,1X,INVNT,6I6,6X,16)
C
C
C
C
SUBROUTINE INPRGR
INTEGER GRADE,SPEC(11),INPUT(10),I,J,K,L,M,N,LASTGR,IYR
LASTGR=1
1 READ (5,7,END=5) GRADE,IYR,SPEC(1),(SPEC(I),INPUT(I-1)
1,I=2,11)
DO 4 M=1,11
IF (SPEC(M).EQ.0) GO TO 1
IF (SPEC(M).EQ.47) GO TO 4
IF (SPEC(M).EQ.70) GO TO 4
N=SPEC(M)
CALL SPNEW(N)
IF (M.EQ.1) GO TO 3
L=N
J=5-GRADE
IF (GRADE.EQ.LASTGR) GO TO 2
LASTGR=GRADE
2 INV(J,K,L)=INV(J,K,L)+INPUT(M-1)
GO TO 4
3 K=N
4 CONTINUE
GO TO 1
5 RETURN
C
C
C
C
7 FORMAT (I1,I2,I2,10(1X,I2,I4))
C
C
C
C
SUBROUTINE SPNEW(N)
INTEGER I
DO 10 I=1,NN

```

```

10  IF(N.EQ.A(I)) N=1
    CONTINUE
    RETURN
C
C
C
    SUBROUTINE SUM
    INTEGER I,J
    INVSUM=0
    DO 2 I=1,NN
    SUM(I)=0
    DO 1 J=1,NN
    SUM(I)=SUM(I)+INVGR(I,J)+INVGR(J,I)
1   INVSUM=INVSUM+INVGR(I,J)
2   SUM(I)=SUM(I)-INVGR(I,I)
    RETURN
    END

```

2.1.3.3.2. RUNSTREAM

The following runstream is used to create the input file 12 using the preprocessor code :

```

@ASG,T 12.
@XGT,PREPROCESSOR.ABSOLUTE
@ADD,E DESIG.FILE

```

2.1.4. SPECIALTY CODES (SPECS)

2.1.4.1. FILE DESCRIPTION

The SPECS file is a list of all valid two-digit specialty codes and their accession/nonaccession status. The number of physical records is equal to the number of valid specialty codes. A physical record consists of:

Two-Digit Specialty Code ID	(CMFTAB)
Single-Digit Nonaccession Flag	(NONACC)

NOTE - It is very important that all valid specialty codes be listed in this file. The DTSPEC and DESIG files use the threedigit specialty code identifier to drive WOSM through the computation phase, while the SPECS file drives WOSM through the PREFERRED DISTRIBUTION and AUTHORIZATIONS phases.

2.1.4.2. RECORD DESCRIPTION

A logical and physical record is constructed by the following data formats:

CMFTAB	COLUMNS 1 - 2
comma	COLUMNS 3
NONACC	COLUMNS 4

NOTE - CMFTAB and NONACC are arrays which are indexed according to a specialty code's numeric position in the sequence of specialty codes; thus, this file should be constructed in lowest to highest order.

2.1.4.3. INPUT ROUTINE

The SPECS file is entered into WOSM via the main program. Refer to section 5 for more information concerning this file.

2.1.5. CASUALTY REPLACEMENT RATES (CASREP)

2.1.5.1. FILE DESCRIPTION

The CASREP file consists of casualty replacement rates for D+30, D+60, and D+90 days of war by three-digit specialty code. Each record consists of the following data images:

Two-Digit Specialty Code ID	(ICMF)
Three-Digit Specialty Code ID	(MOS)
D+30 Casualty Replacement Rate	(RCAS)
D+60 Casualty Replacement Rate	(RCAS)
D+90 Casualty Replacement Rate	(RCAS)

NOTE - Only one RCAS per specialty is read into WOSM. This is achieved by using a specific run option (see section 4).

2.1.5.2. RECORD DESCRIPTION

A logical and physical record is built by using the following data format:

ICMF	COLUMNS 1 - 2
MOS	COLUMNS 4 - 6
RCAS(D+30)	COLUMNS 11 - 16
RCAS(D+60)	COLUMNS 21 - 26
RCAS(D+90)	COLUMNS 31 - 36

NOTE - The array CASRAT, in WOSM's main program, is built using the ICMF and MOS as indices. It is of extreme importance that these parameters reflect the same two and three-digit codes used in the DESIG, DTSPEC and SPFCS files.

2.1.5.3. INPUT ROUTINE

The selected casualty replacement rates are input into the WOSM model via the main program. The selection of a casualty replacement rate depends on the run option used on the AXQT card. Refer to section 4 and section 3 for more information concerning this file.

2.1.6. PREFERRED DISTRIBUTION RATES (PREDIS)

2.1.6.1. FILE DESCRIPTION

The PREDIS file contains the preferred distribution of interchangeable spaces set aside for women officers. It is used primarily to rearrange those spaces set aside for women officers based upon a predetermined distribution when the present WOSM distribution does not satisfy the needs of personnel management. This file can only be created after a WOSM run has been completed and the distribution of female spaces is known. The PREDIS file contains a record for each valid two-digit specialty code where the fields of this record are defined as :

Two-Digit Specialty Code ID	(ISP)
Five-Digit Distribution Rate	(PCT)

2.1.6.2. RECORD DESCRIPTION

Each record is built using the following data format :

ISP	COLUMNS 1 - 2
PCT	COLUMNS 3 - 7

NOTE - Care must be taken to ensure that all two-digit specialty codes used in the PREDIS file are the same two-digit specialty codes used throughout the system.

2.1.6.3. INPUT ROUTINE

The PREDIS file is entered into WOSM via the SUBROUTINE PREDIS only if the proper run option was set (see sections #3, #4, and #5).

2.1.7. MISCELLANEOUS INPUTS

2.1.7.1. TOUR LENGTHS (STL,LTL,MAXCL)

The three tour lengths have been removed from the WOSM code as constants. They can now be entered into WOSM as parameters. WOSM reads these parameters from the runstream via the main program (see section 5 and section 3). The tour lengths defined as:

Two-Digit Short-Tour Length	(STL)
Two-Digit Long-Tour Length	(LTL)
Two-Digit Maximum CONUS Tour	(MAXCL)

NOTE - Tour lengths are represented as months and are coded in the runstream beginning in column 1 separated by a space.

2.1.7.2. MAXIMUM FEMALE STRENGTH CONSTRAINT (NUM)

The NUM parameter is read into WOSM by the SUBROUTINE FILER only if the constrained run option has been turned on (see section 4).

This parameter is coded in the runstream and is read by WOSM using a blank format read statement; thus, NUM can be any size integer the user wishes (see section 3).

2.2. AGE BY GRADE AND PAIR (AGEBGPR)

The AGEBGPR MODEL uses the following data files :

- SPECIALTY CODES
- INSPEC/ADSPEC INVENTORY
- FEMALE CONTINUATION RATES
- OVERALL FEMALE CONTINUATION RATES
- GRADE DISTRIBUTION
- LATERAL ENTRIES
- WOSM FEMALE AUTHORIZATIONS
- THS INVENTORY
- PRESET ACCESSION LEVELS
- UTILIZATION RATES
- SPECIALTY CODES NOT DESIGNATED FOR ADSPEC
- PROPONENT PREFERENCE MATRIX

The following files are necessary to the operation of OASYS : SPECIALTY CODES, INSPEC/ADSPEC INVENTORY, FEMALE CONTINUATION RATES, OVERALL FEMALE CONTINUATION RATES, GRADE DISTRIBUTION, WOSM FEMALE AUTHORIZATIONS, UTILIZATION RATES, and the PROPONENT PREFERENCE MATRIX. The remaining files are optional.

2.2.1. SPECIALTY CODES (SPECS)

2.2.1.1. FILE DESCRIPTION

The SPECS file used in AGEBGPR is the same file used in WOSM. For documentation concerning this file refer to the FILE DESCRIPTION (section 2.1.4.1) in the WOSM input file section.

2.2.1.2. RECORD DESCRIPTION

Refer to WOSM input file section (section 2.1.4.2)

2.2.1.3. INPUT ROUTINE

The SPECS file is read into the AGEBGPR MODEL by the main program. All previous warnings as to the integrity of the twodigit specialty codes used applies also to the AGEBGPR MODEL.

2.2.2. INSPEC/ADSPEC INVENTORY (INV-YG-GP)

2.2.2.1. FILE DESCRIPTION

The INV-YG-GP file is the same file (DESIG) used in WOSM. Refer to the WOSM input file section for details concerning this file (section 2.1.3.1).

2.2.2.2. RECORD DESCRIPTION

Same as the DESIG file used in WOSM. Refer to WOSM input file section (section 2.1.3.2).

2.2.2.3. INPUT ROUTINE

The INV-YG-GP file enters AGE8GP via the main program. All year groups are read into the model, those year groups are "aged" a single year, the resulting 8th year group gets additional specialties, and the calculated new 2d LT (accessions) year group is added to the INV-YG-GP file. When AGE8GP is executed for a period of successive years, the INV-YG-GP file is internally read by the model; thus, a new inventory is created, output, and read by the same program (see section 3).

2.2.3. FEMALE CONTINUATION RATES (CRATE)

2.2.3.1. FILE DESCRIPTION

The CRATE file contains by two-digit specialty and year group the continuation rate for female officers. Each specialty has three records associated with it. The data imaged for those records are :

Two-Digit Specialty Code ID (ISP)
Four-Digit Continuation Rate For Each Yr.(RINPUT)
(includes decimal point)

2.2.3.2. RECORD DESCRIPTION

The data formats for the three records for each specialty code are :

RECORD 1 =====

ISP	COLUMNS 1 - 2
comma	COLUMN 3
RINPUT(1)	COLUMNS 4 - 7
comma	COLUMN 8
RINPUT(2)	COLUMNS 9 - 12
:	:
:	:
RINPUT(10)	COLUMNS 40 - 52

RECORD 2 =====

RINPUT(11)	COLUMNS 1 - 4
comma	COLUMN 5
RINPUT(12)	COLUMNS 6 - 9
comma	COLUMN 10
:	:
:	:
RINPUT(20)	COLUMNS 46 - 49

RECORD 3 =====

RINPUT(21)	COLUMNS 1 - 4
comma	COLUMN 5
RINPUT(22)	COLUMNS 6 - 9
comma	COLUMN 10
:	:
:	:
RINPUT(30)	COLUMNS 46 - 49

2.2.3.3. INPUT ROUTINE

The CRATE file is read into AGE3GPR by the SUBROUTINE READCR. READCR places the CPATES into a matrix called "CRATE" where the row is indexed by the year group and the columns are indexed by the two-digit specialty code.

NOTE - The CRATE file used by the AGE3GPR MODEL was created by a preprocessor, MOD-CRATES. See the MODIFY CONTINUATION RATES pre processor code for more information (section 6).

2.2.4. OVERALL FEMALE CONTINUATION RATES

2.2.4.1. FILE DESCRIPTION

This file represents the OPMD overall continuation rate for year groups one through thirty. It contains three records where the data image for those records is :

Four-Digit Continuation Rate by Yr.Group (CRATE)
(includes decimal point)

2.2.4.2. RECORD DESCRIPTION

The data formats for the three records are :

RECORD 1 =====

CRATE(NT,1)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,2)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,10)	COLUMNS 46 - 49

RECORD 2 =====

CRATE(NT,11)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,12)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,20)	COLUMNS 46 - 49

RECORD 3 =====

CRATE(NT,21)	COLUMNS 1 - 4
comma	COLUMN 5
CRATE(NT,22)	COLUMNS 6 - 9
comma	COLUMN 10
.	.
CRATE(NT,30)	COLUMNS 46 - 49

NOTE - The variable NT represents the last row of the CRATE matrix. The completed matrix is indexed by the year groups one through thirty plus the OPMD average for the rows and the columns are indexed by the two-digit specialty codes.

2.2.4.3. INPUT ROUTINE

This file enters AGEBOPR by the SUBROUTINE READCR. It is the last read statement of this routine.

2.2.5. GRADE DISTRIBUTION (GRADE)

2.2.5.1. FILE DESCRIPTION

The GRADE file contains integer formatted data by years of service for 2d LT through COL. It represents the ideal distribution of grades based on given year-of-service. There are thirty records, one for each year-of-service, consisting of six fields :

Five-Digit Grade Distribution Rate (GRADE)

2.2.5.2. RECORD DESCRIPTION

Each record consists of the following fields :

GRADE(1)	COLUMNS 1 - 5
comma	COLUMN 6
GRADE(2)	COLUMNS 7 - 11
comma	COLUMN 12
GRADE(3)	COLUMNS 13 - 17
comma	COLUMN 18
GRADE(4)	COLUMNS 19 - 23
comma	COLUMN 24
GRADE(5)	COLUMNS 25 - 29
comma	COLUMN 30
GRADE(6)	COLUMNS 31 - 35

2.2.5.3. INPUT ROUTINE

The GRADE file is read into AGEGBPR via the SUBROUTINE READGR. Grades 1 and 2 (2d LT and 1st LT) are added together resulting in a rate for all LTs. READGR returns a matrix of fractional distribution rates where the rows are indexed by the grade (LT=1,...,COL=5) and the columns are indexed by the year-of-service (1 - 30).

2.2.6. LATERAL ENTRIES (REDESIG)

2.2.6.1. FILE DESCRIPTION

The REDESIG file contains by year group and specialty the total number of female officers redesignated to another specialty. This file can contain any number of records where the elements of a record are :

Two-Digit Year-of-Service ID	(J)
Two-Digit Current Specialty ID	(INPUT(1))
Two-Digit Re-designated Specialty ID	(INPUT(2))
Total Population To Be Redesignated	(NUM)

2.2.6.2. RECORD DESCRIPTION

The REDESIG file is read into AGEGBPR using a blank format; thus column specifications are free-format. The only restriction being that all fields should be separated by a comma. The following is an example :

J	COLUMNS 1 - 2
comma	COLUMN 3
INPUT(1)	COLUMNS 4 - 5
comma	COLUMN 6
INPUT(2)	COLUMNS 7 - 8
comma	COLUMN 9
NUM	COLUMNS 10 -

NOTE - The NUM field begins in column 10 and spans the number of columns needed to represent the population to be redesignated as an integer number.

2.2.6.3. INPUT ROUTINE

The REDESIG file is input into AGEGBPR via the main program prior to calculating the new year group accessions. If there are no redesignations then replace the GAND card with an EOF card (see section 3).

2.2.7. WOSM FEMALE AUTHORIZATIONS (AUTH)

2.2.7.1. FILE DESCRIPTION

The AUTH file represents the link between AGE9GPR and WOSM. It contains the distribution of female officer authorizations by two-digit specialty code and grade. WOSM outputs this file in the SUBROUTINE FILER or in the SUBROUTINE PREDIS depending on the run option used (see section 4). This file contains a record for each valid two-digit specialty code. The data images defined are (using AGE9GPR keywords) :

Two-Digit Specialty Code ID	(ISP)
Five-Digit Auth. Amount by Grade	(INPUT)
Five-Digit Total Auth. for All Grades	(TOTAL)*

NOTE - The TOTAL field is not used by AGE9GPR but is included in the file for information purposes.

2.2.7.2. RECORD DESCRIPTION

Each record is defined by the following data formats :

ISP	COLUMNS 2 - 3
INPUT(1) = COL	COLUMNS 4 - 27
INPUT(2) = LTC	COLUMNS 9 - 17
INPUT(3) = MAJ	COLUMNS 14 - 18
INPUT(4) = CPT	COLUMNS 19 - 23
INPUT(5) = LT	COLUMNS 24 - 28
TOTAL	COLUMNS 29 - 33

2.2.7.3. INPUT ROUTINE

This file is read into AGE9GPR at two points - (1) the SUBROUTINE ACCESS reads all the grade fields of this file prior to calculating the accessions, and (2) the main program reads only the field grade authorizations prior to ADSPEC designation.

2.2.8. THS INVENTORY (THS)

2.2.8.1. FILE DESCRIPTION

The THS file contains the current population of female officers in THS by grade, primary specialty, and secondary specialty. The structure of this file is similar to the INSPEC/ADSPEC inventory file with the exception of the year-of-service identifier :

Single-Digit Grade ID	(GRADE)
Two-Digit Primary Specialty ID	(SPEC(1))
Two-Digit Secondary Specialty ID	(SPEC(I), I=2..11)
Four-Digit Population Amount	(INPUT(I), I=1..10)

2.2.8.2. RECORD DESCRIPTION

The number of records per primary specialty is limited to the number of additional specialties listed for that primary specialty. The maximum per record is ten. The following is a description of a variant number of additional specialties :

GRADE	COLUMN 2
SPEC(1)	COLUMNS 4 - 5
SPEC(2)	COLUMNS 7 - 8
INPUT(1)	COLUMNS 9 - 12
SPEC(3)	COLUMNS 14 - 15
INPUT(2)	COLUMNS 16 - 19
:	:
:	:
:	:

2.2.8.3. INPUT ROUTINE

AGE3GPR reads the THS file at two points during program execution - (1) SUBROUTINE ACCESS, and (2) the main program. In both cases the SUBROUTINE INVNT6 is used as the input routine.

2.2.9. PRESET ACCESSION LEVELS (PRESETS)

2.2.9.1. FILE DESCRIPTION

The PRESETS file contains by two-digit specialty code the desired number of 2d LT accessions. By using this file all previous accession calculations are disregarded with the exception of those specialties not preset by this file. The data images in this file are :

Two-Digit Specialty Code ID	(ISP)
Preset Accession Level	(IADJ)

2.2.9.2. RECORD DESCRIPTION

This file can contain from one to all the specialty codes used; thus, the number of records associated with this file can vary. Each record is read into AGE BGPR using a blank format; hence, the adjustment field (IADJ) can vary in size. The data format is :

ISP	COLUMNS 1 - 2
comma	COLUMN 3
IADJ	COLUMNS 4 -

2.2.9.3. INPUT ROUTINE

The PRESETS file enters AGE BGPR via the SUBROUTINE ACCESS. If the user wishes not to preset the accession levels then replace the @ADD card with an @EOF card.

2.2.10. UTILIZATION RATES (URATES)

2.2.10.1. FILE DESCRIPTION

The URATES file contains by two-digit specialty the target MAJ utilization of those specialties where a specific fixed point operating level is desired. The data images involved are :

Two-Digit Specialty Code ID (ISPEC)
 Three-Digit Fixed Point Operating Level (X)
 (includes decimal point)

2.2.10.2. RECORD DESCRIPTION

The URATES file is read into AGE BGPR using a blank format; thus, field lengths can vary. An example data format :

ISPEC	COLUMNS 1 - 2
comma	COLUMN 3
X	COLUMNS 4 - 6

2.2.10.3. INPUT ROUTINE

The SUBROUTINE FAR inputs the URATES file into AGE BGPR. Only those specialties listed in the file will have a fixed point operating level, all other specialties will have their operating levels calculated using a sum of squares minimization technique.

2.2.11. SPECIALTY CODES NO DESIGNATION (NODESIG)

2.2.11.1. FILE DESCRIPTION

The NODESIG file contains by two-digit specialty a list of those specialties which policy precludes from receiving ADSPEC designations. The data image is :

Two-Digit Specialty Code ID (ISPEC)

2.2.11.2. RECORD DESCRIPTION

The NODESIG file can contain any number of specialties up to the total number of specialties used; hence, the number of records can vary. Each record has the following data format :

ISPEC COLUMNS 1 - 2

2.2.11.3. INPUT ROUTINE

The NODESIG file enters AGE BGPR via the SUBROUTINE ADSPEC. This file is read prior to any ADSPEC calculations. If the user wishes not to restrict the "ADSPEC-ing" process then the @ADD card should be replaced with an @EOF card.

2.2.12. PROPONENT PREFERENCE MATRIX (PREF-MAT)

2.2.12.1. FILE DESCRIPTION

The PREF-MAT file contains by two-digit specialty code the proponent preferences for additional specialty designations using a minimum and maximum range of percentages. The data images involved in producing this matrix are :

Two-Digit Primary Specialty ID	(IE)
Two-Digit Secondary Specialty ID	(IC)
One to Three-Digit Integer Percentage	(D)
Single-Digit Type Width Flag	(ITYPE)

2.2.12.2. RECORD DESCRIPTION

The number of records involved are based on the total number of INSPEC/ADSPEC combinations. Each record has the following format :

IS	COLUMNS 1 - 2
comma	COLUMN 3
IC	COLUMNS 4 - 5
comma	COLUMNS 6
D	COLUMNS 7, 7 - 8, or 7 - 9
comma	COLUMNS 8, 9, or 10
ITYPE	COLUMNS 9, 10, or 11

2.2.12.3. INPUT ROUTINE

The proponent preference matrix is read into AGE3GPR via the SUBROUTINE ADSPEC. It is used in conjunction with the RANGE WIDTH (see MISCELLANEOUS INPUTS section 2.2.13) and the type width flag (ITYPE) to produce the minimum and maximum range of percentages.

2.2.13. MISCELLANEOUS INPUTS

Refer to section 3 for more information concerning the following inputs.

2.2.13.1. CURRENT AND PROJECTION YEARS (NOWYR,PROJYR)

The current and projection years are read into the AGE3GPR MODEL by the main program. These parameters are two-digit integers separated by a comma. The difference of these two parameters sets the number of times AGE3GPR will cycle or 'age' the force.

2.2.13.2. OMF SOURCE DATE (OMF)

The OMF source date is read into AGE3GPR by the main program from the runstream. It is placed into the runstream as a five-character string consisting of a three-character month and a two-character year.

2.2.13.3. FAR LIMITS (RATELO,RATEHI)

The FAR LIMITS for MAJ, LTC, and COL are read by AGE3GPR from the runstream by the main program. These parameters consist of six real values, alternating low and high limits, which are separated by commas.

2.2.13.4. ADSPEC YEAR GROUP (IYGTBD)

The ADSPEC YEAR GROUP, usually eight, is read by AGE3GPR by the main program from the same line as the FAR LIMITS. This integer parameter sets the year group which will receive ADSPEC designations.

2.2.13.5. CONSTRAINED NEW 2d LT NUMBER (NUM)

This parameter limits the total number of accessions calculated by the SUBROUTINE ACCESS. It is an integer value read by that subroutine from the runstream.

2.2.13.6. RECALLS (J,NUM)

The RECALL parameters consist of a year-of-service identifier and a population amount separated by a comma. These parameters are read by the main program from the runstream and added to the year group's inventory.

2.2.13.7. SINGLE TRACK ELEMENTS (ISPEC,XX)

Single track elements consist of a two-digit specialty code and a percentage. These parameters are read into AGE3GPR by the SUBROUTINE ADSPEC from the runstream. They control the percentage of a specialty that will not receive additional specialties.

2.2.13.9. PREFERENCE RANGE WIDTH (WIDTH)

This real parameter is a percentage which will be used to compute upper and lower limits for the proponent preference matrix (see section 2.2.12). It is read into AGEPR by the SUBROUTINE ADSPEC from the runstream.

3. RUNSTREAM

The following runstream is used to merge the preprocessors, WOSM, and the AGESGPR MODEL together as one entity. The example shown is for a single-year execution which 'ages' the thirty-year groups one year, calculates a new accession year group, and ADSPECs the new eighth year group. In order to 'age' the force more than one year, several new runstream lines must be added and a block of existing lines must be dittoed.

```

@ASG,T 4.,///500 . ACCESSION/DESIGNATION SUMMARY OUTPUT FILE
@ASG,T 8.,///500 . NEXT FY INVENTORY BY SC PAIR,YOS,GRADE OUTPUT
. FILE
@ASG,T 9.,///500 . NEXT FY INVENTORY BY SC PAIR,GRADE OUTPUT FILE
@ASG,T 10.,///500 . INPUT FILE FOR CREATE 26, OUTPUT FILE FOR WOSM
@ASG,T 12. . OUTPUT FILE FOR CREATE 12, INPUT FILE FOR WOSM
@ASG,T 25. . WOSM INPUT FILE - DTSPEC INVENTORY FILE
@ASG,T 26. . WOSM INPUT FILE - PERSACS AUTH FILE
@ASG,T 29.,///500 . INVENTORY FOR START FY TO END FY BY SC,GRADE
. OUTPUT
@ED PERSACS AUTH FILE,10. . CREATE FILE 10 INPUT FILE
EXIT
@ED DTSPEC FILE,25. . CREATE FILE 25 INPUT FILE
EXIT
@XQT AUTH FILE PREPROCESSOR . CREATE FILE 26 INPUT FILE
@XQT DESIG FILE PREPROCESSOR . CREATE FILE 12 INPUT FILE
@ADD,E DESIG FILE . INSPEC/ADSPEC INVENTORY
@ERS 10. . PREPARE 10 FOR WOSM OUTPUT
@XQT,OPTIONS WOSM MODEL . EXECUTE THE MODEL
@ADD,E SPECS FILE . SPECIALTY CODES
@ADD,E CASREP FILE . CASUALTY REPLACEMENT RATES
12 10 48 . TOUR LENGTHS (SHORT, LONG, CONUS)
@S60 . TOTAL FEMALE AUTH CONSTRAINT
@ADD,E PREDIS FILE . PREFERRED DISTRIBUTION
@COPY,1 10.,FEMALE AUTH FILE . WOSM OUTPUT FILE
@ERS 10. . ERASE TEMPORARY FILE 10
@ERS 12. . ERASE TEMPORARY FILE 12
@ERS 25. . ERASE TEMPORARY FILE 25
@ERS 26. . ERASE TEMPORARY FILE 26
@ERS 27. . ERASE TEMPORARY FILE 27
@ERS 28. . ERASE TEMPORARY FILE 28
@ERS 29. . ERASE TEMPORARY FILE 29
@XQT AGESGPR MODEL . EXECUTE THE MODEL
@ADD,E SPECS FILE . SPECIALTY CODES
@T,84 . BEGINNING AND ENDING YEARS
SFPP3 . BEGINNING INVT OMF SOURCE DATE
.333,.666,.333,.666,.333,.666,8, . MAJ, LTC, COL FAR LIMITS, AND
. ADSPEC YRGP
@ADD,E INV-YG-GP FILE . INSPEC/ADSPEC INVENTORY
@ADD,E CRATES FILE . CONTINUATION RATES BY SPL
@ADD,OVERALL CRATES . OPMD CONTINUATION RATES
@ADD,GRADE DIST FILE . GRADE DISTRIBUTION
@EOF . END OF REDESIGNATION DATA (USUALLY INTO SC 15 & 71)
@ADD,E FEMALE AUTH FILE . WOSM OUTPUT FILE
@ADD,E THS FILE . THS INVENTORY
@COOQ . CONSTRAINED NEW ?LT ACCESSION NUMBER
@EOF . PRESET ACCESSION LEVELS
@EOF . END OF RECALL DATA
@ADD,E FEMALE AUTH FILE . WOSM OUTPUT FILE
@ADD,E THS FILE . THS INVENTORY
@ADD,E URATES FILE . ENTER PRESET MAJ URATES HERE (OPTIONAL)
@ADD,E NODESIG FILE . SPCS NOT DESIGNATED FOR ADSPEC
@EOF . ENTER SINGLE TRACK ELEMENT HERE
.20, . PREFERENCE RANGE WIDTH
@ADD,E PREF-MAT FILE . PROPONENT PREFERENCE MATRIX

```

3.1. TEMPORARY MASS STORAGE ASSIGNMENT

This section of the runstream sets aside temporary mass storage to be used by both models :

```

&ASG,T 4.,///500 . ACCESSION/DESIGNATION SUMMARY OUTPUT FILE
&ASG,T 8.,///500 . NEXT FY INVENTORY BY SC PAIR,YOS,GRADE OUTPUT
                  . FILE
&ASG,T 9.,///500 . NEXT FY INVENTORY BY SC PAIR,GRADE OUTPUT FILE
&ASG,T 10.,///500 . INPUT FILE FOR CREATE 26, OUTPUT FILE FOR WOSM
&ASG,T 12. . OUTPUT FILE FOR CREATE 12, INPUT FILE FOR WOSM
&ASG,T 25. . WOSM INPUT FILE - DTSPEC INVENTORY FILE
&ASG,T 26. . WOSM INPUT FILE - PERSACS AUTH FILE
&ASG,T 29.,///500 . INVENTORY FOR START FY TO END FY BY SC,GRADE
                  . OUTPUT

```

The example shown is for a single year run of AGE3GPR. For multiple year runs three additional temporary files must be assigned for each year of execution; thus, each year needs three separate files to store the output information :

```

R4 ----> FILES 8, 9, 10
R5 ----> FILES 11, 12, 13
R6 ----> FILES 14, 15, 16
:
:
:

```

The output files are defined as :

```

FILES 8,11,14... New FY inventory by year group, grade
                  and specialty pair
FILES 9,12,15... New FY inventory by grade and specialty
                  pair
FILES 10,13,16.. New accessions/ADSPECS for the 8th year
                  group

```

FILE 4 contains the accessions/ADSPECS information for the span of years designated by the beginning/ending years, and FILE 29 contains inventory information for that span of years.

3.2. PREPROCESSOR SECTION

The following section prepares the logical units 10,12,25 and 26 for input into WOSM :

```

&ED PERSACS AUTH FILE,10. . CREATE FILE 10 INPUT FILE
EXIT
&ED DTSPEC FILE,25. . CREATE FILE 25 INPUT FILE
EXIT
&XQT AUTH FILE PREPROCESSOR . CREATE FILE 26 INPUT FILE
&XQT DESIG FILE PREPROCESSOR . CREATE FILE 12 INPUT FILE
&ADD,E DESIG FILE . INSPEC/ADSPEC INVENTORY
&ERS 10. . PREPARE 10 FOR WOSM OUTPUT

```

FILE 10 contains the PERSACS information which is input into the AUTH FILE preprocessor. FILE 12 contains the DESIG FILE information output from the DESIG FILE preprocessor. FILE 25 contains the DTSPEC FILE information, and FILE 26 contains the output information from the AUTH FILE preprocessor. After pre processing is complete FILE 10 is erased.

3.3. WOSM EXECUTION SECTION

This section executes WOSM and adds the appropriate data files and runstream information :

@XQT,OPTIONS WOSM	. EXECUTE THE MODEL
@ADD,E SPECS FILE	. SPECIALTY CODES
@ADD,E CASREP FILE	. CASUALTY REPLACEMENT RATES
12 30 4P	. TOUR LENGTHS (SHORT, LONG, CONUS)
@S60	. TOTAL FEMALE AUTH CONSTRAINT
@ADD,E PREDIS FILE	. PREFERRED DISTRIBUTION

See section 3 for more information concerning this part of the runstream.

3.4. MERGE SECTION

This section prepares the temporary files for use by the AGERGPR MODEL :

@COPY,I 10.,FEMALE AUTH FILE	. WOSM OUTPUT FILE
@ERS 10.	. ERASE TEMPORARY FILE 10
@ERS 12.	. ERASE TEMPORARY FILE 12
@ERS 25.	. ERASE TEMPORARY FILE 25
@ERS 26.	. ERASE TEMPORARY FILE 26
@ERS 27.	. ERASE TEMPORARY FILE 27
@ERS 28.	. ERASE TEMPORARY FILE 28
@ERS 29.	. ERASE TEMPORARY FILE 29

FILE 10, which contains the female officer authorizations, is copied to a permanent file and files 10,12,25,26,27,28, and 29 are erased.

3.5. AGERGPR EXECUTION SECTION

This section runs AGERGPR for the specified number of years. The example shown is for a single year run :

@XQT,AGEGPR MODEL	. EXECUTE THE MODEL
@ADD,E SPECS FILE	. SPECIALTY CODES
@3,94	. BEGINNING AND ENDING YEARS
SEP 83	. BEGINNING INVT OMF SOURCE DATE
.333,.666,.333,.666,.333,.666,8	. MAJ, LTC, CCL FAR LIMITS, AND
	. ADSPEC YRGP
@ADD,E INV-YG-GR FILE	. INSPEC/ADSPEC INVENTORY
@ADD,E CRATES FILE	. CONTINUATION RATES BY SPC
@ADD,OVERALL CRATES	. OPMD CONTINUATION RATES
@ADD,GRADE DIST FILE	. GRADE DISTRIBUTION
@EOF	. END OF REDESIGNATION DATA (USUALLY INTO SC 15 & 71)
@ADD,E FEMALE AUTH FILE	. WOSM OUTPUT FILE
@ADD,E TMS FILE	. TMS INVENTORY
0000	. CONSTRAINED NEW 2LT ACCESSION NUMBER
@EOF	. PRESET ACCESSION LEVELS
@EOF	. END OF RECALL DATA
@ADD,E FEMALE AUTH FILE	. WOSM OUTPUT FILE
@ADD,E TMS FILE	. TMS INVENTORY
@ADD,E URATES FILE	. ENTER PRESET MAJ URATES HERE (OPTIONAL)
@ADD,E NODESIG FILE	. SPCS NOT DESIGNATED FOR ADSPEC
@EOF	. ENTER SINGLE TRACK ELEMENT HERE
.20,	. PREFERENCE RANGE WIDTH
@ADD,E PREF-MAT FILE	. PROPOONENT PREFERENCE MATRIX

In order to run AGERGPR for more than one year the block of lines following the INSPEC/ADSPEC inventory @ADD card must be repeated for each year of execution.

4. RUN OPTIONS

This section deals with the options available to the OASYS user, primarily the WOSM execution options. Run options are placed on the WOSM @XQT card following execute statement :

@XQT,options WOSM.MODEL

options are : C,F,I,M,P,R,X,Y,Z

4.1. C - OPTION

The 'C' option sets WOSM into constrained mode. The presence of this option dictates that a FEMALE CONSTRAINT NUMBER should be included in the runstream (see section 3). The default mode for WOSM is unconstrained. Leave off the 'C' option to run WOSM in unconstrained mode.

4.2. F - OPTION

The 'F' option signifies that this is a PREFERRED DISTRIBUTION run. WOSM will execute the PREDIS routine which reads in the PREDIS file (see section 3) from the runstream. The default mode will not read in the PREDIS file.

4.3. I - OPTION

The 'I' option instructs WOSM to read in the DESIG file. If this option is used then the DESIG file @ADD card should be included in the runstream (see section 3). The default mode is that the DESIG file will not be read into WOSM.

4.4. M - OPTION

The 'M' option causes WOSM to print an extra report - the ROTATION EQUITY report. This report can be used to investigate problem specialties with respect to the rotation structure. The default mode is that this report will not be printed.

4.5. P - OPTION

The 'P' option turns on the OMF COMPARE PRINT switch. If this option is used then an extra report will be printed which shows all specialties not included in the WOSM processing and the reasons why they were not included. The default mode is that this report will not be printed.

4.6. R - OPTION

This option controls the formatting of the female officer authorizations output file. If this option is used then the output file will be formatted for use by the AGERGPR MODEL. If the default mode is used then the output file will be formatted for use by the YOS MODEL.

4.7. X,Y,Z - OPTIONS

Only one of these options should be used by WOSM. These options instruct WOSM as to which casualty replacement rate should be input into the model. The following defines their actions :

X - D+30 CASUALTY REPLACEMENT RATES
Y - D+60 CASUALTY REPLACEMENT RATES
Z - D+90 CASUALTY REPLACEMENT RATES

The default mode is that WOSM will not use casualty replacements during this run.

5. WOSM CODE

The following ASCII FORTRAN CODE listing is the complete WOSM model as modified by the Concepts Analysis Agency. The source code is heavily commented and should be easily read by any FORTRAN programmer. This listing was prepared using the SCIENCE APPLICATIONS, INC. SOFTWARE DESIGN AND DOCUMENTATION LANGUAGE (SAI-SDDL). References to SPERRY system routines include the SPERRY manual title and number.

```

35      1      PROGRAM MAIN
40      317     SUBROUTINE FILER ($)
47      735     SUBROUTINE READR ($)
48      755     SUBROUTINE MAXRPT ($)
50      876     SUBROUTINE FRPT ($)
50      913     ENTRY TITLE
51      996     ENTRY TOTLE
53      1098    ENTRY GRAND
54      1136    SUBROUTINE DATA ($)
56      1241    SUBROUTINE SUMR ($)
58      1316    SUBROUTINE DIST ($)
60      1448    SUBROUTINE CMFT ($)
63      1617    SUBROUTINE TYPER
64      1664    SUBROUTINE SPCONV (IARG,A,NN)
65      1714    SUBROUTINE ROTREP($)
67      1840    SUBROUTINE LEGEND
68      1869    SUBROUTINE PREDIS($)
70      1965    SUBROUTINE OPT(NOPT)
71      2007    SUBROUTINE FACSF (ARG)
72      2030    SUBROUTINE ADATE (DATE,TIME)

```

73 MODULE INVOCATION TREE

74 CROSS REFERENCE -- MODULE

PROGRAM MAIN

DEPARTMENT OF THE ARMY
UNITED STATES ARMY CONCEPTS ANALYSIS AGENCY
FORCE SYSTEMS DIRECTORATE
PERSONNEL SYSTEMS ANALYSIS DIVISION

OFFICER ASSIGNMENT SYSTEM STUDY
ORIGINAL SOURCE CODE : MILPERCEN WOMEN'S OFFICER STRENGTH MODEL
EXTRACTIONS, CONVERSIONS AND MODIFICATIONS

BY
R.M. MALAY OCT 1987

PARAMETER MAXCMF=40

REAL RATIO, TOTFIL(MAXCMF), TOTACC(MAXCMF), CASRAT(MAXCMF, 26), PCAS,
TTHSPC, TOTPCT(MAXCMF)
INTEGER AVAIL/C/, AVAIL1/C/, AVAIL2/C/, CBTCNS(6), CBTLNG(6),
CBTSHT(6), CMFTAR(MAXCMF), CMT(5), CNTL, COMBAT(6), NOPT, J, THSREQ(5),
CONTNT(6), CONUS(6), CTAADS(6), FLAG, GTO(10), IPAGE, VONACC(MAXCMF),
KEEP, LONG(6), LTAADS(6), MALE(5), FEMACC(6), LTL, STL, RFLAG, CRAT,
NNOS, NONCOM(5), CASREP(5), CARPRO(5), PROP, RET/C/, POTREFJ(5), SHORT(4),
MMOS, STAADS(6), STRTH(6), SUM/O/, TAADS(6), MAXCL, MAXGRD/5/, THSFAC,
TOP, TOTAL(11), TOTCMF(MAXCMF), TOTCNT(MAXCMF), TOTATH(MAXCMF),
INVENT(5, MAXCMF), JNVENT(5), ISPEC(MAXCMF), TOTMLE(MAXCMF),
TOTINV(MAXCMF), IC*F, I, NUM, JCMF, NUMCMF, TOTTHS(MAXCMF),
TOTINT(MAXCMF), TOTSAS(MAXCMF), IFILE
CHARACTER GRD(5)*3, MOS*3, NOS*2, PRTON*1, DATE*5, NACC*1, TIME*2,
RTABLE(7)*20, PTAB*20, F135(15)*4, NACCFG(MAXCMF)*1, F27*12, F29*12,
FRAT(5)*4, MAX43(5)*1

EQUIVALENCE (NNOS, NOS), (MMOS, MOS)

DATA GRD/ LT, CPT, MAJ, LTC, COL /

DATA RTABLE/ FULL REPORT
DISTRIBUTION SUMMARY
FEMALE STRTH TOTALS BY SPC
LT-CPT FEM STRTH TOTS BY SPC
LT FEMALE STRTH TOTS BY GRADE
FEMALE STRTH TOTS BY GRADE
ROTATION EQUITY REPORT

DATA F27 / @ASG, T 27 : /
DATA F29 / @ASG, T 29 : /

+
+ FORMAT STATEMENT FOR THE WRITE STATEMENT FOLLOWING PRINT 138 IN+
+ THE SUBROUTINE CMFT(5). THIS FORMAT IS CHANGED DURING RUN TIME +
+ IN THE MAIN ROUTINE. +

DATA (F138(I), I=1, 16) / 4H(40(, 4HT16, , 4HA1, I, 4H2, 5(, 4H4X, I, 4H5), 2,
4H(4X, , 4HF5.1, 4H), 4X, 4H, IS, , 4H3X, F, 4H2.1, , 4H4X, I, 4H5, 5X, 4H, IS, , 4H/
)) /

```

*****
+ THE FOLLOWING DATA STATEMENT ALLOWS DYNAMIC MODIFICATION OF THE
+ FORMAT STATEMENT FOR THE CASUALTY REPLACEMENT RATES READ
+ STATEMENT.
*****

```

```
DATA (FRAT(I),I=1,5) /4H(I2,,4H1X,A,4H3,10,4HX,16,4H.3) /
```

```

*****
+
+ N      N      00000      TTTTTT      EEEEEEE      ::
+ NN     NN     0      0      T      E      ::
+ N N    N N    0      0      T      EEEEE      ::
+ N  N   N N   0      0      T      EEEEE      ::
+ N   NN  NN   0      0      T      EEEEEEE      ::
+ N    N      00000      T      EEEEEEE      ::
+

```

```
+ THIS PROGRAM USES THE FOLLOWING RUN OPTIONS:
```

```

+ P -----> 0MF COMPARE PRINT ON/OFF (DEFAULT IS OFF)
+ C -----> CONSTRAINED FLAG (DEFAULT IS UNCONSTRAINED)
+ I -----> DESIG INVNT FILE 12 INPUT (DEFAULT NO READ)
+ R -----> ROLL UP FILE 10 FOR INPUT TO AGE BGPR (COL-LT,TOT)
+           (DEFAULT IS BY SSI LT-COL)
+ F -----> OPTIONAL PREFERRED DISTRIBUTION ROUTINE
+ M -----> OPTIONAL ROTATION EQUITY REPORT (DEFAULT NO REPORT)
+ X,Y,Z -----> SPECIFIES D+30,D+60,D+90 CASUALTY REPLACEMENT
+                 RATES TO BE APPLIED, RESPECTIVELY.
+                 (DEFAULT - NO CASREP SET ASIDE)

```

```
+ FORMAT : @XQT,OPTIONS ABSOLUTE.ELEMENT
```

```

*****
*
* MAIN DRIVER
*
*****

```

```
+ INITIALIZE DEFAULT OPTIONS
```

```

9999 C
CNTL=2
PRTON='N'
RFLAG=0
CRAT=-1
IFILE=27

```

```

126 C      ++++++
127 C      +
128 C      + GET C OPTION - THIS OPTION SETS THE CONSTRAINED FLAG
129 C      +
130 C      ++++++
131 C
132 CALL OPT(NOPT) @ RETRIEVE OPTION WORD----->( 70)
133 IF(BITS(NOPT,13,1).EQ.1) THEN
134     CNTL=1
135 ENDIF
136 C
137 C      ++++++
138 C      +
139 C      + GET I OPTION - TRIGGERS THE INPUT OF THE FEM DESIG FILE
140 C      +
141 C      ++++++
142 C
143 IF(BITS(NOPT,19,1).EQ.1) THEN
144     J=0
145     J=J+1
146     READ(12,21,END=2) ISPEC(J),(INVENT(I,J),I=1,5)
147     GO TO 1
148     PRINT 20,J-1
149 ENDIF
150 C
151 C      ++++++
152 C      +
153 C      + GET P OPTION - TURNS ON OMF COMPAPE PRINT SWITCH
154 C      +
155 C      ++++++
156 C
157 IF(BITS(NOPT,25,1).EQ.1) THEN
158     PRTON='Y'
159 ENDIF
160 C
161 C      ++++++
162 C      +
163 C      + GET R OPTION - CONTROLS FILE 10 OUTPUT FORMAT
164 C      +
165 C      ++++++
166 C
167 IF(BITS(NOPT,28,1).EQ.1) THEN
168     RFLAG=1
169 ENDIF
170 C
171 C      ++++++
172 C      +
173 C      + READ IN SPECS FILE - CONTAINS VALID SPECIALTY CODE IDS
174 C      +
175 C      ++++++
176 C
177 J=0
178 J=J+1
179 READ(5,19,END=4) CMFTAB(J),NONACC(J)
180 GO TO 3
181 NUMCMF=J-1
182 C
183 C      ++++++
184 C      +
185 C      + THE NUMBER OF SPCS READ IN CONTROLS THE NUMBER OF SPCS
186 C      + OUTPUT IN THE CMFT SUBROUTINE.
187 C      +
188 C      ++++++
189 C
190 ENCODE(4,15,F138(1)) NUMCMF
191 WRITE(6,24) NUMCMF

```

```

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```

```

*****
+ CHECK IF D+30 OR D+60 OR D+90 CASUALTY RATES SHOULD BE APPLIED +
+ OPTION = X OR Y OR Z (USE ONLY ONE!!) +
*****

IF(BITS(NOPT,34,1).EQ.1) THEN @ OPTION X
  CRAT=0
ENDIF
IF(BITS(NOPT,35,1).EQ.1) THEN @ OPTION Y
  CRAT=2
ENDIF
IF(BITS(NOPT,36,1).EQ.1) THEN @ OPTION Z
  CRAT=4
ENDIF
IF(CRAT.GE.0) THEN
  CRAT=CRAT+5+4
  *****
  + THE VARIABLE CRAT CONTROLS THE FIELD TO BE READ IN THE
  + CASUALTY RATE FILE. SPCONV RETURNS THE SPCS INDEX AND
  + THE ICHAR FUNCTION RETURNS THE SSI INDEX. THE CASUALTY
  + RATE IS STORED IN THE ARRAY BY SC,SSI INDICES.
  + EXAMPLE: SPC 11, SSI 11A WOULD BE STORED IN
  + CASRAT(1,1) AND SPC 11, SSI 11B WOULD
  + BE STORED IN CASRAT(1,2).
  *****

  ENCODE(4,16,FRAT(3)) CRAT
  J=0
  J=J+1
  READ(5,FRAT,END=6) ICMF,MOS,RCAS
  CALL SPCONV(ICMF,CMFTAB,NUM(CMF)) @----->( 64)
  I=ICHAR(MOS(3:3))-ICHAR("A")+1
  CASRAT(ICMF,I)=RCAS
  GO TO 5
ENDIF
IF(J.GT.0) THEN
  WRITE(6,23) J-1
ENDIF

*****
+ ASSIGN WORKING FILES 27 AND 29
*****

CALL FACSF(F27) @----->( 71)
CALL FACSF(F29) @----->( 71)
WRITE(6,25)

*****
+ READ IN THE SHORT, LONG, AND MAXIMUM TOUR LENGTHS ALLOWED
+ CALL FILER ROUTINE TO DO COMPUTATIONS AND CALL REPORT
+ GENERATORS. ROTATION EQUITY REPORT IS OPTIONAL.
*****

READ (5,22) STL,LTCL,MAXCL
FLAG=CNTRL

```

```

253 7 CALL FILER ($7)          & DO COMPUTATIONS----->( 40)
259  RTAB=RTABLE(1)
260  CALL FRPT ($8)          & FULL REPORT----->( 50)
261  RTAB=RTABLE(2)
262  CALL DIST ($9)         & DISTRIBUTION SUMMARY----->( 58)
263  RTAB=RTABLE(3)
264  CALL CMFT ($10)        & FEMACC TOTALS BY SPC----->( 60)
265  MAXGRD=2
266  RTAB=RTABLE(4)
267  CALL CMFT ($11)        & LT-CPT FEMACC TOTALS BY SPC----->( 60)
268  MAXGRD=1
269  RTAB=RTABLE(5)
270  CALL CMFT ($12)        & LT FEMACC TOTALS BY SPC----->( 60)
271  RTAB=RTABLE(6)
272  CALL MAXRPT ($13)      & FEMACC TOTALS BY GRADE----->( 48)
273  RTAB=RTABLE(7)
274  IF(BITS(NOPT,23,1).EQ.1) THEN
275  CALL ROTREP($14)      & ROTATION REPORT----->( 65)
276  ENDIF
277 14 IF(BITS(NOPT,16,1).EQ.1) THEN
278  CALL PREDIS($9998)    & PREF DIST ROUTINE----->( 68)
279  ENDIF
280 9998 STOP
281  C
282  C
283  C
284 15 FORMAT ('(,I2,(')
285 16 FORMAT ('(,I2)
286 17 FORMAT (')
287 18 FORMAT (' FEM-DESIG INVENTORY FILE 12 INPUT ',I3,' RECORDS')
288 19 FORMAT ('(I2,1X,I5)
289 20 FORMAT ('(I2,1X,I2,1X,I2)
290 21 FORMAT (' CASUALTY REPLACEMENT RATE FILE INPUT ',I3,' RECORDS')
291 22 FORMAT (' SPECIALTY CODE FILE INPUT ',I3,' RECORDS')
292 23 FORMAT (' OUTPUT FILES ARE: ',1X,'FILE 10 - FEMALE AUTH BY
293 24 GRADE & SPC',1X,'FILE 27 - WORKING STORAGE FILE',1X,'FILE
294 25 29 - NEXT YEAR FEMALE CONTENT BY GRADE & SSI (INCLUDES ACC)')
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```

    FORMAT ('(,I2,(')
    FORMAT ('(,I2)
    FORMAT (')
    FORMAT (' FEM-DESIG INVENTORY FILE 12 INPUT ',I3,' RECORDS')
    FORMAT ('(I2,1X,I5)
    FORMAT ('(I2,1X,I2,1X,I2)
    FORMAT (' CASUALTY REPLACEMENT RATE FILE INPUT ',I3,' RECORDS')
    FORMAT (' SPECIALTY CODE FILE INPUT ',I3,' RECORDS')
    FORMAT (' OUTPUT FILES ARE: ',1X,'FILE 10 - FEMALE AUTH BY
    GRADE & SPC',1X,'FILE 27 - WORKING STORAGE FILE',1X,'FILE
    29 - NEXT YEAR FEMALE CONTENT BY GRADE & SSI (INCLUDES ACC)')
  
```

```

*****
*
*          *****   FTN DEBUG ROUTINE   *****
*
* THIS ROUTINE IS CALLED BY THE SYSTEM IN THE EVENT OF A PROGRAM
* FAILURE. THE CAUSE OF THE APORT AND THE LINE NUMBER WHERE THE
* ABORT OCCURRED IS DISPLAYED. THE USER WILL BE LEFT IN FTN PWD
* MODE.
* REFERENCE: FORTRAN(ASCII) LEVEL 10R1 PROGRAMMER REFERENCE
*             UP-8244.2
*****
  
```

```

    DEBUG SUBCHK,SUBTRACE
    AT 9999
    TRACE ON
    END PROGRAM
  
```

```

317 SUBROUTINE FILER ($)
318 C
319 C *****
320 C * SUBROUTINE FILER($)
321 C *
322 C *
323 C *
324 C * THIS SUBROUTINE COMPUTES AND APPLIES ALL MANAGEMENT CONSTRAINTS
325 C * IT COMPUTES THE MAXIMUM FEMALE STRENGTH AND THE MALE SET-ASIDES
326 C * AND WRITES THIS DATA TO FILE IFILE.
327 C *
328 C *****
329 C
330 C
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337 C
338 C
339 C
340 C
341 C
342 C
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```

INTEGER K,L,CMFTOT(6),JCMF
 REAL A,B,S,CL,PMAX,TROMAX,RLONG,RSHORT,RCONUS,RNLNG,RNSHT,RNCNS,
 RSTL,RLTL,RMCL
 PROP=0
 JCMF=0

++++++
 + PROP EQUAL 1 IMPLIES THIS IS A CONSTRAINED RUN. THE VARIABLE
 + FLAG IS SET BY THE RUN OPTION C.
 ++++++

IF (FLAG.EQ.1) THEN
 PROP=1
 ENDIF
 KEEP=FLAG
 PMAX=1

++++++
 + IF THE RUN IS CONSTRAINED THEN READ THE CONSTRAINED
 + MAXIMUM FEMALE STRENGTH NUMBER.
 ++++++

IF (PROP.EQ.1) THEN
 READ 48, NUM
 TROMAX=0
 ENDIF

25 REWIND 25 @ FILE 25 = FEMALE OFFICER CONTENT FILE
 REWIND 26 @ FILE 26 = AUTHORIZATIONS FILE

++++++
 + THE VARIABLE PRTON IS SET BY THE RUN OPTION P. IF THIS
 + OPTION IS IN EFFECT THEN PRINT INFORMATION CONCERNING
 + DISALLOWED DATA.
 ++++++

IF (PRTON.EQ.'Y') THEN
 PRINT 51
 ENDIF

26 READ (25,49,END=45) ICMF,MOS,THSFAC,CONTNT
 CALL DATA (\$26) @ SUBROUTINE DATA READS FILE 26----->(54)
 TTHSPC=(FLOAT(THSFAC))/100.0

```

79 C
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135 C
136 C
137 C

```

```

+++++
+ INITIALIZE FOR FIRST SSI DATA IMAGE READ.
+++++

IF(JCMF.EQ.0) THEN
  JCMF=ICMF
  DO 23 K=1,6
    CMFTOT(K)=0
  ENDDO
23 ENDIF

+++++
+ CHECK FOR NON-ACCESSION SPECIALTY AND SET MARKER ACCORDINGLY.
+ RETRIEVE APPROPRIATE CASUALTY REPLACEMENT RATE.
+++++

NACC=' '
L=ICMF
CALL SPCONV(L,CMFTAB,NUMCMF) 3----->( 64)
K=(ICHR(MOS(3:3))-ICHR('A'))+1
IF(NONACC(L).EQ.1) THEN
  NACC='*'
ENDIF
RCAS=CASRAT(L,K)

+++++
+ INITIALIZE WORKING VARIABLES
+++++

DO 29 K=1,5
  CASREP(K)=0
  CAPPRO(K)=0
  MALE(K)=0
  NONCOM(K)=0
  FEMACC(K)=0
  ROTREQ(K)=0
  CMT(K)=0
  THSREQ(K)=0
  MAX49(K)=' '
29 ENDDO
FEMACC(5)=0

+++++
+ CALCULATE SET-ASIDES AND MAXIMUM FEMALE STRENGTH FOR
+ EACH GRADE (LT - COL). SKIP CALCULATIONS IF THE TOTAL
+ PERSACS AUTHORIZATIONS FOR THE GRADE IS ZERO.
+++++

DO 39 K=1,5
  IF(STRTH(K).NE.0) THEN

```

```

438 C
439 C
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503 C

```

```

*****
*
* TO DETERMINE AUTHORIZATIONS AVAILABLE FOR FEMALES,
* NON-COMBAT AUTHORIZATIONS ARE DEVELOPED BY
* SUBTRACTING COMBAT AUTHORIZATIONS FROM TOTAL
* AUTHORIZATIONS.
*
*****

NONCOM(K)=STRTH(K)-COMBAT(K)

*****
*
* THE CASUALTY REPLACEMENT COMPUTATION IS THE NUMBER
* OF COMBAT-ONLY AUTHORIZATIONS FROM LONG AND CONUS
* TOUR AREAS MULTIPLIED BY THE CASUALTY RATE DEVELOPED
* FROM THE STRATIFICATION MODEL (CAA).
*
*****

CASPEP(K)=((CBTLNG(K)+CBTCNS(K))*RCAS)+0.5

*****
*
* ROTATION EQUITY COMPUTATION - FIRST A MEAN CONUS TOUR
* LENGTH IS DEVELOPED BY DIVIDING THE TOTAL CONUS AUTH BY
* THE SUM OF THE LONG TOUR AUTH/LONG TOUR LENGTH AND THE
* AND THE SHORT TOUR AUTH/SHORT TOUR LENGTH.
* NOTE** A MAX MEAN CONUS TOUR LENGTH WAS INCLUDED TO
* TRIM DOWN THE EXCESSIVE CONUS TOUR LENGTH
* NUMBERS TO A REASONABLE REAL LIFE NUMBER OF
* MONTHS. THE EXCESSIVE NUMBERS ARE DUE TO SPCS
* WITH NO OR MINIMAL ROTATION STRUCTURE.
* THE ROTREQ SET-ASIDE IS THE CALCULATED MEAN CONUS TOUR
* LENGTH MULTIPLIED BY THE DIFFERENCE OF THE MALE ONLY
* LONG AUTH/LONG TOUR LENGTH + THE MALE ONLY SHORT AUTH
* /SHORT TOUR LENGTH AND THE MALE ONLY CONUS AUTH. ROTREQ
* SET-ASIDE SHOULD NOT EXCEED THE TOTAL INTERCHANGEABLE
* POOL.
*
*****

RSTL=STL
RLTL=LTL
RMCL=MAXCL
RLONG=LONG(K)
RSHORT=SHORT(K)
RCONUS=CONUS(K)
RNLNG=CBTLNG(K)
RNSHT=CBTSHT(K)
RNCNS=CBTCNS(K)
CL=(RLONG/RLTL)+(RSHORT/RSTL)

*****
*
* IF THE DENOMINATOR OF THE EQUATION
* CL=RCONUS/((RLONG/RLTL)+(RSHORT/RSTL)) IS ZERO THEN THE
* CONUS TOUR LENGTH IS INDETERMINATE - THIS CASE IS
* HANDLED BY SETTING THE DENOMINATOR TO THE MAXIMUM
* CONUS TOUR LENGTH ALLOWED, PMCL. IF IT IS NOT ZERO THEN
* CALCULATE A MEAN CONUS TOUR LENGTH.
*
*****

IF (CL.EQ.0.0) THEN
    CL=RMCL

```

```

504      MAX48(K)='+'
505
506      ELSE      CL=RCONUS/CL
507
508      ENDIF
509
510      ++++++
511      +
512      + IF THE CALCULATED MEAN CONUS TOUR LENGTH IS GREATER THAN +
513      + THE MAXIMUM CONUS TOUR LENGTH ALLOWED THEN THE MEAN CONUS +
514      + LENGTH IS SET TO THE MAXIMUM CONUS TOUR LENGTH ALLOWED. +
515      +
516      ++++++
517
518      IF (CL.GT.RMCL) THEN
519          CL=RMCL
520          MAX48(K)='+'
521      ENDIF
522
523      ++++++
524      +
525      + IF THE CALCULATED MEAN CONUS TOUR LENGTH IS NEGATIVE OR +
526      + ZERO THEN THIS CASE REPRESENTS AN AUTHORIZATIONS STRUC- +
527      + TURE WITH NO CONUS AUTHORIZATIONS HENCE NO ROTATION +
528      + STRUCTURE. +
529      +
530      ++++++
531
532      IF (CL.LE.0.0) THEN
533          CL=0.0
534          MAX48(K)='-'
535      ENDIF
536
537      ++++++
538      +
539      + SAVE THE MEAN CONUS TOUR LENGTH AND CALCULATE THE +
540      + ROTATION EQUITY SET-ASIDE. +
541      +
542      ++++++
543
544      CMT(K)=CL*0.5
545      ROTREQ(K)=CL*((RNLNG/RLTL)+(RNSHT/RSTL))-RVCNS*0.5
546
547      ++++++
548      +
549      + IF THE ROTATION EQUITY SET-ASIDE IS NEGATIVE THEN SET IT +
550      + TO ZERO AND IF THIS SET-ASIDE EXCEEDS THE INTERCHANGEABLE +
551      + AUTHORIZATIONS THEN SET IT TO THE NUMBER OF INTERCHANGE- +
552      + ABLE AUTHORIZATIONS. +
553      +
554      ++++++
555
556      IF (ROTREQ(K).LT.0) THEN
557          ROTREQ(K)=0
558      ENDIF
559
560      IF (ROTREQ(K).GT.NONCOM(K)) THEN
561          ROTREQ(K)=NONCOM(K)
562      ENDIF

```

```

562 C      ++++++
563 C      +
564 C      + MALE NON-COMBAT REQUIREMENTS ARE DETERMINED BY USING THE +
565 C      + MAXIMUM REQUIREMENT OF ROTATION EQUITY AND CASUALTY +
566 C      + REPLACEMENT SET-ASIDES. MALE(K) IS THE NUMBER OF NON- +
567 C      + COMBAT AUTHORIZATIONS TO BE FENCED OFF FOR MEN AND +
568 C      + THEREFORE CLOSED TO WOMEN. +
569 C      +
570 C      ++++++
571 C
572 C      MALE(K)=MAXC(ROTRREQ(K),CASREP(K))
573 C
574 C      ++++++
575 C      +
576 C      + THE THEORETICAL CONTENT FOR WOMEN IS CALCULATED BY +
577 C      + SUBTRACTING THE MALE NON-COMBAT REQUIREMENT FROM THE +
578 C      + NON-COMBAT REQUIREMENT. +
579 C      +
580 C      ++++++
581 C
582 C      FEMACC(K)=NONCOM(K)-MALE(K)
583 C      IF(FEMACC(K).LT.0) THEN
584 C          FEMACC(K)=0
585 C      ENDIF
586 C      ENDDO
39
587 C
588 C      ++++++
589 C      +
590 C      + FIND THE SMALLEST FEMALE STRTH RATIO WHICH IN ESSENCE IDEN- +
591 C      + TIFIES THE MALE COMBAT + MALE SET-ASIDE MAXIMUM COMBAT RATIO. +
592 C      + THIS RATIO IS USED TO CALCULATE THE FEMALE POPULATION AND THE +
593 C      + CAREER PROGRESSION SET-ASIDE. +
594 C      +
595 C      ++++++
596 C
597 C
598 C      RATIO=1.0
599 C      DO 41 K=1,5
600 C          A=FEMACC(K)
601 C          B=STRTH(K)
602 C          IF(B.GT.0) THEN
603 C              S=A/B
604 C              IF(S.LT.RATIO) THEN
605 C                  RATIO=S
606 C              ENDIF
607 C          ENDIF
608 C          IF(RATIO.GT.1.0) THEN
609 C              RATIO=1.0
610 C          ENDIF
41
611 C      ENDDO
612 C
613 C      ++++++
614 C      +
615 C      + DEVELOPE THE CAREER PROGRESSION SET-ASIDE BY FIRST CALCULATING +
616 C      + THE FEMALE POPULATION = TOTAL POPULATION TIMES THE MIN FEMALE +
617 C      + STRTH RATIO. SUBTRACT THIS POPULATION PLUS THE MALE ONLY POPU- +
618 C      + LATION FROM THE TOTAL POPULATION GIVING THE CARPRO SET-ASIDE. +
619 C      + THE MAXIMUM MALE SET-ASIDE IS THE LARGEST OF CARPRO, ROTREQ, +
620 C      + AND CASREP - NOT TO EXCEED THE INTERCHANGEABLE POCL FROM WHICH +
621 C      + THESE SET-ASIDES ARE DRAWN. +
622 C      +
623 C      ++++++
624 C
625 C      DO 42 K=1,5
626 C          FEMACC(K)=FLOAT(STRTH(K))*RATIO+C.5
627 C          CARPRO(K)=(STRTH(K)-FEMACC(K))-COMBAT(K)

```

```

622     IF (CARPRO(K).LT.0) THEN
623       CARPRO(K)=0
624     ENDIF
625     MALE(K)=MAX0(MALE(K),CARPRO(K))
626     MALE(K)=MIN0(MALE(K),NONCOM(K))
42  ENDDO
627
628  ++++++
629  +
630  + SUM FEMALE STRENGTH NUMBERS OVER ALL GRADES
631  +
632  ++++++
633
634  DO 43 K=1,5
635    TROMAX=TROMAX+FEMACC(K)
43  ENDDO
636
637  ++++++
638  +
639  + IF THIS IS A CONSTRAINED RUN THEN PROCESS THE NEXT SPECIALTY
640  + ELSE DEVELOPE THE FEMALE THS POPULATION BY MULTIPLYING THE
641  + FEMALE STRENGTH NUMBERS BY THEIR CORRESPONDING THS FACTOR
642  + (INPUT FROM FILE 25). ALSO, IF THIS IS A CONSTRAINED RUN AND
643  + THE PMAX FACTOR HAS BEEN CALCULATED THEN REDUCE THE
644  + FEMALE STRENGTH NUMBERS BY THIS FACTOR. ONCE THE FEMALE
645  + STRENGTH NUMBERS HAVE BEEN CALCULATED ALL PERTINENT DATA IS
646  + WRITTEN TO FILE IFILE.
647  +
648  ++++++
649
650  IF (PROP.EQ.1) THEN
651    GO TO 26
652  ELSE
653    DO 44 K=1,5
654      FEMACC(K)=(FLOAT(FEMACC(K)))*PMAX+.5
655      FEMACC(6)=FEMACC(6)+FEMACC(K)
656      THSREQ(K)=FLOAT(FEMACC(K))*(TTHSPC/(1.0-TTHSPC))+0.5
44  ENDDO
657
658  WRITE (IFILE) ICMF,MOS,STRTH,COMPAT,NONCOM,MALE,TAADS,FEMACC,
1  CONTNT,CARPRO,ROTREQ,CMT,RATIO,LTAADS,STAADS,CTAADS,CASREP,
2  NACC,RCAS,THSREQ,TTHSPC,MAY48
659
660  ++++++
661  +
662  + IF OPTION R WAS SET THEN ROLL-UP SSI DATA INTO SC DATA AND
663  + OUTPUT THESE NUMBERS (COL-LT) TO FILE 10 WHICH IS USED BY
664  + THE AGEGRPR MODEL AS THE AUTH BASE. IF THE OPTION R WAS NOT
665  + SET THEN OUTPUT THE INFO FOR USE BY YOS.
666  +
667  ++++++
668
669  IF (RFLAG.EQ.7) THEN
670    WRITE (10,50) ICMF,MOS,FEMACC
671  ELSE
672    IF (JCMF.EQ.ICMF) THEN
673      DO 53 K=1,6
674        CMFTOT(K)=CMFTOT(K)+FEMACC(K)
53  ENDDO
675    ELSE
676      WRITE(10,54) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
677      JCMF=ICMF
678      DO 55 K=1,6
679        CMFTOT(K)=FEMACC(K)
55  ENDDO
680    ENDIF
681
682  +

```

```

694      ENDIF
695      GO TO 26
696  ENDIF
697  C
698  C
699  C
700  C
701  C
702  C
703  C
704  C
705  C
706  C
707  C
708  C
709  C
710  45  IF (PROP.EQ.1) THEN
711      PROP=0
712      JCMF=0
713      IF (TROMAX.GT.0) THEN
714          PMAX=(FLOAT(NUM))/TROMAX
715      ELSE
716          PMAX=0.0
717      ENDIF
718      GO TO 25
719  ENDIF
720  ENDFILE IFILE
721  IF (RFLAG.EQ.1) THEN
722      WRITE(10,54) JCMF, (CMFTOT(K), K=5, 1, -1), CMFTOT(6)
723  ENDIF
724  REWIND IFILE
725  <--RETURN 1
726  C
727  48  FORMAT ( )
728  49  FORMAT (I2,A3,4X,I2,3X,6I5)
729  50  FORMAT (I2,1X,A3,6(1X,I6))
730  51  FORMAT (1H0," FOLLOWING AUTHORIZATIONS/CONTENT DATA HAS BEEN" DRO
731  1    PPED")
732  54  FORMAT (I3,6I5)
733  C
734  C      END SUBROUTINE FILER

```

```

735 SUBROUTINE READR (I)
736 C
737 C
738 C
739 C
740 C
741 C
742 C
743 C
744 C
745 C
746 C
747 READ(IFILE,END=52) ICMF,MOS,STRTH,COMBAT,NONCOM,MALE,TAADS,FEMACC,
748 CONTNT,CARPRO,ROTREG,CMT,RATIO,LTAADS,STAADS,CTAADS,CASREP,NACC,
749 1 RCAS,THSREQ,TTHSPC,MAX48
750 2 <--RETURN
751 52 REWIND IFILE
752 <--RETURN 1
753 C
754 C END SUBROUTINE READR

```

```

SUBROUTINE MAXRPT (3)
*****
* SUBROUTINE MAXRPT (3)
*
* READS FILE IFILE AND PRINTS FEMALE STRENGTH TOTALS BY GRADE
*****
REAL PCENT(6)
INTEGER SSITOT,TOT,GRDTOT(5),ICT,GRDATH(5),SSIATH,TOTATH
*****
+
+ PRINT REPORT HEADING BY CALLING TITLE
+
*****
RET=1
IPAGE=1
CALL TITLE @----->( 50)
WRITE(6,7)
FORMAT(0,20X,'FEMALE STRTH TOTALS BY GRADE',20X,'TOTAL PERSACS',
AUTH BY GRADE,176X,'SSI',5X,'LT',5X,'CPT',5X,'MAJ',5X,'LTC',
1 2 3
SX,'COL',3X,'TOTAL',15X,'LT',5X,'CPT',5X,'MAJ',5X,'LTC',
SX,'COL',3X,'TOTAL')
*****
+
+ INITIALIZE WORKING VARIABLES
+
*****
ICT=0
DO 8 I=1,5
GRDATH(I)=0
GRDTOT(I)=0
8
ENDDO
TOT=0
TOTATH=0
*****
+
+ MAIN LOOP - READ AND PROCESS INFO UNTIL EOF ON FILE IFILE
+
*****
SSITOT=0
SSIATH=0
CALL READR($999) @----->( 47)
ICT=ICT+1
*****
+
+ TOTAL FEMALE STRENGTH NUMBERS AND AUTHORIZATIONS BY
+ GRADE, BY SSI, AND CALCULATE GRAND TOTALS.
+
*****
DO 11 I=1,5
GRDTOT(I)=GRDTOT(I)+FEMACC(I)
SSITOT=SSITOT+FEMACC(I)
TOT=TOT+FEMACC(I)
GRDATH(I)=GRDATH(I)+STRTH(I)
11

```

```

21      SSIATH=SSIATH+STRTH(I)
22      TOTATH=TOTATH+STRTH(I)
23 11  ENDDO
24  C
25  C
26  C
27  C
28  C
29  C
30  C
31  C
32  C
33  C
34  C
35  C
36  C
37  C
38  C
39  C
40  C
41  C
42  C
43  C
44  C
45  C
46  C
47  C
48  C
49  C
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52  C
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54  C
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56  C
57  C
58  C
59  C
60  C
61  C
62  C
63  C
64  C
65  C
66  C
67  C
68  C
69  C
70  C
71  C
72  C
73  C
74  C
75  C
      SSIATH=SSIATH+STRTH(I)
      TOTATH=TOTATH+STRTH(I)
      ENDDO
      +-----+
      + PRINT ONLY 50 LINES PER PAGE. EJECT A NEW PAGE AND PRINT
      + REPORT HEADING.
      +-----+
      IF(ICT.EQ.50) THEN
        WRITE(6,16)
        CALL TITLE 9----->( 50)
        ICT=0
        WRITE(6,7)
      ENDIF
      +-----+
      + PRINT INFO FOR SSI AND RETURN TO START OF MAIN LOOP
      +-----+
      WRITE(6,12) NACC,MOS,(FEMACC(I),I=1,5),SSITOT,(STRTH(I),I=1,5),
1  SSIATH
      FORMAT(' ',4X,A1,A3,5(2X,I6),I8,10X,5(2X,I6),I8)
      GO TO 9
      +-----+
      + ENTRY POINT FOR EOF ON FILE IFILE - PRINT GRADE TOTALS AND
      + AUTHORIZATION TOTALS. CALCULATE OVERALL PERCENTAGE FILLS
      + BY GRADE AND PRINT THIS INFO.
      +-----+
      WRITE(6,13) (GRDTOT(I),I=1,5),TOT,(GRDATH(I),I=1,5),TOTATH
      FORMAT(' ',2X,"TOTALS",6I8,10X,6I8)
      DO 14 I=1,5
        IF(GRDATH(I).NE.0) THEN
          PCENT(I)=FLOAT(GRDTOT(I))/FLOAT(GRDATH(I))
        ENDIF
        PCENT(I)=PCENT(I)*100.0
      ENDDO
      IF(TOTATH.NE.0) THEN
        PCENT(6)=FLOAT(TOT)/FLOAT(TOTATH)*100.0
      ENDIF
      WRITE(6,15) (PCENT(I),I=1,6)
      FORMAT(' ',2X,"% AUTH",6(3X,F5.1))
      WRITE(6,16)
      FORMAT(' ',T44,"* DENOTES NON-ACCESSION SPECIALTY")
      <---RETURN 1
      END SUBROUTINE MAXRPT

```

```

76 SUBROUTINE FRPT ($)
77 C
78 C
79 C
80 C
81 C
82 C
83 C
84 C
85 C
86 C
87 C
88 C
89 C
90 C
91 C
92 C
93 C
94 C
95 C
96 C
97 C
98 C
99 C
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123 C
124 C
125 C
126 C
127 C
128 C
129 C
130 C
131 C
132 C
133 C
134 C
135 C
136 C
137 C
138 C
139 C
140 C
141 C

```

SUBROUTINE FRPT (\$)

```

* SUBROUTINE FRPT($)
* PRINTS THE FULL 3-DIGIT MOS REPORT
*
INTEGER I,J,K
REAL AID,FILL,PERMOS
+
+ INITIALIZE WORKING VARIABLES
+
DO 62 K=1,10
  TOTAL(K)=0
  GTO(K)=0
62 ENDDO
TOTAL(11)=0
AVAIL=0
AVAIL1=0
AVAIL2=0
IPAGE=1
+
+ ENTRY POINT TITLE - RETRIEVES DATE, TIME FROM SYSTEM AND
+ PRINTS TYPE OF RUN (CONSTRAINED OR UNCONSTRAINED). PRINTS
+ REPORT HEADING.
+
ENTRY TITLE
CALL ADATE (DATE,TIME) @----->( 72)
I=0
PRINT 80,RTAB
PRINT 81, DATE,IPAGE
TOP=0
CALL TYPER @----->( 63)
IPAGE=IPAGE+1
+
+ IF ENTRY INTO SUBROUTINE WAS VIA ENTRY POINT TITLE THEN RETURN
+ TO CALLING PROGRAM ELSE READ SSI DATA FROM FILE IFILE AND
+ PRODUCE THE FULL REPORT.
+
IF (RET.EQ.1) THEN
<-----RETURN
ELSE
64 CALL READR ($79) @----->( 47)
+
+ PRINT SSI THREE DIGIT IDENTIFIER AND GET SCS FEM-DESIG
+ INVENTORY NUMBERS
+

```

```

942 PRINT P2, VACC, MOS, ICMF
943 DO 66 J=1, MAXCMF
944 IF (ISPEC(J).EQ.ICMF) THEN
945 DO 65 K=1,5
946 JNVENT(K)=INVENT(K,J)
947 65 ENDDO
948 ENDIF
949 66 ENDDO
950 C
951 C ++++++
952 C +
953 C + PRINT INFO BY GRADE (LT-COL)
954 C +
955 C ++++++
956 C
957 PRINT P3, (GRD(K), STRTH(K), COMBAT(K), NONCOM(K), MALE(K),
958 1 FEMACC(K), CONTNT(K), JNVENT(K), CARPRO(K), ROTREQ(K), CASREP(K),
959 2 THSREQ(K), CMT(K), MAX48(K), K=1,5)
960 C
961 C ++++++
962 C +
963 C + TOTAL SSI DATA FOR EACH INDIVIDUAL SSI
964 C +
965 C ++++++
966 C
967 DO 68 K=1,11
968 TOTAL(K)=0
969 68 ENDDO
970 DO 69 K=1,5
971 TOTAL(1)=TOTAL(1)+STRTH(K)
972 TOTAL(2)=TOTAL(2)+COMBAT(K)
973 TOTAL(3)=TOTAL(3)+NONCOM(K)
974 TOTAL(4)=TOTAL(4)+MALE(K)
975 TOTAL(5)=TOTAL(5)+FEMACC(K)
976 TOTAL(6)=TOTAL(6)+CONTNT(K)
977 TOTAL(7)=TOTAL(7)+JNVENT(K)
978 TOTAL(8)=TOTAL(8)+CARPRO(K)
979 TOTAL(9)=TOTAL(9)+ROTRREQ(K)
980 TOTAL(10)=TOTAL(10)+CASREP(K)
981 TOTAL(11)=TOTAL(11)+THSREQ(K)
982 69 ENDDO
983 IF (JCMF.EQ.ICMF) THEN
984 DO 70 K=1,5
985 JNVENT(K)=0
986 70 ENDDO
987 ENDIF
988 ENDIF
989 C
990 C ++++++
991 C +
992 C + ENTRY POINT TOTLE - PRODUCES A GRAND TOTAL WHEN CALLED
993 C +
994 C ++++++
995 C
996 ENTRY TOTLE
997 DO 73 K=1,5
998 GTO(1)=GTO(1)+STRTH(K)
999 GTO(2)=GTO(2)+COMBAT(K)
1000 GTO(3)=GTO(3)+NONCOM(K)
1001 GTO(4)=GTO(4)+MALE(K)
1002 GTO(5)=GTO(5)+FEMACC(K)
1003 GTO(6)=GTO(6)+CONTNT(K)
1004 GTO(7)=GTO(7)+CARPRO(K)
1005 GTO(8)=GTO(8)+ROTRREQ(K)
1006 GTO(9)=GTO(9)+CASREP(K)
1007 GTO(10)=GTO(10)+THSREQ(K)

```

```

1008 73      ENDDO
1009      JCMF=ICMF
1010      C
1011      C
1012      C
1013      C
1014      C
1015      C
1016      C
1017      C
1018      C
1019      C
1020      C
1021      C
1022      C
1023      C
1024      C
1025      C
1026      C
1027      C
1028      C
1029      C
1030      C
1031      C
1032      C
1033      C
1034      C
1035      C
1036      C
1037      C
1038      C
1039      C
1040      C
1041      C
1042      C
1043      C
1044      C
1045      C
1046      C
1047      C
1048      C
1049      C
1050      C
1051      C
1052      C
1053      C
1054      C
1055      C
1056      C
1057      C
1058      C
1059      C
1060      C
1061      C
1062      C
1063      C
1064      C
1065      C
1066      C
1067      C
1068      C
1069      C
1070      C
1071      C
1072      C
1073      C

      IF (SUM.EQ.1) THEN
      <-----RETURN
      ELSE
      ++++++
      +
      + CALCULATE FEMALE PERCENT OF AUTHORIZATIONS AND FEMALE
      + PERCENTAGE FILL. ALSO, CALCULATE THE TOTAL AVAILABLE
      + SPACES TO FILL FOR THIS SSI.
      +
      ++++++

      AID=TOTAL(5)
      IF(TOTAL(1).GT.0) THEN
      PERMOS=AID/TOTAL(1)*100.
      ELSE
      PERMOS=0.0
      ENDIF
      PRINT 24, TOTAL,PERMOS
      AID=TOTAL(6)
      IF(TOTAL(5).GT.0) THEN
      FILL=AID/TOTAL(5)*100
      ELSE
      FILL=0.0
      ENDIF
      AVAIL=TOTAL(5)-TOTAL(6)
      IF(AVAIL.LT.0) THEN
      FILL=0.
      AVAIL=0.
      ENDIF
      PRINT 25, RCAS,RATIO,AVAIL,FILL,TTHSPC
      ++++++
      +
      + THE AVAILABLES FOR EACH SPC ARE ADDED TO THE INVENTORY AT
      + GRADES 01-02 FOR A NEW CONTENT IN THE NEXT YEAR. IT IS
      + ASSUMED THE PEOPLE TRAINED WILL BE IN THIS YEAR GROUP.
      + NOTE** FILE 29 CONTAINS THIS INFORMATION IT IS NOT USED
      + BY THE OASYS STUDY. THIS IS A REMNANT OF THE ORIGINAL
      + WOSM LOGIC.
      +
      ++++++

      CONTNT(1)=CONTNT(1)+AVAIL
      WRITE (29,26) ICMF,MOS,CONTNT
      ++++++
      +
      + TOTAL AVAILABLE SPACES. IF ENTRY INTO THIS SUBROUTINE WAS
      + VIA TOTLE AND NOT CALLED FROM SUMR THEN RETURN TO CALLING
      + PROGRAM ELSE INCREMENT THE LINE COUNTER AND PRODUCE ANOTHER
      + SET OF SSI OUTPUT.
      +
      ++++++

      AVAIL1=AVAIL1+AVAIL
      AVAIL2=AVAIL2+AVAIL

```

```

1074      IF (RET.EQ.1) THEN
1075      <-----RETURN 1
1076      ELSE
1077      I=I+1
1078      ENDIF
1079      IF (I.LT.4) THEN
1080      GO TO 64
1081      ELSE
1082      CALL LEGEND 3----->( 67)
1083      PRINT 87
1084      ENDIF
1085      ENDIF
1086      GO TO 63
1087
1088 C
1089 C
1090 C
1091 C
1092 C
1093 C
1094 C
1095 C
1096 C
1097 79      PRINT 87
1098      ENTRY GRAND
1099      PRINT 88
1100      PRINT 89, GTO,AVAIL2
1101      IF (SUM.EQ.1) THEN
1102      <-----RETURN
1103      ELSE
1104      <-----RETURN 1
1105      ENDIF
1106 C
1107 80      FORMAT ('1',T52,A28/T58,'**UNCLASSIFIED**'/)
1108 81      FORMAT (1X,DATE,AC,T56,DEPARTMENT OF THE ARMY,T123,PAGE,13
1109 1      /T46,UNITED STATES ARMY CONCEPTS ANALYSIS AGENCY,T147,PERSONNEL
1110 2      SYSTEMS ANALYSIS DIVISION,T50,OFFICER ASSIGNMENT SYSTEM NO
1111 3      DEL)
1112 82      FORMAT (1X,0,A1,A3,4X,TOTAL,3X,TOTAL,4X,TOTAL,5X,INTCHG
1113 1      ,6X,MAXIM,3X,CURRENT,4X,TOTAL,3X,CONUS/T0,PERSACS,2X,M
1114 2      -ONLY,3X,INTCHG,2X,SET ASIDE,4X,FEMALE,3X,FEM-FILL,2X,FE
1115 3      M-DESIG,1X,CARPRO,2X,ROTEQ,1X,CASREP,1X,FEM-THS,1X,WEAN
1116 4      /T11,AUTH,4X,AUTH,3X,AUTH(WW),3X,M-ONLY,6X,STRTH,3X,RY
1117 5      DTSPC,3X,SPEC,1X,I2,4X,REQ,4X,REQ,4X,REQ,4X,REQ,3X,TOU
1118 6      R/)
1119 83      FORMAT (1X,A3,5X,I5,3X,I5,5X,I5,5X,I5,5X,I5,4X,I5,5X,I5,6X,I4,3X,
1120 1      I4,3X,I4,2X,I5,I6,A1)
1121 84      FORMAT (2X,TOTAL,T10,I5,3X,I5,5X,I5,2(5X,I5),4X,I5,5X,I5,6X,4(I
1122 1      4,3X),7X,X OF SPC,F6.1)
1123 85      FORMAT (1X,5X,CASREP RATE =,F6.2,4X,FEMALE STRTH RATIO =,F6.3,
1124 1      2X,AVAIL =,I6,2X,FILL =,F7.1,2X,THS %,F6.2)
1125 86      FORMAT (I2,A3,9X,I5)
1126 87      FORMAT ('0',T58,'**UNCLASSIFIED**')
1127 88      FORMAT (1X,T10,TOTAL,3X,TOTAL,4X,TOTAL,5X,INTCHG,6X,MAXI
1128 1      M,3X,CURRENT,4X,TL AVAIL/T9,PERSACS,2X,M-ONLY,3X,INTCHG
1129 2      ,2X,SET ASIDE,4X,FEMALE,3X,FEM-FILL,1X,CARPRO,5X,ROTEQ,
1130 3      3X,CASREP,4X,FEM-THS,3X,SPACES,T10,AUTH,5X,AUTH,3X,AUTH
1131 4      (WW),3X,M-ONLY,6X,STRTH,3X,RY DTSPC,5X,REQ,7X,REQ,6X,D
1132 5      EQ,7X,REQ,5X,TO FILL/)
1133 89      FORMAT (1X,GRAND/1X,TOTAL,2X,2(I5,3X),9(I6,4X))
1134
1135 C
1136      END SUBROUTINE FRPT

```

END SUBROUTINE FRPT

```

1136 SUBROUTINE DATA (S)
1137 C
1138 C
1139 C
1140 C
1141 C
1142 C
1143 C
1144 C
1145 C
1146 C
1147 C
1148 C
1149 C
1150 C
1151 C
1152 C
1153 C
1154 C
1155 90 READ (26,END=93) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,CBTSHT,
1156 1 CBTCNS,TAADS,LTAADS,STAADS,CTAADS
1157 C
1158 C
1159 C
1160 C
1161 C
1162 C
1163 C
1164 C
1165 C
1166 C
1167 C
1168 C
1169 C
1170 C
1171 C
1172 C
1173 91 EQUAD=0
1174 C
1175 C
1176 C
1177 C
1178 C
1179 C
1180 C
1181 C
1182 C
1183 C
1184 C
1185 C
1186 C
1187 C
1188 C
1189 C
1190 C
1191 C
1192 C
1193 C
1194 C
1195 C
1196 C
1197 C

```

```

* SUBROUTINE DATA(S)
*
* READS FILE 26 THE AUTHORIZATION DATA BASE
*
*****

```

INTEGER K,IQUAD

```

+ FILE 26 IS THE CONVERTED USAMSSA AUTHORIZATIONS DATA
+
*****

```

1 READ (26,END=93) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,CBTSHT,
CBTCNS,TAADS,LTAADS,STAADS,CTAADS

```

+ IF A "CONTENT" SPC IS NOT FOUND IN "AUTH" FILE IT IS DROPPED.
+ IF AN "AUTH" SPC IS NOT FOUND IN "CONTENT" FILE THE "AUTH" IS
+ IS DROPPED. A MESSAGE IS PRINTED IN EITHER CASE.
+
+ IF THE SPC HAS NO AUTHORIZATIONS IT IS NOT PROCESSED AND
+ A MESSAGE IS PRINTED.
+
*****

```

EQUAD=0
DO 91 K=1,6
EQUAD=EQUAD+STRTH(K)
ENDDO

```

+ CHECK IF THE AUTHORIZATIONS FOR ALL GRADES IS GREATER
+ THAN ZERO. IF IT IS NOT THEN SKIP THIS SPC.
+
*****

```

IF (EQUAD.GT.0) THEN
IF ((NNOS-MMOS).LT.0) THEN

```

+ IF THE SPC FROM THE AUTH FILE IS LESS THAN THE SPC
+ FROM THE INVENTORY FILE THEN THE SPC AUTH IS NOT
+ PROCESSED.
+
*****

```

IF (PRTON.EQ.'Y') THEN
PRINT 99, NOS,STRTH
ENDIF
ELSE

```

1198 C      ++++++
1199 C      +
1200 C      + IF THE SPC FROM THE AUTH FILE IS GREATER THAN THE SPC
1201 C      + FROM THE INVENTORY FILE THEN THE AUTH FILE IS BACKSPACED
1202 C      + ONE RECORD AND THE SPC INVENTORY IS NOT PROCESSED.
1203 C      +
1204 C      ++++++
1205 C
1206 C      IF ((NNOS-MMOS).GT.0) THEN
1207 C          IF (PRTON.EQ.'Y') THEN
1208 C              PRINT 97, MOS,CONTNT
1209 C          ENDIF
1210 C          BACKSPACE 26
1211 C      <-----RETURN 1
1212 C      ELSE
1213 C
1214 C          ++++++
1215 C          +
1216 C          + AUTH SPC AND INVENTORY SPC MATCH HENCE PROCESS THIS
1217 C          + SPC. RETURN TO FILER ROUTINE.
1218 C          +
1219 C          ++++++
1220 C
1221 C      <-----RETURN
1222 C      ENDF
1223 C      ENDF
1224 C      ELSE
1225 C          IF (PRTON.EQ.'Y') THEN
1226 C              PRINT 98, NOS
1227 C          ENDIF
1228 C          ENDF
1229 C          GO TO 90
1230 C      <--RETURN
1231 C
1232 C
1233 C
1234 C      97      FORMAT (1H0,1X,' SPC ',A3,' NOT IN AUTH FILE. ',1X,' CONTENT = ',6
1235 C      1        (1X,I6))
1236 C      98      FORMAT (1H0,' SPC ',A3,' HAS ZERO AUTH ON INPUT FILE 26')
1237 C      99      FORMAT (1H0,1X,' SPC ',A3,' NOT IN CONTENT FILE. ',1X,' AUTH = ',6(1
1238 C      1        X,I6))
1239 C
1240 C      END SUBROUTINE DATA
```

SUBROUTINE SUMR (3)

```

*****
* SUBROUTINE SUMR(3)
*
* PRINTS SUMMARY REPORT
*
*****
INTEGER K

*****
+
+ INITIALIZE WORKING VARIABLES AND TITLE PAGE.
+
*****

SUM=1
IPAGE=1
RET=1
CALL TITLE 3----->( 50)
RET=0
DO 117 K=1,10
  GTO(K)=0
117 ENDDO
AVAIL=0
AVAIL2=0

*****
+
+ BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFILE AND
+ PROCESS THE DATA.
+
*****

118 CALL READR ($120) 3----->( 47)
*****
+
+ TOTLE IS ENTRY POINT IN SUBROUTINE FRPT.
+
*****

CALL TOTLE 3----->( 51)
AVAIL=C

*****
+
+ ACCUMULATE AVAILABLE SPACES FOR THIS SPC.
+
*****

DO 119 K=1,5
  AVAIL=AVAIL+(FEMACC(K)-CONTNT(K))
119 ENDDO
IF(AVAIL.LT.0) THEN
  AVAIL=0
ENDIF
AVAIL2=AVAIL2+AVAIL
GO TO 118

```

```

1307 C      +-----+
1308 C      + ENTRY FOR EOF ON FILE IFILE (INTERMEDIATE FILE). +
1309 C      + GRAND IS ENTRY POINT IN SUBROUTINE FRPT TO PRINT GRAND TOTALS. +
1310 C      +-----+
1311 120 CALL GRAND B----->( 53)
1312 SUM=0
1313 <--RETURN 1
1314 C
1315 C END SUBROUTINE SUMR

```

SUBROUTINE DIST (\$)

```

*****
* SUBROUTINE DIST($)
* PRINT THE DISTRIBUTION REPORT
*****

```

```

1 REAL ASUM,RATHI,RATLO,RATSD,RATSQR,RATSUM,RMEAN,CASLO,CASHI,CASSUM
,CASSQR,CMEAN,CASSD,THSLO,THSHI,THSSUM,THSSQR,TMEAN,THSSD

```

```

+++++
+ SUMMARY REPORT IS AUTOMATICALLY CREATED BEFORE DISTRIBUTION
+ REPORT. INITIALIZE WORKING VARIABLES.
+++++

```

```

CALL SUMR ($122) @----->( 56)

```

```

RATLO=1
RATHI=C
RATSUM=0
RATSQR=0
CASLO=1
CASHI=C
CASSUM=0
CASSQR=0
THSLO=1
THSHI=C
THSSUM=0
THSSQR=0
ASUM=0

```

```

+++++
+ BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFILE
+ AND PROCESS THIS DATA.
+++++

```

```

123 CALL READR ($124) @----->( 47)
ASUM=ASUM+1

```

```

+++++
+ IDENTIFY ARMY WIDE HIGH AND LOW RANGES FOR FEMALE STRENGTH
+ RATIO, CASUALTY REPLACEMENT RATES, AND THS RATES.
+++++

```

```

IF(RATIO.LT.RATLO) THEN
  RATLO=RATIO
ENDIF
IF(RATIO.GT.RATHI) THEN
  RATHI=RATIO
ENDIF
IF(RCAS.LT.CASLO) THEN
  CASLO=RCAS
ENDIF
IF(RCAS.GT.CASHI) THEN
  CASHI=RCAS
ENDIF
IF(TTHSPC.LT.THSLO) THEN
  THSLO=TTHSPC

```

```

1352      ENDIF
1353      IF (TTHSPC.GT.THSHI) THEN
1354          THSHI=TTHSPC
1355      ENDIF
1356  C
1357  C
1358  C
1359  C
1360  C
1361  C
1362  C
1363  C
1364  C
1365  C
1366  C
1367  C
1368  C
1369  C
1370  C
1371  C
1372  C
1373  C
1374  C
1375  C
1376  C
1377  C
1378  C
1379  C
1380  C
1381  C
1382  C
1383  C
1384  C
1385  C
1386  C
1387  C
1388  C
1389  C
1390  C
1391  C
1392  C
1393  C
1394  C
1395  C
1396  C
1397  C
1398  C
1399  C
1400  C
1401  C
1402  C
1403  C
1404  C
1405  C
1406  C
1407  C
1408  C
1409  C
1410  C
1411  C
1412  C
1413  C
1414  C
1415  C
1416  C
1417 124      IF (ASUM.GT.0.0) THEN
1418          RMEAN=RATSUM/ASUM
1419          CMEAN=CASSUM/ASUM
1420          TMEAN=THSSUM/ASUM
1421          IF ((RATSQR/ASUM-RMEAN**2).GE.0.0) THEN
1422              RATSD=SQRT(RATSQR/ASUM-RMEAN**2)
1423          ENDIF
1424          IF ((CASSQR/ASUM-CMEAN**2).GE.0.0) THEN
1425              CASSD=SQRT(CASSQR/ASUM-CMEAN**2)
1426          ENDIF
1427          IF ((THSSQR/ASUM-TMEAN**2).GE.0.0) THEN
1428              THSSD=SQRT(THSSQR/ASUM-TMEAN**2)
1429          ENDIF
1430      ELSE
1431          RMEAN=0.0
1432          RATSD=0.0
1433          CMEAN=0.0
1434          CASSD=0.0
1435          TMEAN=0.0
1436          THSSD=0.0
1437      ENDIF
1438      PRINT 125, RMEAN,RATLO,RATHI,RATSD,CMEAN,CASLO,CASHI,CASSD,TMEAN,
1439      THSLO,THSHI,THSSD
1440      <--RETURN 1
1441  C
1442 125      FORMAT ('0',23X,'MEAN',8X,'LO--RANGE--HI',8X,'STANDARD DEVIATION'
1443      /'0', 'FEMALE STRTH RATIO',2X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4/'0', 'CA
1444      2      SUALTY REPL RATE',2X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4/'0', 'THS RATE',
1445      3      12X,F7.4,4X,F6.2,4X,F6.2,11X,F8.4)
1446  C
1447  C      END SUBROUTINE DIST

```

```

1448 SUBROUTINE CMFT ($)
1449
1450 *****
1451 * SUBROUTINE CMFT($)
1452 * PRINT FEMALE STRENGTH TOTALS BY SPC
1453 *****
1454
1455 INTEGER I,II,J,K,KK,L,FTOT,NTOT,ATOT,MTOT,DTOT,TTOT,ITOT,STOT
1456 REAL A
1457
1458 *****
1459 + INITIALIZE WORKING VARIABLES
1460 *****
1461
1462 IPAGE=1
1463 RET=1
1464 FTOT=0
1465 NTOT=0
1466 ATOT=0
1467 MTOT=0
1468 DTOT=0
1469 TTOT=0
1470 ITOT=0
1471 STOT=0
1472 JCMF=0
1473
1474 *****
1475 + INITIALIZE TOT ARRAYS TO ZERO AND NON-ACCESSION FLAG TO ELANK.
1476 *****
1477
1478 DO 126 K=1,NUMCMF
1479   NACCFG(K)=0
1480   TOTMLE(K)=0
1481   TOTATH(K)=0
1482   TOTCNT(K)=0
1483   TOTFIL(K)=0
1484   TOTINV(K)=0
1485   TOTTHS(K)=0
1486   TOTPCT(K)=0
1487   TOTINT(K)=0
1488   TOTSAF(K)=0
1489   TOTCMF(K)=0
1490
1491 126 ENDDO
1492
1493 *****
1494 + BEGINNING OF MAIN LOOP - READ A RECORD FROM FILE IFILE AND
1495 + PROCESS DATA.
1496 *****
1497
1498 127 CALL READR ($136) @----->( 47)
1499 DO 128 K=1,NUMCMF
1500   KK=K
1501   IF (ICMF.EQ.CMFTAB(K)) THEN
1502     DO 131 J=1,MAXCMF
1503       IF (ISPEC(J).EQ.ICMF) THEN
1504         DO 130 I=1,MAXGRD
1505           JNVENT(I)=INVENT(I,J)
1506
1507 130
1508 131
1509 128
1510
1511
1512
1513

```

```

1514 130          ENDDO
1515          GC TO 132
1516          ENDF
1517 131          ENDDO
1518 132          DO 135 L=1,MAXGRD
1519              FTOT=FTOT+FEMACC(L)
1520              NTOT=NTOT+CONTNT(L)
1521              ATOT=ATOT+STRTH(L)
1522              MTOT=MTOT+COMBAT(L)
1523              TTOT=TTOT+THSREQ(L)
1524              ITOT=ITOT+NONCOM(L)
1525              STOT=STOT+MALE(L)
1526              TOTCNT(KK)=TOTCNT(KK)+CONTNT(L)
1527              IF (JCMF.EQ.ICMF) THEN
1528                  DO 133 II=1,MAXGRD
1529                      JNVENT(II)=0
1530 133          ENDDO
1531              ENDF
1532              DTOT=DTOT+JNVENT(L)
1533              TOTTHS(KK)=TOTTHS(KK)+THSREQ(L)
1534              TOTATH(KK)=TOTATH(KK)+STRTH(L)
1535              TOTMLE(KK)=TOTMLE(KK)+COMBAT(L)
1536              TOTINV(KK)=TOTINV(KK)+JNVENT(L)
1537              TOTINT(KK)=TOTINT(KK)+NONCOM(L)
1538              TOTRAS(KK)=TOTRAS(KK)+MALE(L)
1539              TOTCMF(KK)=TOTCMF(KK)+FEMACC(L)
1540 135          ENDDO
1541              NACCFG(KK)=NACC
1542              JCMF=ICMF
1543              GO TO 127
1544          ENDF
1545 128          ENDDO
1546          GO TO 127
1547          C
1548          C
1549          C
1550          C
1551          C
1552          C
1553          C
1554 136          CALL TITLE 2----->( 50)
1555          RET=0
1556          DO 137 K=1,NUMCMF
1557              A=TOTCNT(K)
1558              IF (TOTCMF(K).GT.0) THEN
1559                  TOTFIL(K)=(A/TOTCMF(K))*100.
1560              ELSE
1561                  TOTFIL(K)=0.0
1562              ENDF
1563              A=TOTCMF(K)
1564              IF (FTOT.GT.0) THEN
1565                  TOTACC(K)=(A/FTOT)*100.
1566              ELSE
1567                  TOTACC(K)=0.0
1568              ENDF
1569              A=TOTCMF(K)
1570              IF (TOTATH(K).GT.0) THEN
1571                  TOTPCT(K)=(A/TOTATH(K))*100.
1572              ELSE
1573                  TOTPCT(K)=0.0
1574              ENDF
1575 137          ENDDO
1576          C

```

```

1577 C      +*****+
1578 C      + PRINT TOT AUTH,TOT M-ONLY,TOT FEMALES,% OF TOT FEM,CURRENT +
1579 C      + CONTENT, % FILL,CURRENT DESIG,AND TOT FEM-THS. +
1580 C      +*****+
1581 C
1582 C
1583 C
1584 C
1585 C      IF(MAXGRD.EQ.5) THEN
1586 C          PRINT 140
1587 C      ELSE
1588 C          IF(MAXGRD.EQ.2) THEN
1589 C              PRINT 142
1590 C          ELSE
1591 C              IF(MAXGRD.EQ.1) THEN
1592 C                  PRINT 141
1593 C              ENDIF
1594 C          ENDIF
1595 C      ENDIF
1596 C      PRINT 138
1597 C      WRITE(6,F138)(NACCFG(K),CMFTAB(K),TOTATH(K),TOTMFL(K),TOTINT(K),
1598 C      1 TOTAS(K),TOTCMF(K),TOTACC(K),TOTPCT(K),TOTCNT(K),TOTFIL(K),
1599 C      2 TOTINV(K),TOTTHS(K),K=1,NUMCMF)
1600 C      WRITE(6,143) ATOT,MTOT,ITOT,STOT,FTOT,NTOT,DTOT,TTOT
1601 C      PRINT 139
1602 C      <--RETURN 1
1603 C
1604 C      138      FORMAT (' ',14X,'SPC',3X,'PERSACS',2X,'M-ONLY',3X,'INTCHG',3X,'M-ONLY',
1605 C      1 3X,'FEMALE',2(4X,'TOTAL'),3X,'FEM-FILL',4X,'%',4X,'FEM-DESIG',
1606 C      2 2X,'FEM-THS',22X,2('AUTH',5X),3X,'AUTH',2X,'SET ASIDE',3X,'STRTH',5X,
1607 C      3 'FEM',6X,'AUTH',2X,'BY DTSPEC',3X,'FILL',2(3X,'BY SPEC'))//
1608 C      140      FORMAT (' ',21X,5('TOTAL',4X),'% OF',5X,'% OF',4X,'CURRENT',12X,'T
1609 C      1 OTAL',5X,'TOTAL')
1610 C      141      FORMAT (' ',22X,4('LTS',6X),',LTS',2(5X,'% OF'),6X,'LTS',14X,'LTS',
1611 C      1 8X,'LTS')
1612 C      142      FORMAT (' ',20X,5('LT-CPT',3X),1X,'% OF',5X,'% OF',4X,'LT-CPT',12X
1613 C      1 'LT-CPT',5X,'LT-CPT')
1614 C      143      FORMAT (' ',15X,'TOTAL',2X,5(15,4X),18X,15,13X,15,5X,15)
1615 C      139      FORMAT (' ',T44,' * DENOTES NON-ACCESSION SPECIALTY')
1616 C      END SUBROUTINE CMFT

```

```

1617 SUBROUTINE TYPER
1618 C
1619 C
1620 C
1621 C
1622 C
1623 C
1624 C
1625 C
1626 C
1627 C
1628 C
1629 C
1630 C
1631 C
1632 C
1633 C
1634 C
1635 C
1636 C
1637 C
1638 C
1639 C
1640 C
1641 C
1642 C
1643 C
1644 C
1645 C
1646 C
1647 C
1648 C
1649 C
1650 C
1651 C
1652 C
1653 C
1654 C
1655 C
1656 C
1657 C
1658 C
1659 C
1660 C
1661 C
1662 C
1663 C

```

SUBROUTINE TYPER

```

      *****
      * SUBROUTINE TYPER
      *
      * ***** PRINT HEADER FOR FILE TYPE *****
      *
      *****
      INTEGER I
      CHARACTER CASTYP(4)*9
      DATA (CASTYP(I),I=1,4) /' D+30 ',' D+60 ',' D+90 ',' NC CA
      SREP /
      IF (TOP.EQ.1) THEN
        PRINT 192
      ENDIF
      IF (CRAT.GE.0) THEN
        I=(CRAT-4)/10+1
      ELSE
        I=4
      ENDIF
      GO TO (190,191), KEEP
      *****
      +
      + FILE TYPE EQUAL 1 - CONSTRAINED
      +
      *****
      PRINT 193, CASTYP(I),NUM
      <--RETURN
      *****
      +
      + FILE TYPE EQUAL 2 - UNCONSTRAINED
      +
      *****
      PRINT 194, CASTYP(I)
      <--RETURN
      FORMAT ('1')
      FORMAT ('0',T52,A9,' CONSTRAINED',I7)
      FORMAT ('0',T54,A9,' UNCONSTRAINED')
      END SUBROUTINE TYPER

```

```

1664 SUBROUTINE SPCONV (IARG,A,NN)
1665 C
1666 C
1667 C
1668 C
1669 C
1670 C
1671 C
1672 C
1673 C
1674 C
1675 C
1676 C
1677 C
1678 1
1679 C
1680 C
1681 C
1682 C
1683 2
1684 C
1685 C
1686 C
1687 C
1688 C
1689 C
1690 C
1691 C
1692 C
1693 C
1694 C
1695 C
1696 C
1697 C
1698 C
1699 C
1700 C
1701 C
1702 C
1703 C
1704 C
1705 C
1706 C
1707 C
1708 C
1709 C
1710 C
1711 C
1712 C
1713 C

```

```

SUBROUTINE SPCONV (IARG,A,NN)
*****
* SUBROUTINE SPCONV
* THIS SUBROUTINE IS USED TO INDEY THE OPMD-MANAGED SPECIALTIES
* IN EFFECT SEP 82. OLD SPECIALTIES WHICH HAVE BEEN ROLLED UP ARE
* APPROPRIATELY INDEXED.
*****
INTEGER A(NN),IARG,ISW,I,NN
ISW=0
DO 2 I=1,NN
  IF (A(I).EQ.IARG) THEN
    IARG=I
    <-----RETURN
  ENDIF
ENDDO
IF (ISW.EQ.0) THEN
  ISW=1
  ++++++
  + THIS SECTION CHECKS FOR ROLLED UP SPECIALTIES
  ++++++
  IF (IARG.EQ.26) THEN
    IARG=25
  ELSE
    IF (IARG.EQ.76.OR.IARG.EQ.77) THEN
      IARG=91
    ELSE
      IF (IARG.EQ.83.OR.IARG.EQ.93) THEN
        IARG=92
      ELSE
        IF (IARG.GE.86.AND.IARG.LE.88) THEN
          IARG=95
        ENDIF
      ENDIF
    ENDIF
  ENDIF
  GO TO 1
ELSE
  <-----RETURN
ENDIF
END SUBROUTINE SPCONV

```

```

1714 SUBROUTINE ROTREP(S)
1715 C
1716 C *****
1717 C * SUBROUTINE ROTREP *
1718 C * *
1719 C * PRODUCES OPTIONAL ROTATION EQUITY REPORT - SHOULD BE USED TO *
1720 C * EXAMINE CURRENT PERSACS AUTHORIZATION STRUCTURE IN AN *
1721 C * EFFORT TO EXPLAIN THOSE SPCS WITH AN INDETERMINATE ROTATION *
1722 C * BASE. *
1723 C *****
1724 C
1725 C
1726 C
1727 C
1728 C INTEGER GTOT(9),TOTAL(9),K,ICNT
1729 C RET=1
1730 C IPAGE=1
1731 C DO 4 K=1,9
1732 C   GTOT(K)=0
1733 C 4 ENDDO
1734 C CALL TITLE 3----->( 50)
1735 C CALL READP(999) 3----->( 47)
1736 C ICNT=ICNT+1
1737 C
1738 C *****
1739 C * RETRIEVE TOTAL AUTH, MALE-ONLY AUTH, AND ROTATION EQUITY *
1740 C * SET-ASIDES FROM FILE IFILE AND SUM THESE VALUES OVER ALL *
1741 C * GRADES. *
1742 C *****
1743 C
1744 C
1745 C DO 20 K=1,5
1746 C   GTOT(1)=GTOT(1)+STRTH(K)
1747 C   GTOT(2)=GTOT(2)+COMBAT(K)
1748 C   GTOT(9)=GTOT(9)+ROTREQ(K)
1749 C 20 ENDDO
1750 C REWIND 26
1751 C
1752 C *****
1753 C * GET CONUS, LONG, AND SHORT TOUR AUTH FROM THE AUTH DATA *
1754 C * BASE AND SUM THESE VALUES OVER ALL GRADES. *
1755 C *****
1756 C
1757 C
1758 C
1759 C 25 READ(26) NOS,STRTH,COMBAT,LONG,SHORT,CONUS,CBTLNG,CBTSHT,CBTCNS,
1760 C 1 TAADS,LTAADS,STAADS,CTAADS
1761 C IF(MOS.NE.NOS) THEN
1762 C   GO TO 25
1763 C ELSE
1764 C   DO 30 K=1,5
1765 C     GTOT(3)=GTOT(3)+CONUS(K)
1766 C     GTOT(4)=GTOT(4)+LONG(K)
1767 C     GTOT(5)=GTOT(5)+SHORT(K)
1768 C     GTOT(6)=GTOT(6)+CBTCNS(K)
1769 C     GTOT(7)=GTOT(7)+CBTLNG(K)
1770 C     GTOT(8)=GTOT(8)+CBTSHT(K)
1771 C 30 ENDDO
1772 C IF(ICNT.GT.4) THEN
1773 C   CALL LEGEND 3----->( 67)
1774 C   PRINT 87
1775 C   CALL TITLE 3----->( 50)
1776 C   ICNT=1
1777 C ENDIF
1778 C

```

```

1779 C      ++++++
1780 C      + PRINT INFO FOR THIS SSI
1781 C      +
1782 C      ++++++
1783 C
1784 C
1785 C      PRINT 200,NACC,MOS
1786 C      PRINT 201,(GRD(K),STRTH(K),COMBAT(K),CONUS(K),LONG(K),SHORT(K),
1787 C      CBTENS(K),CBTLNG(K),CBTSHT(K),ROTEQ(K),CMT(K),MAX46(K),K=1,5)
1788 C      DO 110 K=1,9
1789 C          TOTAL(K)=0
1790 C      ENDDO
1791 C
1792 C      ++++++
1793 C      +
1794 C      + TOTAL AND PRINT TOTALS FOR THIS SSI
1795 C      +
1796 C      ++++++
1797 C
1798 C      DO 115 K=1,5
1799 C          TOTAL(1)=TOTAL(1)+STRTH(K)
1800 C          TOTAL(2)=TOTAL(2)+COMBAT(K)
1801 C          TOTAL(3)=TOTAL(3)+CONUS(K)
1802 C          TOTAL(4)=TOTAL(4)+LONG(K)
1803 C          TOTAL(5)=TOTAL(5)+SHORT(K)
1804 C          TOTAL(6)=TOTAL(6)+CBTENS(K)
1805 C          TOTAL(7)=TOTAL(7)+CBTLNG(K)
1806 C          TOTAL(8)=TOTAL(8)+CBTSHT(K)
1807 C          TOTAL(9)=TOTAL(9)+ROTEQ(K)
1808 C
1809 C      ENDDO
1810 C      PRINT 205, TOTAL
1811 C      ENDIF
1812 C      GO TO 5
1813 C
1814 C      ++++++
1815 C      + ENTRY POINT FOR EOF ON FILE IFILE. PRINT GRAND TOTALS.
1816 C      +
1817 C      ++++++
1818 C
1819 C      999 CALL LEGEND 3----->( 47)
1820 C      PRINT 87
1821 C      CALL TITLE 3----->( 50)
1822 C      PRINT 209
1823 C      PRINT 210, GTOT
1824 C      PRINT 87
1825 C      RET=0
1826 C      <--RETURN 1
1827 C      200 FORMAT('D',30X,A1,A3,2X,5('TOTAL',2X),3X,'CONUS',3X,'LONG',2X,'SHORT',
1828 C      1 3X,'MALE',2X,'MEAN',3X,'PERSACS',1X,'M-ONLY',1X,'CONUS',3X,
1829 C      2 LONG',2X,'SHORT',2X,3('M-ONLY',1X),ROTEQ,2X,'CONUS',3X,
1830 C      3 UTH',3X),REQ,3X,TOUR/)
1831 C      201 FORMAT('D',31X,A3,9I7,16,A1)
1832 C      205 FORMAT('D',30X,TOTAL,16,8I7)
1833 C      87  FORMAT('D',T58,'**UNCLASSIFIED**')
1834 C      210 FORMAT('D',30X,GRAND,30X,TOTAL,16,8I7)
1835 C      209 FORMAT('D',36X,5('TOTAL',2X),3X,'CONUS',3X,'LONG',2X,'SHORT',3X,'MALE',
1836 C      1 3X,'PERSACS',1X,'M-ONLY',1X,'CONUS',3X,'LONG',2X,'SHORT',2X,
1837 C      2 3('M-ONLY',1X),ROTEQ,3X,8('AUTH',3X),REQ/)
1838 C
1839 C      END SUBROUTINE ROTREP

```

```

1840 SUBROUTINE LEGEND
1841 C
1842 C *****
1843 C *
1844 C * SUBROUTINE LEGEND
1845 C *
1846 C * PRINTS LEGEND AT THE BOTTOM OF EVERY PAGE OF THE FULL REPORT
1847 C *
1848 C *****
1849 C
1850 PRINT 75
1851 PRINT 76
1852 PRINT 90
1853 PRINT 76
1854 PRINT 91, MAXCL
1855 PRINT 76
1856 PRINT 92
1857 PRINT 76
1858 PRINT 77
1859
1860 75 <--RETURN
1861 76 FORMAT('D',T40,'-',54(' '),'-')
1862 77 FORMAT(' ',T40,'-',54(' '),'-')
1863 90 FORMAT(' ',T40,'-',3X,'+ Denotes Non-Accession Specialty',18X,'|')
1864 91 1 FORMAT(' ',T40,'-',3X,'+ Denotes Mean Conus Tour Length Exceeds',1
1865 3, Months,1X,'|')
1866 92 FORMAT(' ',T40,'-',3X,'- Denotes No Conus Authorizations',18X,'|')
1867 C
1868 C END SUBROUTINE LEGEND

```

SUBROUTINE PREDIS()

```

1869 C
1870 C
1871 C
1872 C
1873 C
1874 C
1875 C
1876 C
1877 C
1878 C
1879 C
1880 C
1881 C
1882 C
1883 C
1884 C
1885 C
1886 C
1887 C
1888 C
1889 C
1890 C
1891 C
1892 C
1893 C
1894 C
1895 C
1896 C
1897 C
1898 C
1899 C
1900 C
1901 C
1902 C
1903 C
1904 300 I=1
1905 READ(5,301,END=302) ISP,PCT(I)
1906 I=I+1
1907 GO TO 300
1908 C
1909 C
1910 C
1911 C
1912 C
1913 C
1914 302 CALL FACSF(F28) @----->( 71)
1915 J=ICMF
1916 IF(JCMF.EQ.0) THEN
1917 JCMF=ICMF
1918 DO 303 K=1,5
1919 CMFTOT(K)=0
1920 303 ENDDO
1921 ENDF
1922 FEMACC(6)=0
1923 CALL SPCONV(J,CMFTAB,NUMCMF) @----->( 64)
1924 DO 305 I=1,5
1925 FEMACC(I)=(FEMACC(I)+(FLOAT(PCT(J))/1000.0))+0.5
1926 FEMACC(6)=FEMACC(6)+FEMACC(I)
1927 THSREQ(I)=FLOAT(FEMACC(I))*(TTHSPC/(1.0-TTHSPC))+0.5
1928 305 ENDDO
1929 WRITE(28) ICMF,MOS,STRTH,COMBAT,NONCOM,MALE,TAADS,FEMACC,CONTNT,
1930 CARPRO,ROTREQ,CMT,RATIO,LTAADS,STAADS,CTAADS,CASREP,NACC,RCAS,
1931 THSREQ,TTHSPC,MAX48
1932 IF(JCMF.EQ.ICMF) THEN
1933 DO 310 K=1,6
1934 CMFTOT(K)=CMFTOT(K)+FEMACC(K)

```

```

1935 310      ENDDO
1936      ELSE
1937          WRITE(10,311) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
1938          JCMF=ICMF
1939          DO 312 K=1,6
1940              CMFTOT(K)=FEMACC(K)
1941 312      ENDDO
1942      ENDIF
1943      GO TO 302
1944      C
1945      C
1946      C
1947      C
1948      C
1949      C
1950      C
1951      C
1952      C
1953 400      WRITE(10,311) JCMF,(CMFTOT(K),K=5,1,-1),CMFTOT(6)
1954          IFILE=28
1955          REWIND IFILE
1956          MAXGRD=5
1957          RTAB=      PREFERRED DISTRIBUTION
1958          CALL CMFT($410) 2----->( 60)
1959 410      <--RETURN 1
1960      C
1961 301      FORMAT(I2,I5)
1962 311      FORMAT(I3,6I5)
1963      C
1964      C      END SUBROUTINE PREDIS

```

```

1965 C SUBROUTINE OPT(NOPT)
1966 C
1967 C *****
1968 C * SUBROUTINE OPT *
1969 C *
1970 C * RETRIEVE THE @XQT OPTIONS VIA ER OPTS. THIS ROUTINE IS
1971 C * AVAILABLE IN SYSS*RLIBS
1972 C *
1973 C *****
1974 C
1975 C THIS SUBROUTINE MAKES AVAILABLE THE OPTIONS FOLLOWING THE
1976 C @XQT CALL STATEMENT VIA ER OPTS. WHEN CONTROL IS RETURNED
1977 C THE SPECIFIED OPTION LETTERS ARE SET IN REGISTER AQ IN
1978 C MASTER BIT NOTATION, THAT IS, LETTER A SETS BIT 25, LETTER B
1979 C SETS BIT 24.....LETTER Z SETS BIT 0. BITS 35 - 26 ARE ALWAYS
1980 C ZERO.
1981 C
1982 C
1983 C 35 26 25 0
1984 C -----
1985 C | A B C D ..... Y Z |
1986 C -----
1987 C
1988 C BIT POS. 13 .....36
1989 C
1990 C THE ABOVE ILLUSTRATION IS THE WORD FOR THE ARGUMENT NOPT.
1991 C THE BITS FUNCTION RETURNS A 1 IF THE BIT POSITION ASKED
1992 C ASKED FOR HAS BEEN SET:
1993 C BITS(NOPT,I,1) WHERE I=INITIAL BIT POSITION
1994 C THAT IS, I=13 REFERS TO BIT 25, I=14 REFERS TO BIT 26 AND
1995 C SO ON.
1996 C
1997 C *****
1998 C * REFERENCE : EXEC LEVEL 36R1 VOL 2 PROGRAMMER REFERENCE *
1999 C * PUP-4144.2P2 *
2000 C * ASCII FORTRAN LEVEL 10R1 PROGRAMMER REFERENCE *
2001 C * UP-8244.2 *
2002 C *****
2003 C
2004 C
2005 C
2006 C END SUBROUTINE OPT

```

SUBROUTINE FACS F (ARG)

```

*****
* SUBROUTINE FACS F
* THIS ROUTINE SUBMITS AN EXECUTIVE CONTROL IMAGE (ARG) FOR
* INTERPRETATION AND PROCESSING
*****

```

FACS F IS USED IN THIS PROGRAM TO PASS TEMPORARY MASS
STORAGE FILES. ARG SHOULD BE A STANDARD SPERRY CONTROL
IMAGE.

```

*****
+ REFERENCE : ASCII FORTRAN LEVEL 10R1 PROGRAMMER REFERENCE
+ UP-8244.2
*****

```

END SUBROUTINE FACS F

```

20330 C
20331 C
20332 C
20333 C
20334 C
20335 C
20336 C
20337 C
20338 C
20339 C
20400 C
20401 C
20402 C
20403 C
20404 C
20405 C
20406 C
20407 C
20408 C
20409 C
20410 C
20411 C
20412 C
20413 C
20414 C
20415 C
20416 C
20417 C
20418 C
20419 C
20420 C
20421 C
20422 C
20423 C
20424 C
20425 C
20426 C
20427 C
20428 C
20429 C
20430 C
20431 C
20432 C
20433 C
20434 C
20435 C
20436 C
20437 C
20438 C
20439 C
20440 C
20441 C
20442 C
20443 C
20444 C
20445 C
20446 C
20447 C
20448 C
20449 C
20450 C
20451 C
20452 C
20453 C
20454 C
20455 C
20456 C
20457 C
20458 C
20459 C
20460 C
20461 C
20462 C
20463 C
20464 C
20465 C
20466 C
20467 C
20468 C
20469 C
20470 C
20471 C
20472 C
20473 C
20474 C
20475 C
20476 C
20477 C
20478 C
20479 C
20480 C
20481 C
20482 C
20483 C
20484 C
20485 C
20486 C
20487 C
20488 C
20489 C
20490 C
20491 C
20492 C
20493 C
20494 C
20495 C
20496 C
20497 C
20498 C
20499 C
20500 C

```

SUBROUTINE ADATE (DATE,TIME)

```

*****
* SUBROUTINE ADATE
* RETURNS THE CURRENT DATE AND TIME
*****
THE ARGS DATE AND TIME SHOULD BE CHARACTER VARIABLES OF
EIGHT CHARACTERS IN LENGTH. DATE IS RETURNED AS 'MMDDYY'
AND TIME IS RETURNED AS 'HHMMSS'
*****
+ REFERENCE : ASCII FORTRAN LEVEL 10R1 PROGRAMMER REFERENCE
+ UP-8244.2
*****
END

```

```

1      35  MAIN
2      70  . OPT
3      64  . SPCONV
4      71  . FACS
5      40  . FILER
6      54  . : DATA
7      64  . : SPCONV
8      50  . FRPT
9      58  . DIST
10     56  . : SUMR
11     50  . : . TITLE
12     73  . : . : ADATE
13     64  . : . : TYPER
14     47  . : . : READR
15     51  . : . : READR
16     67  . : . : TOTLE
17     53  . : . : LEGEND
18     47  . : . : GRAND
19     60  . : READR
20     47  . CMFT
21     50  . : READR
22     47  . : TITLF
23     50  . : ** SEE LINE 11
24     47  . MAXRPT
25     50  . : TITLE
26     47  . : ** SEE LINE 11
27     65  . : READR
28     50  . ROTREP
29     47  . : TITLE
30     50  . : ** SEE LINE 11
31     47  . : READR
32     67  . : LEGEND
33     68  . PREDIS
34     71  . : FACS
35     47  . : READR
36     64  . : SPCONV
37     60  . : CMFT
38     50  . : ** SEE LINE 20

```

MODULE
CROSS REFERENCE LISTING

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```

*****
ADATE
PAGE 50 ENTRY TITLE 914
PAGE 72 SUBROUTINE ADATE 2030
CMFT
PAGE 39 PROGRAM MAIN 264 267 270
PAGE 60 SUBROUTINE CMFT 1448
PAGE 62 1616
PAGE 69 SUBROUTINE PREDIS 1958
DATA
PAGE 40 SUBROUTINE FILER 376 376
PAGE 46 730
PAGE 54 SUBROUTINE DATA 1136
PAGE 55 1240
PAGE 63 SUBROUTINE TYPER 1629
PAGE 68 SUBROUTINE PREDIS 1885
DIST
PAGE 39 PROGRAM MAIN 262 278
PAGE 58 SUBROUTINE DIST 1316
PAGE 59 1447
FACSF
PAGE 38 PROGRAM MAIN 243 244
PAGE 68 SUBROUTINE PREDIS 1805
PAGE 71 SUBROUTINE FACSF 2007 2018 2029
FILER
PAGE 38 PROGRAM MAIN 258
PAGE 40 SUBROUTINE FILER 317
PAGE 46 734
FRPT
PAGE 39 PROGRAM MAIN 240
PAGE 50 SUBROUTINE FRPT 876
PAGE 53 ENTRY GRAND 1135
GRAND
PAGE 53 ENTRY GRAND 1008 1133
PAGE 57 SUBROUTINE SUMR 1311
PAGE 66 SUBROUTINE ROTREP 1834
LEGEND
PAGE 53 ENTRY TOTLE 1082
PAGE 65 SUBROUTINE ROTREP 1773
PAGE 66 1819
PAGE 67 SUBROUTINE LEGEND 1840 1869
MAIN
PAGE 35 PROGRAM MAIN 1
MAXRPT
PAGE 39 PROGRAM MAIN 272
PAGE 48 SUBROUTINE MAXRPT 755
PAGE 49 875
OPT
PAGE 37 PROGRAM MAIN 132
PAGE 70 SUBROUTINE OPT 1965 1977 2006
PREDIS
PAGE 39 PROGRAM MAIN 278
PAGE 68 SUBROUTINE PREDIS 1869
PAGE 69 1964
READR
PAGE 47 SUBROUTINE READR 735 754
PAGE 48 SUBROUTINE MAXRPT 826
PAGE 50 ENTRY TITLE 923
PAGE 56 SUBROUTINE SUMR 1278
PAGE 59 SUBROUTINE DIST 1358
PAGE 60 SUBROUTINE CMFT 1306
PAGE 65 SUBROUTINE ROTREP 1734
PAGE 68 SUBROUTINE PREDIS 1914
ROTREP
PAGE 39 PROGRAM MAIN 275

```

MODULE
CROSS REFERENCE LISTING

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```

*****
PAGE 65 SUBROUTINE ROTREP 1714
PAGE 66 1879
SPCONV
PAGE 38 PROGRAM MAIN 228
PAGE 41 SUBROUTINE FILER 401
PAGE 64 SUBROUTINE SPCONV 1664 1713
PAGE 62 SUBROUTINE PREDIS 1923
SUMR
PAGE 56 SUBROUTINE SUMR 1241
PAGE 57 1315
PAGE 58 SUBROUTINE DIST 1336
TITLE
PAGE 48 SUBROUTINE MAXRPT 777
PAGE 49 874
PAGE 50 ENTRY TITLE 913
PAGE 56 SUBROUTINE SUMR 1263
PAGE 61 SUBROUTINE CMFT 1564
PAGE 65 SUBROUTINE ROTREP 1733 1775
PAGE 66 1821
TOTLE
PAGE 51 ENTRY TOTLE 996
PAGE 56 SUBROUTINE SUMR 1286
TYPER
PAGE 50 ENTRY TITLE 919
PAGE 63 SUBROUTINE TYPER 1617 1663

```

6. MODIFY CONTINUATION RATES

6.1. SOURCE CODE

This program should be used by all OASYS users until viable female continuation rates can be obtained. Female continuation rates are extracted from the overall female continuation rates for each specialty code by using the percentage difference of the male-female overall continuation rates and the female overall continuation rates and then applying these percentage differences against the male-female specialty continuation rates.

This ASCII FORTRAN listing was prepared using the SAI-SDOL processor.

PROGRAM MAIN

```

1 C
2 C
3 C
4 C
5 C
6 C
7 C
8 C
9 C
10 C
11 C
12 C
13 C
14 C
15 C
16 C
17 C
18 C
19 C
20 C
21 C
22 C
23 4
24 1
25 1
26 6
27 C
28 C
29 C
30 C
31 C
32 2
33 6
34 C
35 C
36 C
37 C
38 C
39 C
40 C
41 C
42 C
43 C
44 C
45 C
46 C
47 C
48 C
49 C
50 C
51 C
52 C
53 C
54 C
55 9
56 C
57 C
58 C
59 C
60 C
61 C
62 C
63 C
64 C
65 C
66 C

*****
* THIS PROGRAM CREATES FEMALE CONTINUATION RATES BASED ON THE
* MALE AND OVERALL CONTINUATION RATES CURRENTLY USED.
*****

REAL OVRCOM(30),OVRWOM(30),OVRPCT(30),SPCCOM(30),SPCWOM(30),
SAVWOM(30),NEWWOM(30),SAVCOM(30),SAVWMN(30),NONCOM(30),NONWMN(30),
ACCCOM(30),ACCWMN(30),NONPCT(30),ACCPCT(30)
INTEGER I,J,ICMF,JCMF,NONACC(36),A(36)
CHARACTER IN15*58,IN16*65

*****
+ INPUT VALID SPECIALTY CODES AND TYPE OF SPECIALTY CODE
+
DO 1 I=1,36
  READ(12,4,END=2) A(I),NONACC(I)
  FORMAT(' ')
ENDDO

*****
+ INPUT OVERALL CRATE FILES FOR COMBINED AND FEMALE OFFICERS
+
READ(5,6) SAVCOM
READ(5,6) SAVWMN
FORMAT(' ')

*****
+ CALCULATE CUMULATIVE DATA POINTS FOR COMBINED AND FEMALE CRATES
+
+ DISTRIBUTE OVERALL CRATES FOR ACCESSION AND NON-ACCESSION SPCS
+ NON-ACCESSION SPCS GET FEM OVERALL CRATES FOR 1ST EIGHT YEARS
+
DO 9 I=1,30
  NONCOM(I)=SAVCOM(I)
  NONWMN(I)=SAVWMN(I)
  ACCCOM(I)=SAVCOM(I)
  ACCWMN(I)=SAVWMN(I)
  IF(I.LE.8) THEN
    NONCOM(I)=SAVWMN(I)
  ENDIF
ENDDO
DO 10 I=1,30
  ACCPCT(I)=0.0
  NONPCT(I)=0.0
  IF(I.GT.1) THEN
    NONCOM(I)=NONCOM(I)+NONCOM(I-1)
    NONWMN(I)=NONWMN(I)+NONWMN(I-1)
    ACCCOM(I)=ACCCOM(I)+ACCCOM(I-1)
    ACCWMN(I)=ACCWMN(I)+ACCWMN(I-1)
  ENDIF
  IF(NONCOM(I).GT.0.0) THEN
    NONPCT(I)=NONWMN(I)/NONCOM(I)

```

```

67      ENDIF
68      IF (ACCCOM(I).GT.0.0) THEN
69          ACCPCT(I)=ACCCOM(I)/ACCCOM(I)
70      ENDIF
71 10    ENDDO
72      C
73      C
74      C
75      C
76      C
77      C
78      C
79 11    READ(10,6,END=999) ICMF,SPCCOM
80      READ(11,6) JCMF,SAVWOM
81      C
82      C
83      C
84      C
85      C
86      C
87      C
88      IF(ICMF.NE.JCMF) THEN
89          GO TO 998
90      ENDIF
91      C
92      C
93      C
94      C
95      C
96      C
97      C
98      C
99      C
100     DO 12 I=1,36
101         IF (ICMF.EQ.A(I)) THEN
102             IF (NONACC(I).EQ.1) THEN
103                 DO 15 J=1,30
104                     OVRCOM(J)=NONCOM(J)
105                     OVRWOM(J)=NONWMN(J)
106                     OVRPCT(J)=NONPCT(J)
107                     IF (OVRPCT(J).GT.1.00) THEN
108                         OVRPCT(J)=1.00
109                     ENDIF
110                     IF (J.LE.8) THEN
111                         SPCCOM(J)=SAVWMN(J)
112                     ENDIF
113             ENDDO
114         ELSE
115             DO 14 J=1,30
116                 OVRCOM(J)=ACCCOM(J)
117                 OVRWOM(J)=ACCCWMN(J)
118                 OVRPCT(J)=ACCPCT(J)
119                 IF (OVRPCT(J).GT.1.00) THEN
120                     OVRPCT(J)=1.00
121                 ENDIF
122             ENDDO
123         ENDIF
124     ENDDO
125 12    C

```

```

126 C      ++++++
127 C      +
128 C      + CALCULATE CUMULATIVE COMBINED DATA POINTS AND APPLY PERCENTAGE +
129 C      + DIFFERENCE TO THOSE DATA POINTS RESULTING IN NEW FEM CUMULATIVE +
130 C      + DATA POINTS. CALCULATE NEW FEM CRATE BY DIVIDING CUMULATIVE DATA +
131 C      + POINTS BY THE PREVIOUS CUMULATIVE DATA POINTS. +
132 C      +
133 C      ++++++
134 C
135 DO 13 I=1,30
136     NEWWOM(I)=0.0
137     IF (I.GT.1) THEN
138         SPCCOM(I)=SPCCOM(I)+SPCCOM(I-1)
139     ENDIF
140     SPCWOM(I)=SPCCOM(I)+OVRPCT(I)
141     IF ((I.GT.1).AND.(SPCWOM(I-1).GT.0.0)) THEN
142         NEWWOM(I)=SPCWOM(I)/SPCWOM(I-1)
143     ENDIF
144     IF (I.EQ.1) THEN
145         NEWWOM(I)=SPCWOM(I)
146     ENDIF
147     IF (NEWWOM(I).GE.1.00) THEN
148         NEWWOM(I)=0.999
149         SPCWOM(I)=SPCWOM(I-1)+NEWWOM(I)
150     ENDIF
151 13 ENDDO
152 C
153 C      ++++++
154 C      +
155 C      + WRITE NEW CRATE DATA TO FILE 13 +
156 C      +
157 C      ++++++
158 C
159     WRITE(13,25) ICMF,(NEWWOM(I),I=1,10)
160     WRITE(13,26) (NEWWOM(I),I=11,20)
161     WRITE(13,26) (NEWWOM(I),I=21,30)
162 25 FORMAT(I2,10(,F4.3))
163 26 FORMAT(9(F4.3,1,F4.3))
164 C
165 C      ++++++
166 C      +
167 C      + WRITE DISPLAY TO FILE 15 +
168 C      +
169 C      ++++++
170 C
171     WRITE(15,50) ICMF
172 50 FORMAT(10X,"SPC",I3,1X," CONTINUATION RATE DATA"//11X,30("-"))
173     WRITE(15,51)
174 51 FORMAT(10X,"CUM",5X,"CUM-FEM",6X,2("CUM-SPC",1X),1X,"GIVEN",5X
175     "CALC")
176     WRITE(15,52)
177 52 FORMAT(10X,"OVERALL",1X,"OVERALL",1X,"PCT",2X,"OVERALL",1X,2("
178     FEMALE",3X),1X,"FEMALE")
179     WRITE(15,53)
180 53 FORMAT(16X,"YOS",1X,"CRATE",3X,"CRATE",3X,"DIFF",1X,2("CRATE",3
181     X),1X,"CRATE",5X,"CRATE"/)
182     DO 60 I=1,30
183         WRITE(15,55) I,OVRCOM(I),OVRWOM(I),OVRPCT(I),SPCCOM(I),SPC*OM(I
184         ),SAVWOM(I),NEWWOM(I)
185 55 FORMAT(16X,I3,2X,F4.3,4X,F4.3,3X,F4.2,2X,F4.3,4X,F4.3,5X,F4
186         .3,6X,F4.3)
187 60 ENDDO
188     CALL GRAPH(SPC*OM)----->( P1)
189     GO TO 11
190 C

```

```

191 C      ++++++
192 C      +
193 C      + *** ERROR MESSAGE ***
194 C      +
195 C      ++++++
196 C
197 998
198 61
199 1
200 C
201 C      ++++++
202 C      +
203 C      + NORMAL EXIT
204 C      +
205 C      ++++++
206 C
207 999
208 REWIND 15
209 REWIND 16
210 J=1
211 DO 69 I=1,7
212 READ(15,72,END=9999) IN15
213 FORMAT(7X,A58)
214 IF((I.EQ.1).AND.(J.EQ.1)) THEN
215 WRITE(6,74) IN15
216 FORMAT(1,A58)
217 J=2
218 ELSE
219 IF((I.EQ.1).AND.(J.EQ.2)) THEN
220 WRITE(6,75) IN15
221 FORMAT(0,///1X,A53)
222 J=1
223 ELSE
224 WRITE(6,77) IN15
225 FORMAT(1,A58)
226 ENDIF
227 69
228 ENDDO
229 DO 89 I=1,30
230 READ(15,72) IN15
231 IF(I.LE.26) THEN
232 READ(16,80) IN16
233 FORMAT(A65)
234 WRITE(6,83) IN15,IN16
235 FORMAT(1,A58,4X,A65)
236 ELSE
237 WRITE(6,77) IN15
238 ENDIF
239 89
240 ENDDO
241 GO TO 70
242 9999
243 WRITE(6,65)
244 FORMAT(0,///,10X,"====> NEW CRATE FILE AT FILE 13 <====")
245 STOP
246 END

```

```

244 SUBROUTINE GRAPH(POINTS)
245 REAL POINTS(30)
246 INTEGER I,J,K
247 CHARACTER GRAF(23,64)*1,NUM(10)*1
248 DATA (NUM(I),I=1,10) /'1','2','3','4','5','6','7','8','9','0'/
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```

BUILD X AND Y AXIS SYSTEM

```

DO 10 I=1,23
DO 11 J=1,64
  GRAF(I,J)=' '
  IF((J.EQ.4).AND.(I.LE.21)) THEN
    GRAF(I,J)='+'
  ENDIF
  IF((I.EQ.21).AND.(J.GT.4)) THEN
    GRAF(I,J)='+'
  ENDIF
ENDDO
ENDDO

```

LABEL AXIS SYSTEM

```

J=9
DO 12 I=1,21,2
  GRAF(I,3)='0'
  IF(I.EQ.1) THEN
    GRAF(I,1)='1'
    GRAF(I,2)='C'
  ELSE
    IF(I.LT.21) THEN
      GRAF(I,2)=NUM(J)
      J=J-1
    ENDIF
  ENDIF
ENDDO
I=1
DO 13 J=6,64,2
  IF(J.LE.22) THEN
    GRAF(22,J)=NUM(I)
    I=I+1
  ELSE
    IF(J.LE.42) THEN
      GRAF(22,J)='1'
      GRAF(23,J)=NUM(I)
      I=I+1
      IF(I.GT.10) THEN
        I=1
      ENDIF
    ELSE
      IF(J.LE.62) THEN
        GRAF(22,J)='2'
        GRAF(23,J)=NUM(I)
        I=I+1
        IF(I.GT.10) THEN
          I=1
        ENDIF
      ELSE
        GRAF(22,J)='3'
      ENDIF
    ENDIF
  ENDIF
ENDDO

```

```

10          GRAF(23,J)='0'
11      ENDIF
12  ENDIF
13  ENDDO
14  ++++++
15  + PLOT DATA POINTS
16  ++++++
17  I=1
18  DO 15 J=6,64,2
19      K=IFIX((21.0-(POINTS(1)*100.0)/5.0)+0.5)
20      IF((K.GT.0).AND.(K.LT.21)) THEN
21          GRAF(K,J)='*'
22      ENDIF
23      I=I+1
24  ENDDO
25  ++++++
26  + WRITE DISPLAY TO FILE 16
27  ++++++
28  WRITE(16,20)
29  FORMAT(18X,'% FEMALE OFFICERS REMAINING')
30  DO 19 I=1,21
31      WRITE(16,22) (GRAF(I,J),J=1,64)
32      FORMAT(1,64A1)
33  ENDDO
34  WRITE(16,24)
35  FORMAT(1,25X,'YEAR OF SERVICE')
36  <--RETURN
37  END

```

1313

6.2. RUNSTREAM

1314
1315

The following runstream is used to produce the modified female continuation rates :

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```

      . ASSIGN TEMPORARY MASS STORAGE
      BASSG,T 10.
      BASSG,T 11.
      BASSG,T 12.
      BASSG,T 15.
      BASSG,T 16.
      BASSG,T 13.
      BDEFD BOB2CRATE-SC,10.    . M/F SPC CONTINUATION RATES
      BDEFD BOB2CRATE-SC/FEM,11. . FEM CONTINUATION RATES
      BDEFD SPECS,12.          . SPECIALTY CODES FILE
      BEXQT MOD/CRATES         . EXECUTE THE PROGRAM
      BADD BOB2CRATE           . M/F OVERALL CRATES
      BADD BOB2CRATE/FEM       . FEM OVERALL CRATES

```

LMED
— 8