

592

Copy No. [redacted]
Page 1 of 4
30 October 1961

PHOTOGRAPHIC EVALUATION REPORT

Mission No: 9025
Film Type: J-23-7600
Camera No: 56

Photo Date: 13 October 1961
Filter, Main: W 21
Evaluated by: [redacted]

Evaluation No. FE 98-61
Filter, Horizon: W 25A

1. Shutter Operation:

- a. Port Horizon - Good
- b. Starboard Horizon - Good

Generally speaking, the horizon cameras operated satisfactorily throughout the mission. However, on some passes when the last frame should have contained horizon formats, they failed to be exposed. This condition occurred in conjunction with no exposure of the digitote.

2. Slit Operation (Main): .2" - Good

3. Camera Number (Image Quality): Over exposed but readable; first digit tracked off edge of format throughout.

4. Digitote Operation: Digitote was difficult to read intermittently throughout the mission. Occasionally unit and tenths digits could not be read. At the end of a majority of passes the digitote was not recorded.

5. Film Metering: Ranged from .12" to .2" throughout. Average metering between port horizon format and terrain format was .18", average between starboard horizon format and terrain format was .12". Port horizon format offset to the right from .02" - .08" in relation to terrain format throughout mission.

6. Film Tracking: Normal. However pressure marks on leading edge of frames 3, 4 of last pass, 18 seem to indicate a mistracking problem.

7. Timing Pulses: None

8. Shrinkage Markers: None

9. Fiducials:

- a. Main Camera - ragged throughout mission.
- b. Horizon Cameras - for most part, sharp throughout mission. However, flare noted from top fiducial intermittently.

10. Flare: Probable reflections noted on several frames at beginning and end of all passes. Noted in particular was a boat-shaped fogged area that occurred on all passes. An example can be found on pass 03, frame 02. In addition the end of pass marker flared over into the terrain format throughout the mission.

11. Light Leaks: Light leaks were noted on first two frames and last three frames of every pass. As evidenced on mission 9022, wherever a photo pass followed an engineering pass no fogging was apparent at the beginning or end.

12. Forward Overlap: Slightly above 10%.

13. Static Electricity: Very little; pass 02, frames 31, 32; pass 03, frame 17.

14. Pinholes: Numerous on pass 0E1, frames 01-24; pass 02, frames 01, 02, 18. Few thereafter.

15. Abrasions and Scratches:

- a. Scratches outside format along leading and trailing edges continuous throughout, probably caused by rails.
- b. Scratches and digs inside format were noted on pass 0E1, frames 1-3, 22; pass 02, frames 10, 12, 18, 34; pass 03, frames 19, 20, 24, 25; pass 04, frames 02, 07, 30, 34, 42; pass 05, frames 02, 72, 74, 75-81; pass 07,

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frames 27, 76-78, 131; pass 08, frames 46, 47, 63, 151-154, 166; pass 09, frames 50-52, 54-59, 64, 67-80, 86, 90-99; pass 10, frames 01, 07, 10, 30, 31; pass 15, frames 22, 27; pass 18, frames 01-04, 40-42.

- c. Abrasions were noted near the starboard horizon format on passes 10 and 15. Abrasions within the format were noted on pass 02, frame 01; pass 07, frames 77, 80; pass 10, frame 01.
16. Tearing: None noticed. A portion of the last frame on pass 18 was missing.
 17. Processing Streaks: None noted.
 18. Pressure Marks: The port horizon format contained a pressure mark throughout the mission. A large desensitized streak, not parallel to the edge of the film was noticed on pass 0E1, frames 10, 21, 22; pass 15, frames 03, 04; pass 17, frames 03, 04, 05. A desensitized spot occurring every 3.14", 1/8" in from the trailing edge was noticed on pass 0E1. Indiscriminate desensitized spots were noted intermittently on all passes.
 19. Water Marks: None noted.
 20. Blistering and Frilling: Few blisters, no frilling
 21. Density: Medium 30%, heavy 70%. Density appeared heavy due to cloud cover, snow and texture of terrain.
 22. Contrast: Low 75%, medium 25%.
 23. Apparent Resolution: 96% of every frame in the mission was out of focus but in areas of good focus, resolution appeared comparable to the best in missions 9022 and 9023.
 24. Apparent Granularity: Very fine.
 25. Photo Quality: Poor
 - a. Degradation due mainly to poor focus.
 26. Camera Operation: Poor
 - a. Degradation due to flat horizon photos, no timing pips, poor exposure on digitote, illegible digitote, main format almost totally out of focus, conspicuous light leaks on approximately 5 frames per pass, end of pass indicator appeared at beginning of passes, fiducials were blunted in main format, and some type of film slippage was evident at the end of passes.
 27. Suitability for FI: Poor 96%, very good 04%.
 - a. Degradation due to main format and horizon format areas being out of focus.

Remarks:

1. The average pitch and roll were very close to 0° with a maximum roll of less than -01° occurring at camera turn on.
2. 96% of the main format area appeared out of focus. In focus areas appeared as small narrow bands adjacent to the trailing edge of the film and where the film left the main format area, near the rollers on both ends of the format.
3. The end of pass markers were over exposed and covered a small portion of the format area.
4. The end of pass markers usually occurred at the beginning of a pass.
5. The camera number was slightly over exposed and the first digit tracked off the film edge.

- 6. Creases:
 - a. Noted along the trailing edge of the film and probably due to film handling before evaluation. Pass 05, frames 76 to 99; pass 08, frames 84 to 150.
- 7. Crimping: Pass OE1, frames 09, 10, 13, 17, 22; pass 03, frames 09, 20; pass 04, frames 01, 04, 06, 09; pass 05, frame 69; pass 08, frames 82, 122.
- 8. Foreign material noted on pass OE1, frame 04; pass 05, frame 01; pass 09, frame 75.
- 9. Bits of emulsion were lifted from pass 02, frames 09, 10, 14, 38, 40; pass 03, frames 10, 24; pass 05, frame 08; pass 07, frame 111.
- 10. Stains were noticed on pass OE1, frames 09, 24; pass 03, frames 01, 14, 24; pass 05, frame 57; pass 08, frame 123.
- 11. Titling ran into main format on pass OE1, frame 01.
- 12. Titling was smeared on pass OE1, frame 24.
- 13. Some type of slippage occurred after camera was turned off. Some fogging with "ghost fiducials" was noticed on the last frame of passes 02, 03, 07, 08, 09, 10, 15, 17.
- 14. Initiation of recovery sequence occurred on pass 18, frame 27.
- 15. Edge fog and slight mottling of the film edges were noted throughout the mission.
- 16. Density readings were made on every pass using the Eastman Kodak Reflection - Transmission Color Densitometer Model RT.
Two readings were made for base fog as fogging appeared greater at the edges than in the center of the film.

Pass No.	Frame	D Max	D Min	Base Fog	
				Center	Edge
OE1	04	2.10	1.03	0.22	0.24
	13	2.20	0.66	0.20	0.20
	21	2.17	1.10	0.21	0.21
02	03	2.03	0.63	0.19	0.20
	21	1.94	0.63	0.19	0.20
	41	1.91	0.85	0.21	0.22
03	03	2.12	0.68	0.23	0.24
	11	2.09	0.58	0.22	0.28
	22	2.06	0.83	0.22	0.25
04	05	1.82	1.09	0.23	0.23
	25	2.13	0.66	0.22	0.22
	49	1.94	0.73	0.20	0.23
05	04	1.82	---	0.22	0.26
	44	1.71	0.79	0.22	0.27
	95	2.17	---	0.21	0.27
07	05	1.57	0.52	0.22	0.30
	47	1.98	0.77	0.22	0.28
	129	2.20	0.86	0.18	0.24
08	64	1.67	0.85	0.20	0.25
	116	1.91	1.14	0.19	0.23
	166	1.88	1.04	0.18	0.24

Pass No.	Frame	D Max	D Min	Base Fog	
				Center	Edge
09	02	1.95	0.51	0.15	0.20
	50	1.88			
	87	2.29			
10	03	2.01	0.54	0.17	0.22
	13	1.94			
	27	1.95			
15	07	1.75	0.86	0.16	0.24
	15	2.10			
	28	1.78			
17	05	1.87	0.58	0.16	0.23
	21	2.00			
	38	2.02			
18	11	1.87	0.99	0.19	0.25
	20	1.98			
	28	1.97			

D Max range 2.29 - 1.57 Average 1.97

D Min range 1.14 - 0.51 Average 0.79

Base Fog range - Center 0.23 - 0.15 Average 0.19

Base Fog range - Edge 0.30 - 0.20 Average 0.24

Total range 2.29 - 0.51

Average 1.38

Minimum D Min to Maximum D Max = 1.78

Average D Min to Average D Max = 1.18