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PHOTOGRAPHIC EVALUATION REPORT

MISSION 1051

This document contains information referring to Project Corona

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SEPTEMBER 1969
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29 PAGES

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TECHNICAL PUBLICATION

PHOTOGRAPHIC EVALUATION REPORT
MISSION 1051

SEPTEMBER 1969

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER

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GLOSSARY OF TERMS

ABSOLUTE HEIGHT	Vertical distance from the vehicle to the mean ground level of the area being photographed.
ACUITY	Sharpness - Edge definition.
ACUTANCE	Measure of the ability of a lens to reproduce sharp images.
AIR BASE	Ground distance between 2 exposure stations.
ALTITUDE	Vertical distance from the vehicle to the Hough Ellipsoid at the time of exposure.
AZIMUTH OF THE PRINCIPAL RAY	Horizontal clockwise angle, measured from true north to the camera principal ray.
BASE HEIGHT RATIO	Ratio between the air base and the absolute altitude of a stereoscopic pair of photographs.
CAMERA NADIR	Geodetic latitude and longitude of a point vertically beneath the perspective center of the camera lens on the Hough Ellipsoid.
CONE ANGLE	Angle between the principal ray and the vehicle nadir.
COPY GENERATION	Number of reproductive steps by which a negative or positive photographic copy is separated from the original, i.e. the original negative is copy 1, a positive made from the original negative is copy 2,etc.
DATE OF PHOTOGRAPHY	Indicates the day, month, and year (GMT) that the photography was acquired.

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EXPOSURE*	Total quantity of light received per unit area on a sensitized plate or film.
EXPOSURE DURATION	Time during which a light-sensitive material is subjected to the influence of light. Expressed in this text in fractions of a second. Formula: Exposure Time (sec) = Slit Width (in) / Scan Rate (rads per sec)
EXPOSURE STATION	Position occupied by the camera lens at the moment of exposure.
FIDUCIAL MARK	A standard geometrical reference point imaged at the margin of a photograph. The intersection of the primary fiducial marks usually defines the principal point.
FOCAL LENGTH: CALIBRATED	Adjusted value of the equivalent focal length. Computed to distribute the effect of lens distortion over the entire field.
FOCAL LENGTH: EQUIVALENT	Distance measured along the lens axis from the rear nodal point to the plane of best average definition over the entire field. Points other than the rear nodal point may be used but must be specified for correct interpretation of data.
FOCAL PLANE	Plane perpendicular to the lens axis, in which images of points in the object field of the lens are focused.
FRAME	One of a series of full-format photographs comprising a roll of film.
GROUND RESOLUTION*	Resolved ground distance as determined from standard bar target resolution targets. A target is considered to be resolved when a grouping of 3 bars can be distinguished as 3 distinct lines. The lines need not have linear form.

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IMC (Image Motion Compensation)	Correction for the forward motion of the vehicle while photographing the terrain.
ISODENSITOMETER	An instrument which is basically a microdensitometer with the capability of repeatedly scanning an image at pre-set intervals. Its output is in the form of a plot representing distance along 2 axes and density differences as code changes within each scan line.
LOCAL SUN TIME	Time of day computed from the position of the sun relative to the imaged terrain.
MICRODENSITOMETER	An instrument which measures the optical density of very small areas in an image. Its output is in the form of a continuous plot of density versus distance across an image. The microdensitometer used in NPIC can accurately measure distances as small as 1 micron and densities up to 5.0+.
PANORAMIC CAMERA	Photographs a partial or complete panorama of the terrain in a transverse direction through a scanning motion of the lens system.
PARALLAX	Apparent displacement of the position of an object in relation to a reference point, caused by a change in the point of observation.
PASS	Operational portion of an orbital revolution. A suffix D indicates the descending node and a suffix A indicates the ascending node. A suffix M indicates a change from the ascending node to the descending node, or vice versa, during a continuous photographic operation. An addition-

[redacted]

[redacted]

	al suffix E indicates that the associated photography was generated for engineering purposes.
PITCH	Rotation of the camera about its transverse axis. Positive pitch indicates nose-up attitude.
PRINCIPAL RAY	That ray of light which emanates from a point in object space and passes undeviated through the lens to become imaged at the principal point of the camera system. It is co-incident with the optical axis of the lens.
RESOLUTION	Measure of the smallest array of point objects distinguishable as independent point images, expressed in lines/mm.
ROLL	Rotation of the camera about its longitudinal axis. Positive roll indicates left wing up attitude.
SHADOW FACTOR	A constant for each frame, used to calculate heights from shadow lengths.
SHRINKAGE MARKERS	Calibrated reference points used to calculate deformations of the photographic material.
SOLAR ELEVATION	Vertical angle measured from a plane (tangent to the surface of the earth at the point of intersection of the principal ray) to the sun, the vertex being at the center of the format.
STELLAR CAMERA	Used simultaneously with the index camera to photograph stars in order to determine vehicle attitude.

[redacted]

SYSTEM TIME LABEL	Binary presentation of the accumulative system time.
UNIVERSAL GRID	X, Y coordinate system used to locate images on photographic formats.
VEHICLE AZIMUTH	Clockwise horizontal angle measured from true north to the vehicle ground track.
VIGNETTING	Gradual reduction in density of parts of a photographic image due to the stopping of some of the rays entering the lens.
YAW	Rotation of the camera about its vertical axis. Positive yaw represents nose-left attitude, as viewed from the top of the camera.

*Defined differently than in the "Glossary of NPIC Terminology."

[redacted]

INDEX OF PHOTOGRAPHIC EVALUATION REPORTS AND SPECIAL STUDIES

PER	DOCUMENT NUMBER	SPECIAL STUDY
1033	[redacted]	None
1034		None
1036		None
1037		None
1038		None
1039		None
1040		None
1041		Slant Range Computations Related to Universal Grid Coordinates for the J-1 Camera System
1042	[redacted]	None
1043		Scan Speed Deviation Analysis of the Forward Camera, Mission 1043
1044	[redacted]	Dual Gamma/Viscose Vs Conventional/Spray Processing Analysis (Mission 1044)
1045	[redacted]	None
1046		SO-230 Vs 3404 Evaluation
1047		None
1048		None
1049		Image Quality Comparison Mission 1102--Original Negative vs. Duplicate Positive
1050	[redacted]	None
1051		None
1101		Slant Range Computations Related to Universal Grid Coordinates for the J-3 Camera System
1102	[redacted]	None
1103		None
1104		SO-180 Evaluation Mission 1104
1105		SO-121 Evaluation Mission 1105
1106	[redacted]	None

[redacted]

SYNOPSIS

Mission 1051 was launched on 2 May 1969/0147Z. The first bucket was recovered dry on 9 May 1969/0312Z; the second bucket was recovered dry on 18 May 1969/0045Z.

Mission 1051 exhibits extreme image quality variability. The overall quality of the fwd-looking camera record is poorer than an average mission of this system; the overall image quality of the aft-looking camera record, slightly better than the forward, exhibits examples of imagery comparable to an average mission of this system. In general, the imagery of both pan camera records is soft and lacks crispness and edge sharpness.

The interpretation suitability ranges from good to poor. The majority of the targets are rated from fair to poor on bucket one and fair on bucket two.

An MIP rating of 80 is assigned to both parts of Mission 1051.

Overall cloud cover for the mission is approximately 45 percent.

[redacted]

PART I. GENERAL SYSTEM INFORMATION

A. Camera Numbers

Forward-Looking Panoramic Camera	212
Aft-Looking Panoramic Camera	213
Stellar/Index Camera (1051-1)	D115/148/142
Stellar/Index Camera (1051-2)	D122/156/161

B. Launch and Recovery Dates

	Mission 1051-1	Mission 1051-2
Launch	0147Z/2 May 69	0147Z/2 May 69
Recovery	0312Z/9 May 69	0045Z/18 May 69
Recovery Rev	113	256

C. Orbit Elements

Element	Planned	Mission 1051-1 Actual Rev 65	Mission 1051-2 Actual Rev 190	Photo Range
Period (min)	89.60	89.537	89.530	N/A
Perigee (nm)	100	98.368	98.030	100.21, Rev 07
Apogee (nm)	191.9	188.720	189.750	133.06, Rev 57
Eccentricity	0.0128	0.01262	0.01281	N/A
Inclination (deg)	65.0	64.995	64.995	N/A
Perigee Latitude (deg)	N/A	58.840	62.370	N/A

N/A - Not applicable

D. Photographic Operations

1. Panoramic Cameras

Type	Mission 1051-1 Revs	Mission 1051-1 Frames	Mission 1051-2 Revs	Mission 1051-2 Frames	Total Revs	Total Frames
Operational						
Fwd	49	2859	52	3012	101	5871
Aft	49	2845	53	3008	102	5853
Operational/Domestic						
Fwd	0	0	0	0	0	0
Aft	0	0	0	0	0	0

[redacted]

Type	Mission 1051-1 Revs	Mission 1051-1 Frames	Mission 1051-2 Revs	Mission 1051-2 Frames	Total Revs	Total Frames
Domestic						
Fwd	7	128	5	73	12	201
Aft	7	127	6	89	13	216
Engineering (no imagery)						
Fwd	0	0	0	0	0	0
Aft	0	0	0	0	0	0
TOTALS						
Fwd	56	2987	57	3085	113	6072
Aft	56	2972	59	3097	115	6069

2. Secondary Cameras

Camera	Frames
Stellar (1051-1)	464
Index (1051-1)	464
Stellar (1051-2)	492
Index (1051-2)	492

E. Film Usage

	Film Load (Total)	Preflight Footage	Processed Footage
Fwd-Looking (1051-1)	16,300*	194	8,073
Aft-Looking (1051-1)	16,300*	214	8,031
Fwd-Looking (1051-2)	N/A	N/A	8,130
Aft-Looking (1051-2)	N/A	N/A	8,165
Stellar (1051-1)	75	1.09	55
Stellar (1051-2)	75	**	56
Index (1051-1)	135	2.18	114
Index (1051-2)	135	**	117

*Total load for both buckets
N/A - Not Applicable
**Not available

[redacted]

PART II. IMAGE ANALYSIS

A. Fwd-Looking Panoramic Camera

1. Density: Approximately 17 percent of the mission is considered to be of thin density, 73 percent of medium density, and 10 percent of heavy density.

2. Contrast: The majority of this mission is of medium contrast.

3. Image Quality: The imagery exhibits extreme quality variability with overall quality poorer than an average mission of this system. Grossly out-of-focus imagery appears in approximately the same format position in each frame at the supply end along the binary edge (see Graphic 1). Approximately 12 percent of the format is affected. Also isolated soft spots are randomly located throughout the record. In general the imagery is soft, lacking crispness and overall edge sharpness.

4. Image Degradations:

a. Light Leaks: Light leak induced fog patterns are present on the fifth, fifth from end, next to last, and last frames of both buckets. These patterns are illustrated in Graphics 2 - 5 on page 6.

b. Other:

(1) Minor banding perpendicular to the major axis of the film is present at the take-up end of some frames.

(2) A biased minus density streak approximately 0.1-inch wide and following the path of the field flattener is present on a few frames near the end of the mission.

(3) Numerous fine minus density lines parallel to the major axis of the film are present intermittently throughout the mission.

5. Physical Degradations: Minor rail scratches are present throughout the mission. Emulsion scratches caused by the scan head rollers are present to an average extent.

B. Aft-Looking Panoramic Camera

1. Density: The density of the aft-looking material correlates with that of the forward. Most of the imagery is of medium density.

2. Contrast: The contrast of the aft-looking material is similar to that of the forward; most of the material is of medium contrast.

3. Image Quality: The image quality of the aft-looking camera material is superior to that of the forward. This camera material ex-

[redacted]

hibits some imagery comparable to an average 1000 series mission. Grossly out-of-focus imagery appears in approximately the same format position in each frame near the supply end along the frequency mark edge (see Graphic 6). Approximately 10 percent of the format is affected. Also, isolated soft spots are randomly located throughout the record. In general, the imagery is soft, lacking crispness and overall edge sharpness.

4. Imaged Degradations:

a. Light Leaks: Light leak induced fog patterns are imaged on the first, fourth, fifth from last, next to last, and last frames of both 1051-1 and 1051-2 aft camera records. These patterns are illustrated in Graphics 7 - 11 on page 7.

b. Static: Dendritic type fog patterns are intermittently present along both film edges on pass 244D.

c. Other:

(1) Minor banding perpendicular to the major axis of the film is present at the take-up end of some frames.

(2) A biased minus density line, approximately 0.1-inch wide and following the path of the field flattener, is present on a few frames near the end of the mission.

(3) Revs 1 - 3 contain minus density spots 3.12 inches apart and up to 0.36 inches from the data block edge.

5. Physical Degradations: Rail scratches are present throughout the entire mission.

C. Stellar Camera (1051-1)

1. Density: Adequate for the detection of stellar images.
2. Contrast: Adequate for the detection of stellar images.
3. Image Shape: Most stellar images appear as point types.
4. Images per Frame: More than 12 stellar images are detectable in most frames.
5. Flare Level: Flare affects approximately 45 percent of each format.
6. Imaged Degradations:
   a. Light Leaks: None noted.
   b. Static: None noted.
   c. Other: A bar of fog perpendicular to the major axis of the film is present intermittently throughout the stellar record. It is generally located between frames and appears to have been induced by roller pressure during sit periods.
7. Physical Degradations: None noted.

[redacted]

D. Stellar Camera (1051-2)

1. Density: Adequate for the detection of stellar images.
2. Contrast: Adequate for the detection of stellar images.
3. Image Shape: Most stellar images appear as point type.
4. Images per Frame: More than 12 stellar images are detectable in most frames.
5. Flare Level: Flare affects approximately 40 percent of each format.
6. Imaged Degradations:
   a. Light Leaks: None noted.
   b. Static: Static induced fog patterns along the reseau number edge are present intermittently throughout the mission.
   c. Other: A narrow plus density marking, extending approximately halfway across the film web from the non-reseau number edge, is present intermittently throughout the mission.
7. Physical Degradations: Emulsion cracks parallel to the minor axis of the film are present intermittently throughout the mission.

E. Index Camera (1051-1)

1. Density: Generally medium.
2. Contrast: Generally medium.
3. Image Sharpness: The image quality is good and compares favorably to previous missions.
4. Imaged Degradations:
   a. Light Leaks: None noted.
   b. Static: None noted.
5. Physical Degradations: None noted.

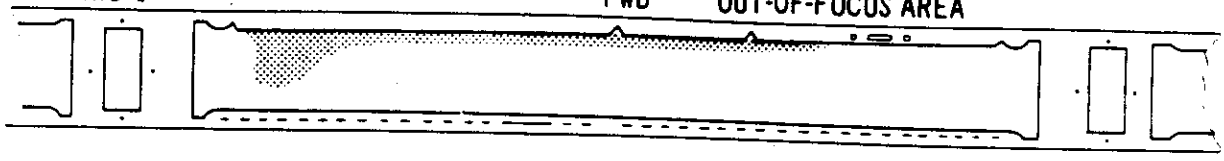
F. Index Camera (1051-2)

1. Density: Generally medium.
2. Contrast: Generally medium.
3. Image Sharpness: The image quality is good and compares favorably to the quality obtained from previous missions.
4. Imaged Degradations:
   a. Light Leaks: None noted.
   b. Static: Dendritic type fog patterns near the center of format are present intermittently throughout the mission material.
   c. Other: Four fine plus density lines, parallel to the major axis of the film, are present throughout most of the index material. They are located 0.5, 1.25, 1.5, and 2.25 inches from the titled edge.
5. Physical Degradations: None noted.

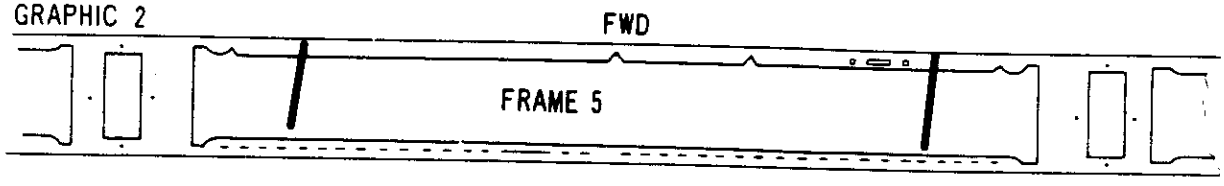
G. Graphic Display

The patterns illustrated below are referenced in the text of this report.

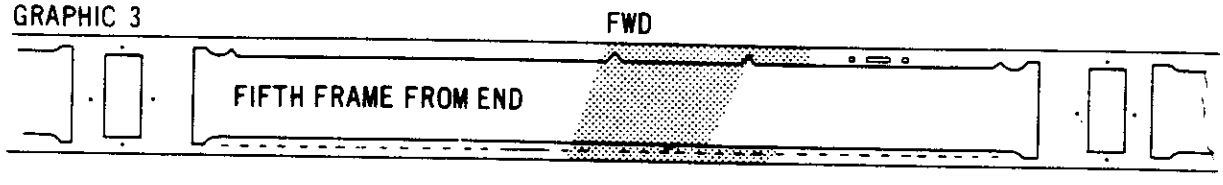
GRAPHIC 1



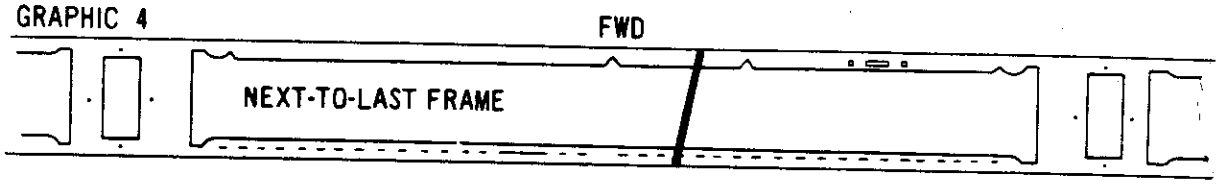
GRAPHIC 2



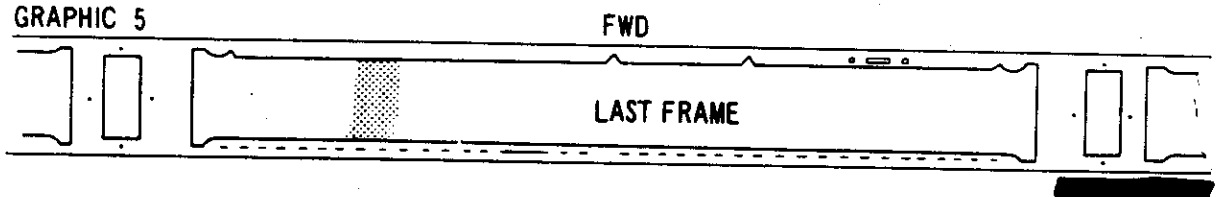
GRAPHIC 3



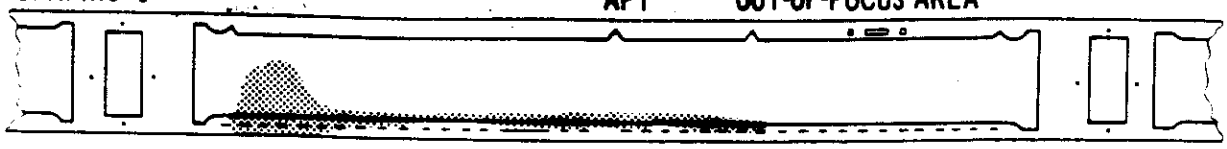
GRAPHIC 4



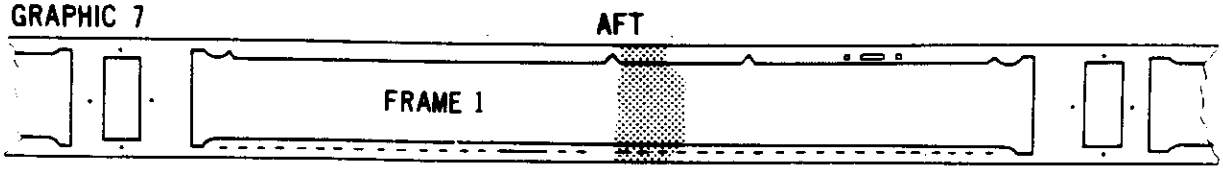
GRAPHIC 5



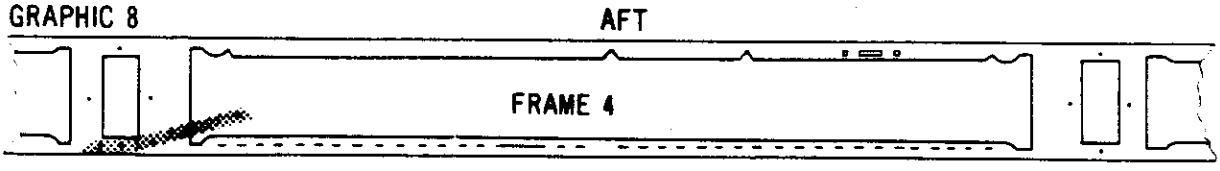
GRAPHIC 6



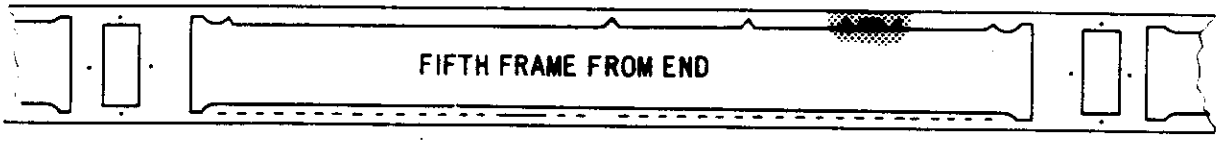
GRAPHIC 7



GRAPHIC 8

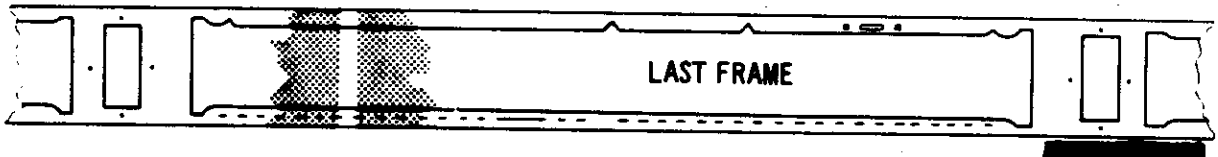


GRAPHIC 9



GRAPHIC 10

GRAPHIC 11



[redacted]

PART III. IMAGED AUXILIARY DATA

A. Fwd-Looking Panoramic Camera

1. Horizon Cameras:
   a. Starboard-Looking
      (1) Imagery: The imagery has a veiled appearance through rev 68D, after which the horizon arc appears sharp and well defined.
      (2) Fiducials: Sharp and well defined.
   b. Port-Looking
      (1) Imagery: The horizon arc is sharp and well defined.
      (2) Fiducials: Sharp and well defined.
2. Frequency Marks: The frequency marks near the supply end of each frame have an out-of-focus appearance. This anomaly correlates with the out-of-focus imagery illustrated in Graphic 1 page 6.
3. Binary Time Word: The binary time word is not imaged on frame 2, pass 2A, and frame 42, pass 246D. All other time words are adequate for automatic readout.
4. Binary Index: The index image is sharp and well defined.
5. Camera Number: Readable.

B. Aft-Looking Panoramic Camera

1. Horizon Cameras
   a. Starboard-Looking
      (1) Imagery: The imagery is veiled up to approximately rev 38D after which the arc appears sharp and well defined.
      (2) Fiducials: Sharp and well defined.
   b. Port-Looking
      (1) Imagery: The horizon arc is sharp and well defined.
      (2) Fiducials: Sharp and well defined.
2. Frequency Marks: The frequency marks near the supply end of each frame have an out-of-focus appearance. This correlates with the out-of-focus imagery illustrated on Graphic 6 page 7.
3. Binary Time Word: The binary time word is not imaged on frame 17, pass 85D. A manufacturer's splice is present where the time word would have been imaged on frame 13, pass 183D. All other time words are adequate for automatic readout.
4. Binary Index: The index image is sharp and well defined.
5. Camera Number: Readable.

[redacted]

C. Stellar Camera (1051-1)

1. Grid Image Quality: Sharp and well defined.
2. Correlation Lamp Image Quality: Good.

D. Stellar Camera (1051-2)

1. Grid Image Quality: Sharp and well defined.
2. Correlation Lamp Image Quality: Good.

E. Index Camera (1051-1)

1. Grid Image Quality: Sharp and well defined.
2. Correlation Lamp Image Quality: Good.
3. Camera Number Legibility: Readable.

E. Index Camera (1051-2)

1. Grid Image Quality: Sharp and well defined.
2. Correlation Lamp Image Quality: Good.
3. Camera Number Legibility: Readable.

[redacted]

PART IV. MENSURATION QUALITY

The mensuration quality of this mission is fair. The out-of-focus areas described in Part II, paragraph 3, had a degrading effect on mensuration of targets which were imaged in these areas.

[redacted]

[redacted]

PART V. FILM PROCESSING

A. Processing Machines and Process Gamma

Film	Machine	Gamma
Fwd (1051-1)	Yardleigh	1.78
Aft (1051-1)	Yardleigh	1.71
Fwd (1051-2)	Yardleigh	1.83
Aft (1051-2)	Yardleigh	1.80
Stellar (1051-1)	Trenton	2.07
Stellar (1051-2)	Trenton	2.08
Index (1051-1)	Drape	1.01
Index (1051-2)	Drape	0.72

B. Processing Levels

1. Panoramic Cameras: The entire record was processed in dual-gamma chemistry.
2. Secondary Cameras:
   a. Stellar Cameras: Single level process used throughout.
   b. Index Cameras: Single level process used throughout.

C. Film Handling Summary

1. Fwd-Looking Camera
   a. Capsule De-Filming:
      (1) Mission 1051-1: No problems encountered.
      (2) Mission 1051-2: No problems encountered.
   b. Pre-Spooling: No problems encountered.
   c. Manufacturing Splices:
      (1) Mission 1051-1: Pass 39D, frame 13
                          Pass 83A, frame 24
      (2) Mission 1051-2: Pass 150D, frame 25. Part of frames 57 and 58 of pass 246D were exposed on a non-sensitive strip (approximately 42 inches in length) and therefore not recorded. This strip of pre-exposed material was inserted near the end of both the fwd and aft film loads to indicate, through telemetry, the amount of film remaining on each spool.
   d. Processing Splices: None other than normal.
   e. Manufacturing Defects: None noted.
   f. Processing Anomalies: None noted.

[redacted]

[redacted]

g. Breakdown:
(1) Mission 1051-1: No problems encountered.
(2) Mission 1051-2: No problems encountered.

2. Aft-Looking Camera:
a. Capsule De-Filming:
(1) Mission 1051-1: No problems encountered.
(2) Mission 1051-2: Light to moderate static discharges were noted intermittently.
b. Pre-Spooling: No problems encountered.
c. Manufacturing Splices:
(1) Mission 1051-1: Pass 38D, frame 49
Pass 99A, frame 42
(2) Mission 1051-2: Pass 183D, frame 13. Part of frames 14 and 15 of pass 247D were exposed on a non-sensitive strip (approximately 42 inches in length) and therefore are not recorded. This strip of pre-exposed material was inserted near the end of both the fwd and aft film loads to indicate, through telemetry, the amount of film remaining on each spool.
d. Processing Splices: None other than normal.
e. Manufacturing Defects: None noted.
f. Processing Anomalies: None noted.
g. Breakdown:
(1) Mission 1051-1: No problems encountered.
(2) Mission 1051-2: No problems encountered.

3. Stellar Cameras (1051-1 and 1051-2)
a. Capsule De-Filming: No problems encountered.
b. Pre-Spooling: No problems encountered.
c. Manufacturing Splices: None.
d. Processing Splices: None other than normal.
e. Manufacturing Defects: None noted.
f. Processing Anomalies: None noted.
g. Breakdown: No problems encountered.

4. Index Cameras (1051-1 and 1051-2)
a. Capsule De-Filiming: No problems encountered.
b. Pre-Spooling: No problems encountered.
c. Manufacturing Splices: None.

[redacted]

D. Timetable

Film	Recovered	Received at Processing Site	Spec Ship* at NPIC Recd	Priority 1A at NPIC Recd
Fwd (1051-1)	9 May 69/0312Z	9 May 69/1910Z	None	12 May 69/0102Z
Aft (1051-1)	"	"	"	"
Stellar (1051-1)	"	"	"	"
Index (1051-1)	"	"	"	"
Fwd (1051-2)	18 May 69/0045Z	18 May 69/1625Z	20 May 69/0459Z	21 May 69/0536Z
Aft (1051-2)	"	"	"	"
Stellar (1051-2)	"	"	None	"
Index (1051-2)	"	"	"	"

*A titled, good quality copy of the entire mission was forwarded to NPIC, on an immediate basis, to satisfy a special Photo Interpreter Requirement.

PART VI. PI SUITABILITY

A. Definition of Photographic Interpretation (PI) Suitability

The PI suitability is an assessment of the information content of photographic reconnaissance material and its interpretability. A number of interrelated factors are involved, such as the quality of the photography, the extent of target coverage, scale, and weather limitations. However, the fundamental criteria for assigning a PI suitability rating may be reduced to (a) the scope of the photographic coverage and (b) the degree to which a photographic interpreter may extract useful and reliable information from the material.

PI suitability ratings are categorized as Excellent, Good, Fair, Poor, and Unusable. These ratings refer to the overall interpretive value of the photography obtained from a particular reconnaissance mission. Individual targets may also be assigned PI suitability ratings. The standards that determine assignment of the various ratings are:

Excellent: The photography is free of degradations by camera malfunctions or processing faults and the weather conditions are favorable throughout. The imagery contains sharp, well-defined edges and corners with no unusual distortions. Contrast is optimum and shadow details, as well as details in the highlight areas, are readily detectable. Observation of small objects and a high order of mensuration are made possible by the consistently good quality of the photography.

Good: The photography is relatively free of degradation or limiting atmospheric conditions. Edges and corners are well defined. No unusual distortions are present. Detection and accurate mensuration of small objects are feasible, but to a lesser degree than in material rated as "Excellent."

Fair: Degradation is present and the acuity of the photography is less than optimum. Edges and corners are not crisply defined and there is loss of detail in shadow and/or highlight areas. Detection and identification of small objects are possible, but accuracy of mensuration is reduced by the fall-off in image quality and the less-than-optimum contrast that prevails.

Poor: Camera-induced degradations and/or weather limitations severely reduce the effectiveness of the photography. Definition of edges and corners is not sharp. Only gross terrain features and culture may be detected or identified and distortion of form may exist. Accurate mensuration of even large objects is doubtful.

Unusable: Degradation of photography completely precludes detection, identification, and mensuration of cultural details.

B. PI Statistics

1. Target Coverage

	Mission 1051-1	Mission 1051-2	Totals
Priority 1 Targets Programmed	NA	NA	NA
Priority 1 Targets Covered	85	56	141

2. PI Quality Appraisal

Rating	Missiles	Nuclear Energy	Air Facilities	Ports	Elect Commo	Military Activity	Complex	Other
Good	5	0	4	0	0	0	0	0
Fair	56	5	15	12	0	0	0	15
Poor	143	3	29	11	0	11	1	3
Totals*	204	8	48	23	0	11	1	18

3. Summary of PI Quality Ratings

Good 9 or 3 percent
Fair 103 or 33 percent
Poor 201 or 64 percent

*A discrepancy exists between the total number of targets covered and the total PI reports because some targets are covered more than once.

[redacted]

C. PI Comments

1. Atmospheric Attenuation: The following is an analysis of the atmospheric conditions affecting the priority targets as reported by the photo interpreters during the initial readout of the mission.

Weather	Number of Targets
a. Clear	116 or 37.1 percent
b. Scattered Clouds	79 or 25.2 percent
c. Heavy Clouds	83 or 26.5 percent
d. Haze	34 or 10.9 percent
e. Snow	1 or 0.3 percent

2. Terrain Conditions: The terrain conditions were considered fair to good.

3. Product Interpretability: The interpretability is considered good to poor with the majority of the targets rated from fair to poor. The major factors contributing to the poor quality ratings are the out-of-focus areas described earlier in this report and the unusually high percentage of cloud cover.

[redacted]

PART VII. MISSION DATA

	Fwd Looking Pan	Fwd Looking Take-up Horizon	Fwd Looking Supply Horizon	Aft Looking Pan	Aft Looking Take-up Horizon	Aft Looking Supply Horizon	Mission 1051-1 Stellar	Mission 1051-1 Index	Mission 1051-2 Stellar	Mission 1051-2 Index
Camera Number	212	NA	NA	213	NA	NA	D115/148/142		D122/156/161	
Reseau Number	NA	NA	NA	NA	NA	NA	142	148	161	156
Lens Serial Number	174	19093	12878	173	19097	19094	11.798	824316	11320	825508
Slit Width (in)	0.140	NA	NA	0.140	NA	NA	NA	NA	NA	NA
Aperture	f/3.5	f/8.0	f/6.3	f/3.5	f/6.3	f/8.3	f/1.8	f/4.5	f/1.8	f/4.5
Exposure Time (sec)	1/475	1/100	1/100	1/475	1/100	1/100	2.0	1/500	1.0	1/500
Filter (Wratten)	21	25	25	21	25	25	None	21	None	21
Focal Length (mm)	609.625	54.850	54.900	609.602	54.950	54.700	85	38.49	85	38.49
Film Length (ft)	16,300	NA	NA	16,300	NA	NA	75	135	75	135
Splices	5	NA	NA	6	NA	NA	None	None	None	None
Emulsion		435-11-4-9			435-11-4-9		288-12/2-1-9	189-5-12-8	288-12/2-1-9	189-5-12-8
Film Type		3404			3404		3401	3400	3401	3400
Resolution Data (L/mm) *		*	*	*	*	*	NA	88''	NA	83''
Static'										
High Contrast	256	*	*	252	*	*	*	*	*	*
Low Contrast	154	*	*	139	*	*	*	*	*	*
Dynamic'										
I High Contrast	199	*	*	207	*	*	*	*	*	*
I Low Contrast	127	*	*	137	*	*	*	*	*	*
P High Contrast	0	*	*	0	*	*	*	*	*	*
P Low Contrast	117	*	*	127	*	*	*	*	*	*

* Not Available
NA Not Applicable
'film type 3404
''film type 3400