#397

VIKING LANDER 1 & 2
COMMAND HISTORY WITH SPECTRA HISTORY
AND
TEMP. HISTORY ON MAG. TAPE

75-075C-13E
75-083C-13E

VIKING 1 LANDER

COMMAND, SPECTRA, TEMP HIST MTAPE

75-075C-13E

This data set has been restored. There were originally three 7-track, 800 BPI tapes written in BCD. There is one restored tape written in ASCII. The DR tape is a 3480 cartridge and the DS tape is 9-track, 6250 BPI. The original tapes were created on a 1108 computer. The DR and DS numbers along with the corresponding D numbers are as follows:

| DR# | DS# | D# | FILES | |
|---|---|---|---|---|
| DR004014 | DS004014 | D029361 | 1 - 3 | SOL. 1 - 104 |
| | | D036436 | 4 - 6 | SOL. 104 - 458 |

o D36437 : Bad tape.

VIKING 2 LANDER

COMMAND, SPECTRA, TEMP HIST MTAPE

75-083C-13E

This data set have been restored. Originally there were three 7-track, 800 BPI tapes, written in BCD. There is one restored tape, written in ASCII. The original tapes were created on a 1108 computer, and the restored tape was created on an IBM 9021 computer. The DR tape is 3480 cartridge and the DS tape is 9-track, 6250 BPI. The DR and DS number along with their corresponding D numbers are as follows:

| DR# | DS# | DD# | FILES | |
|---|---|---|---|---|
| DR-005166 | DS-005166 | DD-029362 | 1 - 3 | SOL. 1 - 61 |
| | | DD-036434 | 4 - 6 | SOL. 61 - 412 |
| | | DD-036435 | 7 - 9 | SOL. 412 - 775 |

| REQ. AGENT | RAND NO. | ACQ. AGENT |
|---|---|---|
| VJP | RC7976 | RWV |

VIKING LANDER 1 & 2

COMMAND HISTORY WITH SPECTRA HISTORY

AND

TEMP. HISTORY ON MAG. TAPE

75-075C-13E

75-083C-13E

This data set catalog consists of 3 Viking Lander 1 and 3 Viking Lander 2 data tape. The tapes are 800 BPI, 7-track, ~~BCD~~ BINARY, with 3 files of data on each tape. The tapes were created on a Univac 1108 computer. The 'D' and 'C' numbers along with the time spans are as follows:

Viking Lander 1

| D# | C# | TIME SPAN |
|---|---|---|
| D-29361 | C-19280 | SOL. 1 - 104 |
| D-36436 | C-21011 | SOL. 104 - 458 |
| D-36437 | | SOL. 458 - 841 |

Viking Lander 2

| | | |
|---|---|---|
| D-29362 | C-19281 | SOL. 1 - 61 |
| D-36434 | C-21609 | SOL. 62 - 412 |
| D-36435 | C-21010 | SOL. 412 - 775 |

JET PROPULSION LABORATORY *California Institute of Technology • 4800 Oak Grove Drive, Pasadena, California 91103*

March 25, 1977

Robert W. Vostreys
National Space Science Data Center
Code 601
Goddard Space Flight Center
Greenbelt, Md. 20771

Dear Dr. Vostreys,

Enclosed you will find:

(1) Command history, with spectra history, and temperature history data on magnetic Tape collected by the Inorganic Chemical Analysis Team (ICAT) during the Viking primary and reduced missions.

Viking-1: Tape ICAT 1

Viking-2: Tape ICAT 2

(2) Plots on microfiche of all spectra taken.

Please note that we have arranged to produce the microfiche copy and therefore are not delivering the more bulky hardcopy printout. Also enclosed is a copy of the documentation of file formats, and reprints of our published work to date.

Sincerely,

Ben Clark

Benton C. Clark
Cognizant Engineer, ICAN
(JPL Mail Stop 264-339, Phone ext. 7836)

BC:ljm

cc: P. Toulmin, III
G. J. Soffen
C. Wende

encl.

The tapes ICAT 1 and ICAT 2 are even parity, 800 BPI, written in external BCD on the Univac 1108 (character code). There are three files per tape. The first file contains the command history information, the second file contains temperature history data and the third file contains spectra history. Each file has 120 characters per card image with the last 40 characters blank filled. This allows for 24 logical records to equal one physical record or 2880 characters per physical record.

On tape ICAT 1, file one has 137 physical records, file 2 has 291 physical records and file 3 has 1875 physical records. On tape ICAT 2 file one has 58 physical records, file two has 230 physical records and file three has 621 physical records.

Attached is a description of the files.

```
-----DATA FILE                    - SPCHIS FILE -----

CARD 1.  HEADER CARD FOR FILE                    SPCHIS FILE
CARD 2. (RSPNM(KD),KD=1,9),OPNAM,KTR2,JPLTM3,DATE3,NSP(10A6,I3,2A6,I5)
CARDS 3-15.   (RSPK(NW),NW=1,127)          (10F8.1)
CARD 16.      (NDFSP(I),I=1,16)            (16I5)
CARD 17.      (CTIM1(I),I=1,16)            (16F5.1)
FOLLOWING CARDS.   REPEAT OF CARDS 2-17.

DEFINITIONS.
 RSPNM(NSP,KD)   =   SPECTRUM NAME
 RSPK(NSP,NW)= RAW SPECTRUM DATA, NORMALIZED TO 30.7 SEC
 KTR2(NSP)    = PC TUBE WHICH GENERATED THIS SPECTRUM
 JPLTM3(NSP)  = JPL TIME THIS SPECTRUM ASSEMBLED
 DATE3(NSP)  = JPL DATE THIS SPECTRUM ASSEMBLED
 NDFSP(NSP,J)= DATA FRAME NO.S USED TO MAKE THIS SPECTRUM
 CTIM1(NSP,J)= COUNTING TIME FOR EACH DATA FRAME
 OPNAM        = NAME OF OPERATOR WHO GENERATED THIS SPECTRUM

NOTES.
 THE NSP NO. IS STORED AT THE END OF THE SPECTRUM NAME CARD (SEE CARD 2)
 SPECTRA ARE 16 APART.
 Spectrum number ends in column 80.  For example, to find spectrum number 87, use FIND,79 87.
```

----- DATA FILE. . . TEMHIS FILE -----

CARD 1. *HEADER CARD FOR DATA FILE' ----- TEMHIS FILE
CARD 2. NTEMT,NDECS (3I5)
CARDS 3 AND FOLLOWING. ITEMP(NTEM),HTEMP(NTEM),NTEM=1,NTEMX 4(I10,F10.1)
CARD N. 'EOG'. END OF GROUP CARD (A3)

DEFINITIONS.
NTEMX = TOTAL NUMBER OF DECSET TEMPERATURE GROUPS (675 MAX. READINGS EACH)
HTEMP(NTEM) = TEMP READING FROM PLAT RES THERMOM IN XRFS BOX
ITEMP(NTEM) = GCSC TIME (SEC) AT WHICH TEMP MEAS TAKEN
NTEMT = NUMBER OF TEMP READINGS IN A GROUP (675 MAX.)
NDECM(IM) = NUMBER OF GROUPS STORED IN THIS FILE. ISET2(10,IM).

----- DATA FILE  COMHIS FILE -----

```
CARD 1  *HEADER CARD FOR FILE                    COMHIS FILE*
CARD 2. NCDTX,NCD1                               (2I5)
CARD 3. PURCOM (NCD,KD), NSIP, MSETE             (10A6, 2I5)
CARD 4. NCD,KTR1S,  IVOLTS, IDUMPS, IDUMPC, CPERS, ICPERC, NWGS, IDT, IPRED, IGCSC
          (I4, I2, I5, 1X, A4, A2, 1X, F5.1,A2,1X,I3,1X, I5, 1X, I3, 1X, I10)
```

DEFINITIONS.

| | | |
|---|---|---|
| NCDX | = | TOTAL NUMBER OF COMMANDS SENT (ISET2(1,IM)) |
| KTR1S(NCD) | = | PC TUBE NUMBER |
| IVOLTS(NCD) | = | HIGH VOLTAGE BIAS SETTING |
| IDUMPS(NCD) | = | DUMP, QUO, FLAG, OR BAD (A4) |
| IDUMPC(NCD) | = | GIVES -A, -B, ETC. (A2) |
| CPERS(NCD) | = | COUNT PERIOD (30.7, 122.9, ETC.) |
| ICPERC(NCD) | = | GIVES -A OR -B FOR COUNT PERIOD (A2) |
| NWGS(NCD) | = | WINDOW GROUP |
| IDT(NCD) | = | EXECUTION TIME FOR COMMAND NCD |
| IGCSC(NCD) | = | TIME(IN SEC,GCSC)CMD IS TO BEGIN EXECUTION ON MARS |
| IPRED(NCD) | = | PREDICTED NUMBER OF DATA FRAMES COMMANDED |
| NCDTX | = | NUMBER OF COMMANDS STORED IN THIS GROUP |
| NCD1 | = | NCD NUMBER OF FIRST COMMAND IN THIS GROUP |
| PURCOM(NCD,10) | = | PURPOSE OF THE COMMAND |
| NSIP | = | COMMAND TABLE NUMBER (SIP NUMBER) WHICE PRODUCED THIS COMMAND |
| MSETE | = | NUMBER OF THE MSET ENTRY WHICH PRODUCED THIS COMMAND |

DR004014

File number 1, record number 1, record size is 2882 bytes

```
   0        D  A  T  6  9  X  A  6  9  0  0  2        F  I  L  E     6
  20        9     -     T  E  M  H  I  S     F  I  L  E     -     M  I
  40        S  S  I  O  N     1
  60
  80
 100
 120                   1              1
 140
 160
 180
 200
 220
 240                                  0                          .  0
 260
 280
 300
 320
 340
 360        E  O  G
 380
 400
 420
 440
 460
 480                   1              1  F  I  R  S  T     C  R  U  I
 500        S  E     C  H  E  C  K  O  U  T     V  I  K  I  N  G     1
 520           D  A  T  E     1  1  /  1  3  /  7  5              1  1
 540        1  3  7  5  0  4  5  6  3  3
 560
 580
 600                                  0                          .  0
 620
 640
 660
 680
 700
 720        E  O  G
 740
 760
 780
 800
 820
 840              6  7  5              3  V  L  -  1  ,  S  H  O  U  L
 860        D     B  E     P  R  E  -  S  E  P  ,  X  A  0  0  1  1  0
 880                                                              0  7
 900        1  9  7  6  0  0  0  0  4  9
 920
 940
 960                                1  2                    6  8  .  1
 980                                1  3                    6  8  .  1
1000                                1  4                    6  8  .  1
1020                                1  5                    6  8  .  1
1040
1060
1080                                1  6                    6  8  .  1
1100                                1  7                    6  8  .  1
```

TIME SPAN IN the 1st & last
RECORD of FILE 1

D-29361
sol 1 -104
( MARS time)

```
$JOB  13:05:19
$NOP ******** DUMP OF X-403 ***********
$ASS IN MS5
$EXEC DPDCT/ 35
 INPUT TAPE ON MS5
 DATA INPUT     3 5 3
  FILE  1
```

| | DATEDIX | ASLENGTH | ASPATIX | SI | COMHIS | FILE | MISS | ION 1 |
|---|---|---|---|---|---|---|---|---|
| ( 0) | 545123150127 | 515501000002 | 202056714365 | 205501204020 | 634644707122 | 206671436520 | 402044712222 | 714645200120 |
| ( 48) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 96) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202001010220 | 202020012020 | 202020202020 | 202020202020 |
| ( 144) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 192) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 240) | 447122227146 | 452061204020 | 475165402265 | 472063706563 | 424046242320 | 634464200120 | 202020202020 | 202020202020 |
| ( 288) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 336) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202023012004 | 200100010020 | 060606060606 | 202020077307 |
| ( 384) | 202020202000 | 202020050410 | 202020072020 | 202020202002 | 021000202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 432) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 480) | 447122227146 | 452061204020 | 475165402265 | 472063706563 | 424046242320 | 634464732002 | 202020202020 | 202020202020 |
| ( 528) | 202020202020 | 202020202020 | 202020200020 | 202020002020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 576) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020022003 | 200100010520 | 101010101010 | 202020077307 |
| ( 624) | 202020202000 | 202020050410 | 202020072020 | 202020202002 | 100210202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 672) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 720) | 447122227146 | 452061204020 | 475165402265 | 472063706563 | 424046242320 | 634464732003 | 202020202020 | 202020202020 |
| ( 768) | 202020202020 | 202020202020 | 202020200020 | 202020002020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 816) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020032002 | 200100050020 | 060606060606 | 202020077307 |
| ( 864) | 202020202000 | 202020050410 | 202020072020 | 202020202003 | 030706202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 912) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 960) | 447122227146 | 452061204020 | 475165402265 | 472063706563 | 424046242320 | 634464732004 | 202020202020 | 202020202020 |
| ( 1008) | 202020202020 | 202020202020 | 202020200020 | 202020002020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1056) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020042001 | 200100070520 | 101010101010 | 202020077307 |
| ( 1104) | 202020202000 | 202020050410 | 202020072020 | 202020202003 | 110204202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1152) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | TIME SPAN | 202020202020 | 202020202020 | 202020202020 |
| ( 1200) | 202541113363 | 446420236243 | 202020614333 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 1248) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1296) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020052004 | 200100060020 | 101010101010 | 202020077307 |
| ( 1344) | 202020202000 | 202001010706 | 202001062020 | 202020200306 | 070511202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1392) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1440) | 202541013363 | 446420236243 | 202020012033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 1488) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1536) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020062003 | 200100070520 | 060606060606 | 202020077307 |
| ( 1584) | 202020202000 | 202001010104 | 202001052020 | 202020200307 | 110305202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1632) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1680) | 202541013363 | 446420236243 | 202020022033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 1728) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1776) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020072002 | 200100050020 | 111111111111 | 202020077307 |
| ( 1824) | 202020202000 | 202001010104 | 202001052020 | 202020200311 | 000411202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1872) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 1920) | 202541013363 | 446420236243 | 202020052033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 1968) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2016) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020102001 | 200101020020 | 070707070707 | 202020077307 |
| ( 2064) | 202020202000 | 202001010104 | 202001052020 | 202020200400 | 010403202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2112) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2160) | 202541013363 | 446420236243 | 202020042033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 2208) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2256) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020112004 | 200100010020 | 040404040404 | 202020077307 |
| ( 2304) | 202020202000 | 202001010104 | 202001052020 | 202020200401 | 020707202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2352) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2400) | 202541013363 | 446420236243 | 202020052033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 2448) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2496) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202001002003 | 200100010520 | 040404040404 | 202020077307 |
| ( 2544) | 202020202000 | 202001010104 | 202001052020 | 202020200402 | 031101202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2592) | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |
| ( 2640) | 202541013363 | 446420236243 | 202020062033 | 516365202246 | 432020200120 | 342240117305 | 205165252000 | 202020202020 |
| ( 2688) | 202020202020 | 202020202020 | 202020010020 | 202020012020 | 202020202020 | 202020202020 | 202020202020 | 202020202020 |

Sol 1