

QC
807.5
.U6
B5
no.4
c.2

NOAA Technical Memorandum ERL BOMAP-4

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Research Laboratories

High-Level Cloud Photography Inventory

BOMEX Period II
May 24-June 10, 1969

VANCE A MYERS

The
BOMAP
Office

POCKVILLE, MD

March 1971

Environmental Research Laboratories, BOMAP Series

The Barbados Oceanographic and Meteorological Analysis Project (BOMAP) was established in the Research Laboratories of the Environmental Science Services Administration (ESSA), now the Environmental Research Laboratories (ERL) of NOAA, to coordinate the reduction of data collected during the Barbados Oceanographic and Meteorological Experiment (BOMEX) of May, June, and July 1969; to analyze these data, particularly those pertaining to the Sea-Air Interaction Program (the BOMEX Core Experiment); and to provide a central contact point for BOMEX information exchange and publication of BOMEX results.

NOAA Technical Memoranda in the Environmental Research Laboratories BOMAP series document the methods, procedures, and techniques used to collect, analyze, and evaluate BOMEX data and facilitate the rapid dissemination of information that is preliminary in nature and subject to formal publication elsewhere at a later date. Memorandum 1 was published in the former series of ESSA Technical Memoranda, ESSA Research Laboratories (ERLTM). Beginning with Memorandum 2, these publications are part of the series of NOAA Technical Memoranda, Environmental Research Laboratories (ERL).

Publications listed below are available from the National Technical Information Service, U.S. Department of Commerce, Sills Bldg., 5285 Port Royal Road, Springfield, Va. 22151. Price: \$3.00 paper cover; \$0.95 microfiche. Order by accession number shown in parentheses at end of each entry.

ESSA Technical Memoranda

ERLTM-BOMAP-1 High-Level Cloud Photography Inventory, BOMEX Period IV, July 11-28, 1969. Vance A. Myers, September 1970. (PB-194 661)

NOAA Technical Memoranda

ERL BOMAP-2 A Statistical Data Plan for BOMEX. Theodore W. Horner, December 1970. (COM-71-00 188)

ERL BOMAP-3 Mass, Momentum, and Energy Budget Equations for BOMAP Computations. Eugene M. Rasmusson, January 1971. (COM-71-00 195)

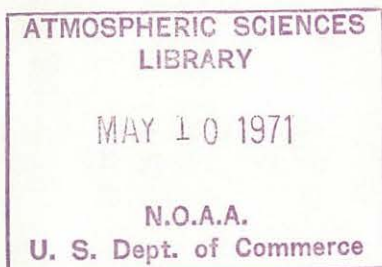
U.S.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Environmental Research Laboratories

NOAA Technical Memorandum ERL BOMAP-4

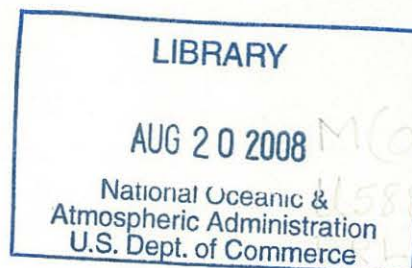
HIGH-LEVEL CLOUD PHOTOGRAPHY INVENTORY
BOMEX PERIOD II, May 24-June 10, 1969

Vance A. Myers



The BOMAP Office
Rockville, Md.
March 1971

155 607



QC
807.5
.U6B5
N. V. 4
C. 2

M(055)
158/74cm
BOMAP-4
C. 2

UDC 551.576.1:551.507.352:528.7:778.35(083.5)(084.12)(729.8)
"1969.05.24-06.10"

551.5	Meteorology
.576.1	Clouds
.507.352	Airplane reconnaissance
528.7	Aerial photography (Cartography)
778.35	Aerial photographs
(083.5)	Catalogs and inventories
(084.12)	Photographs
(729.8)	Windward Islands
"1969.05.24-06.10"	1969, 05.24-06.10

HIGH-LEVEL CLOUD PHOTOGRAPHY INVENTORY

BOMEX PERIOD II, MAY 24-JUNE 10, 1969

Vance A. Myers

Abstract. This technical memorandum documents the high-level photography missions flown by U.S. Air Force RB-57F aircraft during the Barbados Oceanographic and Meteorological Experiment (BOMEX) Period II, May 24-June 10. Tables and flight tracks give the time and location of each of the 1500 photographs taken.

During the Barbados Oceanographic and Meteorological Experiment (BOMEX), May, June, and July 1969, panoramic cloud photographs were secured on high-level flights by an RB-57F aircraft from the 58th Weather Reconnaissance Squadron of the Air Weather Service, U.S. Air Force, operating from Ramey AFB, Puerto Rico. During BOMEX Period II, May 24-June 10, more than 1500 photographs, in the form of large color transparencies, were obtained on 16 missions requiring 74 hours of flight time. These photographs, each of which includes a clock and serial counter, are in the custody of the BOMAP Office, NOAA, Rockville, Maryland, where they are available for study by researchers concerned with analysis of BOMEX data or generally interested in tropical meteorological phenomena. As an aid in using these photographs for research, this memorandum shows the reconstructed flight tracks and identifies the time, position and orientation of each photograph, based on navigator's notes, data entered on the BOMEX RECCO Code form used by both Navy and Air Force aircraft during the project for recording of weather reconnaissance data, and information gleaned from examination of the photographs.

The missions flown during Period II, all at an indicated altitude of 50,000 ft., are summarized in table 1. The flight tracks in figures 1 through 16 show the time (GCT) and location at which the pictures were taken, as well as codes indicating the amount of cloud cover as estimated by visual inspection of each photograph at the BOMAP Office. These codes are explained in table 2 and are shown along the flight tracks for each fifth photograph. Codes 0, 1-, 9+, and 10 apply to the entire picture; to minimize horizon perspective effects, tenths of coverage in the range 1 to 9 was estimated from that portion of the photograph within about 12 n.mi. of the flight track, i.e., two-thirds of the total area of the picture.

The logs for the 16 missions are presented in tables 3 through 18, consisting of (a) navigation notes, showing the location, true heading, drift angle, air and ground speed, and wind direction and speed, and (b) photograph data, listing photograph number, time of photography, aircraft attitude, and nominal track. In the navigation notes, the entries "Drop 1," "Drop 2," etc., indicate the specific location at which dropsondes were released twice daily from other Air Weather Service aircraft during BOMEX. These positions were fixed points in the BOMEX array and used as navigation reporting points by the RB-57F aircraft.

Table 1.--Summary of high-level cloud photography
during BOMEX Period II -- 24 May-10 June 1969
(all flights at 50,000 ft.)

Date	Time Departed Ramey AFB	Time Landed Ramey AFB	Flight Time	Number of Photographs
	GCT	GCT	hr:min	
May				
24	1238	1710	4:32	95
25	1236	1719	4:43	101
26	1247	1730	4:43	99
27	1248	1720	4:32	99
28	1306	¹ 1732	4:26	100
30	1303	1741	4:38	² 80
31	1256	¹ 1736	4:40	99
June				
1	1309	1751	4:44	³ 78
2	1258	¹ 1738	4:40	100
3	1306	1743	4:37	100
4	1306	1734	4:28	94
6	1257	¹ 1729	4:32	99
7	1307	1750	4:43	100
8	1306	1745	4:39	98
9	1304	1740	4:36	97
10	1304	¹ 1735	4:31	99
TOTALS			73:44	1538

¹ Estimated landing time: time over St. Croix plus 23 min.

² Ten pictures lost in film processing not included.

³ Nine pictures lost in film processing not included.

Table 2.--Cloudiness code

Code as Indicated in Figures 1 Through 16	Amount of Cloud Cover
0	Absence of clouds
1-	Less than 1/10 cover
1	1/10 cover
2	2/10 cover
3	3/10 cover
4	4/10 cover
5	5/10 cover
6	6/10 cover
7	7/10 cover
8	8/10 cover
9	9/10 cover
9+	More than 9/10 cover with breaks
10	Complete cover

Information pertaining to BOMEX Period IV similar to that presented here is contained in NOAA Technical Memorandum ERLTM-BOMAP 1, "High-Level Cloud Photography Inventory, BOMEX Period IV, July 11-28, 1969," The reader is also referred to BOMEX Period III High-Level Cloud Photography Atlas, January 1971, issued by the BOMAP Office, Environmental Research Laboratories, NOAA, which is on sale at the Superintendent of Documents, U.S. Government Printing Office. In that document, high-level cloud photographs for BOMEX Period III are re-printed in black and white and assembled into lines along the flight path, representing a quasi-mosaic. It also contains tables and maps giving details on location, orientation, time of photography; mission procedures; and methods used by the BOMAP Office to reconstruct flight tracks and determine photograph orientations and positions. The techniques used in preparing the atlas are the same as the ones applied in assembling the data contained in this memorandum and are therefore not repeated here.

Acknowledgement is due Bob Rooney, BOMAP Student Assistant, who, under the direction of the author, prepared the data tabulations and maps.

Table 3.--Log of high-level cloud photography mission -- 24 May 1969

NAVIGATION NOTES*

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1238	Ramey AFB	1830	6708						
1305	St. Croix	1744	6442						
1345	Fort-de-France	1436	6100						
1400				118	-1	392	430	290	35
1403	Barbados	1304	5929						
1414	DELTA	1223	5823					280	35
1421	Drop 1	1302	5754						
1430	Radio fix and sun line	1312	5645	078		395	440	270	45
1448	Drop 5	1336	5431					270	40
1500	Radio fix and sun line	1300	5446	347	+6	395	390	270	40
1518	Drop 4	1657	5503					290	40
1530	Radio fix and sun line	5608	5750	262	+4	395	365	300	40
1552	Drop 8	1622	5832						
1559	ALFA	1650	5912					290	30
1620	Antigua	1708	6147	280	+1	395	370	260	25
1647	St. Croix	1744	6442						
1710	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

Table 3.--Log for 24 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time(GCT) On Photo	Corrected	Aircraft Attitude	Nominal Track
9	0221:55	1421	Right roll	
10	0222:58	1422	Level	80
11	0224:01	1423	"	80
12	0225:03	1424	"	80
13	0226:07	1425	"	80
14	0227:09	1426	"	80
15	0228:12	1427	"	80
16	0229:15	1428	"	80
17	0230:18	1429	"	80
18	0231:21	1430	"	80
19	0232:24	1431	"	80
20	0233:27	1432	"	80
21	0234:30	1434	"	80
22	0235:34	1435	"	80
23	0236:37	1436	"	80
24	0237:41	1437	"	80
25	0238:45	1438	"	80
26	0239:49	1439	"	80
27	0240:52	1440	"	80
28	0241:56	1441	"	80
29	0242:59	1442	"	80
30	0244:04	1443	"	80
31	0245:08	1444	"	80
32	0246:13	1445	"	80
33	0247:18	1446	"	80
34	0248:22	1447	Left roll	
35	0249:26	1448	"	
36	0250:31	1450	Level	351
37	0251:35	1451	"	351
38	0252:40	1452	"	351
39	0253:45	1453	"	351
40	0254:50	1454	Right roll	

Table 3.--Log for 24 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	0255:55	1455	Right roll	351
42	0257:00	1456	"	351
43	0258:05	1457	"	351
44	0259:10	1458	"	351
45	0300:15	1459	"	351
46	0301:20	1500	"	351
47	0302:25	1501	"	351
48	0303:30	1503	"	351
49	0304:35	1504	"	351
50	0305:39	1505	"	351
51	0306:44	1506	"	351
52	0307:50	1507	"	351
53	0308:55	1508	"	351
54	0310:00	1509	"	351
55	0311:06	1510	"	351
56	0312:11	1511	"	351
57	0313:16	1512	"	351
58	0314:21	1513	"	351
59	0315:26	1514	Level	351
60	0316:31	1516	"	351
61	0317:37	1517	"	351
62	0318:43	1518	Left roll	
63	0319:49	1519	"	
64	0320:54	1520	Level	260
65	0321:59	1521	"	260
66	0323:05	1522	"	260
67	0324:10	1523	"	260
68	0325:16	1524	"	260
69	0326:22	1525	"	260
70	0327:27	1526	"	260

Table 3.--Log for 24 May 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	Time(GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	0328:33	1528	Level	260
72	0329:39	1529	"	260
73	0330:45	1530	"	260
74	0331:51	1531	"	260
75	0332:57	1532	"	260
76	0334:03	1533	"	260
77	0335:08	1534	"	260
78	0336:15	1535	"	260
79	0337:20	1536	"	260
80	0338:26	1537	"	260
81	0339:31	1539	"	260
82	0340:38	1540	"	260
83	0341:44	1541	"	260
84	0342:50	1542	"	260
85	0343:57	1543	"	260
86	0345:03	1544	"	260
87	0346:08	1545	"	260
88	0347:14	1546	"	260
89	0348:21	1547	"	260
90	0349:26	1548	"	260
91	0350:32	1550	"	260
92	0351:39	1551	"	260
93	0352:45	1552	Right roll	
94	0353:51	1553	Level	305
95	0354:57	1554	"	305
96	0356:03	1555	"	305
97	0357:10	1556	"	305
98	0358:16	1557	"	305
99	0359:22	1558	"	305
¹ 100	0419:51	1619	"	
¹ 101	0420:58	1620	"	
102	0422:05	1621	"	
103	0423:12	1622	"	

** Corrected altitude: 51,700 ft.=8.5 n mi.

¹ Land visible - Antigua.

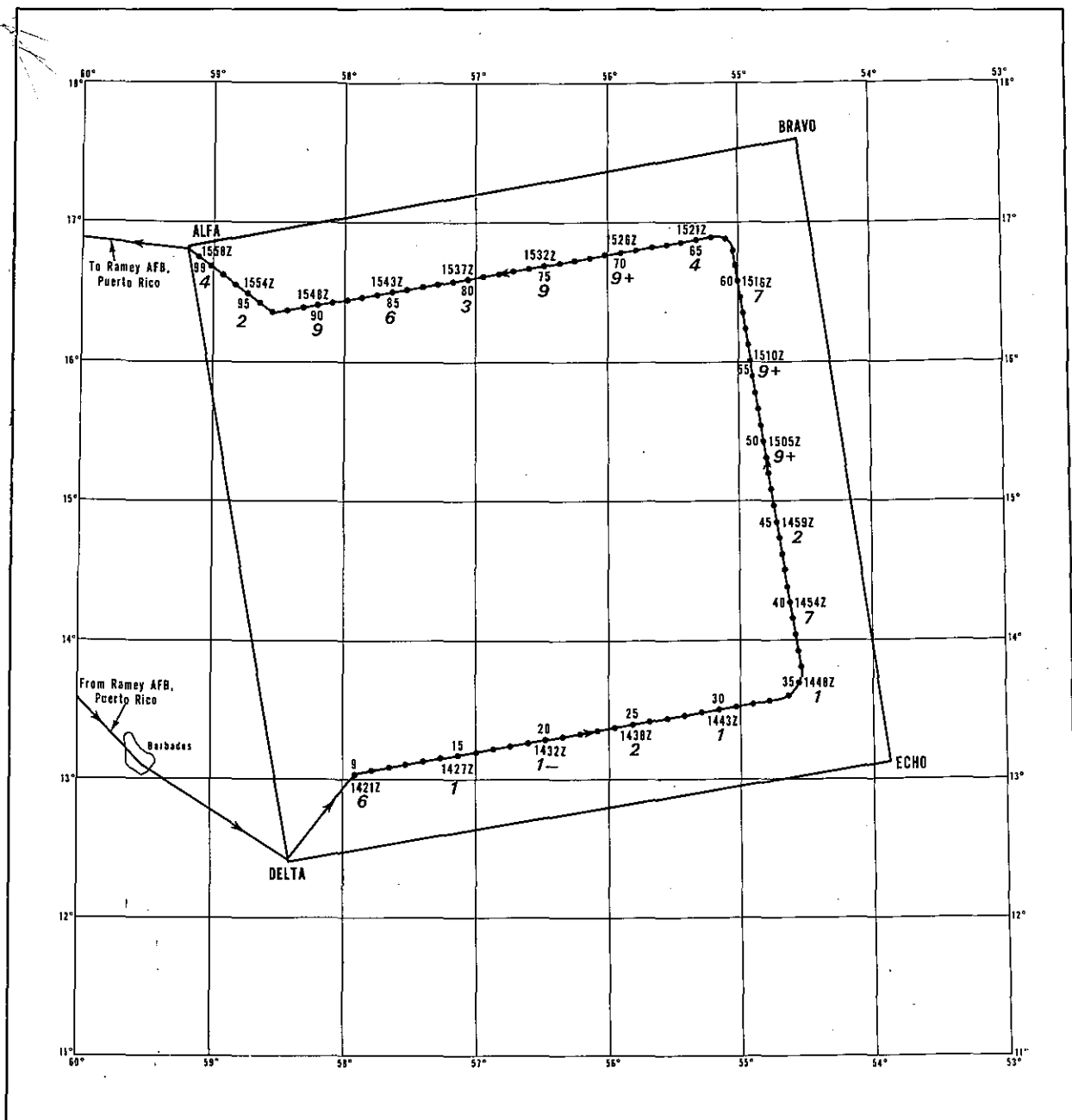


Figure 1.--RB-57F cloud photo track, 24 May 1969

Table 4. --Log of high-level cloud photography mission -- 25 May 1969

NAVIGATION NOTES*

Time	Location		True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat. Long.			Air	Ground	Dir.	Speed
GCT		°'N °'W	deg.	deg.	kt.	kt.	deg.	kt.
1236	Ramey AFB	1830 6708		Log missing				
1303	St. Croix	1744 6442		"				
1344	Fort-de-France	1436 6100		"				
1403	Barbados	1304 5929		"				
1415	DELTA	1223 5823		"			310	21
1422	Drop 1	1302 5754		"				
1432				"			320	25
1453	Drop 5	1336 5431		"			310	25
1509				"			310	30
1525	Drop 4	1657 5503		"			320	30
1540				"			320	35
1556	Drop 8	1622 5832		"			320	30
1604	ALFA	1650 5912		"			320	30
1630	Antigua	1708 6147		"				
1657	St. Croix	1744 6442		"				
1719	Ramey AFB	1830 6708		"				

* Indicated altitude: 50,000 ft.

Table 4.--Log for 25 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
5	0222:13	1422	Right roll	
6	0223:11	1423	Level	80
7	0224:08	1424	"	80
8	0225:06	1425	"	80
9	0226:03	1426	"	80
10	0227:00	1427	"	80
11	0227:58	1428	"	80
12	0228:55	1429	"	80
13	0229:52	1430	"	80
14	0230:50	1431	"	80
15	0231:47	1432	"	80
16	0232:44	1433	"	80
17	0233:42	1434	"	80
18	0234:39	1435	"	80
19	0235:36	1436	"	80
20	0236:34	1437	"	80
21	0237:31	1438	"	80
22	0238:29	1438	"	80
23	0239:26	1439	"	80
24	0240:24	1440	"	80
25	0241:21	1441	"	80
26	0242:19	1442	"	80
27	0243:16	1443	"	80
28	0244:13	1444	"	80
29	0245:11	1445	"	80
30	0246:09	1446	"	80
31	0247:06	1447	"	80
32	0248:04	1448	"	80
33	0249:01	1449	"	80
34	0249:58	1450	"	80
35	0250:55	1451	Left roll	
36	0251:52	1452	"	
37	0252:50	1453	Level	351
38	0253:48	1454	"	351
39	0254:45	1455	"	351
40	0255:43	1456	"	351

Table 4.--Log for 25 May 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	Time (GCT) On Photo	Corrected	Aircraft Attitude	Nominal Track
41	0256:40	1457	Level	351
42	0257:37	1458	"	351
43	0258:35	1459	"	351
44	0259:32	1500	"	351
45	0300:30	1500	"	351
46	0301:27	1501	"	351
47	0302:25	1502	"	351
48	0303:23	1503	"	351
49	0304:20	1504	"	351
50	0305:18	1505	"	351
51	0306:15	1506	"	351
52	0307:13	1507	"	351
53	0308:10	1508	"	351
54	0309:08	1509	"	351
55	0310:06	1510	"	351
56	0311:03	1511	"	351
57	0312:01	1512	"	351
58	0312:58	1513	"	351
59	0313:55	1514	"	351
60	0314:53	1515	"	351
61	0315:50	1516	"	351
62	0316:48	1517	"	351
63	0317:45	1518	"	351
64	0318:43	1519	"	351
65	0319:41	1520	"	351
66	0320:38	1521	"	351
67	0321:36	1522	"	351
68	0322:33	1523	"	351
69	0323:30	1523	"	351
70	0324:28	1524	"	351

Table 4.--Log for 25 May 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	0325:26	1525	Left roll	
72	0326:24	1526	"	
73	0327:21	1527	Level	260
74	0328:19	1528	"	260
75	0329:17	1529	"	260
76	0330:14	1530	"	260
77	0331:12	1531	"	260
78	0332:09	1532	"	260
79	0333:07	1533	"	260
80	0334:05	1534	"	260
81	0335:03	1535	"	260
82	0336:01	1536	"	260
83	0336:59	1537	"	260
84	0337:56	1538	"	260
85	0338:53	1539	"	260
86	0339:51	1540	"	260
87	0340:48	1541	"	260
88	0341:46	1542	"	260
89	0342:44	1543	"	260
90	0343:42	1544	"	260
91	0344:39	1545	"	260
92	0345:37	1546	"	260
93	0346:35	1547	"	260
94	0347:32	1548	"	260
95	0348:30	1548	"	260
96	0349:28	1549	"	260
97	0350:26	1550	"	260
98	0351:23	1551	"	260
99	0352:21	1552	"	260
100	0353:19	1553	"	260

Table 4. --Log for 25 May 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	On Photo	Time(GCT)		Aircraft Attitude	Nominal Track
			Corrected		
101	0354:16		1554	Level	260
102	0355:14		1555	"	260
103	0356:12		1556	Right roll	
104	0357:10		1557	"	
105	0358:07		1558	Level	305

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

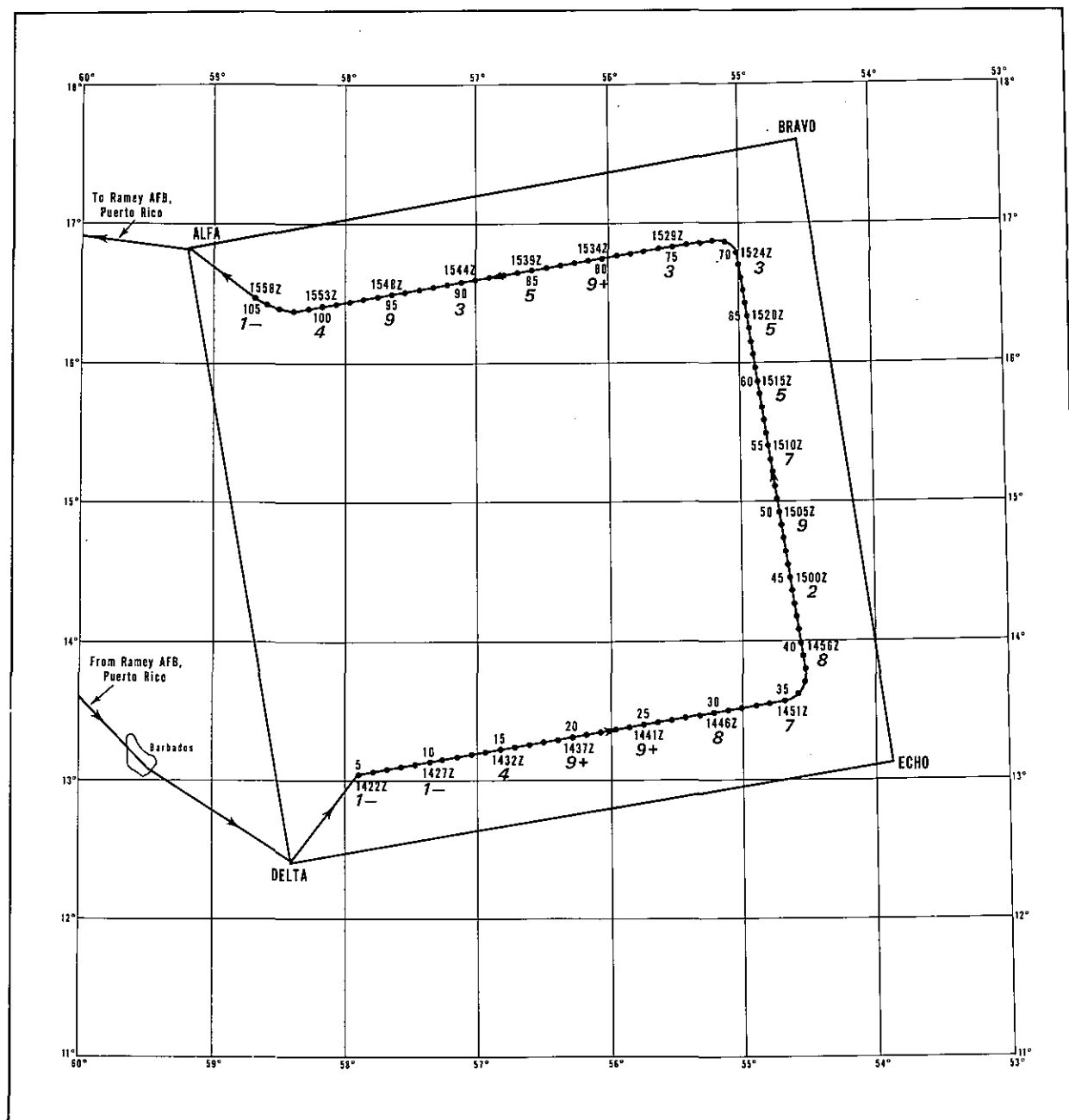


Figure 2.--RB-57F cloud photo track, 25 May 1969

Table 5. --Log of high-level cloud photography mission -- 26 May 1969

NAVIGATION NOTES*

Time	Location		True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat. Long.			Air	Ground	Dir.	Speed
GCT		°'N °'W	deg.	deg.	kt.	kt.	deg.	kt.
1247	Ramey AFB	1830 6708						
1313	St. Croix	1744 6442						
1354	Fort-de-France	1436 6100	134	0	402	410	310	08
1413	Barbados	1304 5929						
1424	DELTA	1223 5823					310	25
1431	Drop 1	1302 5754						
1435	Radio fix and sun line	1306 5726	081	+2	402	418	310	20
1455	Radio fix and sun line	1331 5505	077	+1	402	420	280	20
1500	Drop 5	1336 5431					280	20
1516							280	40
1528			346	+4	405	394	280	30
1532	Drop 4	1657 5503					280	30
1548							270	35
1603	Radio fix	1636 5812						
1605	Drop 8	1622 5832						
1613	ALFA	1650 5912	308	+1	405	375	300	35
1637	Antigua	1708 6147						
1704	St. Croix	1744 6442	283	-1	405	372	300	30
1730	Ramey AFB	1830 6708						

*Indicated altitude: 50,000 ft.

Table 5.--Log for 26 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
8	1431:57	1431	Right roll	80
9	1432:59	1432	Level	80
10	1434:03	1433	"	80
11	1435:06	1434	"	80
12	1436:09	1435	"	80
13	1437:12	1436	"	80
14	1438:15	1437	"	80
15	1439:18	1438	"	80
16	1440:21	1439	"	80
17	1441:24	1440	"	80
18	1442:27	1441	"	80
19	1443:31	1443	"	80
20	1444:34	1444	"	80
21	1445:37	1445	"	80
22	1446:41	1446	"	80
23	1447:44	1447	"	80
24	1448:47	1448	"	80
25	1449:50	1449	"	80
26	1450:53	1450	"	80
27	1451:57	1451	"	80
28	1453:00	1452	"	80
29	1454:03	1453	"	80
30	1455:07	1454	"	80
31	1456:10	1455	"	80
32	1457:13	1456	"	80
33	1458:16	1457	"	80
34	1459:19	1458	"	80
35	1500:22	1459	"	80
36	1501:26	1500	Left roll	
37	1502:29	1501	"	
38	1503:32	1503	Level	351
39	1504:36	1504	"	351
40	1505:39	1505	"	351

Table 5. --Log for 26 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time(GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1506:42	1506	"	351
42	1507:46	1507	"	351
43	1508:49	1508	"	351
44	1509:52	1509	"	351
45	1510:56	1510	"	351
46	1511:59	1511	"	351
47	1513:02	1512	"	351
48	1514:05	1513	"	351
49	1515:09	1514	"	351
50	1516:12	1515	"	351
51	1517:15	1516	"	351
52	1518:19	1517	"	351
53	1519:22	1518	"	351
54	1520:25	1519	"	351
55	1521:28	1520	"	351
56	1522:32	1522	"	351
57	1523:36	1523	"	351
58	1524:39	1524	Level	351
59	1525:43	1525	"	351
60	1526:46	1526	"	351
61	1527:49	1527	"	351
62	1528:52	1528	"	351
63	1529:56	1529	"	351
64	1531:00	1530	"	351
65	1532:03	1531	"	351
66	1533:07	1532	Left roll	
67	1534:10	1533	"	
68	1535:13	1534	Slight left roll	
69	1536:17	1535	Level	260
70	1537:20	1536	"	260

Table 5.--Log for 26 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time(GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1538:24	1537	Level	260
72	1539:27	1538	"	260
73	1540:31	1540	"	260
74	1541:35	1541	"	260
75	1542:38	1542	"	260
76	1543:42	1543	"	260
77	1544:45	1544	"	260
78	1545:49	1545	"	260
79	1546:53	1546	"	260
80	1547:56	1547	"	260
81	1549:00	1548	"	260
82	1550:03	1549	"	260
83	1551:07	1550	"	260
84	1552:10	1551	"	260
85	1553:13	1552	"	260
86	1554:17	1553	"	260
87	1555:21	1554	"	260
88	1556:25	1555	"	260
89	1557:28	1556	"	260
90	1558:32	1558	"	260
91	1559:35	1559	"	260
92	1600:39	1600	"	260
93	1601:43	1601	"	260
94	1602:46	1602	"	260
95	1603:50	1603	"	260
96	1604:53	1604	"	260
97	1605:57	1605	Right roll	
98	1607:00	1606	"	
99	1608:11	1607	Level	305
100	1609:14	1608	"	305

Table 5. --Log for 26 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
101	1610:18	1609	Level	305
102	1611:21	1610	"	305
103	1612:25	1611	"	305
104	1613:29	1612	"	305
105	1614:32	1614	"	305
106	1615:35	1615	"	305

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

Table 6. --Log of high-level cloud photography mission -- 27 May 1969

NAVIGATION NOTES *

Time	Location		True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat. Long.			Air	Ground	Dir.	Speed
GCT		°'N °'W	deg.	deg.	kt.	kt.	deg.	kt.
1248	Ramey AFB	1830 6708						
1315	St. Croix	1744 6442						
1356	Fort-de-France	1436 6100	130	+1	400	410	343	10
1414	Barbados	1304 5929	132	+1	400	412	345	15
1428	Drop 1	1302 5754	084	+4	398	405	343	28
1443							340	30
1457	Drop 5	1336 5431	076	+4	400	402	340	30
1510	Radio fix and sun line	1459 5443						
1513							330	38
1529	Drop 4	1657 5503	350	+2	398	365	329	38
1545							310	29
1600	Drop 8	1622 5832	263	-3	395	372	308	29
1630	Antigua	1708 6147	285	-2	395	370	313	30
1658	St. Croix	1744 6442	287					
1700				-1	400	365	302	35
	Ramey AFB	1830 6708						

*Indicated altitude: 50,000 ft.

Table 6. --Log for 27 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time(GCT) On Photo	Corrected	Aircraft Attitude	Nominal Track
7	1428:31	1429	Slight left roll	
8	1429:34	1430	Level	80
9	1430:36	1431	"	80
10	1431:39	1432	"	80
11	1432:42	1433	Slight left roll	80
12	1433:44	1434	Level	80
13	1434:48	1435	"	80
14	1435:50	1436	"	80
15	1436:53	1437	"	80
16	1437:56	1438	"	80
17	1438:58	1439	"	80
18	1440:01	1440	"	80
19	1441:04	1441	"	80
20	1442:07	1442	"	80
21	1443:10	1443	"	80
22	1444:13	1444	"	80
23	1445:16	1445	"	80
24	1446:19	1446	"	80
25	1447:21	1447	"	80
26	1448:24	1448	"	80
27	1449:27	1449	"	80
28	1450:30	1451	"	80
29	1451:34	1452	"	80
30	1452:37	1453	"	80
31	1453:40	1454	"	80
32	1454:43	1455	"	80
33	1455:45	1456	"	80
34	1456:48	1457	Left roll	
35	1457:51	1458	"	
36	1458:54	1459	Level	351
37	1459:57	1500	"	351
38	1501:00	1501	"	351
39	1502:02	1502	"	351
40	1503:05	1503	"	351

Table 6. --Log for 27 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1504:07	1504	Level	351
42	1505:10	1505	"	351
43	1506:13	1506	"	351
44	1507:16	1507	"	351
45	1508:19	1508	"	351
46	1509:21	1509	"	351
47	1510:24	1510	"	351
48	1511:27	1511	"	351
49	1512:29	1512	"	351
50	1513:32	1514	"	351
51	1514:35	1515	"	351
52	1515:38	1516	"	351
53	1516:41	1517	"	351
54	1517:44	1518	"	351
55	1518:46	1519	"	351
56	1519:49	1520	"	351
57	1520:52	1521	"	351
58	1521:55	1522	"	351
59	1522:57	1523	"	351
60	1524:00	1524	"	351
61	1525:03	1525	"	351
62	1526:06	1526	"	351
63	1527:08	1527	"	351
64	1528:11	1528	"	351
65	1529:13	1529	Left roll	
66	1530:16	1530	"	
67	1531:19	1531	Level	260
68	1532:22	1532	"	260
69	1533:25	1533	"	260
70	1534:28	1534	"	260

Table 6. --Log for 27 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1535:30	1536	Level	260
72	1536:33	1537	"	260
73	1537:36	1538	"	260
74	1538:39	1539	"	260
75	1539:42	1540	"	260
76	1540:45	1541	"	260
77	1541:48	1542	"	260
78	1542:50	1543	"	260
79	1543:53	1544	"	260
80	1544:55	1545	"	260
81	1545:58	1546	"	260
82	1547:01	1547	"	260
83	1548:04	1548	"	260
84	1549:07	1549	"	260
85	1550:10	1550	"	260
86	1551:12	1551	"	260
87	1552:15	1552	"	260
88	1553:18	1553	"	260
89	1554:20	1554	"	260
90	1555:23	1555	"	260
91	1556:26	1556	"	260
92	1557:29	1557	"	260
93	1558:31	1559	"	260
94	1559:34	1600	"	260
95	1600:37	1601	Right roll	
96	1601:40	1602	Level	285
97	1602:42	1603	"	285
98	1603:45	1604	"	285
99	1604:48	1605	"	285
100	1605:50	1606	"	285
101	1606:53	1607	"	285
102	1607:55	1608	"	285
103	1608:58	1609	"	285
104	1610:00	1610	"	285
105	1611:03	1611	"	285

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

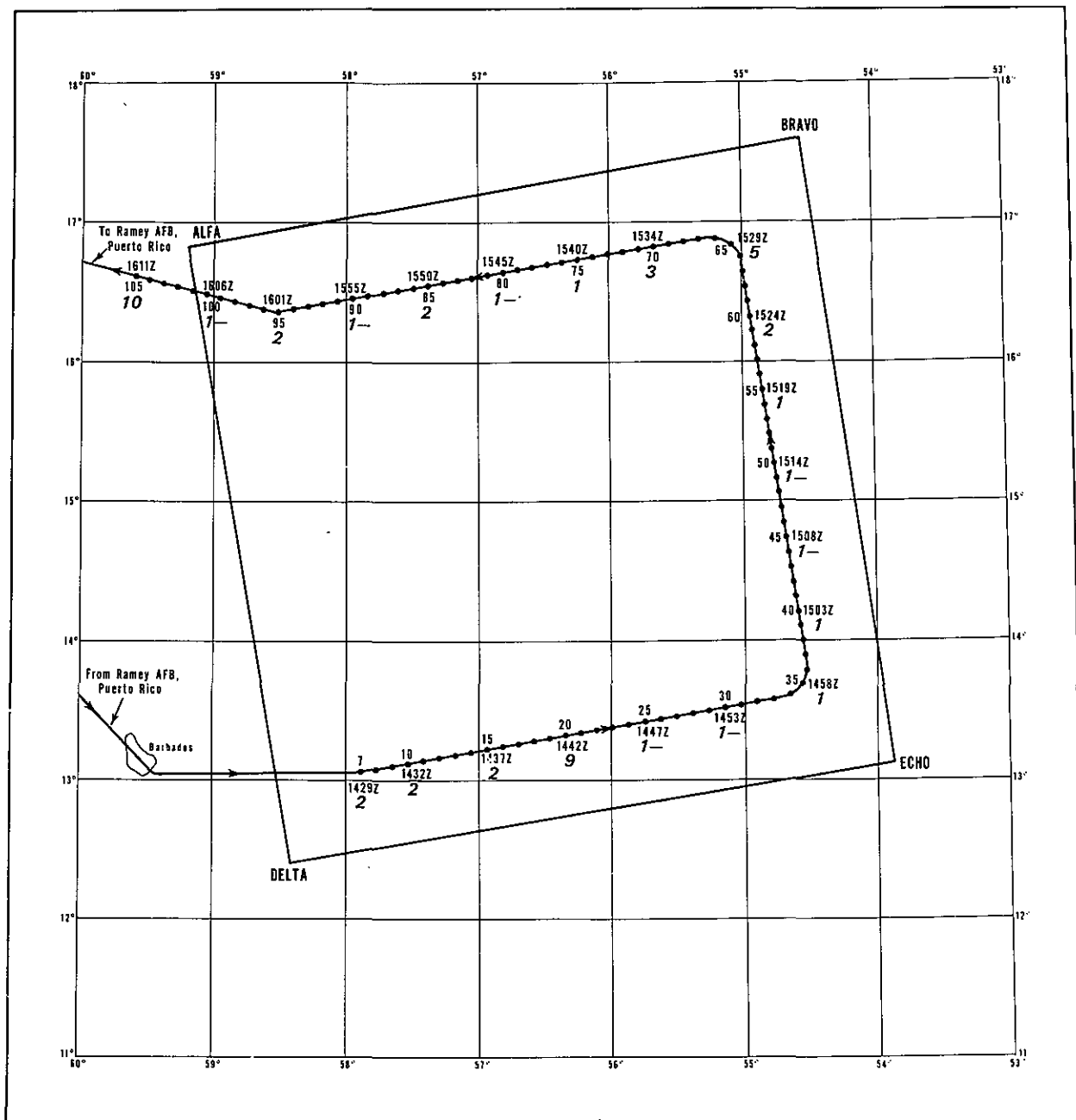


Figure 4.---RB-57F cloud photo track, 27 May 1969

Table 7.--Log of high-level cloud photography mission -- 28 May 1969

NAVIGATION NOTES*

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		° 'N	° 'W	deg.	deg.	kt.	kt.	deg.	kt.
1306	Ramey AFB	1830	6708						
1332	St. Croix	1744	6442						
1411	Fort-de-France	1436	6100						
1429	Barbados	1304	5929						
1440	DELTA	1223	5823						
1447	Drop 1	1302	5754	034	+3	410	410	307	20
1501								290	21
1515	Drop 5	1336	5431	079	+2	414	430	305	21
1530								290	20
1545	Drop 4	1657	5503	350	+1	410	400	337	10
1559								290	5
1615	Drop 8	1622	5832	269	0	410	410		
1622	ALFA	1650	5912	317	0	410	410		
1643	Antigua	1708	6147						
1709	St. Croix	1744	6442						
	Ramey AFB	1830	6708						

* Indicated altitude: 50,000 ft.

Table 7.--Log for 28 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
7	1447:47	1448	Level	80
8	1448:49	1449	"	80
9	1449:51	1450	"	80
10	1450:53	1451	"	80
11	1451:55	1452	"	80
12	1452:57	1453	"	80
13	1453:59	1454	"	80
14	1455:00	1455	"	80
15	1456:02	1456	"	80
16	1457:04	1457	"	80
17	1458:07	1458	"	80
18	1459:09	1459	"	80
19	1500:11	1500	"	80
20	1501:12	1501	"	80
21	1502:14	1502	"	80
22	1503:16	1503	"	80
23	1504:18	1504	"	80
24	1505:19	1505	"	80
25	1506:21	1506	"	80
26	1507:23	1507	"	80
27	1508:25	1508	"	80
28	1509:27	1509	"	80
29	1510:29	1510	"	80
30	1511:30	1511	"	80
31	1512:32	1513	"	80
32	1513:34	1514	"	80
33	1514:37	1515	"	80
34	1515:39	1516	Left roll	
35	1516:42	1517	Level	351
36	1517:44	1518	"	351
37	1518:45	1519	"	351
38	1519:47	1520	"	351
39	1520:49	1521	"	351
40	1521:51	1522	"	351

Table 7. --Log for 28 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1522:53	1523	Level	351
42	1523:56	1524	"	351
43	1524:58	1525	"	351
44	1526:00	1526	"	351
45	1527:02	1527	"	351
46	1528:04	1528	"	351
47	1529:06	1529	"	351
48	1530:09	1530	"	351
49	1531:11	1531	"	351
50	1532:14	1532	"	351
51	1533:16	1533	"	351
52	1534:18	1534	"	351
53	1535:20	1535	"	351
54	1536:23	1536	"	351
55	1537:25	1537	"	351
56	1538:28	1538	"	351
57	1539:31	1540	"	351
58	1540:33	1541	"	351
59	1541:36	1542	"	351
60	1542:38	1543	"	351
61	1543:40	1544	"	351
62	1544:43	1545	Left roll	
63	1545:45	1546	"	
64	1546:48	1547	Level	260
65	1547:51	1548	"	260
66	1548:53	1549	"	260
67	1549:56	1550	"	260
68	1550:58	1551	"	260
69	1552:00	1552	"	260
70	1553:03	1553	"	260

Table 7. --Log for 28 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1554:05	1554	Level	260
72	1555:08	1555	"	260
73	1556:10	1556	"	260
74	1557:13	1557	"	260
75	1558:15	1558	"	260
76	1559:17	1559	"	260
77	1600:19	1600	"	260
78	1601:23	1601	"	260
79	1602:25	1602	"	260
80	1603:27	1603	"	260
81	1604:30	1604	"	260
82	1605:32	1606	"	260
83	1606:35	1607	"	260
84	1607:21	1607	"	260
185	1607:45	1608	"	260
186	1608:23	1608	"	260
187	1609:07	1609	"	260
188	1609:34	1610	"	260
89	1610:13	1610	"	260
90	1611:16	1611	"	260
91	1612:18	1612	"	260
92	1613:21	1613	"	260
193	1614:08	1614	"	260
194	1614:12	1614	"	260
95	1614:31	1615	"	260
96	1615:34	1616	Right roll	
97	1616:36	1617	Level	305
98	1617:39	1618	"	305
99	1618:42	1619	"	305
100	1619:45	1620	"	305

Table 7. --Log for 28 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
101	1620:47	1621	Level	305
102	1621:50	1622	"	305
103	1622:52	1623	Left roll	
104	1623:54	1624	Level	278
105	1624:57	1625	"	278
106	1625:59	1626	"	278

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

¹Time interval between pictures shorter than normal.

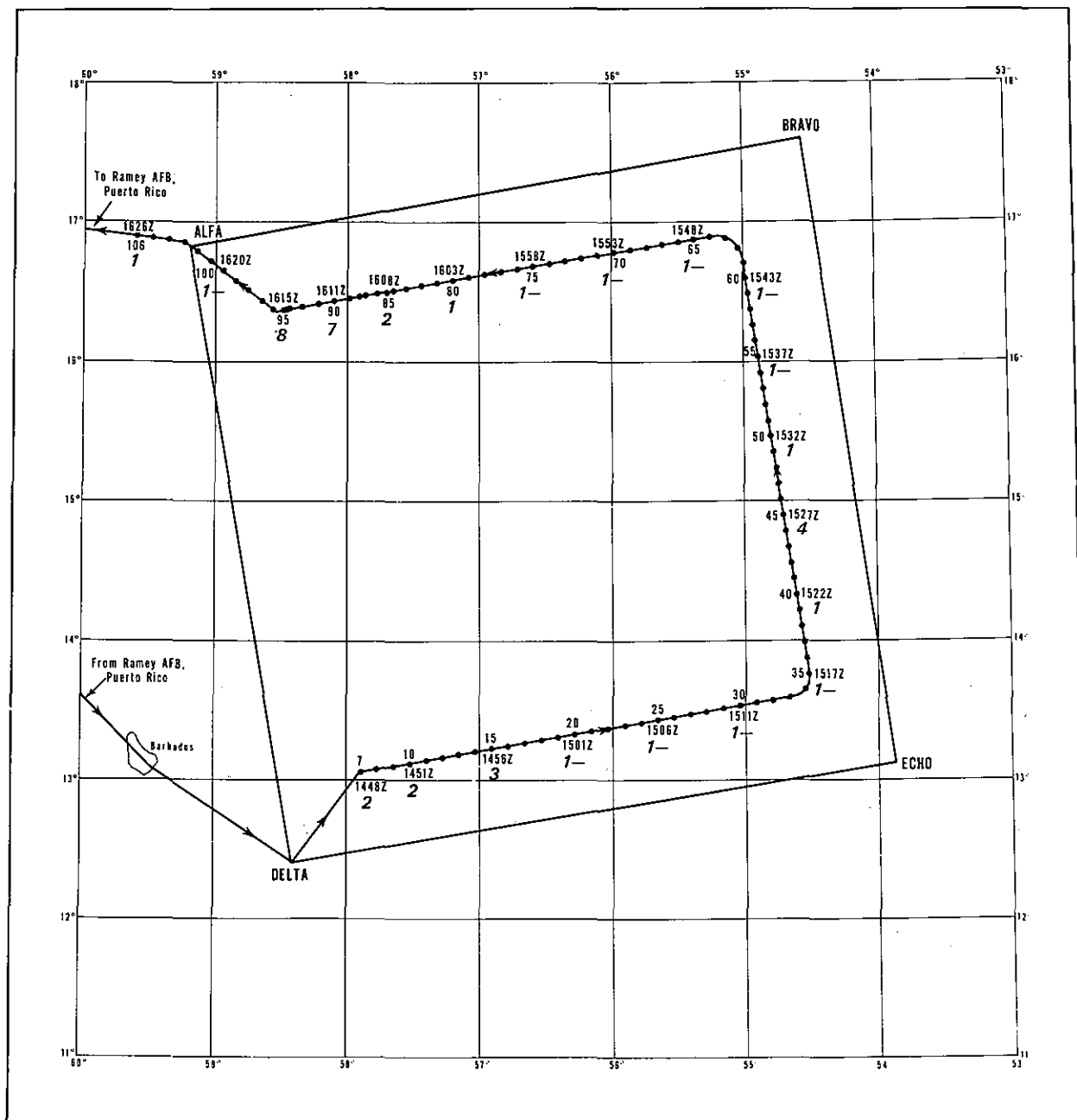


Figure 5.--RB-57F cloud photo track, 28 May 1969

Table 8. --Log of high-level cloud photography mission -- 30 May 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1303	Ramey AFB	1830	6708						
1334	St. Croix	1744	6442						
1413	Fort-de-France	1436	6100						
1431	Barbados	1304	5929	131	+2	400	400	040	15
1442	DELTA	1223	5823					300	20
1450	Drop 1	1302	5754						
1455	Radio fix and sun line	1314	5708			400	380	340	30
1503								340	30
¹ 1519								310	25
1525				352	+2	400	380	310	25
1531								310	25
1545				350	+2	400	380	300	25
1548	Drop 4	1657	5503					300	25
1603								300	12
1615	Radio fix and sun line	1635	5809	258	+3	400	385	310	25
1619	Drop 8	1622	5832						
1625	ALFA	1650	5912					310	25
1648	Antigua	1708	6147	280	-4	400	380	330	30
1715	St. Croix	1744	6442						
1726				290	-5	405	365		
1741	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

¹Compass failure at approximately 1505.

Table 8.--Log for 30 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
7	1450:43	1449	Slight right roll	
8	1451:43	1450	Right roll	
9	1452:44	1451	Level	80
10	1453:44	1452	"	80
11	1454:44	1453	"	80
12	1455:45	1454	"	80
13	1456:46	1455	"	80
14	1457:47	1456	"	80
15	1458:48	1457	"	80
16	1459:48	1458	"	80
17	1500:49	1459	"	80
18	1501:50	1500	"	
19	1502:51	1501	"	
20	1503:52	1502	"	
21	1504:53	1503	"	
22	1505:54	1504	"	
23	1506:55	1505	"	
24	1507:56	1506	"	
25	1508:57	1507	"	
26	1509:58	1508	"	
27	1510:59	1509	"	
28	1512:00	1510	"	
29	1513:02	1511	"	
30	1514:04	1512	"	
31	1515:05	1513	"	
32	1516:06	1514	"	
33	1517:07	1515	Slight right roll	
34	1518:09	1516	Level	
35	1519:10	1517	"	
36	1520:12	1518	"	
37	1521:13	1519	"	
38	1522:15	1520	Left roll	
39	1523:17	1521	"	
40	1524:18	1522	"	

Table 8.--Log for 30 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
¹ 41		1523		351
² 42	1526:21	1524	Level	351
² 43	1527:23	1525	"	351
² 44	1528:25	1526	"	351
² 45	1529:27	1527	"	351
² 46	1530:29	1528	"	351
² 47	1531:31	1530	"	351
² 48	1532:33	1531	"	351
² 49	1533:35	1532	"	351
² 50	1534:36	1533	"	351
² 51	1535:38	1534	"	351
² 52	1536:40	1535	"	351
² 53	1537:42	1536	"	351
² 54	1538:44	1537	"	351
² 55	1539:46	1538	"	351
² 56	1540:48	1539	"	351
¹ 57	1541:50	1540		351
¹ 58	1542:52	1541		351
¹ 59	1543:54	1542		351
¹ 60	1544:57	1543		351
¹ 61	1545:59	1544		351
¹ 62	1547:01	1545		351
¹ 63	1548:03	1546		351
¹ 64	1549:05	1547		351
³ 65	1550:07	1548	Left roll	
² 66	1551:09	1549	Level	260
67	1552:11	1550	"	260
68	1553:13	1551	"	260
69	1554:16	1552	"	260
70	1555:18	1553	"	260

Table 8. --Log for 30 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1556:20	1554	Level	260
² 72	1557:22	1555	"	260
73	1558:24	1556	"	260
74	1559:26	1557	"	260
² 75	1600:28	1558	"	260
76	1601:31	1600	"	260
77	1602:33	1601	"	260
² 78	1603:35	1602	"	260
² 79	1604:38	1603	"	260
² 80	1605:40	1604	"	260
81	1606:42	1605	"	260
² 82	1607:44	1606	"	260
83	1608:47	1607	"	260
² 84	1609:50	1608	"	260
² 85	1610:52	1609	"	260
² 86	1611:54	1610	"	260
² 87	1612:56	1611	"	260
² 88	1613:59	1612	"	260
² 89	1615:01	1613	"	260
² 90	1616:03	1614	"	260
² 91	1617:06	1615	"	260
² 92	1618:08	1616	"	260
93	1619:10	1617	"	260
94	1620:12	1618	"	260
95	1621:14	1619	Right roll	
² 96	1622:16	1620	Level	305

** Corrected altitude: 51,700 ft. = 8.5 n.mi.

- ¹ No picture. Obliterated by malfunction during film development.
- ² Defects in picture from malfunction during development.
- ³ Picture obliterated except for left horizon.

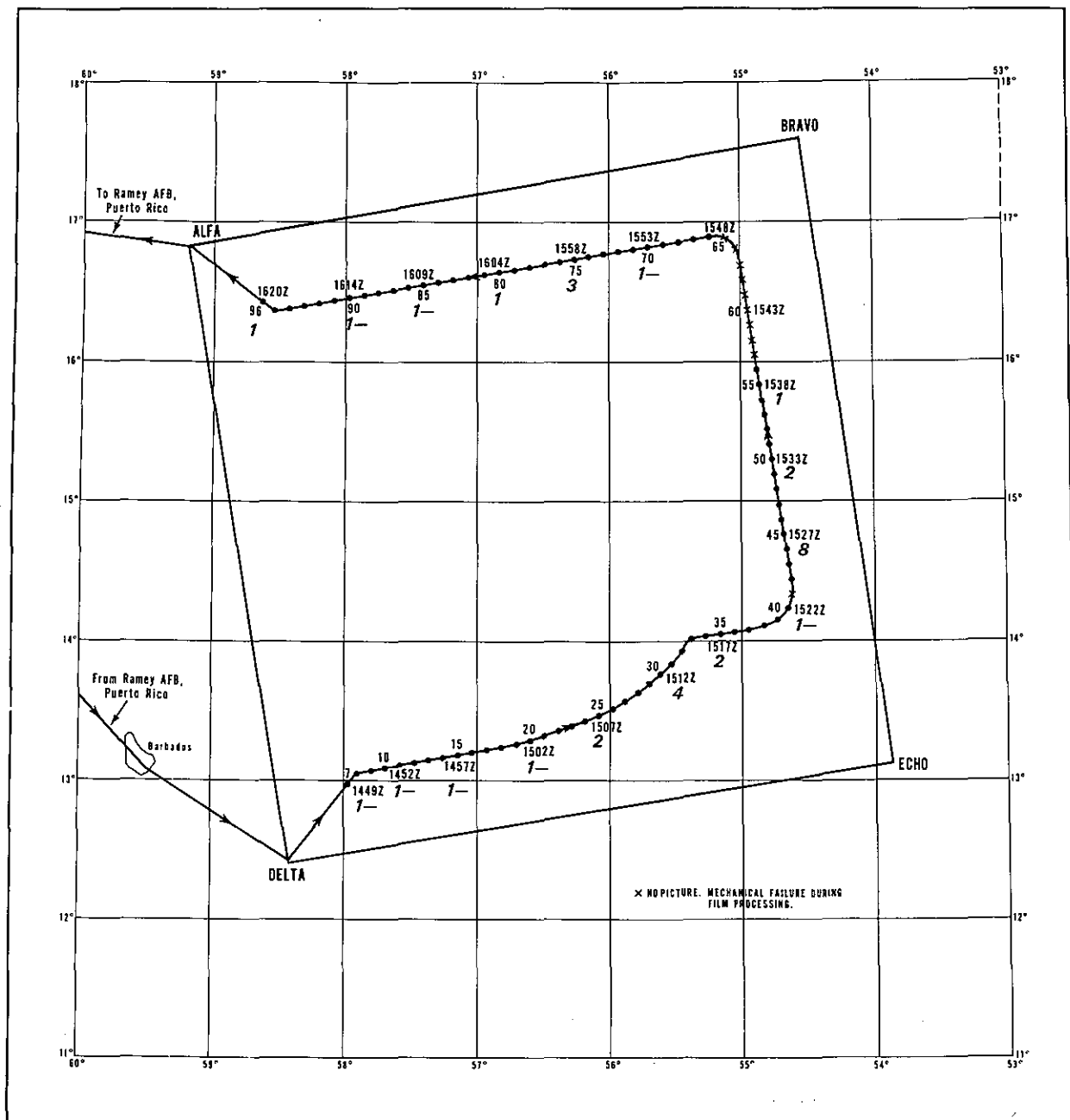


Figure 6.--RB-57F cloud photo track, 30 May 1969

Table 9.--Log of high-level cloud photography mission -- 31 May 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1256	Ramey AFB	1830	6708						
1323	St. Croix	1744	6442						
1407	Fort-De-France	1436	6100	132	0	395	375	132	20
1425	Barbados	1304	5929						
1439	Drop 1	1302	5754	090	+3	392	385	017	22
1454								010	16
1510	Drop 5	1336	5431	078	+3	385	390	005	21
1520	Radio fix and sun line	1450	5451						
1526								320	22
1542	Drop 4	1657	5503	352	+2	388	380	295	16
1558								310	25
1613	Drop 8	1622	5832					290	30
1646	Antigua	1708	6147	280	0	390	370	280	20
1713	St. Croix	1744	6442						
1723				279	0	385	370	279	15
	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

Table 9.--Log for 31 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
6	1440:26	1439	Slight left roll	80
7	1441:25	1440	Level	80
8	1442:24	1441	"	80
9	1443:23	1442	"	80
10	1444:22	1443	"	80
11	1445:20	1444	"	80
12	1446:19	1445	"	80
13	1447:18	1446	"	80
14	1448:16	1447	"	80
15	1449:15	1448	"	80
16	1450:14	1449	"	80
17	1451:13	1450	"	80
18	1452:12	1451	"	80
19	1453:10	1452	"	80
20	1454:09	1453	"	80
21	1455:07	1454	"	80
22	1456:06	1455	"	80
23	1457:05	1456	"	80
24	1458:04	1457	"	80
25	1459:03	1458	"	80
26	1500:02	1459	"	80
27	1501:00	1500	"	80
28	1501:59	1501	"	80
29	1502:58	1502	"	80
30	1503:57	1503	"	80
31	1504:56	1504	"	80
32	1505:55	1505	"	80
33	1506:54	1506	"	80
34	1507:52	1507	"	80
35	1508:51	1508	"	80
36	1509:50	1509	"	80
37	1510:49	1510	"	80
38	1511:48	1511	Left roll	
39	1512:47	1512	Level	351
40	1513:46	1513	"	351

Table 9.--Log for 31 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1514:45	1514	Level	351
42	1515:44	1515	"	351
43	1516:43	1516	"	351
44	1517:41	1517	"	351
45	1518:40	1518	"	351
46	1519:39	1519	"	351
47	1520:38	1520	"	351
48	1521:37	1521	"	351
49	1522:36	1522	"	351
50	1523:35	1523	"	351
51	1524:34	1524	"	351
52	1525:33	1525	"	351
53	1526:32	1526	"	351
54	1527:31	1527	"	351
55	1528:30	1528	"	351
56	1529:20	1529	"	351
57	1530:29	1529	"	351
58	1531:28	1530	"	351
59	1532:27	1531	"	351
60	1533:26	1532	"	351
61	1534:25	1533	"	351
62	1535:24	1534	"	351
63	1536:23	1535	"	351
64	1537:23	1536	"	351
65	1538:22	1537	"	351
66	1539:21	1538	"	351
67	1540:20	1539	"	351
68	1541:19	1540	"	351
69	1542:18	1541	"	351
70	1543:17	1542	Left roll	
71	1544:16	1543		
72	1545:15	1544	Slight left roll	
73	1546:14	1545	Level	260
74	1547:13	1546	"	260
75	1548:12	1547	"	260
76	1549:11	1548	"	260
77	1550:10	1549	"	260
78	1551:09	1550	"	260
79	1552:08	1551	"	260
80	1553:07	1552	"	260

Table 9.--Log for 31 May 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
81	1554:07	1553	Level	260
82	1555:06	1554	"	260
83	1556:05	1555	"	260
84	1557:03	1556	"	260
85	1558:02	1557	"	260
86	1559:01	1558	"	260
87	1600:00	1559	"	260
88	1600:59	1600	"	260
89	1601:58	1601	"	260
90	1602:57	1602	"	260
91	1603:56	1603	"	260
92	1604:55	1604	"	260
93	1605:53	1605	"	260
94	1606:52	1606	"	260
95	1607:51	1607	"	260
96	1608:50	1608	"	260
97	1609:49	1609	"	260
98	1610:48	1610	"	260
99	1611:47	1611	"	260
100	1612:46	1612	"	260
101	1613:44	1613	"	260
102	1614:43	1614	Right roll	
103	1615:42	1615	Level	285
104	1616:41	1616	"	285

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

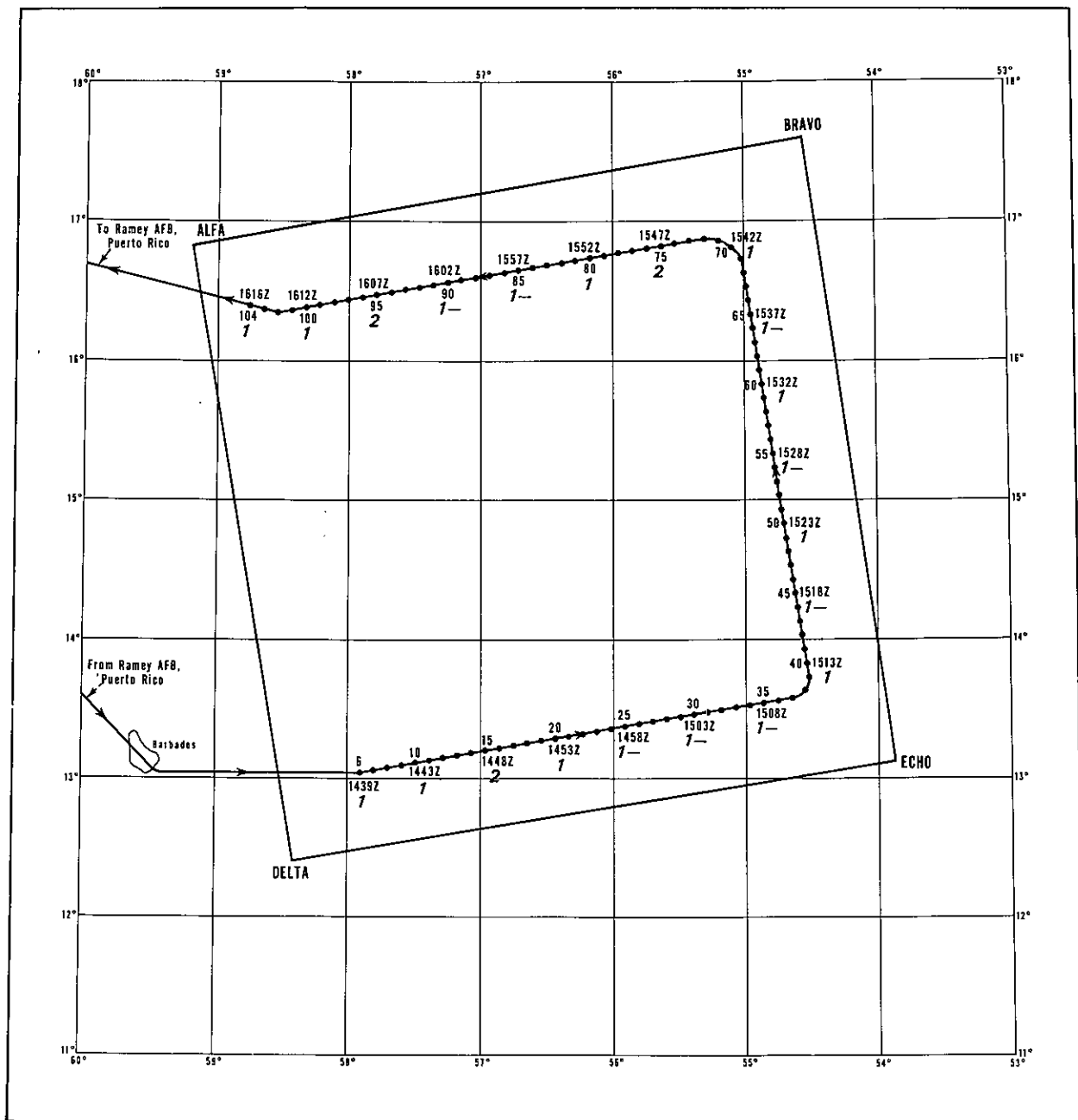


Figure 7.--RB-57F cloud photo track, 31 May 1969

Table 10. --Log of high-level cloud photography mission -- 1 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		° 'N	° 'W	deg.	deg.	kt.	kt.	deg.	kt.
1309	Ramey AFB	1830	6708						
1335	St. Croix	1744	6442						
1417	Fort-de-France	1436	6100						
1436	Barbados	1304	5929						
1447	DELTA	1223	5823						
1454	Drop 1	1302	5754	034	0	410	410		
1509								330	¹ L/V 22
1523	Drop 5	1336	5431	078	+3	410	420	328	22
1539								330	40
1556	Drop 4	1657	5503	350	+4	410	380	313	40
1611								310	40
1628	Drop 8	1622	5832	265	-4	410	380	311	40
1636	ALFA	1650	5912						
1700	Antigua	1708	6147						
1728	St. Croix	1744	6442						
1751	Ramey AFB	1830	6708						

* Indicated altitude: 50,000 ft.

¹ Light variable.

Table 10. --Log for 1 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
6	1457:17	1457	Level	80
7	1458:14	1458	"	80
8	1459:11	1459	"	80
9	1500:08	1500	"	80
10	1501:05	1501	"	80
11	1502:02	1502	"	80
12	1502:59	1503	"	80
13	1503:56	1504	"	80
14	1504:53	1505	"	80
15	1505:50	1506	"	80
16	1506:47	1507	"	80
17	1507:44	1508	"	80
18	1508:41	1509	"	80
19	1509:38	1510	"	80
20	1510:35	1511	"	80
21	1511:31	1512	"	80
22	1512:29	1512	"	80
23	1513:26	1513	"	80
24	1514:23	1514	"	80
25	1515:20	1515	"	80
26	1516:17	1516	"	80
27	1517:14	1517	"	80
28	1518:11	1518	"	80
29	1519:08	1519	"	80
30	1520:05	1520	"	80
31	1521:02	1521	"	80
32	1521:59	1522	"	80
33	1522:55	1523	"	80
34	1523:53	1524	Left roll	
35	1524:49	1525	"	
36	1525:45	1526	Level	351
37	1526:42	1527	"	351
38	1527:39	1528	"	351
39	1528:36	1529	"	351
40	1529:33	1530	"	351

Table 10. --Log for 1 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
1 41		1530	Level	351
2 42	1531:26	1531	"	351
1 43	1532:23	1532	"	351
44	1533:20	1533	"	351
45	1534:17	1534	"	351
46	1535:13	1535	"	351
47	1536:10	1536	"	351
48	1537:06	1537	"	351
49	1538:03	1538	"	351
50	1539:00	1539	"	351
51	1539:57	1540	"	351
52	1540:54	1541	"	351
53	1541:49	1542	"	351
54	1542:45	1543	"	351
55	1543:42	1544	"	351
1 56	1544:38	1545	"	351
3 57	1545:35	1546		351
3 58	1546:31	1547		351
3 59	1547:28	1547		351
3 60	1548:25	1548		351
3 61	1549:21	1549		351
3 62	1550:17	1550		351
3 63	1551:14	1551		351
3 64	1552:11	1552		351
3 65	1553:07	1553		351
1 66	1554:04	1554	"	351
67	1555:00	1555	"	351
68	1555:57	1556	"	351
69	1556:53	1557	Left Roll	
70	1557:49	1558	"	

Table 10. --Log for 1 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1558:45	1559	Level	260
72	1559:41	1600	"	260
73	1600:37	1601	"	260
74	1601:34	1602	"	260
75	1602:30	1603	"	260
76	1603:27	1603	"	260
77	1604:23	1604	"	260
78	1605:19	1605	"	260
79	1606:15	1606	"	260
80	1607:12	1607	"	260
81	1608:08	1608	"	260
82	1609:05	1609	"	260
83	1610:01	1610	"	260
84	1610:57	1611	"	260
85	1611:53	1612	"	260
86	1612:49	1613	"	260
87	1613:45	1614	"	260
88	1614:41	1615	"	260
89	1615:37	1616	"	260
90	1616:34	1617	"	260
91	1617:30	1618	"	260
92	1618:26	1618	"	260

** Corrected altitude: 51,700 ft. = 8.5 n.mi.

1 Picture marred but usable.

2 1/8 of photograph shows.

3 No picture.

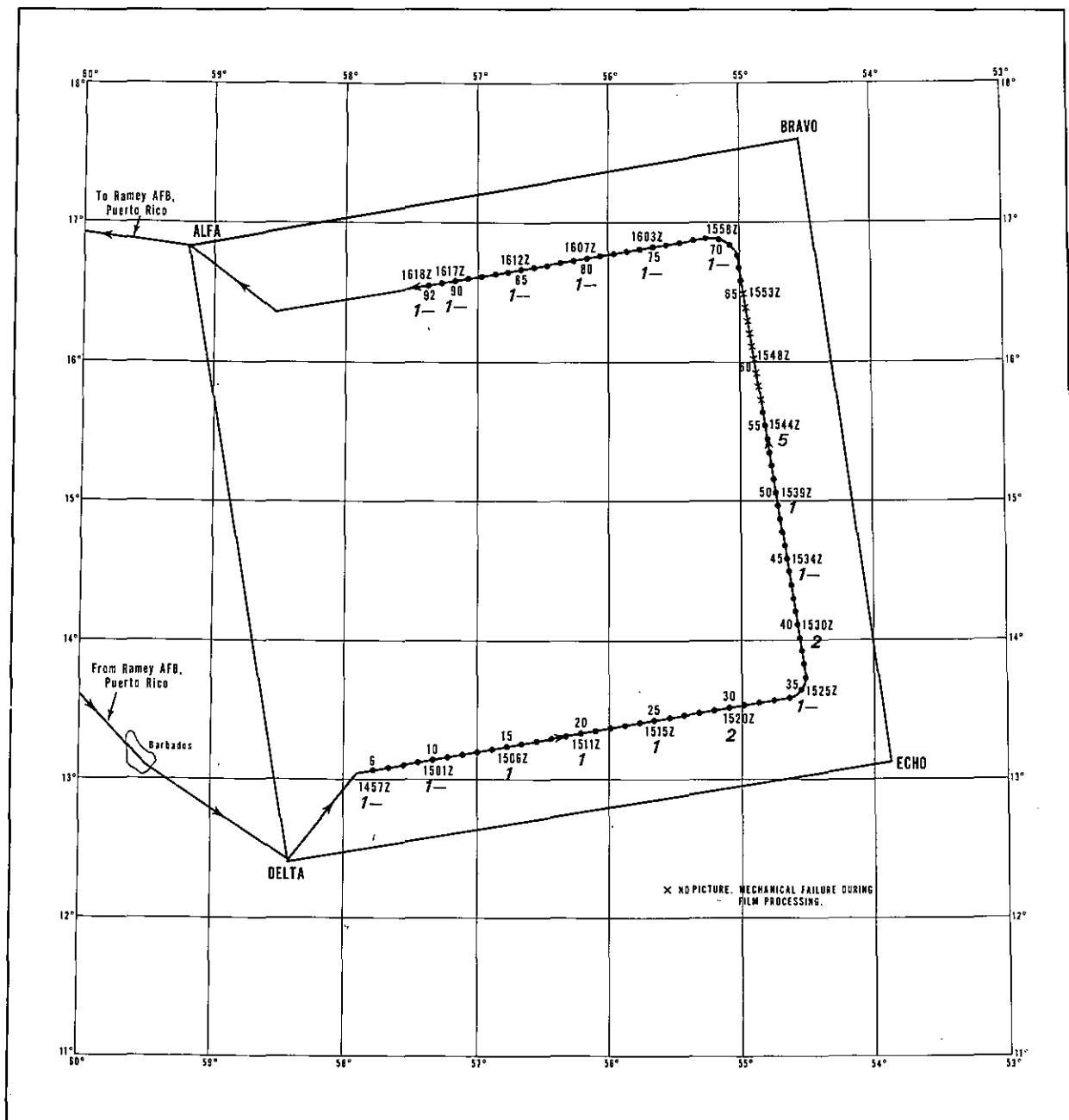


Figure 8.--RB-57F cloud photo track, 1 June 1969

Table 11.--Log of high-level cloud photography mission -- 2 June 1969

NAVIGATION NOTES *

Time	Location		True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat. Long.			Air	Ground	Dir.	Speed
GCT		°'N °'W	deg.	deg.	kt.	kt.	deg.	kt.
1258	Ramey AFB	1830 6708						
1326	St. Croix	1744 6442						
1408	Fort-de-France	1436 6100	130	+2	395	405	359	20
1426	Barbados	1304 5929						
1440	Drop 1	1302 5754	086	+6	393	388	005	40
1456							350	38
1511	Drop 5	1336 5431	074	+5	394	390	353	35
1526							300	38
1542	Drop 4	1657 5503	346	+4	390	360	308	40
1558							290	31
1615	Drop 8	1622 5832	263	-3	390	368	301	30
1648	Antigua	1708 6147						
1715	St. Croix	1744 6442	280	0	390	362	280	28
	Ramey AFB	1830 6708						

*Indicated altitude: 50,000 ft.

Table 11.---Log for 2 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
7		1442	Level	80
8	1443:53	1443	"	80
9	1444:55	1444	"	80
10	1445:58	1445	"	80
11	1447:00	1446	"	80
12	1448:02	1447	"	80
13	1449:04	1448	"	80
14	1450:06	1449	"	80
15	1451:08	1450	"	80
16	1452:11	1451	"	80
17		1452	"	80
18	1454:15	1453	"	80
19	1455:18	1454	"	80
20	1456:20	1455	"	80
21	1457:22	1456	"	80
22	1458:25	1457	"	80
23	1459:27	1458	"	80
24	1500:29	1459	"	80
25	1501:32	1501	"	80
26	1502:34	1502	"	80
27	1503:37	1503	"	80
28	1504:40	1504	"	80
29	1505:42	1505	"	80
30	1506:44	1506	"	80
31	1507:46	1507	"	80
32	1508:48	1508	"	80
33	1509:51	1509	"	80
34	1510:53	1510	"	80
35	1511:56	1511	Left roll	
36	1512:58	1512	"	
37	1514:00	1513	Level	351
38	1515:03	1514	"	351
39	1516:05	1515	"	351
40	1517:07	1516	"	351

Table 11.--Log for 2 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1518:10	1517	Level	351
42	1519:13	1518	"	351
43	1520:15	1519	"	351
44	1521:18	1520	"	351
45	1522:20	1521	"	351
46	1523:22	1522	"	351
47	1524:25	1523	"	351
48	1525:27	1524	"	351
49	1526:30	1526	"	351
50	1527:33	1527	"	351
51	1528:35	1528	"	351
52	1529:37	1529	"	351
53	1530:40	1530	"	351
54	1531:42	1531	"	351
55	1532:44	1532	"	351
56	1533:47	1533	"	351
57	1534:49	1534	"	351
58	1535:51	1535	"	351
59	1536:53	1536	"	351
60	1537:56	1537	"	351
61	1538:58	1538	"	351
62	1540:00	1539	"	351
63	1541:02	1540	"	351
64	1542:05	1541	"	351
65	1543:07	1542	Left roll	
66	1544:10	1543	Very slight left roll	
67	1545:12	1544	Level	260
68	1546:14	1545	"	260
69	1547:16	1546	"	260
70	1548:18	1547	"	260
71	1549:20	1548	"	260
72	1550:23	1549	"	260
73	1551:25	1550	"	260
74	1552:27	1551	"	260
75	1553:29	1552	"	260
76	1554:32	1554	"	260
77	1555:34	1555	"	260
78	1556:36	1556	"	260
79	1557:39	1557	"	260
80	1558:41	1558	"	260

Table 11.--Log for 2 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
81	1559:43	1559	Level	260
82	1600:45	1600	"	260
83	1601:48	1601	"	260
84	1602:50	1602	"	260
85	1603:52	1603	"	260
86	1604:54	1604	"	260
87	1605:56	1605	"	260
88	1606:59	1606	"	260
89	1608:01	1607	"	260
90	1609:03	1608	"	260
91	1610:05	1609	"	260
92	1611:07	1610	"	260
93	1612:10	1611	"	260
94	1613:12	1612	"	260
95	1614:14	1613	Slight right roll	
96	1615:16	1614	Level	285
97	1616:19	1615	"	285
98	1617:21	1616	"	285
99	1618:23	1617	"	285
100	1619:25	1618	"	285
101	1620:27	1619	"	285
102	1621:30	1621	"	285
103	1622:32	1622	"	285
104	1623:35	1623	"	285
105	1624:37	1624	"	285
106	1625:39	1625	"	285

**Corrected altitude: 51,000 ft. = 8.5 n.mi.

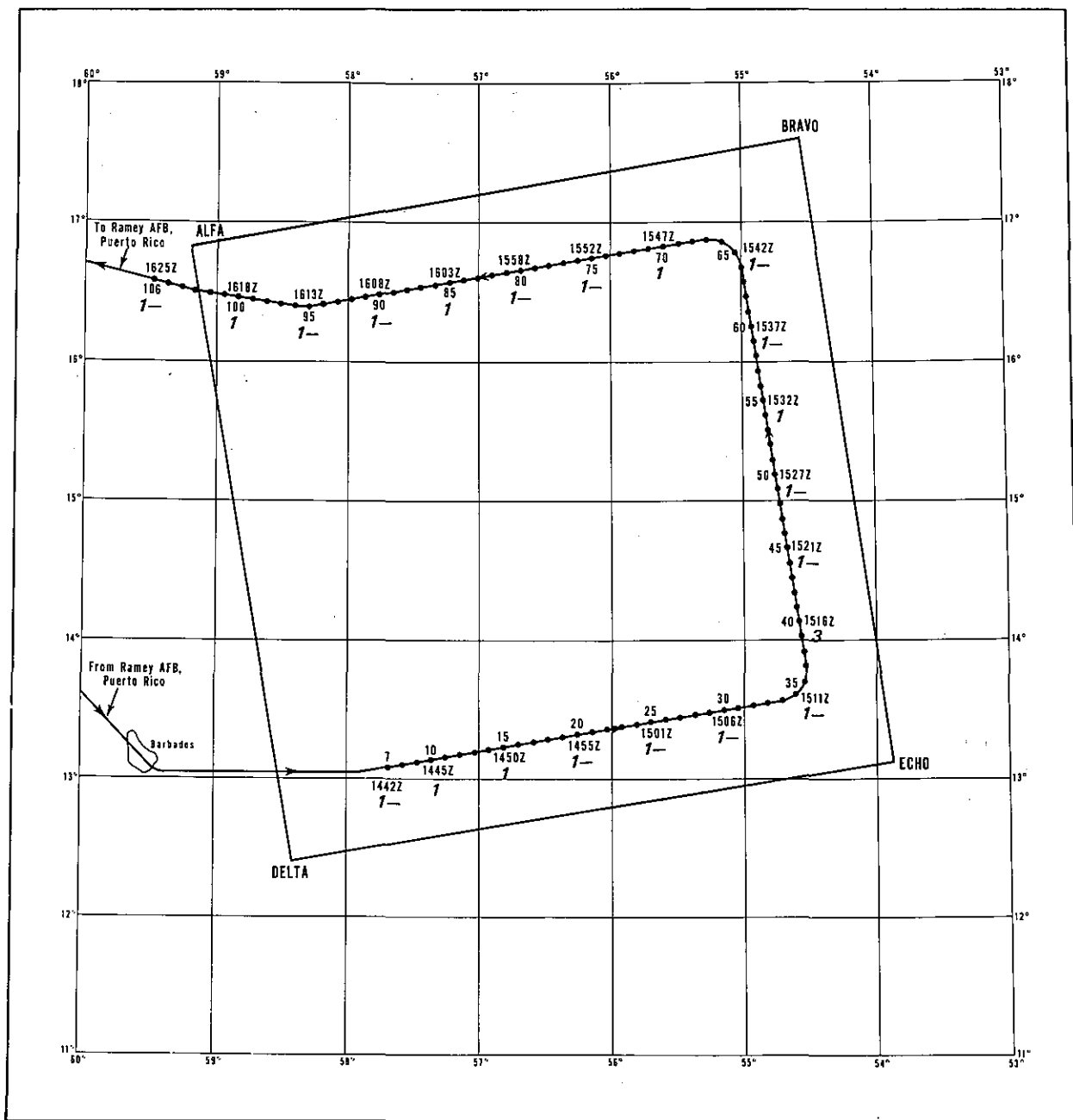


Figure 9.--RB-57F cloud photo track, 2 June 1969

Table 12. --Log of high-level cloud photography mission -- 3 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1306	Ramey AFB	1830	6708						
1334	St. Croix	1744	6442						
1413	Fort-de-France	1436	6100						
1431	Barbados	1304	5929						
1442	DELTA	1223	5823						
1449	Drop 1	1302	5754	032	+5	405	390	332	41
1504								330	32
1518	Drop 5	1336	5431	074	+4	406	419	326	30
1535								300	42
1550	Drop 4	1657	5503	348	+5	405	380	298	42
1606								310	37
1623	Drop 8	1622	5832	258	-3	405	375	291	39
1631	ALFA	1650	5912						
1654	Antigua	1708	6147						
1721	St. Croix	1744	6442						
1734	Ramey AFB	1830	6708						

* Indicated altitude: 50,000 ft.

Table 12.--Log for 3 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
6	1507:13	1507	Level	80
7	1508:15	1508	"	80
8	1509:18	1509	"	80
9	1510:20	1510	"	80
10	1511:23	1511	"	80
11	1512:26	1512	"	80
12	1513:28	1513	"	80
13	1514:31	1515	"	80
14	1515:34	1516	"	80
15	1516:36	1517	"	80
16	1517:39	1518	"	80
17	1518:42	1519	Left roll	
18	1519:45	1520	"	
19	1520:47	1521	Level	351
20	1521:50	1522	"	351
21	1522:52	1523	"	351
22	1523:55	1524	"	351
23	1524:58	1525	"	351
24	1526:00	1526	"	351
25	1527:03	1527	"	351
26	1528:06	1528	"	351
27	1529:08	1529	"	351
28	1530:11	1530	"	351
29	1531:13	1531	"	351
30	1532:16	1532	"	351
31	1533:19	1533	"	351
32	1534:21	1534	"	351
1 33	1534:49	1535	"	351
34	1535:52	1536	"	351
35	1536:54	1537	"	351
36	1537:57	1538	"	351
37	1538:59	1539	"	351
38	1540:01	1540	"	351
39	1541:04	1541	"	351
40	1542:06	1542	"	351

Table 12. --Log for 3 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1543:09	1543	Level	351
42	1544:12	1544	"	351
43	1545:14	1545	"	351
44	1546:17	1546	"	351
45	1547:19	1547	"	351
46	1548:22	1548	"	351
47	1549:25	1549	"	351
48	1550:27	1550	Left roll	
49	1551:30	1552	"	
50	1552:33	1553	Level	260
51	1553:35	1554	"	260
52	1554:37	1555	"	260
53	1555:40	1556	"	260
54	1556:43	1557	"	260
55	1557:45	1558	"	260
56	1558:48	1559	"	260
57	1559:51	1600	"	260
58	1600:53	1601	"	260
59	1601:56	1602	"	260
60	1602:58	1603	"	260
61	1604:00	1604	"	260
62	1605:03	1605	"	260
63	1606:06	1606	"	260
64	1607:09	1607	"	260
65	1608:11	1608	"	260
66	1609:14	1609	"	260
67	1610:16	1610	"	260
68	1611:18	1611	"	260
69	1612:21	1612	"	260
70	1613:24	1613	"	260

Table 12. --Log for 3 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1614:27	1614	Level	260
72	1615:30	1616	"	260
73	1616:33	1617	"	260
74	1617:35	1618	"	260
75	1618:37	1619	"	260
76	1619:40	1620	"	260
77	1620:43	1621	"	260
78	1621:46	1622	"	260
79	1622:49	1623	"	260
80	1623:51	1624	Right roll	
81	1624:54	1625	Level	305
82	1625:56	1626	"	305
83	1626:59	1627	"	305
84	1628:01	1628	"	305
85	1629:04	1629	"	305
86	1630:07	1630	"	305
87	1631:09	1631	Left roll	
88	1632:12	1632	Level	278
89	1633:27	1633	"	278
90	1633:32	1634	"	278
91	1633:36	1634	"	278
92	1633:39	1634	"	278
93	1633:42	1634	"	278
94	1633:43	1634	"	278
95	1633:45	1634	"	278
96	1633:46	1634	"	278
97	1633:48	1634	"	278
98	1633:50	1634	"	278
99	1633:51	1634	"	278
100	1633:54	1634	"	278
101	1633:57	1634	"	278
102	1633:59	1634	"	278
103	1634:00	1634	"	278
104	1634:02	1634	"	278
105	1634:04	1634	"	278

** Corrected altitude: 51,700 ft.= 8.5 n. mi.

1 Shortened time interval.

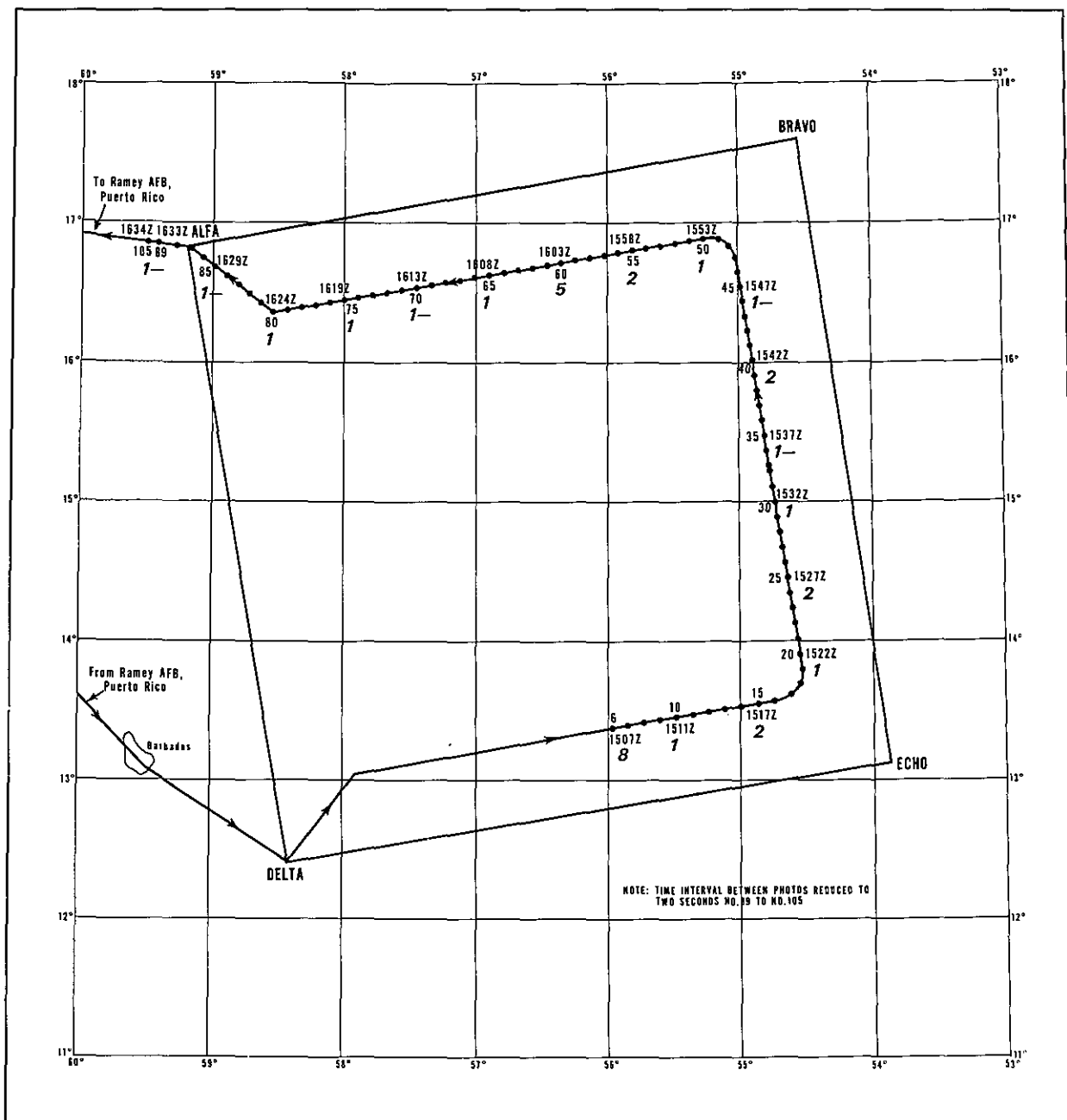


Figure 10.---RB-57F cloud photo track, 3 June 1969

Table 13.--Log of high-level cloud photography mission -- 4 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°N	°W	deg.	deg.	kt.	kt.	deg.	kt.
1306	Ramey AFB	1830	6708						
1331	St. Croix	1744	6442						
1410	Fort-de-France	1436	6100	125	+5	410	435	360	40
1428	Barbados	1304	5929	139	+4	410	420	020	30
1442	Drop 1; Radio fix and sun line	1302	5754					350	30
1457								340	35
1505	Radio fix and sun line	1333	5512	075	+5	410	414	340	30
1512	Drop 5	1336	5431					340	30
1528								290	35
1535				348	+6	410	400	270	40
1542	Drop 4	1657	5503					270	40
1558								260	20
1605	Radio fix and sun line	1645	5740	262	0	410	400	260	10
1612	Drop 8	1622	5832					260	10
1640	Antigua	1708	6147	285	-5	405	370	310	50
1709	St. Croix	1744	6442						
1720				288	-2	406	368	300	40
1734	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

Table 13.--Log for 4 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
7	1443:32	1444	Level	80
8	1444:33	1445	"	80
9	1445:35	1446	"	80
10	1446:37	1447	"	80
11	1447:40	1448	"	80
12	1448:41	1449	"	80
13	1449:43	1450	"	80
14	1450:44	1451	"	80
15	1451:46	1452	"	80
16	1452:48	1453	"	80
17	1453:50	1454	"	80
18	1454:52	1455	"	80
19	1455:54	1456	"	80
20	1456:55	1457	"	80
21	1457:57	1458	"	80
22	1458:58	1459	"	80
23	1500:00	1500	"	80
24	1501:02	1501	"	80
25	1502:04	1502	"	80
26	1503:06	1503	"	80
27	1504:08	1504	"	80
28	1505:10	1505	"	80
29	1506:11	1506	"	80
30	1507:13	1507	"	80
31	1508:15	1508	"	80
32	1509:17	1509	"	80
33	1510:19	1510	"	80
34	1511:21	1511	"	80
35	1512:23	1512	Left roll	
36	1513:25	1513	Level	351
37	1514:26	1514	"	351
38	1515:28	1515	"	351
39	1516:30	1517	"	351
40	1517:32	1518	"	351

Table 13.--Log for 4 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected (hr:min)		
41	1518:34	1519	Level	351
42	1519:36	1520	"	351
43	1520:38	1521	"	351
44	1521:40	1522	"	351
45	1522:42	1523	"	351
46	1523:43	1524	"	351
47	1524:45	1525	"	351
48	1525:47	1526	"	351
49	1526:49	1527	"	351
50	1527:51	1528	"	351
51	1528:53	1529	"	351
52	1529:55	1530	"	351
53	1530:56	1531	"	351
54	1531:58	1532	"	351
55	1532:59	1533	"	351
56	1534:01	1534	"	351
57	1535:03	1535	"	351
58	1536:05	1536	"	351
59	1537:06	1537	"	351
60	1538:08	1538	"	351
61	1539:10	1539	"	351
62	1540:11	1540	"	351
63	1541:13	1541	"	351
64	1542:15	1542	Left roll	
65	1543:17	1543	Slight left roll	
66	1544:18	1544	Level	260
67	1545:20	1545	"	260
68	1546:21	1546	"	260
69	1547:23	1547	"	260
70	1548:25	1548	"	260
71	1549:27	1549	"	260
72	1550:29	1550	"	260
73	1551:31	1552	"	260
74	1552:32	1553	"	260
75	1553:34	1554	"	260
76	1554:36	1555	"	260
77	1555:37	1556	"	260
78	1556:39	1557	"	260
79	1557:41	1558	"	260
80	1558:43	1559	"	260

Table 13.--Log for 4 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
81	1559:45	1600	Level	260
82	1600:47	1601	"	260
83	1601:48	1602	"	260
84	1602:50	1603	"	260
85	1603:51	1604	"	260
86	1604:53	1605	"	260
87	1605:55	1606	"	260
88	1606:57	1607	"	260
89	1607:59	1608	"	260
90	1609:01	1609	"	260
91	1610:02	1610	"	260
92	1611:04	1611	"	260
93	1612:06	1612	"	260
¹ 94	1613:08	1613	"	
95	1614:10	1614	"	285
96	1615:12	1615	"	285
97	1616:13	1616	"	285
98	1617:15	1617	"	285
99	1618:17	1618	"	285
100	1619:18	1619	"	285

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

¹ Sun glint position shows right turn between No. 93 and No. 94.

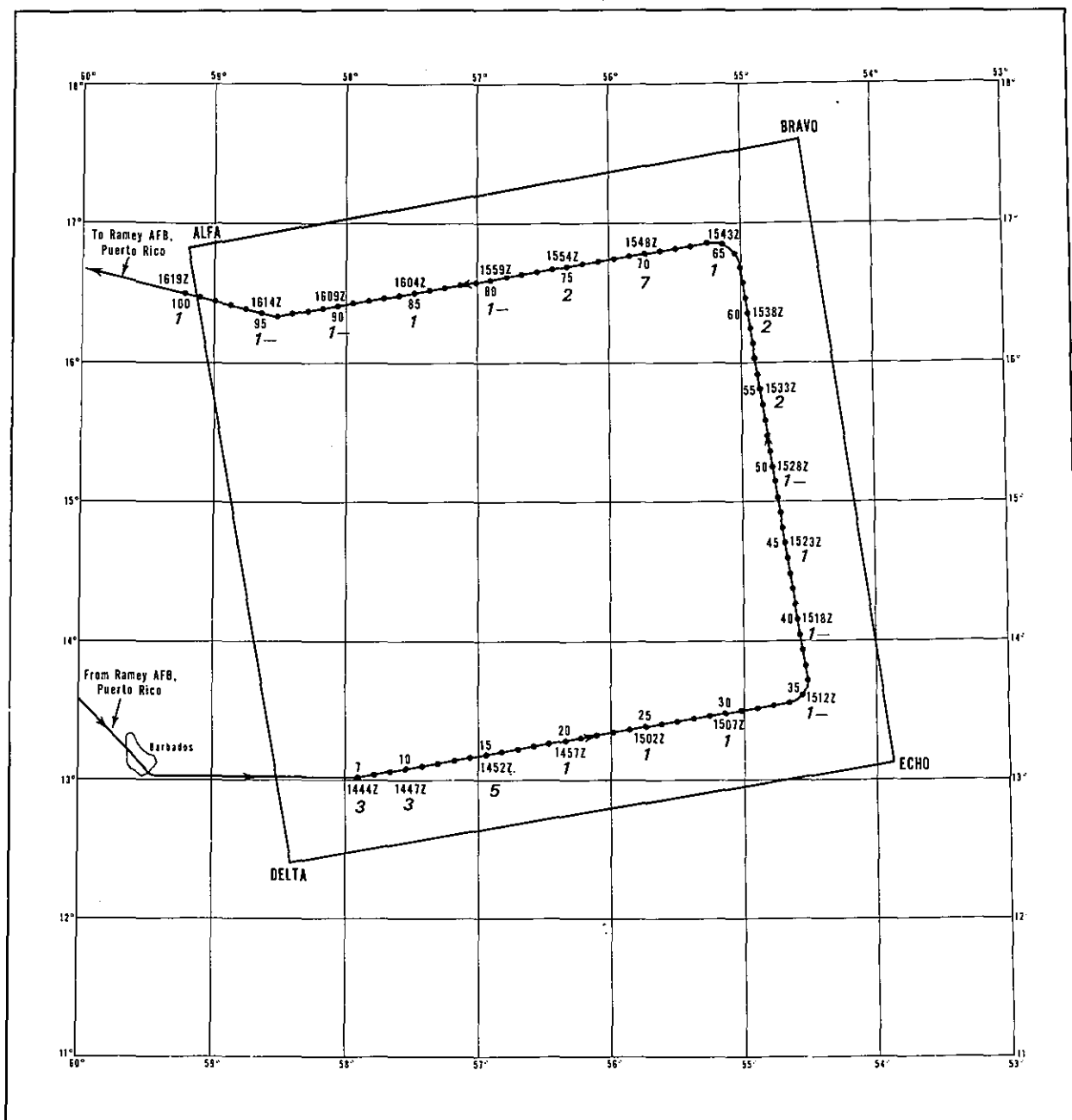


Figure 11.--RB-57F cloud photo track, 4 June 1969

Table 14. --Log of high-level cloud photography mission -- 6 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1257	Ramey AFB	1830	6708						
1324	St. Croix	1744	6442	101	+4	380	392	346	30
1406	Fort-de-France	1436	6100						
1424	Barbados	1304	5929	155	-2	395	415	300	25
1439	Drop 1	1302	5754					280	22
1454								260	40
1506	Drop 5	1336	5431	103	0	395	435	283	40
1522								250	30
1537	Drop 4	1657	5503	007	+4	390	395	267	28
1552								270	30
1610	Drop 8	1622	5832	261	-1	395	365	274	30
1639	Antigua	1708	6147						
1706	St. Croix	1744	6442	275	-2	392	390	003	13
	Ramey AFB	1830	6708						

* Indicated altitude: 50,000 ft.

Table 14. --Log for 6 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
6	1439:55	1440	Left roll	
7	1440:55	1441	Level	80
8	1441:55	1442	"	80
9	1442:56	1443	"	80
10	1443:56	1444	"	80
11	1444:56	1445	"	80
12	1445:57	1446	"	80
13	1446:57	1447	"	80
14	1447:57	1448	"	80
15	1448:58	1449	"	80
16	1449:58	1450	"	80
17	1450:58	1451	"	80
18	1451:58	1452	"	80
19	1452:58	1453	"	80
20	1453:59	1454	"	80
21	1454:59	1455	"	80
22	1456:00	1456	"	80
23	1457:00	1457	"	80
24	1458:00	1458	"	80
25	1459:00	1459	"	80
26	1500:01	1500	"	80
27	1501:01	1501	"	80
28	1502:02	1502	"	80
29	1503:02	1503	"	80
30	1504:02	1504	"	80
31	1505:03	1505	"	80
32	1506:03	1506	"	80
33	1507:03	1507	Left roll	
34	1508:04	1508	"	
35	1509:04	1509	Level	351
36	1510:04	1510	"	351
37	1511:05	1511	"	351
38	1512:05	1512	"	351
39	1513:06	1513	"	351
40	1514:06	1514	"	351

Table 14. --Log for 6 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1515:06	1515	Level	351
42	1516:06	1516	"	351
43	1517:07	1517	"	351
44	1518:07	1518	"	351
45	1519:08	1519	"	351
46	1520:08	1520	"	351
47	1521:08	1521	"	351
48	1522:08	1522	"	351
49	1523:09	1523	"	351
50	1524:10	1524	"	351
51	1525:09	1525	"	351
52	1526:10	1526	"	351
53	1527:10	1527	"	351
54	1528:11	1528	"	351
55	1529:11	1529	"	351
56	1530:11	1530	"	351
57	1531:11	1531	"	351
58	1532:12	1532	"	351
59	1533:12	1533	"	351
60	1534:12	1534	"	351
61	1535:13	1535	"	351
62	1536:13	1536	"	351
63	1537:14	1537	Left roll	
64	1538:14	1538	"	
65	1539:14	1539	"	
66	1540:14	1540	Level	260
67	1541:15	1541	"	260
68	1542:15	1542	"	260
69	1543:16	1543	"	260
70	1544:16	1544	"	260

Table 14. --Log for 6 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1545:16	1545	Level	260
72	1546:16	1546	"	260
73	1547:16	1547	"	260
74	1548:17	1548	"	260
75	1549:17	1549	"	260
76	1550:17	1550	"	260
77	1551:17	1551	"	260
78	1552:17	1552	"	260
79	1553:17	1553	"	260
80	1554:17	1554	"	260
81	1555:17	1555	"	260
82	1556:17	1556	"	260
83	1557:17	1557	"	260
84	1558:18	1558	"	260
85	1559:18	1559	"	260
86	1600:18	1600	"	260
87	1601:18	1601	"	260
88	1602:18	1602	"	260
89	1603:18	1603	"	260
90	1604:18	1604	"	260
91	1605:18	1605	"	260
92	1606:18	1606	"	260
93	1607:19	1607	"	260
94	1608:19	1608	"	260
95	1609:19	1609	"	260
96	1610:19	1610	"	260
97	1611:19	1611	"	285
98	1612:19	1612	"	285
99	1613:19	1613	"	285
100	1614:19	1614	"	285
101	1615:19	1615	"	285
102	1616:19	1616	"	285
103	1617:19	1617	"	285
104	1618:19	1618	"	285

**Corrected altitude: 51,700 ft.= 8.5 n. mi.

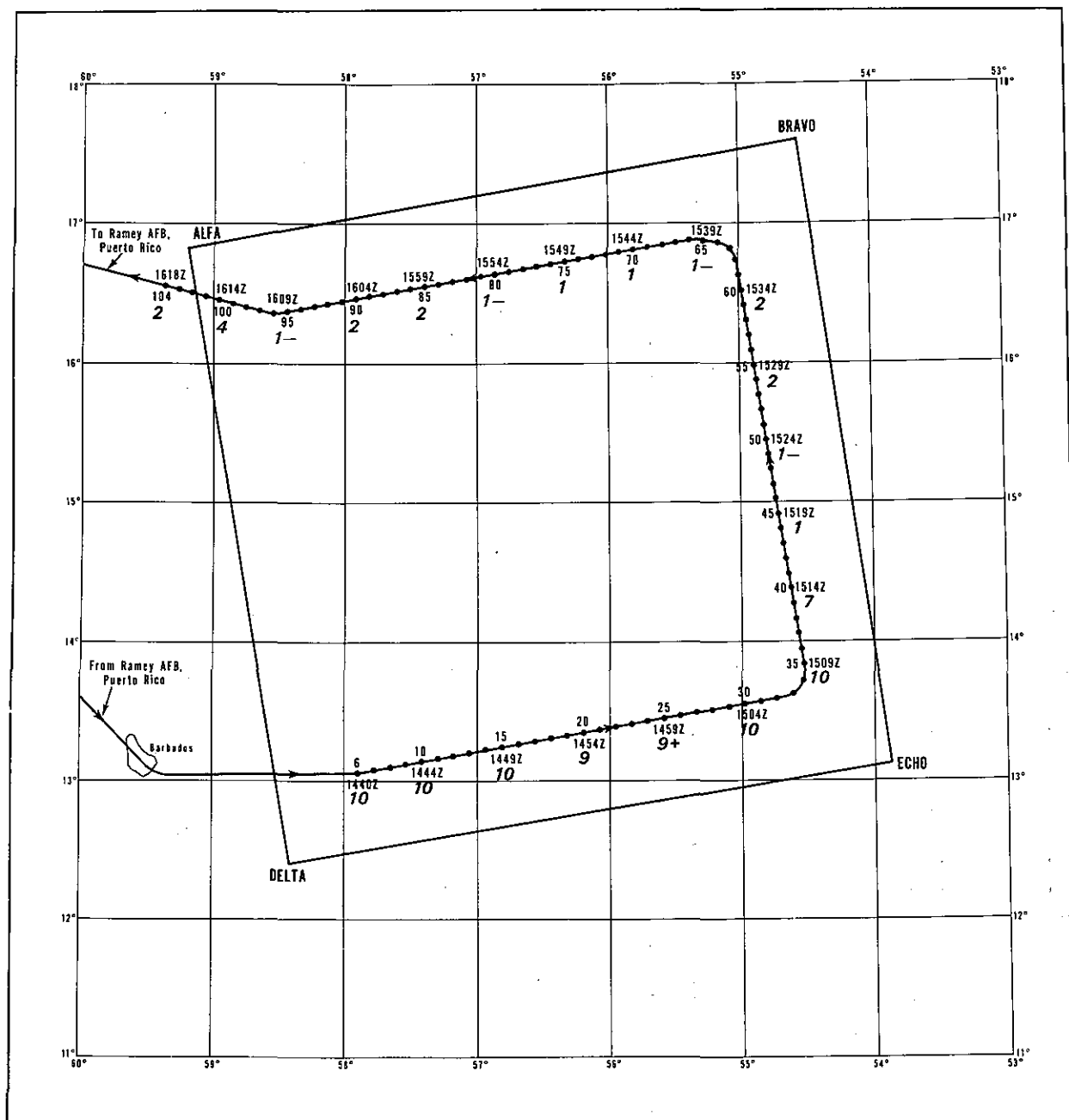


Figure 12.--RB-57F cloud photo track

Table 15.--Log of high-level cloud photography mission -- 7 June 1969

NAVIGATION NOTES *

Time	Location		True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat. Long.			Air	Ground	Dir.	Speed
GCT		°'N °'W	deg.	deg.	kt.	kt.	deg.	kt.
1307	Ramey AFB	1830 6708						
1335	St. Croix	1744 6442						
1416	Fort-de-France	1436 6100	108	+1	410	410		¹ L/V
1435	Barbados	1304 5929	135	-1	404	424	300	20
1446	DELTA	1223 5823					270	30
1453	Drop 1	1302 5754						
1500	Radio fix and sun line	1305 5706	080	+1	395	420	260	25
1508							260	25
1522	Drop 5	1336 5431	350	+1	400	380	310	25
1538							310	35
1550	Radio fix and sun line	1632 5440	360	+5	400	380	300	40
1555	Drop 4	1657 5503					300	40
1612							300	40
1625			272	-4	400	368	300	35
1630	Drop 8	1622 5832					300	35
1659	Antigua	1708 6147	282	-4	395	385	350	35
1725	St. Croix	1744 6442	287	-6		395	350	40
1750	Ramey AFB	1830 6708						

*Indicated altitude: 50,000 ft.; compass malfunction.

¹Light variable.

Table 15.--Log for 7 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
122	1456:34	1455	Level	80
123	1457:35	1456	"	80
124	1458:37	1457	"	80
125	1459:39	1458	"	80
126	1500:42	1459	"	80
127	1501:44	1500	"	80
128	1502:46	1501	"	80
129	1503:49	1502	"	80
130	1504:51	1503	"	80
131	1505:53	1504	"	80
132	1506:55	1505	"	80
133	1507:58	1506	"	80
134	1509:00	1507	Slight left roll	80
135	1510:03	1508	Level	80
136	1511:06	1509	"	80
137	1512:09	1510	"	80
138	1513:12	1511	"	80
139	1514:15	1512	"	80
140	1515:17	1513	"	80
141	1516:20	1514	"	80
142	1517:22	1515	"	80
143	1518:26	1516	"	80
144	1519:29	1517	"	80
145	1520:32	1519	"	80
146	1521:35	1520	"	80
147	1522:38	1521	"	80
148	1523:41	1522	Left roll	
¹ 149	1524:44	1523	Level	
¹ 150	1525:48	1524	"	
¹ 151	1526:51	1525	"	
¹ 152	1527:55	1526	"	
¹ 153	1528:58	1527	"	
¹ 154	1530:02	1528	"	
¹ 155	1531:05	1529	"	
¹ 156	1532:08	1530	"	
¹ 157	1533:12	1531	"	
¹ 158	1534:15	1532	"	
¹ 159	1535:19	1533	"	
¹ 160	1536:23	1534	"	

Table 15.--Log for 7 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
¹ 161	1537:26	1535	Level	
¹ 162	1538:29	1536	"	
¹ 163	1539:33	1538	"	
¹ 164	1540:37	1539	"	
¹ 165	1541:41	1540	"	
¹ 166	1542:45	1541	"	
¹ 167	1543:49	1542	"	
¹ 168	1544:53	1543	"	
¹ 169	1545:56	1544	"	
¹ 170	1547:00	1545	"	
¹ 171	1548:04	1546	"	
¹ 172	1549:08	1547	"	
¹ 173	1550:12	1548	"	
¹ 174	1551:16	1549	"	
¹ 175	1552:20	1550	"	
¹ 176	1553:24	1551	"	
177	1554:28	1552	Left roll	
178	1555:31	1554	"	
179	1556:35	1555	Slight left roll	
180	1557:39	1556	"	260
181	1558:44	1557	Level	260
182	1559:48	1558	"	260
183	1600:53	1559	"	260
184	1601:56	1600	"	260
185	1603:00	1601	"	260
186	1604:05	1602	"	260
187	1605:09	1603	"	260
188	1606:13	1604	"	260
189	1607:18	1605	"	260
190	1608:22	1606	"	260
191	1609:26	1607	"	260
192	1610:30	1609	"	260
193	1611:34	1610	"	260
194	1612:38	1611	"	260
195	1613:43	1612	"	260
196	1614:48	1613	"	260
197	1615:53	1614	"	260
198	1616:57	1615	"	260
199	1618:01	1616	"	260
200	1619:06	1617	"	260

Table 15.--Log for 7 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
201	1620:10	1618	Level	260
202	1621:14	1619	"	260
203	1622:19	1620	"	260
204	1623:23	1621	"	260
205	1624:28	1622	"	260
206	1625:32	1624	"	260
207	1626:37	1625	"	260
208	1627:41	1626	"	260
209	1628:46	1627	"	260
210	1629:51	1628	"	260
211	1630:56	1629	"	260
212	1632:01	1630	"	285
213	1633:05	1631	"	285
214	1634:10	1632	"	285
215	1722:27	1720		
216	1723:33	1722	"	
217	1724:39	1723	"	
² 218	1725:46	1724	"	
² 219	1726:52	1725	"	
² 220	1728:00	1726	"	
² 221	1729:11	1727	"	

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

¹ Nominal track 351°. Actual track about 358°. Compass failure. See map.

² Land visible - St. Croix.

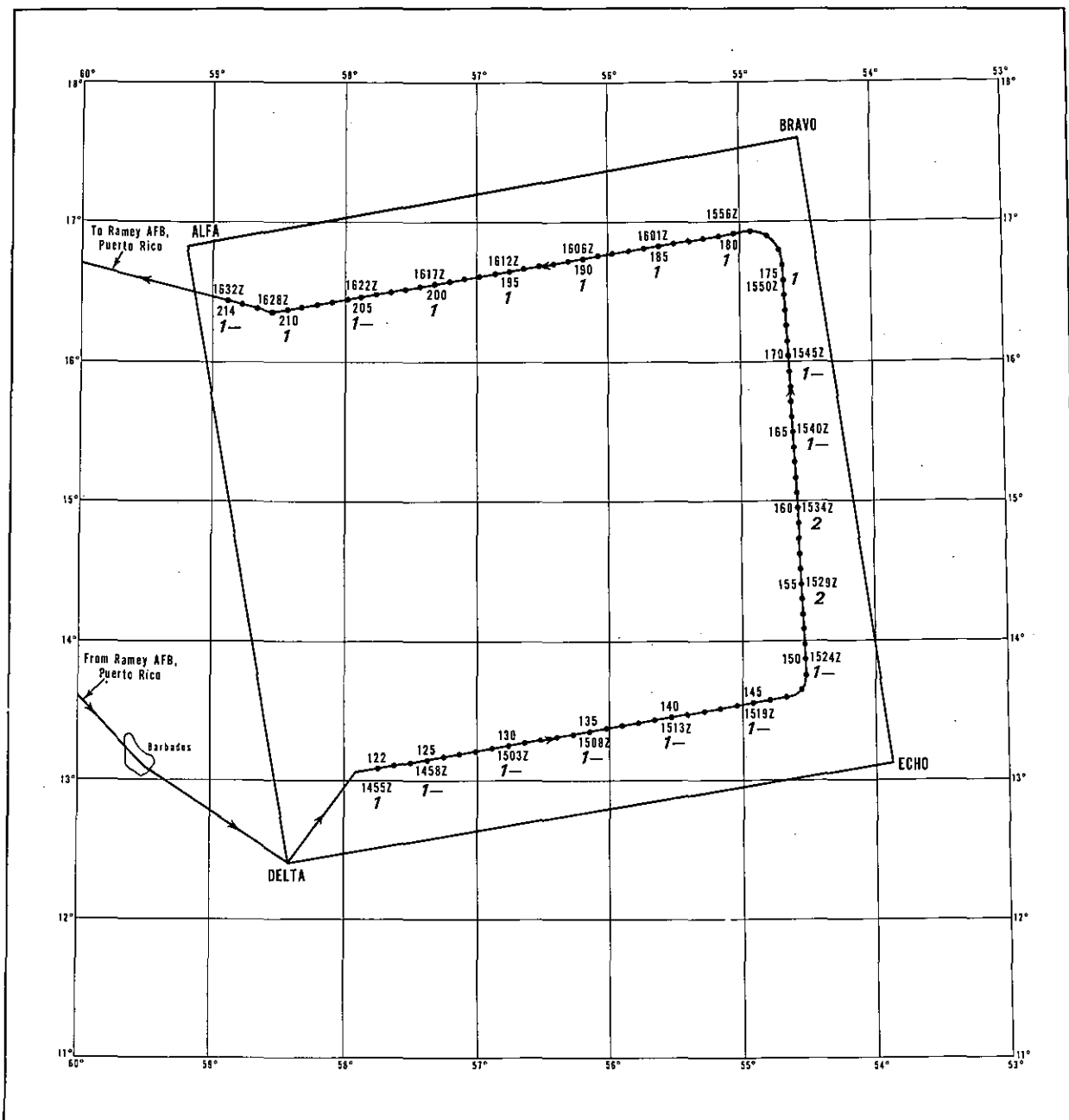


Figure 13.--RB-57 cloud photo track, 7 June 1969

Table 16. --Log of high-level cloud photography mission -- 8 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1306	Ramey AFB	1830	6708						
1335	St. Croix	1744	6442						
1415	Fort-de-France	1436	6100						
1435	Barbados	1304	5929						
1446	DELTA	1223	5823						
1453	Drop 1	1302	5754	034	+4	400	390	325	32
1508								320	30
1522	Drop 5	1336	5431	349	+4	400	375	304	35
1538								290	40
1554	Drop 4	1657	5503	350	+3	400	380	319	36
1609								220	36
1626	Drop 8	1622	5832					300	27
1655	Antigua	1708	6147						
1723	St. Croix	1744	6442						
1745	Ramey AFB	1830	6708						

* Indicated altitude: 50,000 ft.

Table 16. --Log for 8 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
7	1456:15	1454	Possible right roll	
8	1457:16	1455	Level	80
9	1458:16	1456	"	80
10	1459:17	1457	"	80
11	1500:17	1458	"	80
12	1501:18	1459	"	80
13	1502:20	1500	"	80
14	1503:21	1501	"	80
15	1504:22	1502	"	80
16	1505:23	1503	"	80
17	1506:24	1504	"	80
18	1507:25	1505	"	80
19	1508:26	1506	"	80
20	1509:28	1507	"	80
21	1510:29	1508	"	80
22	1511:30	1509	"	80
23	1512:31	1511	"	80
24	1513:32	1512	"	80
25	1514:32	1513	"	80
26	1515:33	1514	"	80
27	1516:34	1515	"	80
28	1517:35	1516	"	80
29	1518:37	1517	"	80
30	1519:38	1518	"	80
31	1520:39	1519	"	80
32	1521:40	1520	"	80
33	1522:41	1521	"	80
34	1523:43	1522	Left roll	
35	1524:44	1523	"	
36	1525:45	1524	Level	351
37	1526:47	1525	"	351
38	1527:49	1526	"	351
39	1528:51	1527	"	351
40	1529:52	1528	"	351

Table 16. --Log for 8 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
41	1530:54	1529	Level	351
42	1531:57	1530	"	351
43	1532:58	1531	"	351
44	1533:59	1532	"	351
45	1535:02	1533	"	351
46	1536:04	1534	"	351
47	1537:07	1535	"	351
48	1538:08	1536	"	351
49	1539:10	1537	"	351
50	1540:12	1538	"	351
51	1541:14	1539	"	351
52	1542:17	1540	"	351
53	1543:19	1541	"	351
54	1544:21	1542	"	351
55	1545:23	1543	"	351
56	1546:25	1544	"	351
57	1547:28	1545	"	351
58	1548:30	1546	"	351
59	1549:33	1548	"	351
60	1550:36	1549	"	351
61	1551:38	1550	"	351
62	1552:41	1551	"	351
63	1553:44	1552	"	351
64	1554:46	1553	"	351
65	1555:49	1554	Left roll	
66	1556:52	1555	Level	260
67	1557:55	1556	"	260
68	1558:58	1557	"	260
69	1600:00	1558	"	260
70	1601:03	1559	"	260

Table 16. --Log for 8 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
71	1602:06	1600	Level	260
72	1603:09	1601	"	260
73	1604:12	1602	"	260
74	1605:15	1603	"	260
75	1606:18	1604	"	260
76	1607:21	1605	"	260
77	1608:23	1606	"	260
78	1609:26	1607	"	260
79	1610:29	1608	"	260
80	1611:32	1610	"	260
81	1612:35	1611	"	260
82	1613:38	1612	"	260
83	1614:42	1613	"	260
84	1615:45	1614	"	260
85	1616:48	1615	"	260
86	1617:52	1616	"	260
87	1618:55	1617	"	260
88	1622:48	1621	"	260
89	1623:51	1622	"	260
90	1624:55	1623	"	260
91	1625:58	1624	"	260
92	1627:01	1625	"	260
93	1628:04	1626	Right roll	
94	1629:08	1627	"	
¹ 95	1657:24	1655	Level	
¹ 96	1657:28	1655	"	
¹ 97	1657:32	1656	"	
¹ 98	1657:39	1656	"	
¹ 99	1657:43	1656	"	
¹ 100	1657:51	1656	"	
¹ 101	1657:55	1656	"	
¹ 102	1658:02	1656	"	
¹ 103	1658:06	1656	"	
¹ 104	1658:14	1656	"	

** Corrected altitude: 51,700 ft.= 8.5 n. mi.

¹ Land visible-Antigua

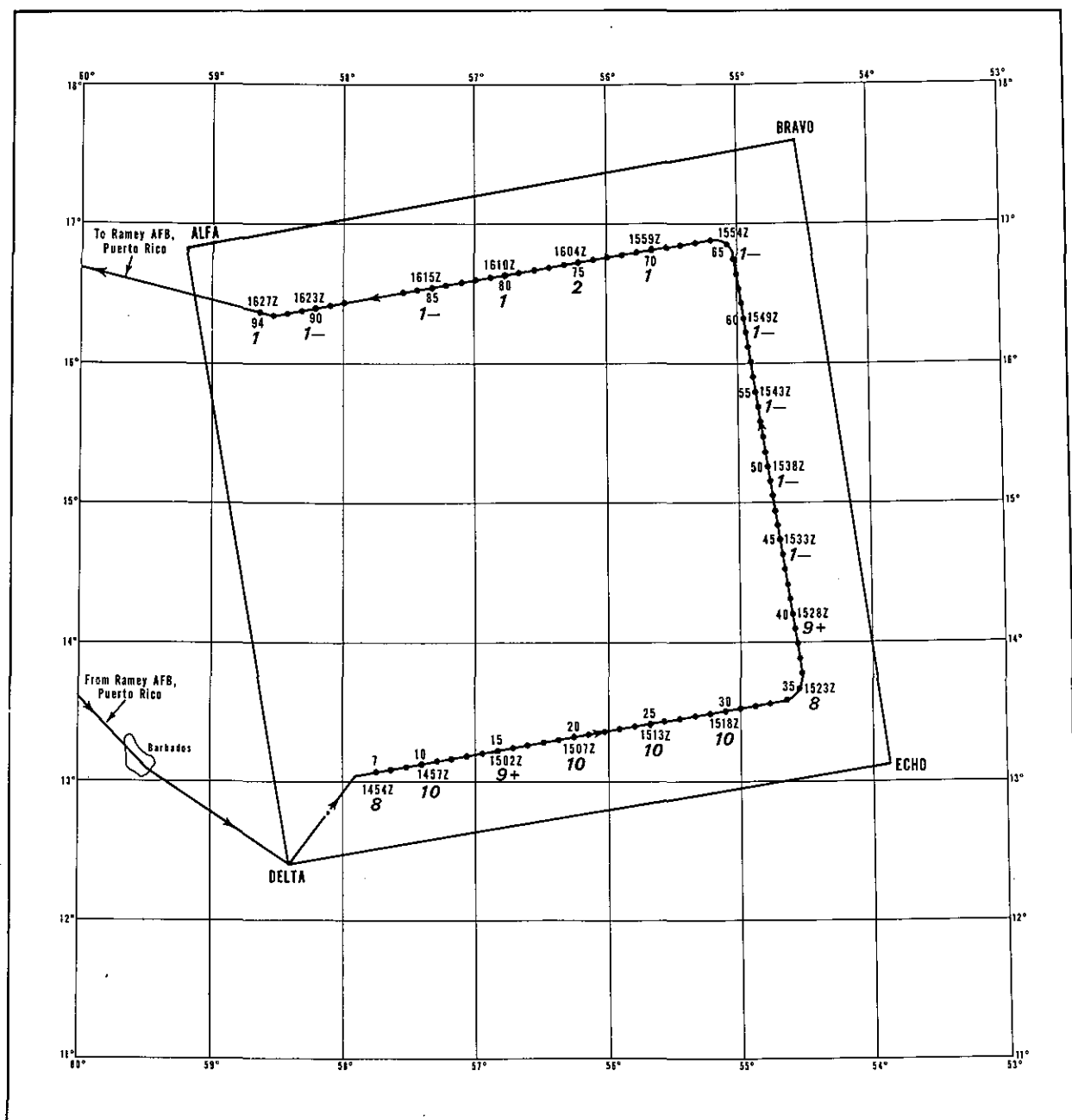


Figure 14.--RB-57 cloud photo track, 8 June 1969

Table 17.--Log of high-level cloud photography mission -- 9 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1304	Ramey AFB	1830	6708						
1331	St. Croix	1744	6442						
1410				147	+5	395	392	060	30
1413	Fort-de-France	1436	6100						
1432	Barbados	1304	5929						
1440				143	+2	397	410	360	20
1443	DELTA	1223	5823					340	20
1450	Drop 1	1302	5754						
1455	Radio fix and sun line	1318	5711	100	+2	394	402	360	20
1504								340	20
1519	Drop 5	1336	5431					320	20
1525				010	+4	390	385	330	22
1536								310	20
1550	Drop 4	1657	5503					300	15
1555				263	-1	390	385	280	10
1605								260	10
1622	Drop 8	1622	5832					330	15
1625				309	-2	393	385	005	15
1650	Antigua	1708	6147	287	-6	390	395	020	45
1716	St. Croix	1744	6442						
1726				304	-4	395	370	350	35
1740	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

Table 17.--Log for 9 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo (hr:min:sec)	Corrected (hr:min)		
16		1450	Right roll	
7	1450:04	1451	Level	80
8	1451:06	1452	"	80
9	1452:08	1453	"	80
10	1453:11	1454	"	80
11	1454:13	1455	"	80
12	1455:16	1456	"	80
13	1456:18	1457	"	80
14	1457:21	1458	"	80
15	1458:23	1459	"	80
16	1459:25	1500	"	80
17	1500:28	1501	"	80
18	1501:30	1503	"	80
19	1502:33	1504	"	80
20	1503:36	1505	"	80
21	1504:38	1506	"	80
22	1505:41	1507	"	80
23	1506:43	1508	"	80
24	1507:45	1509	"	80
25	1508:48	1510	"	80
26	1509:51	1511	"	80
27	1510:53	1512	"	80
28	1511:56	1513	"	80
29	1512:58	1514	"	80
30	1514:00	1515	"	80
31	1515:03	1516	"	80
32	1516:06	1517	"	80
33	1517:08	1518	"	80
34	1518:11	1519	Left roll	
35	1519:14	1520	Slight left roll	
36	1520:16	1521	Level	351
37	1521:19	1522	"	351
38	1522:21	1523	"	351
39	1523:24	1524	"	351
40	1524:27	1525	"	351

Table 17.--Log for 9 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo (hr:min:sec)	Corrected (hr:min)		
41	1525:30	1527	Level	351
42	1525:56	1527	"	351
43	1526:33	1528	"	351
44	1527:36	1529	"	351
45	1528:38	1530	"	351
46	1529:41	1531	"	351
47	1530:43	1532	"	351
48	1531:46	1533	"	351
49	1532:49	1534	"	351
50	1533:48	1535	"	351
51	1533:52	1535	"	351
52	1534:55	1536	"	351
53	1535:58	1537	"	351
54	1537:00	1538	"	351
55	1538:02	1539	"	351
56	1539:05	1540	"	351
57	1540:07	1541	"	351
58	1541:10	1542	"	351
59	1542:13	1543	"	351
60	1543:16	1544	"	351
61	1544:18	1545	"	351
62	1545:20	1546	"	351
63	1546:23	1547	"	351
64	1547:25	1548	"	351
65	1548:28	1549	"	351
66	1549:31	1551	Left roll	
67	1550:34	1552	Level	260
68	1551:37	1553	"	260
69	1552:40	1554	"	260
70	1553:42	1555	"	260
71	1554:44	1556	"	260
72	1555:47	1557	"	260
73	1556:50	1558	"	260
74	1557:52	1559	"	260
75	1558:55	1600	"	260
76	1559:58	1601	"	260
77	1601:00	1602	"	260
78	1602:02	1603	"	260
79	1603:05	1604	"	260
80	1604:07	1605	"	260

Table 17.--Log for 9 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo (hr:min:sec)	Corrected (hr:min)		
81	1605:10	1606	Level	260
82	1606:13	1607	"	260
83	1607:15	1608	"	260
84	1608:18	1609	"	260
85	1609:20	1610	"	260
86	1610:23	1611	"	260
87	1611:25	1612	"	260
88	1612:28	1613	"	260
89	1613:31	1615	"	260
90	1614:34	1616	"	260
91	1615:36	1617	"	260
92	1616:39	1618	"	260
93	1617:41	1619	"	260
94	1618:44	1620	"	260
95	1619:46	1621	"	260
96	1620:49	1622	"	
² 97	1621:52	1623	"	
98	1622:55	1624	"	285
99	1623:57	1625	"	285
100	1625:00	1626	"	285
101	1626:02	1627	"	285
102	1627:05	1628	"	285

**Corrected altitude: 51,000 ft. = 8.5 n.mi.

¹Clock not visible in photograph.

²Clouds and sun glint show turn between No. 96 and No. 97.

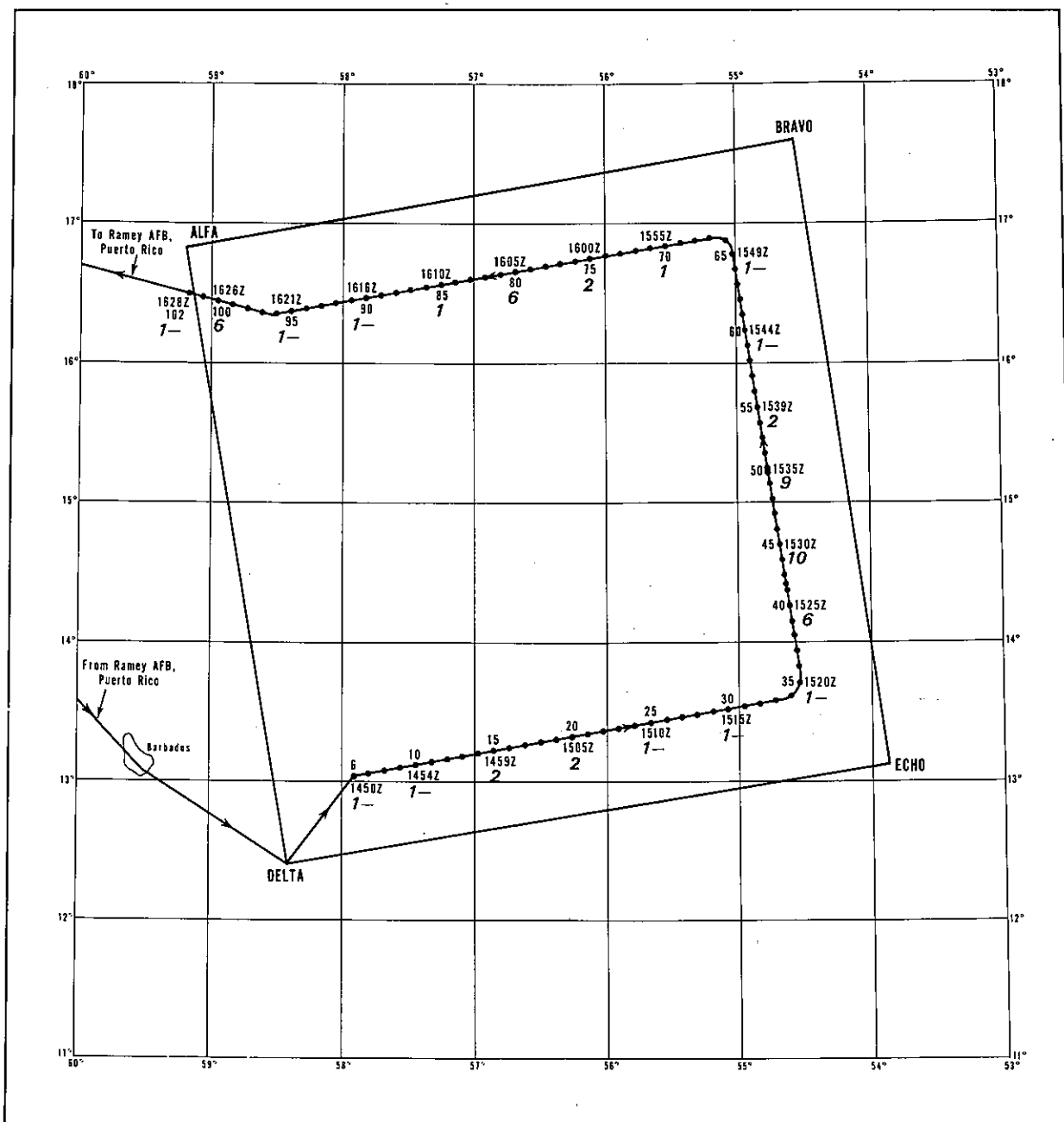


Figure 15.--RB-57 cloud photo track, 9 June 1969

Table 18.--Log of high-level cloud photography mission -- 10 June 1969

NAVIGATION NOTES *

Time	Location			True Head- ing	Drift Angle	Speed		Wind	
	Log entry	Lat.	Long.			Air	Ground	Dir.	Speed
GCT		°'N	°'W	deg.	deg.	kt.	kt.	deg.	kt.
1304	Ramey AFB	1830	6708						
1331	St. Croix	1744	6442						
1413	Fort-de-France	1436	6100	124	+7	408	410	036	50
1432	Barbados	1304	5929						
1447	Drop 1	1302	5754	091	+4	410	405	009	30
1502								360	30
1517	Drop 5	1336	5431	078	+3	410	410	348	23
1533								300	28
1549	Drop 4	1657	5503	348	+1	410	370	337	40
1604								330	32
1620	Drop 8	1622	5832	262	-2	410	395	302	20
1648	Antigua	1708	6147						
1712	St. Croix	1744	6442	286	-5	410	420	030	38
	Ramey AFB	1830	6708						

*Indicated altitude: 50,000 ft.

Table 18.--Log for 10 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
110	1447:59	1448	Slight left roll	
111	1448:59	1449	Level	80
112	1449:59	1450	Slight left roll	80
113	1451:00	1451	Level	80
114	1452:00	1452	"	80
115	1453:01	1453	"	80
116	1454:02	1454	"	80
117	1455:03	1455	"	80
118	1456:04	1456	"	80
119	1457:04	1457	"	80
120	1458:04	1458	"	80
121	1459:04	1459	"	80
122	1500:05	1500	"	80
123	1501:05	1501	"	80
124	1502:06	1502	"	80
125	1503:07	1503	"	80
126	1504:07	1504	"	80
127	1505:08	1505	"	80
128	1506:08	1506	"	80
129	1507:09	1507	"	80
130	1508:09	1508	"	80
131	1509:10	1509	"	80
132	1510:11	1510	"	80
133	1511:11	1511	"	80
134	1512:12	1512	"	80
135	1513:12	1513	"	80
136	1514:13	1514	"	80
137	1515:13	1515	"	80
138	1516:14	1516	"	80
139	1517:15	1517	Left roll	
140	1518:15	1518	Level	351

Table 18.--Log for 10 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
141	1519:16	1519	Level	351
142	1520:17	1520	"	351
143	1521:18	1521	"	351
144	1522:18	1522	"	351
145	1523:18	1523	"	351
146	1524:19	1524	"	351
147	1525:20	1525	"	351
148	1526:21	1526	"	351
149	1527:22	1527	"	351
150	1528:22	1528	"	351
151	1529:23	1529	"	351
152	1530:23	1530	"	351
153	1531:24	1531	"	351
154	1532:25	1532	"	351
155	1533:26	1533	"	351
156	1534:27	1534	"	351
157	1535:27	1535	"	351
158	1536:28	1536	"	351
159	1537:28	1537	"	351
160	1538:29	1538	"	351
161	1539:28	1539	"	351
162	1540:29	1540	"	351
163	1541:30	1542	"	351
164	1542:30	1543	"	351
165	1543:31	1544	"	351
166	1544:31	1545	"	351
167	1545:32	1546	"	351
168	1546:32	1547	"	351
169	1547:32	1548	"	351
170	1548:33	1549	"	351
171	1549:34	1550	Left roll	
172	1550:34	1551	Level	260
173	1551:35	1552	"	260
174	1552:36	1553	"	260
175	1553:36	1554	"	260
176	1554:36	1555	"	260
177	1555:37	1556	"	260
178	1556:37	1557	"	260
179	1557:38	1558	"	260
180	1558:39	1559	"	260

Table 18.--Log for 10 June 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT)		Aircraft Attitude	Nominal Track
	On Photo	Corrected		
181	1559:40	1600	Level	260
182	1600:40	1601	"	260
183	1601:40	1602	"	260
184	1602:40	1603	"	260
185	1603:41	1604	"	260
186	1604:42	1605	"	260
187	1605:42	1606	"	260
188	1606:43	1607	"	260
189	1607:43	1608	"	260
190	1608:44	1609	"	260
191	1609:44	1610	"	260
192	1610:45	1611	"	260
193	1611:45	1612	"	260
194	1612:46	1613	"	260
195	1613:47	1614	"	260
196	1614:48	1615	"	260
197	1615:48	1616	"	260
198	1616:49	1617	"	260
199	1617:49	1618	"	260
200	1618:49	1619	"	260
201	1619:50	1620	"	260
202	1620:51	1621	"	260
203	1621:51	1622	"	285
204	1622:52	1623	"	285
205	1623:53	1624	"	285
206	1624:53	1625	"	285
207	1625:54	1626	"	285
208	1626:54	1627	"	285

**Corrected altitude: 51,700 ft. = 8.5 n.mi.

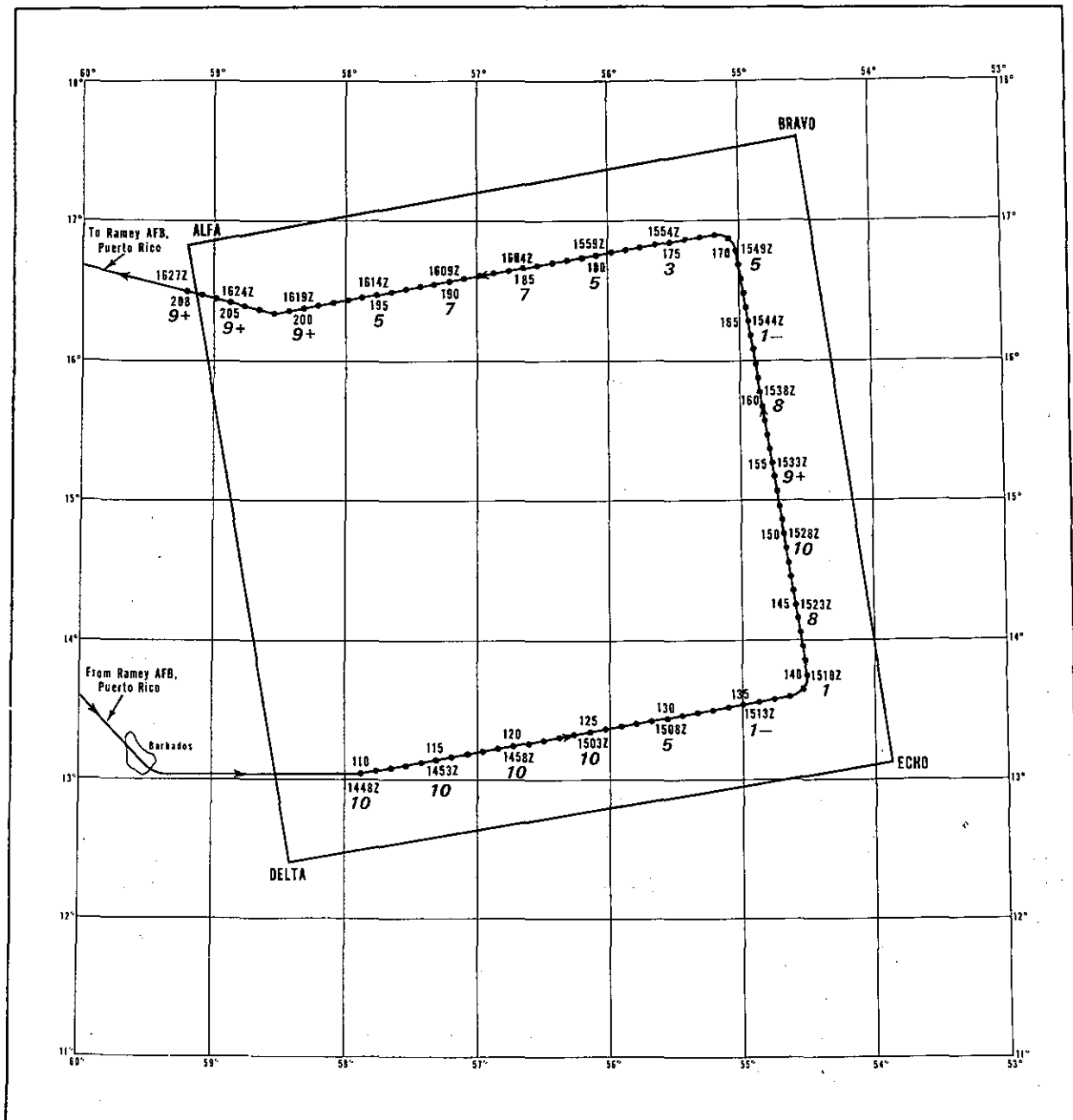


Figure 16.--RB-57 cloud photo track, 10 June 1969