



#362

VOYAGER 1  
IMAGING DATA ON MAGNETIC  
TAPE  
77-084A-01M

REQ. AGENT  
SAR

RAND NO.  
V0305

ACQ. AGENT  
PSB

VOYAGER 1

IMAGING DATA ON MAGNETIC TAPE

77-084A-01M

This data set catalog consists of 257 magnetic tapes. The tapes are 9-track, 6250 BPI, Binary and are multi-filed. They were created on an IBM 370 computer. The D and C numbers along with the ID's are listed on the following pages. The image numbers can be found in the documentation.

<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-67337	C-25148	<del>DSD TAPE</del> 153	VGE 001
D-67338	C-25149	135	VGE 002
D-67339	C-25150	144	VGE 003
D-67340	C-25151	144	VGE 004
D-67341	C-25152	134	VGE 005
D-67342	C-25153	144	VGE 006
D-67343	C-25154	126	VGE 007
D-67344	C-25155	123	VGE 008
D-67345	C-25156	113	VGE 009
D-67346	C-25157	131	VGE 010
D-67347	C-25158	137	VGE 011
D-67348	C-25159	140	VGE 012
D-67349	C-25160	127	VGE 013
D-67350	C-25161	94	VGE 014
D-67351	C-25162	124	VGE 015
D-67352	C-25163	131	VGE 016
D-67353	C-25164	124	VGE 017
D-67354	C-25165	133	VGE 018
D-67355	C-25166	120	VGE 019
D-67356	C-25167	116	VGE 020
D-67357	C-25168	123	VGE 021
D-67358	C-25169	118	VGE 022
D-67359	C-25170	123	VGE 023
D-67360	C-25171	131	VGE 024
D-67361	C-25172	118	VGE 025
D-67362	C-25173	128	VGE 026
D-67363	C-25174	138	VGE 027
D-67364	C-25175	131	VGE 028
D-67365	C-25176	132	VGE 029
D-67366	C-25177	126	VGE 030
D-67367	C-25178	127	VGE 031
D-67368	C-25179	131	VGE 032
D-67369	C-25180	126	VGE 033
D-67370	C-25181	130	VGE 034
D-67371	C-25182	144	VGE 035
D-67372	C-25183	123	VGE 036
D-67373	C-25184	144	VGE 037
D-67374	C-25185	144	VGE 038
D-67375	C-25186	117	VGE 039
D-67376	C-25187	138	VGE 040
D-67377	C-25188	144	VGE 041
D-67378	C-25189	123	VGE 042
D-67379	C-25190	137	VGE 043
D-67380	C-25191	144	VGE 044
D-67381	C-25192	123	VGE 045
D-67382	C-25193	133	VGE 046
D-67383	C-25194	120	VGE 047
D-67384	C-25195	144	VGE 048
D-67385	C-25196	129	VGE 049

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<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-67386	C-25197	129	VGE 050
D-67387	C-25198	111	VGE 051
D-67388	C-25199	141	VGE 052
D-67389	C-25200	144	VGE 053
D-67390	C-25201	128	VGE 054
D-67391	C-25202	134	VGE 055
D-67392	C-25203	140	VGE 056
D-67393	C-25204	144	VGE 057
D-67394	C-25205	135	VGE 058
D-67395	C-25206	135	VGE 059
D-67396	C-25207	129	VGE 060
D-67397	C-25208	137	VGE 061
D-67398	C-25209	144	VGE 062
D-67399	C-25210	128	VGE 063
D-67400	C-25211	144	VGE 064
D-67401	C-25212	124	VGE 065
D-67402	C-25213	141	VGE 066
D-67403	C-25214	128	VGE 067
D-67404	C-25215	131	VGE 068
D-67405	C-25216	144	VGE 069
D-67406	C-25217	124	VGE 070
D-67407	C-25218	127	VGE 071
D-67408	C-25219	132	VGE 072
D-67409	C-25220	144	VGE 073
D-67410	C-25221	131	VGE 074
D-67411	C-25222	132	VGE 075
D-67412	C-25223	132	VGE 076
D-67413	C-25224	144	VGE 077
D-67414	C-25225	133	VGE 078
D-67415	C-25226	132	VGE 079
D-67416	C-25227	132	VGE 080
D-67417	C-25228	144	VGE 081
D-67418	C-25229	132	VGE 082
D-67419	C-25230	134	VGE 083
D-67420	C-25231	144	VGE 084
D-67421	C-25232	132	VGE 085
D-67422	C-25233	141	VGE 086
D-67423	C-25234	132	VGE 087
D-67424	C-25235	144	VGE 088
D-67425	C-25236	133	VGE 089
D-67426	C-25237	132	VGE 090
D-67427	C-25238	132	VGE 091
D-67428	C-25239	144	VGE 092
D-67429	C-25240	131	VGE 093
D-67430	C-25241	131	VGE 094
D-67431	C-25242	123	VGE 095
D-67432	C-25243	144	VGE 096
D-67433	C-25244	132	VGE 097
D-67434	C-25245	144	VGE 098
D-67435	C-25246	134	VGE 100

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<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-67436	C-26002	107	VGE 101
D-67437		117	VGE 102
D-67438		124	VGE 103
D-67439		126	VGE 104
D-67440		103	VGE 105
D-67441		120	VGE 106
D-67442		122	VGE 107
D-67443		133	VGE 108
D-67444		144	VGE 109
D-67445	C-26003	132	VGE 110
D-67446		132	VGE 111
D-67447		129	VGE 112
D-67448		144	VGE 113
D-67449		132	VGE 114
D-67450		132	VGE 115
D-67451		124	VGE 116
D-67452		144	VGE 117
D-67453		132	VGE 118
D-67454		132	VGE 119
D-67455	C-26004	132	VGE 120
D-67456		144	VGE 121
D-67457		131	VGE 122
D-67458		132	VGE 123
D-67459		132	VGE 124
D-67460		144	VGE 125
D-67461		132	VGE 126
D-67462		132	VGE 127
D-67463		130	VGE 128
D-67464		144	VGE 129
D-67465	C-26005	138	VGE 130
D-67466		144	VGE 131
D-68836		144	VGE 223
D-68837		125	VGE 224
D-68838		147	VGE 225
D-68839		144	VGE 226
D-68840		153	VGE 227
D-68841		144	VGE 228
D-68842		144	VGE 229
D-68843		144	VGE 230
D-68844	C-26006	144	VGE 231
D-68845		154	VGE 232
D-68846		144	VGE 233
D-68847		135	VGE 234
D-68848		144	VGE 235
D-68849		149	VGE 236
D-68850		144	VGE 237
D-68851		144	VGE 238
D-68852		152	VGE 239
D-68853	C-26007	144	VGE 240
D-68854		143	VGE 241

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<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-68855		144	VGE242
D-68856		144	VGE243
D-68857		144	VGE244
D-68858		144	VGE245
D-68859		143	VGE246
D-68860		153	VGE247
D-68861		150	VGE248
D-68862		144	VGE249
D-68863		144	VGE250
D-70267	C-26008	152	VGE251
D-70268		143	VGE252
D-70269		154	VGE253
D-70270		144	VGE254
D-70271		148	VGE255
D-70272		143	VGE256
D-70273		147	VGE257
D-70274		144	VGE258
D-70275		144	VGE259
D-70276		144	VGE260
D-70277	C-26009	144	VGE261
D-70278		128	VGE262
D-70279		144	VGE263
D-70280		142	VGE264
D-70281		152	VGE265
D-70282		153	VGE266
D-70283		144	VGE267
D-70284		145	VGE268
D-70285		142	VGE269
D-70286		144	VGE270
D-70287	C-26010	152	VGE271
D-70288		144	VGE272
D-70289		142	VGE273
D-70290		144	VGE274
D-70291		144	VGE275
D-70292		142	VGE276
D-70293		144	VGE277
D-70294		136	VGE278
D-70295		144	VGE279
D-70296		154	VGE280
D-70297	C-26011	144	VGE281
D-70298		147	VGE282
D-70299		142	VGE283
D-70300		144	VGE284
D-70301		144	VGE285
D-70302		144	VGE286
D-70303		144	VGE287
D-70304		153	VGE288
D-70305		136	VGE289
D-70306		144	VGE290
D-70307	C-26012	143	VGE291

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<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-70308		144	VGE292
D-70309		144	VGE293
D-70310		153	VGE294
D-70311		144	VGE295
D-70312		144	VGE296
D-70313		99	VGE297
D-70314		144	VGE298
D-70315		144	VGE299
D-70316		144	VGE300
D-70317	C-26013	144	VGE301
D-70318		144	VGE302
D-70319		155	VGE303
D-70320		144	VGE304
D-70321		144	VGE305
D-70322		141	VGE306
D-70323		144	VGE307
D-70324		144	VGE308
D-70325		133	VGE309
D-70326		144	VGE310
D-70327	C-26014	143	VGE311
D-70328		144	VGE312
D-70329		144	VGE313
D-70330		134	VGE314
D-70331		144	VGE315
D-70332		124	VGE316
D-70333		144	VGE317
D-70334		144	VGE318
D-70335		144	VGE319
D-70336		142	VGE320
D-70337	C-26015	144	VGE321
D-70338		143	VGE322
D-70339		138	VGE323
D-70340		144	VGE324
D-70341		131	VGE325
D-70342		144	VGE326
D-70343		139	VGE327
D-70344		116	VGE328
D-70345		104	VGE329
D-70346		130	VGE330
D-70347	C-26016	128	VGE331
D-70348		134	VGE332
D-70349		124	VGE333
D-70350		123	VGE334
D-70351		144	VGE335
D-70352		120	VGE336
D-70353	<del>XXXXXXXXXX</del>	108	VGE337
D-70354		134	VGE338
D-70355	<del>XXXXXXXXXX</del>	123	VGE339
D-70356		119	VGE340
D-70357	C-26017	101	VGE341

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<u>D#</u>	<u>C#</u>	<u>FILES</u>	<u>ID</u>
D-70358		113	VEG342
D-70359		142	VEG343
D-70360		144	VEG344
D-70361		134	VEG345
D-70362		135	VEG346
D-70363		116	VEG347
D-70364		140	VEG348
D-70365		141	VEG349



Final Report

Planetary Image Conversion Task

April 1, 1985

Michael D. Martin  
Carol L. Stanley  
Gaylin Laughlin

*See other Voyagers, or Vikings, or  
Mariner data sets for a complete  
copy of this document.*

## Abstract

The Planetary Image Conversion task has processed 12,500 magnetic tapes containing raw imaging data from JPL planetary missions to produce an image data base in consistent format on 1,200 fully packed 6250 bpi tapes. The originals will remain at JPL and a copy of the entire tape set has been produced and delivered to the U. S. Geological Survey (USGS), Flagstaff, Az. A secondary task converted computer catalogs which had been stored in project specific MARK IV File Management System data types and structures to flat-file, text format processable on any modern computer system.

The conversion processing was carried out at JPL's Image Processing Laboratory (IPL) on an IBM 370-158 with existing software modified slightly to meet the needs of the conversion task. The processing of 12,500 input tapes was performed over a period of 12 months as a serial string of conversion jobs running an average of two shifts per day, five days a week. Over 10,000 separate batch jobs were required and nearly 5,000 hours of elapsed processing time (500 hours of cpu time). About 4-person years of labor were required, excluding computer operations support. The total conversion cost for this task can be expressed as \$40 per input tape, or \$5 per megabyte of data processed. Due to the nature of this task (fairly uniform, well-documented inputs, and minimal software development costs), these estimates should be considered as very optimistic in budgeting other salvage efforts.

More than 99 per cent of the original digital image data was successfully recovered by the conversion task. However, the act of processing data tapes recorded prior to 1975 was destructive. This discovery is of critical importance to facilities responsible for maintaining digital archives since normal periodic random sampling techniques would be unlikely to detect this phenomena and entire data sets could be wiped out in the act of generating seemingly positive sampling results.

It is recommended that immediate follow-on activities be initiated to : 1) Develop a single, machine-independent utility program which will read images from any archive tape and perform simple fill-in of missing pixels and lines; 2) convert the Mariner 4, 6 and 7 image data and the Mariner 9 Master Data Records to high density format; 3) produce a vault copy of the Mariner 9 and 10 image archive tapes and 4) document processed image data sets and calibration data files currently in storage.

DUMP OF TAPE SIN81

INPUT TAPE SIN81 ON HT1  
DATA INPUT HS\_FL 1 1 STOP

FILE 1 RECORD 1 LENGTH 320000BYTES

( 0)	F7F74040	40404040	40404040	40404040	40404040	40404040	F0F8F0F1	40404040	404040F1	40F5F4F4
( 40)	40D340E1	40404040	40404040	40404040	40404040	40404040	40404040	40404040	F5C7D960	F1404040
( 80)	C6C4E240	F3F2F5F7	F44BF5F5	40404040	40404040	C9C3D5D6	F9E2F160	F0F7F9F0	4040E2C3	C5E340F8
( 120)	E04BE2F3	F940E0E0	F2E2E9FA	E2E24040	40404040	40404040	40404040	C1D4C5D9	C14040C5	E7D740F0
( 160)	F5F7F6F0	4BF040D4	E2C5C340	40C6C9D3	E340F040	C5D3C5C1	C9D3C5C1	D9405D40	40D3D640	C7C1C9D5
( 200)	C1D540D9	C1E3C540	40F57AE1	404040C3	C5D9E340	F8E04BE2	F3F940F0	F17AF5F0	7AF2F340	4040F161
( 240)	40F140C6	E4D3D340	404040D9	C5E24040	40E5C9C4	C9C3D6D5	D7404060	D7404060	F8F14BF0	F040C4C5
( 280)	C741C340	404040C3	C9D561F1	F1F0E0F6	F061F1F0	40D6F4E3	61C5C5C5	5C5C5404	5C5C5404	40404040
( 320)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 360)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 400)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 440)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 480)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 520)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 560)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 600)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1280)	40F0F0F0	F6F540C1	61F4F1F0	F0F0C2C4	F740C261	C1F8F7C6	40C361F0	F9F7C640	C461F0F0	F7C6F0F0
( 1320)	F0E040C5	F3D3D461	F0E0E0E0	F0E0C3C2	F0E0E6C1	F0E0C2E0	F0E0E1E2	C640C1C3	D5C140D6	D7C3C1D3
( 1360)	40F0F040	5C5C5C5C	5C4B5C40	D4E2C5C3	5D40D7C9	E7E1E5C7	C3C1D440	C5C3C1D3	40C3E8C3	D3C540C2
( 1400)	C1D34004	D6C4C540	F24DD5C1	D6D5D3E8	5040D3E8	4040C1C3	C3C1D440	C5C3C1D3	40C3E8C3	D3C540C2
( 1440)	C5C1D440	40D9C5E2	C5E340D6	D7C5D540	40C3D3D6	E2C540C6	D3D6D6C4	40C1C5E7	D7D44040	C6C9D340
( 1480)	C7E140E2	C8E4E340	D4D6C4C5	4040C1C3	D5C14040	4040D5D6	40404040	F040D740	F8C5E240	4040D5D6
( 1520)	40404040	D5D64040	4040D9D6	4040D9D6	40404040	4040D5D6	40404040	F040D740	405C40D5	D6D9D4C1
( 1560)	D3404040	4040C1C3	F6C34040	40D5D640	4040D7D9	C5D74040	D5D64040	4040E0C5	F2404040	D5D64040
( 1600)	4040D5D6	40404040	D5D64040	4040D5D6	40404040	F240D740	40F340D5	D6D9D4C1	D3404040	4040C1C3
( 1640)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1680)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1720)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1760)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1800)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1840)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1880)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1920)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 1960)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2000)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2040)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2080)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2120)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2160)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2200)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2240)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000
( 2280)	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000	00000000

Voyager 1  
Imaging Data  
77-084A-01M  
b. 67338  
Image #  
32574.55