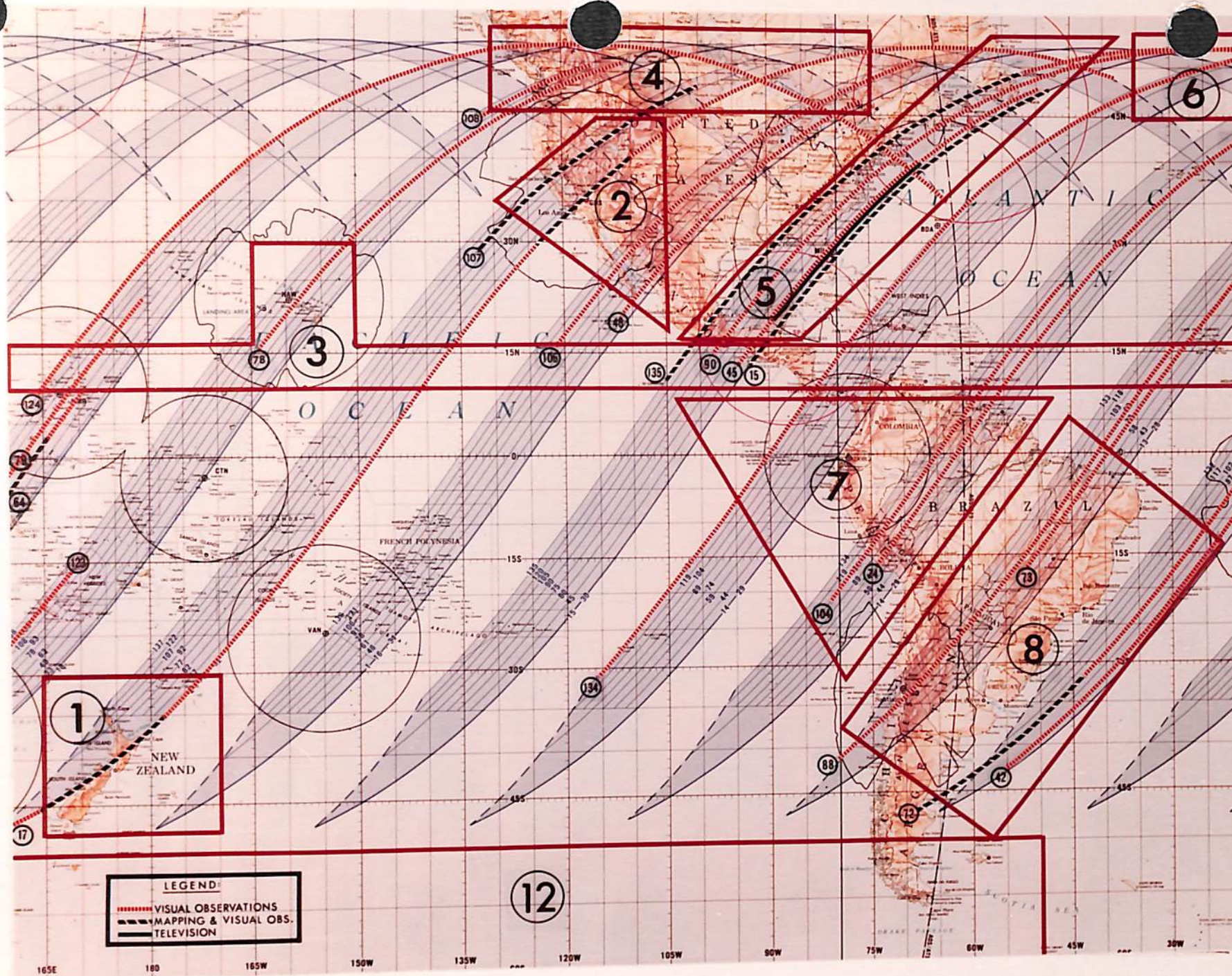
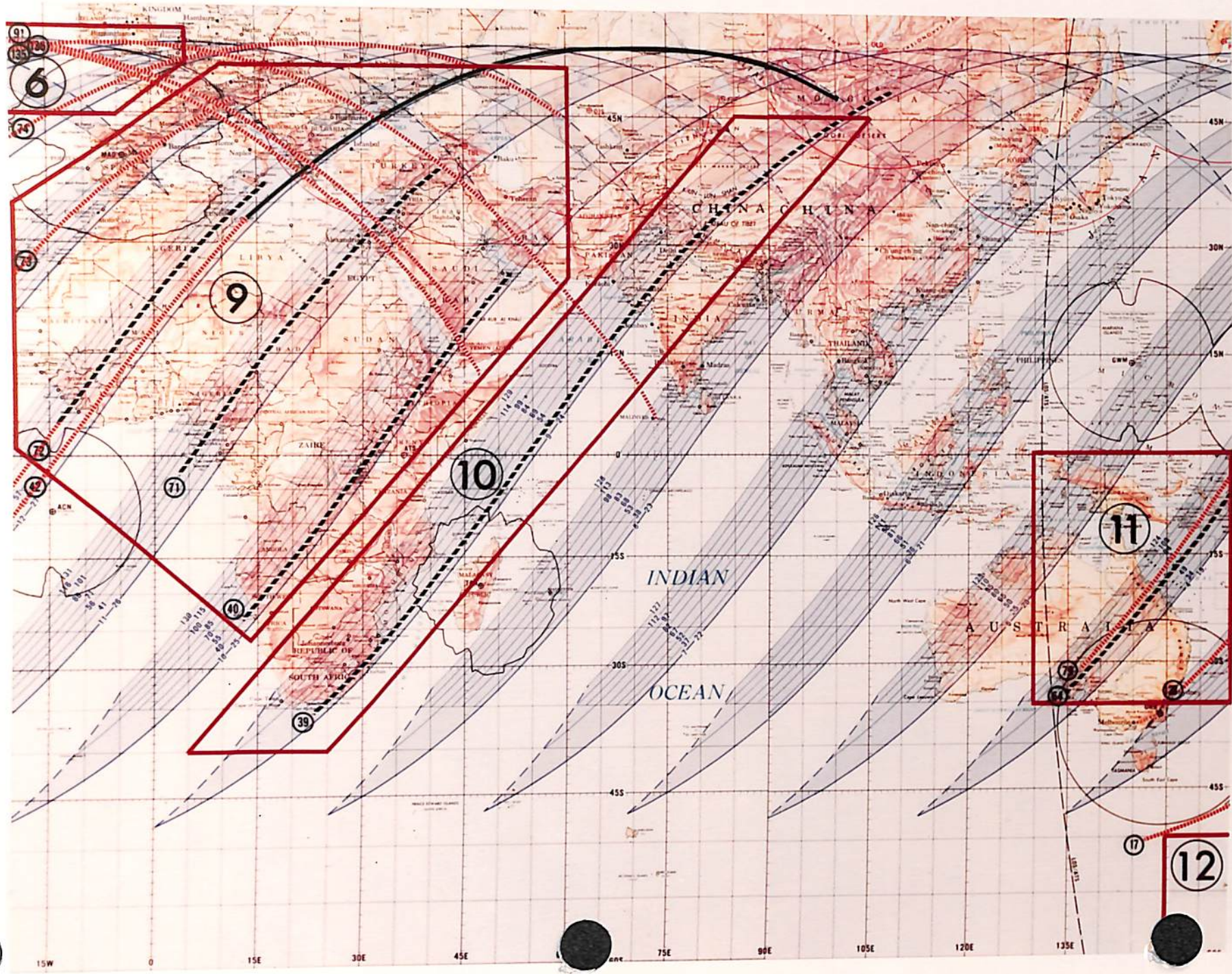


ASTP	
EARTH OBSERVATIONS BOOK	
PART NO.	S/N
SKF 32100114 - 116	1002



WESTERN HEMISPHERE

EASTERN HEMISPHERE



TIMELINE AND MAPPING PAD

1st and 2nd LAUNCH OPPORTUNITY

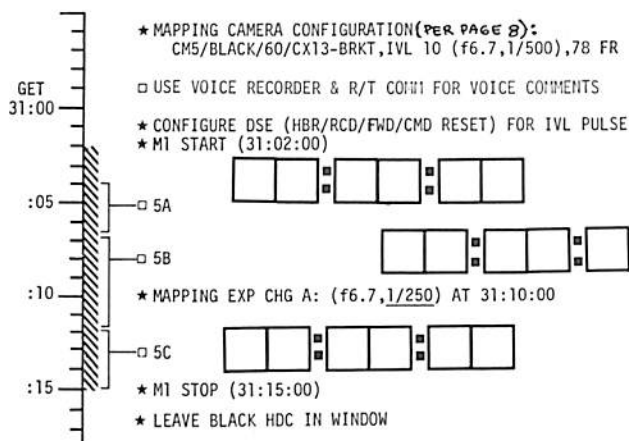
TIMELINE

AC-★ ☆ THIS PASS WILL BE SCHEDULED IN 1st OPP ONLY. ☆ ☆

DP-□

Rev. 15/16

M1

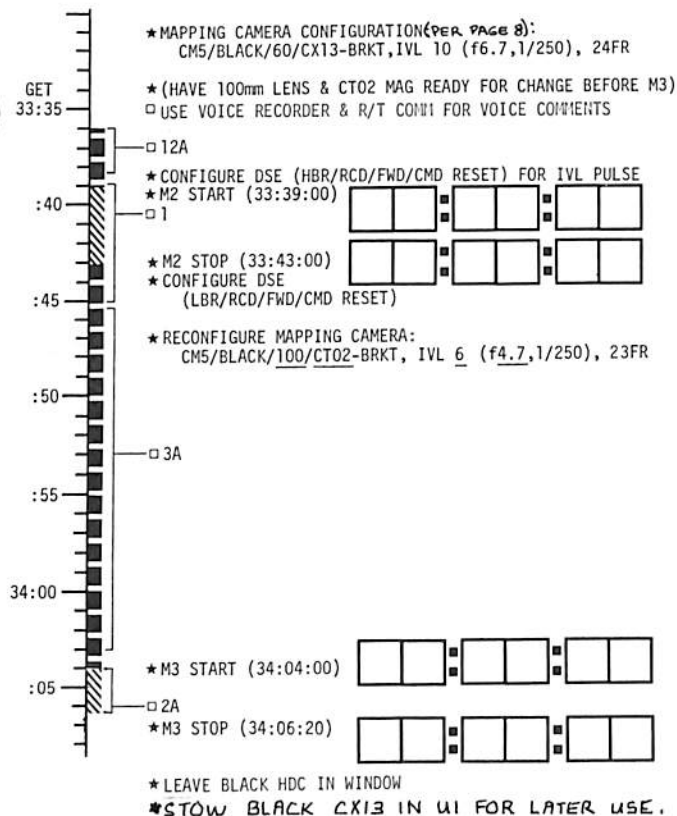


DP-★ ☆ THIS PASS WILL BE SCHEDULED IN 1st OPP ONLY. ☆ ☆

CP-□

Rev. 17/18

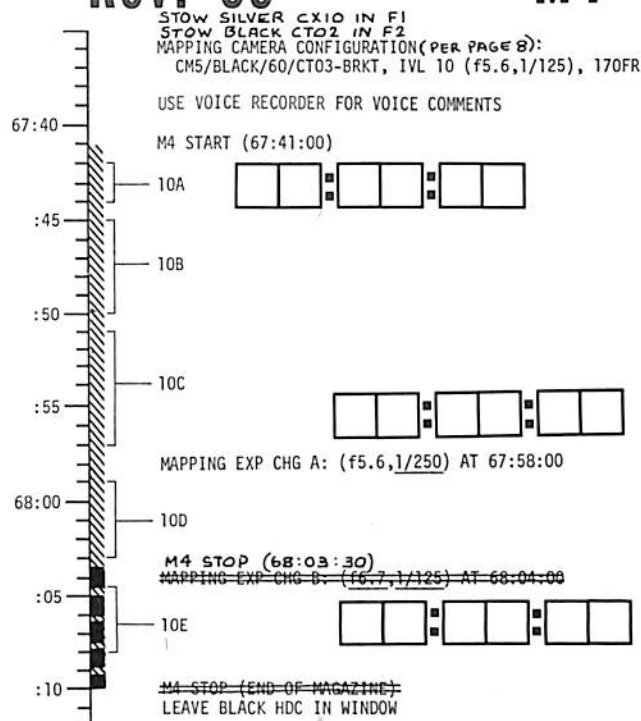
M2, M3



DP

Rev. 39

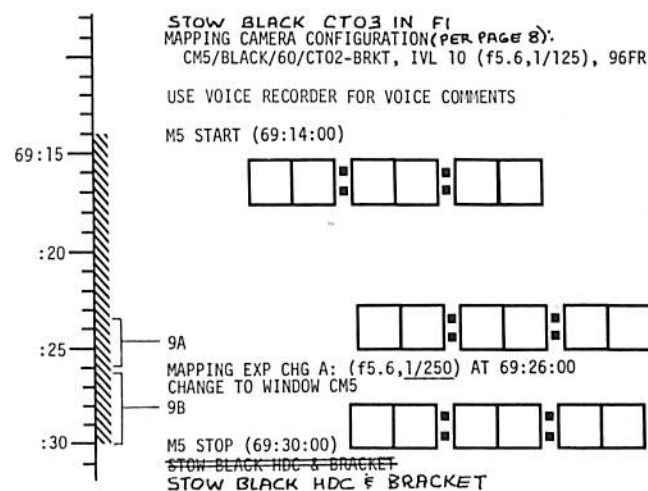
M4



DP

Rev. 40

M5

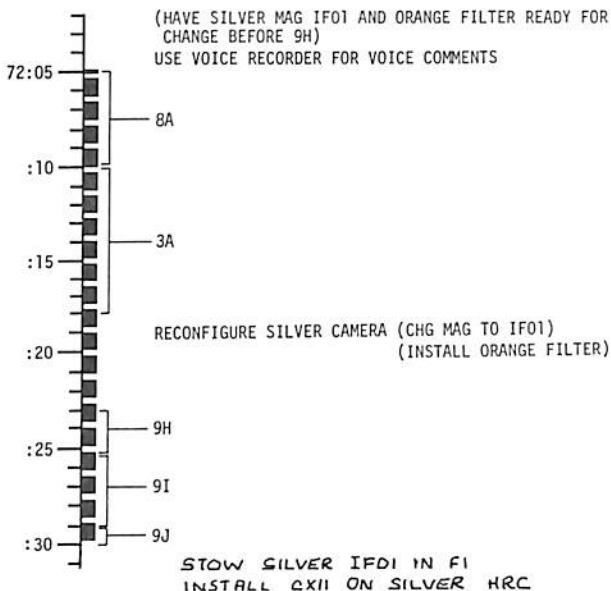


TIMELINE AND MAPPING PAD

1st and 2nd LAUNCH OPPORTUNITY

DP

Rev. 42



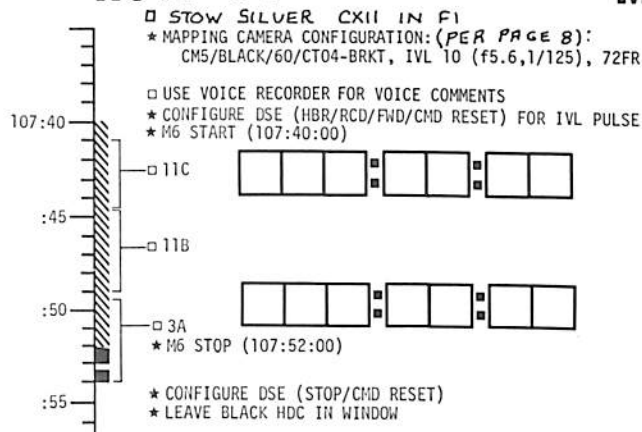
AC-*

CP-□

Rev. 64

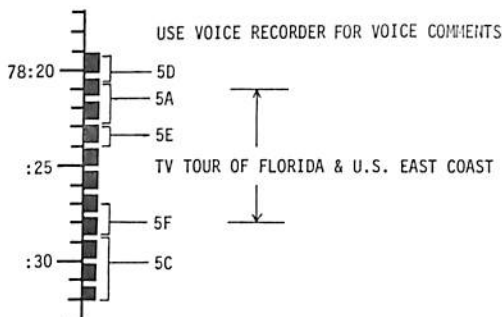
*STOW BLACK CTO2 IN F2

M6



DP

Rev. 45/46

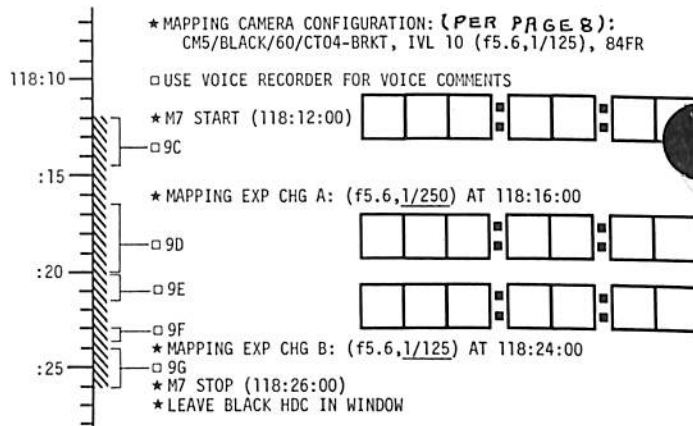


DP-*

CP-□

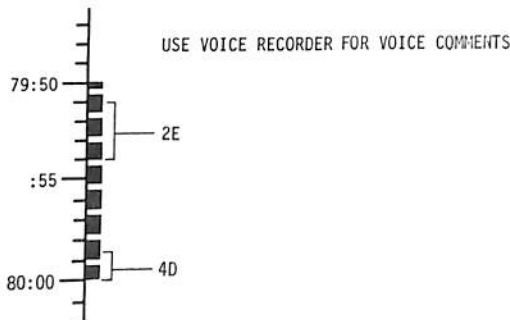
Rev. 71

M7



CP

Rev. 46



TIMELINE AND MAPPING PAD

1st and 2nd LAUNCH OPPORTUNITY

AC-★
DP-□

Rev. 72

M8, M9

★ STOW BLACK CTO4 IN F1
★ MAPPING CAMERA CONFIGURATION: (PER PAGE 8):
CM5/BLACK/60/CX13-BRKT, IVL 10 (f8,1/125), 36FR

□ DAC CAMERA CONFIGURATION:
CM3/DAC/25/CT01/6 fps (f8,1/125), 11 minutes

★ (HAVE 100mm LENS & CT05 MAG READY FOR CHANGE BEFORE M9)
□ USE VOICE RECORDER FOR VOICE COMMENTS
★ CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE

119:25

□ 12A, M8 START (119:25:00)



□ 8A

:30

★ M8 STOP (119:31:00)



★ RECONFIGURE MAPPING CAMERA:
CM5/BLACK/100/CT05-BRKT, IVL 6 (f5.6,1/250), 110 FR

:35

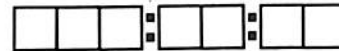
:40

★ □ M9 & DAC START (119:43:00)



:45

□ DAC: 9H,9I,9J



:50

★ MAPPING EXP CHG A: (f4,1/250) AT 119:52:00

:55

★ □ M9 & DAC STOP (119:54:00)

★ STOW BLACK HDC AND BRACKET



□ STOW CTO1 IN F2 FOR USE LATER

★ STOW BLACK CX13 IN F1

AC

Rev. 74

USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS

122:35

7B

:40

7C

:45

:50

6A

:55

6B

123:00

:05

★ THIS PASS WILL STOP HERE ★
★ DURING NO ATS CASE ONLY. ★

AC

Rev. 74/75

★ THIS PASS WILL BE SCHEDULED ★
★ IN NO ATS CASE ONLY. ★

USE VOICE RECORDER FOR VOICE COMMENTS

124:00

3A

:05

7F

:10

3B

:15

5D

:20

7G

AC

Rev. 73

STOW SILVER CX12 IN F1
USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS

121:05

:10

3A

:15

:20

9K

:25

9L

DP

Rev. 78

USE VOICE RECORDER FOR VOICE COMMENTS

130:10

3C

:15

:20

4A

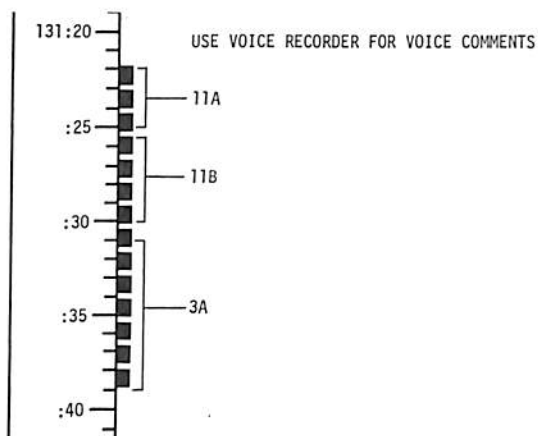
3.1b

TIMELINE AND MAPPING PAD

1st and 2nd LAUNCH OPPORTUNITY

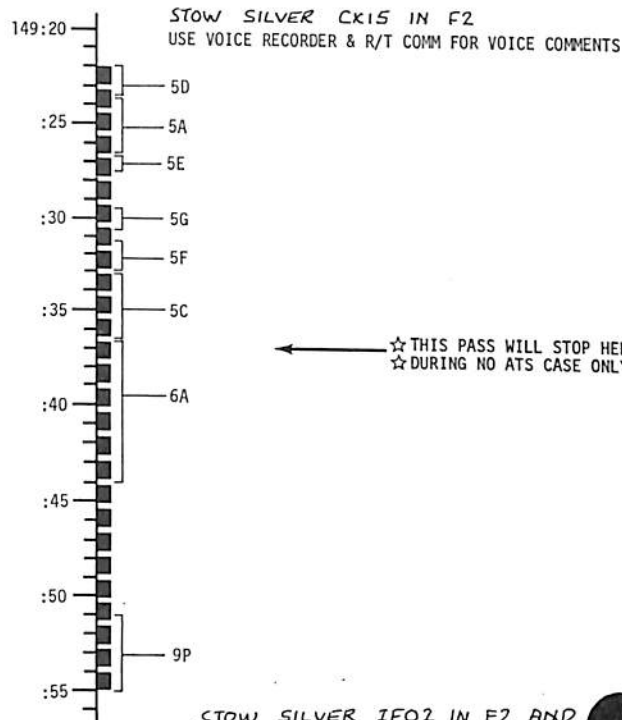
DP

Rev. 79



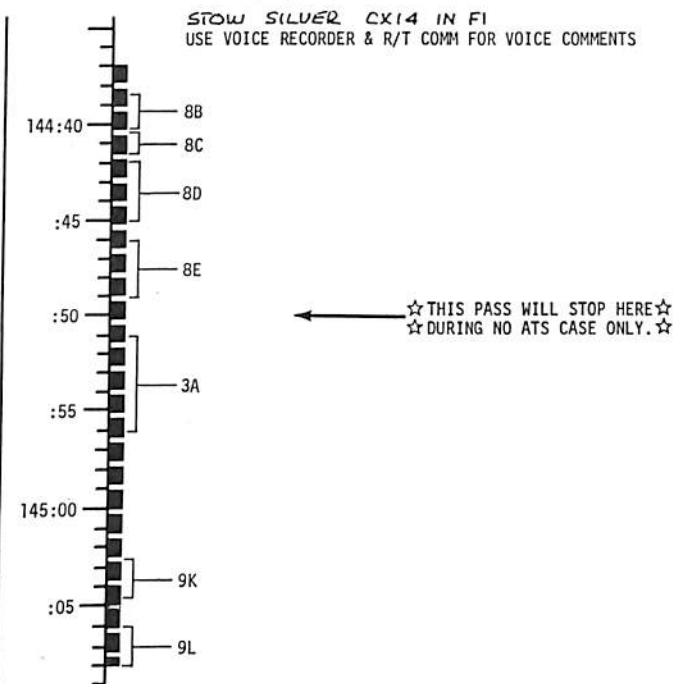
DP

Rev. 90/91



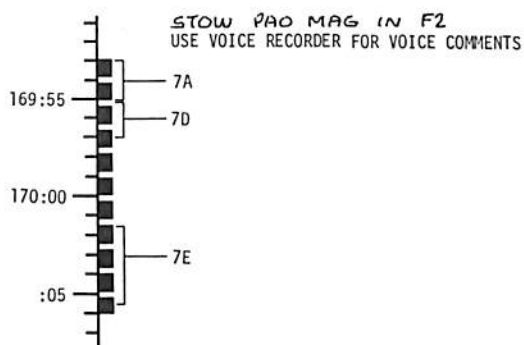
AC

Rev. 88



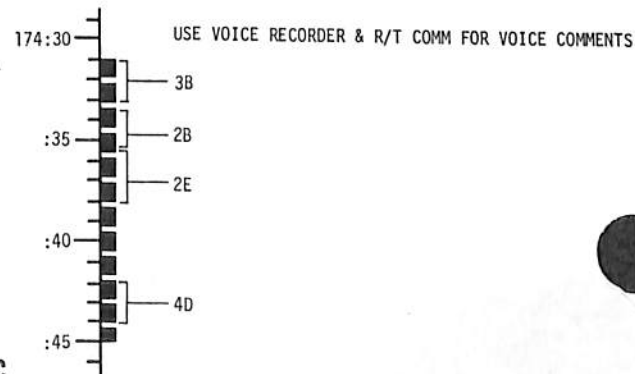
AC

Rev. 104



CP

Rev. 106/107



TIMELINE AND MAPPING PAD

1st LAUNCH OPPORTUNITY

CP

Rev. 107

M10

STOW SILVER CX15 IN FI
MAPPING CAMERA CONFIGURATION: (PER PAGE 8):
CM5/SILVER/50/CX16-BRKT, IVL 10 (f4, 1/250), 30FR

USE VOICE RECORDER FOR VOICE COMMENTS

CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE

M10 START (176:06:00)

176:05

2C

:10

2D

M10 STOP (176:11:00)
CONFIGURE DSE (LBR/CMD RESET)
RECORD LAST FR NO: PAGE 5

CP

Rev. 124

USE VOICE RECORDER FOR VOICE COMMENTS

202:35

:40

:45

:50

:55 4A

203:00

4C

4D

:05

CP

Rev. 108

USE VOICE RECORDER FOR VOICE COMMENTS

177:30

3C

:35

:40

4B

DP

Rev. 123

USE VOICE RECORDER FOR VOICE COMMENTS

200:50

11D

:55

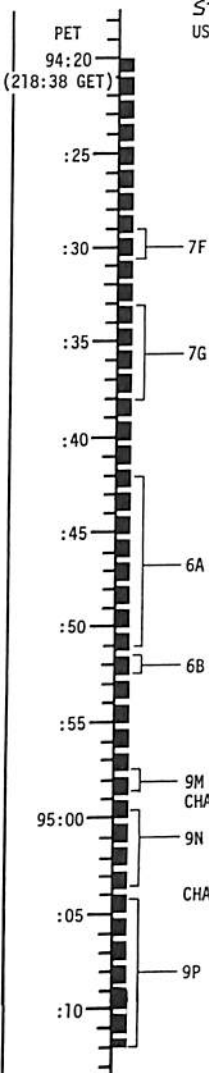
TIMELINE AND MAPPING PAD

1st LAUNCH OPPORTUNITY

AC

Rev. 134/135

STOW SILVER CX16 IN FI
USE VOICE RECORDER FOR VOICE COMMENTS



DP-★

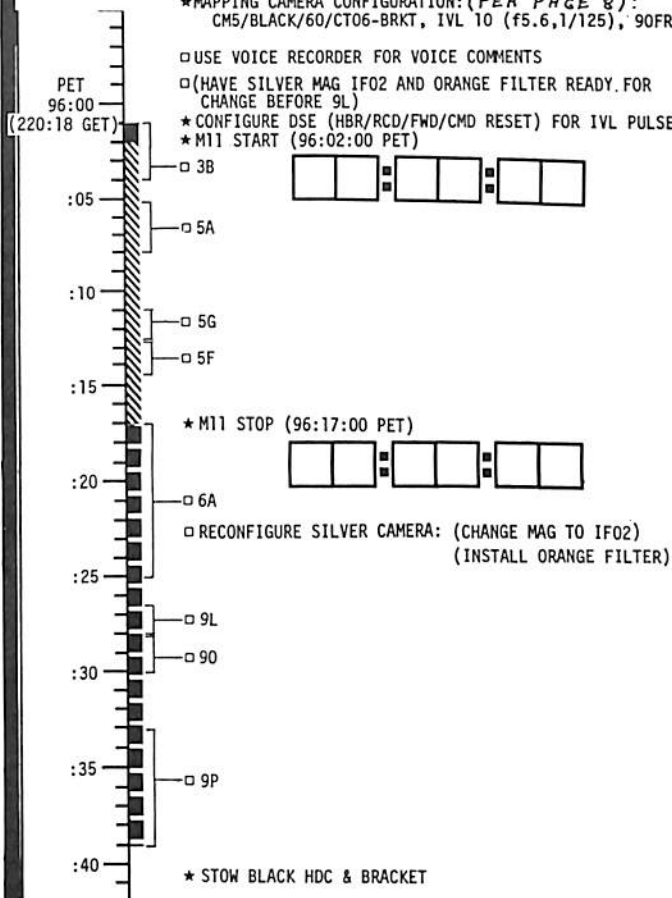
CP-□

Rev. 135/136

M11

★STOW BLACK CT05 IN FI
★MAPPING CAMERA CONFIGURATION: (PER PAGE 8):
CM5/BLACK/60/CT06-BRKT, IVL 10 (f5.6, 1/125), 90FR

□ USE VOICE RECORDER FOR VOICE COMMENTS
□ (HAVE SILVER MAG IF02 AND ORANGE FILTER READY FOR CHANGE BEFORE 9L)
★ CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE
★ M11 START (96:02:00 PET)



VISUAL OBS FILM BUDGET (SILVER HRC)

HASSELBLAD MAGAZINES —70 FR/MAG										
	CX10		IF01		CX11		CX12		CX14	
	(U1)		(A6)		(A6)		(A6)		(A6)	
	FRAMES/PASS	MAG COUNTER	FRAMES/PASS	MAG COUNTER	FRAMES/PASS	MAG COUNTER	FRAMES/PASS	MAG COUNTER	FRAMES/PASS	MAG COUNTER
		SCHED. LOG		SCHED. LOG		SCHED. LOG		SCHED. LOG		SCHED. LOG
REV 15/16	15	15 _____								
REV 17/18	49	64 _____								
REV 39			32	32 _____						
REV 40			12	44 _____						
REV 42			18	62 _____	9	9 _____				
REV 45/46					30	39 _____				
REV 46					9	48 _____				
REV 64							12	12 _____		
REV 71							24	36 _____		
REV 72							12	48 _____		
REV 73									15	15 _____
REV 74									15	30 _____
REV 78									9	39 _____
REV 79									15	54 _____

FILM BUDGET
(PAGE 5)



OPERATIONAL STOWAGE

LAUNCH STOWAGE FOR EQUIPMENT USED IN EARTH OBSERVATIONS

BLACK SYSTEM

Hasselblad data camera system:

HDC.....B3
 60 MM lens.....B5
 100 MM lens.....B5
 Film magazines:
 CT02.....~~U1~~ B3 (on HDC)
 CT03,4,5.....A6
 CT06.....U1
 CX13.....~~U1~~ B3 (on HDC)

Camera mount.....A6
 TM cable.....A6
 Ringsight.....B3

Intervalometer.....A6

Spotmeter.....B3

Voice recorder-Sony....A4
 Cassettes.....A4
 Batteries.....A4

Spotting Scope.....A1

Nikon camera system:

35 MM Nikon.....B2
 35 MM lens.....B2
 300 MM lens.....A5
 300 MM bracket.....A5
 Film cassettes.....B2, B5
 Cable release.....B2

SILVER SYSTEM

Hasselblad reflex camera system:

HRC.....B5
 50 MM lens.....B5
 250 MM lens.....B5
 Film magazines:
 CX06.....B5 (on HRC)
 CX07,8,9.....B5
 CX10.....U1
 CX11,12,14.....A6
 CX15,16,17.....A6
 IF01,02.....A6
 Orange Filter.....B5

16 MM data aquisition camera system:

DAC.....B3
 10 MM lens.....B5
 25 MM lens.....B3
 75 MM lens.....B3
 Film mag CT01~~B3~~ F2
 Camera mount.....U2
 Mirror.....B3
 Power cable.....B3
 Timing cable.....A6

Flight data file:

Earth Observation book.R3
 World Map Pack.....A2
 Color Wheel.....R3
 Orbital slider map.....R3

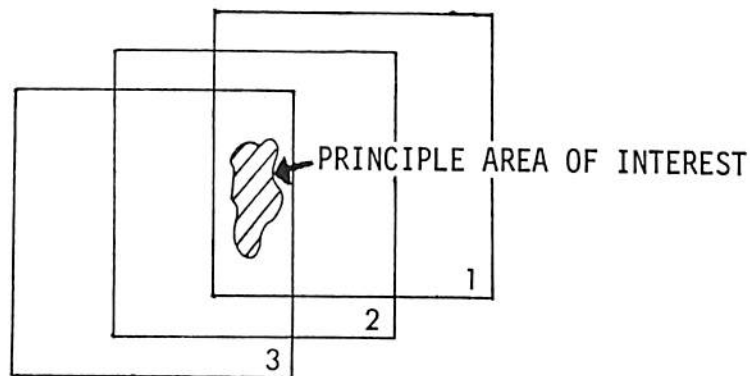
NOTE: CAMERA EQUIPMENT NEEDED FOR EACH DAY WILL BE STOWED IN F2 DURING POST-SLEEP CHECKOUT ACTIVITY.

STOWAGE

INFORMATION TO BE RECORDED ON VOICE RECORDER

(Transmit this information concurrently on real-time voice or on DSE if these communication modes are available.)

1. MAGAZINE NUMBER IN HRC - at beginning of each pass.
(Record magazine number in HDC if different from scheduled.)
2. SITE NUMBER OF EACH VISUAL OBS SITE
3. GET OF EACH VISUAL OBSERVATION
4. CAMERA SETTINGS - if different from scheduled.
5. COMMENTS:
 - a. Answer as many questions as possible for each site in same order as listed in book.
 - b. Give color wheel number when making a color comparison.
 - c. Make any additional observations which is felt may add to scientific knowledge in the site area.
6. FRAME COUNT OF HRC - at end of each pass.

PROCEDURE FOR TAKING A SET OF 3 STEREO PHOTOS

- A. HOLD CAMERA AT APPROXIMATELY THE SAME ANGLE.
- B. TAKE FIRST FRAME WHEN AREA OF INTEREST IS ON ONE SIDE OF CAMERA FIELD OF VIEW
- C. TAKE SECOND FRAME WHEN AREA IS IN CENTER OF CAMERA FIELD OF VIEW
- D. TAKE THIRD FRAME WHEN AREA IS ON OTHER SIDE OF CAMERA FIELD OF VIEW

[FRAME INTERVAL: 5 SECONDS]

CAMERA SETUP PROCEDURES

SETUP FOR MAPPING CAMERA:

1. Install HDC Earth Obs camera mount (A6) in window CM5. (Remove R12)
2. Install specified lens (B5) on HDC (B3).
3. Install specified film magazine (U1, A6). (~~CT02~~ ^{CX13} on camera at launch)
4. Mount camera/lens to mount.
5. SCI INST PWR-OFF (PNL 227).
6. Attach TM cable (A6) to PNL 227.
7. Connect intervalometer (A6) to TM cable.
8. Connect TM cable to HDC.
9. SCI INST PWR-PWR (PNL 227).
10. Set exposure for first picture sequence.

SETUP FOR REFLEX CAMERA:

1. Install specified lens (B5) on HRC (B5)
 2. Install specified film magazine (U1, B5, A6).
 3. Set exposure for first visual observation site.
-

VOICE RECORDER OPERATION PROCEDURES

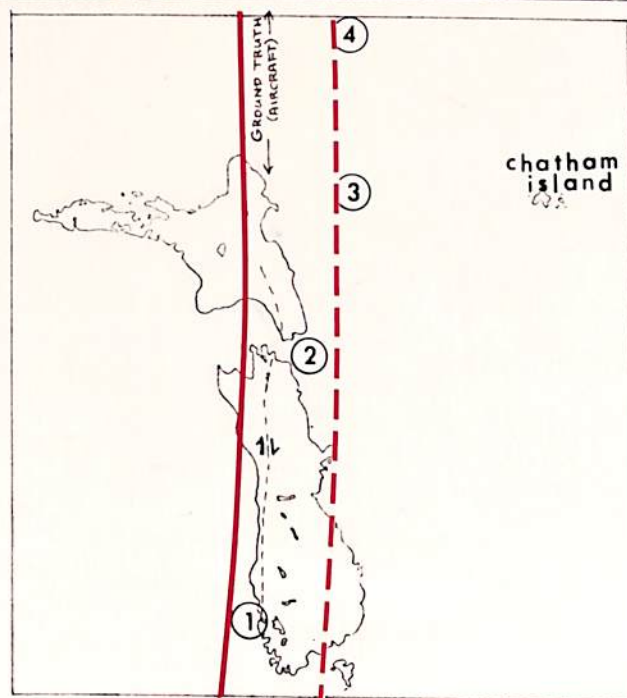
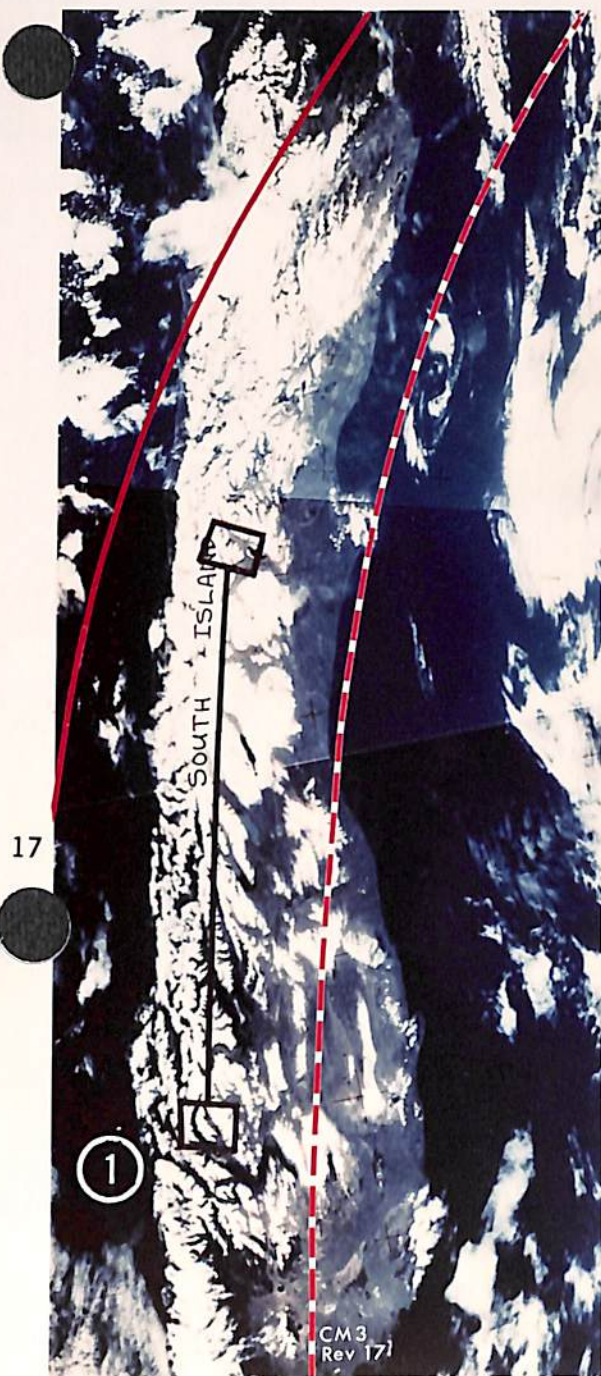
1. Remove tape cassette from tape cassette kit. (Use cassettes in following order: MA136-1,2,3,4,5,6,7,8,X)
2. Remove spool lock from tape cassette.
3. Install cassette in recorder with side 1 up.
4. Set counter to 000.
5. Set REC MUSIC/SPEECH to SPEECH.
6. Set START/STOP FRONT SWITCH to STOP.
7. Perform battery check.
8. To start recorder, simultaneously depress REC and FWD buttons.
9. Set FRONT SWITCH to START. Wait 4 seconds before making voice comments on a new side of tape. (This switch can be temporarily placed to STOP during periods of silence during a pass to save tape.)
10. At completion of Earth Obs comments depress STOP button on top of recorder. (Recorder will automatically stop at end of tape.)

NOTE: Use START/STOP FRONT SWITCH only for momentary pause.

11. When a cassette side is completely recorded, mark cassette to avoid recording over that side.

SITE 1: SOUTH SEAS

SITE 1



1. OBTAIN 19 PHOTOGRAPHS OF THE ALPINE FAULT ALONG SOLID BLACK LINE. (Photo strip)
(FRAME INTERVAL: 2 SECS)
2. CAN YOU SEE INTERNAL WAVES BETWEEN THE TWO ISLANDS? NOTE ORIENTATION AND SIZE.
3. IF YOU CAN SEE PLANKTON BLOOMS E-NE OF THE ISLANDS, MARK LOCATION ON SKETCH.
4. USE COLOR CHART TO DEFINE WATER COLOR OF THE SOUTH PACIFIC; MARK G.E.T.

REV 17: CM3/SILVER/250/CX10(f6.7,1/250) 22FR,[NEXT SITE: 3A]

SITE 2: SOUTHWESTERN U.S.



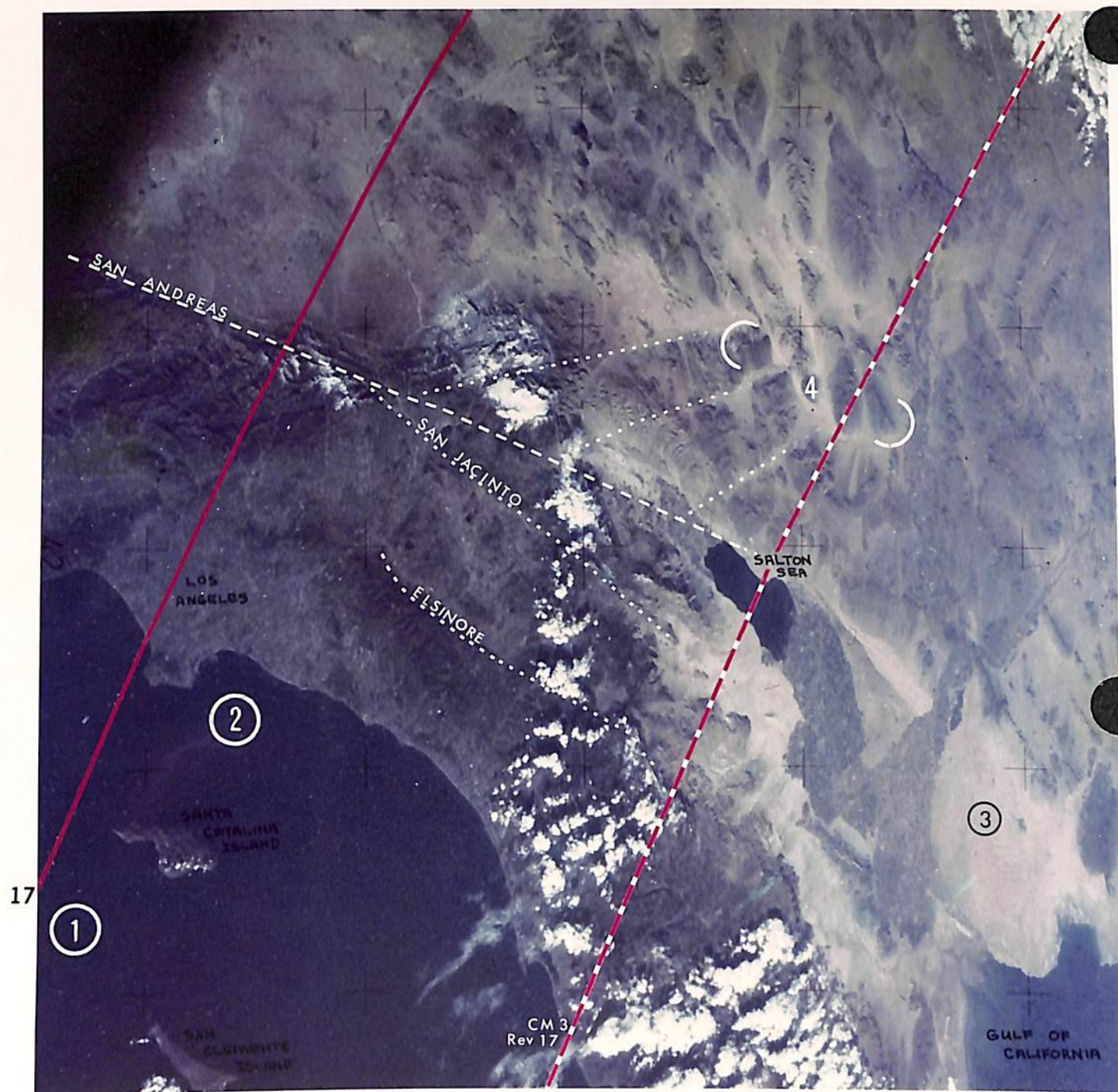
SITE 2

107

17

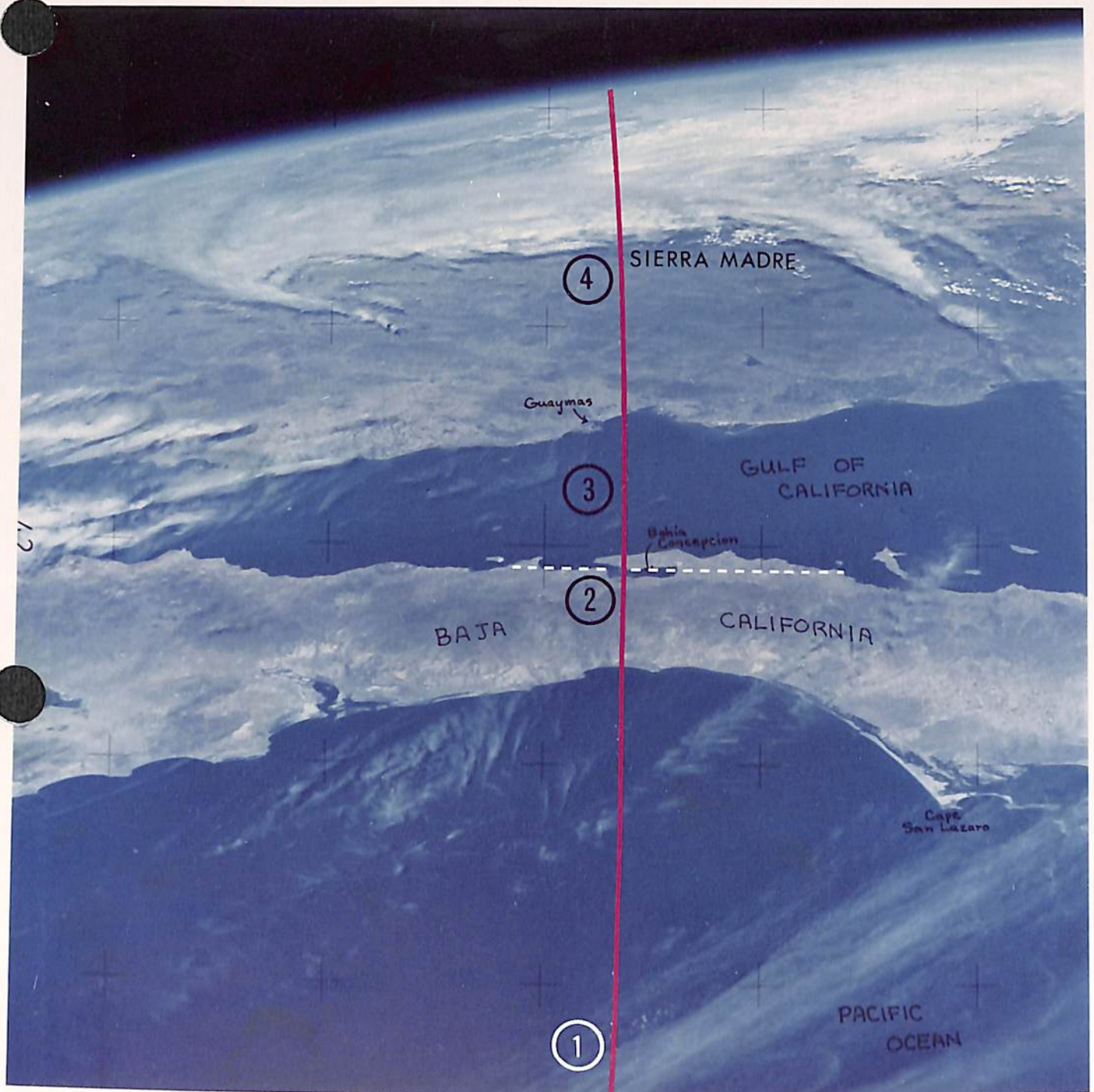
106

46



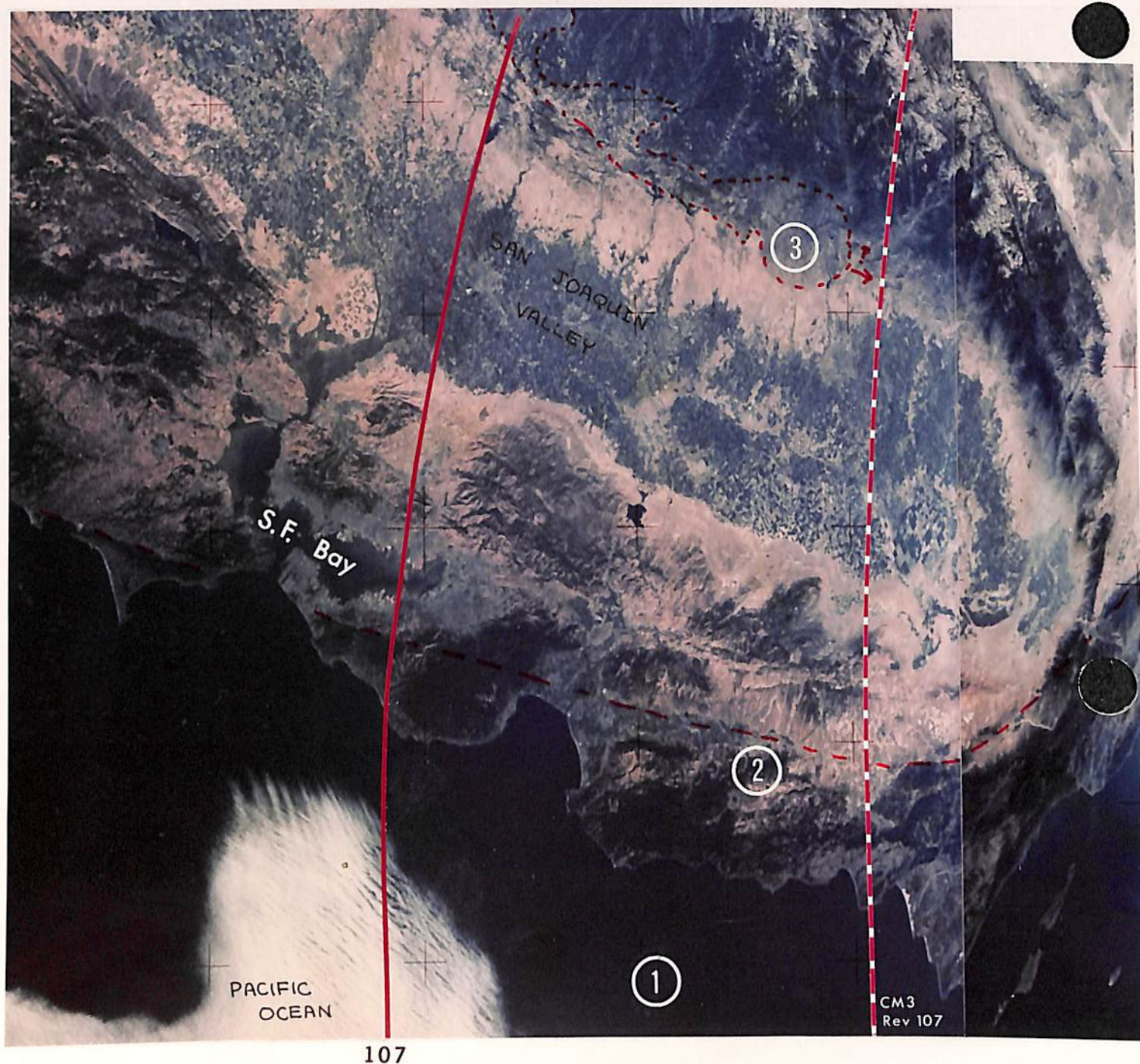
1. CAN YOU SEE AN OCEAN CURRENT BOUNDARY? MARK LOCATION IF POSSIBLE.
2. IS ANY RED TIDE VISIBLE OFF THE COAST? MARK LOCATION OF BLOOM.
3. USE COLOR CHART TO DEFINE COLOR OF GRAN DESIERTO.
4. ARE THERE OTHER DESERT VARNISHED HILLS THAN THE FOUR MARKED?

REV 17: CM3/SILVER/250/CX10(f9.5,1/500) 9FR,[NEXT SITE: 4C]



106

1. USE COLOR CHART TO DEFINE PACIFIC WATER COLOR.
2. PHOTOGRAPH BAHIA CONCEPCION FAULT AND PARALLEL STRUCTURES.
(3 STEREO FRAMES PER TARGET)
3. ARE THERE ANY INTERNAL WAVES IN THE GULF OF CALIFORNIA?
4. PHOTOGRAPH SLATY-GREY ROCK EXPOSURES AND STRUCTURES IN THE SIERRA MADRE.
(3 STEREO FRAMES PER TARGET)

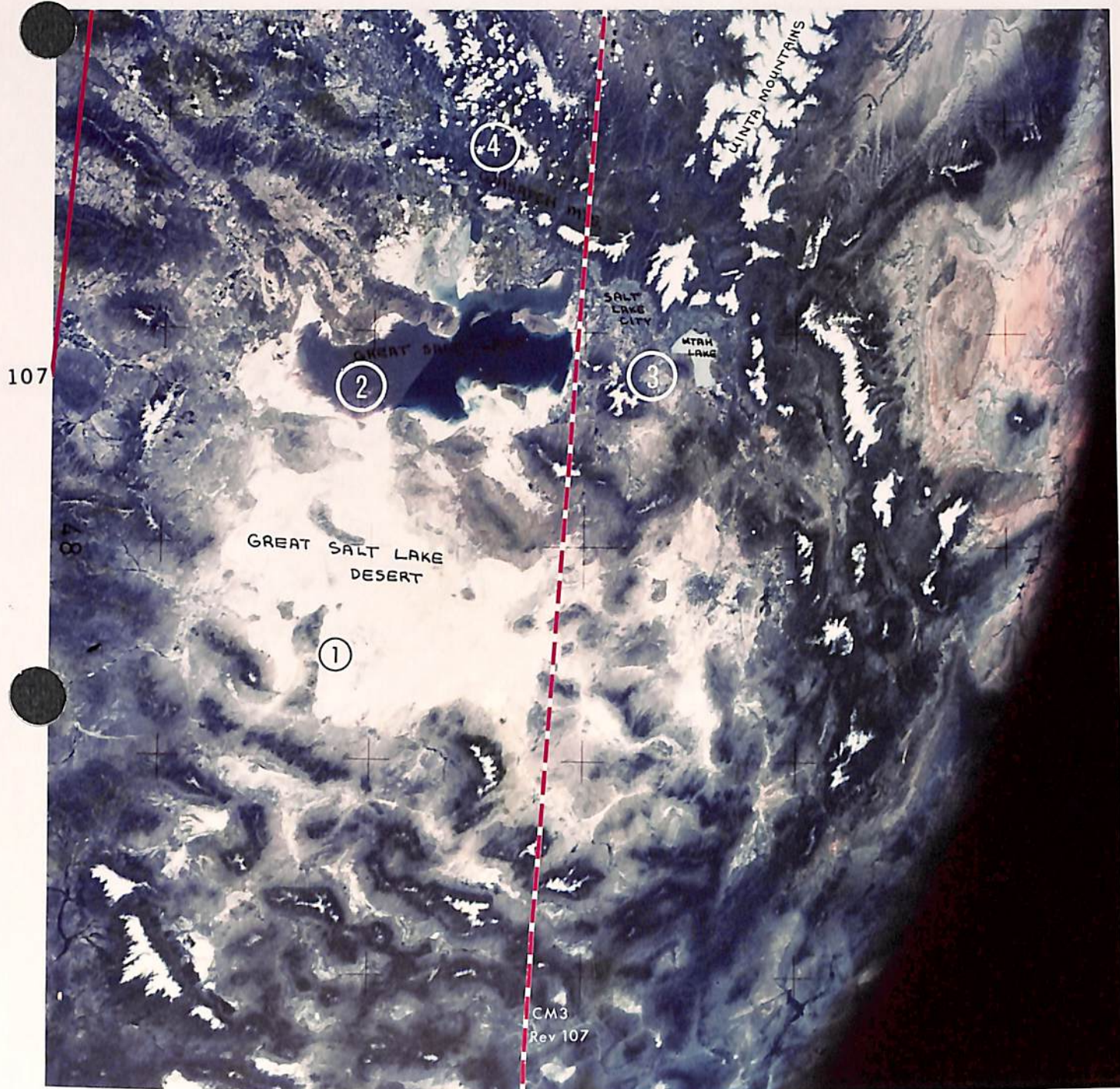


1. USE COLOR CHART TO DEFINE PACIFIC WATER COLOR; MARK ANY COLOR BOUNDARIES.
2. DESCRIBE PARALLEL FAULTS WEST OF SAN ANDREAS.
3. MARK SOUTHERN LIMITS OF FOOTHILL METAMORPHIC RANGE ON PHOTOGRAPH.

REV 107: CM3/VIS OBS COMMENTS ONLY [NEXT SITE: 2D]

GREAT SALT LAKE

2D

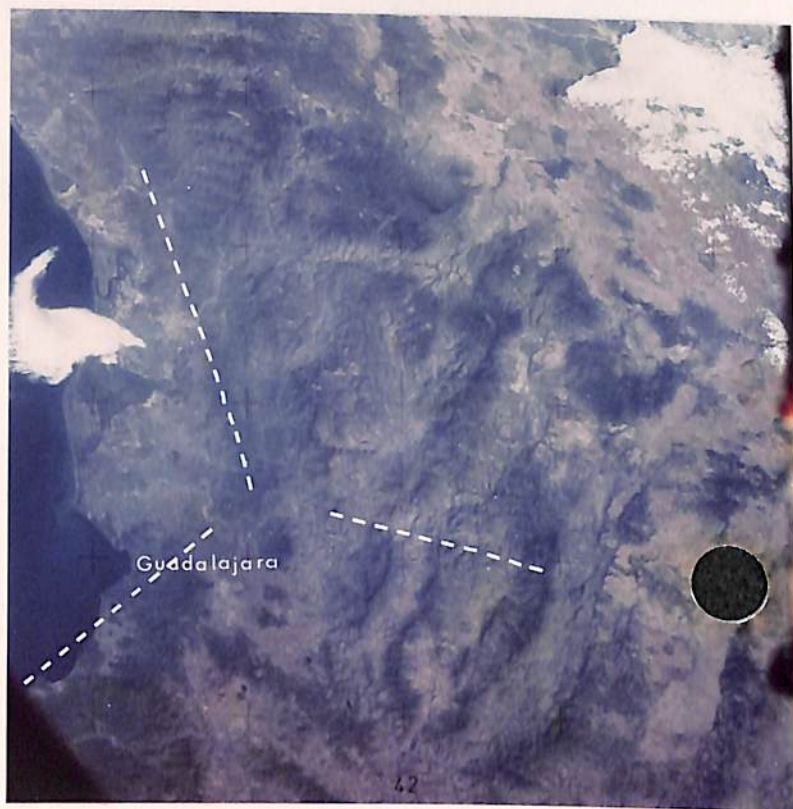


1. WITHOUT SCOPE CAN YOU SEE THE BONNEVILLE TRACK?
2. ARE THERE ANY COLOR BOUNDARIES OR SEDIMENT PLUMES WITHIN THE TWO HALVES OF THE LAKE?
3. DESCRIBE OXIDATION COLORS IN AREA OF BINGHAM COPPER MINE.
4. ~~DESCRIBE ANY SNOW COVER OVER THE WASATCH MOUNTAINS.~~

REV 107: CM3/VIS OBS COMMENTS ONLY



106 46

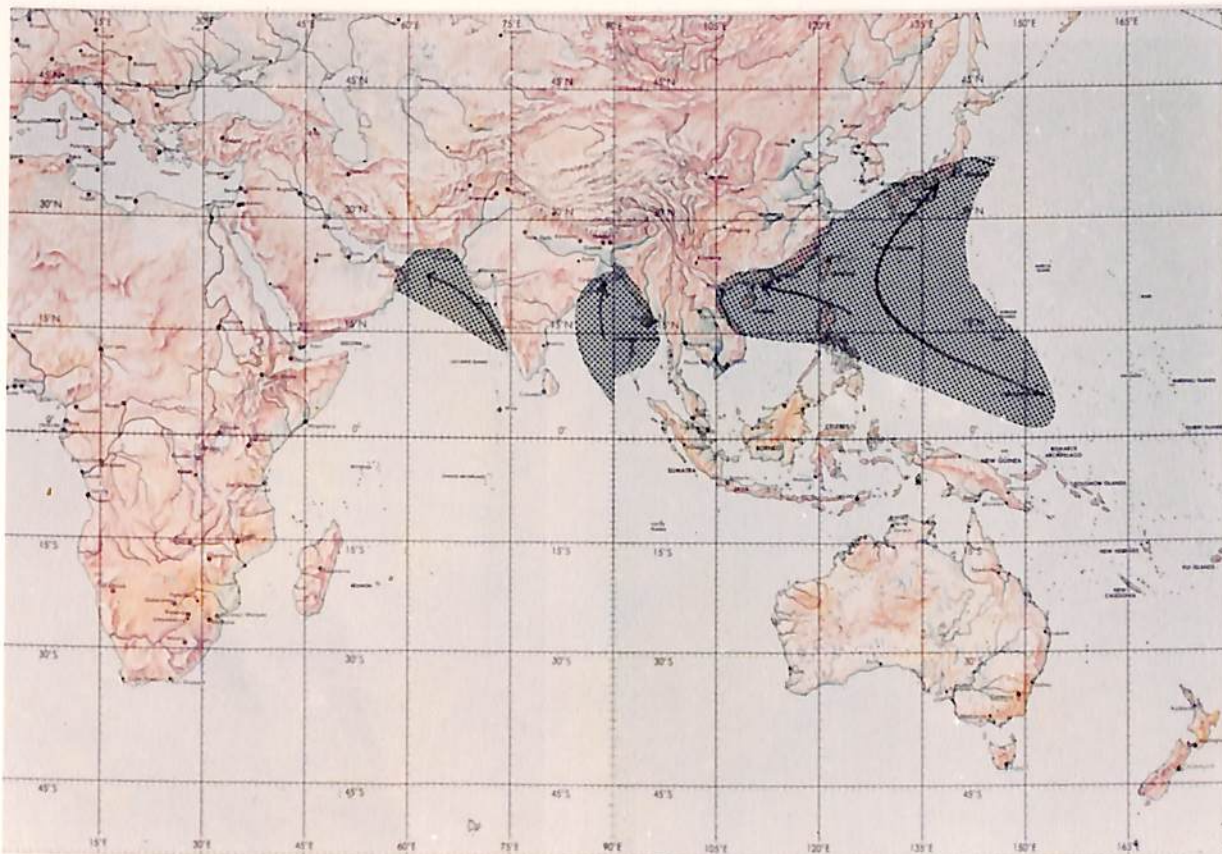
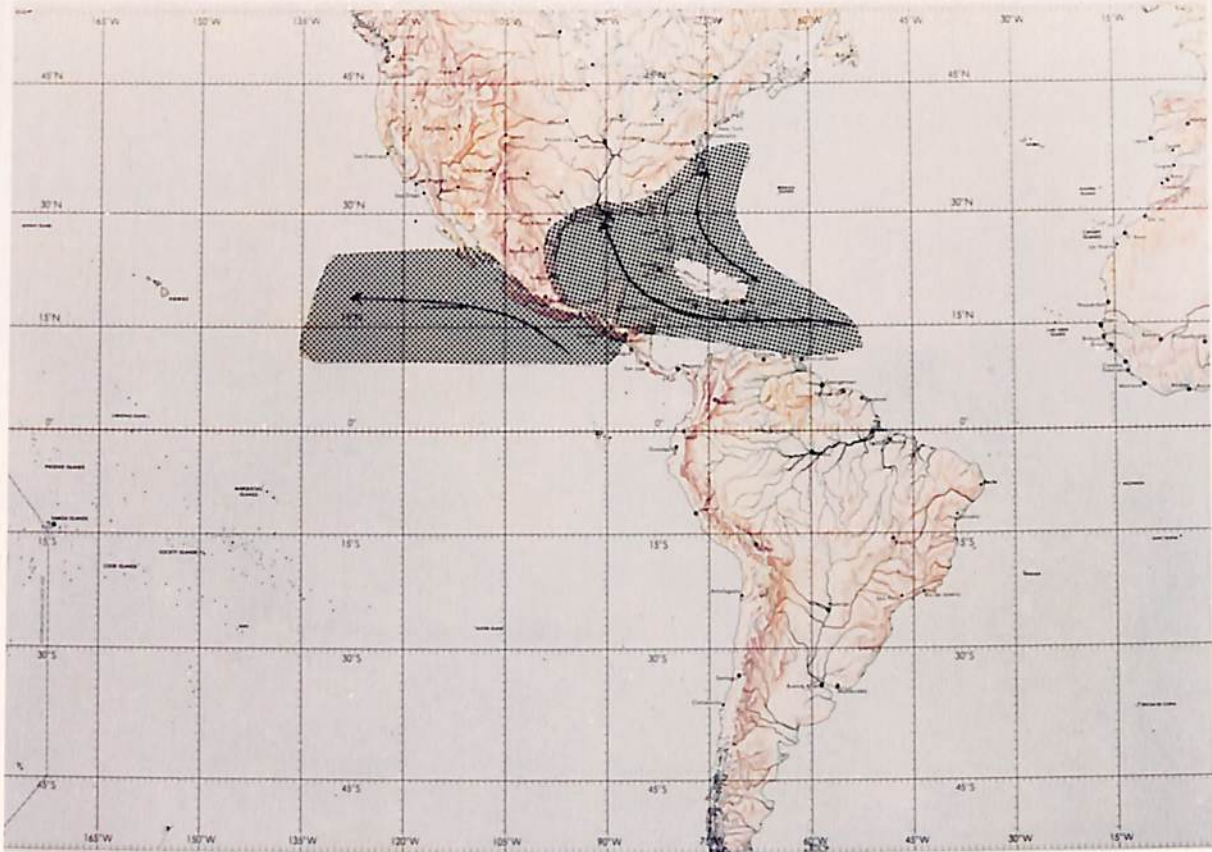


1. OBSERVE TERRAIN ON SOUTH SIDE OF GROUNDTRACK.
PHOTOGRAPH MAJOR FAULT LINES IN AREA OF GUADALAJARA.
KEEP IN MIND POSSIBLE INTERSECTION OF THREE MAJOR SETS.
2. PHOTOGRAPH STRUCTURES IN BIG BEND NATIONAL PARK AREA.
(3 STEREO FRAMES PER TARGET)

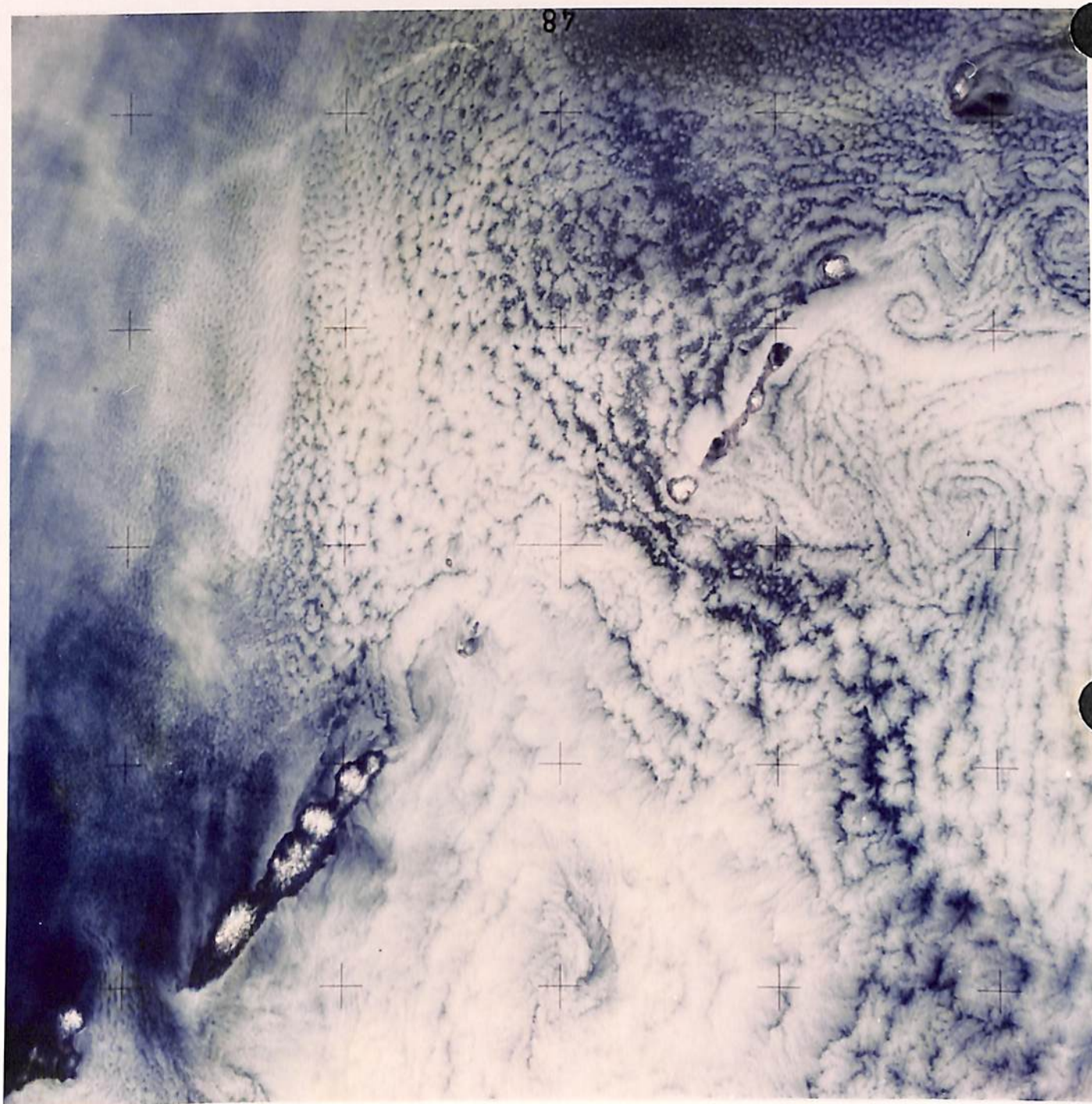
REV 46: CM1/SILVER/50/CX11(f9.5,1/500) 6FR,[NEXT SITE: 4D]

REV 106: CM3/SILVER/250/CX15(f8,1/500) 6FR,[NEXT SITE: 4D]

SITE 3: WEATHER BELT



AREAS OF MAJOR TROPICAL STORM ACTIVITY



1. PHOTOGRAPH CONVECTIVE CLOUD FEATURES: 3 STEREO FRAMES PER TARGET

REV 17: CM3/SILVER/250/CX10(f16,1/500) 3FR,[NEXT SITE: 2A]

REV 42: CM3/SILVER/50/CX11(f16,1/500) 3FR,[NEXT SITE: 9H, CHANGE TO IF01]

REV 64: CM3/SILVER/250/CX12(f16,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

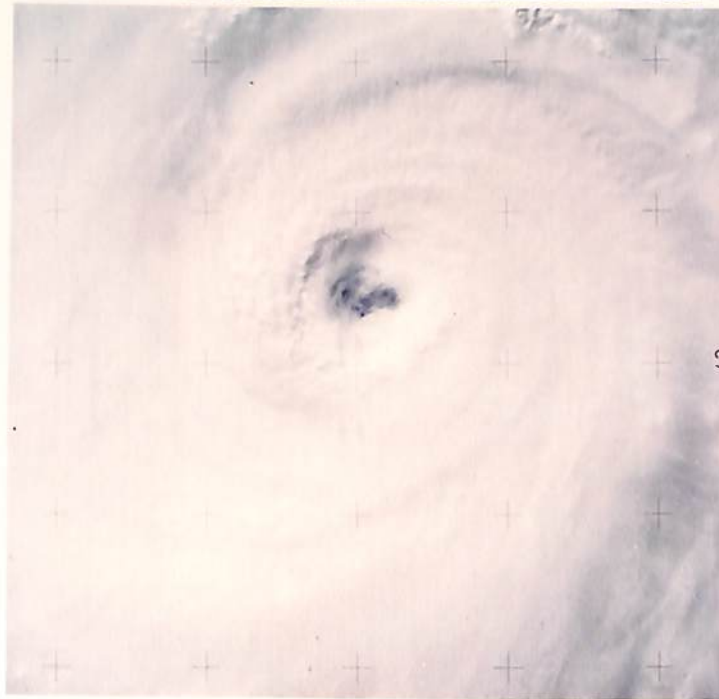
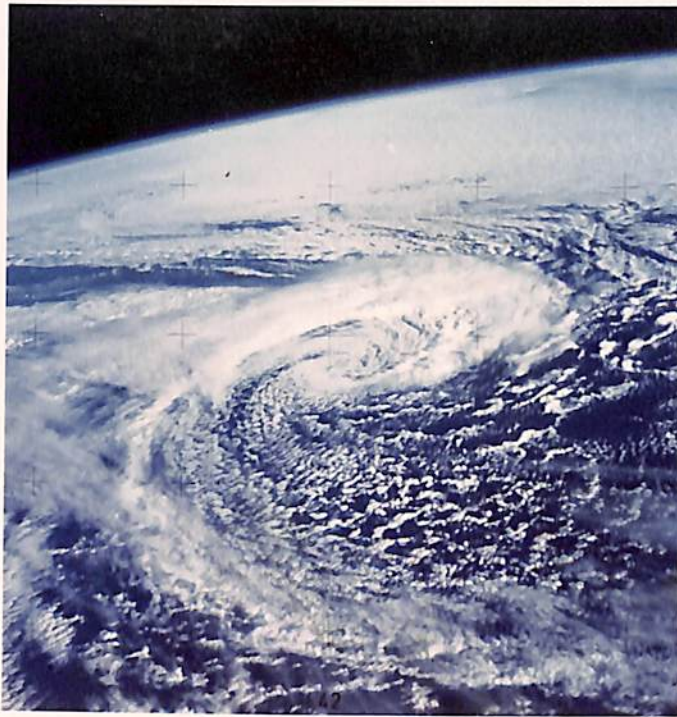
REV 73: CM3/SILVER/50/CX14(f16,1/500) 3FR,[NEXT SITE: 9K]

REV 79: CM3/SILVER/50/CX14(f16,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 88: CM3/SILVER/250/CX15(f16,1/500) 3FR,[NEXT SITE: 9K]

TROPICAL STORMS

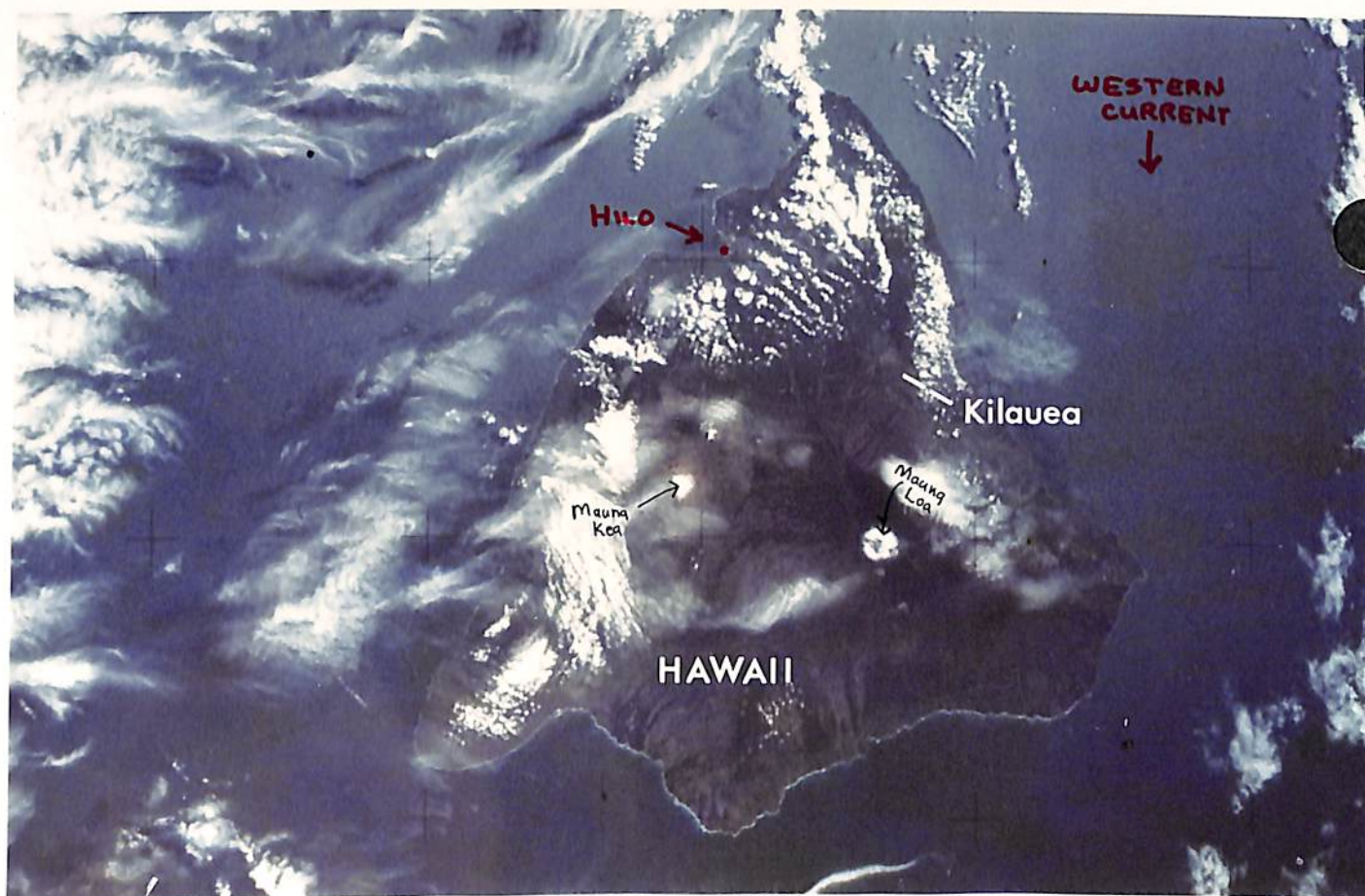
3B



1. PHOTOGRAPH DEVELOPING OR MATURE STORM CENTERS; 3 STEREO FRAMES PER TARGET.
2. DESCRIBE TEXTURE AND STRUCTURE OF STORMS; USE SCOPE IF DESIRED.

REV 106: CM3/SILVER/250/CX15(f16,1/500) 3FR,[NEXT SITE: 2B]

REV 135: CM3/SILVER/250/CX17(f16,1/500) 3FR,[NEXT SITE: 5A]



1. DO YOU OBSERVE UPWELLINGS, BOW WAVES, OR ISLAND WAKES?
OBTAIN 3 STEREO FRAMES PER TARGET.
(KILAUEA IS AN ACTIVE VOLCANO)

REV 78: CM3/SILVER/250/CX14(f6.7,1/500) 3FR,[NEXT SITE: 4A]

REV 108: CM3/SILVER/250/CX16(f6.7,1/500) 3FR,[NEXT SITE: 4B]

KURISHIO CURRENT

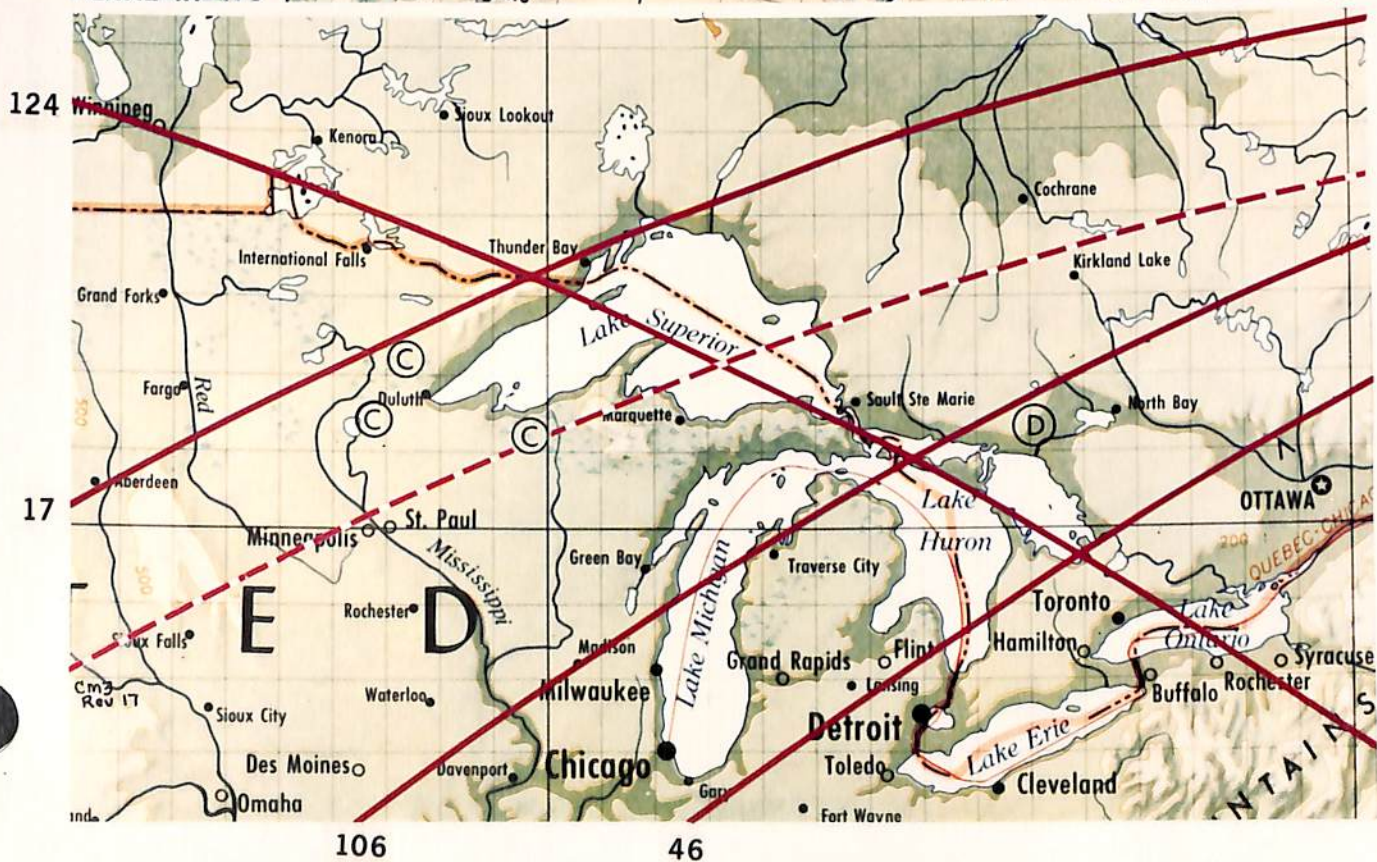
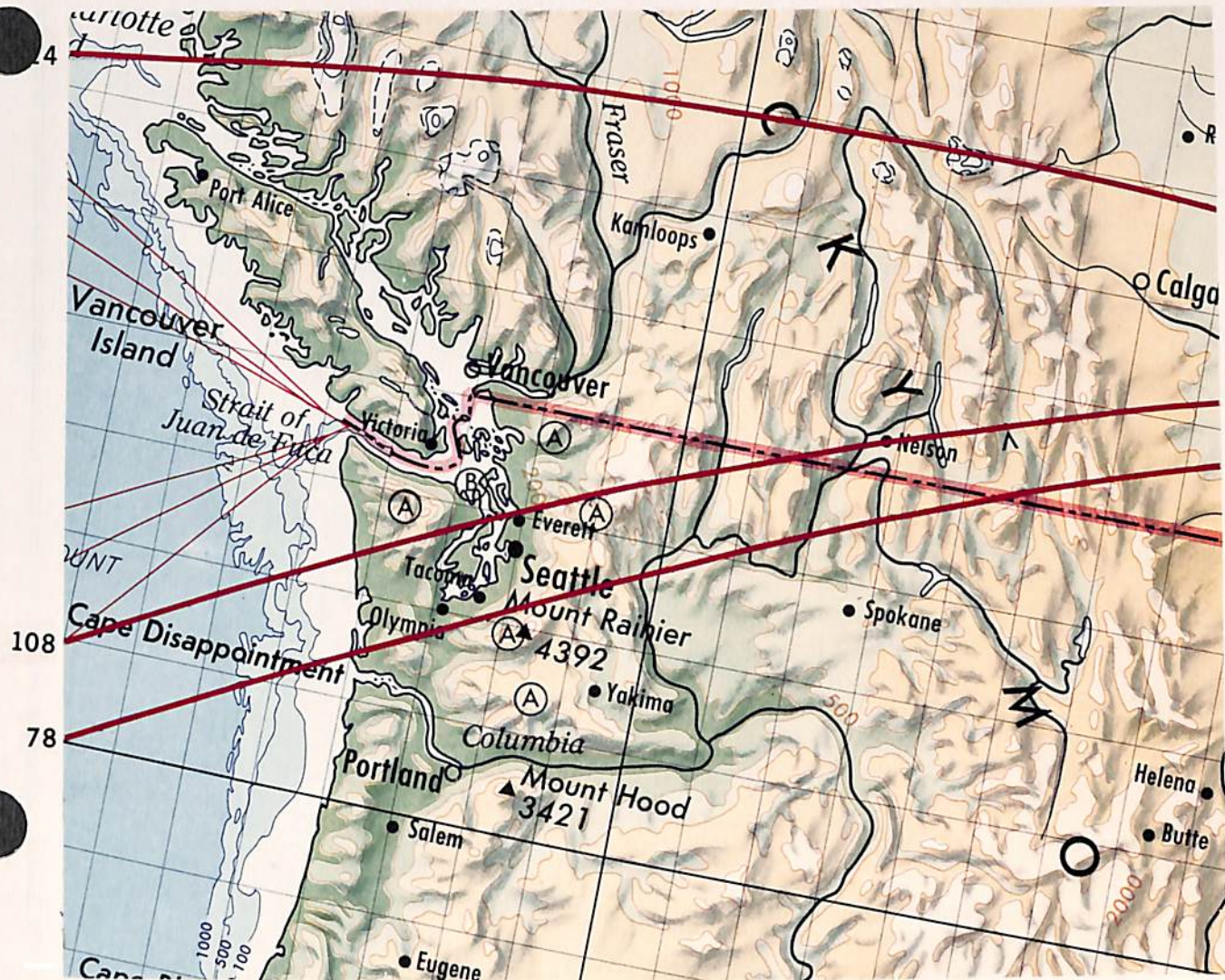
3D



FOR ALTERNATE PLAN 9B ONLY.

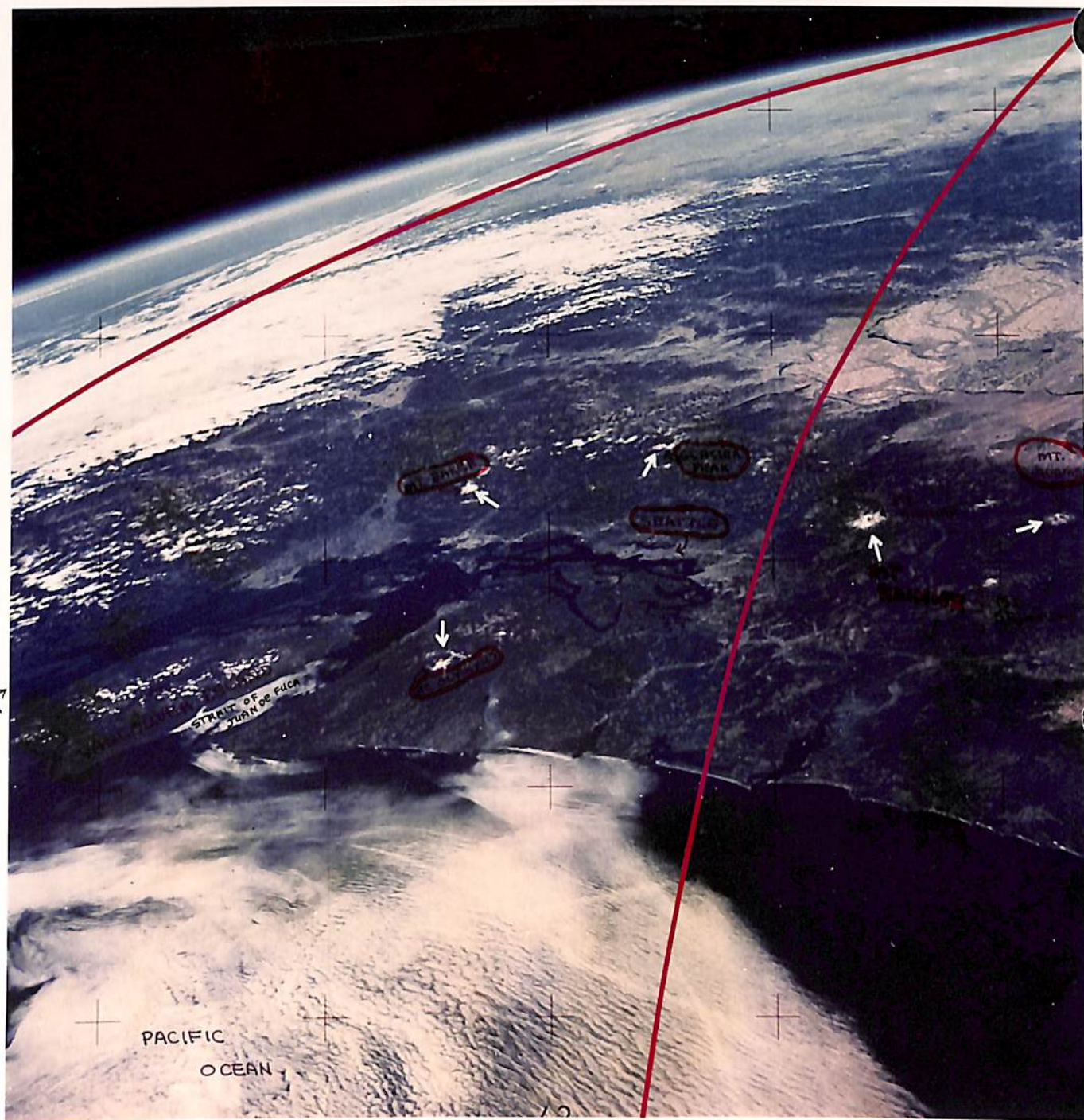
1. CAN YOU OBSERVE ANY MANIFESTATION OF THE KURISHIO CURRENT?
(LOOK FOR COLOR CHANGES, SCUM LINES, DETACHED MEANDERS, GYRES, ETC.)
2. OBTAIN 3 STEREO PHOTOGRAPHS OF ANY PLANKTON BLOOMS.

SITE 4: NORTHERN U.S.



4A

SNOW PEAKS

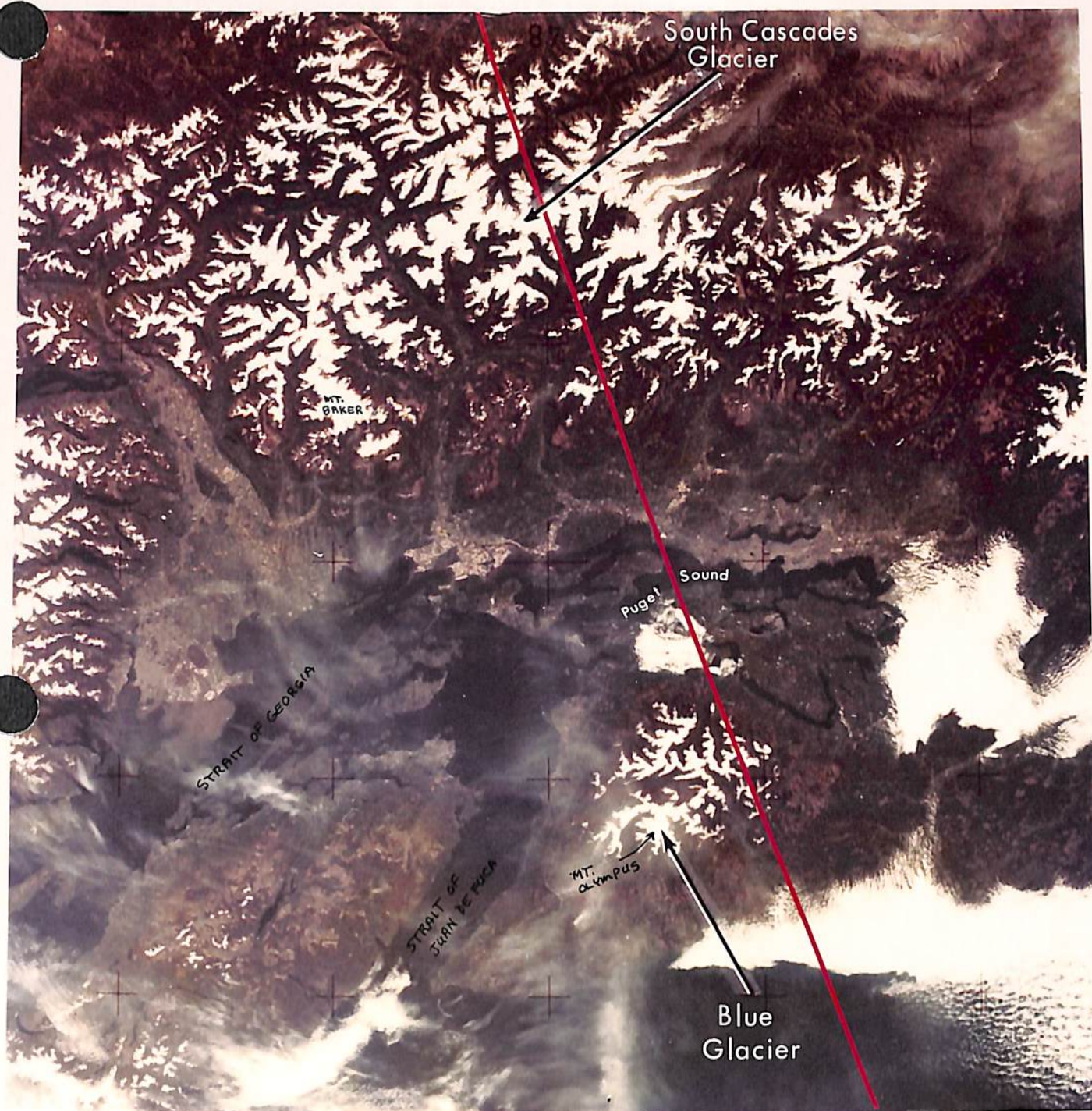


1. PHOTOGRAPH SNOW PEAKED MOUNTAINS; 3 STEREO FRAMES PER TARGET.
2. CAN YOU SEE GLACIERS AND FIRN LINES? (SCOPE MAY HELP)

REV 78: CM3/SILVER/250/CX14(f8,1/500) 6FR,[RECORD LAST FR NO: PAGE 4]

REV 124: CM3/SILVER/50/CX16(f8,1/500) 6FR,[NEXT SITE: 4C]

SITE 4



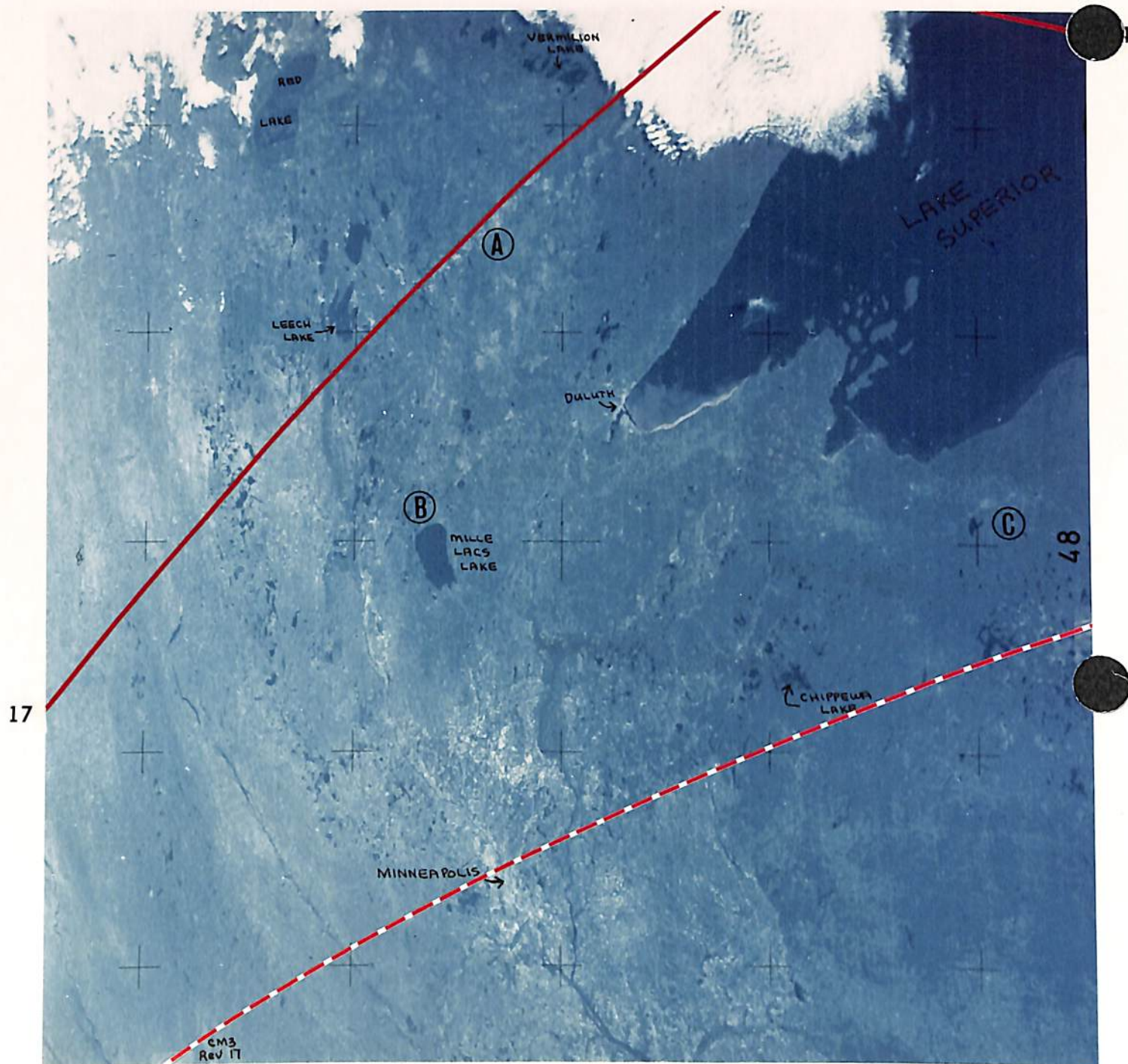
108

1. DESCRIBE SUSPENDED SEDIMENTS IN THE WATERS OF PUGET SOUND.
2. CAN YOU SEE ANY GYRES THERE? USE SCOPE IF DESIRED.
3. CAN YOU SEE MOUNTAIN GLACIERS AND FIRN LINES? (SCOPE MAY HELP)

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 108: CM3/SILVER/250/CX16(f8,1/250) 3FR,[RECORD LAST FR NO: PAGE 5]

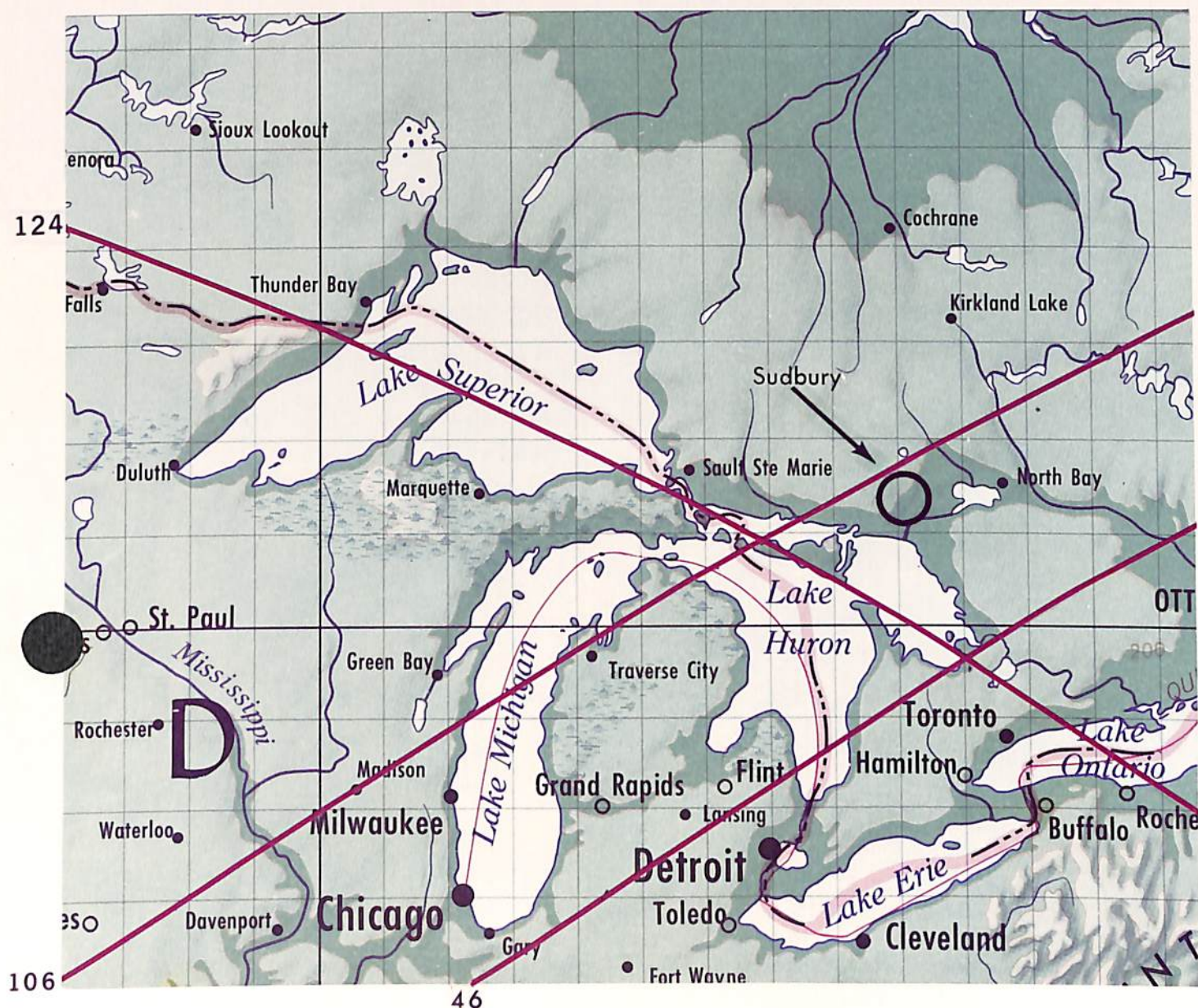
SUPERIOR IRON



1. DESCRIBE COLOR OXIDATION ZONES OF IRON MINES IN THE LAKE SUPERIOR REGION.
(USE COLOR WHEEL IF POSSIBLE)
2. IS THERE A DIFFERENCE IN COLOR BETWEEN AREAS A, B, AND C?
3. PHOTOGRAPH AREAS OF INTEREST; 3 STEREO FRAMES PER TARGET.

REV 17: CM3/SILVER/250/CX10(f6.7,1/500) 6FR,[NEXT SITE: 5C]

REV 124: CM3/SILVER/50/CX16(f6.7,1/500) 6FR,[NEXT SITE: 4D]



1. DESCRIBE COLOR OXIDATION ZONES OF SUDBURY AREA; ARROW.
(USE COLOR WHEEL IF POSSIBLE)

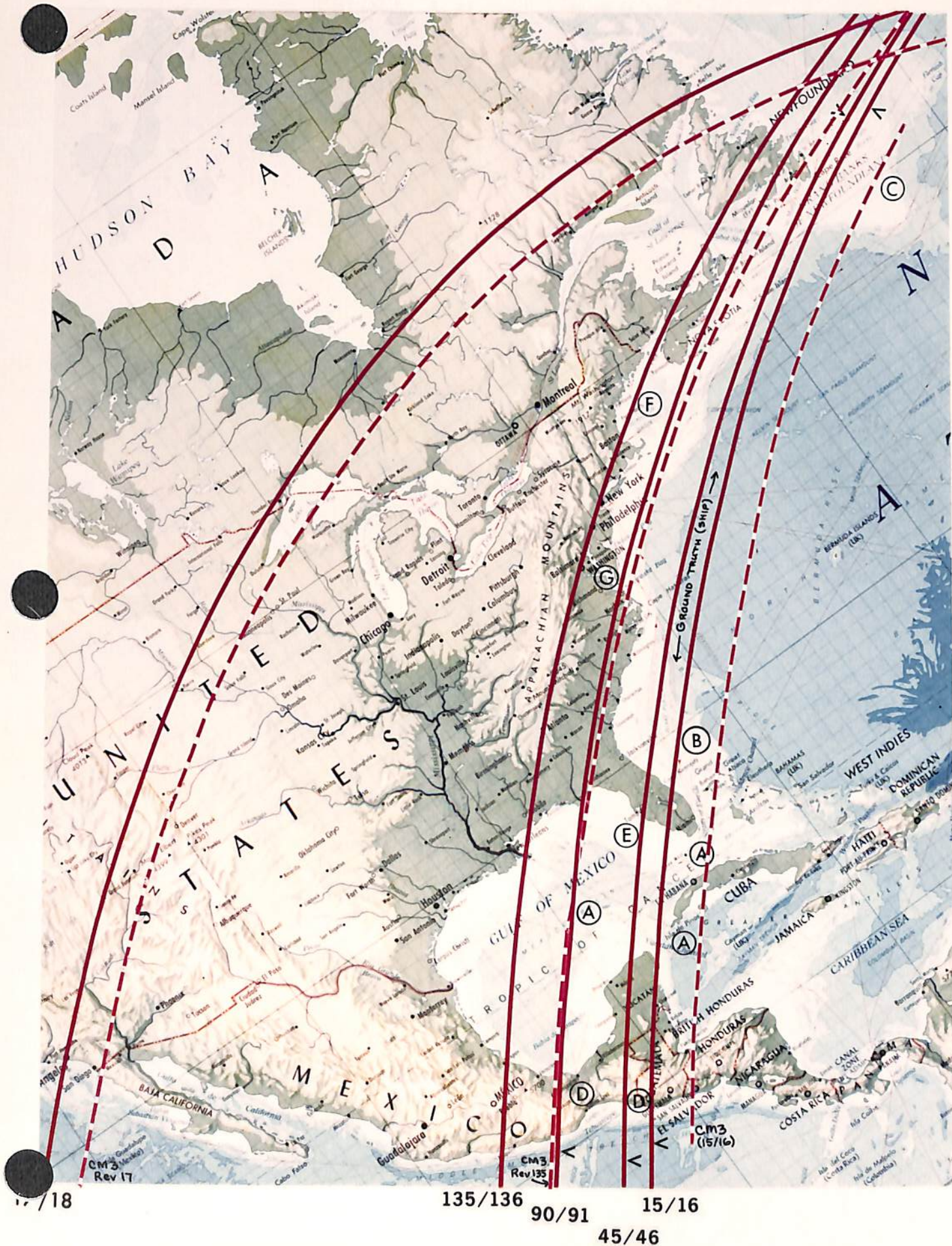
2. COMPARE WITH COLOR OF LAKE SUPERIOR REGION (SITE 4C).

REV 46: CM1/SILVER/50/CX11(f9.5,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 106: CM3/SILVER/250/CX15(f8,1/500) 3FR,[RECORD LAST FR NO: PAGE 5]

REV 124: CM3/SILVER/50/CX16(f6.7,1/500) 3FR,[RECORD LAST FR NO: PAGE 5]

SITE 5 EASTERN NORTH AMERICA



17/18

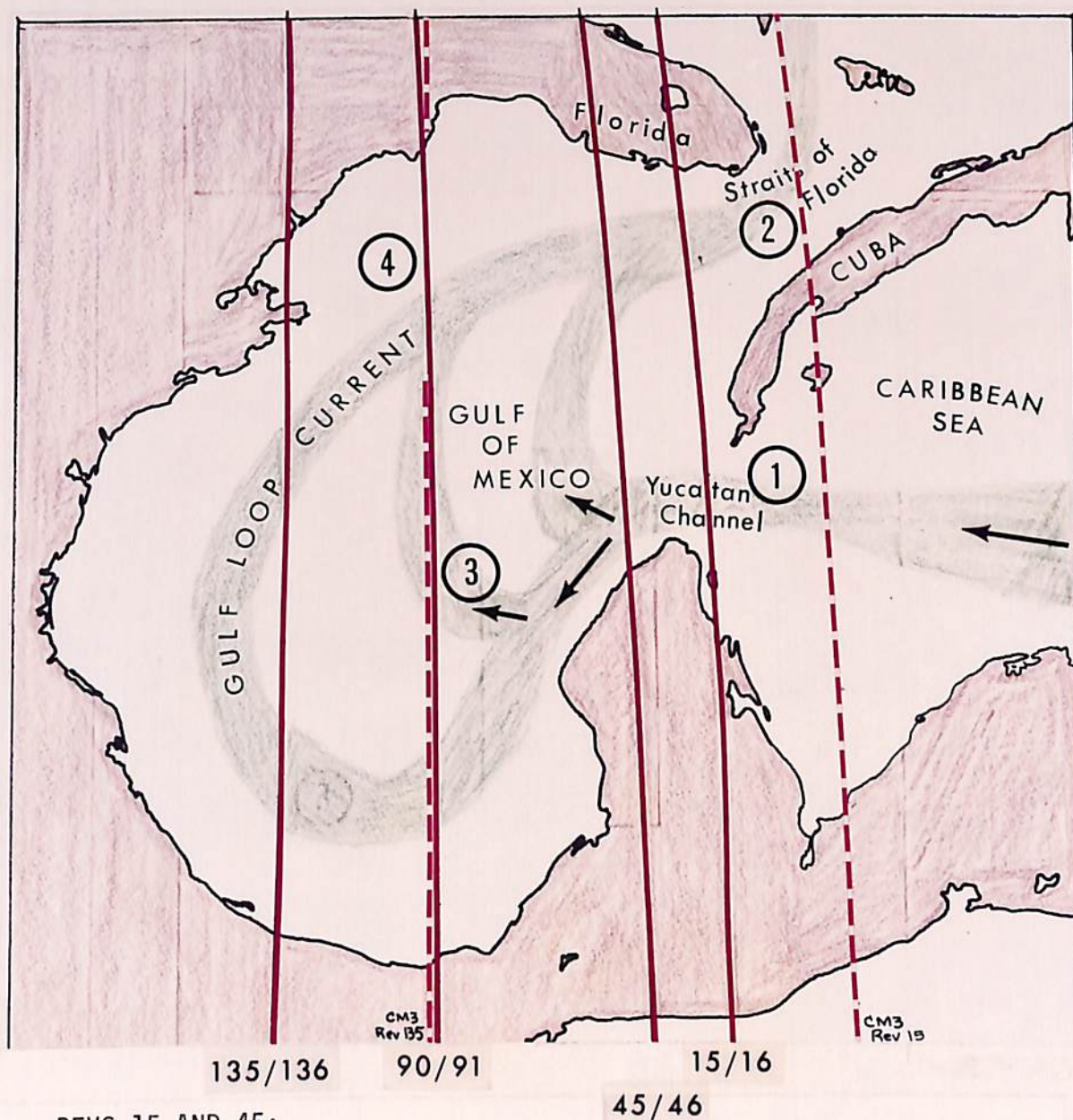
135/136

90/91

15/16

45/46

GULF OF MEXICO



REVS 15 AND 45:

1. CAN YOU SEE EDDIES AT THE YUCATAN CHANNEL?
2. IS THE FLORIDA CURRENT VISIBLE IN THE STRAITS OF FLORIDA?

REVS 90 AND 135:

3. CAN YOU OBSERVE ANY PART OF THE GULF LOOP CURRENT?
4. DO YOU SEE INTERNAL WAVES IN THE GULF WATERS?

PHOTOGRAPHS; 3 STEREO FRAMES PER TARGET.

REV 15: CM3/SILVER/50/CX10(f8,1/500) 6FR,[NEXT SITE: 5B]

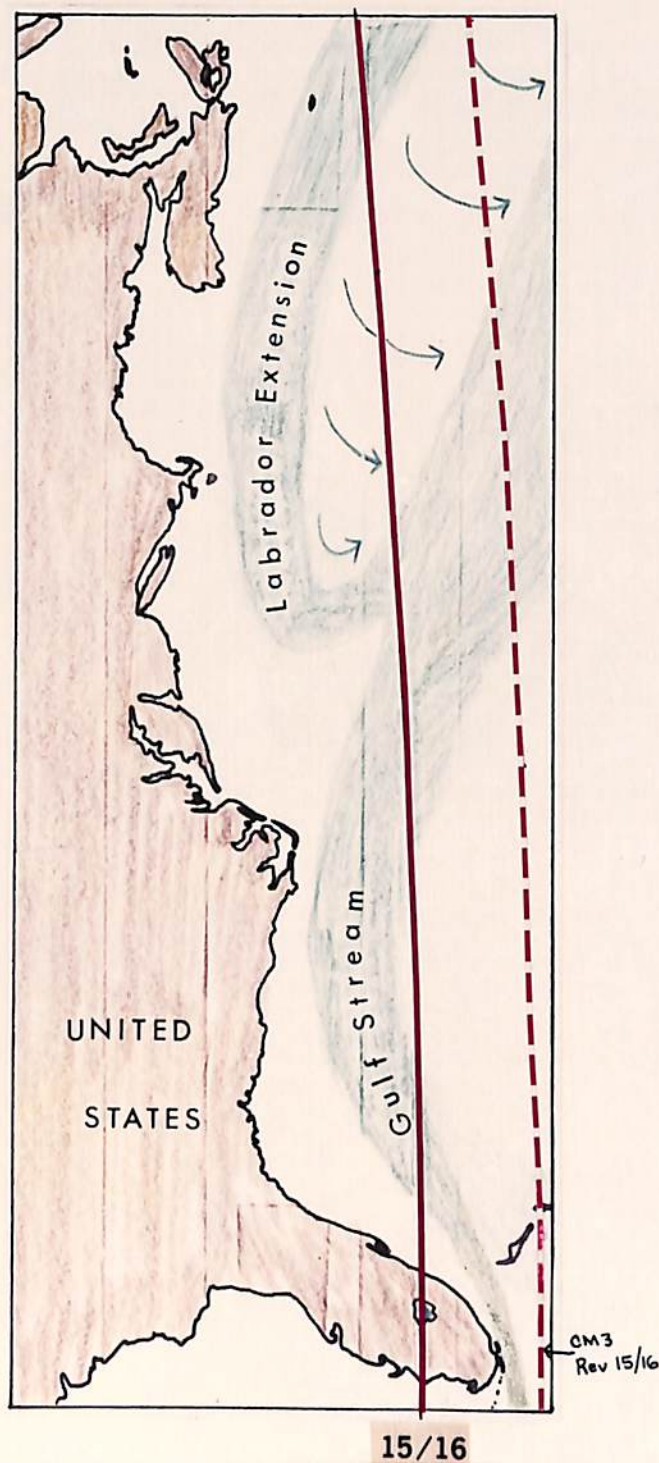
REV 45: CM1/SILVER/50/CX11(f9.5,1/500) 6FR,[NEXT SITE: 5E]

REV 90: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/500) 6FR,[NEXT SITE: 5E]

REV 135: CM3/SILVER/250/CX17(f8,1/500) 6FR,[NEXT SITE: 5G]

GULF STREAM

5B

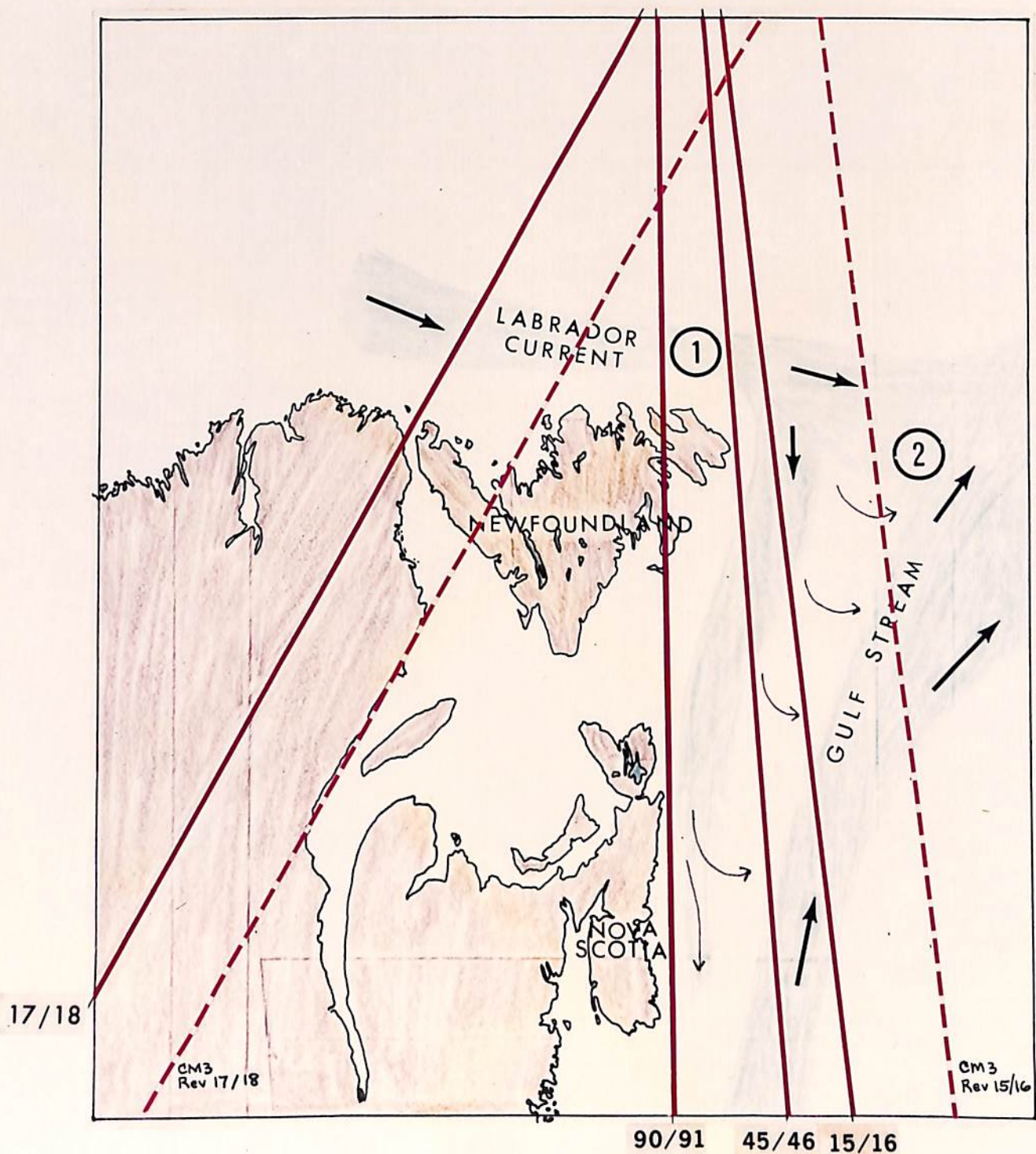


1. CAN YOU OBSERVE THE GULF STREAM BOUNDARY?
(LOOK FOR COLOR CHANGES, SCUM LINES, DETACHED MEANDERS, GYRES, ETC.)
2. DO YOU SEE ANY INTERNAL WAVES? USE SCOPE IF DESIRED.
3. CAN YOU LOCATE THE CONFLUENCE OF THE GULF STREAM AND LABRADOR EXTENSION?

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 16: CM3/SILVER/50/CX10(f6.7,1/500) 6FR,[NEXT SITE: 5C]

LABRADOR CURRENT



1. IS THE LABRADOR CURRENT VISIBLE?

2. CAN YOU LOCATE THE CONFLUENCE OF THE GULF STREAM AND THE LABRADOR CURRENTS?

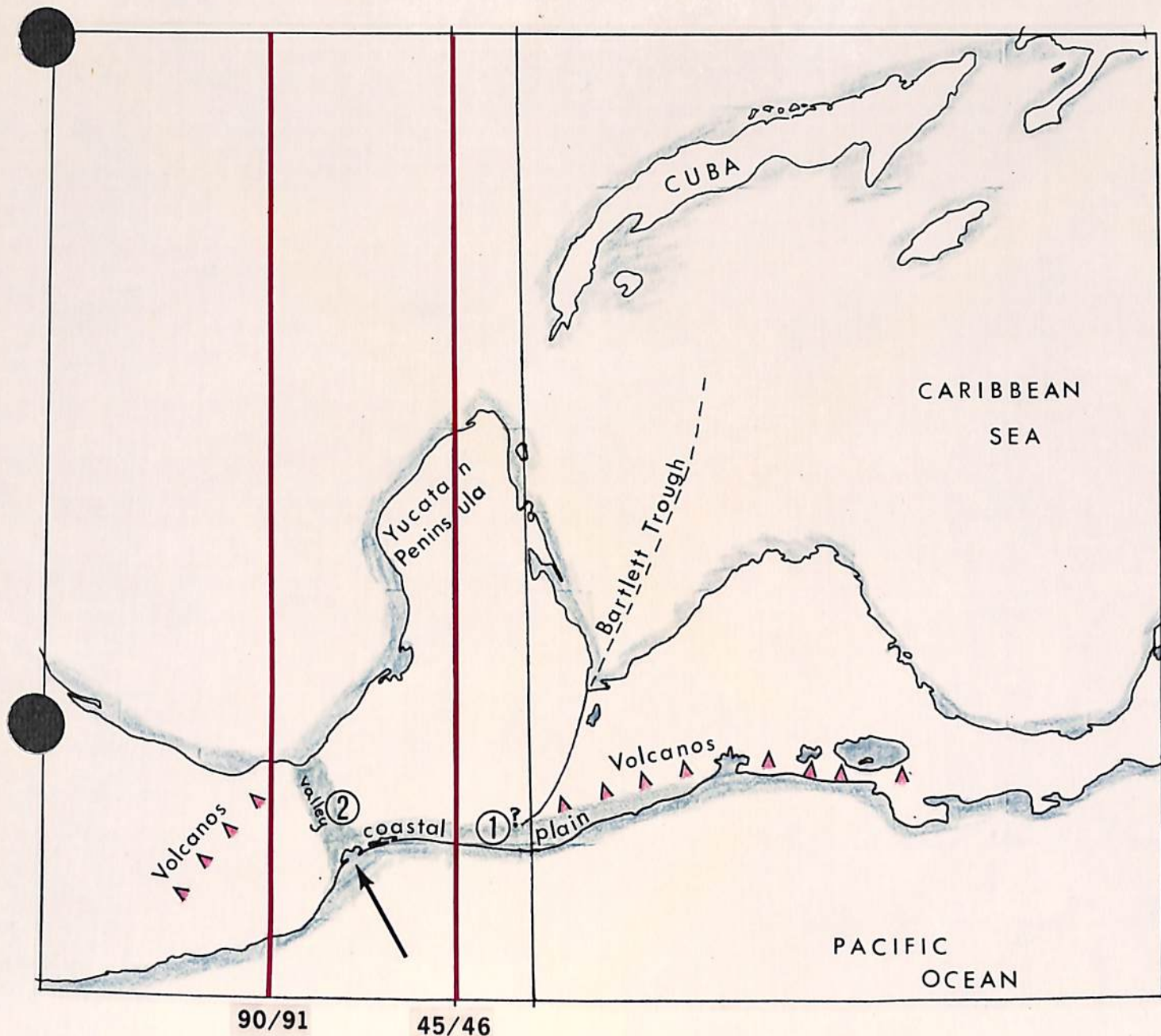
PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 16: CM3/SILVER/50/CX10(f6.7,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 17/18: CM3/SILVER/250/CX10(f6.7,1/125) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 46: CM1/SILVER/50/CX11(f6.7,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 91: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/250) 3FR,[NEXT SITE: 6A]

USE SCOPE

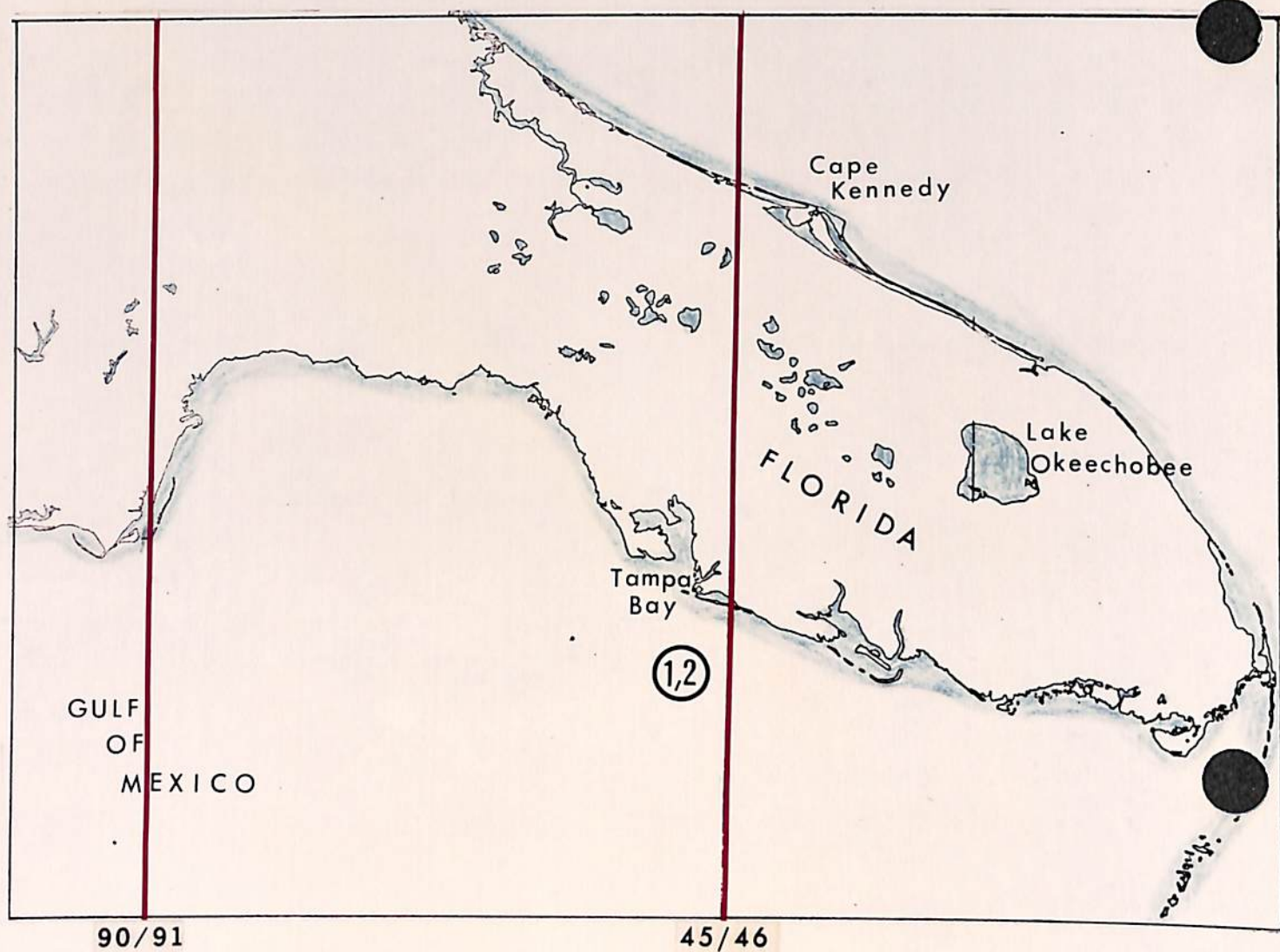
1. CAN YOU SEE THE EXTENSION OF THE BARTLETT FAULT INTO THE PACIFIC COASTAL PLAIN?
2. OBTAIN 3 STEREO FRAMES OF THE VALLEY INDICATED BY ARROW.

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 45: CM1/SILVER/50/CX11(f9.5,1/500) 6FR,[NEXT SITE: 5A]

REV 90: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/500) 6FR,[NEXT SITE: 5A]

FLORIDA RED TIDE



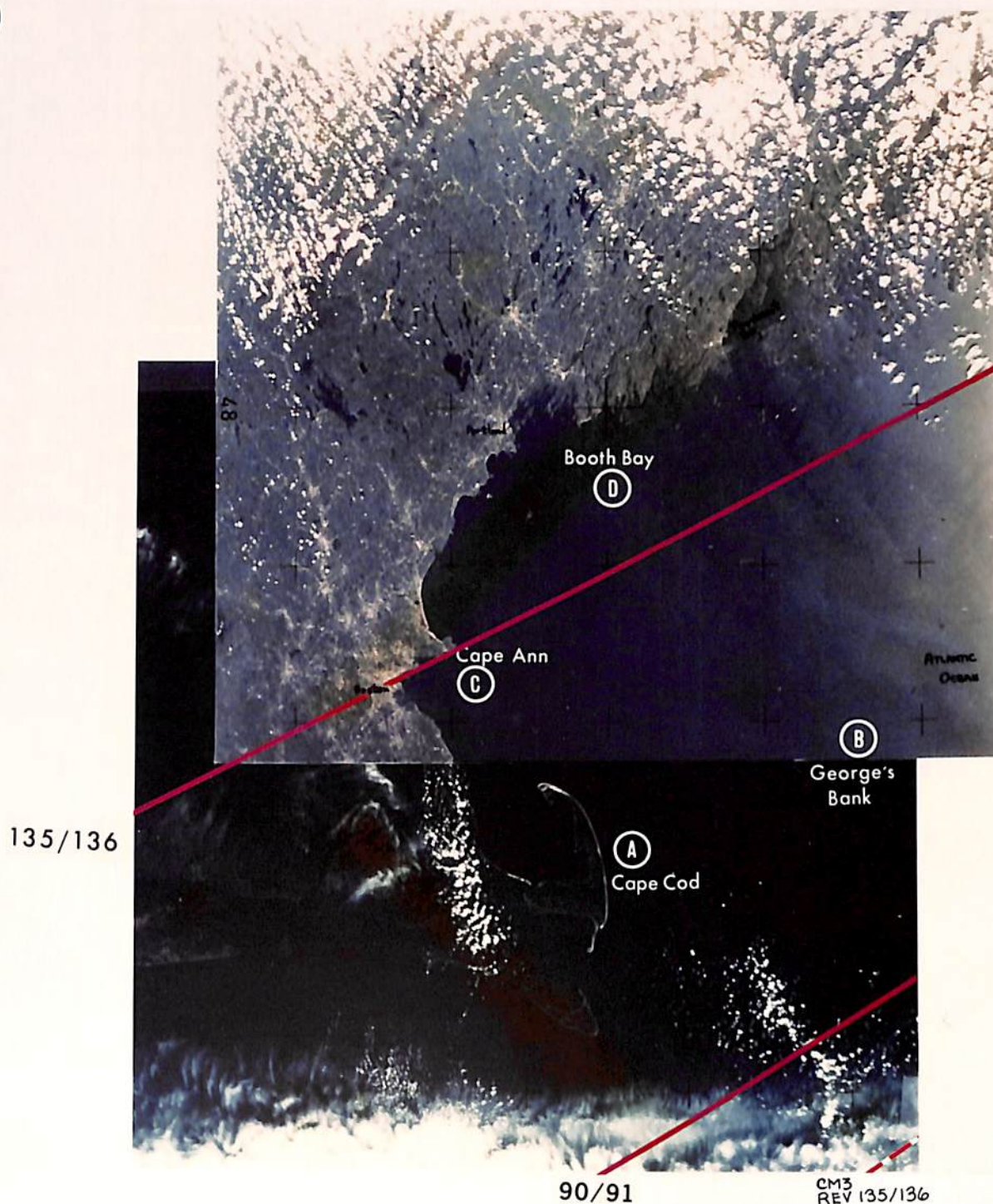
1. IS THERE ANY RED TIDE VISIBLE WEST OF FLORIDA?

2. SKETCH LOCATION AND SHAPE OF BLOOM, ESPECIALLY WEST OF TAMPA BAY.

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 45: CM1/SILVER/50/CX11(f9.5,1/500) 3FR,[NEXT SITE: 5F]

REV 90: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/500) 3FR,[NEXT SITE: 5G]



1. IS THERE ANY RED TIDE VISIBLE OFF THE NEW ENGLAND COAST?
2. SKETCH LOCATION AND SHAPE OF BLOOM.
- 3. OBTAIN 3 STEREO FRAMES OF AREAS A, B, C AND D; AND EDGE OF CLOUDS OR FOG.

REV 46: CM1/SILVER/50/CX11(f6.7,1/500) 12FR,[NEXT SITE: 5C]

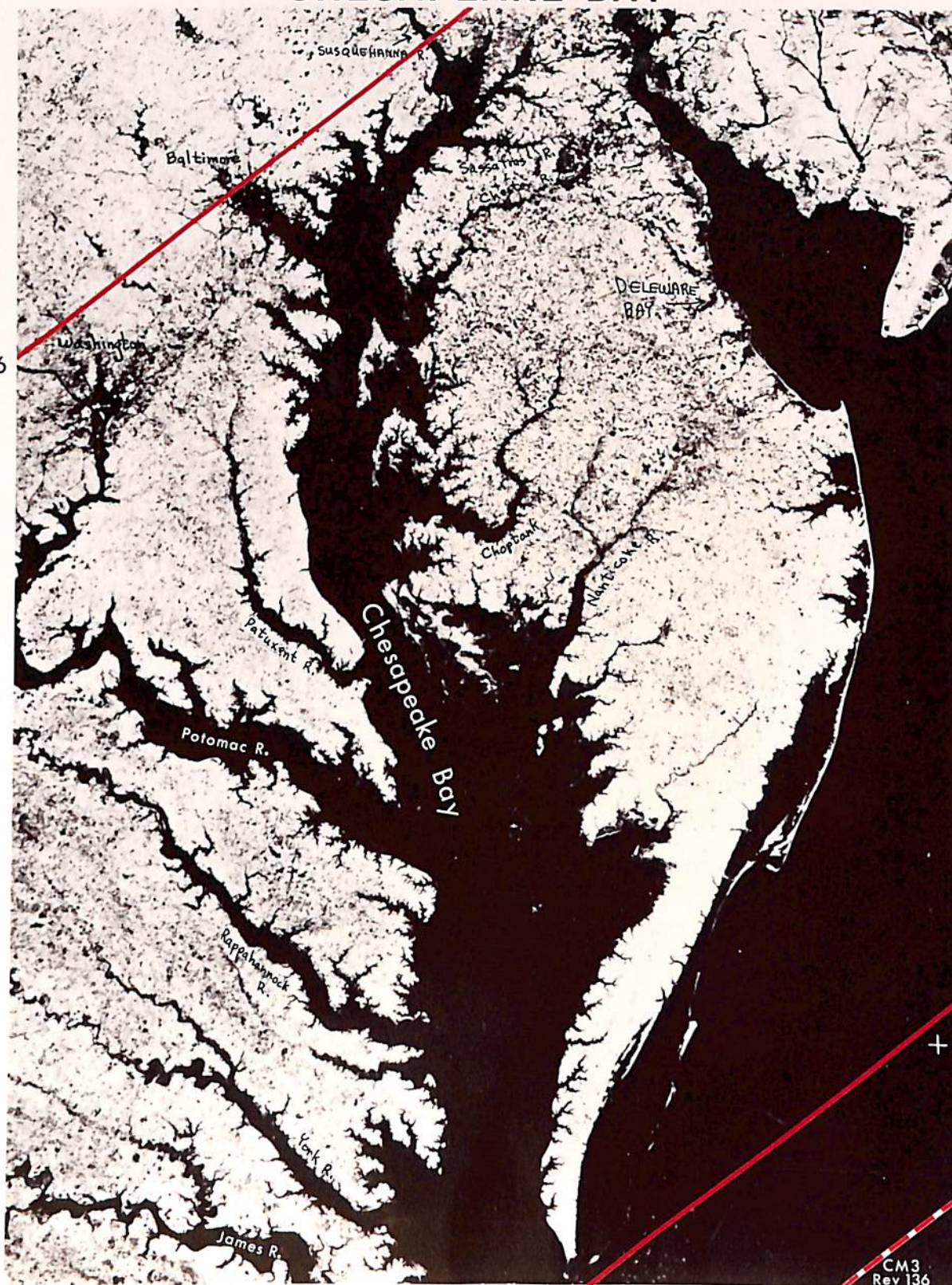
REV 91: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/250) 12FR,[NEXT SITE: 5C]

REV 136: CM3/SILVER/250/CX17(f8,1/500) 12FR,[NEXT SITE: 6A]

5G

CHESAPEAKE BAY

135/136



90/91

1. DESCRIBE SUSPENDED SEDIMENT PLUMES OR GYRES IN THE BAY.

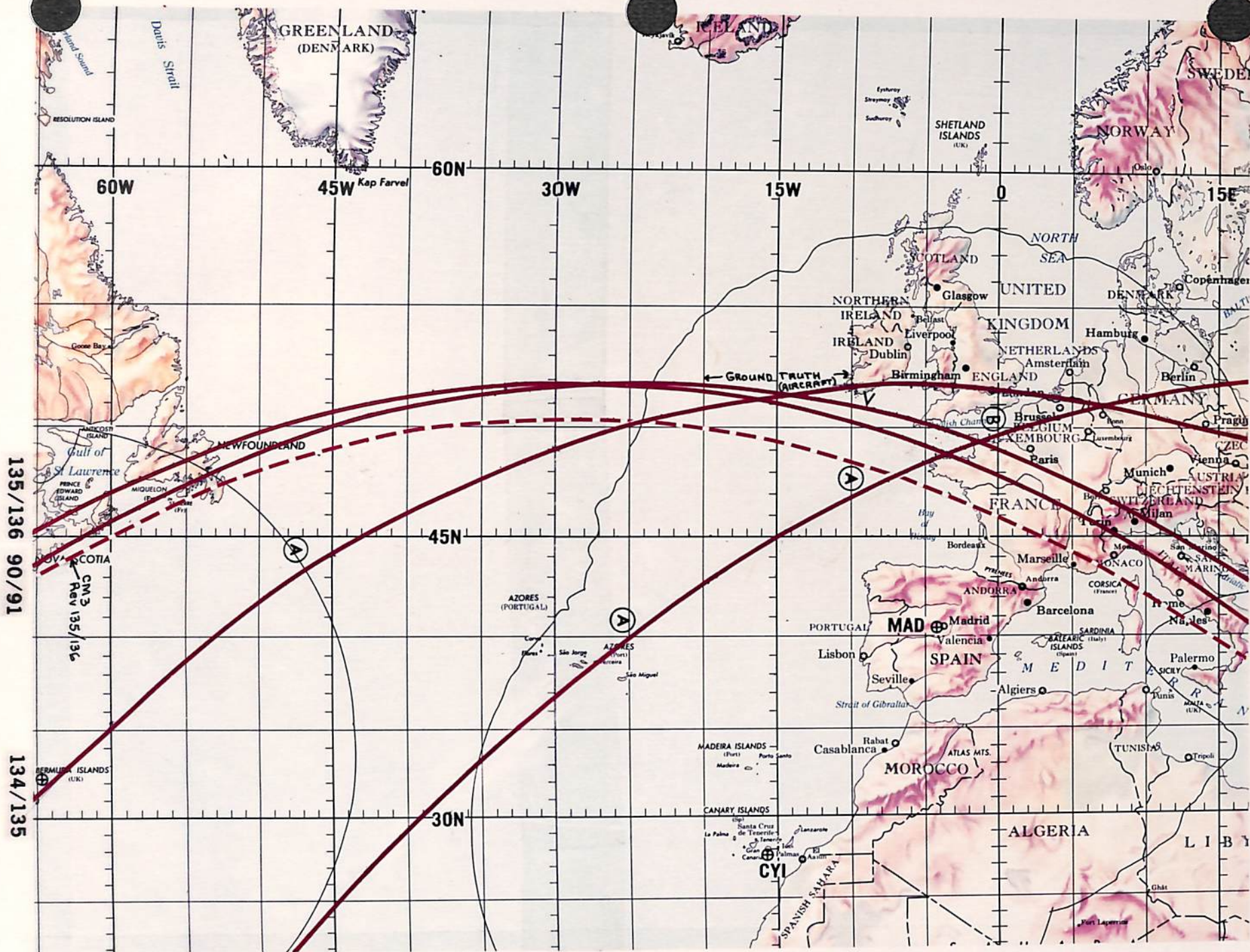
2. ARE THERE ANY POLLUTION PLUMES IN THE POTOMAC RIVER?

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 91: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/500) GFR,[NEXT SITE: 5F]

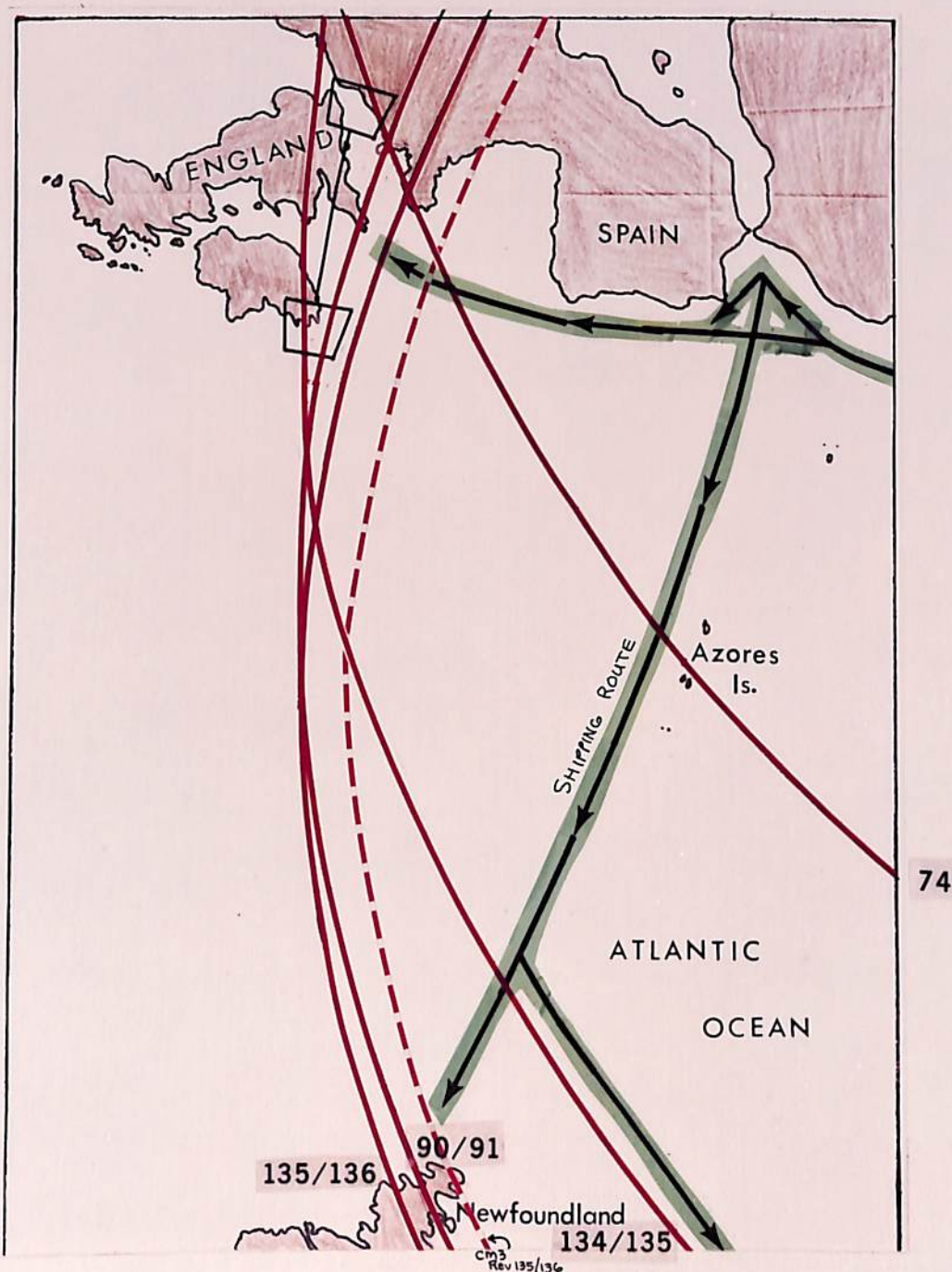
REV 136: CM3/SILVER/250/CX17(f8,1/500) GFR,[NEXT SITE: 5F]

SITE 6: NORTHERN ATLANTIC



6A

OIL SLICKS



OIL SLICKS ARE BEST OBSERVED JUST OFF SUNGLINT.

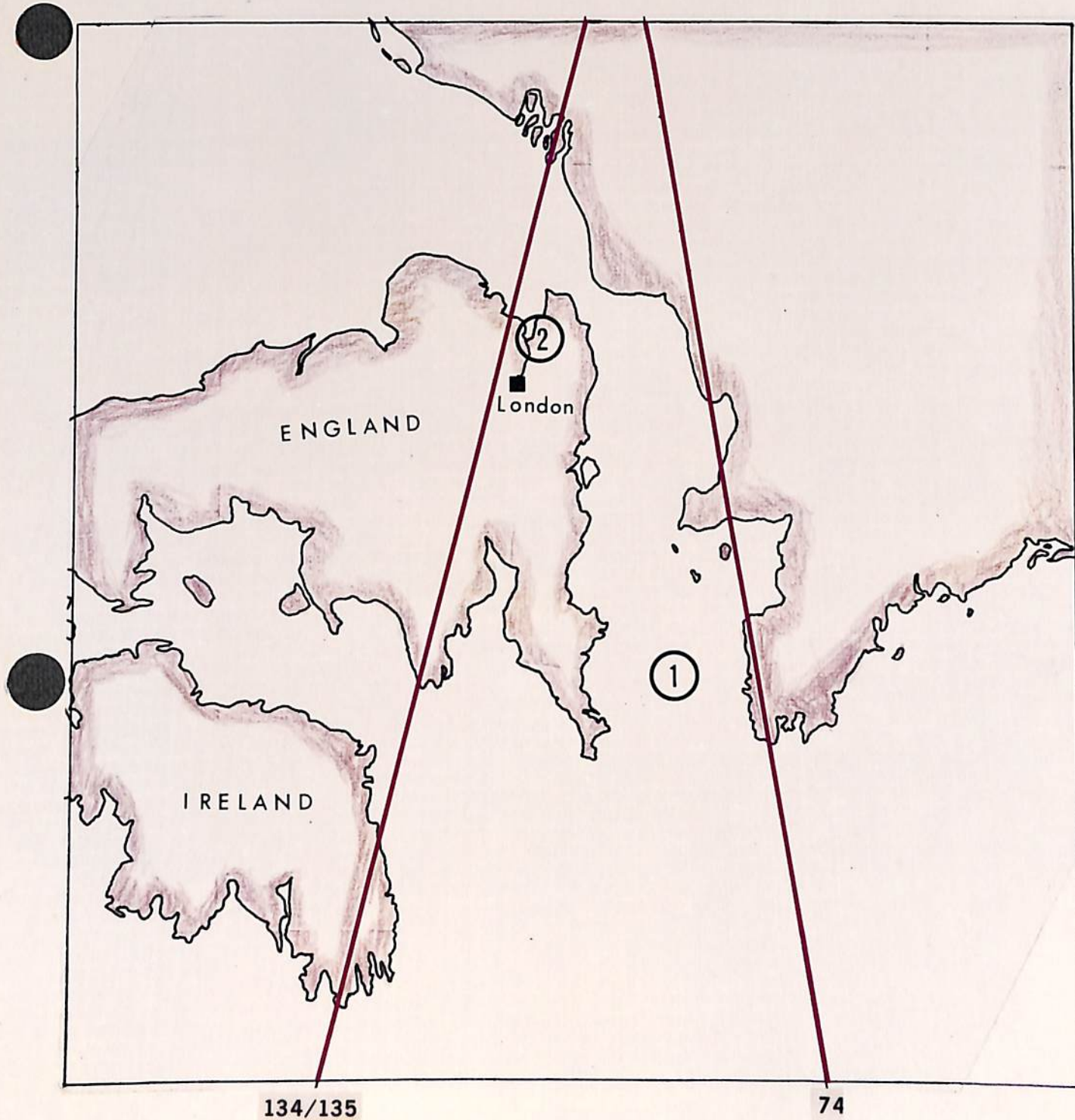
1. MARK G.E.T. ON OBSERVATION OF OIL SLICKS IN SHIP ROUTES.
2. DESCRIBE COLOR AND EXTENT OF SLICKS AND OBTAIN 3 FRAMES PER TARGET.
3. OBTAIN A STRIP OF PHOTOGRAPHS ALONG LINE INDICATED ON BOTH REVS 91 AND 134/135.
(FRAME INTERVAL: 10 SECS FOR 50mm LENS)

REV 74: CM3/SILVER/250/CX14(f8,1/250) 3FR,[NEXT SITE: 6B]

REV 91: CM3/SILVER/50/IF02/ORANGE FILTER(f6.7,1/250) 17FR,[NEXT SITE: 9P]

REV 134/135: CM3/SILVER/50/CX17(f6.7,1/500) 17FR,[NEXT SITE: 6B]

REV 135/136: CM3/SILVER/250/CX17(f5.6,1/500) 3FR,[NEXT SITE: 9L, CHANGE TO IF02]



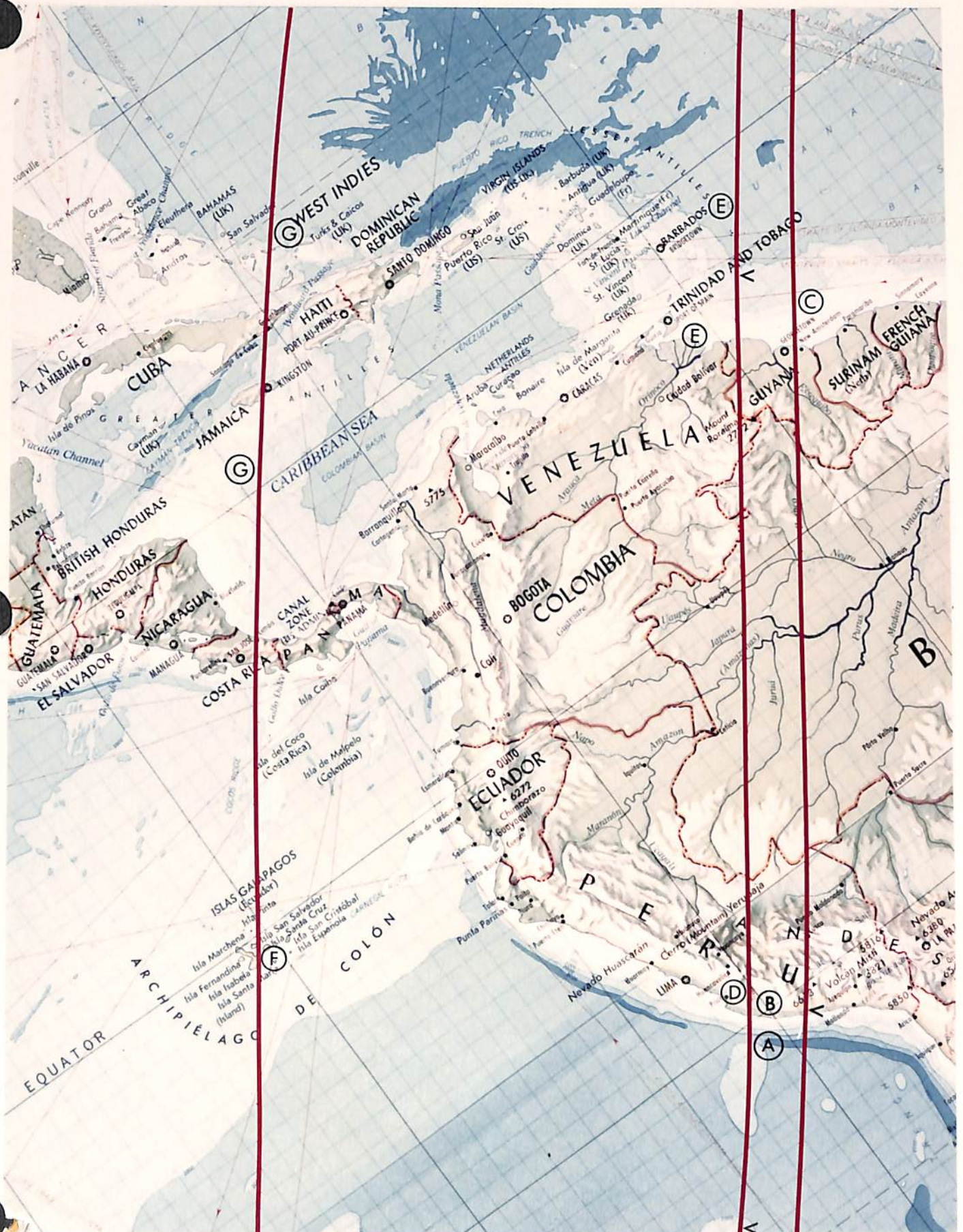
1. ARE SUSPENDED SEDIMENTS, EDDIES OR CURRENT BOUNDARIES VISIBLE IN THE ENGLISH CHANNEL?
(USE SCOPE IF DESIRED)

2. OBTAIN 3 STEREO FRAMES OF LONDON HARBOR AREA.

REV 74: CM3/SILVER/250/CX14(f8,1/250) 6FR,[RECORD LAST FR NO: PAGE 4]

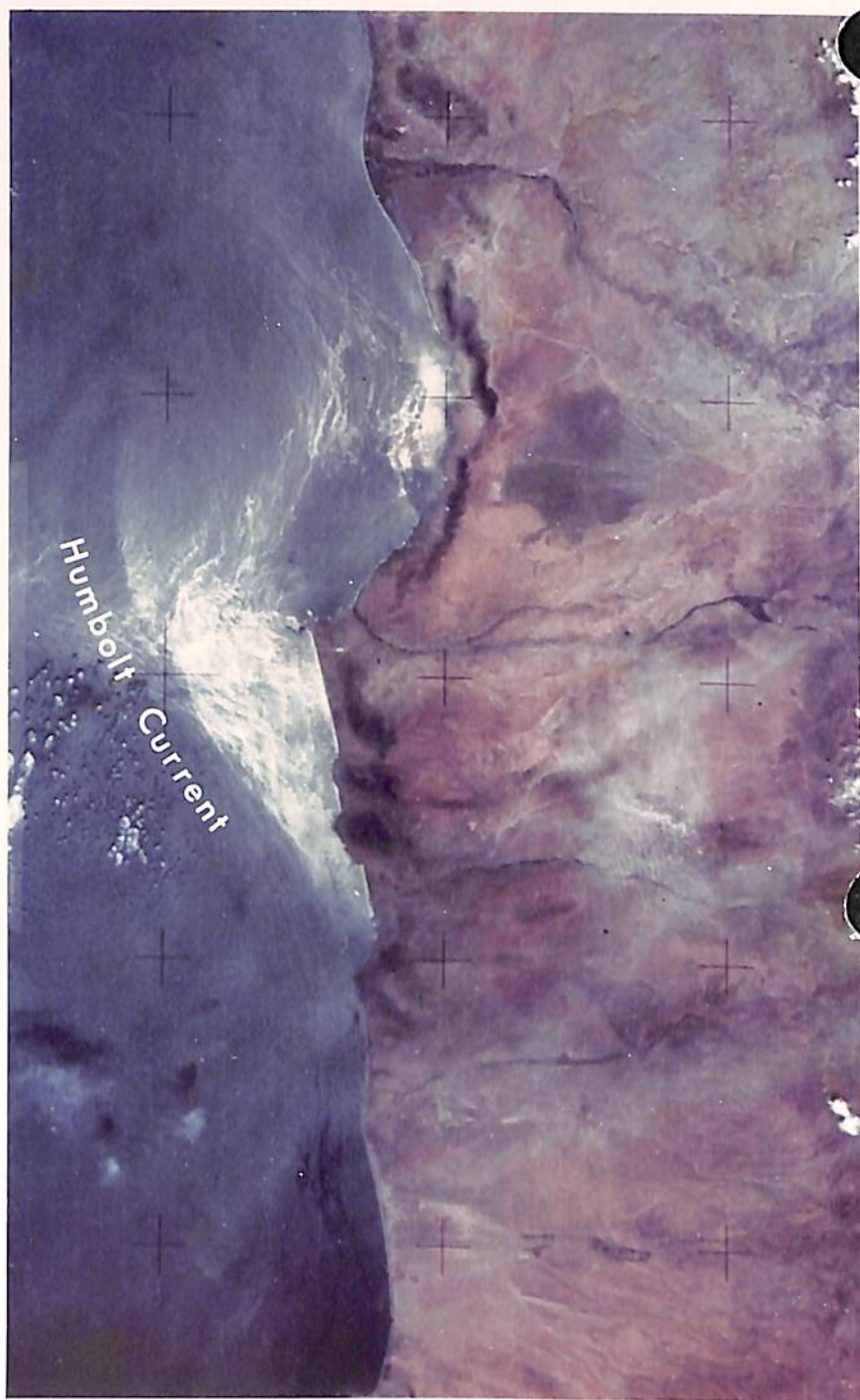
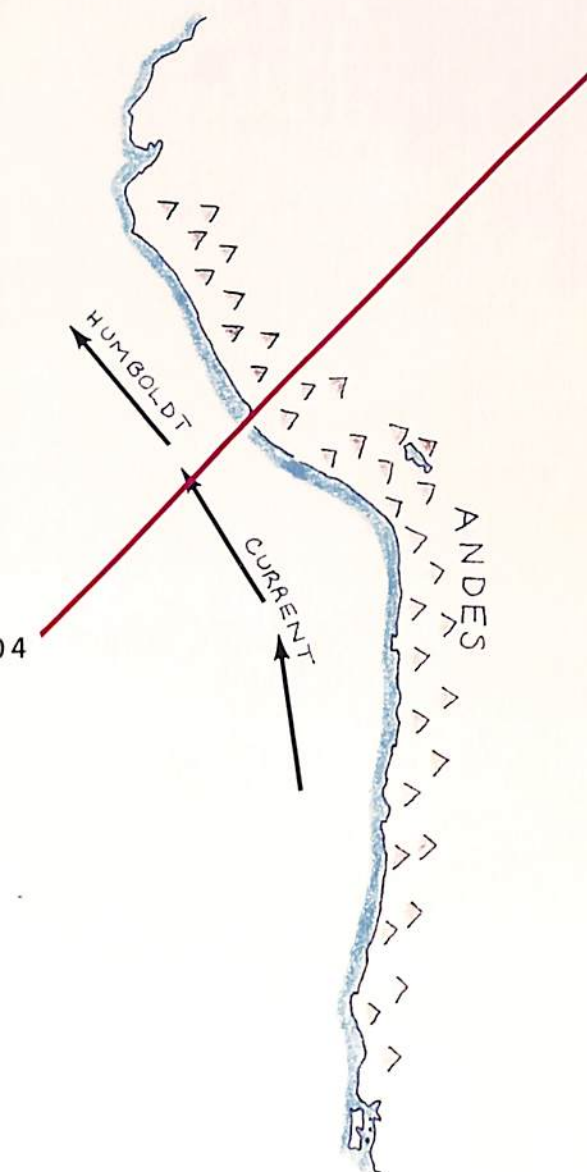
134/135: CM3/SILVER/50/CX17(f6.7,1/500) 3FR,[NEXT SITE: 9M]

SITE 7: NORTHERN SOUTH AMERICA



7A

HUMBOLDT CURRENT

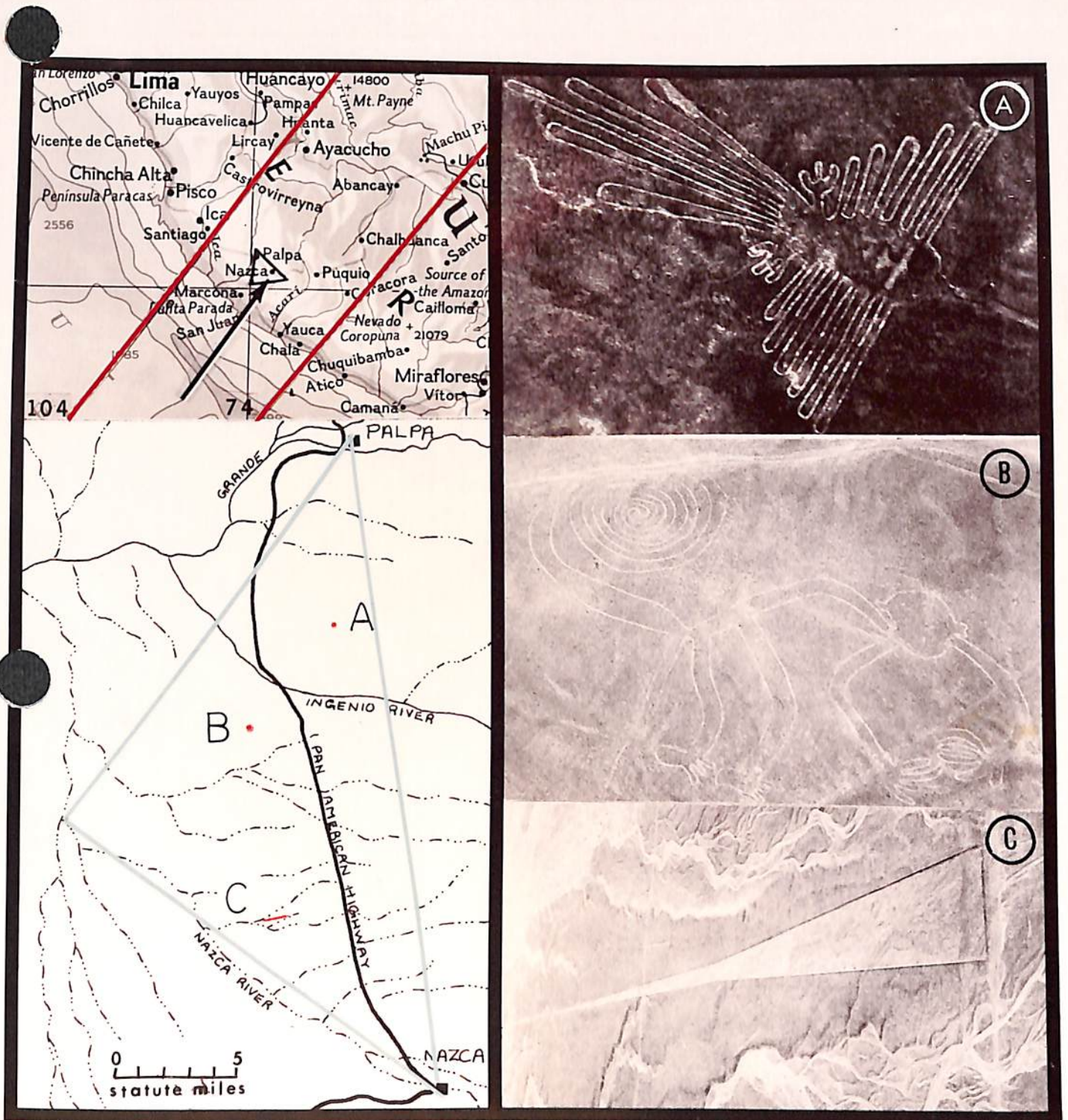


1. CAN YOU OBSERVE THE HUMBOLDT CURRENT?

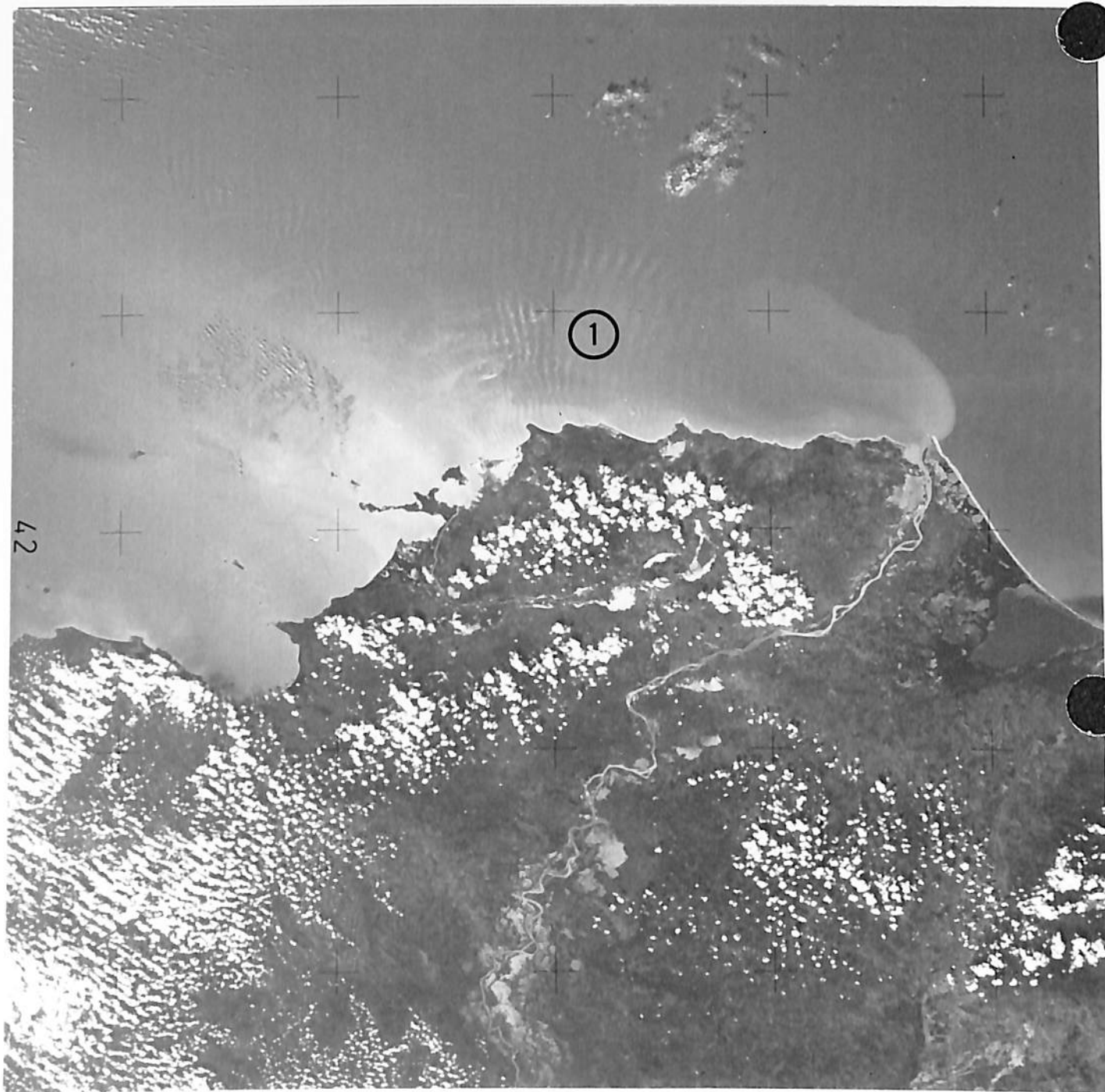
2. ARE THERE ANY GYRES?

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 104: CM3/SILVER/50/CX15(f5.6,1/500) 3FR,[NEXT SITE: 7D]



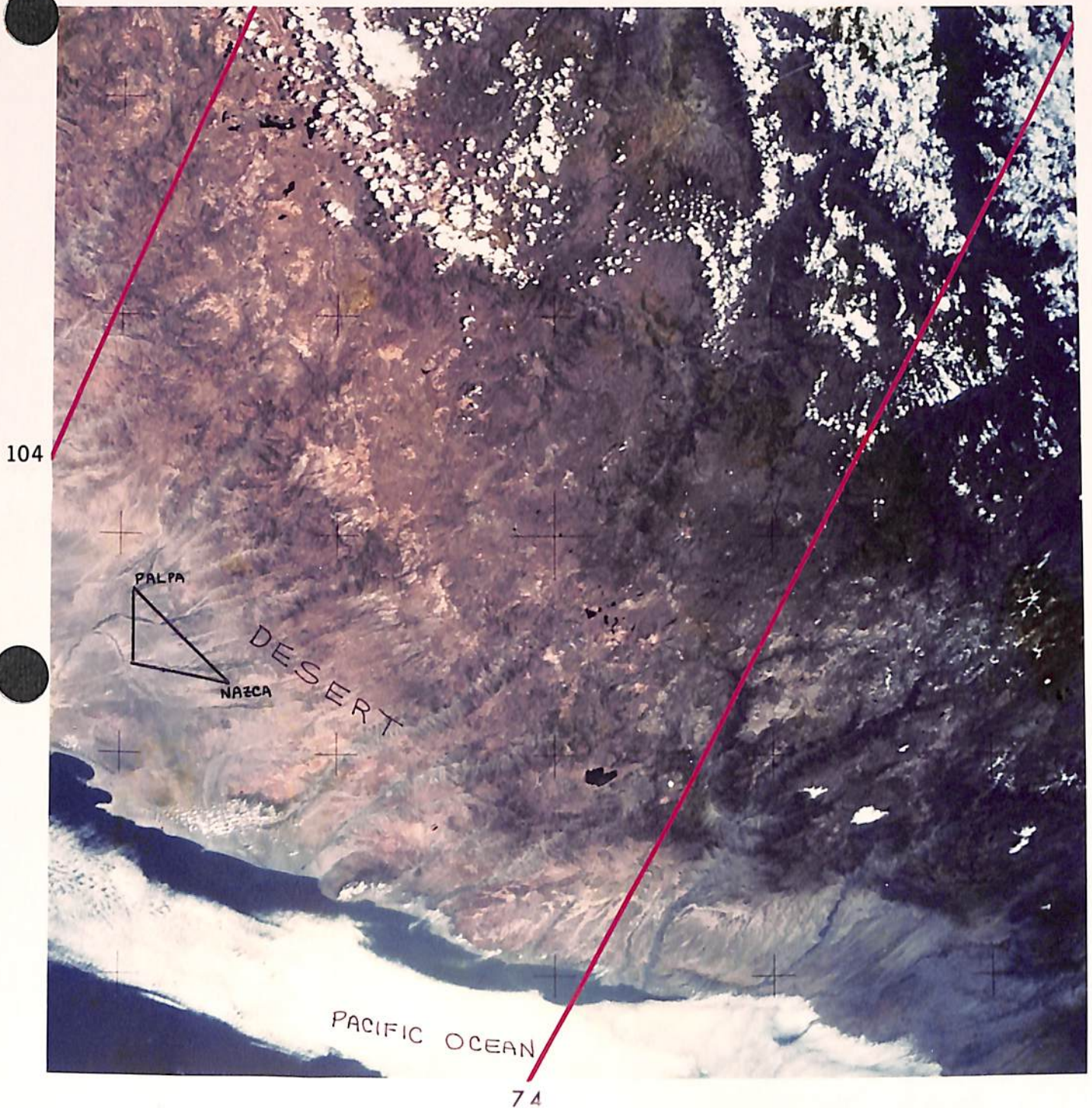
1. CAN YOU DISCERN THE NAZCA PLAIN MARKINGS? SCOPE MAY HELP.
 2. IF NOT, OBTAIN 3 STEREO PHOTOGRAPHS OF PERUVIAN DESERT LANDFORMS.
- REV 74: CM3/SILVER/250/CX14(f9.5,1/500) 3FR,[NEXT SITE: 7C]



1. DO YOU SEE INTERNAL WAVES OFF THE COAST?

2. PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 74: CM3/SILVER/250/CX14(f8,1/250) 3FR,[NEXT SITE: 6A]

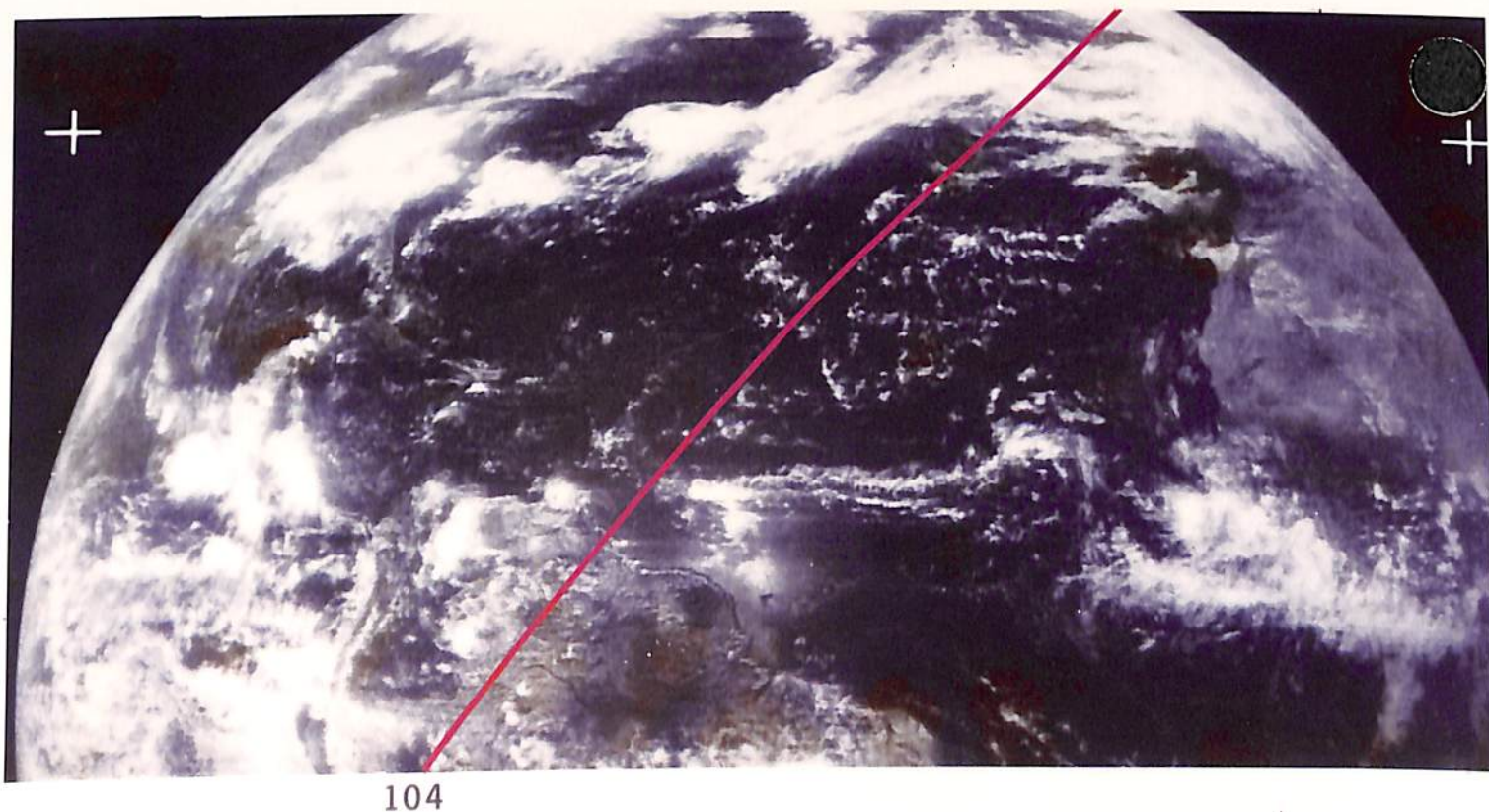
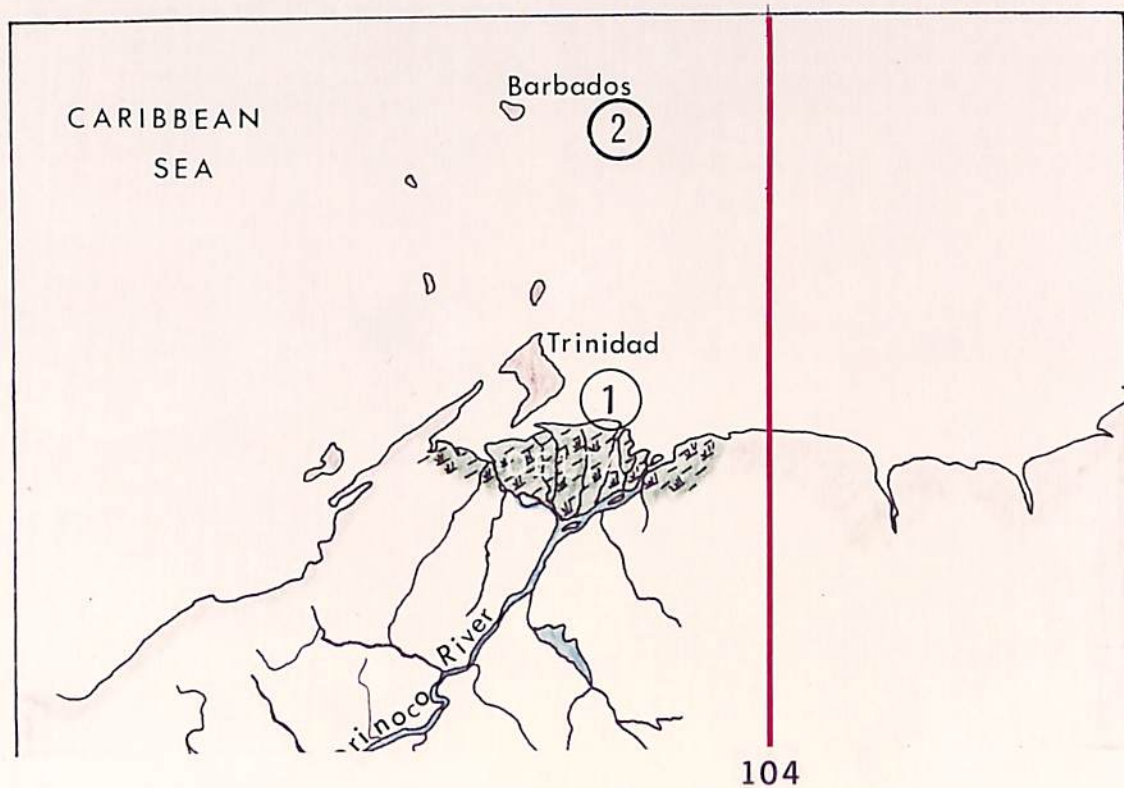


1. CAN YOU DISTINGUISH DUNE FIELDS IN THE PERUVIAN DESERT?
2. PHOTOGRAPH NAZCA PLAIN (SITE 7B).

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 104: CM3/SILVER/50/CX15(f8,1/500) 3FR,[NEXT SITE: 7E]

ORINOCO RIVER DELTA



1. OBTAIN 3 STEREO PHOTOGRAPHS OF THE ORINOCO RIVER DELTA.
2. OBTAIN 3 STEREO PHOTOGRAPHS OF WATER NEAR BARBADOS.
3. USE COLOR CHART TO IDENTIFY WATER COLORS BETWEEN COAST AND BARBADOS.



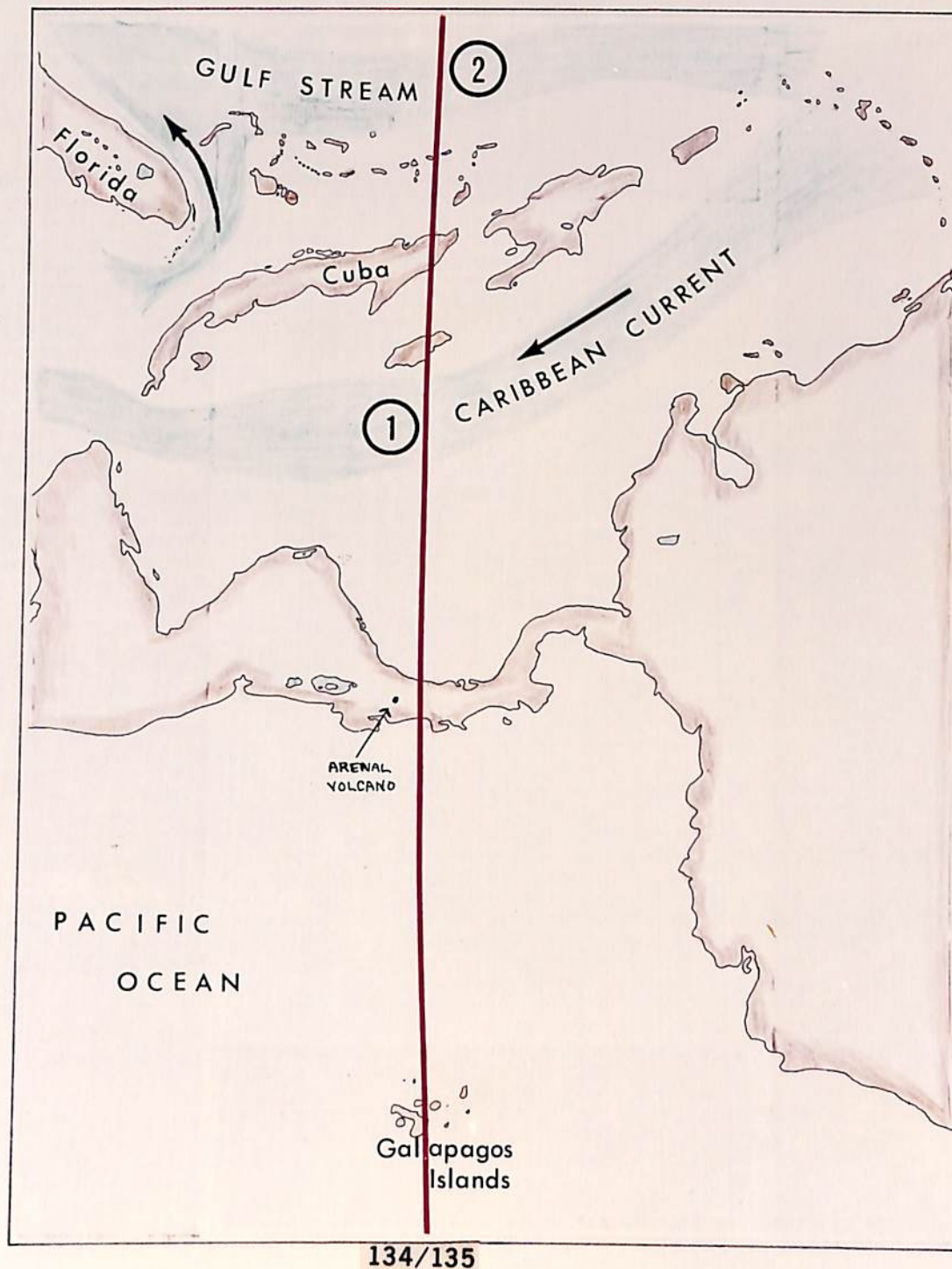
134/135

1. DESCRIBE UPWELLINGS, BOW WAVES, ISLAND WAKES, OR INTERNAL WAVES.
(FERNANDINA IS AN ACTIVE VOLCANO)

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 134: CM3/SILVER/50/CX17(f9.5,1/500) 3FR,[NEXT SITE: 7G]

CARIBBEAN SEA

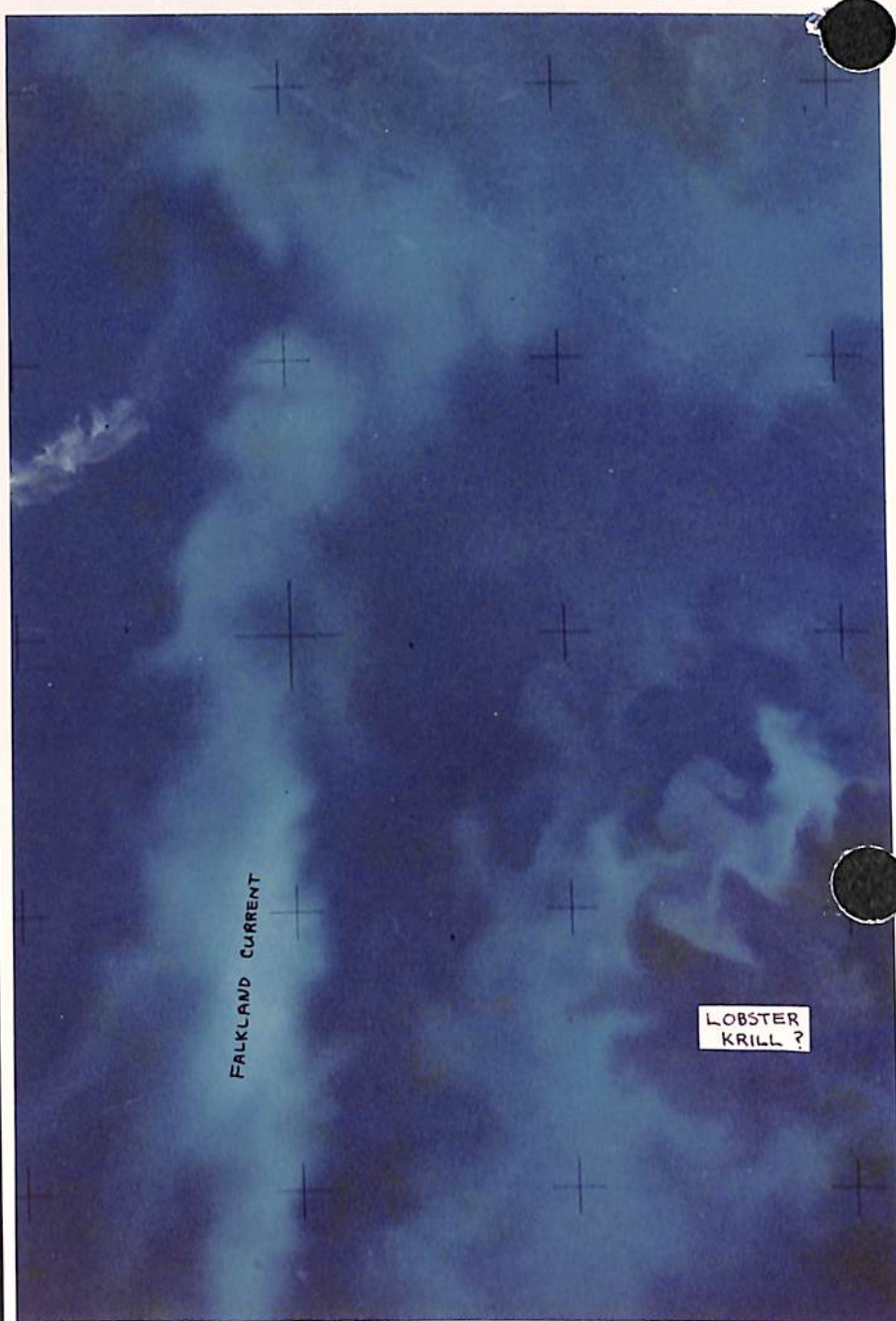
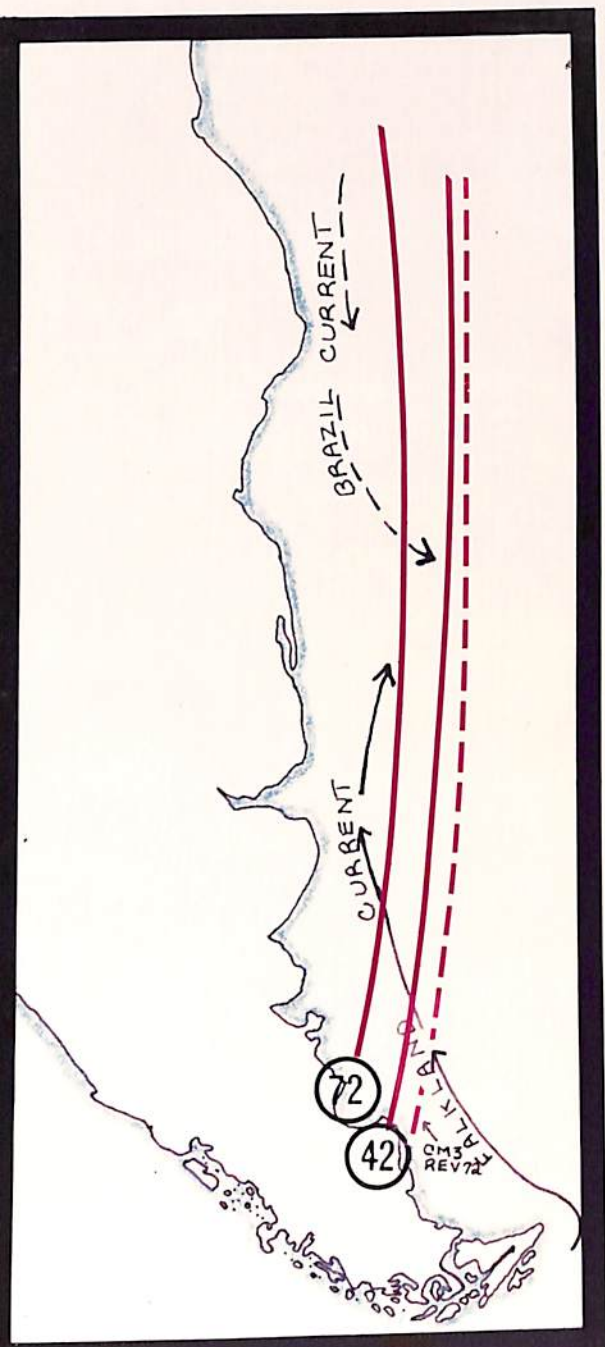


1. OBTAIN 3 STEREO PHOTOGRAPHS OF EDDIES IN THE CARIBBEAN SEA.
2. OBTAIN 3 STEREO PHOTOGRAPHS OF GULF STREAM BOUNDARIES.
(IF CLOUDED, LOOK FOR TROPICAL STORM CENTERS [SITE 3B])

REV 134: CM3/SILVER/50/CX17(f9.5,1/500) 6FR,[NEXT SITE: 6A]

SITE 8: SOUTHERN SOUTH AMERICA

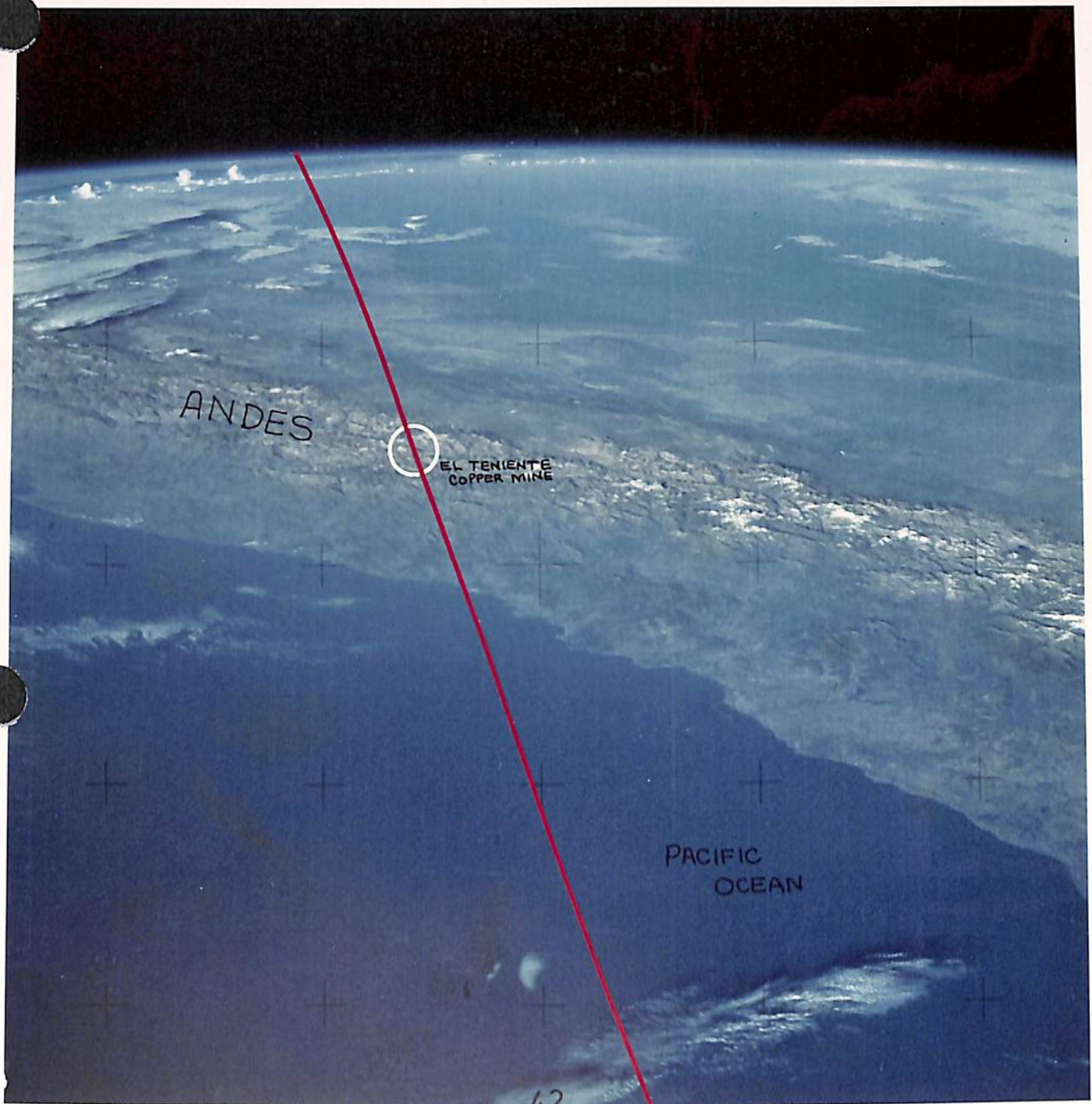




1. CAN YOU LOCATE THE FALKLAND CURRENT?
2. OBTAIN 3 STEREO FRAMES OF PLANKTON BLOOM OCCURRENCES.
3. TRACE THE FALKLAND CURRENT TO AREA OF CONFLUENCE WITH BRAZIL CURRENT.
MARK G.E.T. AND OBTAIN 3 STEREO PHOTOGRAPHS.

REV 42: CM3/SILVER/50/CX11(f6.7,1/250) 6FR,[NEXT SITE: 3A]

REV 72: CM3/SILVER/250/CX12(f6.7,1/125) 6FR,[NEXT SITE: 9H - DAC STRIP]
[RECORD LAST FR NO: PAGE 4]



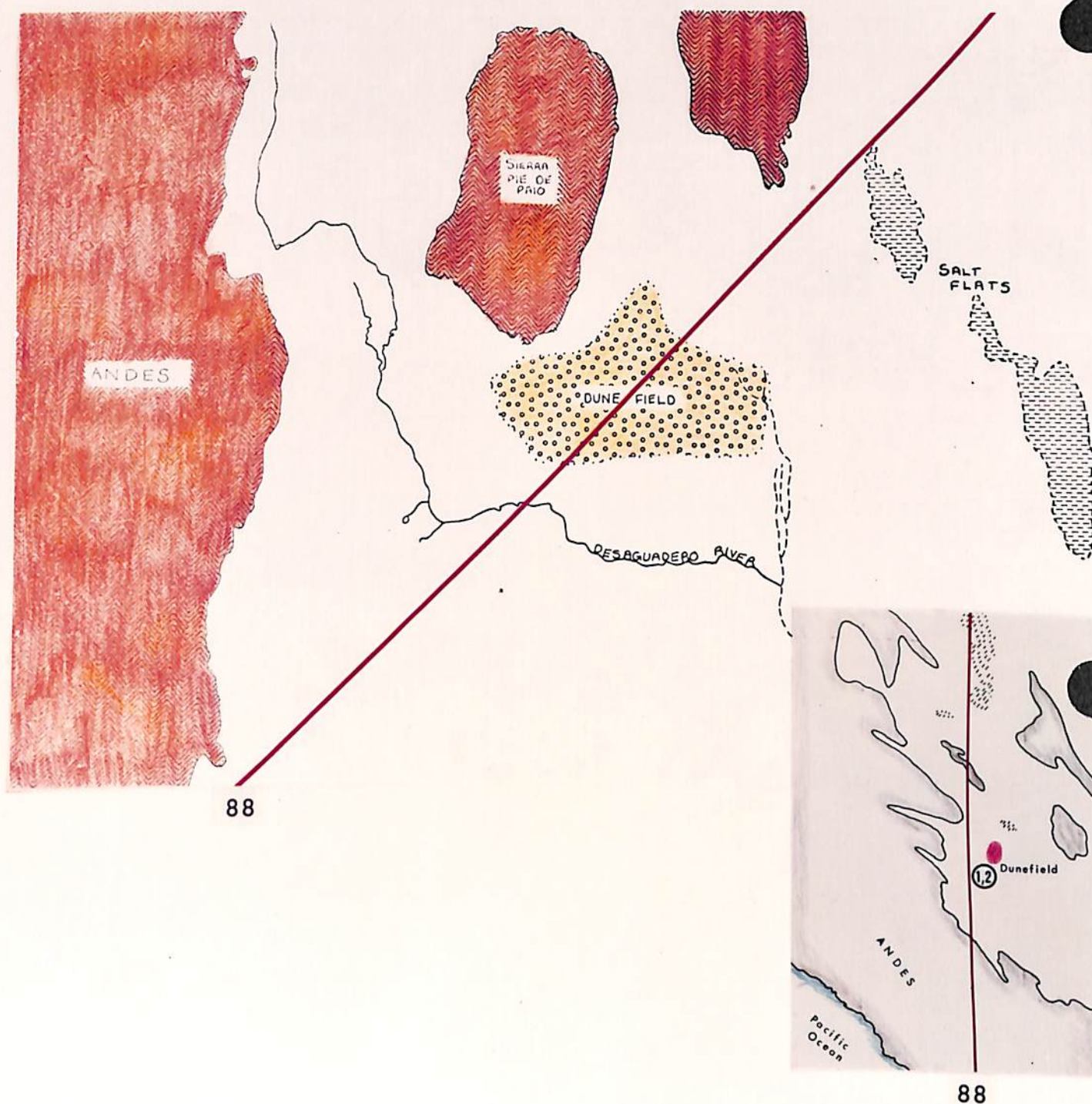
88

1. CAN YOU SEE ANY COLOR OXIDATION ZONES SIMILAR TO THOSE IN GREAT LAKES REGION (SITES 4C AND 4D)? IF SO, MARK LOCATION.

2. PHOTOGRAPH MAJOR STRUCTURES OR LINEAMENTS.

REV 88: CM3/SILVER/250/CX15(f6.7,1/250) 3FR,[NEXT SITE: 8C]

DUNE FIELD



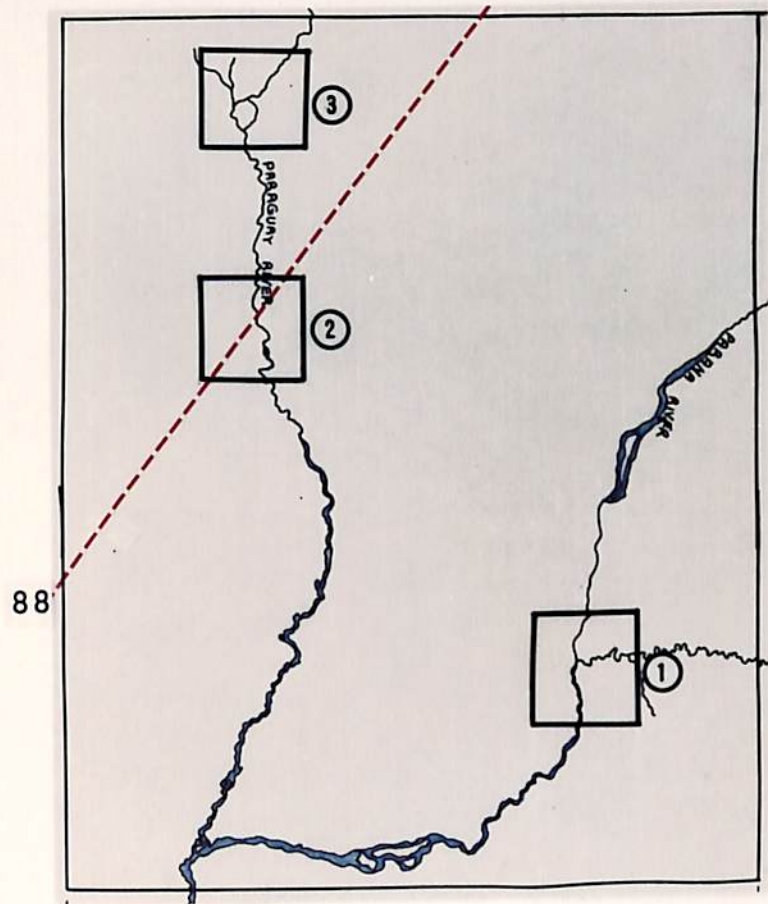
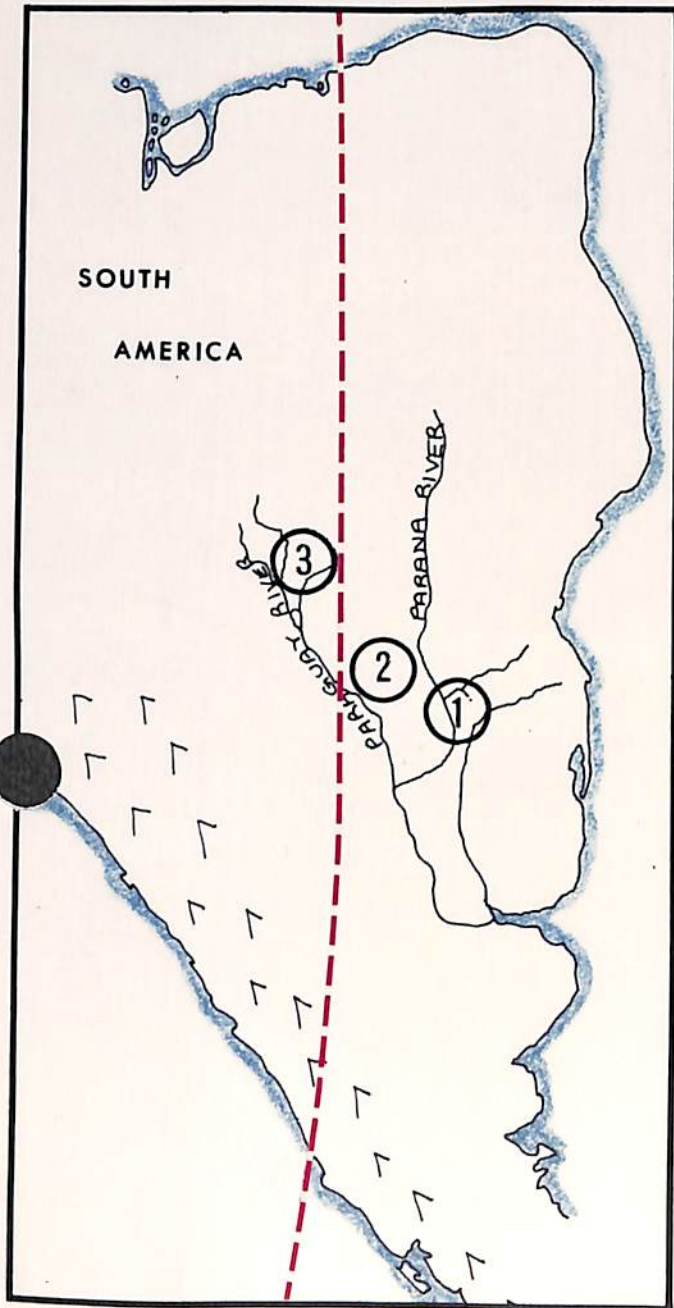
1. USE COLOR CHART TO IDENTIFY COLOR OF DUNE FIELD.

2. WHAT IS THE DUNE PATTERN AND HOW ARE THE DUNES ORIENTED?

3. IS THERE ANY RELATION BETWEEN THE DUNE FIELD AND ADJACENT MOUNTAINS?

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

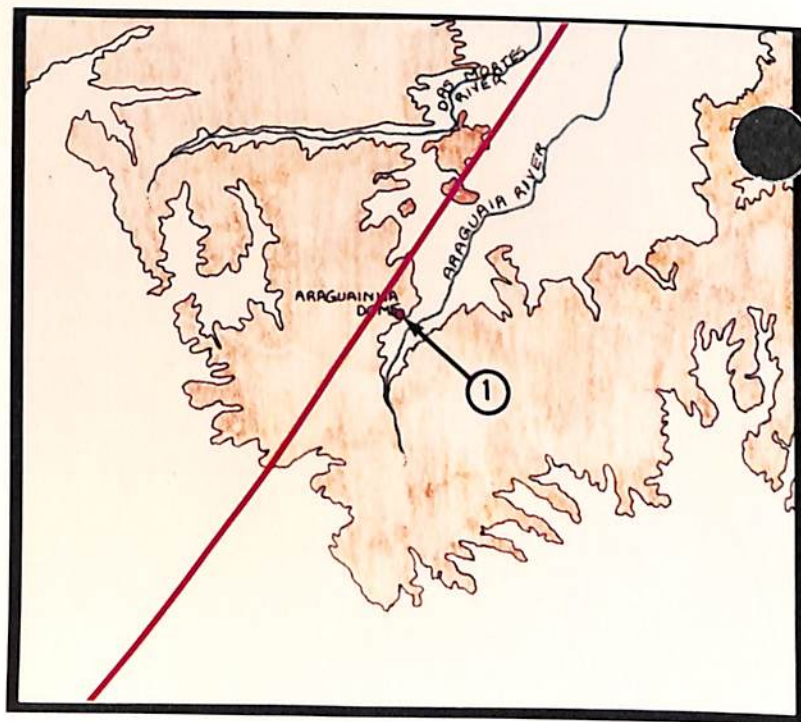
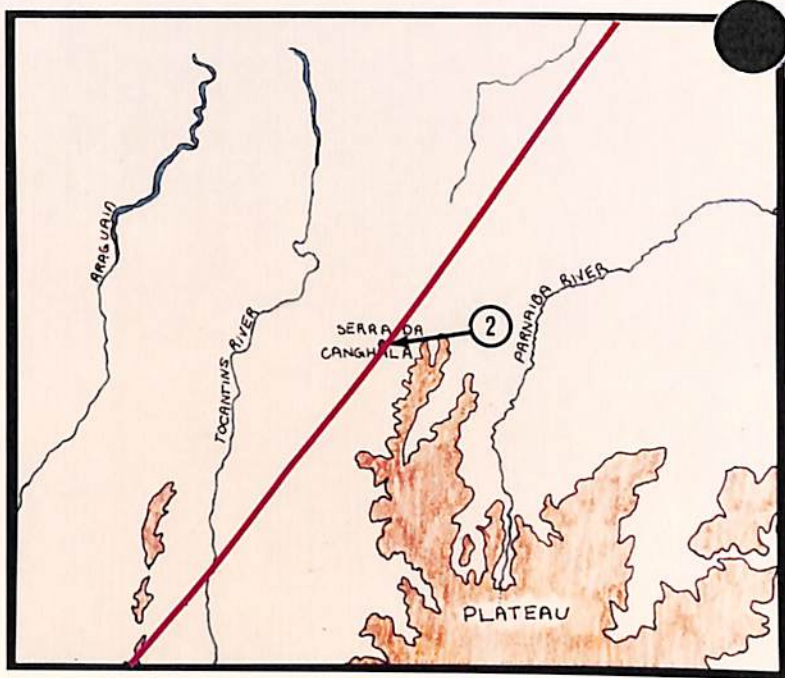
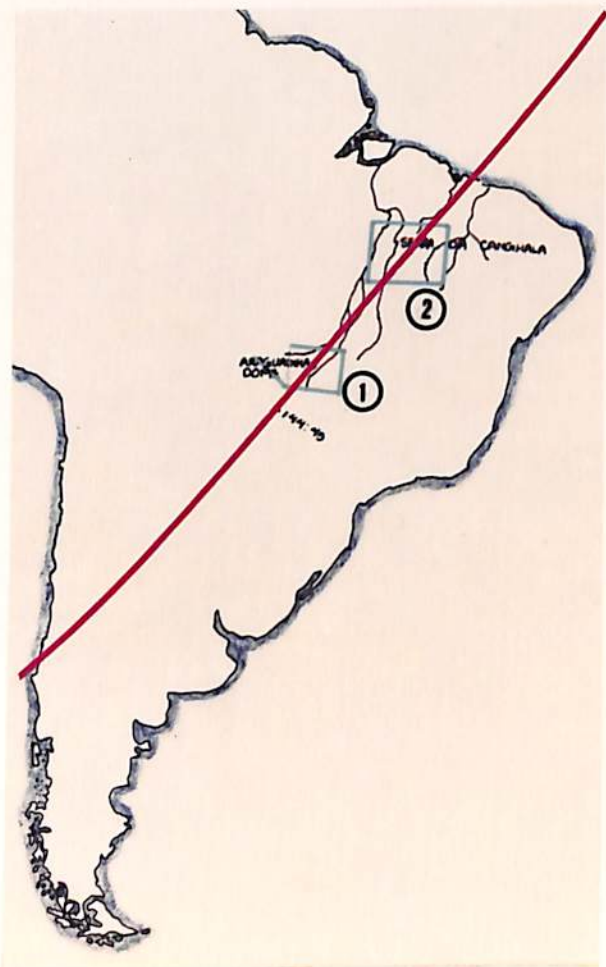
REV 88: CM3/SILVER/250/CX15(f6.7, $\frac{1/500}{1/250}$) 3FR, [NEXT SITE: 8D]



DAM SITE 2 IN CENTER OF CM3 AT — — — : — — — : — — —

OBTAIN 3 STEREO FRAMES EACH OF DAM SITES 1, 2, AND 3.

REV 88: CM3/SILVER/250/CX15(f6.7, 1/500) 9FR, [NEXT SITE: 8E]

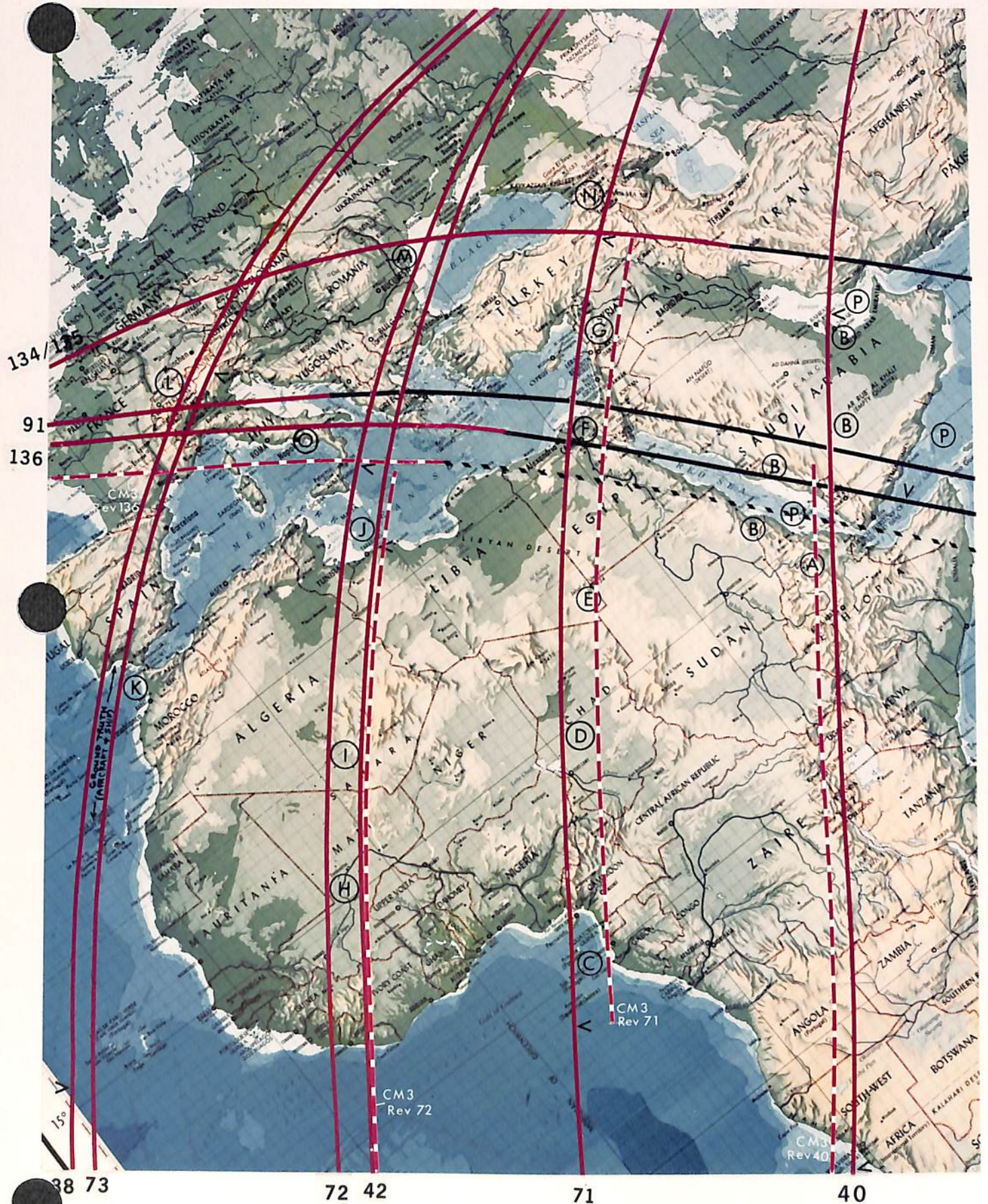


STRUCTURE 1 IN CENTER OF CM3 AT _ _ _ : _ _ : _ _
 STRUCTURE 2 IN CENTER OF CM3 AT _ _ _ : _ _ : _ _

1. CAN YOU RESOLVE THE TWO CIRCULAR STRUCTURES 1 AND 2 ?
2. OBTAIN 3 STEREO FRAMES PER TARGET.

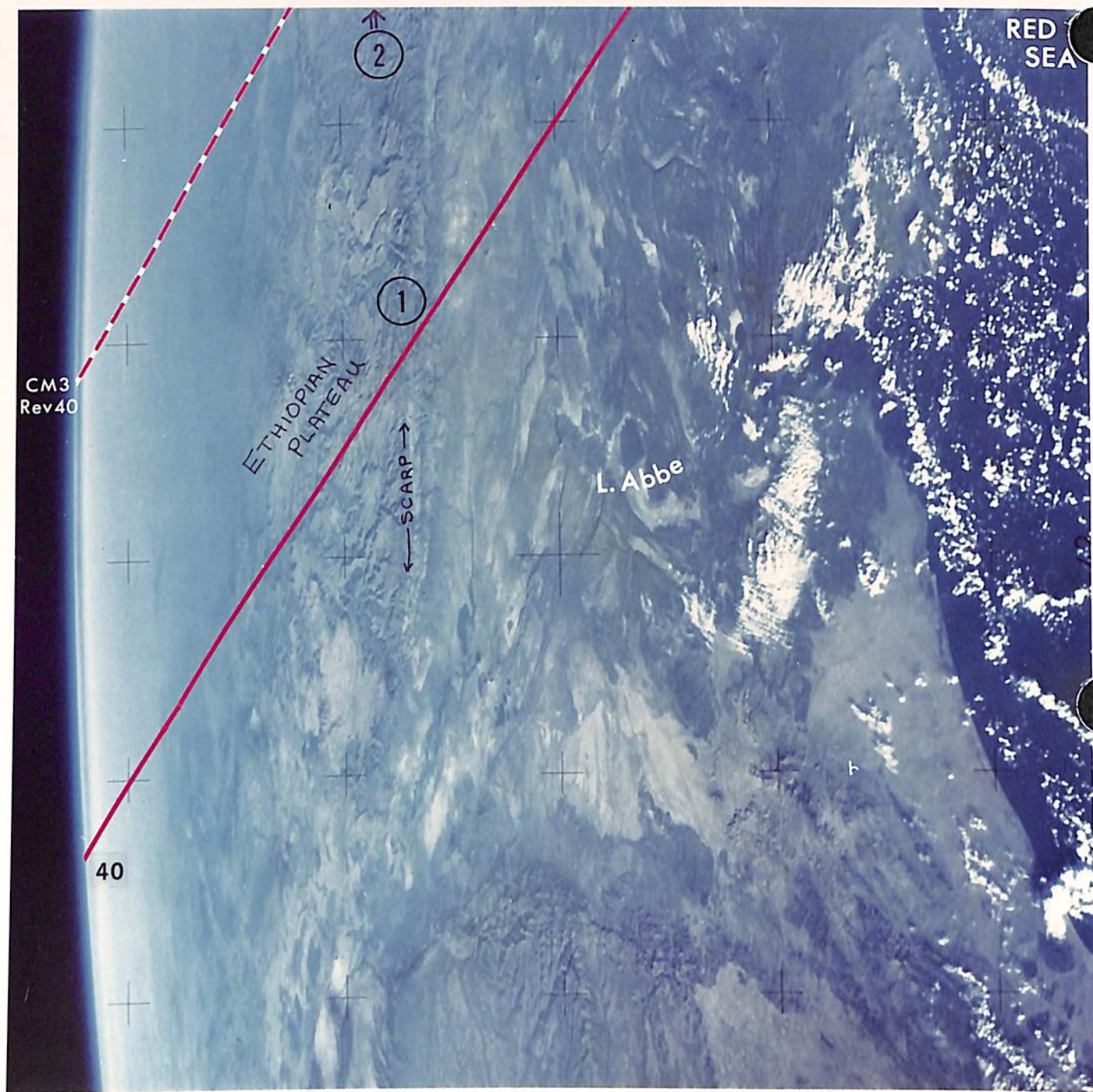
REV 88: CM3/SILVER/250/CX15(f6.7,1/500) 6FR,[NEXT SITE: 3A]

SITE 9: AFRICA AND EUROPE



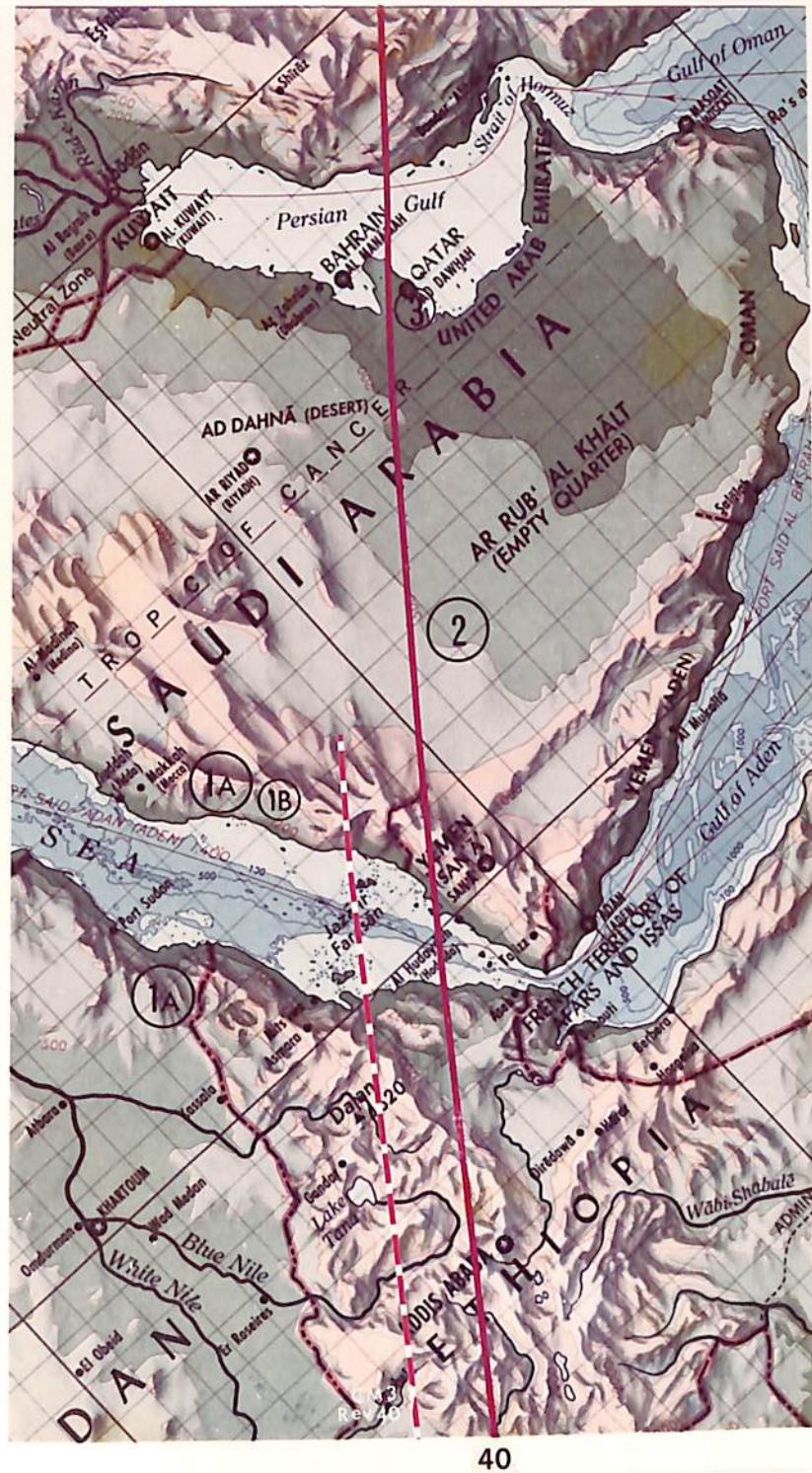
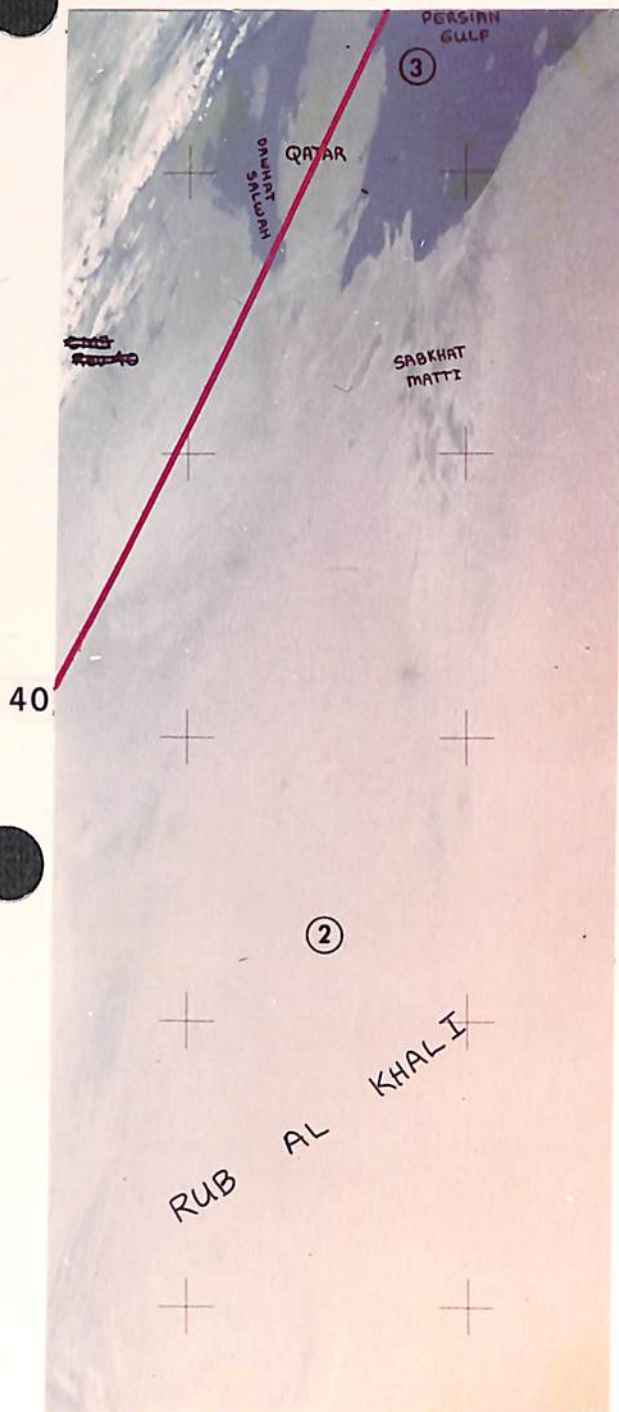
9A

AFAR TRIANGLE



1. OBTAIN 3 STEREO PHOTOGRAPHS OF THE ETHIOPIAN PLATEAU SCARP.
2. OBSERVE MOUNTAINOUS REGION TO THE NORTH.

REV 40: CM3/SILVER/50/IF01/ORANGE FILTER(f6.7,1/500) 3FR,[NEXT SITE: 9B]



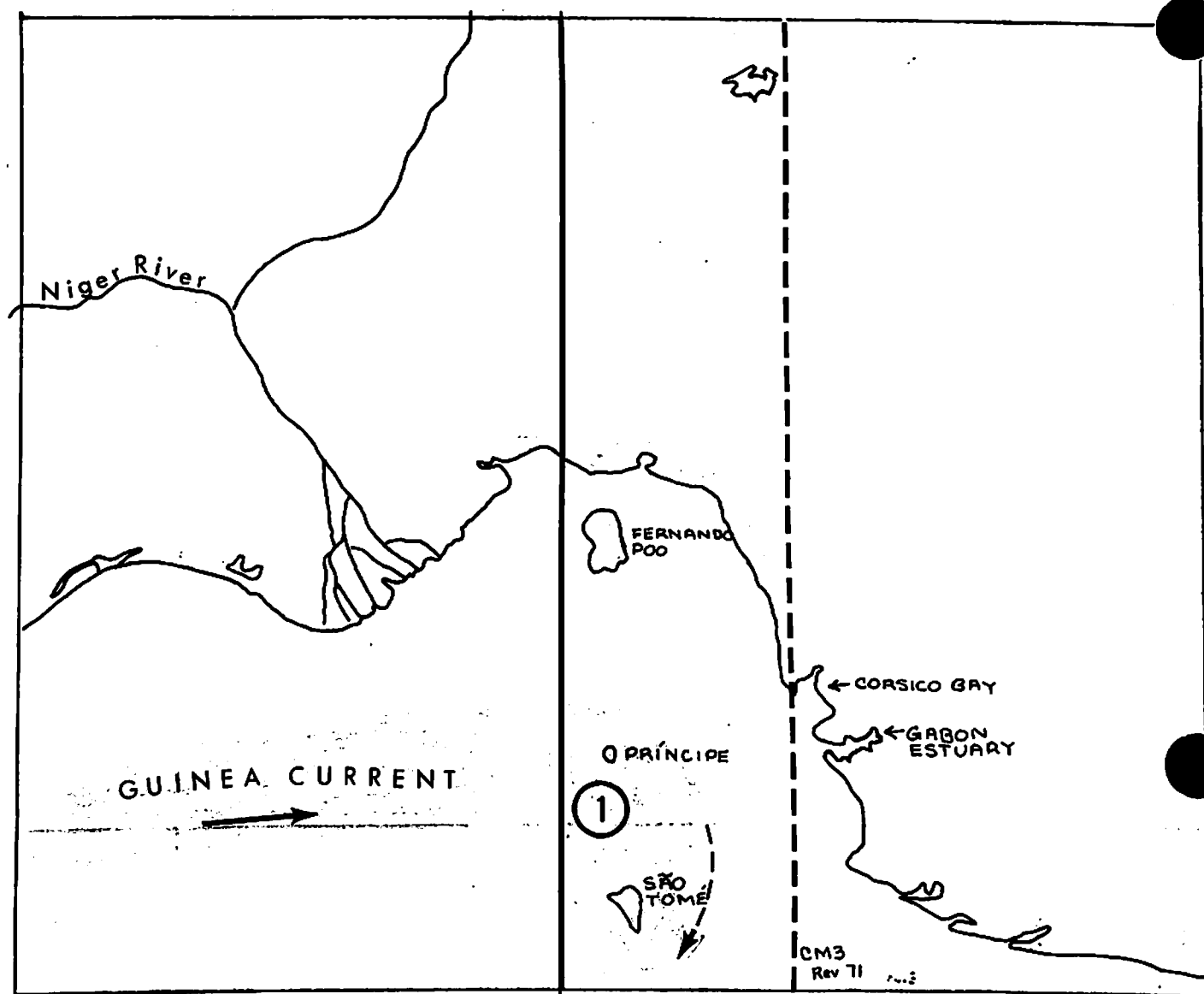
CM3

- 1A. COMPARE MOUNTAINOUS REGION ON EACH SIDE OF THE RED SEA.
- B. OBTAIN 3 STEREO PHOTOGRAPHS OF STRUCTURES THAT NEARLY PARALLEL GROUNDTRACK.

CM5

- 2A. USE COLOR CHART TO DEFINE DESERT COLOR TRANSITIONS.
- B. IS COLOR RELATED TO DUNE TYPE OR ORIENTATION?
3. OBTAIN 3 STEREO PHOTOGRAPHS OF THE WATER-LAND INTERFACE AT DOHA, QATAR.

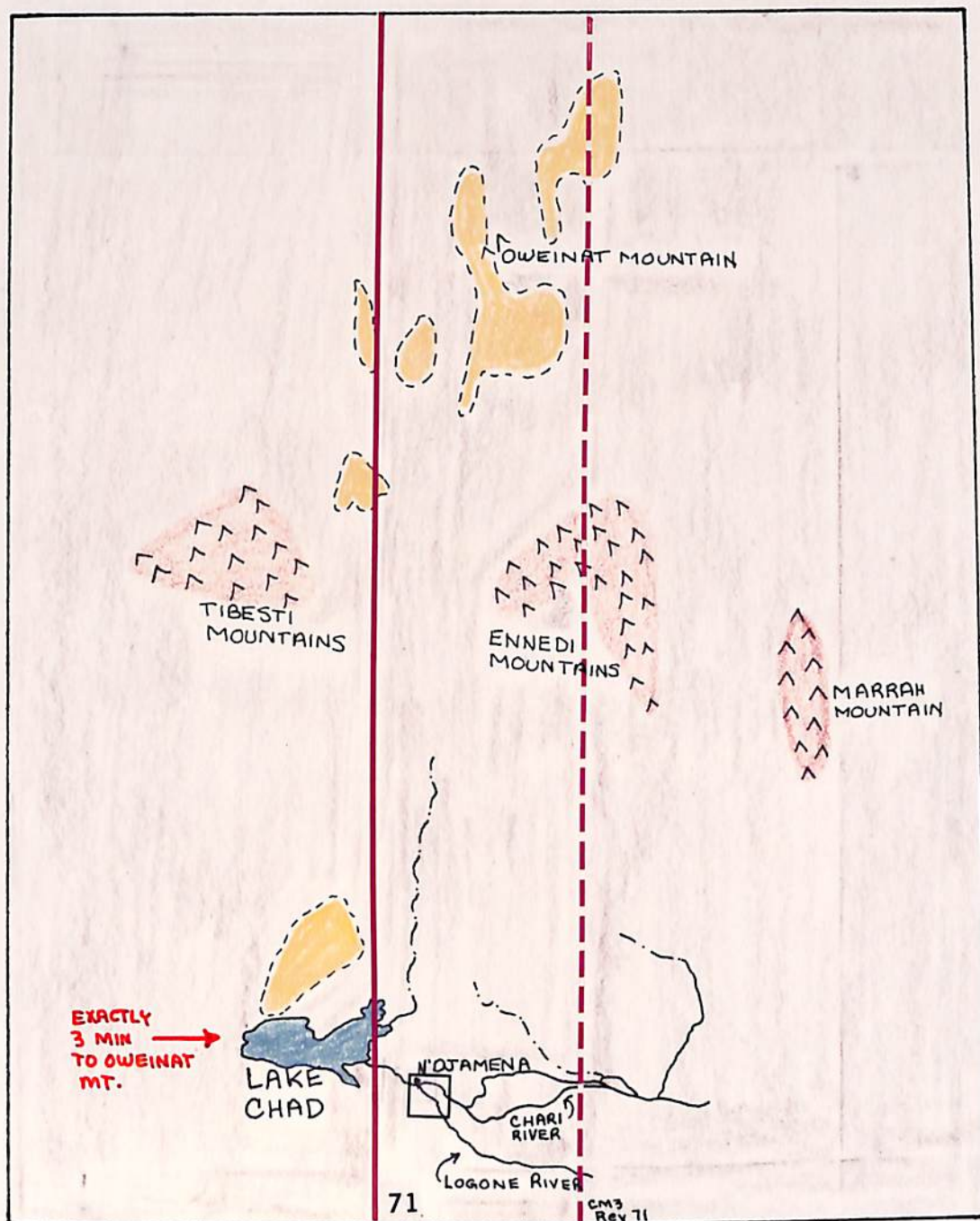
GUINEA CURRENT



71

1. CAN YOU SEE ANY TRACES OF THE GUINEA CURRENT?
2. ARE THERE ANY GYRES IN THE AREA, IF SO MARK ON MAP.

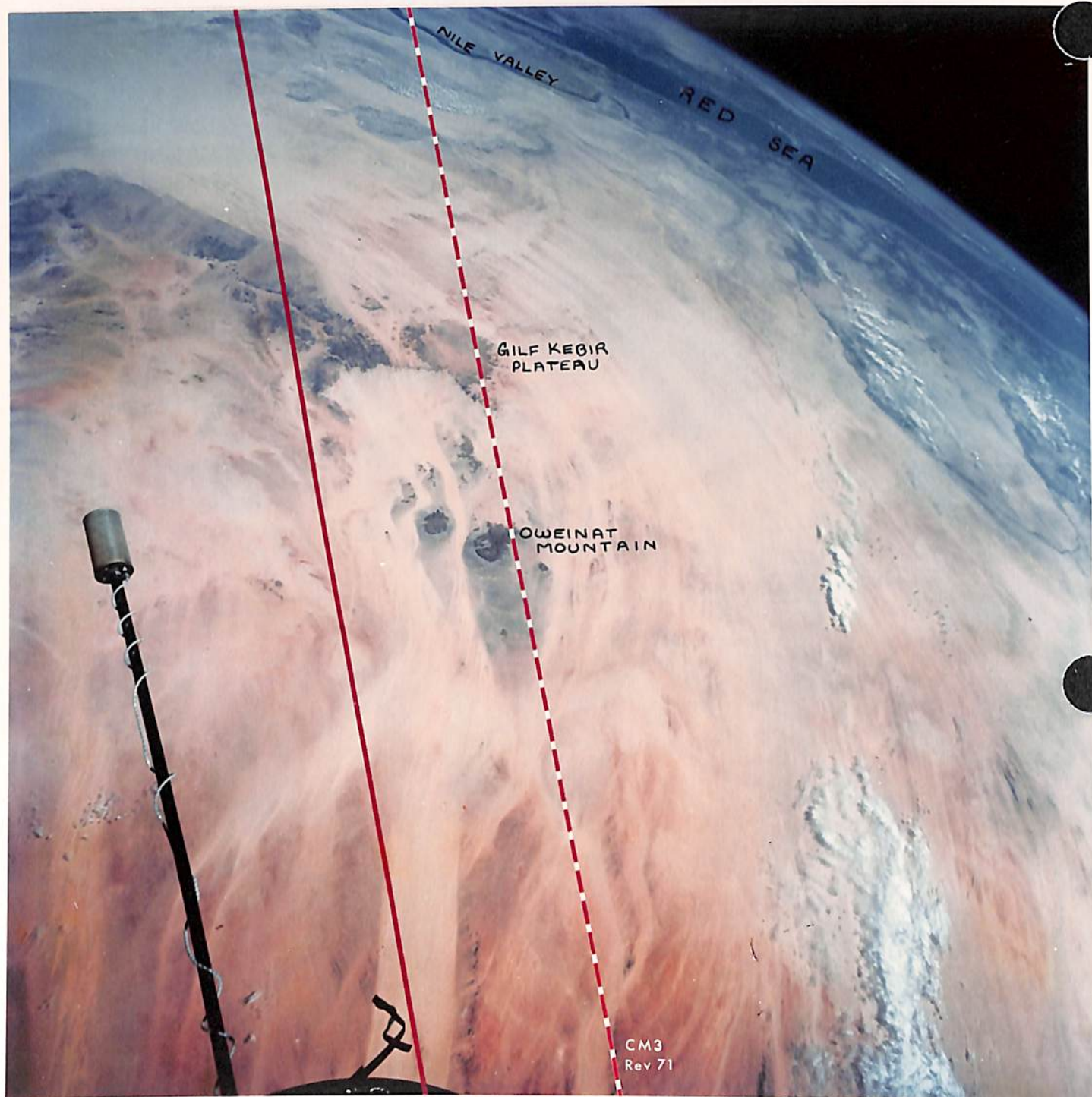
REV 71: CM3/SILVER/250/CX12(f8,1/250) 3FR,[NEXT SITE: 9D]



1. OBTAIN 3 STEREO PHOTOGRAPHS OF AREA SOUTHEAST OF N'DJAMENA. (Indicated by square)
2. USE COLOR CHART TO DEFINE DESERT COLORS, NORTH OF LAKE CHAD.
3. WHAT DUNE PATTERNS CAN YOU OBSERVE; DO THEY HAVE DIFFERENT COLORS?

REV 71: CM3/SILVER/250/CX12(f11,1/500) 6FR,[NEXT SITE: 9E]

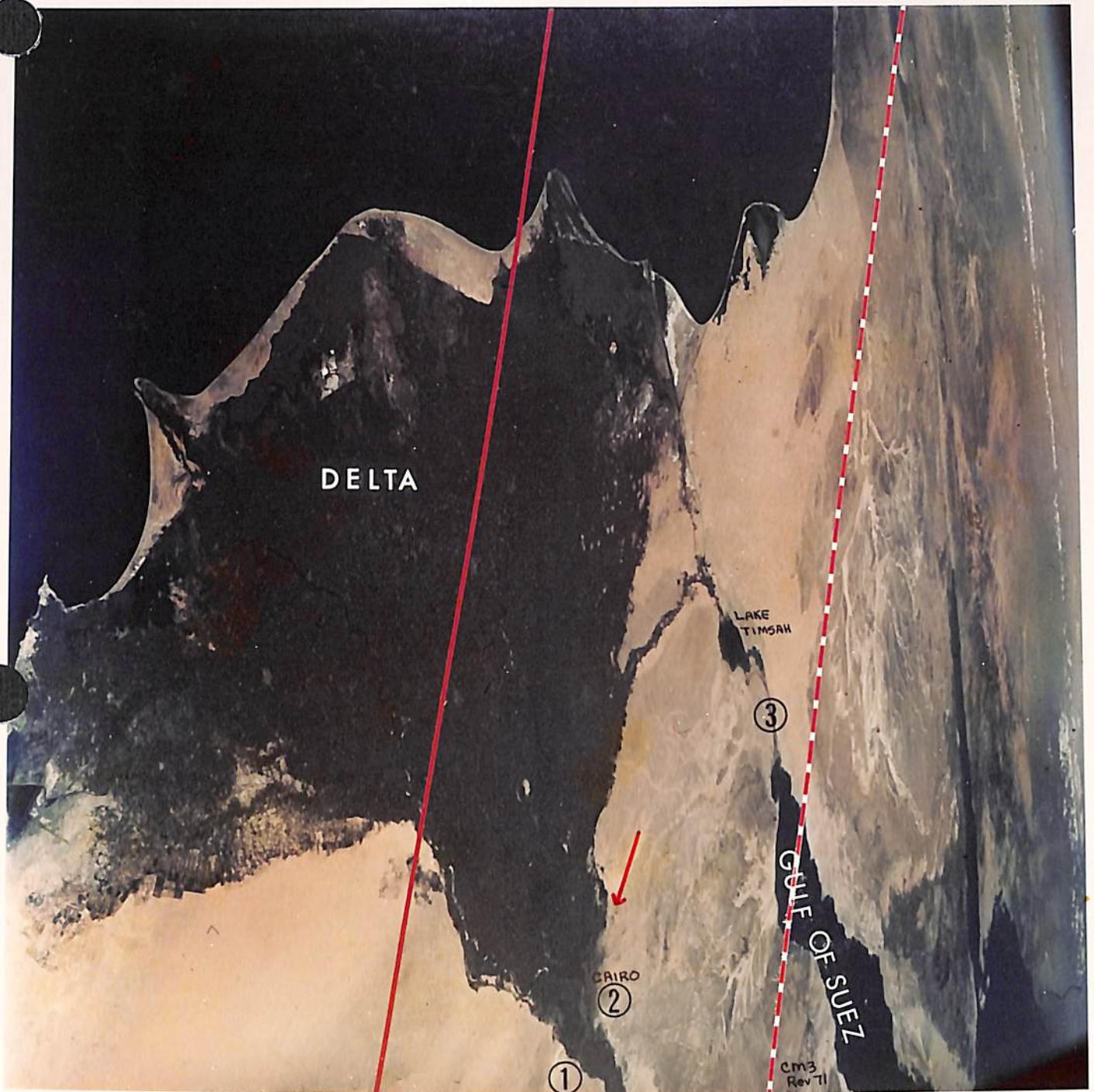
OWEINAT MOUNTAIN



71

1. OBTAIN 3 STEREO PHOTOGRAPHS OF OWEINAT MOUNTAIN AND ADJACENT DUNEFIELDS.
2. CAN YOU RESOLVE ANY STRUCTURES IN THE MOUNTAIN?
3. ARE THERE ANY COLOR OXIDATION ZONES ON THE MOUNTAIN?

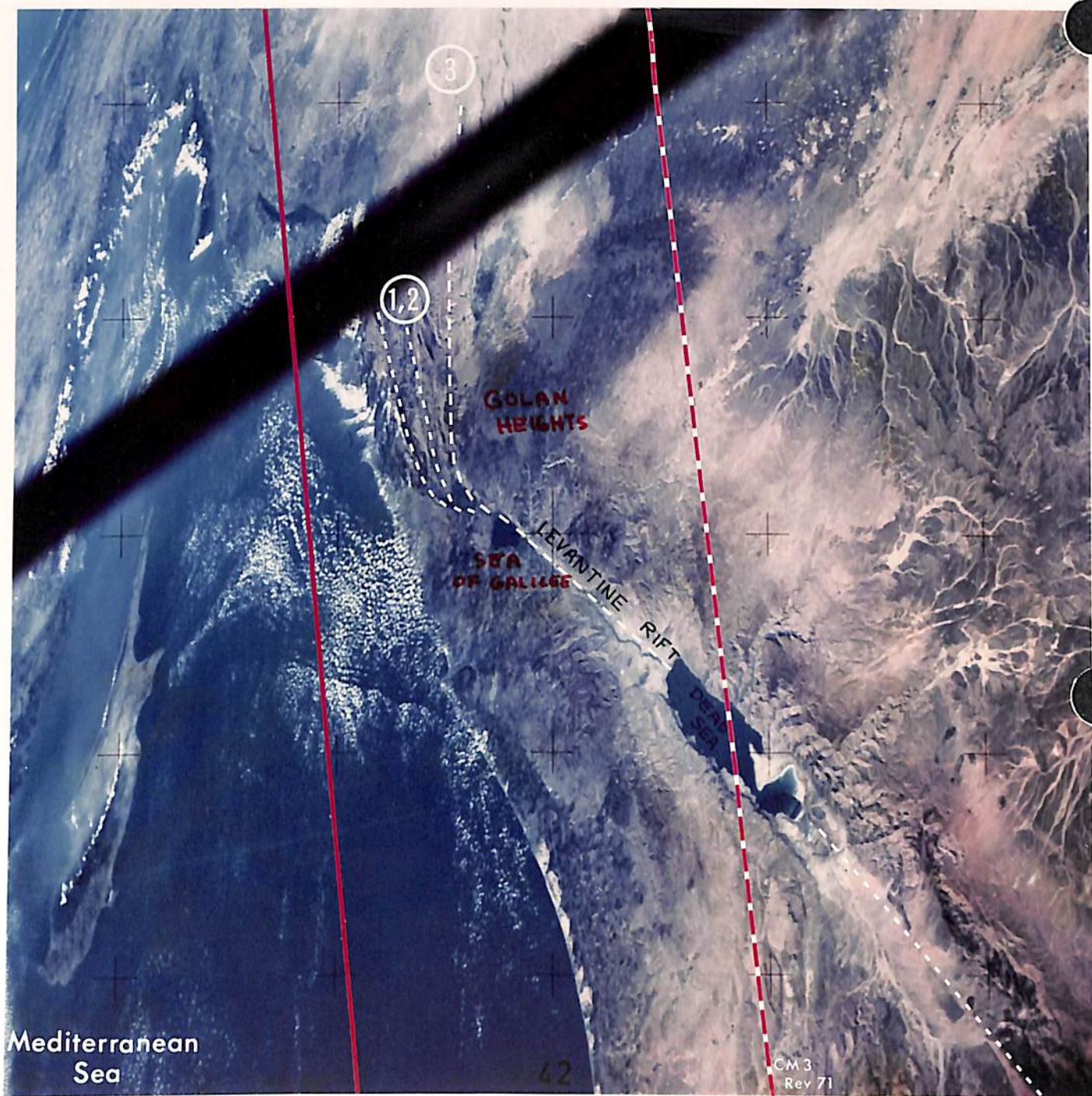
REV 71: CM3/SILVER/250/CX12(f11,1/500) 3FR,[NEXT SITE: 9F]



71

1. CAN YOU RESOLVE THE PYRAMIDS WITHOUT SCOPE?
2. OBTAIN 3 STEREO PHOTOGRAPHS OF CAIRO.
3. OBTAIN 3 STEREO PHOTOGRAPHS LOOKING SOUTHWARD ALONG THE GULF OF SUEZ.

REV 71: CM3/SILVER/250/CX12(f8,1/500) 9FR,[NEXT SITE: 9G]



71

1. OBTAIN 3 STEREO PHOTOGRAPHS OF THE ARCUATE TERMINATIONS OF THE LEVANTINE RIFT.
2. CAN YOU DISTINGUISH RELATED GROUPS OF FAULTS?
3. WHERE IS THE NORTHERNMOST TERMINATION OF THIS FAULT COMPLEX?

REV 71: CM3/SILVER/250/CX12(f8,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]



72

42

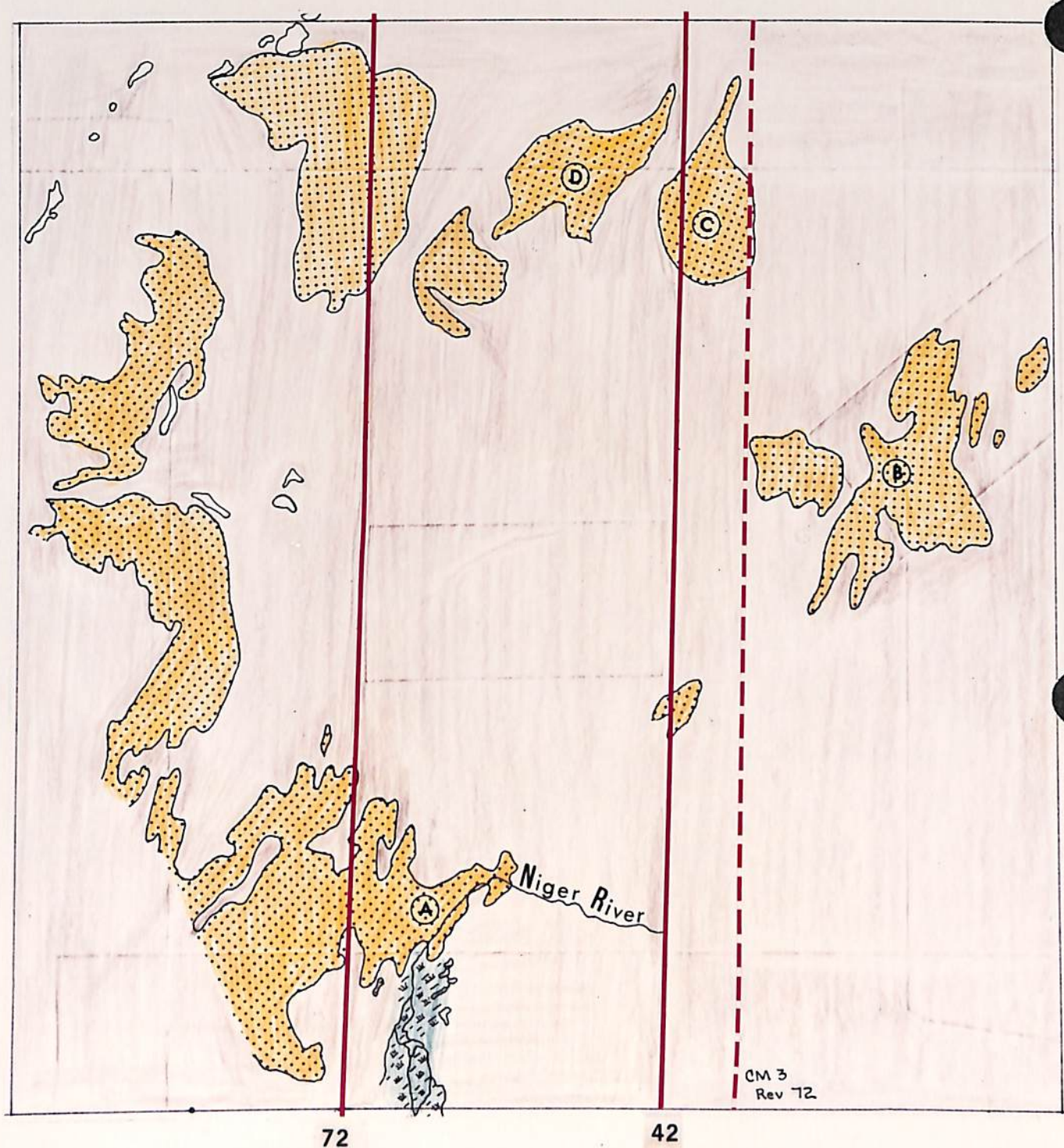
1. IN AREA OF FOSSIL DUNES, CAN YOU DISTINGUISH YOUNGER DUNE GENERATIONS?
DELINEATE THEIR ORIENTATIONS ON PHOTOGRAPH, MARKING THEM FROM OLDEST TO YOUNGEST.
2. WHERE DO YOU SEE VEGETATION PATTERNS?
3. OBTAIN 3 STEREO PHOTOGRAPHS OF INTERESTING FEATURES.

REV 42: CM3/SILVER/50/IF01/ORANGE FILTER(f9.5,1/500) 6FR,[NEXT SITE: 9I]

REV 72: {CM3/DAC/25/CT01/6fps(f8,1/125) 11 MINUTES TOTAL STRIP

{[MAKE GENERAL COMMENTS ONLY]}

ALGERIAN DESERT

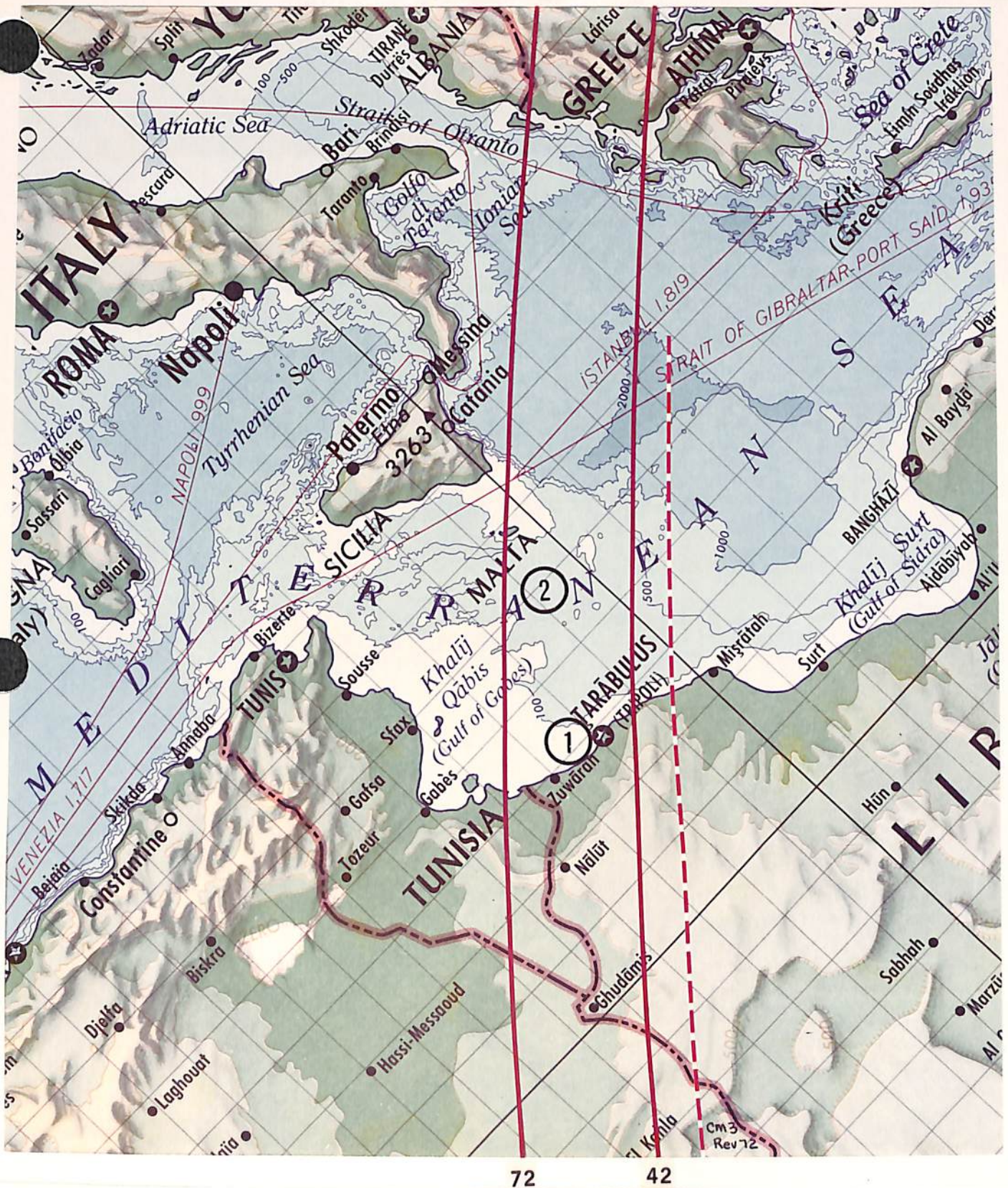


1. USE COLOR WHEEL TO DEFINE DESERT COLORS.
2. IS COLOR RELATED TO OBSERVABLE DUNE PATTERNS? OBTAIN 3 STEREO PHOTOGRAPHS.
3. DESCRIBE INTERDUNE AREAS AND RELATIONSHIP BETWEEN DUNES AND ADJACENT HILLS.
4. DESCRIBE TRANSITION ZONES BETWEEN DESERT AND ANY VEGETATED LAND.

REV 42: CM3/SILVER/50/IF01/ORANGE FILTER(f9.5,1/500) 6FR,[NEXT SITE: 9J]

REV 72: {CM3/DAC/25/CT01/6fps(f8,1/125) 11 MINUTES TOTAL STRIP

[MAKE GENERAL COMMENTS ONLY]

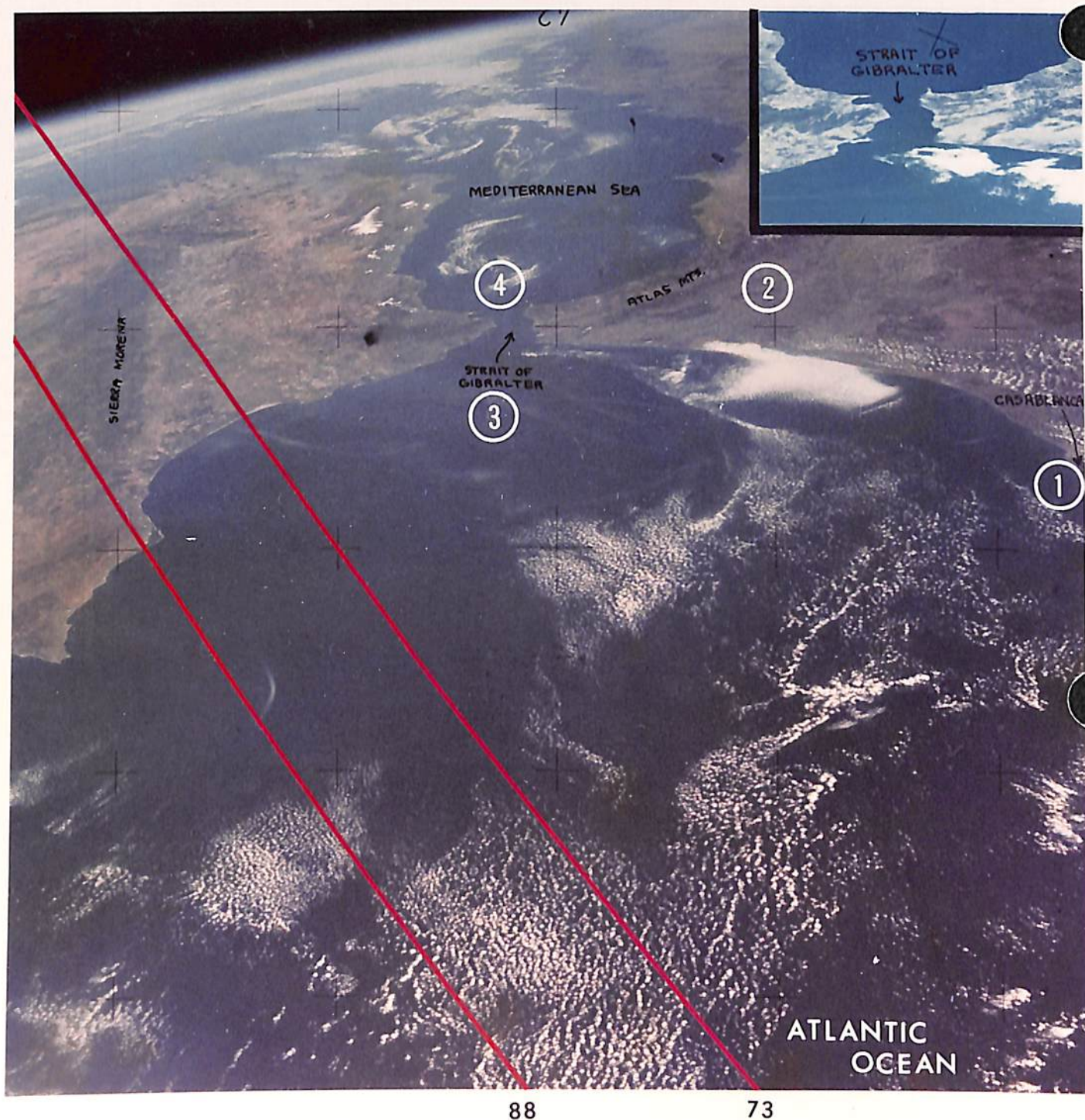


1. OBTAIN 3 STEREO PHOTOGRAPHS OF WATER-LAND INTERFACE AT TRIPOLI.
2. BETWEEN TRIPOLI AND SICILY, CAN YOU SEE: EDDIES OR GYRES? CURRENT BOUNDARIES? INTERNAL WAVES? PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 42: CM3/SILVER/50/IF01/ORANGE FILTER(f9.5,1/500) 6FR,[RECORD LAST FR NO: PAGE 4]

REV 72: CM3/DAC/25/CT01/6fps(f8,1/125) 11 MINUTES TOTAL STRIP [MAKE GENERAL COMMENTS ONLY]

STRAIT OF GIBRALTAR

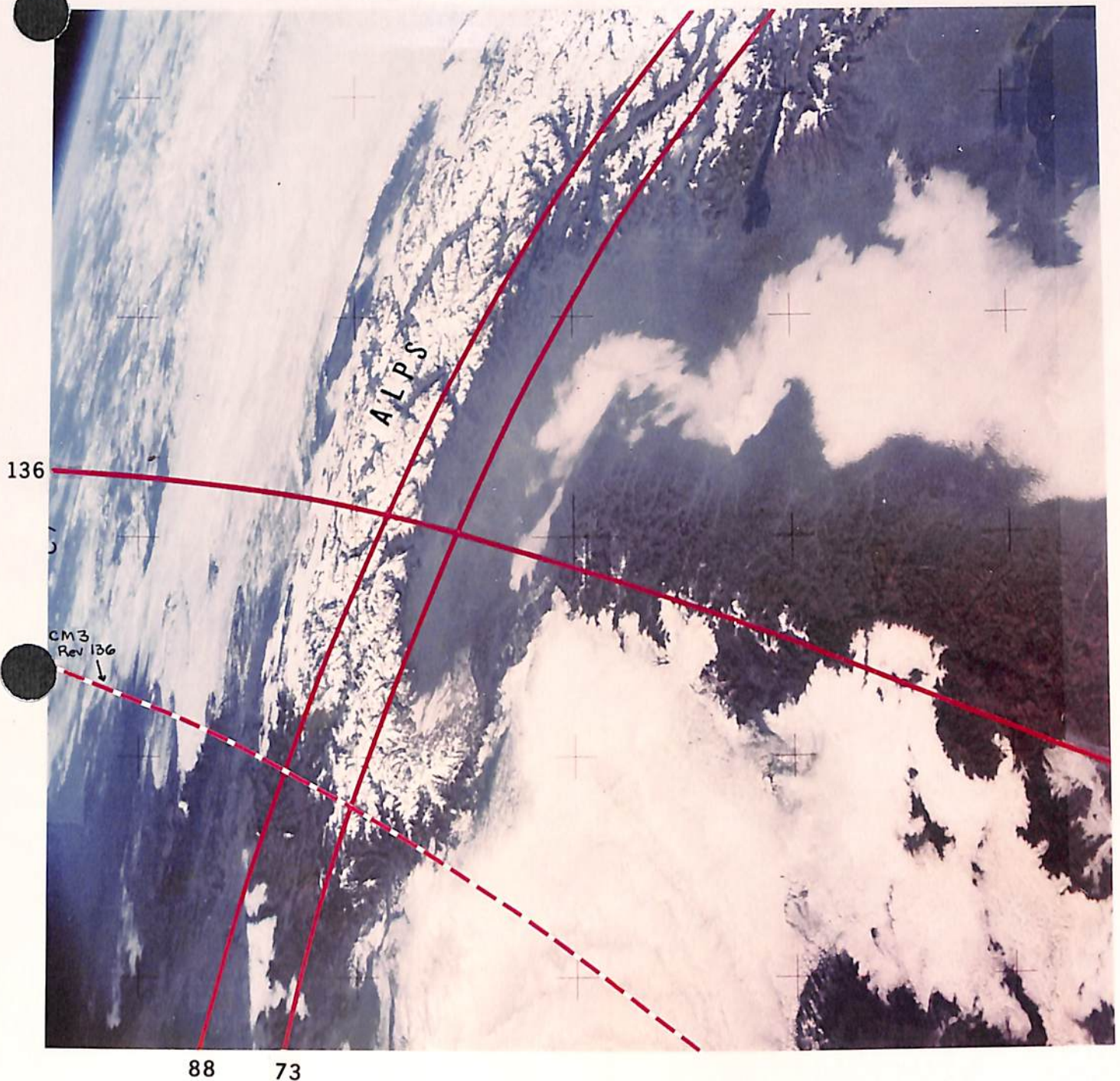


1. OBTAIN 3 STEREO PHOTOGRAPHS OF WATER-LAND INTERFACE AT CASABLANCA.
2. OBTAIN 3 STEREO PHOTOGRAPHS OF ATLAS MOUNTAINS.
3. CAN YOU SEE CURRENT BOUNDARIES WEST OF THE STRAIT OF GIBRALTAR?
4. DESCRIBE TURBULENCE OR INTERNAL WAVES EAST OF THE STRAIT OF GIBRALTAR.

PHOTOGRAPHS: 3 STEREO FRAMES PER TARGET.

REV 73: CM3/SILVER/50/CX14,(f9.5,1/500) 9FR,[NEXT SITE: 9L]

REV 88: CM3/SILVER/250/CX15(f9.5,1/500) 9FR,[NEXT SITE: 9L]



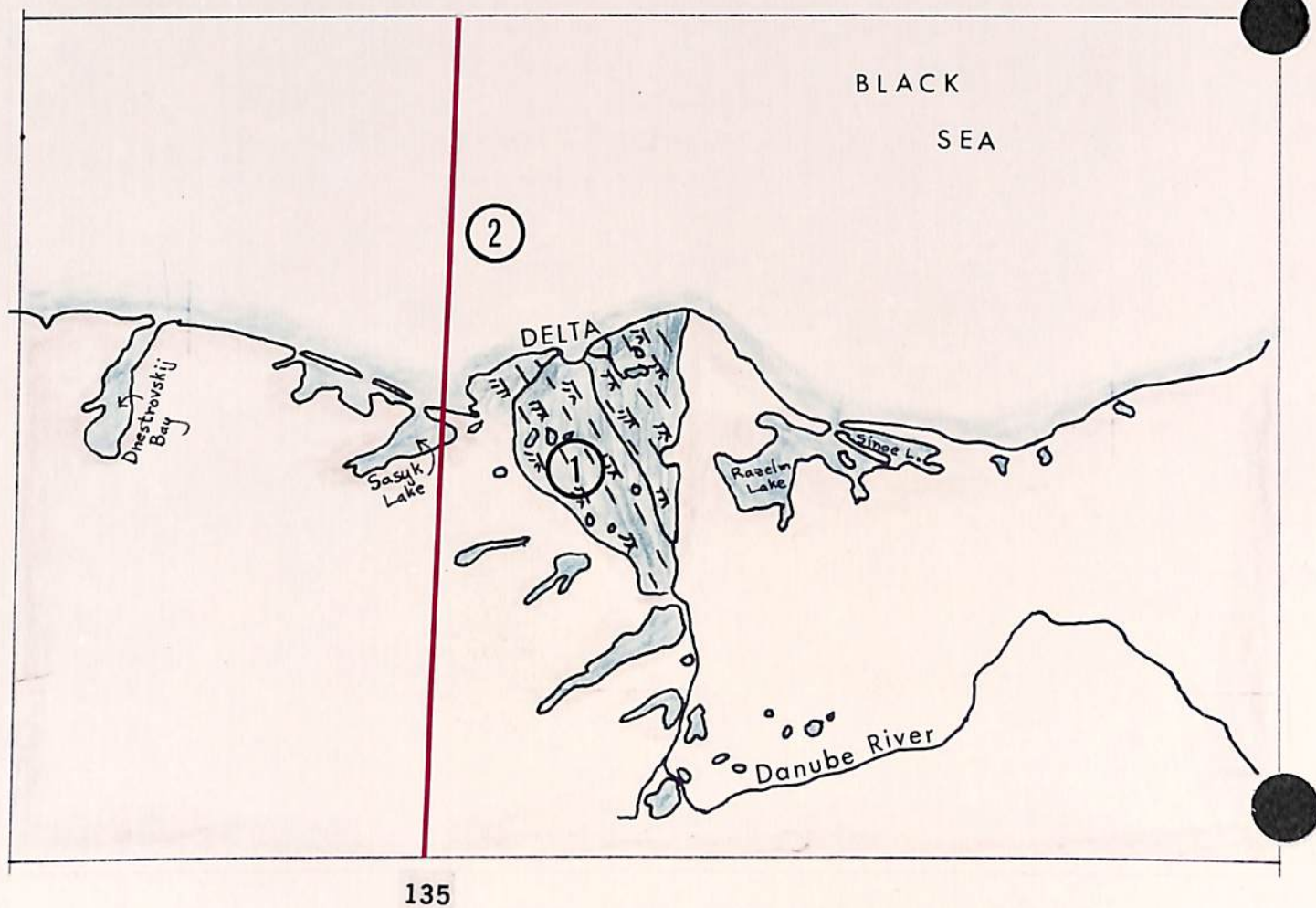
1. OBTAIN 3 STEREO PHOTOGRAPHS OF SNOW COVER PATTERNS.
2. CAN YOU DISTINGUISH ANY GLACIERS OR FIRN LINES?

REV 73: CM3/SILVER/50/CX14(f9.5,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

REV 88: CM3/SILVER/250/CX15(f9.5,1/500) 3FR,[RECORD LAST FR NO: PAGE 5]

REV 136: CM3/SILVER/250/IF02/ORANGE FILTER(f5.6,1/250) 3FR,[NEXT SITE: 90]

DANUBE DELTA

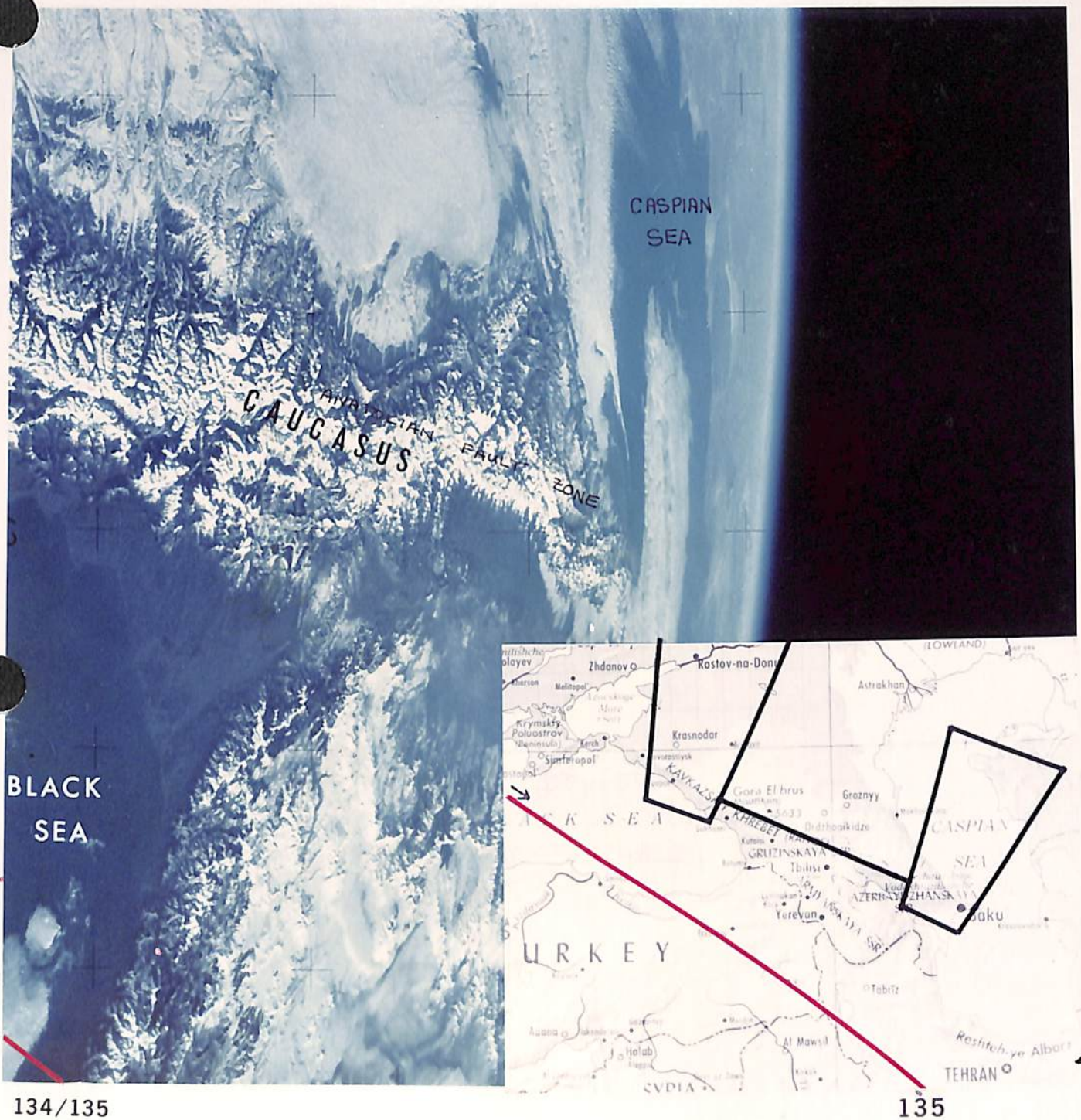


1. OBTAIN 3 STEREO PHOTOGRAPHS OF DANUBE DELTA.
2. CAN YOU SEE ANY SEDIMENT PLUMES IN THE BLACK SEA?

REV 135: CM3/SILVER/50/CX17(f5.6,1/500) 3FR,[NEXT SITE: 9N, CHANGE TO CM5]

ANATOLIAN FAULT

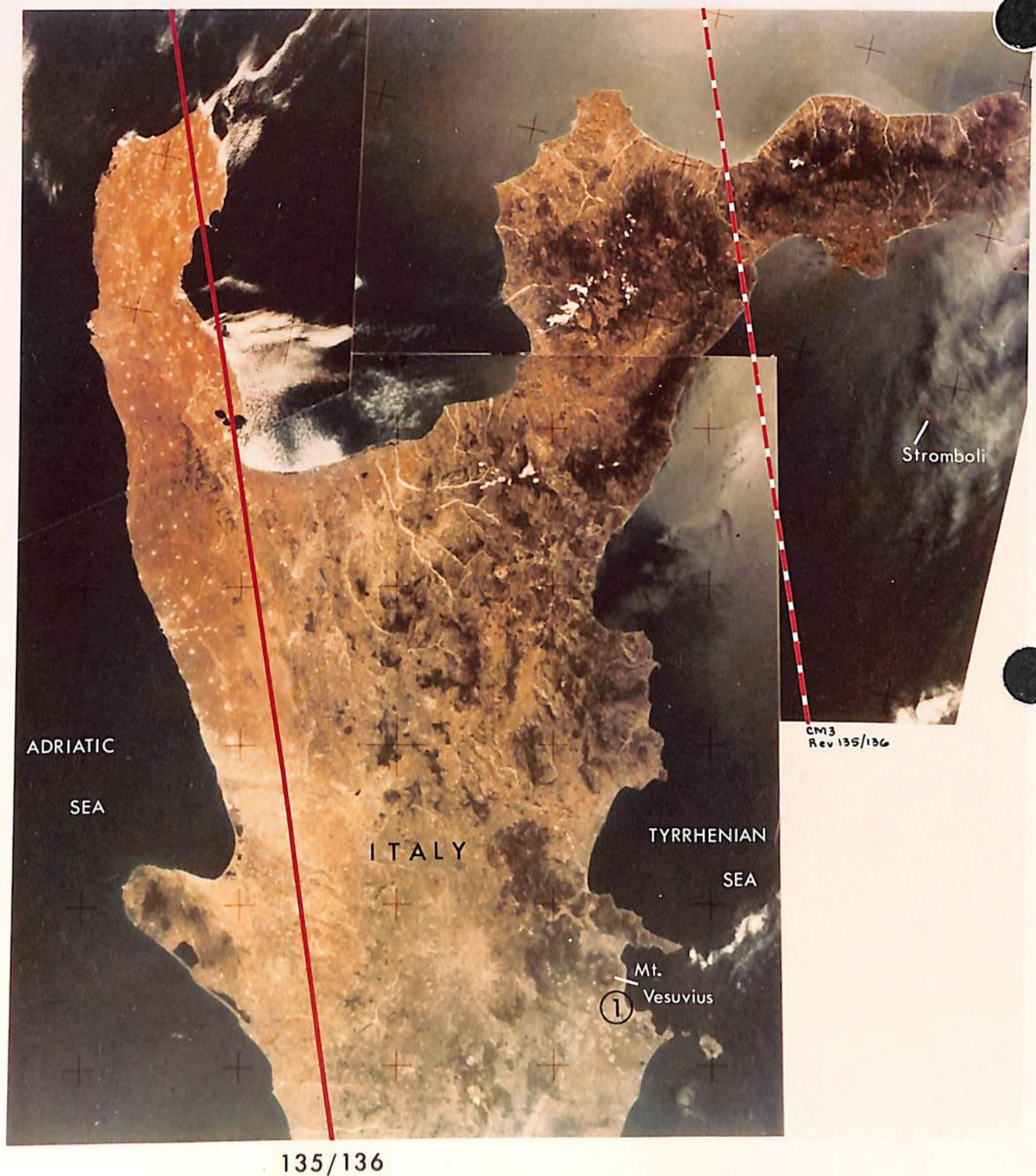
9N



1. OBTAIN 6 STEREO PHOTOGRAPHS OF THE ANATOLIAN FAULT ZONE.
(FRAME INTERVAL: 6 SECS)

2. CAN YOU SEE ANY SNOW COVER ON TOP OF THE PEAKS?

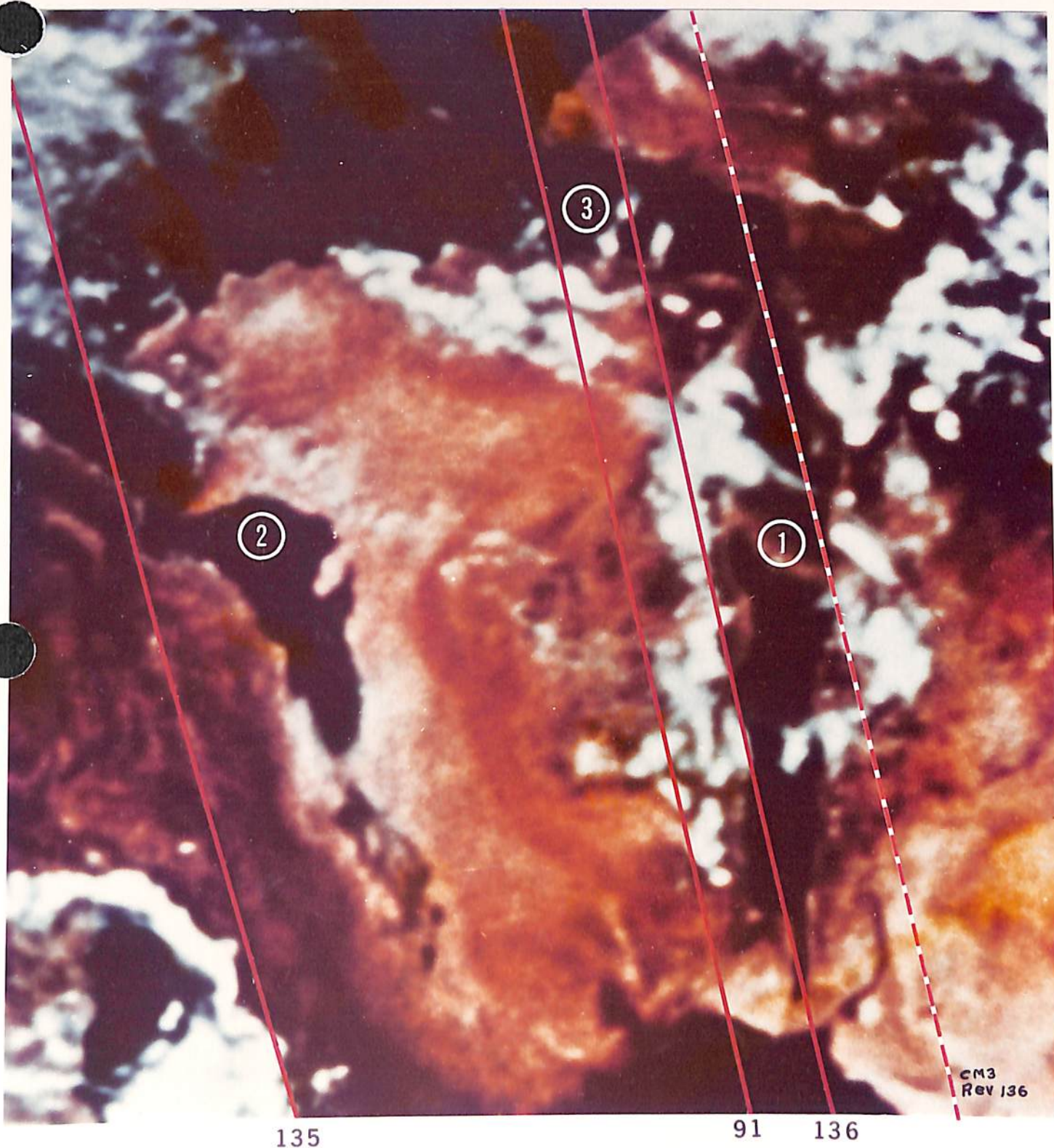
REV 135: CM5/SILVER/50/CX17(f5.6,1/500) 6FR,[NEXT SITE: 9P]



1. OBTAIN 3 STEREO PHOTOGRAPHS OF VESUVIUS AND OTHER DARK-COLORED VOLCANIC ROCKS.

IF02

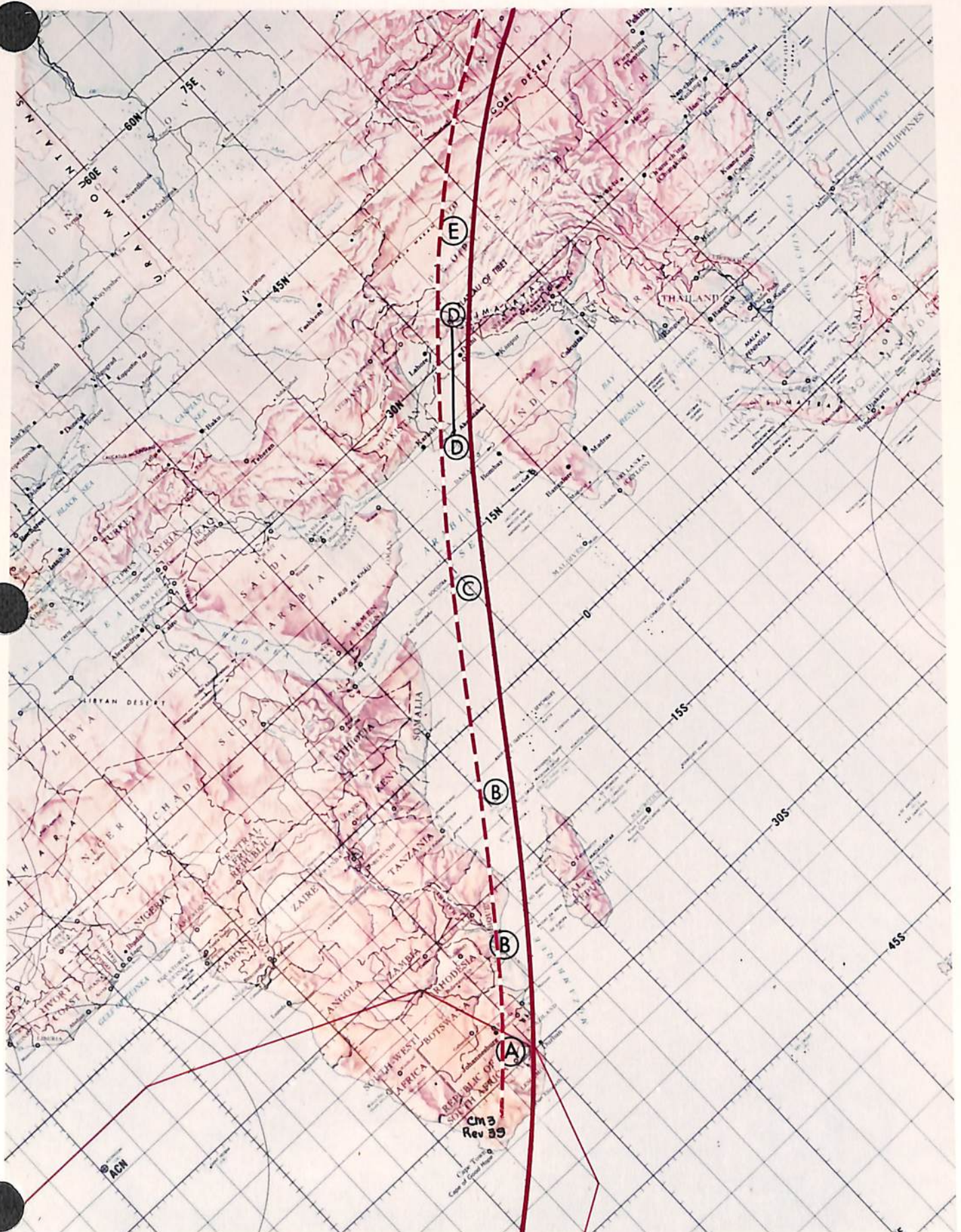
REV 136: CM3/SILVER/250/~~1101~~/ORANGE FILTER(f5.6,1/125) 6FR,[NEXT SITE: 9P]



MARK G.E.T. IF YOU SEE ANY FLICKERS OF LIGHT THAT MAY BE DUE TO BIOLUMINESCENCE IN:

1. REV 91: CM3/RED SEA [RECORD LAST FR NO: PAGE 5]
2. REV 135: CM3/PERSIAN GULF AND ARABIAN SEA [RECORD LAST FR NO: PAGE 5]
3. REV 136: CM3/RED SEA AND GULF OF ADEN [RECORD LAST FR NO: PAGE 5]

SITE 10: AFRICA AND INDIA



10A

GREAT DIKE

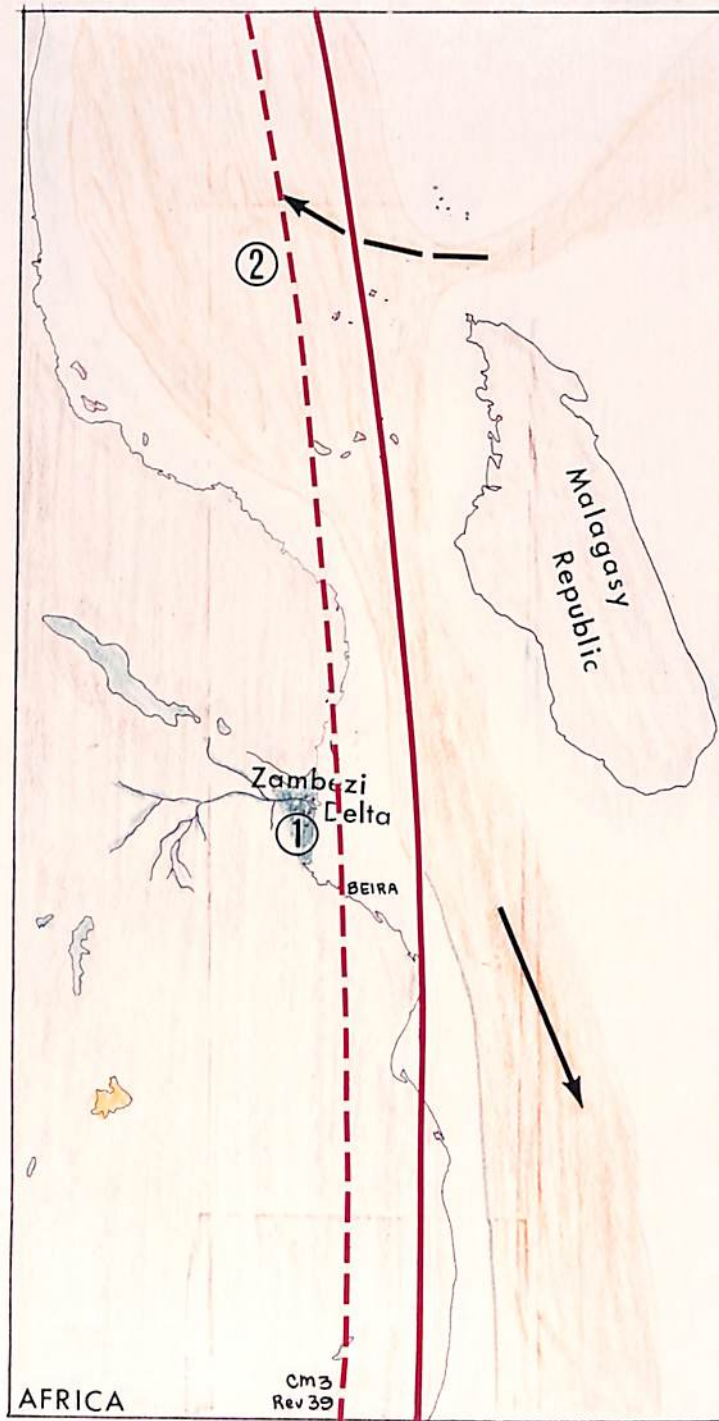


1. COMPARE THE COLOR OF THE GREAT DIKE TO THAT OF THE SURROUNDING ROCK.
2. OBTAIN 3 STEREO PHOTOGRAPHS OF THE DIKE.

REV 39: CM3/SILVER/50/IF01/ORANGE FILTER(f5.6,1/500) 3FR,[NEXT SITE: 10B]

SOMALI CURRENT

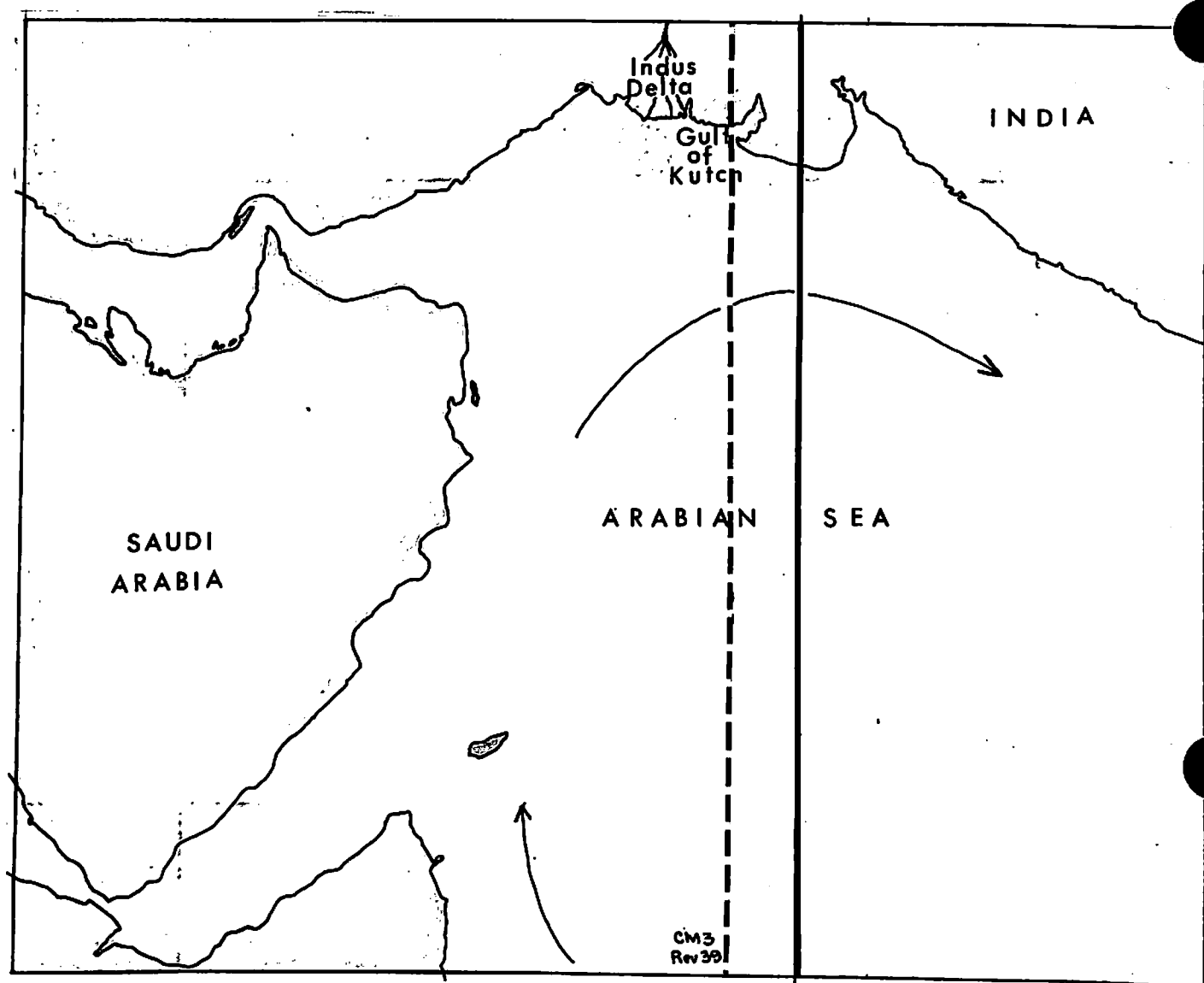
10B



39

1. OBTAIN 3 STEREO PHOTOGRAPHS OF ZAMBEZI RIVER DELTA.
2. OFF THE COAST OF AFRICA, CAN YOU SEE:
SEDIMENT PLUMES?
CURRENT BOUNDARIES?
INTERNAL WAVES?

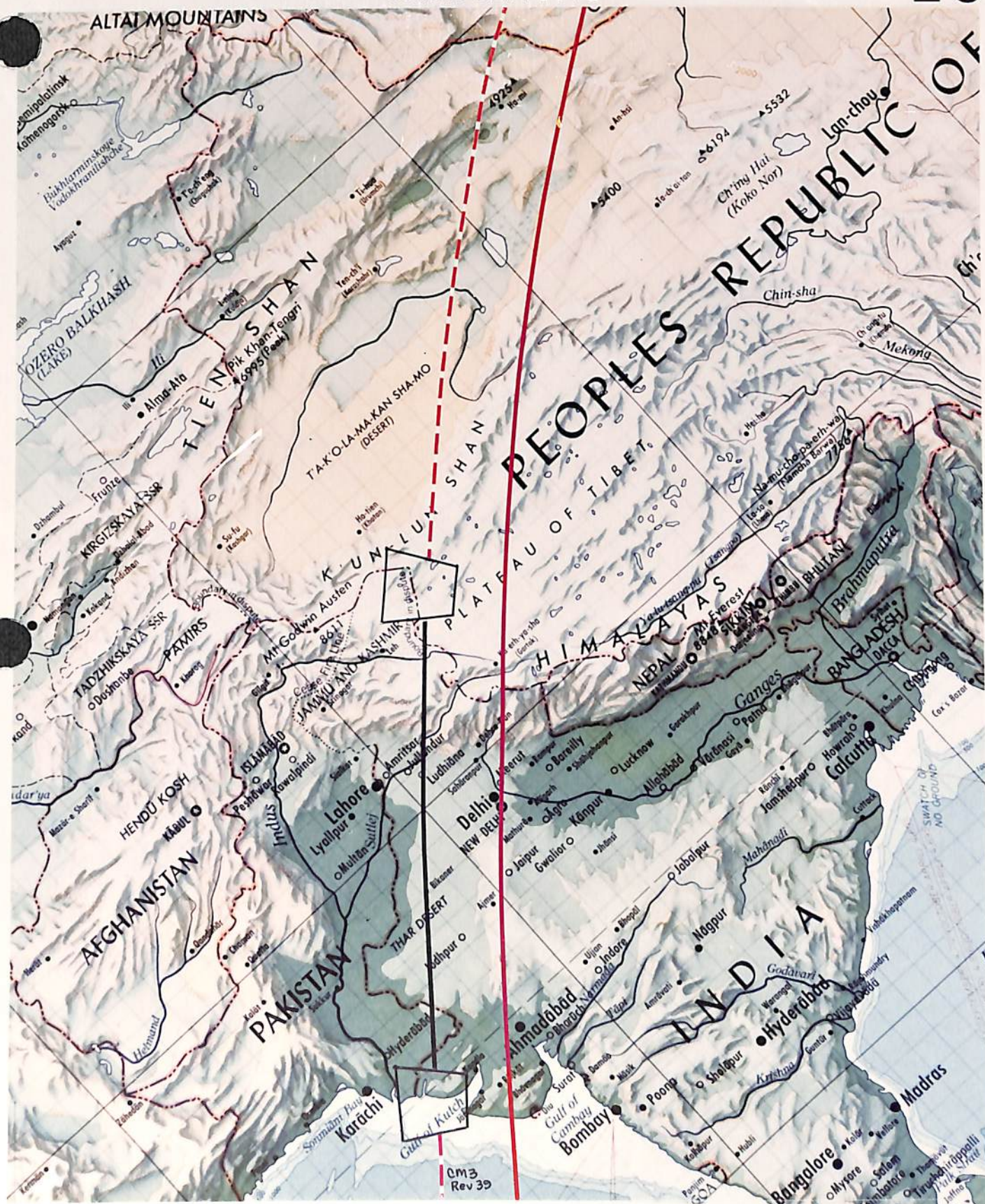
REV 39: CM3/SILVER/50/IF01/ORANGE FILTER(f6.7,1/500) 3FR,[NEXT SITE: 10C]



39

1. CAN YOU SEE CURRENT BOUNDARIES IN THE ARABIAN SEA?
2. OBTAIN 3 STEREO PHOTOGRAPHS OF INTERESTING FEATURES.

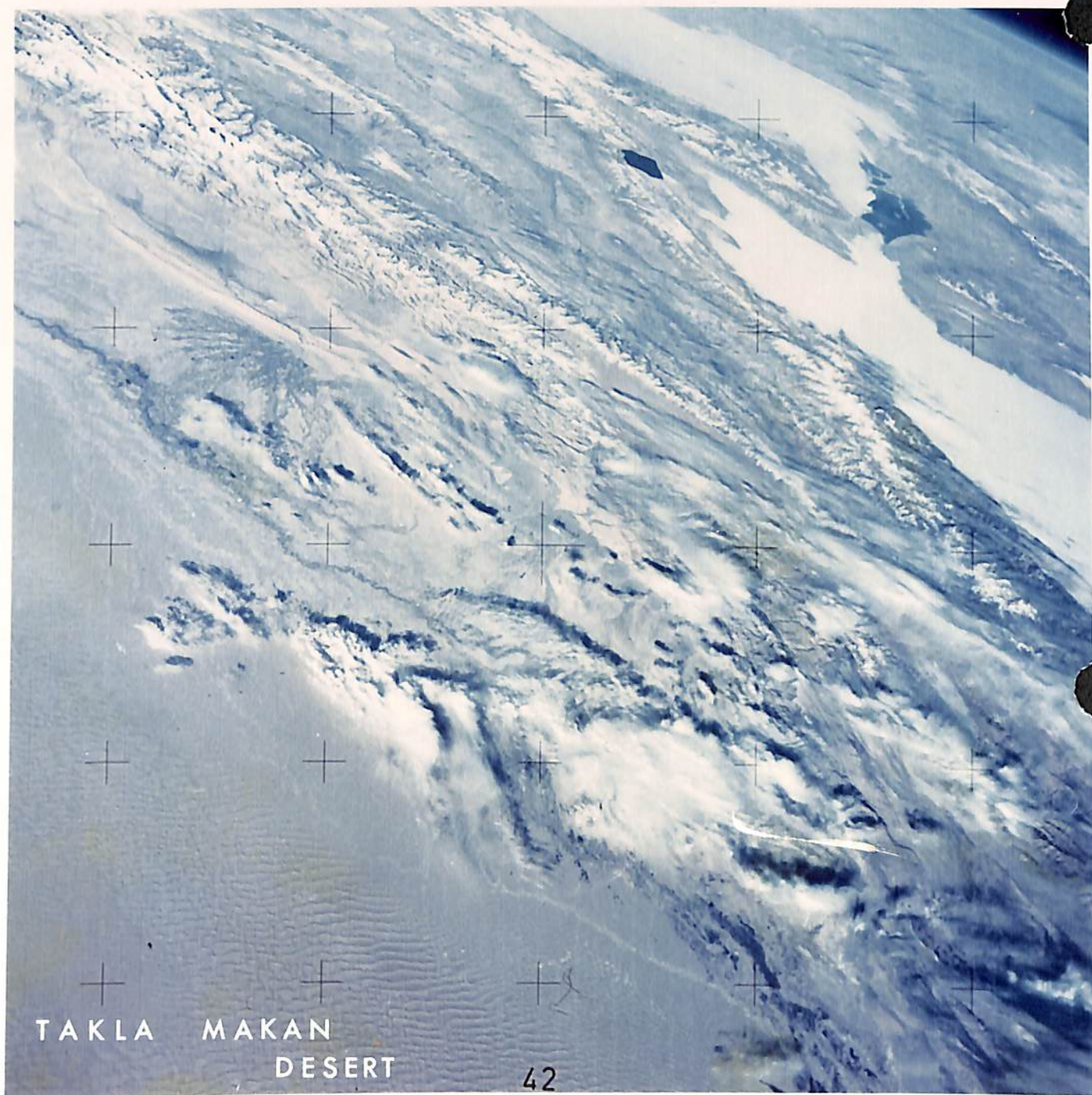
REV 39: CM3/SILVER/50/IF01/ORANGE FILTER(f6.7,1/500) 3FR,[NEXT SITE: 10D]



39

OBTAIN 20 PHOTOGRAPHS THROUGH CENTER OF CM3 ALONG SOLID BLACK LINE.
(FRAME INTERVAL: 10 SECS)

REV 39: CM3/SILVER/50/IF01/ORANGE FILTER(f8,1/500) 20FR,[NEXT SITE: 10E]



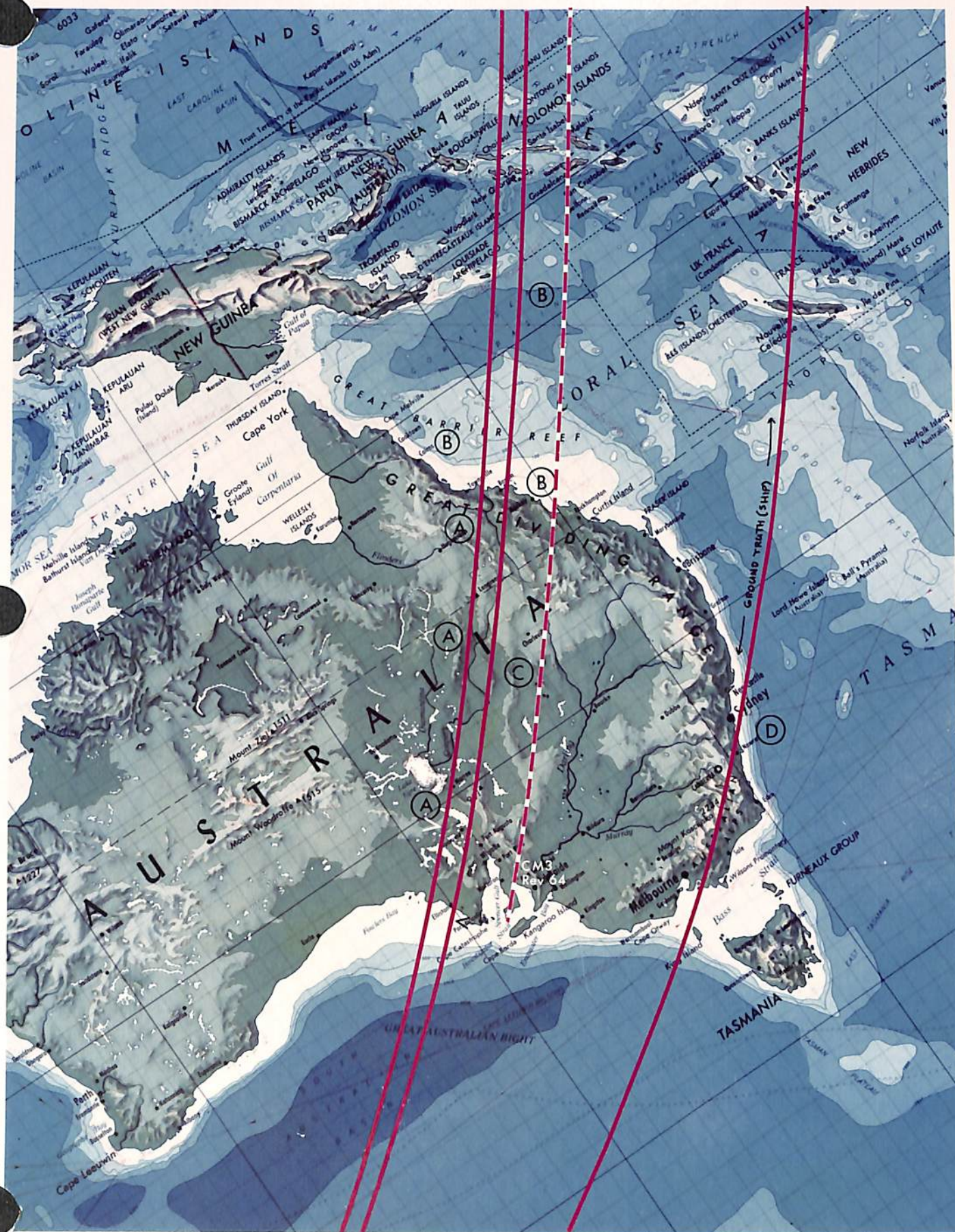
1. USE COLOR CHART TO DEFINE DESERT COLORS.

2. WHAT DUNE PATTERNS ARE PREDOMINANT AND DOES COLOR DEPEND ON DUNE PATTERNS?

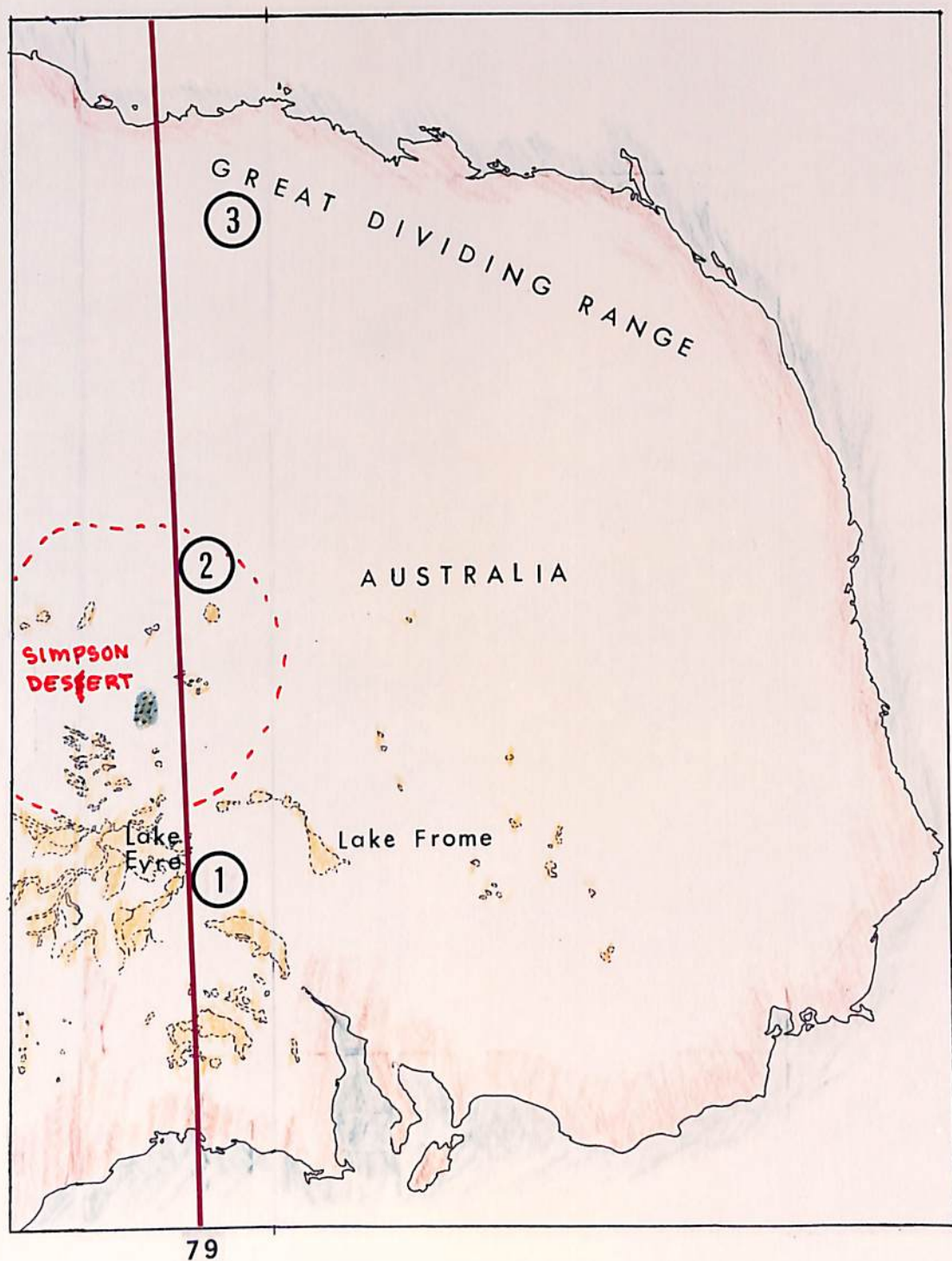
PHOTOGRAPHS; 3 STEREO FRAMES PER TARGET.

REV 39: CM3/SILVER/50/IF01/ORANGE FILTER(f8,1/500) 3FR,[RECORD LAST FR NO: PAGE 4]

SITE 11: AUSTRALIA

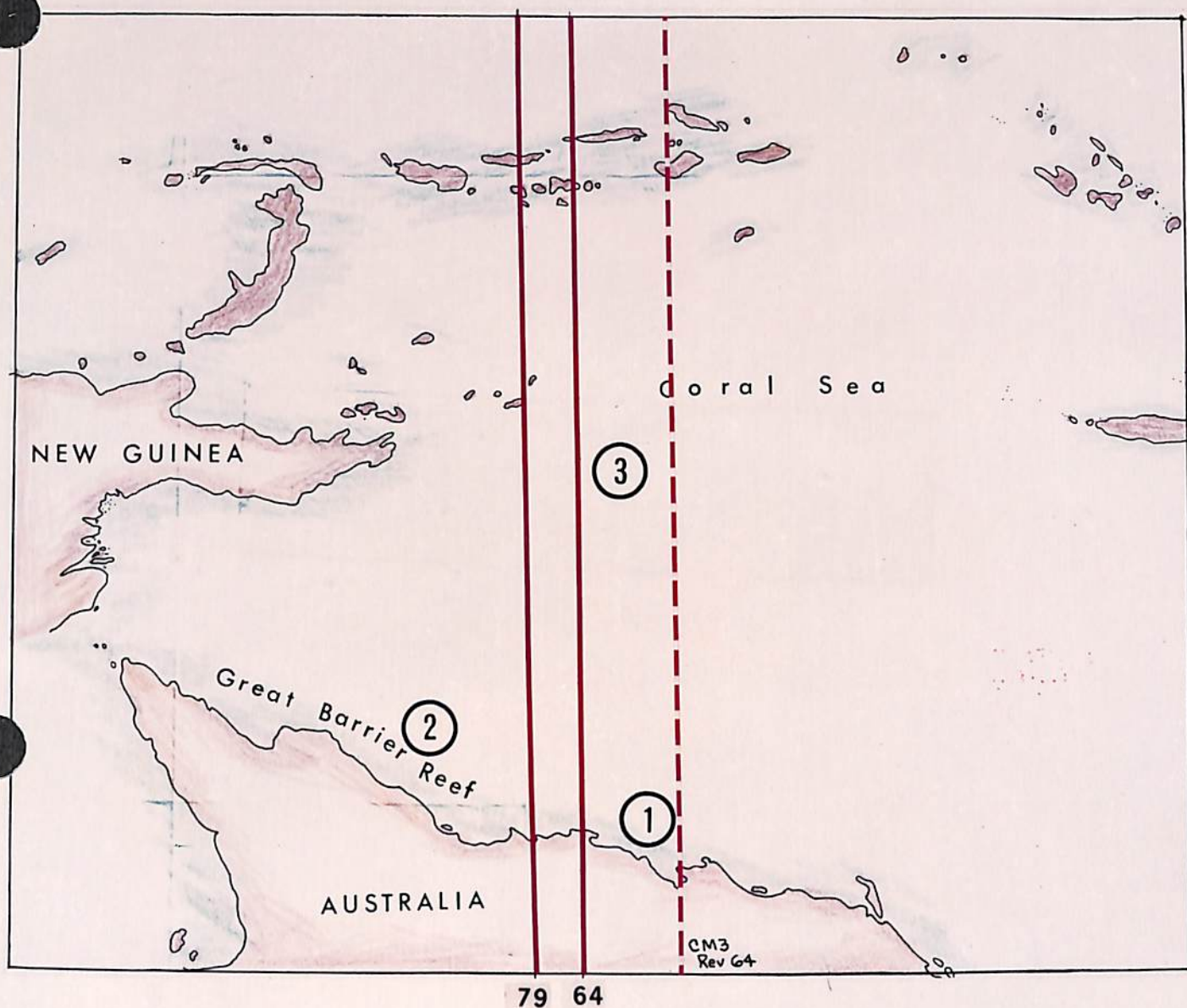


SITE 11



1. STUDY THE LAKE EYRE REGION AND COMPARE TO THE NIGER RIVER FALSE DELTA (SITE 9H).
2. DESCRIBE AND OBTAIN 3 STEREO PHOTOGRAPHS OF DESERT EROSION AND DUNE PATTERNS.
3. OBTAIN 3 STEREO PHOTOGRAPHS OF MAJOR LINEAMENTS IN THE GREAT DIVIDING RANGE.

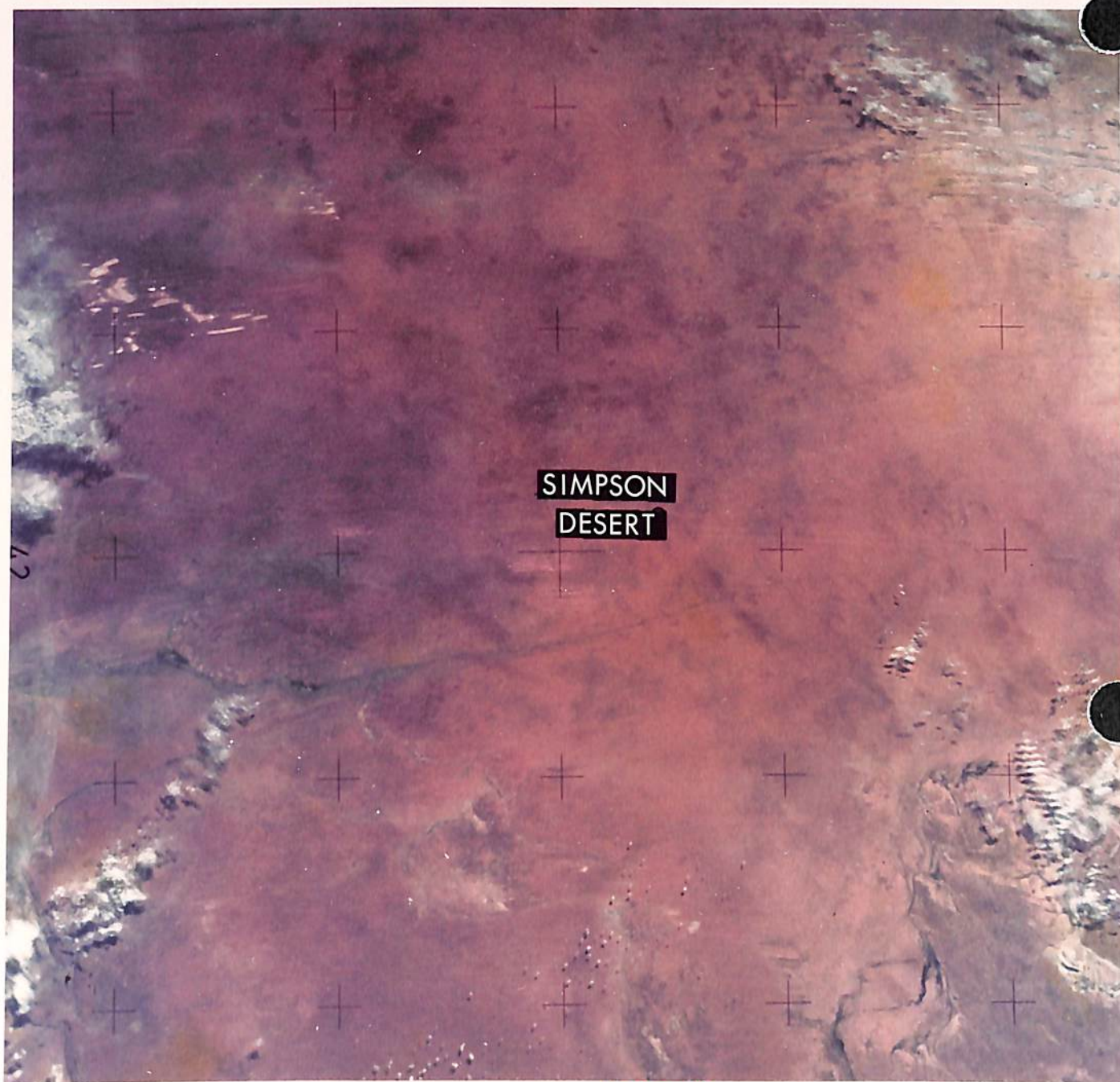
REV 79: CM3/SILVER/50/CX14(f9.5,1/500) 6FR,[NEXT SITE: 11B]



1. ARE THERE ANY SUSPENDED SEDIMENTS OFF THE COAST?
2. OBTAIN 3 STEREO PHOTOGRAPHS OF THE BARRIER REEF.
3. DO YOU SEE ANY WATER EDDIES IN THE CORAL SEA?
(CLOUD PATTERNS MAY BE USEFUL IN LOCATING EDDIES)

REV 64: CM3/SILVER/250/CX12(f8,1/500) 6FR,[NEXT SITE: 3A]

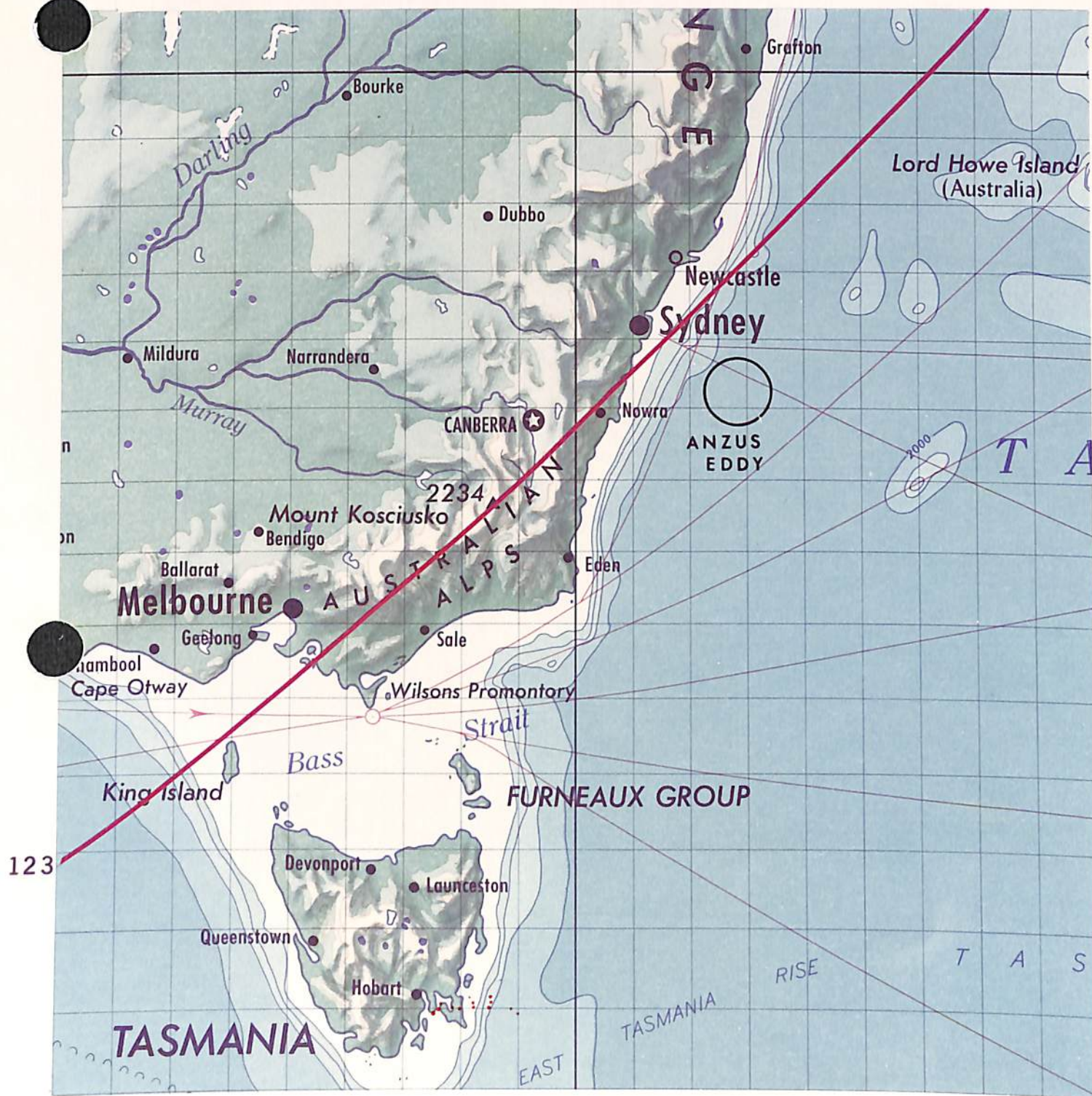
REV 79: CM3/SILVER/50/CX14(f8,1/500) 6FR,[NEXT SITE: 3A]



(SEE IIA)

1. USE COLOR CHART TO DEFINE DESERT COLORS.
2. ARE THERE ANY DISTINCT DUNE FIELDS?
3. IS COLOR RELATED TO DUNE TYPE, ORIENTATION OR PROBABLE SOURCE?

REV 64: CM3/SILVER/250/CX12(f8,1/250) 3FR,[NEXT SITE: 11B]



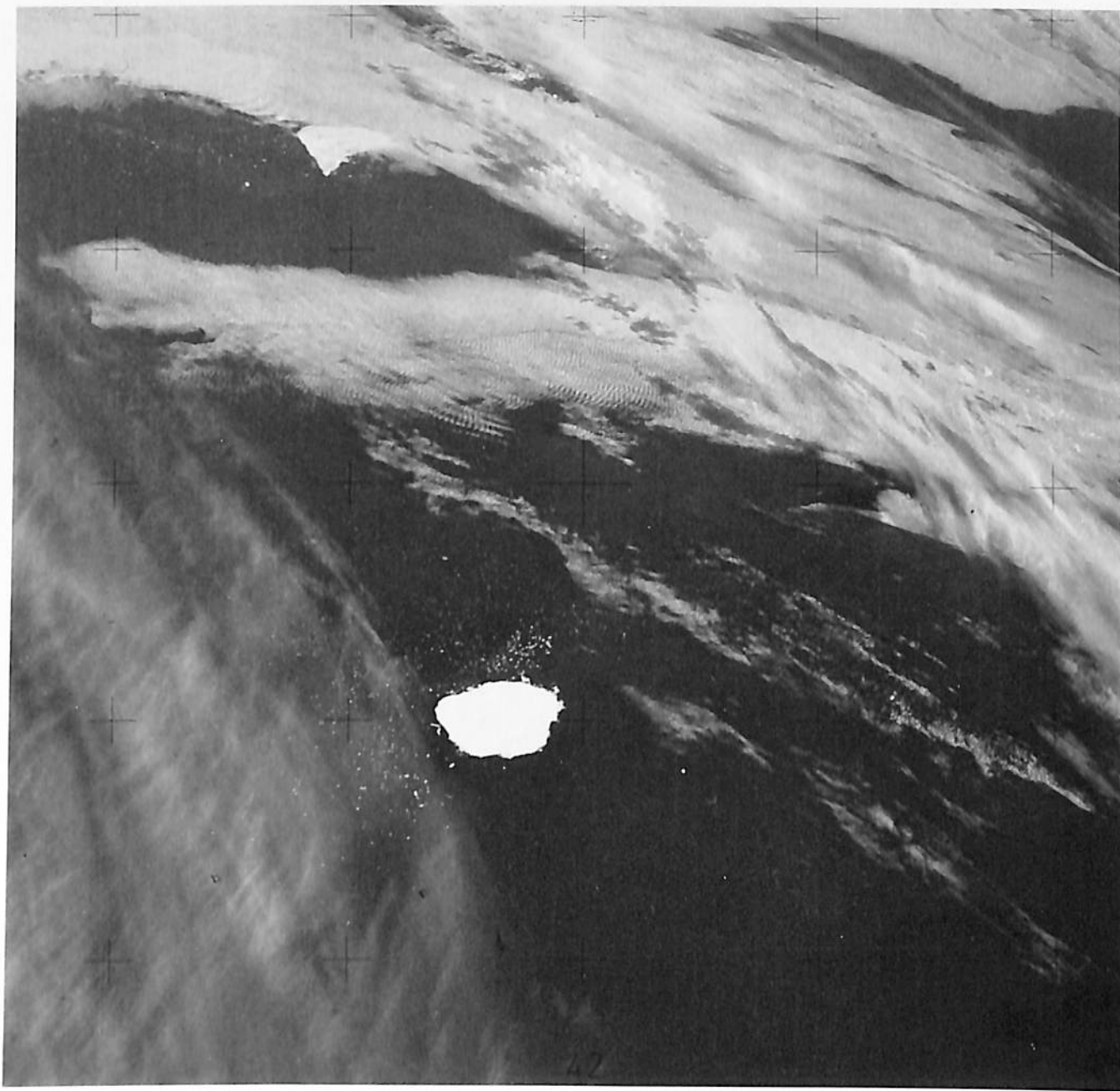
1. CAN YOU OBSERVE ANY MANIFESTATIONS OF THE "ANZUS EDDY"?
(LOOK FOR WATER COLOR, CLOUD PATTERNS OR SEA STATE)

2. OBTAIN 3 STEREO PHOTOGRAPHS OF AREA.

REV 123: CM3/SILVER/50/CX16(f4.7,1/250) 6FR,[RECORD LAST FR NO: PAGE 5]

SITE 12





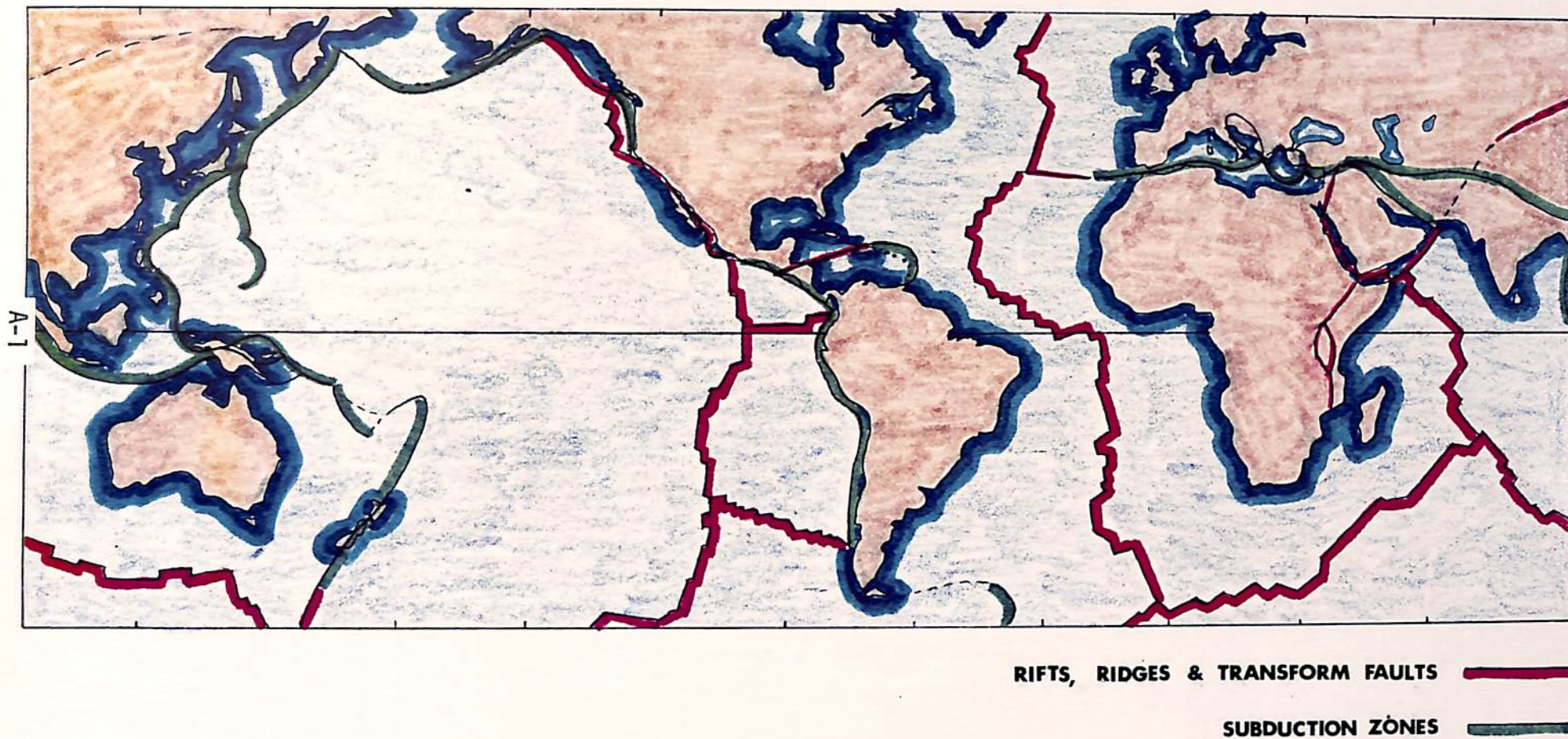
MARK GET OF ANY ICEBERG OBSERVATIONS

1. PHOTOGRAPH ICEBERGS AND ASSOCIATED SWARMS.
2. IS THERE ANY EVIDENCE OF BERG ROTATION?
3. IF YOU CAN SEE THE EDGE OF ANTARCTICA, OBTAIN 3 STEREO PHOTOGRAPHS.

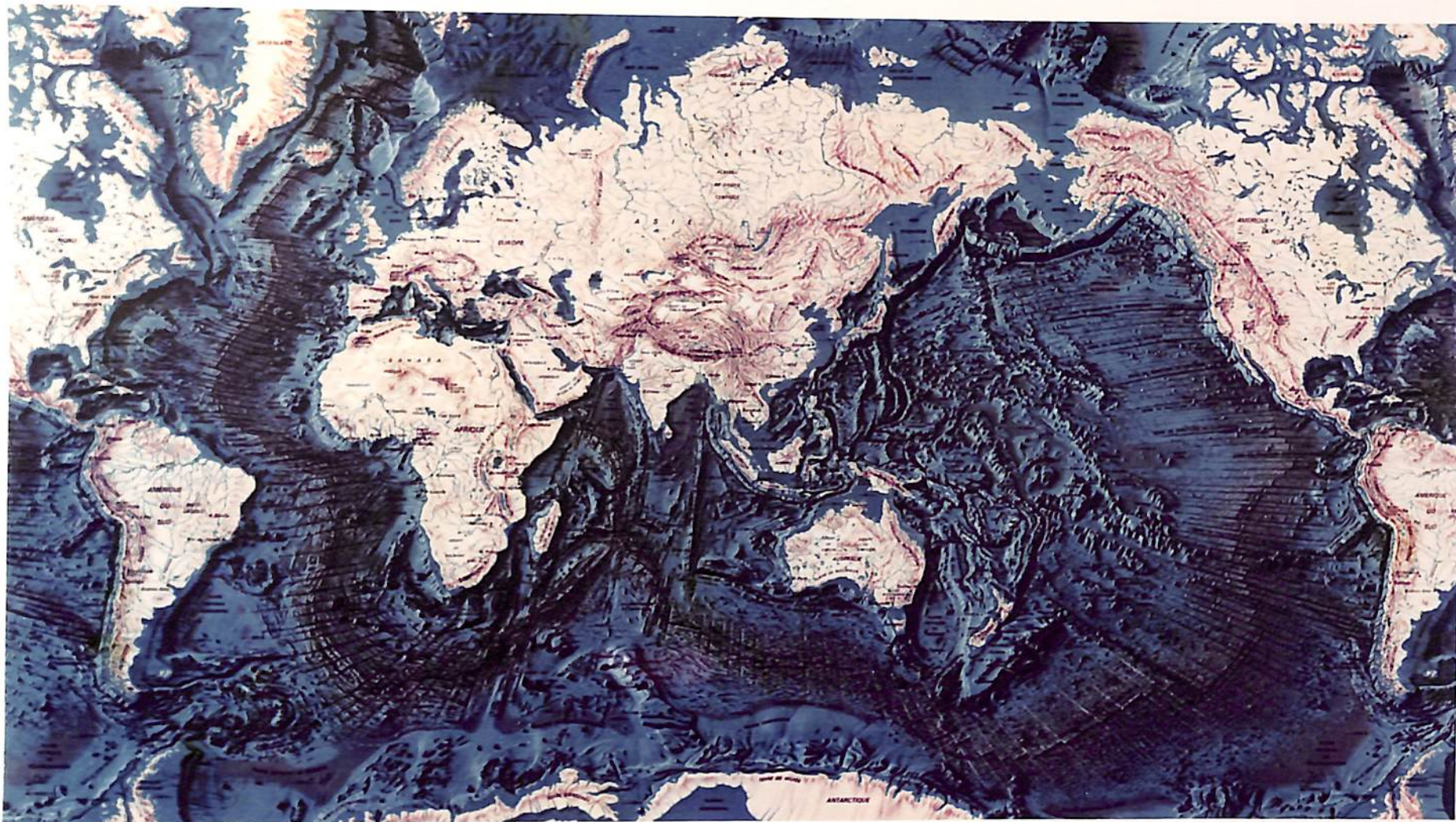
REV 17: CM3/SILVER/250/CX10(f6.7,1/250) 6FR,[NEXT SITE: 1]

REV 72: CM3/SILVER/250/CX12(f6.7,1/250) 6FR,[NEXT SITE: 8A]

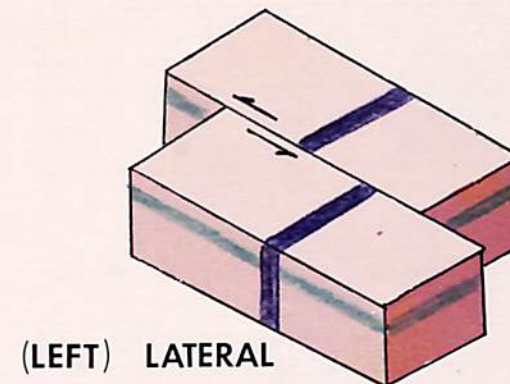
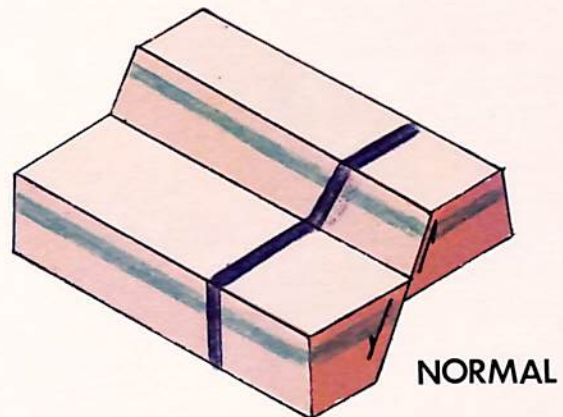
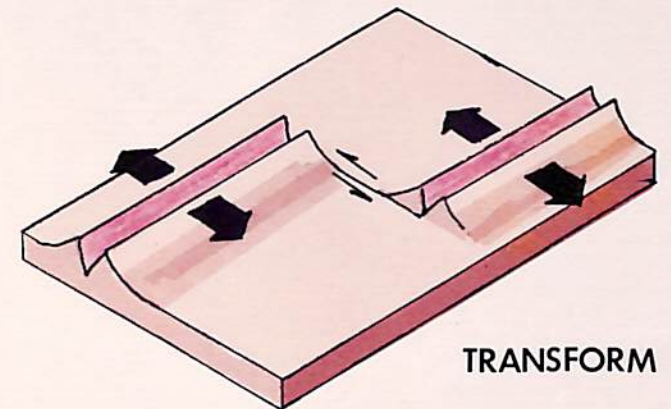
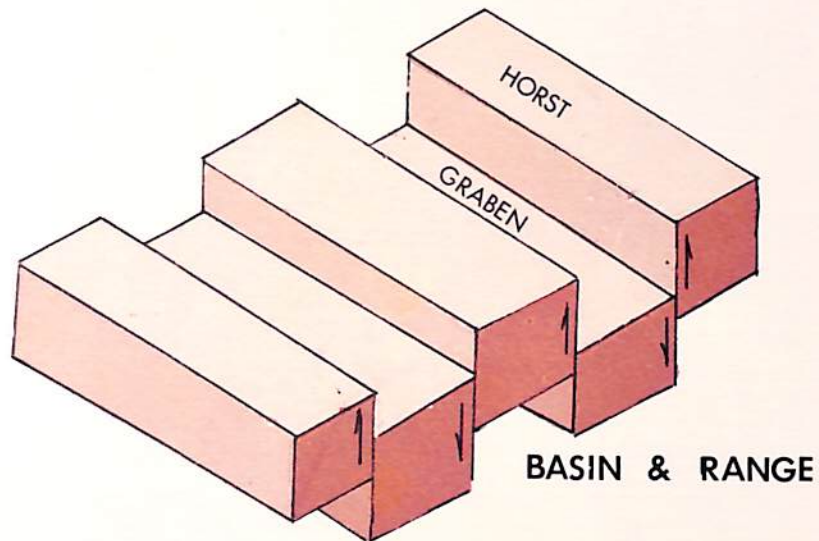
PLATE TECTONICS



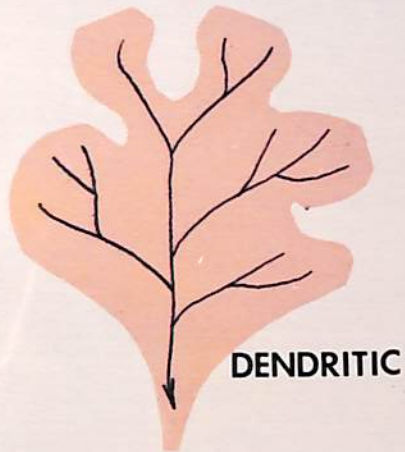
OCEAN FLOOR



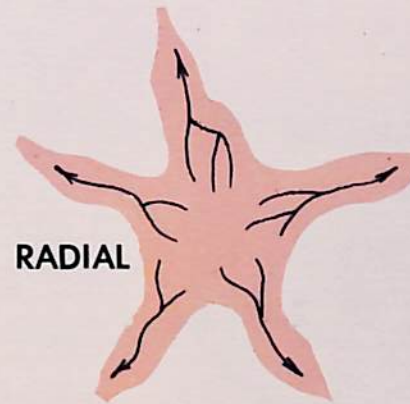
FAULTS



DRAINAGE PATTERNS



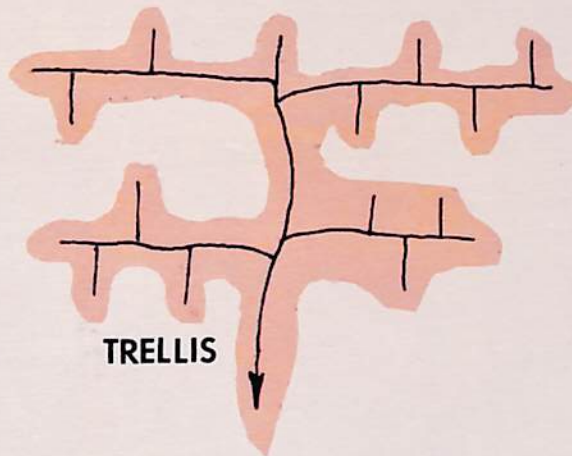
DENDRITIC



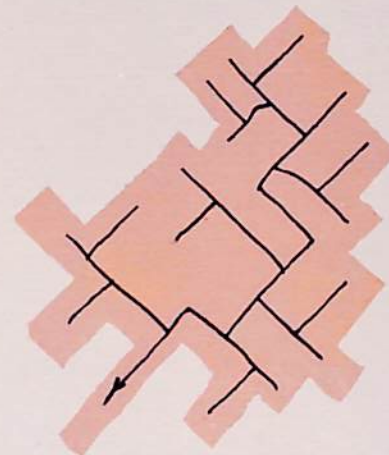
RADIAL



ANNULAR

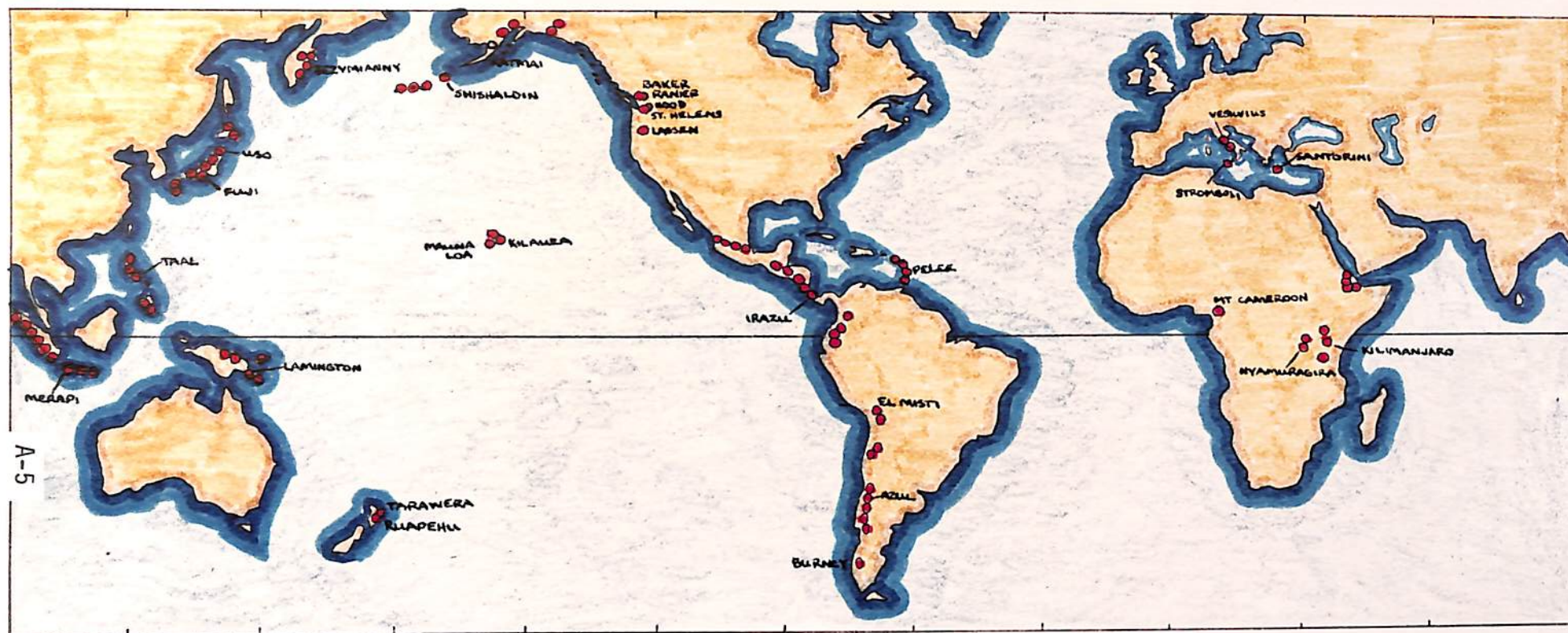


TRELLIS

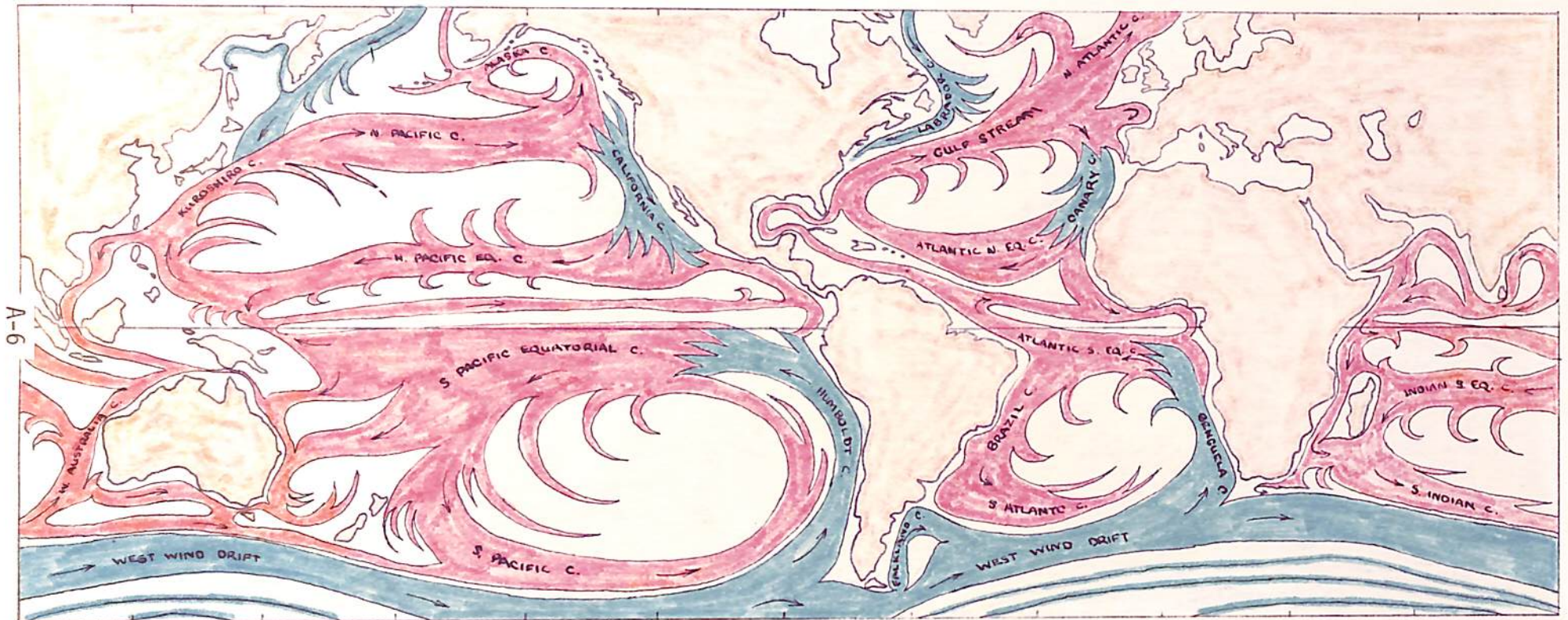


RECTANGULAR

VOLCANOES



OCEAN CURRENTS

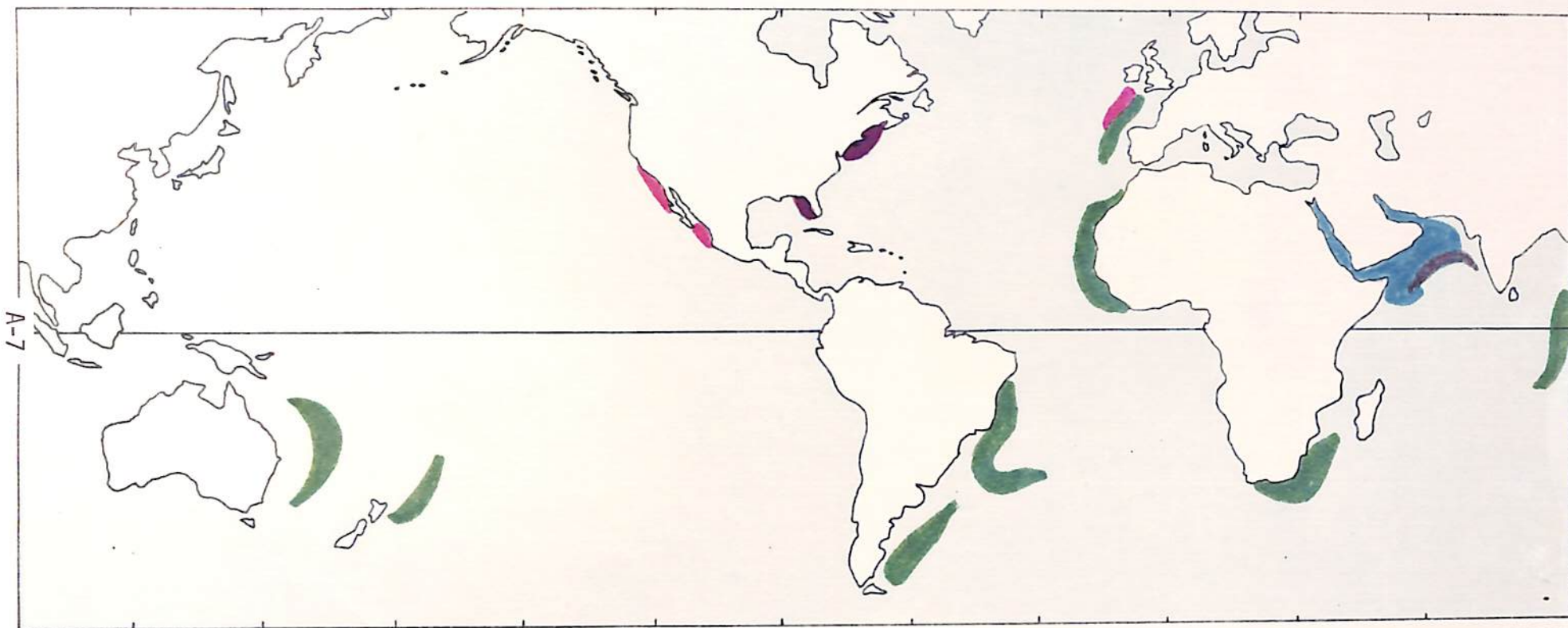


COLD

WARM



OCEAN BIOCOLORS



ZOÖPLANKTON



DIATOMS



DINOFLAGELLATES



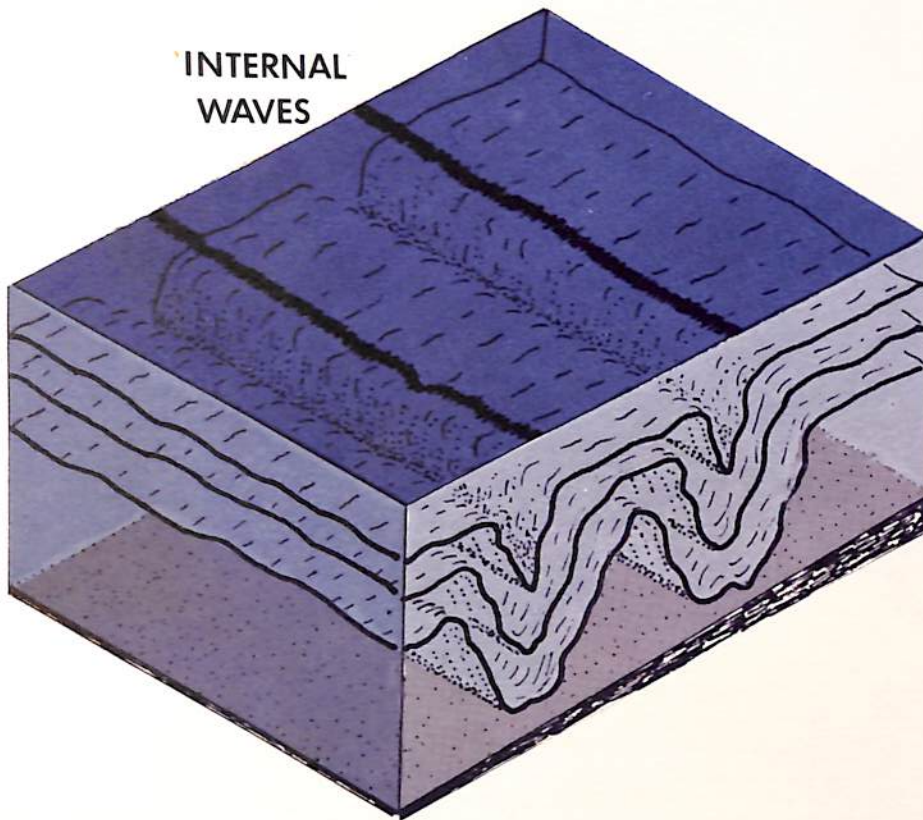
PHOSPHORESCENCE



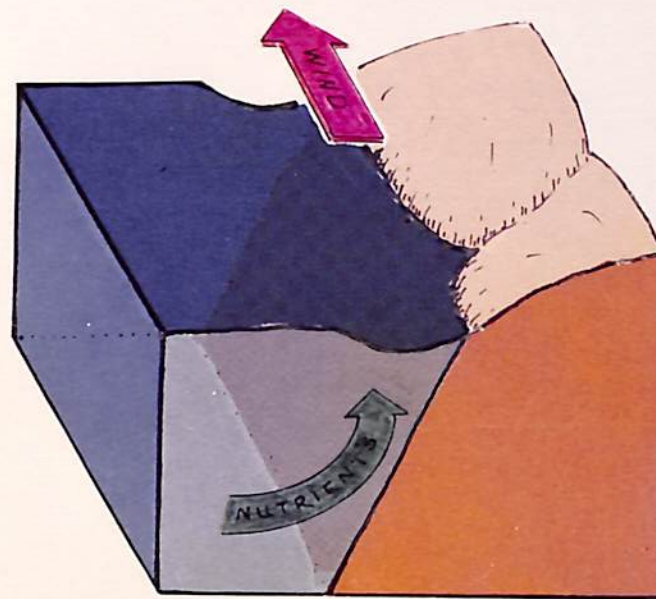
RED TIDE



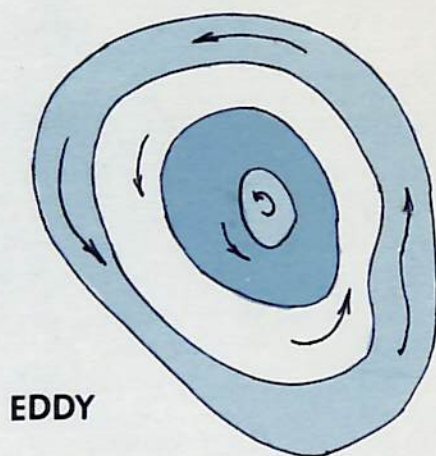
INTERNAL
WAVES



OCEAN PHENOMENA

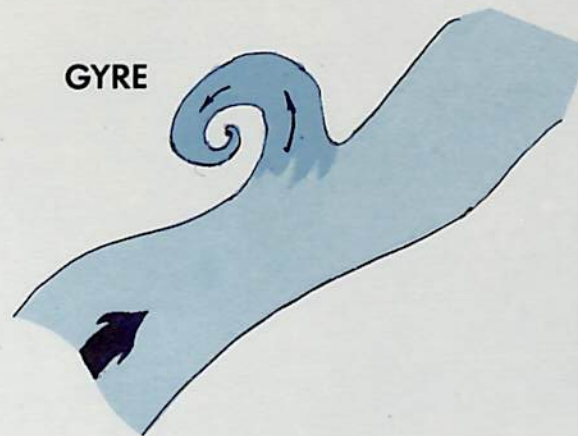


UPWELLING

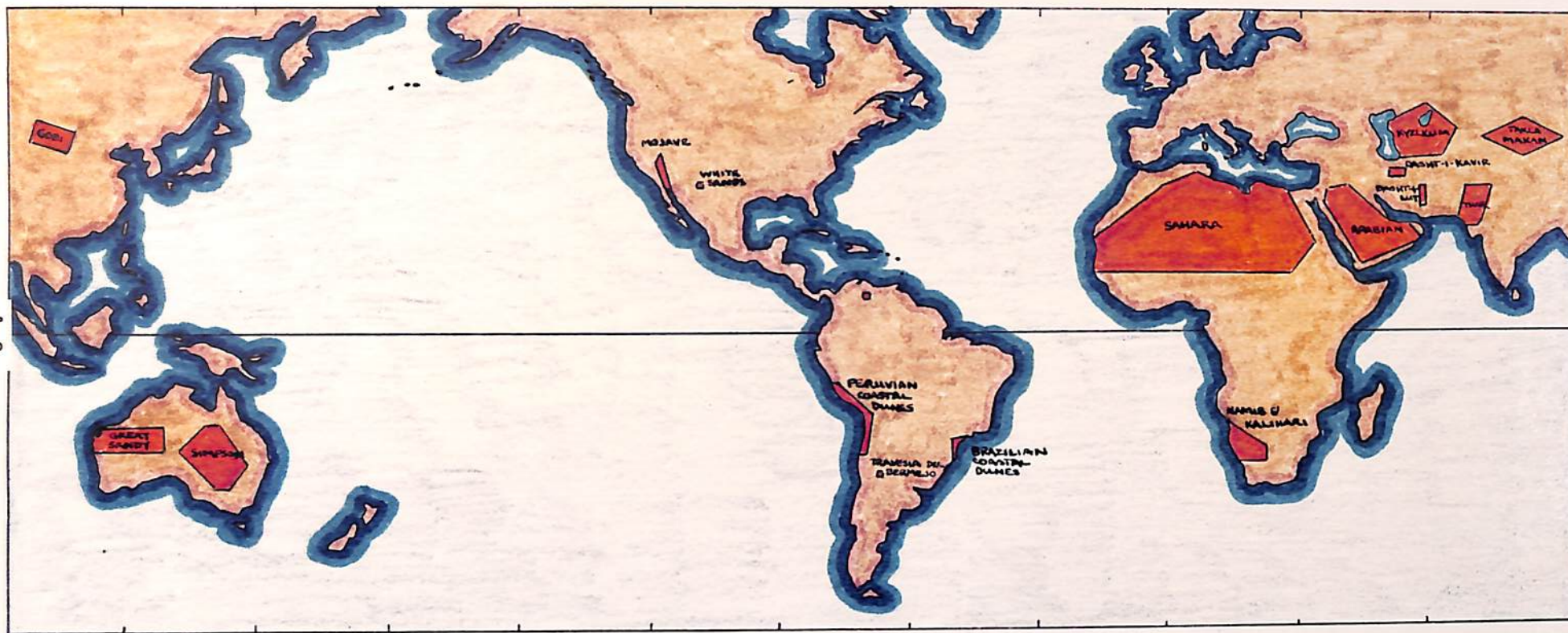


EDDY

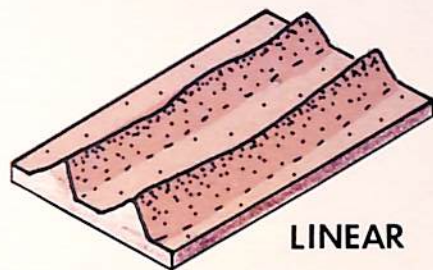
GYRE



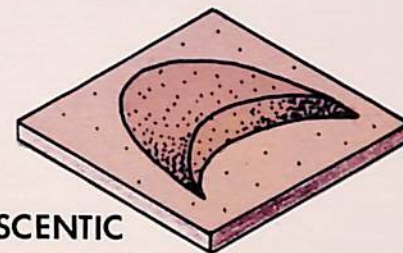
SAND SEAS



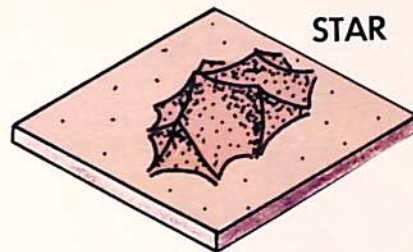
DUNES



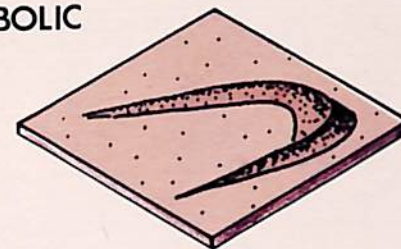
LINEAR



CRESCENTIC

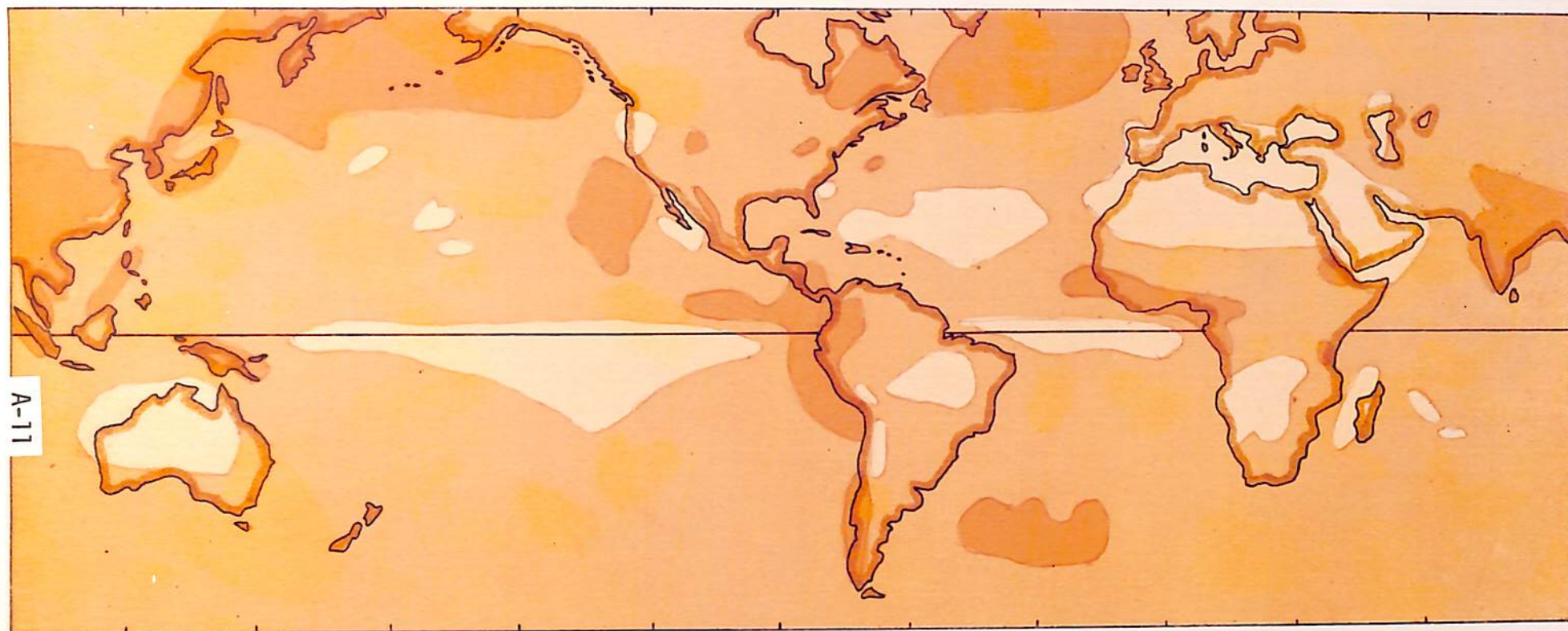


STAR



PARABOLIC

JULY CLOUD COVER



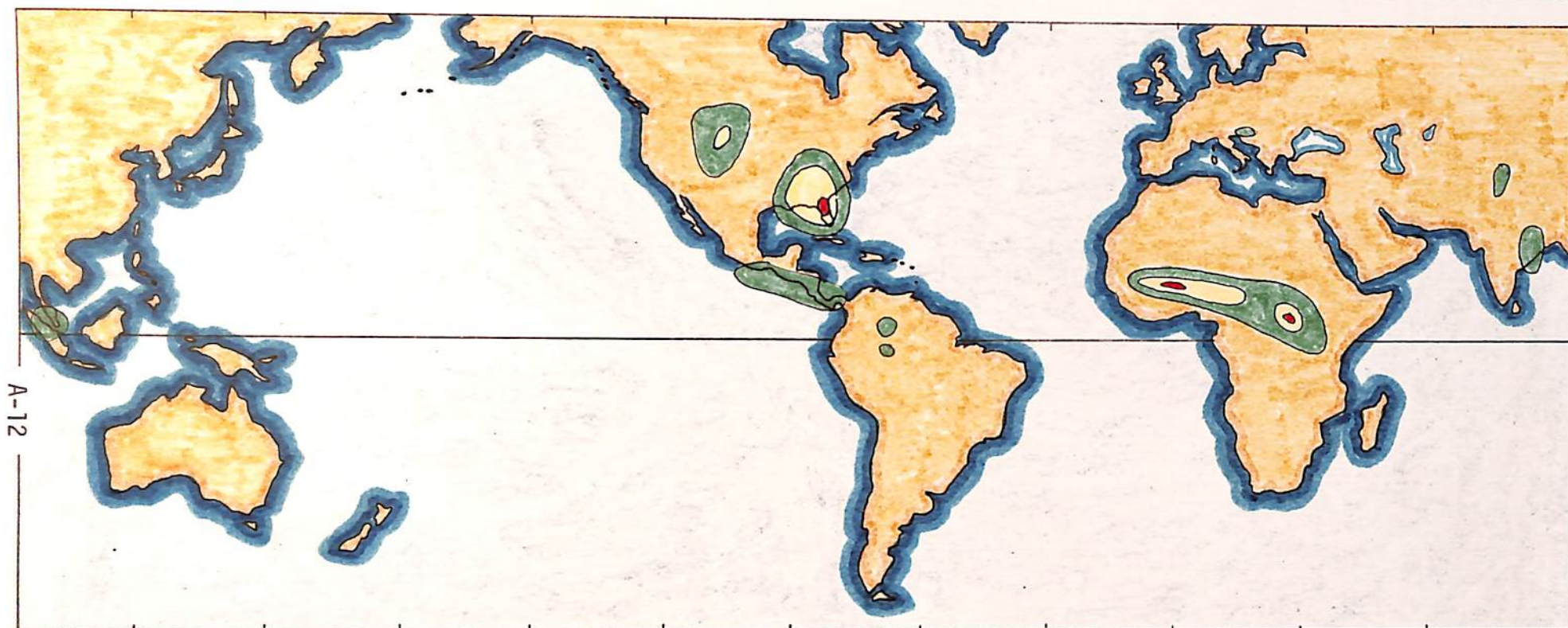
A-11

<30 %

30-70%

>70 %

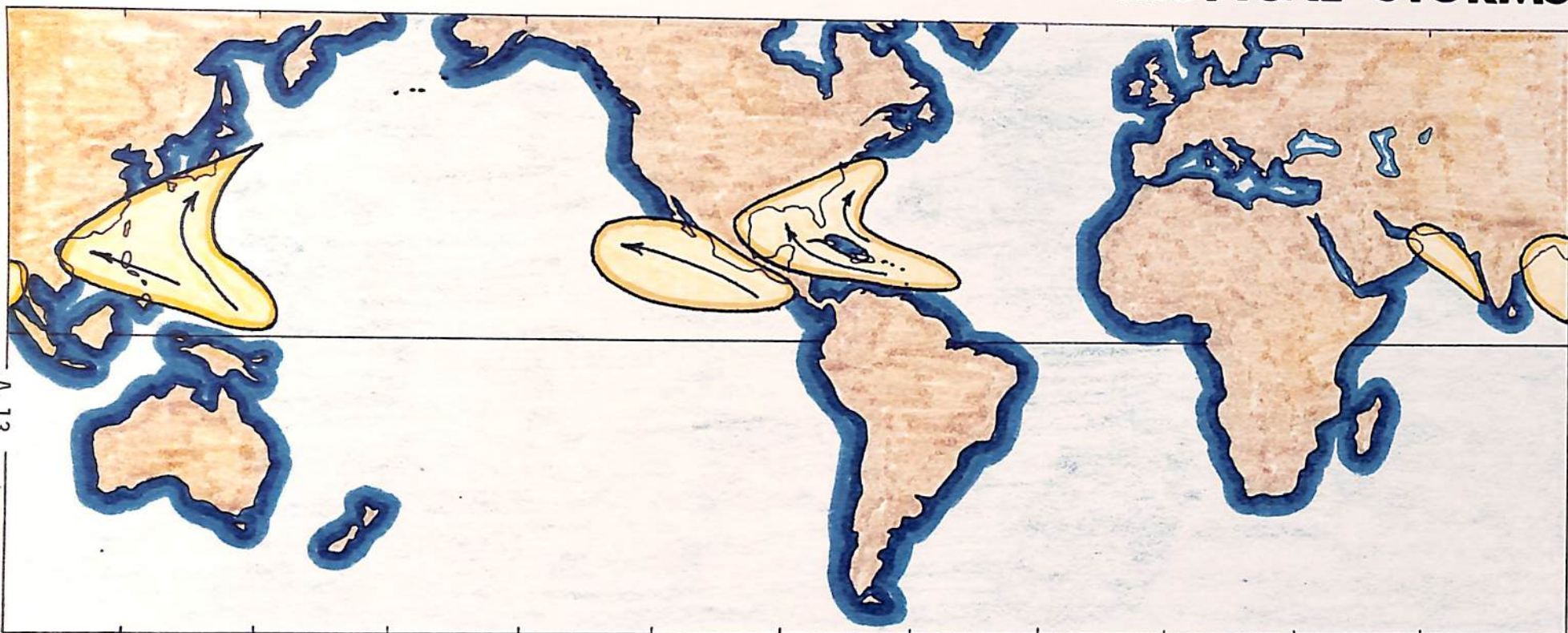
JULY THUNDERSTORMS



A-12



TROPICAL STORMS



A-13

TIMELINE AND MAPPING PAD

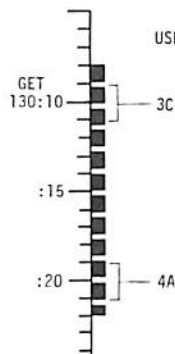
CONTINGENCY ONLY
(4th and 5th LAUNCH OPPORTUNITY)

☆☆ THIS PASS WILL BE SCHEDULED IN 4th OPP ONLY. ☆☆

DP

Rev. 33

USE VOICE RECORDER FOR VOICE COMMENTS

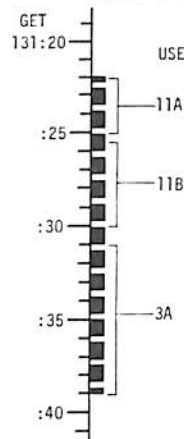


☆☆ THIS PASS WILL BE SCHEDULED IN 4th OPP ONLY. ☆☆

DP

Rev. 34

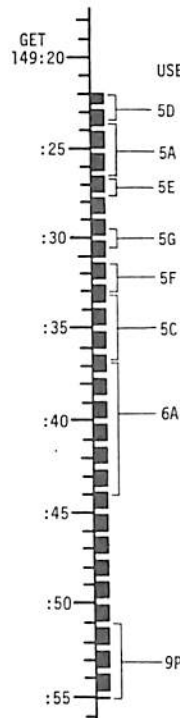
USE VOICE RECORDER FOR VOICE COMMENTS



DP

Rev. 90/91

USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS

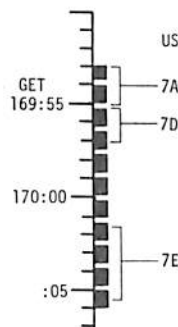


← ☆ THIS PASS WILL STOP HERE ☆
☆ DURING NO ATS CASE ONLY. ☆

AC

Rev. 104

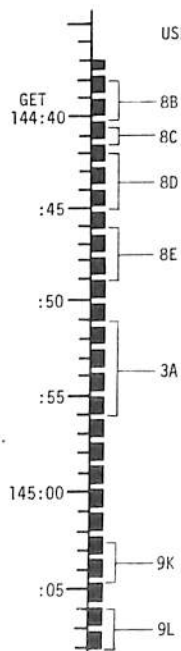
USE VOICE RECORDER FOR VOICE COMMENTS



AC

Rev. 88

USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS

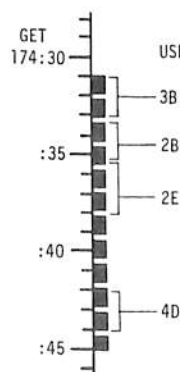


← ☆ THIS PASS WILL STOP HERE ☆
☆ DURING NO ATS CASE ONLY. ☆

CP

Rev. 106/107

USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS



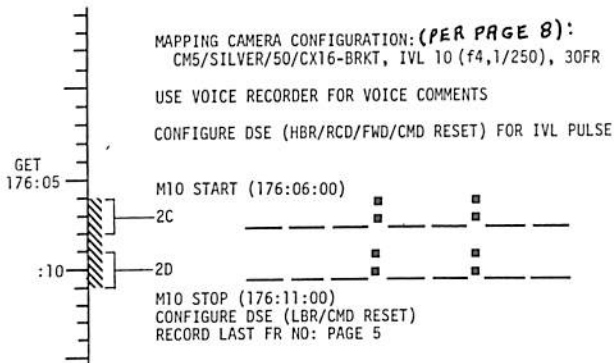
TIMELINE AND MAPPING PAD

CONTINGENCY ONLY
(4th and 5th LAUNCH OPPORTUNITY)

CP

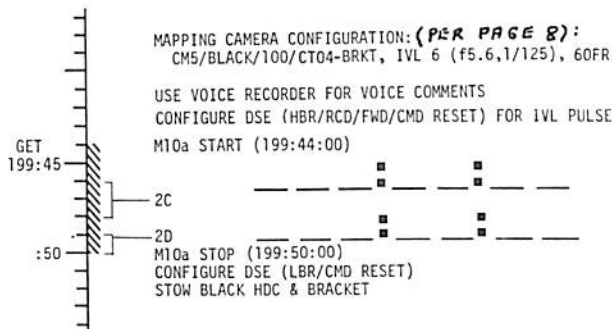
Rev. 107

M10



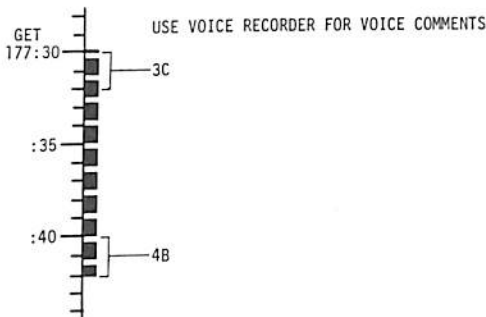
CP

Rev. 122 (9A) M10a



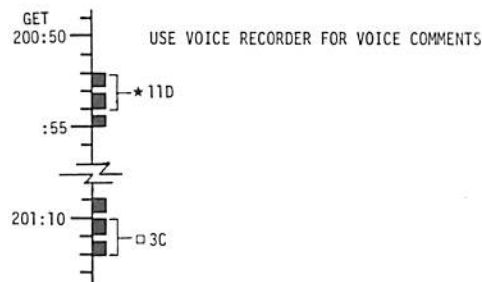
CP

Rev. 108



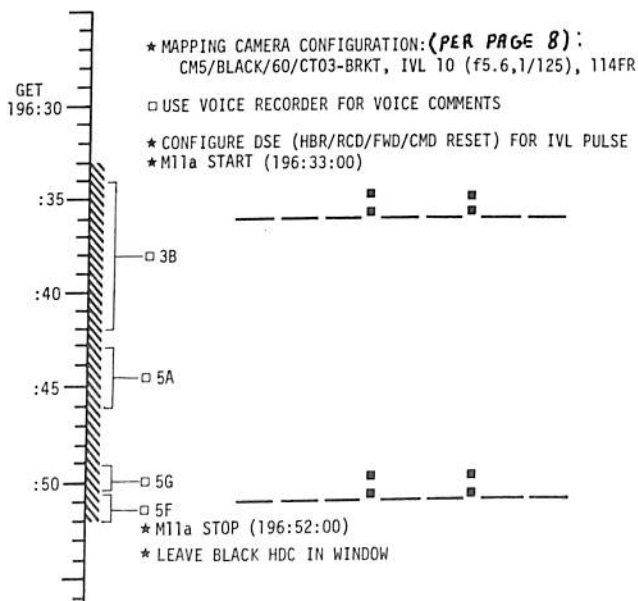
DP-★
CP-□

Rev. 123 (9A)



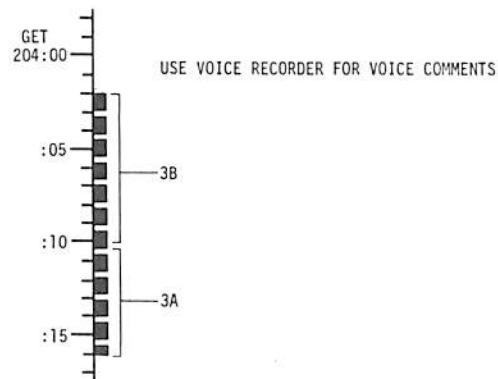
CP-★
DP-□

Rev. 120/121 (9A) M11a



CP

Rev. 125 (9A)

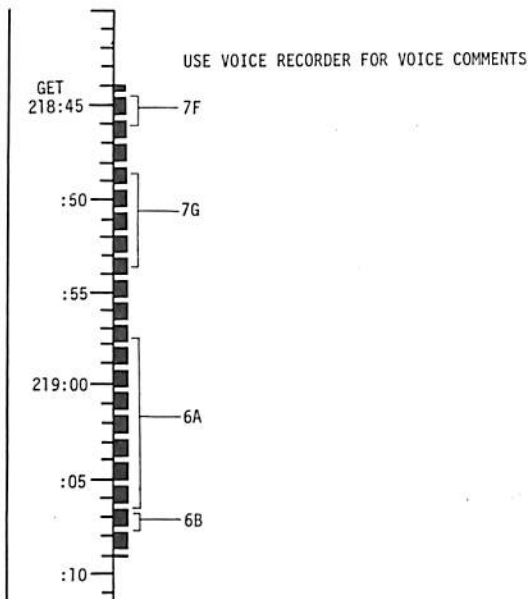


TIMELINE AND MAPPING PAD

CONTINGENCY ONLY
(4th and 5th LAUNCH OPPORTUNITY)

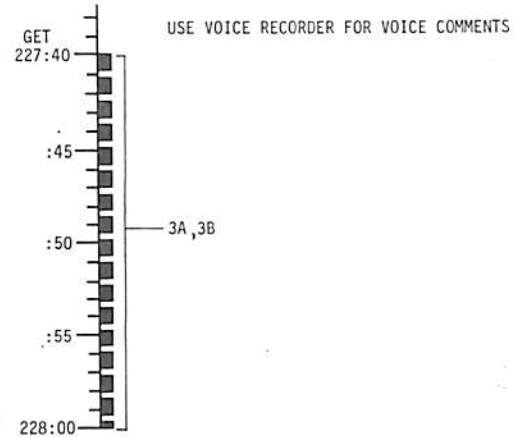
AC

Rev. 134/135 (9B)

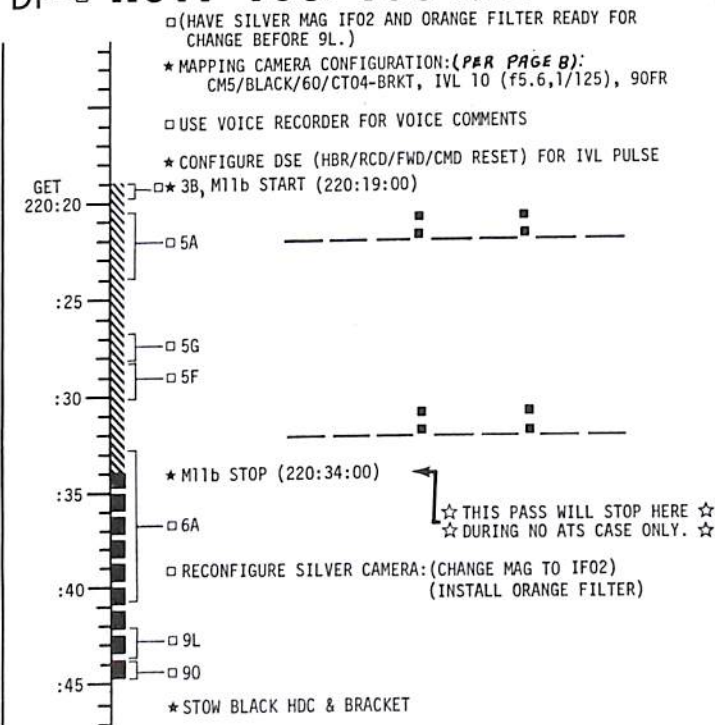


DP

Rev. 140 (9B)

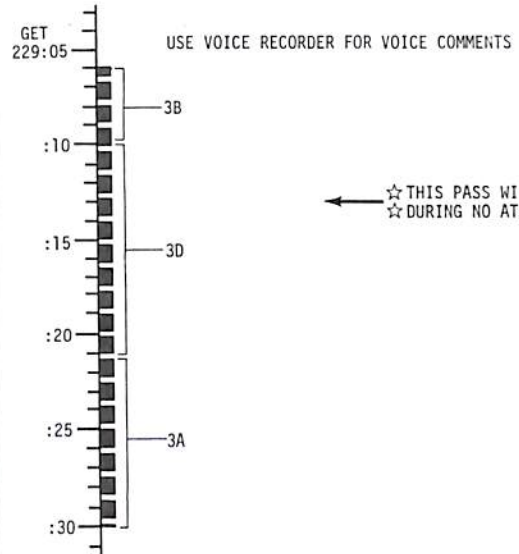


CP-★ **Rev. 135/136 (9B) M11b**
DP-□



CP

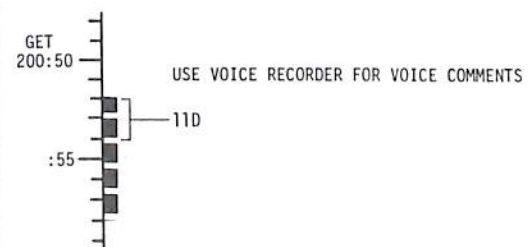
Rev. 141 (9B)



← ☆ THIS PASS WILL START HERE ☆
☆ DURING NO ATS CASE ONLY. ☆

DP

Rev. 123

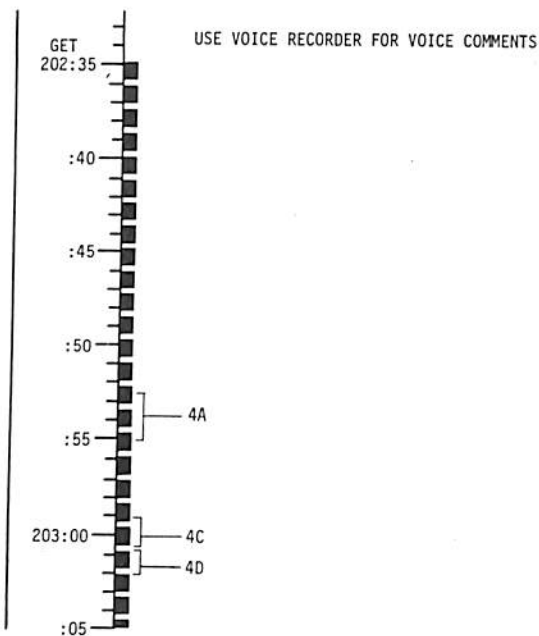


TIMELINE AND MAPPING PAD

CONTINGENCY ONLY
(4th and 5th LAUNCH OPPORTUNITY)

CP

Rev. 124

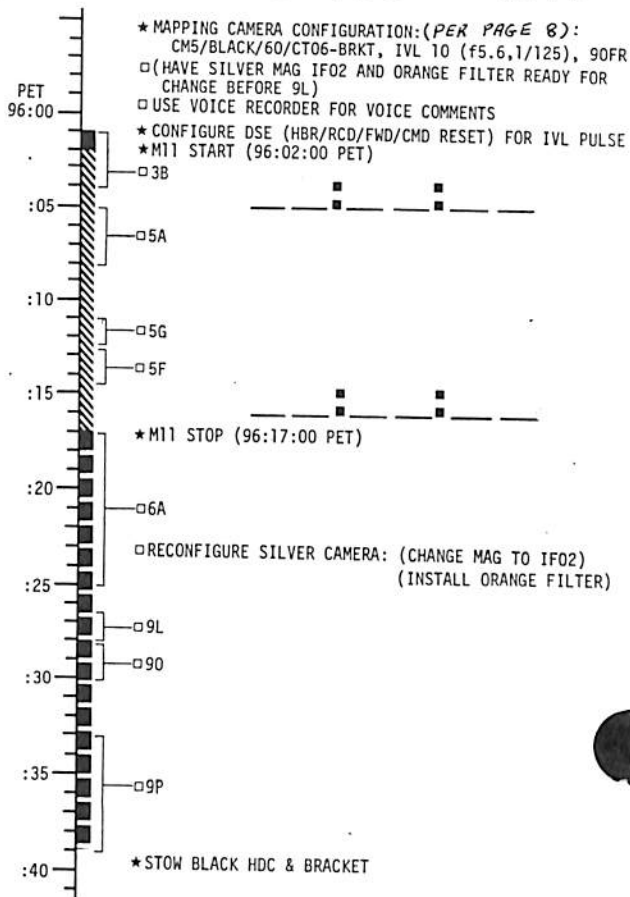


DP-★

CP-□

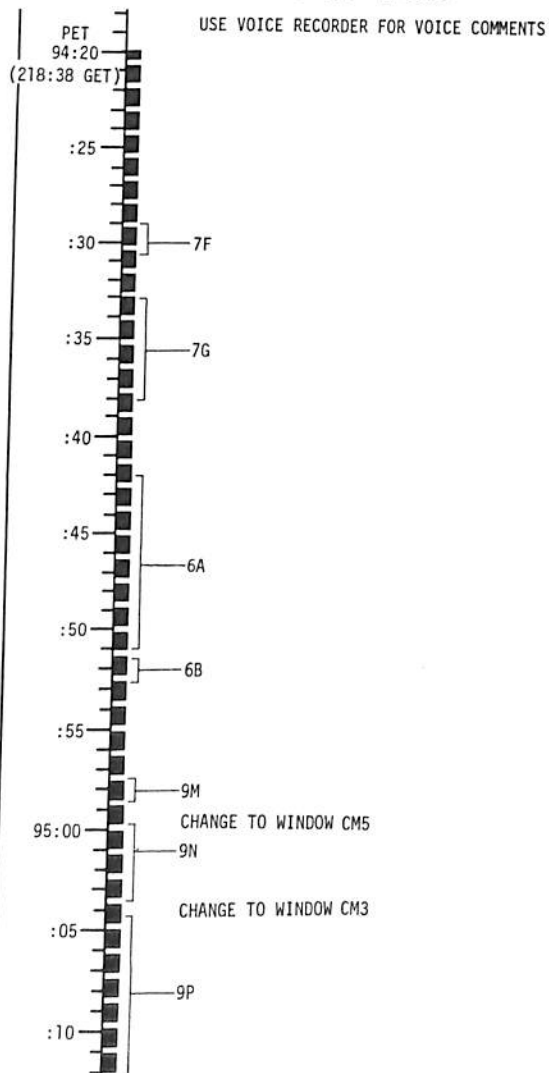
Rev. 135/136

M11



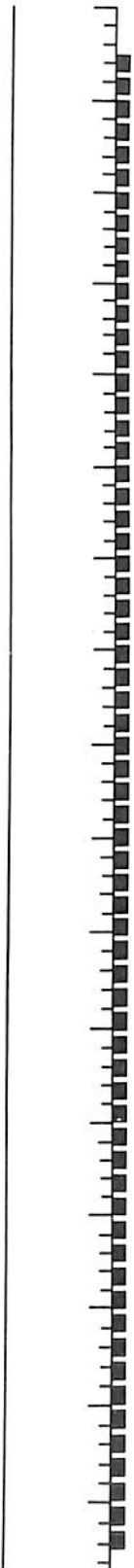
AC

Rev. 134/135

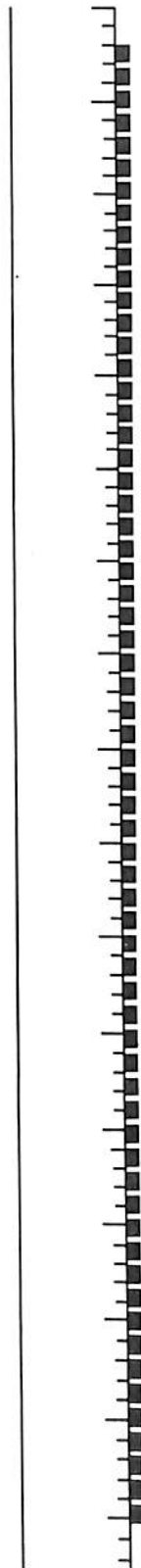


TIMELINE AND MAPPING PAD

GET

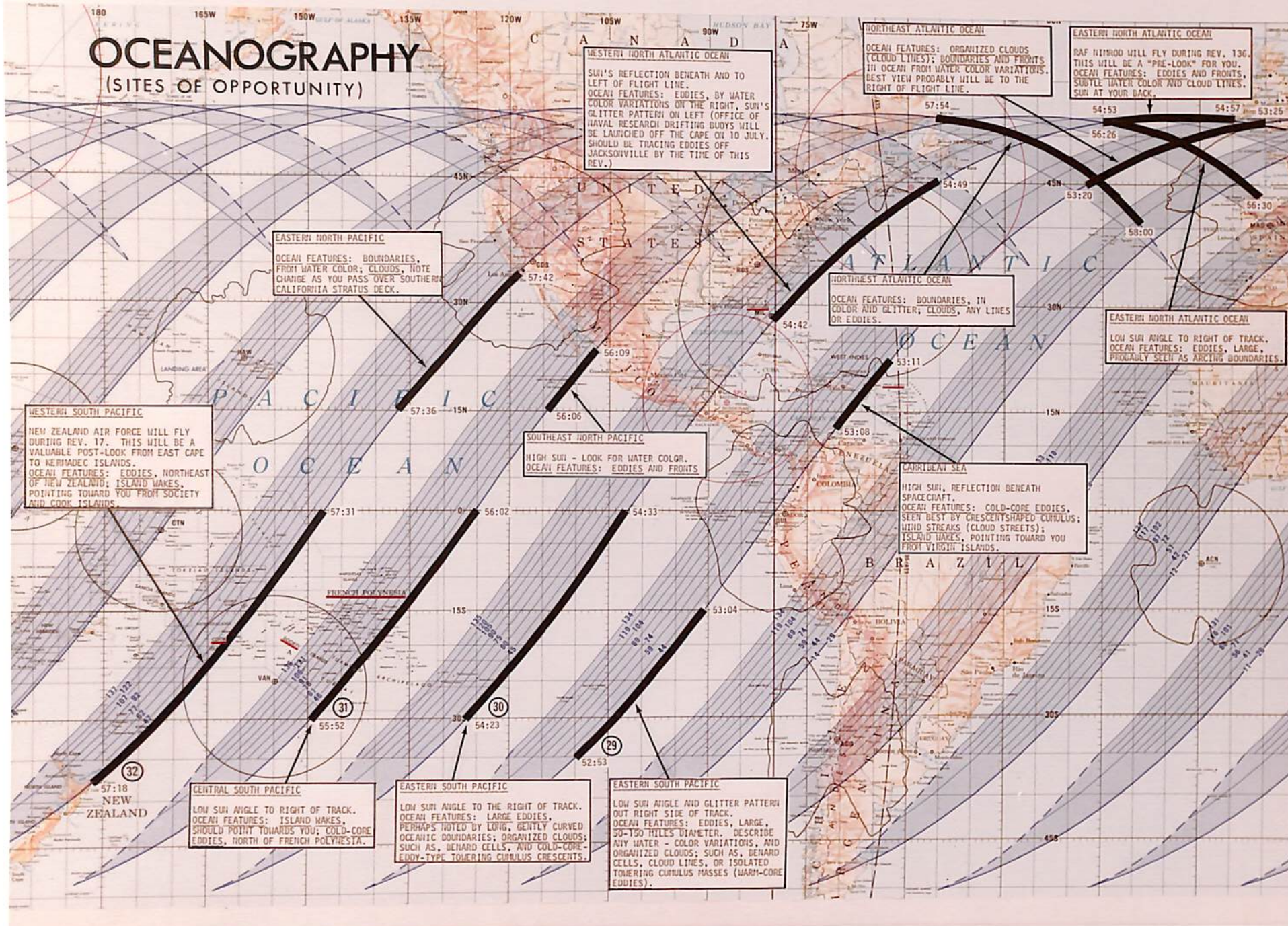


GET



OCEANOGRAPHY

(SITES OF OPPORTUNITY)



TIMELINE FLIPOUT

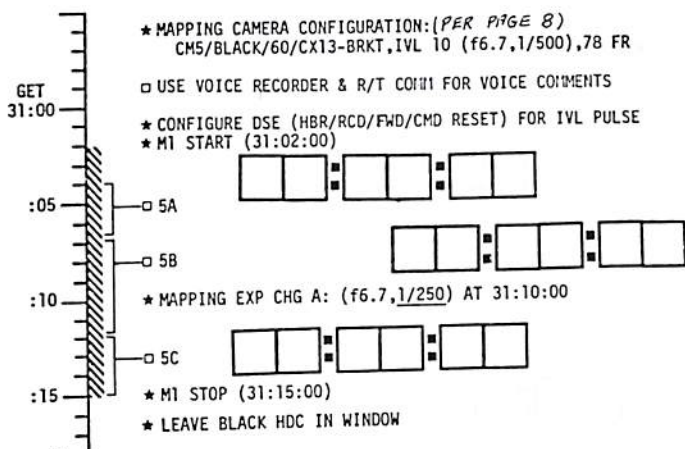
(1ST OPP.)

AC-★ ☆ THIS PASS WILL BE SCHEDULED IN 1st OPP ONLY. ☆ ☆

DP-□

Rev. 15/16

M1

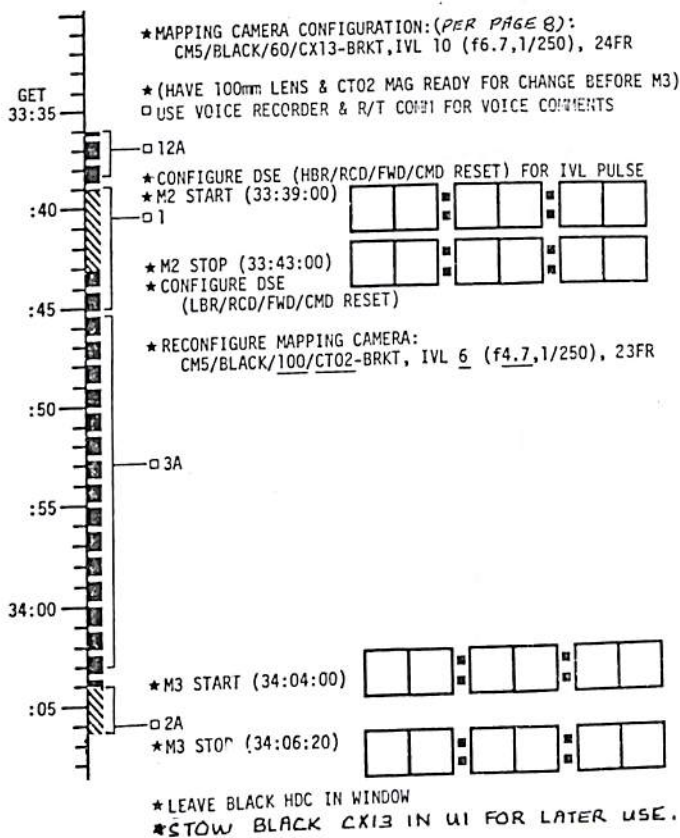


DP-★ ☆ THIS PASS WILL BE SCHEDULED IN 1st OPP ONLY. ☆ ☆

CP-□

Rev. 17/18

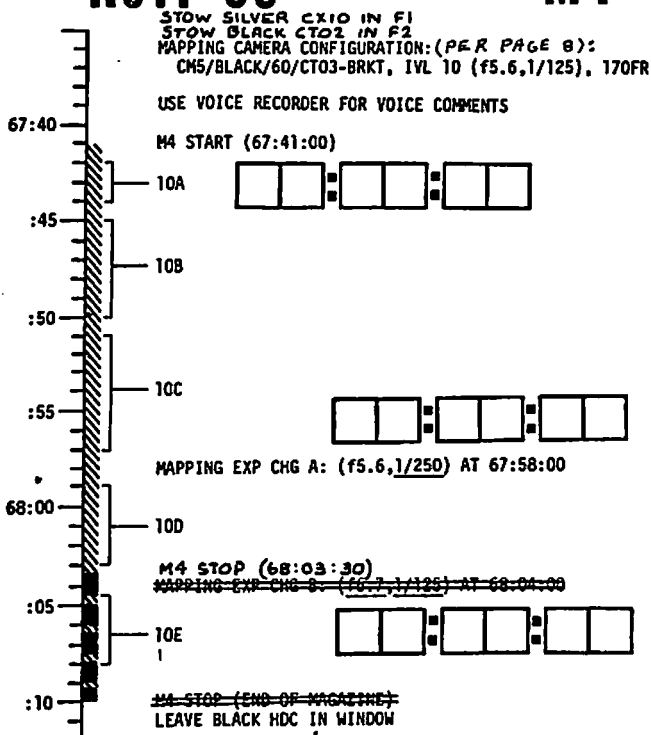
M2, M3



DP

Rev. 39

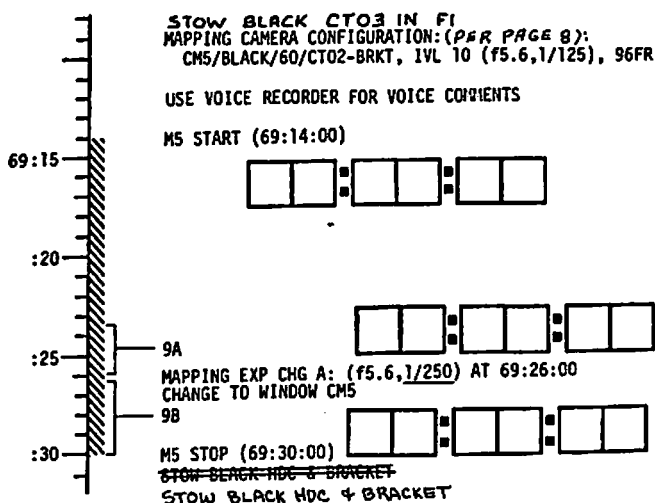
M4



DP

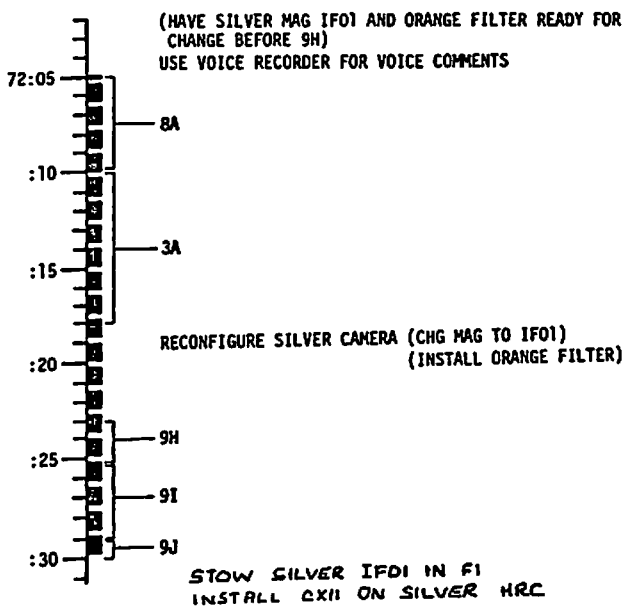
Rev. 40

M5



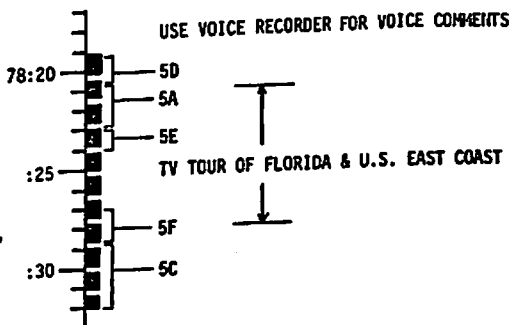
DP

Rev. 42



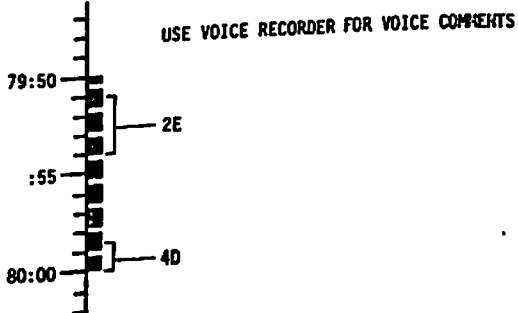
DP

Rev. 45/46



CP

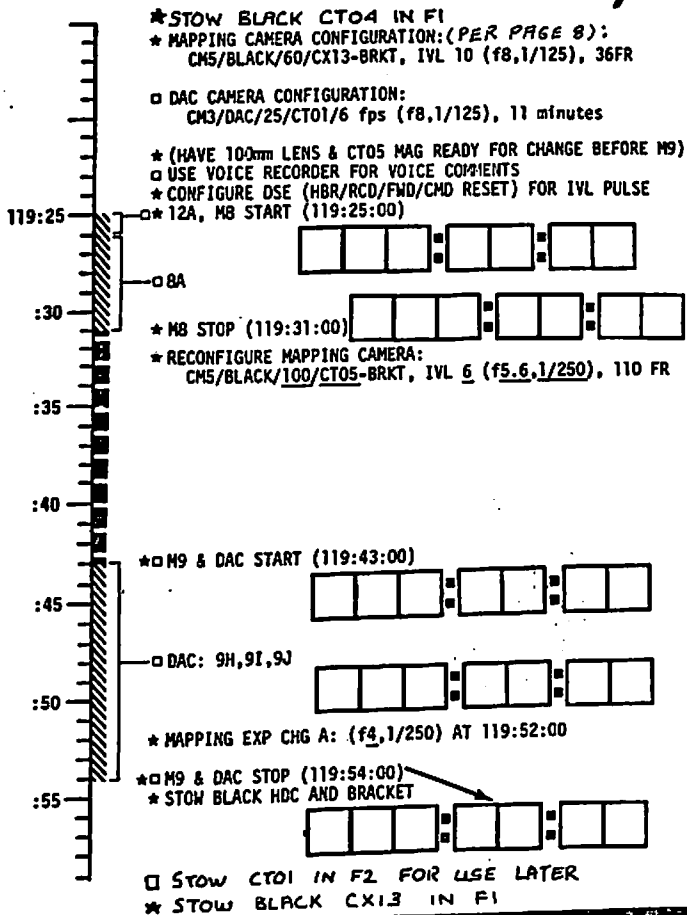
Rev. 46



AC-★
DP-□

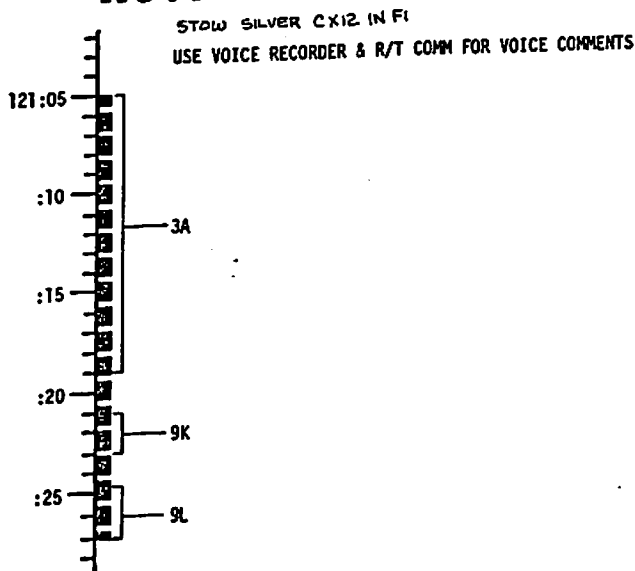
Rev. 72

M8, M9



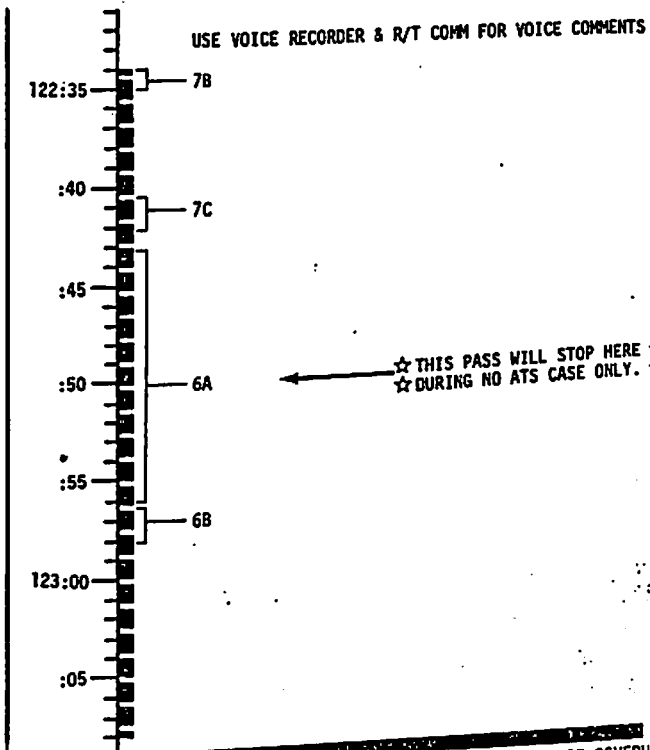
AC

Rev. 73



AC

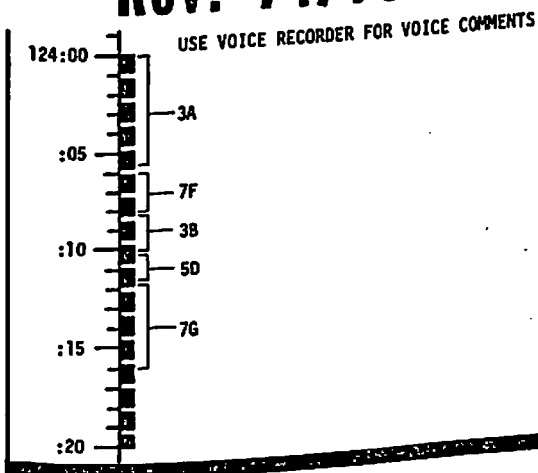
Rev. 74



AC

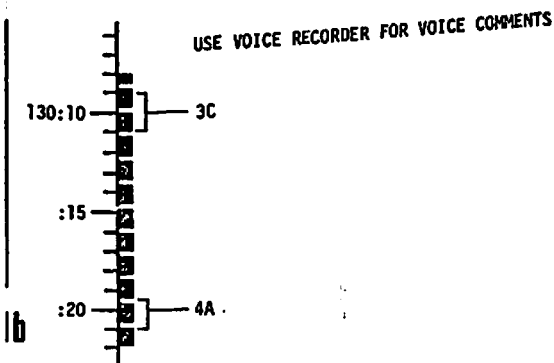
Rev. 74/75

☆ THIS PASS WILL BE SCHEDULED ☆
☆ IN NO ATS CASE ONLY. ☆



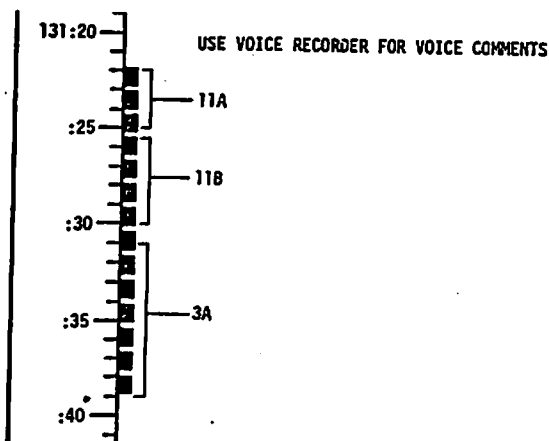
DP

Rev. 78



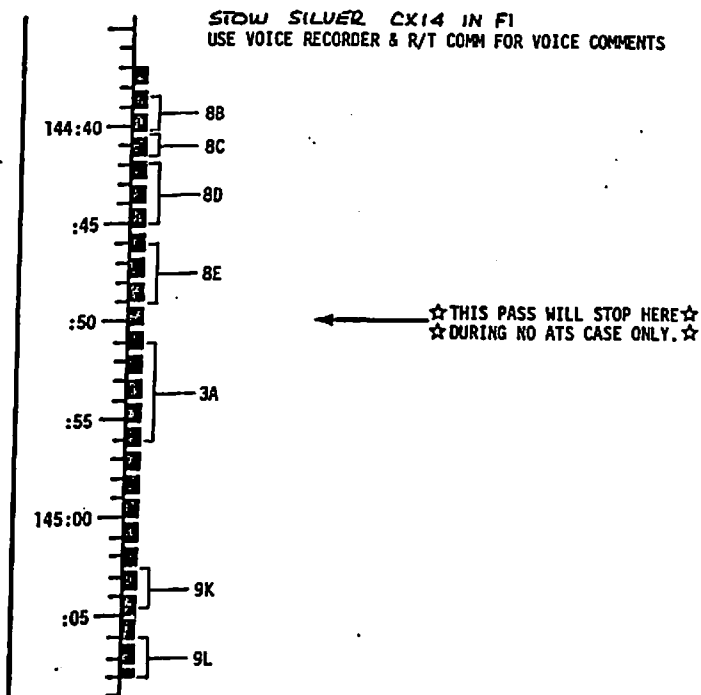
DP

Rev. 79



AC

Rev. 88



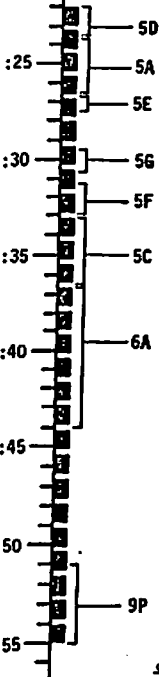
DP

Rev. 90/91

149:20

STOW SILVER CK15 IN F2

USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS



☆ THIS PASS WILL STOP HERE ☆
☆ DURING NO ATS CASE ONLY. ☆

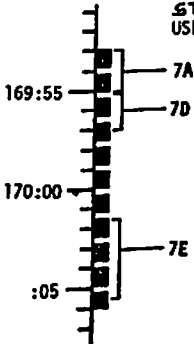
STOW SILVER IFO2 IN F2 AND
INSTALL PAO MAG (B5) FOR ANY
SITES OF OPPORTUNITY

AC

Rev. 104

STOW PAO MAG IN F2

USE VOICE RECORDER FOR VOICE COMMENTS

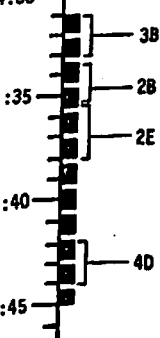


CP

Rev. 106/107

174:30

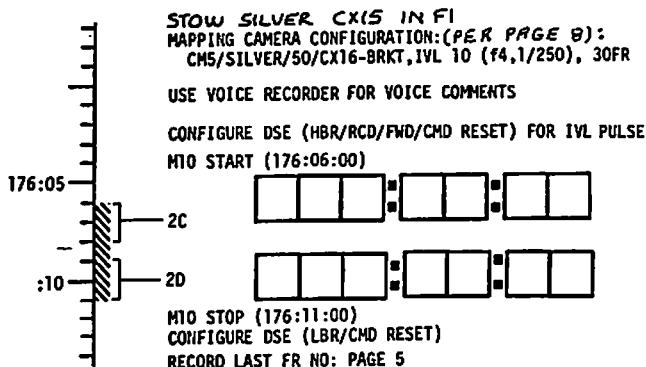
USE VOICE RECORDER & R/T COMM FOR VOICE COMMENTS



CP

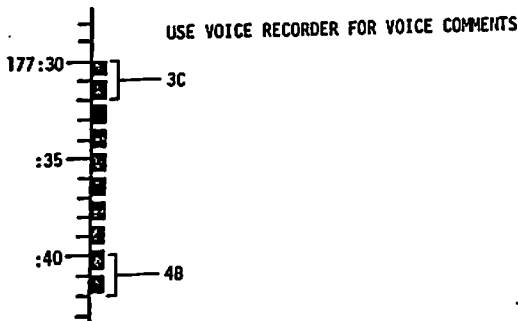
Rev. 107

M10



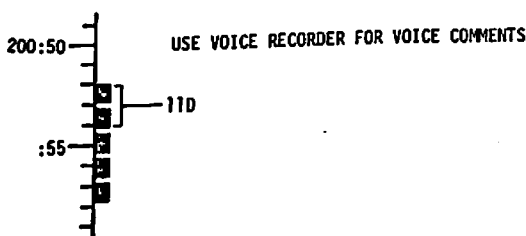
CP

Rev. 108



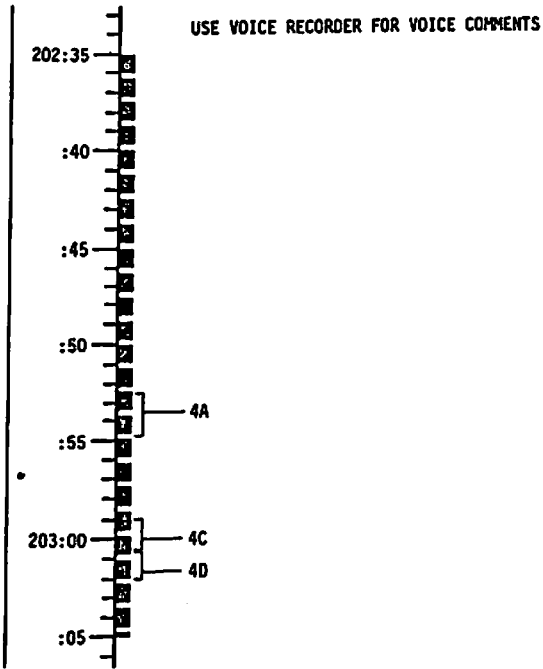
DP

Rev. 123



CP

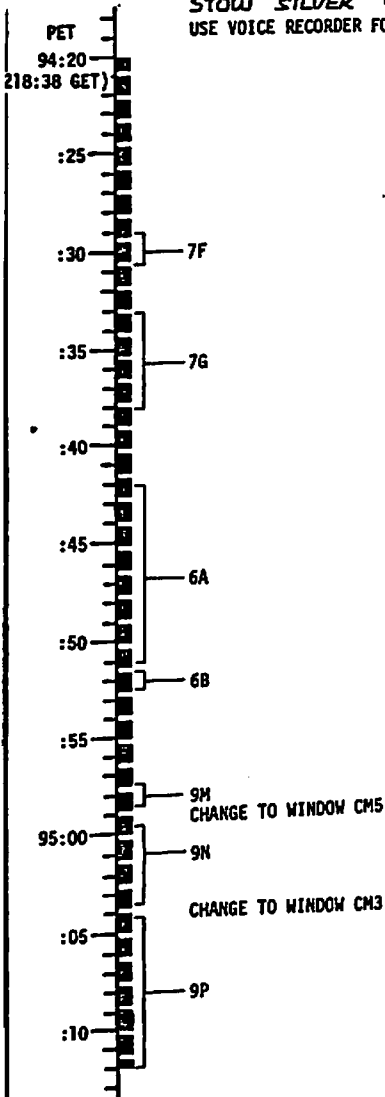
Rev. 124



AC

Rev. 134/135

STOW SILVER CX16 IN FI
USE VOICE RECORDER FOR VOICE COMMENTS



DP-★
CP-□

Rev. 135/136

M11

*STOW BLACK CTOS IN FI
*MAPPING CAMERA CONFIGURATION: (PER PAGE B):
CM5/BLACK/60/CT06-BRKT, IVL 10 (f5.6, 1/125), 90FR

- USE VOICE RECORDER FOR VOICE COMMENTS
- (HAVE SILVER MAG IFO2 AND ORANGE FILTER READY FOR CHANGE BEFORE 9L)
- * CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE
- * M11 START (96:02:00 PET)

PET
96:00
(220:18 GET)

□ 3B

		:			:		
--	--	---	--	--	---	--	--

:05
□ 5A

:10
□ 5G
□ 5F

:15
* M11 STOP (96:17:00 PET)

		:			:		
--	--	---	--	--	---	--	--

:20
□ 6A

- RECONFIGURE SILVER CAMERA: (CHANGE MAG TO IFO2)
(INSTALL ORANGE FILTER)

:25
□ 9L
□ 9O

:30
□ 9P

:35

:40
* STOW BLACK HDC & BRACKET

CONTINGENCY ONLY

CP

Rev. 107

M10

GET
176:05

:10

MAPPING CAMERA CONFIGURATION:
CM5/SILVER/50/CX16-BRKT, IVL 10 (f4.1/250), 30FR
USE VOICE RECORDER FOR VOICE COMMENTS
CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE

M10 START (176:06:00)

M10 STOP (176:11:00)
CONFIGURE DSE (LBR/CMD RESET)
RECORD LAST FR NO: PAGE 5

CP

Rev. 108

GET
177:30

:35

:40

USE VOICE RECORDER FOR VOICE COMMENTS

3C

4B

CP-★

DP-□

Rev. 120/121 (9A) M11a

GET
196:30

:35

:40

:45

:50

★ MAPPING CAMERA CONFIGURATION: (PER PAGE 8):
CM5/BLACK/60/CT03-BRKT, IVL 10 (f5.6, 1/125), 114FR
□ USE VOICE RECORDER FOR VOICE COMMENTS
★ CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE
★ M11a START (196:33:00)

□ 3B

□ 5A

□ 5G

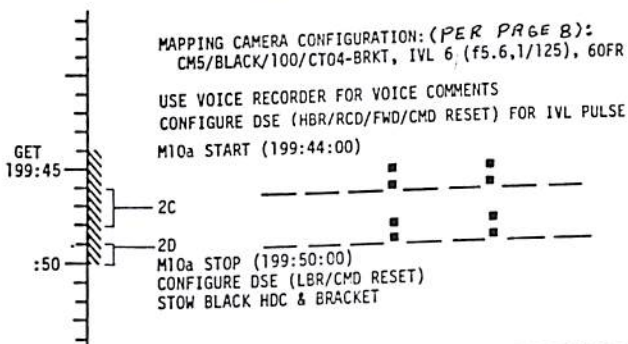
□ 5F

★ M11a STOP (196:52:00)

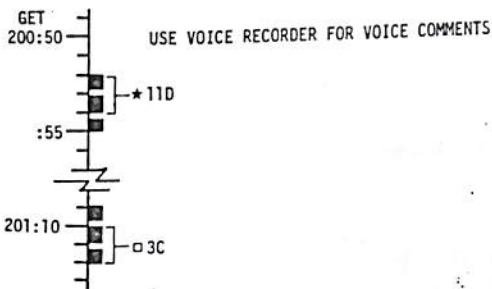
★ LEAVE BLACK HDC IN WINDOW

CP

Rev. 122 (9A) M10a

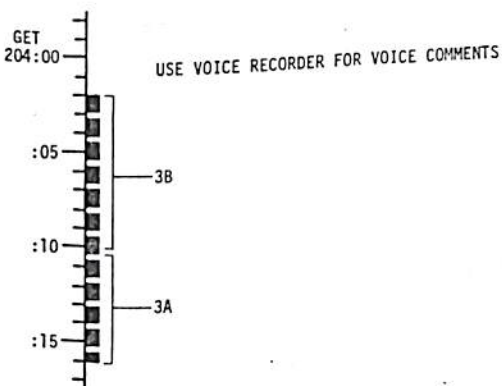
DP-★
CP-□

Rev. 123 (9A)



CP

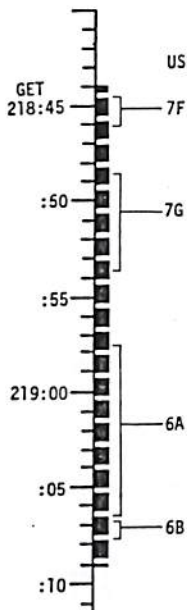
Rev. 125 (9A)



CONTINGENCY ONLY

AC

Rev. 134/135 (9B)



USE VOICE RECORDER FOR VOICE COMMENTS

CP-★ Rev. 135/136 (9B) M11b

DP-□

- (HAVE SILVER MAG IF02 AND ORANGE FILTER READY FOR CHANGE BEFORE 9L.)
- ★ MAPPING CAMERA CONFIGURATION: (PER PAGE B): CMS/BLACK/60/CT04-BRKT, IVL 10 (f5.6, 1/125), 90FR

□ USE VOICE RECORDER FOR VOICE COMMENTS

★ CONFIGURE DSE (HBR/RCD/FWD/CMD RESET) FOR IVL PULSE

GET 220:20

□ ★ 3B, M11b START (220:19:00)

□ 5A

:25

□ 5G

□ 5F

:30

:35

★ M11b STOP (220:34:00)

□ 6A

:40

□ RECONFIGURE SILVER CAMERA: (CHANGE MAG TO IF02) (INSTALL ORANGE FILTER)

□ 9L

□ 90

:45

★ STOW BLACK HDC & BRACKET

☆ THIS PASS WILL STOP HERE ☆
 ☆ DURING NO ATS CASE ONLY. ☆

CONTINGENCY ONLY

DP

Rev. 140 (9B)

GET
227:40

USE VOICE RECORDER FOR VOICE COMMENTS

:45

:50

3A, 3B

:55

228:00

CP

Rev. 141 (9B)

GET
229:05

USE VOICE RECORDER FOR VOICE COMMENTS

:10

3B

:15

3D

:20

:25

3A

:30

☆ THIS PASS WILL START HERE ☆
 ☆ DURING NO ATS CASE ONLY. ☆

DP

Rev. 123

GET
200:50

USE VOICE RECORDER FOR VOICE COMMENTS

:55

11D