

NOAA Technical Memorandum ERL BOMAP-7

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

High-Level Cloud Photography Inventory

BOMEX Period I
May 3-15, 1969

VANCE A. MYERS

Center for
Experiment
Design and
Data Analysis

ROCKVILLE, MD.
December 1971

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Center for Experiment Design and Data Analysis (CEDDA)
Rockville, Md.
December 1971

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"1969.05.03/.15"

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
"1969.05.03/.15"	1969, 05.03/.15

HIGH-LEVEL CLOUD PHOTOGRAPHY INVENTORY

BOMEX PERIOD I, MAY 3-15, 1969

Vance A. Myers

Abstract. This memorandum documents the high-level cloud photography missions flown by U.S. Air Force RB-57F aircraft during the Barbados Oceanographic and Meteorological Experiment (BOMEX) Period I, May 3-15, 1969. Tables and flight tracks give the time and location of each of the photographs taken.

Panoramic cloud photographs were obtained during the Barbados Oceanographic and Meteorological Experiment (BOMEX) in the summer of 1969 by 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 I, May 3 to 15, nearly 900 photographs, in the form of large color transparencies, were taken on 10 missions from altitudes of 50,000 ft. The photographs, each of which includes a clock and serial counter, are available for study at the Center for Experiment Design and Data Analysis (formerly the BOMAP Office), NOAA, Rockville, Md. This memorandum shows the reconstructed flight tracks and identifies the time, position, and orientation of each photograph, based on navigator's notes, on data entered on the BOMEX RECCO Code form used by both Navy and Air Force aircraft during BOMEX for recording of weather reconnaissance data, and on information gained through close examination of the photographs.

For BOMEX Periods II and IV, information similar to that presented in this memorandum is contained in earlier publications (Myers, 1970, 1971b). The reader is also referred to BOMEX Period III High-Level Cloud Photography Atlas (Myers, 1971a), in which high-level cloud photographs for BOMEX Period III are reprinted in black and white and assembled along the flight paths. The atlas also contains tables and maps that give details on location, orientation, and time of photography; mission procedures; and methods used in reconstructing flight tracks and determining orientation and position of the photographs. The techniques used for preparing the atlas are the same as the ones applied in assembling the data contained in this memorandum and are therefore not repeated here.

The missions flown during Period I are summarized in table 1. The flight tracks in figures 1 through 10 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. These codes are

Table 1.--Summary of high-level cloud photography during BOMEX Period I, May 3-15, 1969

Date	Time departed Ramey AFB	Time landed Ramey AFB	Flight time	Number of photographs
May	GCT	GCT	hr:min	
3	1255	1825	5:30	91
4	1245	1814*	5:29	99
5	1233	1839*	6:06	92
6	1251	1814*	5:23	80
7	1243	1807	5:24	78
9	1241	1818	5:37	94
10	1241	1803*	5:22	91
11	1240	1807	5:27	90
12	1242	1804*	5:22	91
14	1238	1806	5:28	87
Totals			53:48	893

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

Table 2.--Cloudiness code

Code as indicated in figures I-1 through I-10	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

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 the portion of the photograph within about 12 n. mi. of the flight track, i.e., two-thirds of the total area of the picture.

Logs for the 10 missions are presented in tables 3 through 12, which consist of (a) navigation notes, showing location, indicated altitude, true heading, drift angle, air and ground speed, and wind direction and speed, and (b) photograph data, including number and time of photograph, 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 fixed positions in the BOMEX array were used as navigation reporting points by the RB-57F aircraft.

Acknowledgment

Acknowledgment is due Robert L. Rooney, who, under the direction of the author, prepared the data tabulations and maps.

References

- Myers, Vance A., "High-Level Cloud Photography Inventory, BOMEX Period IV, July 11-28, 1969," ESSA Technical Memorandum ERLTM-BOMAP 1, Environmental Science Services Administration, U.S. Department of Commerce, Rockville, Md., 1970, 66 pp.
- Myers, Vance A., BOMEX Period III High-Level Cloud Photography Atlas, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Rockville, Md., 1971a, 123 pp.
- Myers, Vance A., "High-Level Cloud Photography Inventory, BOMEX Period II, May 24-June 10, 1969," NOAA Technical Memorandum ERL BOMAP-4, National Oceanic and Atmospheric Administration, U.S. Department of Commerce, Rockville, Md., 1971b, 86 pp.

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1255	Ramey AFB	1830 6708							
1321	St. Croix	1744 6422							
1400	Fort-de-France	1436 6100		145	-2	415	440	290	30
1418	Barbados	1304 5929		135	-1	415	440	300	30
1425		1248* 5900*	50,000					300	30
1429	DELTA	1223 5823	50,000						
1438	DELTA	1223 5823	40,000					300	35
1444	Drop 1	1302 5754	40,000						
1458		1318* 5618*	50,000					300	35
1511	Drop 5	1336 5431	50,000						
1514		1318* 5412*	50,000					300	40
1519	ECHO	1308 5351	50,000						
1523	ECHO	1308 5351	40,000						
1528		1318* 5412*	40,000					300	30
1533	Drop 5	1336 5431	40,000						
1548		1524* 5448*	50,000					290	50
1603	Drop 4	1657 5503	50,000						
1607		1718* 5448*	50,000					290	40
1610	BRAVO	1736 5434	50,000	034	+5	410	420	240	40
1615	BRAVO	1736 5434	40,000						
1623			40,000					310	45
1624	Drop 4	1657 5503	40,000						
1640		1642* 5642*	50,000					320	55
1658	Drop 8	1622 5832	50,000						

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		° 'N ° 'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1700		1636* 5854*	50,000					320	55
1705	ALFA	1650 5912	50,000						
1709	ALFA	1650 5912	40,000						
1715			40,000					280	35
1735	Antigua	1708 6147							
1802	St. Croix	1744 6442							
1825	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
9	0246:22	1446		Level	80
10	0246:52	1447	30	"	80
11	0247:22	1447	30	"	80
12	0247:52	1448	30	"	80
13	0248:21	1448	29	"	80
14	0248:52	1449	31	"	80
15	0249:21	1449	29	"	80
16	0249:52	1450	31	"	80
17	0250:21	1450	29	"	80
18	0250:51	1451	30	"	80
19	0251:19	1451	28	"	80
20	0251:48	1452	29	"	80
21	0252:16	1452	28	"	80
22	0252:45	1453	29	"	80
23	0253:13	1453	28	"	80
24	0253:42	1454	29	"	80
25	0254:10	1454	28	"	80
26	0254:38	1455	28	"	80
27	0255:07	1455	29	"	80
28	0255:35	1456	28	"	80
29	0256:04	1456	29	"	80
30	0256:32	1457	28	"	80
31	0257:01	1457	29	"	80
32	0257:30	1458	29	"	80
33	0257:59	1458	29	"	80
34	0258:27	1458	28	"	80
35	0258:56	1459	29	"	80
36	0259:24	1459	28	"	80
37	0259:53	1500	29	"	80
38	0300:21	1500	28	"	80
39	0300:50	1501	29	"	80
40	0301:18	1501	28	"	80

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	0301:46	1502	28	Level	80
42	0302:15	1502	29	"	80
43	0302:44	1503	29	"	80
44	0303:12	1503	28	"	80
45	0303:41	1504	29	"	80
46	0304:10	1504	29	"	80
47	0304:38	1505	28	"	80
48	0305:07	1505	29	"	80
49	0305:35	1506	28	"	80
50	0306:04	1506	29	"	80
51	0306:33	1507	29	"	80
52	0307:01	1507	28	"	80
53	0307:30	1508	29	"	80
54	0307:58	1508	28	"	80
55	0308:27	1508	29	"	80
56	0308:55	1509	28	"	80
57	0309:24	1509	29	"	80
58	0309:52	1510	28	"	80
59	0310:21	1510	29	"	80
60	0310:50	1511	29	"	80
61	0311:18	1511	28	Right roll	
62	0311:47	1512	29	"	
63	0312:15	1512	28	Level	125
64	0312:44	1513	29	"	125
65	0313:13	1513	29	"	125
66	0313:42	1514	29	"	125
67	0314:10	1514	28	"	125
68	0314:39	1515	29	"	125
69	0315:07	1515	28	"	125
70	0315:36	1516	29	"	125
71	0316:05	1516	29	"	125
72	0316:33	1517	28	"	125
73	0317:02	1517	29	"	125
74	0317:30	1518	28	"	125
75	0317:59	1518	29	"	125
76	0318:27	1518	28	"	125
77	0318:56	1519	29	"	125
78	0319:24	1519	28	"	125
79	0319:53	1520	29	Left roll	

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
80	0334:03	1534	28	Level	351
81	0334:31	1535	29	"	351
82	0335:00	1535	28	"	351
83	0335:28	1535	30	"	351
84	0335:58	1536	28	"	351
85	0336:26	1536	29	"	351
86	0336:55	1537	29	"	351
87	0337:24	1537	29	"	351
88	0337:53	1538	29	"	351
89	0338:21	1538	28	"	351
90	0338:50	1539	29	"	351
91	0339:19	1539	29	"	351
92	0339:48	1540	29	"	351
93	0340:16	1540	28	"	351
94	0340:45	1541	29	"	351
95	0341:13	1541	28	"	351
96	0341:42	1542	29	"	351
97	0342:11	1542	29	"	351
98	0342:40	1543	29	"	351
99	0343:08	1543	28	"	351

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

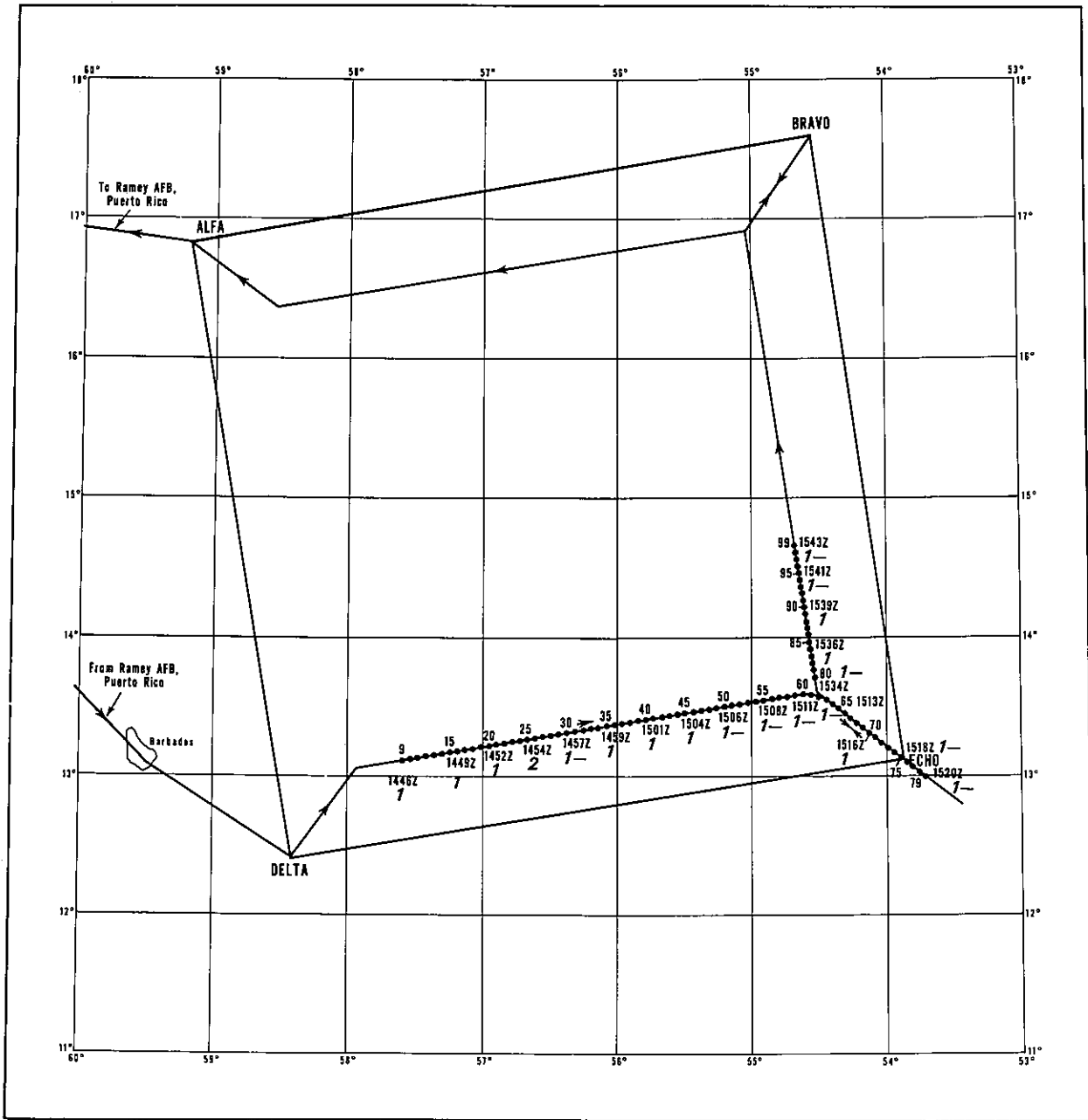


Figure 1.--RB-57F cloud photo track, May 3, 1969.

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1245	Ramey AFB	1830 6708							
1312	St. Croix	1744 6442							
1353	Fort-de-France	1436 6100							
1412	Barbados	1304 5929							
1423	DELTA	1223 5823	50,000					250	20
1427	DELTA	1223 5823	40,000					260	45
1434	Drop 1	1302 5754	40,000						
1447		1324* 5612*	50,000					290	20
1501	Drop 5	1336 5431	50,000						
1506	ECHO	1308 5351	50,000					290	20
1509	ECHO	1308 5351	40,000					270	10
1521	Drop 5	1336 5431	40,000						
1537		1518* 5454*	50,000					290	25
1552	Drop 4	1657 5503	50,000						
1600	BRAVO	1736 5434	50,000					280	40
1603	BRAVO	1736 5434	40,000					280	50
1613	Drop 4	1657 5503	40,000						
1631		1642* 5642*	50,000					270	40
1646	Drop 8	1622 5832	50,000						
1654	ALFA	1650 5912	50,000					280	35
1700	ALFA	1650 5912	40,000					270	42
1723	Antigua	1708 6147							
1751	St. Croix	1744 6442							
1814	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
8	1434:30	1434		Level	80
9	1435:08	1435	38	"	80
10	1435:45	1436	37	"	80
11	1436:22	1436	37	"	80
12	1436:59	1437	37	"	80
13	1437:36	1438	37	"	80
14	1438:12	1438	36	"	80
15	1438:49	1439	37	"	80
16	1439:26	1439	37	"	80
17	1440:03	1440	37	"	80
18	1440:40	1441	37	"	80
19	1441:17	1441	37	"	80
20	1441:54	1442	37	"	80
21	1442:31	1443	37	"	80
22	1443:08	1443	37	"	80
23	1443:45	1444	37	"	80
24	1444:22	1444	37	"	80
25	1444:59	1445	37	"	80
26	1445:36	1446	37	"	80
27	1446:13	1446	37	"	80
28	1446:50	1447	37	"	80
29	1447:26	1447	36	"	80
30	1448:04	1448	38	"	80
31	1448:41	1449	37	"	80
32	1449:18	1449	37	"	80
33	1449:55	1450	37	"	80
34	1450:32	1451	37	"	80
35	1451:09	1451	37	"	80
36	1451:46	1452	37	"	80
37	1452:23	1452	37	"	80
38	1452:58	1453	35	"	80
39	1453:32	1454	34	"	80
40	1454:11	1454	39	"	80

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1454:50	1455	39	Level	80
42	1455:29	1455	39	"	80
43	1456:08	1456	39	"	80
44	1456:47	1457	39	"	80
45	1457:26	1457	39	"	80
46	1458:05	1458	39	"	80
47	1458:45	1459	40	"	80
48	1459:23	1459	38	"	80
49	1500:03	1500	40	"	80
50	1500:42	1501	39	"	80
51	1520:43	1521		Slight right roll	
52	1521:23	1521	40	"	
53	1522:03	1522	40	"	
54	1522:44	1523	41	Level	351
55	1523:24	1523	40	"	351
56	1524:04	1524	40	"	351
57	1524:44	1525	40	"	351
58	1525:24	1525	40	"	351
59	1526:05	1526	41	"	351
60	1526:45	1527	40	"	351
61	1527:25	1527	40	"	351
62	1528:05	1528	40	"	351
63	1528:46	1529	41	"	351
64	1529:26	1529	40	"	351
65	1530:06	1530	40	"	351
66	1530:47	1531	41	"	351
67	1531:27	1531	40	"	351
68	1532:07	1532	40	"	351
69	1532:48	1533	41	"	351
70	1533:28	1533	40	"	351

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1534:08	1534	40	Level	351
72	1534:48	1535	40	"	351
73	1535:28	1535	40	"	351
74	1536:08	1536	40	"	351
75	1536:49	1537	41	"	351
76	1537:29	1537	40	"	351
77	1538:10	1538	41	"	351
78	1538:50	1539	40	"	351
79	1539:30	1540	40	"	351
80	1540:11	1540	41	"	351
81	1540:51	1541	40	"	351
82	1541:31	1542	40	"	351
83	1542:11	1542	40	"	351
84	1542:51	1543	40	"	351
85	1543:31	1544	40	"	351
86	1544:12	1544	41	"	351
87	1544:52	1545	40	"	351
88	1545:32	1546	40	"	351
89	1546:13	1546	41	"	351
90	1546:53	1547	40	"	351
91	1547:33	1548	40	"	351
92	1548:14	1548	41	"	351
93	1548:54	1549	40	"	351
94	1549:34	1550	40	"	351
95	1550:14	1550	40	"	351
96	1550:55	1551	41	"	351
97	1551:35	1552	40	"	351
98	1552:15	1552	40	Slight right roll	
99	1613:09	1613		"	
100	1613:50	1614	41	"	
101	1614:30	1615	40	Level	260
102	1615:13	1615	43	"	260
103	1615:59	1616	46	"	260
104	1616:46	1617	47	"	260
105	1617:33	1618	47	"	260
106	1618:19	1618	46	"	260

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

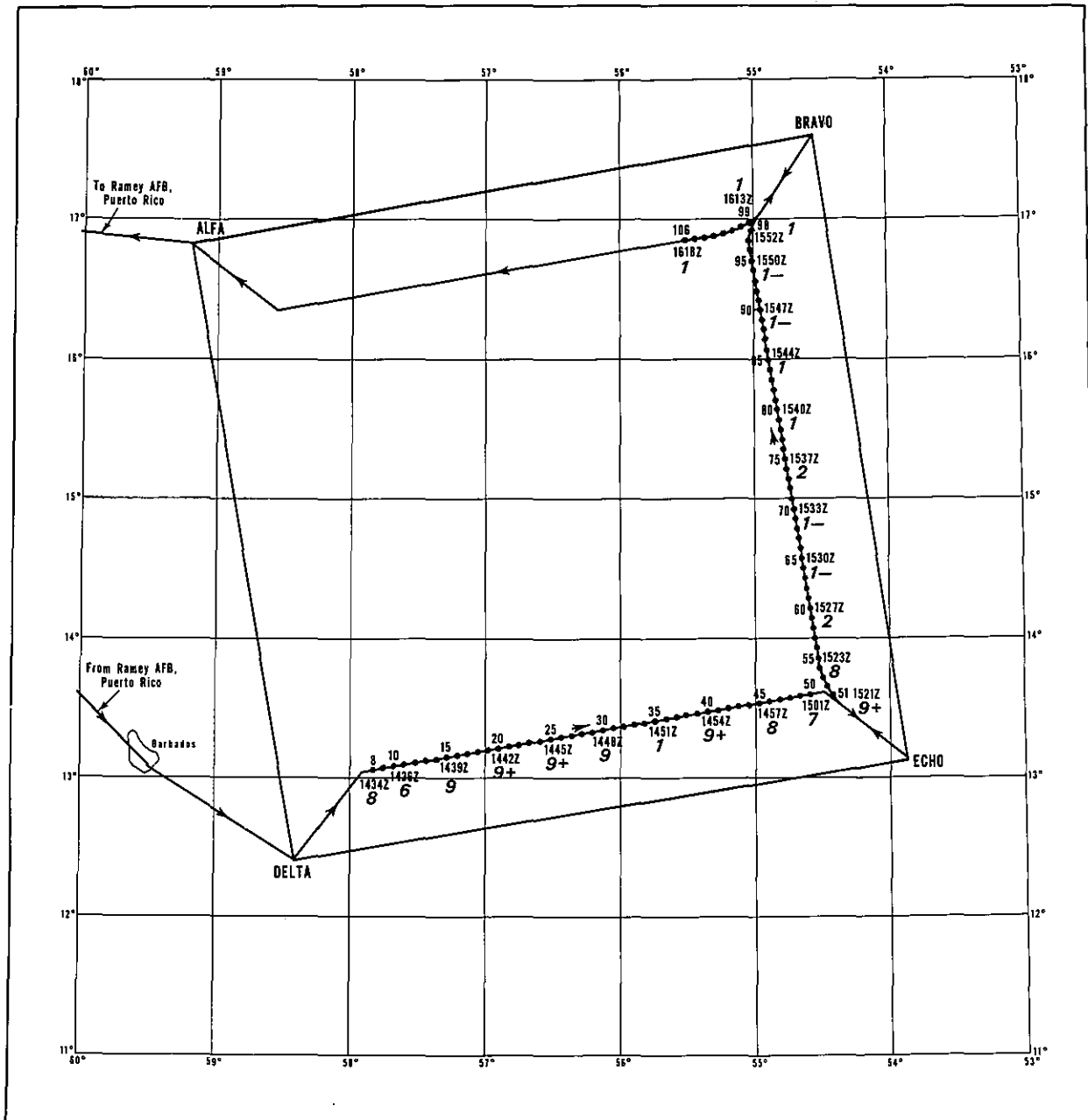


Figure 2.--RB-57F cloud photo track, May 4, 1969.

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		° 'N ° 'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1233	Ramey AFB	1830 6708							
1303	St. Croix	1744 6442							
1310		1700* 6400*	50,000					240	30
1335		1518* 6148*	50,000					230	40
1345	Fort-de-France	1436 6100	50,000						
1400			50,000	143	-5	382	382	230	40
1404	Barbados	1304 5929	50,000						
1416	DELTA	1223 5823	50,000					230	40
1422	DELTA	1223 5823	40,000					360	20
1432	Drop 1	1302 5754	40,000						
1445		1318* 5618*	50,000					200	30
1500			50,000	095	-3	400	405	200	25
1502	Drop 5	1336 5431	50,000						
1509	ECHO	1308 5351	50,000					210	30
1512	ECHO	1308 5351	40,000					300	45
1521	Drop 5	1336 5431	40,000						
1536		1518* 5448*	50,000					320	40
1552	Drop 4	1657 5503	50,000						
1600	BRAVO	1736 5434	50,000	037	+3	400	410	270	20
	BRAVO	1736 5434	40,000					240	80
1612	Drop 4	1657 5503	40,000						
1630		1642* 5648*	50,000					300	50
1648	Drop 8	1622 5832	50,000						
1700			50,000	191	-6	390	355	230	50
1706	ALFA	1650 5912	50,000					230	50

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True head- ing	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1709	ALFA	1650 5912	40,000					270	80
1748	Antigua	1708 6147	50,000					290	55
1800				280	-3	400	345	290	55
1816	St. Croix	1744 6442							
1839	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
16	1433:18	1433		Right roll	
17	1434:02	1434	44	Climb	80
18	1434:47	1435	45	Level	80
19	1435:31	1436	44	"	80
20	1436:16	1436	45	"	80
21	1437:00	1437	44	Climb	80
22	1437:45	1438	45	Level	80
23	1438:29	1438	44	"	80
24	1439:13	1439	44	"	80
25	1439:57	1440	44	"	80
26	1440:42	1441	45	"	80
27	1441:26	1441	44	"	80
28	1442:11	1442	45	"	80
29	1442:55	1443	44	"	80
30	1443:40	1444	45	"	80
31	1444:24	1444	44	"	80
32	1445:08	1445	44	"	80
33	1445:53	1446	45	"	80
34	1446:37	1447	44	"	80
35	1447:21	1447	44	"	80
36	1448:06	1448	45	"	80
37	1448:50	1449	44	Right roll	
38	1449:35	1450	45	"	
39	1450:19	1450	44	Level	
40	1450:53	1451	34	"	
41	1451:24	1451	31	"	
42	1451:54	1452	30	"	
43	1452:25	1452	31	"	
44	1452:55	1453	30	"	
45	1453:25	1453	30	"	
46	1453:56	1454	31	"	
47	1454:26	1454	30	"	
48	1454:57	1455	31	"	
49	1455:26	1455	29	"	
50	1456:06	1456	40	"	

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
51	1456:51	1457	45	Level	
52	1457:35	1458	44	"	
53	1458:20	1458	45	"	
54	1459:05	1459	45	"	
55	1459:49	1500	44	"	
56	1500:34	1501	45	"	
57	1501:18	1501	44	"	
58	1523:55	1524		"	351
59	1524:40	1525	45	"	351
60	1525:24	1525	44	"	351
61	1526:09	1526	45	"	351
62	1526:54	1527	45	"	351
63	1527:39	1528	45	"	351
64	1528:24	1528	45	"	351
65	1529:08	1529	44	"	351
66	1529:53	1530	45	"	351
67	1530:39	1531	46	"	351
68	1531:23	1531	44	"	351
69	1532:08	1532	45	"	351
70	1532:54	1533	46	"	351
71	1533:39	1534	45	"	351
72	1534:23	1534	44	"	351
73	1535:08	1535	45	"	351
74	1535:53	1536	45	"	351
75	1536:38	1537	45	"	351
76	1537:22	1537	44	"	351
77	1538:08	1538	46	"	351
78	1538:53	1539	45	"	351
79	1539:38	1540	45	"	351
80	1540:23	1540	45	"	351

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
81	1541:15	1541	52	Level	351
82	1542:07	1542	52	"	351
83	1542:59	1543	52	"	351
84	1543:51	1544	52	"	351
85	1544:43	1545	52	"	351
86	1545:35	1546	52	"	351
87	1546:27	1546	52	"	351
88	1547:19	1547	52	"	351
89	1548:11	1548	52	"	351
90	1549:03	1549	52	"	351
91	1549:55	1550	52	"	351
92	1550:46	1551	51	"	351
93	1622:25	1622		"	260
94	1623:17	1623	52	"	260
95	1624:09	1624	52	"	260
96	1625:02	1625	53	"	260
97	1625:54	1626	52	"	260
98	1626:47	1627	53	"	260
99	1627:42	1628	55	"	260
100	1628:36	1629	54	"	260
101	1629:31	1630	55	"	260
102	1630:25	1630	54	"	260
103	1631:19	1631	54	"	260
104	1632:14	1632	55	"	260
105	1633:09	1633	55	"	260
106	1634:03	1634	54	"	260
107	1639:58	1635	55	"	260

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

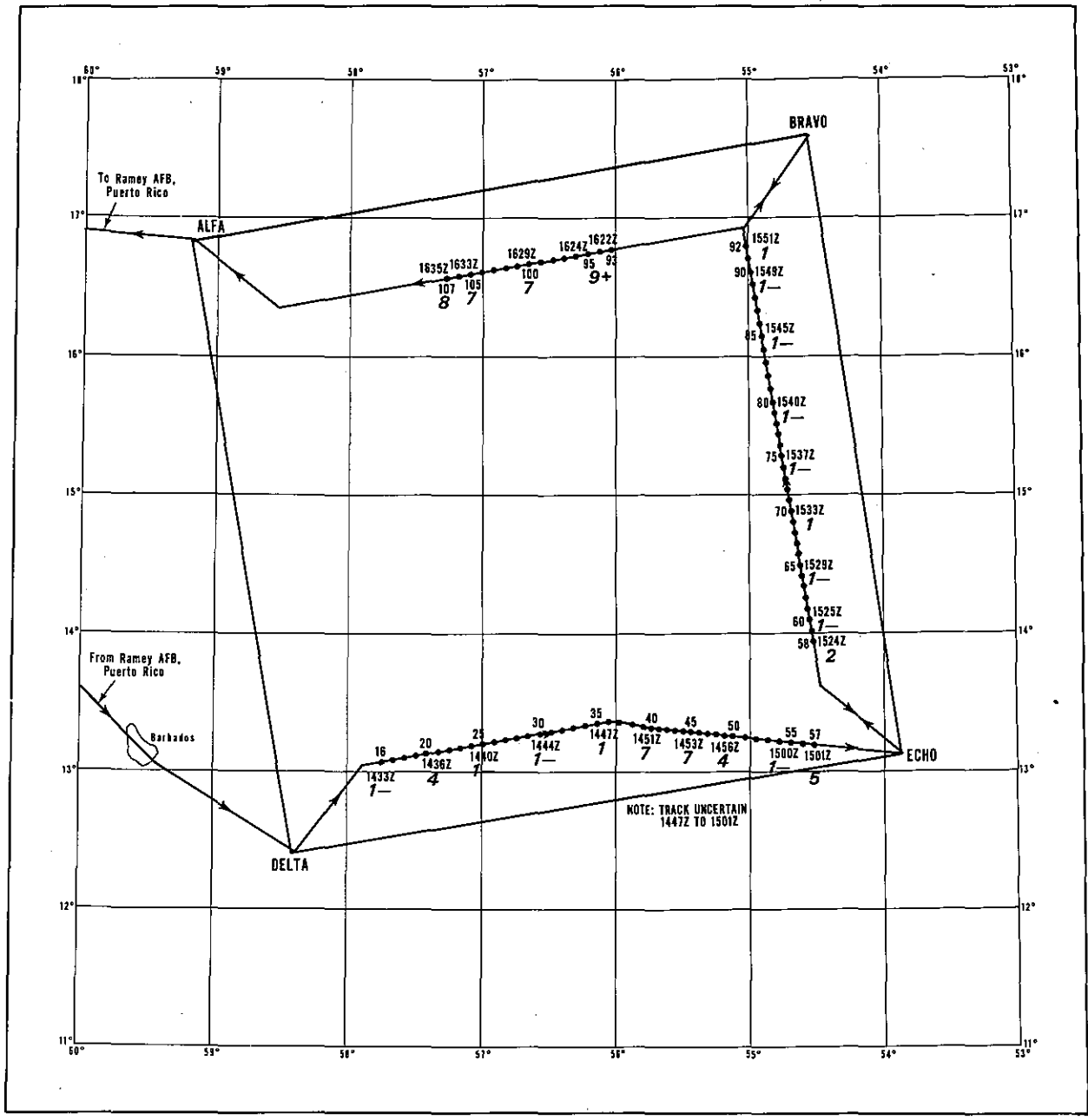


Figure 3.--RB-57F cloud photo track, May 5, 1969.

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°N °W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1251	Ramey AFB	1830 6708							
1318	St. Croix	1744 6442							
1359	Fort-de-France	1436 6100							
1418	Barbados	1304 5929		124	-4	415	395	175	35
1429	DELTA	1223 5823	50,000					180	35
1431	DELTA	1223 5823	40,000					040	005
1441	Drop 1	1302 5754	40,000						
1456		1318* 5618*	50,000					090	18
1500			50,000	086	0	410	410	Light variable	
1510	Drop 5	1336 5431	50,000						
1517	ECHO	1308 5351	50,000					140	005
1519	ECHO	1308 5351	40,000					310	40
1529	Drop 5	1336 5431	40,000						
1544		1518* 5448*	50,000					350	10
1550				351	0	410	410	Light variable	
1559	Drop 4	1657 5503	50,000						
1606	BRAVO	1736 5434	50,000					320	15
1608	BRAVO	1736 5434	40,000					260	74
1618	Drop 4	1657 5503	40,000						
1630			50,000	263	-2	410	365	280	45
1633			50,000					280	45
1649	Drop 8	1622 5832	50,000						
1657	ALFA	1650 5912	50,000					300	35
1659	ALFA	1650 5912	40,000					270	80
1724	Antigua	1708 6147							
1751	St. Croix	1744 6442							
1814	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message

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

PHOTOGRAPH DATA**

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
26	1441:11	1441		Level	80
27	1441:51	1442	40	"	80
28	1442:31	1443	40	"	80
29	1443:11	1443	40	"	80
30	1443:51	1444	40	"	80
31	1444:31	1445	40	"	80
32	1445:11	1445	40	"	80
33	1445:51	1446	40	"	80
34	1446:31	1447	40	"	80
35	1447:12	1447	41	"	80
36	1447:52	1448	40	"	80
37	1448:32	1449	40	"	80
38	1449:12	1449	40	"	80
39	1449:52	1450	40	"	80
40	1450:32	1451	40	"	80
41	1451:13	1451	41	"	80
42	1451:53	1452	40	"	80
43	1452:33	1453	40	"	80
44	1453:14	1453	41	"	80
45	1453:54	1454	40	"	80
46	1454:34	1455	40	"	80
47	1455:14	1455	40	"	80
48	1455:54	1456	40	"	80
49	1456:34	1457	40	"	80
50	1457:15	1457	41	"	80
51	1457:55	1458	40	"	80
52	1458:35	1459	40	"	80
53	1459:16	1459	41	"	80
54	1459:56	1500	40	"	80
55	1500:36	1501	40	"	80
56	1501:17	1501	41	"	80
57	1501:57	1502	40	"	80
58	1502:37	1503	40	"	80
59	1503:17	1503	40	"	80
60	1503:58	1504	41	"	80

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
61	1504:38	1505	40	Level	80
62	1505:18	1505	40	"	80
63	1505:59	1506	41	"	80
64	1506:39	1507	40	"	80
65	1507:19	1507	40	"	80
66	1508:00	1508	41	"	80
67	1508:40	1509	40	"	80
68	1509:20	1509	40	"	80
69	1510:00	1510	40	"	80
70	1510:40	1511	40	"	80
71	1511:21	1511	41	Right roll	
72	1530:24	1530		Level	351
73	1531:05	1531	41	"	351
74	1531:42	1532	37	"	351
75	1532:16	1532	34	"	351
76	1532:48	1533	32	"	351
77	1533:22	1533	34	"	351
78	1533:55	1534	33	"	351
79	1534:28	1534	33	"	351
80	1535:01	1535	33	"	351
81	1535:34	1536	33	"	351
82	1536:07	1536	33	"	351
83	1536:40	1537	33	"	351
84	1537:13	1537	33	"	351
85	1537:46	1538	33	"	351
86	1538:20	1538	34	"	351
87	1538:53	1539	33	"	351
88	1539:26	1539	33	"	351
89	1539:59	1540	33	"	351
90	1540:32	1541	33	"	351

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
91	1541:06	1541	34	Level	351
92	1541:38	1542	32	"	351
93	1542:12	1542	34	"	351
94	1542:45	1543	33	"	351
95	1543:18	1543	33	"	351
96	1543:51	1544	33	"	351
97	1544:24	1544	33	"	351
98	1544:58	1545	34	"	351
99	1545:31	1546	33	"	351
100	1546:04	1546	33	"	351
101	1546:37	1547	33	"	351
102	1547:11	1547	34	"	351
103	1547:44	1548	33	"	351
104	1548:17	1548	33	"	351
105	1548:50	1549	33	"	351

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

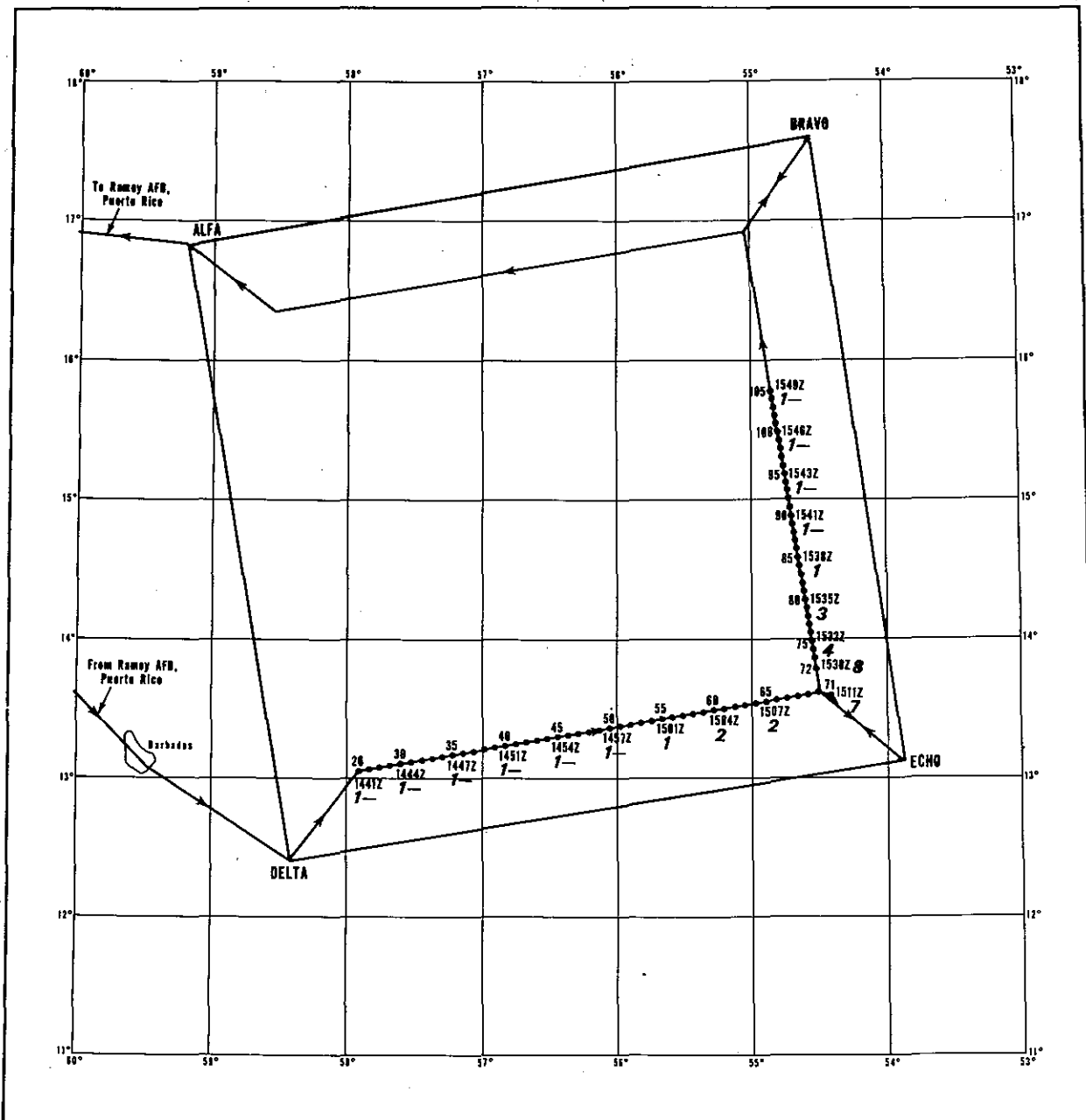


Figure 4.--RB-57F cloud photo track, May 6, 1969.

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

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		° 'N ° 'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1243	Ramey AFB	1830 6708							
1309	St. Croix	1744 6442							
1320				140	-4	405	410	250	28
1352	Fort-de-France	1436 6100							
1411	Barbados	1304 5929		132	-2	405	410	240	15
1413		1248* 5900*	50,000					240	15
1422	DELTA	1223 5823	50,000						
1427	DELTA	1223 5823	40,000					210	20
1432	Drop 1	1302 5754	40,000						
1448		1318* 5618*	50,000					230	20
1459			50,000					290	15
1502	Drop 5	1336 5431	50,000						
1510	ECHO	1308 5351	50,000	128	-1	400	415	240	15
1516	ECHO	1308 5351	40,000					310	10
1521	Drop 5	1336 5431	40,000	306	0	330	320	310	10
1536		1518* 5448*	50,000					360	05
1551	Drop 4	1657 5503	50,000	005	0	413	408	355	05
1558	BRAVO	1736 5434	50,000					220	10
1602	BRAVO	1736 5434	40,000					270	40
1611	Drop 4	1657 5503	40,000						
1630		1642* 5648*	50,000					300	10
1643	Drop 8	1622 5832	50,000	261	-1	400	390	295	10
1650	ALFA	1650 5912	50,000					300	15
1655	ALFA	1650 5912	40,000					250	32
1716	Antigua	1708 6147		282	+2	405	380	250	30
1743	St. Croix	1744 6442							
1807	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

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

PHOTOGRAPH DATA**

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
9	1432:52	1433		Level	80
10	1433:57	1434	65	"	80
11	1435:02	1435	65	"	80
12	1436:07	1436	65	"	80
13	1437:13	1437	66	"	80
14	1438:19	1438	66	"	80
15	1439:24	1439	65	"	80
16	1440:30	1440	66	"	80
17	1441:36	1442	66	"	80
18	1442:41	1443	65	"	80
19	1443:47	1444	66	"	80
20	1444:52	1445	65	"	80
21	1445:58	1446	66	"	80
22	1447:04	1447	66	"	80
23	1448:10	1448	66	"	80
24	1449:15	1449	65	"	80
25	1450:21	1450	66	"	80
26	1451:26	1451	65	"	80
27	1452:32	1453	66	"	80
28	1453:38	1454	66	"	80
29	1454:44	1455	66	"	80
30	1455:50	1456	66	"	80
31	1456:56	1457	66	"	80
32	1458:01	1458	65	"	80
33	1459:07	1459	66	"	80
34	1500:12	1500	65	"	80
35	1521:33	1522		Right roll	
36	1522:39	1523	66	Level	351
37	1523:45	1524	66	"	351
38	1524:52	1525	67	"	351
39	1525:58	1526	66	"	351
40	1527:05	1527	67	"	351

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1528:12	1528	67	Right roll	
42	1529:18	1529	66	Level	351
43	1530:24	1530	66	"	351
44	1531:30	1531	66	"	351
45	1532:36	1533	66	"	351
46	1533:42	1534	66	"	351
47	1534:48	1535	66	"	351
48	1535:54	1536	66	"	351
49	1537:00	1537	66	"	351
50	1538:06	1538	66	"	351
51	1539:11	1539	65	"	351
52	1540:17	1540	66	"	351
53	1541:23	1541	66	"	351
54	1542:29	1542	66	"	351
55	1543:35	1544	66	"	351
56	1544:41	1545	66	"	351
57	1545:47	1546	66	"	351
58	1546:53	1547	66	"	351
59	1547:58	1548	65	"	351
60	1549:04	1549	66	"	351
61	1611:56	1612		"	260
62	1613:02	1613	66	"	260
63	1614:08	1614	66	"	260
64	1615:15	1615	67	"	260
65	1616:21	1616	66	"	260
66	1617:28	1617	67	"	260
67	1618:34	1619	66	"	260
68	1619:40	1620	66	"	260
69	1620:46	1621	66	"	260
70	1621:52	1622	66	"	260

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

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1622:58	1623	66	Level	260
72	1624:04	1624	66	"	260
73	1625:09	1625	65	"	260
74	1626:15	1626	66	"	260
75	1627:20	1627	65	"	260
76	1628:26	1628	66	"	260
77	1629:31	1630	65	"	260
78	1630:37	1631	66	"	260
79	1631:43	1632	66	"	260
80	1632:49	1633	66	"	260
81	1633:54	1634	65	"	260
82	1634:59	1635	65	"	260
83	1636:05	1636	66	"	260
84	1637:10	1637	65	"	260
85	1638:15	1638	65	"	260
86	1639:21	1639	66	"	260

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

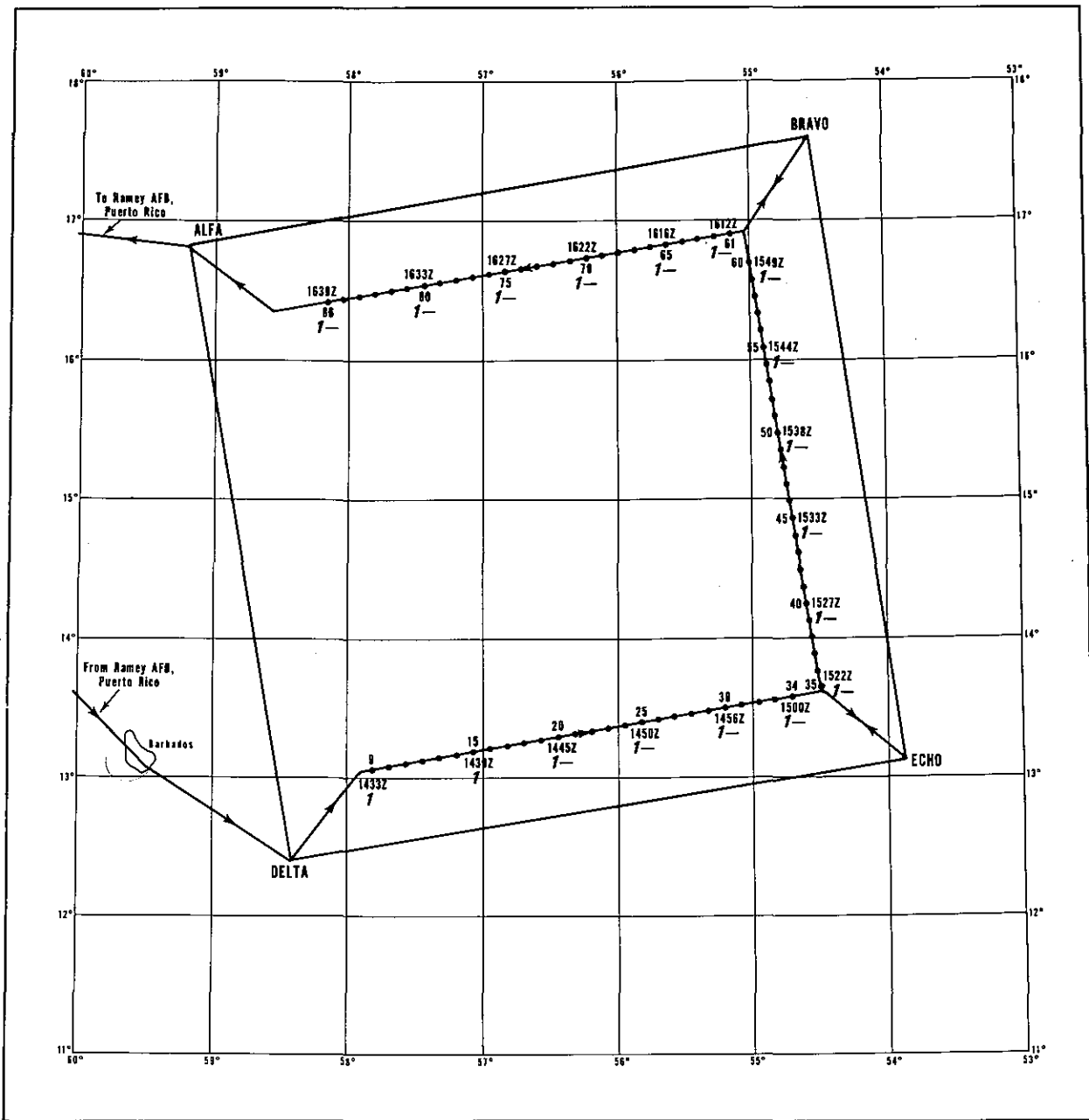


Figure 5.--RB-57F cloud photo track, May 7, 1969.

Table 8.--Log of high-level cloud photography mission, May 9, 1969

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		'N 'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1241	Ramey AFB	1830 6708							
1308	St. Croix	1744 6442							
1350	Fort-de-France	1436 6100		135	-5	390	390	220	35
1409	Barbados	1304 5929							
1421	DELTA	1223 5823	50,000					240	30
1425	DELTA	1223 5823	40,000					300	25
1434	Drop 1	1302 5754	40,000						
1450		1318* 5600*	50,000	080	-1	390	420	250	30
1502	Drop 5	1336 5431	50,000						
1509	ECHO	1308 5351	50,000					250	30
1513	ECHO	1308 5351	40,000					310	30
1523	Drop 5	1336 5431	40,000						
1540		1518* 5448*	50,000	351	-1	405	405	270	10
1555	Drop 4	1657 5503	50,000						
1602	BRAVO	1736 5434	50,000					220	20
1605	BRAVO	1736 5434	40,000					270	55
1614	Drop 4	1657 5503	40,000						
1630		1648* 5648*	50,000					280	33
1640			50,000	261	-1	395	375	280	25
1647	Drop 8	1622 5832	50,000						
1655	ALFA	1650 5912	50,000					280	25
1700	ALFA	1650 5912	40,000					270	50
1725	Antigua	1708 6147		289	+1	395	375	280	25
1753	St. Croix	1744 6442						300	20
1818	Ramey AFB	1830 6708		282	-1	395	375	300	20

*Approximate position -- from radio weather message.

Table 8.--Log for May 9, 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
13	1435:11	1434		Level	80
14	1436:04	1435	53	"	80
15	1436:58	1436	54	"	80
16	1437:52	1437	54	"	80
17	1438:45	1438	53	"	80
18	1439:38	1439	53	"	80
19	1440:32	1440	54	"	80
20	1441:25	1440	53	"	80
21	1442:18	1441	53	"	80
22	1443:12	1442	54	"	80
23	1444:05	1443	53	"	80
24	1444:59	1444	54	"	80
25	1445:53	1445	54	"	80
26	1446:47	1446	54	"	80
27	1447:40	1447	53	"	80
28	1448:33	1448	53	"	80
29	1449:27	1448	54	"	80
30	1450:20	1449	53	"	80
31	1451:13	1450	53	"	80
32	1452:07	1451	54	"	80
33	1453:00	1452	53	"	80
34	1453:54	1453	54	"	80
35	1454:48	1454	54	"	80
36	1455:42	1455	54	"	80
37	1456:35	1456	53	"	80
38	1457:28	1456	53	"	80
39	1458:21	1457	53	"	80
40	1459:15	1458	54	"	80
41	1500:09	1459	54	"	80
42	1501:02	1500	53	"	80
43	1501:56	1501	54	"	80
44	1502:50	1502	54	Right roll	

Table 8.--Log for May 9, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
45	1527:37	1527		Level	351
46	1528:31	1528	54	"	351
47	1529:24	1528	53	"	351
48	1530:18	1529	54	"	351
49	1531:12	1530	54	"	351
50	1532:05	1531	53	"	351
51	1532:59	1532	54	"	351
52	1533:53	1533	54	"	351
53	1534:47	1534	54	"	351
54	1535:41	1535	54	"	351
55	1536:34	1536	53	"	351
56	1537:28	1536	54	"	351
57	1538:21	1537	53	"	351
58	1539:14	1538	53	"	351
59	1540:08	1539	54	"	351
60	1541:02	1540	54	"	351
61	1541:56	1541	54	"	351
62	1542:50	1542	54	"	351
63	1543:43	1543	53	"	351
64	1544:37	1544	54	"	351
65	1545:30	1544	53	"	351
66	1546:23	1545	53	"	351
67	1547:17	1546	54	"	351
68	1548:10	1547	53	"	351
69	1549:04	1548	54	"	351
70	1549:58	1549	54	"	351
71	1550:52	1550	54	"	351
72	1551:45	1551	53	"	351
73	1552:39	1552	54	"	351
74	1553:32	1553	53	"	351
75	1617:08	1616		"	260
76	1618:02	1617	54	"	260
77	1618:56	1618	54	"	260
78	1619:50	1619	54	"	260
79	1620:44	1620	54	"	260
80	1621:38	1621	54	"	260

Table 8.--Log for May 9, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
81	1622:32	1622	54	Level	260
82	1623:26	1622	54	"	260
83	1624:19	1623	53	"	260
84	1625:13	1624	54	"	260
85	1626:07	1625	54	"	260
86	1627:00	1626	53	"	260
87	1627:54	1627	54	"	260
88	1628:54	1628	60	"	260
89	1629:53	1629	59	"	260
90	1630:53	1630	60	"	260
91	1631:52	1631	59	"	260
92	1632:51	1632	59	"	260
93	1633:50	1633	59	"	260
94	1634:49	1634	59	"	260
95	1635:48	1635	59	"	260
96	1636:48	1636	60	"	260
97	1637:47	1637	59	"	260
98	1638:46	1638	59	"	260
99	1639:45	1639	59	"	260
100	1640:45	1640	60	"	260
101	1641:44	1641	59	"	260
102	1642:43	1642	59	"	260
103	1643:42	1643	59	"	260
104	1644:41	1644	59	Right roll	
105	1645:40	1645	59	"	
106	1646:40	1646	60	Level	305

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

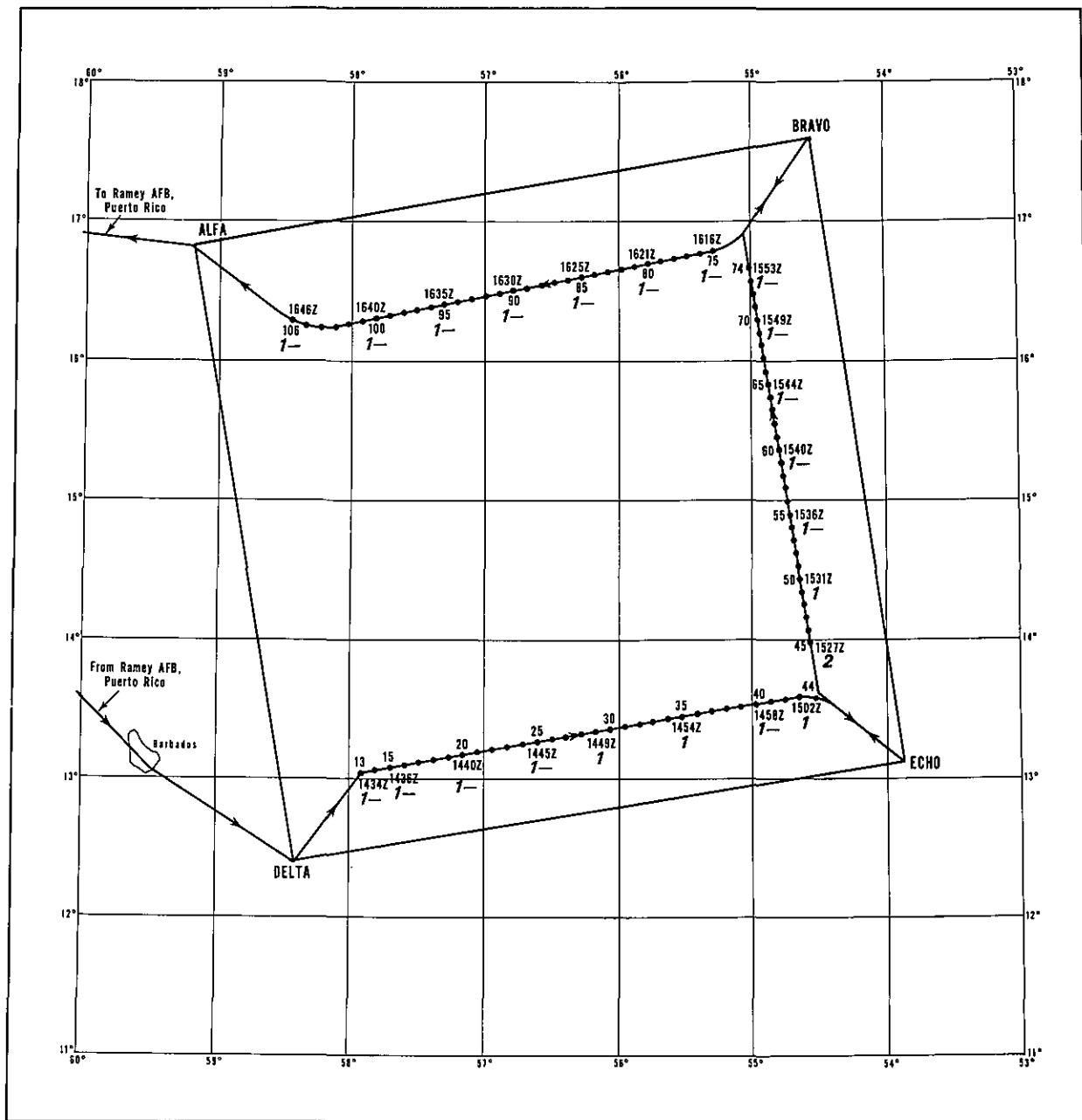


Figure 6.--RB-57F cloud photo track, May 9, 1969

Table 9.--Log of high-level cloud photography mission, May 10, 1969

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1241	Ramey AFB	1830 6708							
1306	St. Croix	1744 6442							
1348	Fort-de-France	1436 6100							
1407	Barbados	1304 5929							
1418	DELTA	1223 5823	50,000					240	40
1420	DELTA	1223 5823	40,000						
1430	Drop 1	1302 5754	40,000	082	-2	410	440	237	40
1445		1318* 5612*	50,000					250	35
1458	Drop 5	1336 5431	50,000						
1505	ECHO	1308 5351	50,000					280	40
1509	ECHO	1308 5351	40,000						
1519	Drop 5	1336 5431	40,000	346	+5	410	425	275	40
1550	Drop 4	1657 5503	50,000						
1557	BRAVO	1736 5434	50,000						
1558	BRAVO	1736 5434	40,000						
1608	Drop 4	1657 5503	40,000					Doppler inoperative	
1623		1642* 5648*							
1641	Drop 8	1622 5832	50,000						
1648	ALFA	1650 5912	50,000						
1651	ALFA	1650 5912	40,000					Doppler inoperative	
1713	Antigua	1708 6147							
1740	St. Croix	1744 6442							
1803	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

Table 9.--Log for May 10, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
9	1432:51	1433		Level	80
10	1433:51	1434	60	"	80
11	1434:52	1435	61	"	80
12	1435:53	1436	61	"	80
13	1436:54	1437	61	"	80
14	1437:54	1438	60	"	80
15	1438:55	1439	61	"	80
16	1439:55	1440	60	"	80
17	1440:56	1441	61	"	80
18	1441:57	1442	61	"	80
19	1442:58	1443	61	"	80
20	1443:59	1444	61	"	80
21	1444:59	1445	60	"	80
22	1446:00	1446	61	"	80
23	1447:01	1447	61	"	80
24	1448:02	1448	61	"	80
25	1449:02	1449	60	"	80
26	1450:03	1450	61	"	80
27	1451:04	1451	61	"	80
28	1452:05	1452	61	"	80
29	1453:06	1453	61	"	80
30	1454:07	1454	61	"	80
31	1455:08	1455	61	"	80
32	1456:09	1456	61	"	80
33	1457:10	1457	61	"	80
34	1458:11	1458	61	Right roll	
35	1459:12	1459	61	Level	125
36	1518:53	1519		Right roll	
37	1519:55	1520	62	Level	351
38	1520:58	1521	63	"	351
39	1522:00	1522	62	"	351
40	1523:02	1523	62	"	351

Table 9.--Log for May 10, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1524:04	1524	62	Level	351
42	1525:06	1525	62	"	351
43	1526:08	1526	62	"	351
44	1527:10	1527	62	"	351
45	1528:12	1528	62	"	351
46	1529:14	1529	62	"	351
47	1530:16	1530	62	"	351
48	1531:18	1531	62	"	351
49	1532:20	1532	62	"	351
50	1533:22	1533	62	"	351
51	1534:24	1534	62	"	351
52	1535:25	1535	61	"	351
53	1536:27	1536	62	"	351
54	1537:29	1537	62	"	351
55	1538:31	1539	62	"	351
56	1539:32	1540	61	"	351
57	1540:34	1541	62	"	351
58	1541:36	1542	62	"	351
59	1542:38	1543	62	"	351
60	1543:39	1544	61	"	351
61	1544:41	1545	62	"	351
62	1545:43	1546	62	"	351
63	1546:45	1547	62	"	351
64	1547:47	1548	62	"	351
65	1548:49	1549	62	"	351
66	1607:23	1607		"	260
67	1608:25	1608	62	"	260
68	1609:28	1609	63	"	260
69	1610:30	1610	62	"	260
70	1611:33	1612	63	"	260

Table 9.--Log for May 10, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1612:36	1613	63	Level	260
72	1613:38	1614	62	"	260
73	1614:41	1615	63	"	260
74	1615:43	1616	62	"	260
75	1616:45	1617	62	"	260
76	1617:48	1618	63	"	260
77	1618:51	1619	63	"	260
78	1619:53	1620	62	"	260
79	1620:56	1621	63	"	260
80	1621:58	1622	62	"	260
81	1623:00	1623	62	"	260
82	1624:03	1624	63	"	260
83	1625:08	1625	63	"	260
84	1626:08	1626	63	"	260
85	1627:10	1627	62	"	260
86	1628:13	1628	63	"	260
87	1629:15	1629	62	"	260
88	1630:18	1630	63	"	260
89	1631:20	1631	62	"	260
90	1632:22	1632	62	"	260
91	1633:24	1633	62	"	260
92	1634:26	1634	62	"	260
93	1635:29	1635	63	"	260
94	1636:31	1637	62	"	260
95	1637:33	1638	62	"	260
96	1638:35	1639	62	"	260
97	1639:37	1640	62	"	260
98	1640:39	1641	62	Right roll	
99	1641:42	1642	63	Level	305

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

Table 10.--Log of high-level cloud photography mission, May 11, 1969

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1240	Ramey AFB	1830 6708							
1308	St. Croix	1744 6442							
1351	Fort-de-France	1436 6100							
1409	Barbados	1304 5929							Light variable
1420	DELTA	1223 5823	50,000					300	5
1423	DELTA	1223 5823	40,000					010	20
1429	Drop 1	1302 5754	40,000						
1443		1318* 5612*	50,000					340	5
1458	Drop 5	1336 5431	50,000						
1507	ECHO	1308 5351	50,000					290	30
1509	ECHO	1308 5351	40,000					320	45
1521	Drop 5	1336 5431	40,000					355	32
1538			50,000					360	32
1554	Drop 4	1657 5503	50,000						
1603	BRAVO	1736 5434	50,000					340	20
1605	BRAVO	1736 5434	40,000					250	50
1615	Drop 4	1657 5503	40,000						
1621			50,000					340	20
1632		1642* 5648*	50,000					310	40
1648	Drop 8	1622 5832	50,000						
1656	ALFA	1650 5912	50,000					340	25
1659	ALFA	1650 5912	40,000					320	60
1721	Antigua	1708 6147							
1747	St. Croix	1744 6442							
1807	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

Table 10.--Log for May 11, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
6	1430:30	1429		Level	80
7	1431:32	1431	62	"	80
8	1432:34	1432	62	"	80
9	1433:36	1433	62	"	80
10	1434:38	1434	62	"	80
11	1435:39	1435	61	"	80
12	1436:41	1436	62	"	80
13	1437:43	1437	62	"	80
14	1438:44	1438	61	"	80
15	1439:46	1439	62	"	80
16	1440:48	1440	62	"	80
17	1441:50	1441	62	"	80
18	1442:52	1442	62	"	80
19	1443:53	1443	61	"	80
20	1444:55	1444	62	"	80
21	1445:57	1445	62	"	80
22	1446:59	1446	62	"	80
23	1448:01	1447	62	"	80
24	1449:02	1448	61	"	80
25	1450:04	1449	62	"	80
26	1451:06	1450	62	"	80
27	1452:07	1451	61	"	80
28	1453:09	1452	62	"	80
29	1454:11	1453	62	"	80
30	1455:13	1454	62	"	80
31	1456:15	1455	62	"	80
32	1457:17	1456	62	"	80
33	1522:22	1521		"	351
34	1523:24	1522	62	"	351
35	1524:26	1523	62	"	351
36	1525:29	1524	63	"	351
37	1526:31	1526	62	"	351
38	1527:34	1527	63	"	351
39	1528:37	1528	63	"	351
40	1529:39	1529	62	"	351

Table 10.--Log for May 11, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1530:42	1530	63	Level	351
42	1531:44	1531	62	"	351
43	1532:46	1532	62	"	351
44	1533:49	1533	63	"	351
45	1534:51	1534	62	"	351
46	1535:54	1535	63	"	351
47	1536:56	1536	62	"	351
48	1537:59	1537	63	"	351
49	1539:00	1538	61	"	351
50	1540:02	1539	62	"	351
51	1541:05	1540	63	"	351
52	1542:07	1541	62	"	351
53	1543:10	1542	63	"	351
54	1544:11	1543	61	"	351
55	1545:13	1544	62	"	351
56	1546:16	1545	63	"	351
57	1547:17	1546	61	"	351
58	1548:20	1547	63	"	351
59	1549:22	1548	62	"	351
60	1550:24	1549	62	"	351
61	1551:26	1550	62	"	351
62	1552:28	1551	62	"	351
63	1553:30	1552	62	"	351
64	1554:32	1554	62	"	351
65	1617:25	1616		"	260
66	1618:27	1617	62	"	260
67	1619:30	1618	63	"	260
68	1620:32	1620	62	"	260
69	1621:35	1621	63	"	260
70	1622:38	1622	63	"	260

Table 10.--Log for May 11, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1623:41	1623	63	Level	260
72	1624:43	1624	62	"	260
73	1625:46	1625	63	"	260
74	1626:49	1626	63	"	260
75	1627:51	1627	62	"	260
76	1628:54	1628	63	"	260
77	1629:57	1629	63	"	260
78	1630:59	1630	62	"	260
79	1632:02	1631	63	"	260
80	1633:04	1632	62	"	260
81	1634:07	1633	63	"	260
82	1635:09	1634	62	"	260
83	1636:11	1635	62	"	260
84	1637:13	1636	62	"	260
85	1638:16	1637	63	"	260
86	1639:18	1638	62	"	260
87	1640:21	1639	63	"	260
88	1641:23	1640	62	"	260
89	1642:25	1641	62	"	260
90	1643:27	1642	62	"	260
91	1644:29	1643	62	"	260
92	1645:31	1645	62	"	260
93	1646:34	1646	63	"	260
94	1647:36	1647	62	"	260
95	1648:38	1648	62	"	260

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

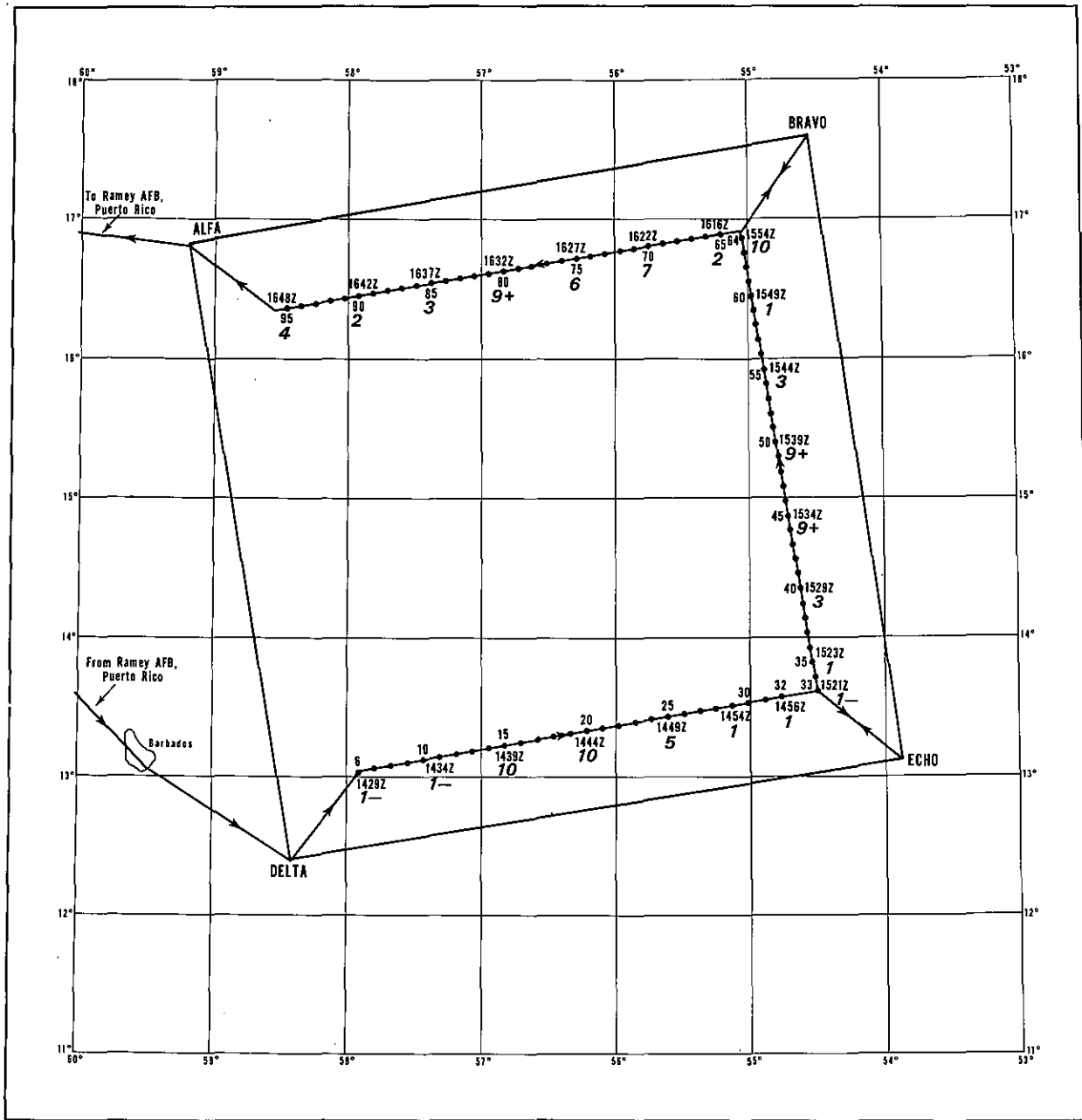


Figure 8.--RB-57F cloud photo track, May 11, 1969.

Table 11.--Log of high-level cloud photography mission, May 12, 1969

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1242	Ramey AFB	1830 6708							
1312	St. Croix	1744 6442							
1354	Fort-de-France	1436 6100		124	+1	395	405	310	10
1412	Barbados	1304 5929							
1423	DELTA		50,000					310	10
1429	DELTA		40,000					290	15
1438	Drop 1	1302 5754	40,000						
1446			50,000	080	+2	400	405	330	15
1455		1318* 5600*	50,000					330	15
1506	Drop 5	1336 5431	50,000						
1514	ECHO	1308 5351	50,000					330	15
1518	ECHO	1308 5351	40,000					280	30
1526	Drop 5	1336 5431	40,000						
1535			50,000	351	-2	400	380	030	20
1540		1512* 5448*	50,000					030	20
1557	Drop 4	1657 5503	50,000						
1604	BRAVO	1736 5434	50,000					030	40
1607	BRAVO	1736 5434	40,000					220	10
1616	Drop 4	1657 5503	40,000						
1624			50,000	265	-2	400	410	030	20
1632		1642* 5648*	50,000					030	20
1646	Drop 8	1622 5832	50,000						
1653	ALFA	1650 5912	50,000					030	20
1657	ALFA	1650 5912	40,000					300	20
1716	Antigua	1708 6147							
1741	St. Croix	1744 6442							
1804	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message.

Table 11.--Log for May 12, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
7	1438:47	1439		Level	80
8	1439:47	1440	60	"	80
9	1440:48	1441	61	"	80
10	1441:48	1442	60	"	80
11	1442:49	1443	61	"	80
12	1443:49	1444	60	"	80
13	1444:50	1445	61	"	80
14	1445:50	1446	60	"	80
15	1446:51	1447	61	"	80
16	1447:51	1448	60	"	80
17	1448:52	1449	61	"	80
18	1449:52	1450	60	"	80
19	1450:52	1451	60	"	80
20	1451:53	1452	61	"	80
21	1452:53	1453	60	"	80
22	1453:53	1454	60	"	80
23	1454:54	1455	61	"	80
24	1455:55	1456	61	"	80
25	1456:55	1457	60	"	80
26	1457:56	1458	61	"	80
27	1458:56	1459	60	"	80
28	1459:56	1500	60	"	80
29	1500:57	1501	61	"	80
30	1501:57	1502	60	"	80
31	1502:58	1503	61	"	80
32	1503:58	1504	60	"	80
33	1504:59	1505	61	"	80
34	1527:09	1527		"	351
35	1528:10	1528	61	"	351
36	1529:12	1529	62	"	351
37	1530:13	1530	61	"	351
38	1531:14	1531	61	"	351
39	1532:15	1532	61	"	351
40	1533:16	1533	61	"	351

Table 11.--Log for May 12, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1534:17	1534	61	Level	351
42	1535:18	1535	61	"	351
43	1536:19	1536	61	"	351
44	1537:20	1537	61	"	351
45	1538:21	1538	61	"	351
46	1539:22	1539	61	"	351
47	1540:23	1540	61	"	351
48	1541:24	1541	61	"	351
49	1542:25	1542	61	"	351
50	1543:26	1543	61	"	351
51	1544:27	1544	61	"	351
52	1545:27	1545	60	"	351
53	1546:28	1546	60	"	351
54	1547:29	1547	61	"	351
55	1548:29	1548	60	"	351
56	1549:30	1549	61	"	351
57	1550:31	1551	61	"	351
58	1551:32	1552	61	"	351
59	1552:33	1553	61	"	351
60	1553:34	1554	61	"	351
61	1554:34	1555	60	"	351
62	1555:35	1556	61	"	351
63	1616:33	1617		"	260
64	1617:34	1618	61	"	260
65	1618:35	1619	61	"	260
66	1619:36	1620	61	"	260
67	1620:37	1621	61	"	260
68	1621:38	1622	61	"	260
69	1622:39	1623	61	"	260
70	1623:41	1624	62	"	260

Table 11.--Log for May 12, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1624:42	1625	61	Level	260
72	1625:43	1626	61	"	260
73	1626:44	1627	61	"	260
74	1627:45	1628	61	"	260
75	1628:46	1629	61	"	260
76	1629:47	1630	61	"	260
77	1630:48	1631	61	"	260
78	1631:49	1632	61	"	260
79	1632:50	1633	61	"	260
80	1633:51	1634	61	"	260
81	1634:52	1635	61	"	260
82	1635:53	1636	61	"	260
83	1636:53	1637	60	"	260
84	1637:54	1638	61	"	260
85	1638:55	1639	61	"	260
86	1639:56	1640	61	"	260
87	1640:57	1641	61	"	260
88	1641:58	1642	61	"	260
89	1642:58	1643	60	"	260
90	1643:59	1644	61	"	260
91	1644:59	1645	60	Right roll	
92	1645:57	1646	58	"	
93	1646:57	1647	60	Level	305
94	1647:35	1648	38	"	305
95	1648:06	1648	31	"	305
96	1648:38	1649	32	"	305
97	1649:09	1649	31	"	305

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

Table 12.--Log of high-level cloud photography mission, May 14, 1969

NAVIGATION NOTES

Time	Location		Indicated altitude	True heading	Drift angle	Speed		Wind	
	Log entry	Lat. Long.				Air	Ground	Dir.	Speed
GCT		°'N °'W	ft.	deg.	deg.	kt.	kt.	deg.	kt.
1238	Ramey AFB	1830 6708							
1306	St. Croix	1744 6442							
1347	Fort-de-France	1436 6100							
1400				131	+2	396	414	350	25
1406	Barbados	1304 5929							
1418	DELTA #	1223 5823	50,000					010	15
1422	DELTA	1223 5823	40,000					310	16
1431	Drop 1	1302 5754	40,000						
1447		1318* 5612*	50,000					260	10
1500			50,000	078	0	404	418	250	14
1501	Drop 5	1336 5431	50,000						
1508	ECHO	1308 5351	50,000					250	14
1511	ECHO	1308 5351	40,000					360	18
1521	Drop 5	1336 5431	40,000						
1537		1518* 5436*	50,000					110	20
1552	Drop 4	1657 5503	50,000						
1559	BRAVO #	1736 5434	50,000					020	10
1600			50,000	037	0	400	400	Light variable	
1602	BRAVO	1736 5434	40,000					360	40
1611	Drop 4	1657 5503	40,000						
1627		1642* 5648*	50,000					350	30
1642	Drop 8	1622 5832	50,000						
1649	ALFA	1650 5912	50,000					020	25
1652	ALFA	1650 5912	40,000					360	50
1700				277	-7	340	335	360	50
1740	St. Croix	1744 6442							
1806	Ramey AFB	1830 6708							

*Approximate position -- from radio weather message

#Visual fix on ship

Table 12.--Log for May 14, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Time (GCT) Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
8	1428:51	1431			80
9	1429:51	1432	60	Level	80
10	1430:50	1433	59	"	80
11	1431:50	1434	60	"	80
12	1432:49	1435	59	"	80
13	1433:49	1436	60	"	80
14	1434:48	1437	59	"	80
15	1435:47	1438	59	"	80
16	1436:47	1439	60	"	80
17	1437:46	1440	59	"	80
18	1438:46	1441	60	"	80
19	1439:45	1442	59	"	80
20	1440:45	1443	60	"	80
21	1441:45	1444	60	"	80
22	1442:44	1445	59	"	80
23	1443:44	1446	60	"	80
24	1444:43	1447	59	"	80
25	1445:42	1448	59	"	80
26	1446:42	1449	60	"	80
27	1447:42	1450	60	"	80
28	1448:41	1451	59	"	80
29	1449:40	1452	59	"	80
30	1450:40	1453	60	"	80
31	1451:39	1454	59	"	80
32	1452:38	1455	59	"	80
33	1453:38	1456	60	"	80
34	1454:38	1457	60	"	80
35	1455:38	1458	60	"	80
36	1456:37	1459	59	"	80
37	1457:37	1500	60	"	80
38	1520:16	1522		"	351
39	1521:16	1523	60	"	351
40	1522:16	1524	60	"	351

Table 12.--Log for May 14, 1969 (continued)

PHOTOGRAPH DATA**

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
41	1523:16	1525	60	Level	351
42	1524:16	1526	60	"	351
43	1525:17	1527	61	"	351
44	1526:17	1528	60	"	351
45	1527:17	1529	60	"	351
46	1528:17	1530	60	"	351
47	1529:17	1531	60	"	351
48	1530:17	1532	60	"	351
49	1531:18	1533	61	Slight right roll	351
50	1532:18	1534	60	Level	351
51	1533:18	1535	60	"	351
52	1534:18	1536	60	"	351
53	1535:18	1537	60	"	351
54	1536:18	1538	60	"	351
55	1537:18	1539	60	"	351
56	1538:18	1540	60	"	351
57	1539:18	1541	60	"	351
58	1540:18	1542	60	"	351
59	1541:19	1543	61	"	351
60	1542:19	1544	60	"	351
61	1543:19	1545	60	"	351
62	1544:19	1546	60	"	351
63	1545:20	1547	61	"	351
64	1546:20	1548	60	"	351
65	1547:20	1549	60	"	351
66	1548:20	1550	60	"	351
67	1610:47	1613		"	260
68	1611:47	1614	60	"	260
69	1612:48	1615	61	"	260
70	1618:49	1616	61	"	260

Table 12.--Log for May 14, 1969 (continued)

PHOTOGRAPH DATA **

Photo No.	Time (GCT) Photo	Corrected	Elapsed time (sec.)	Aircraft attitude	Nominal track (deg.)
71	1614:50	1617	61	Level	260
72	1615:50	1618	60	"	260
73	1616:51	1619	61	"	260
74	1617:52	1620	61	"	260
75	1618:52	1621	60	"	260
76	1619:52	1622	60	"	260
77	1620:52	1623	60	"	260
78	1621:53	1624	61	"	260
79	1622:54	1625	61	"	260
80	1623:54	1626	60	"	260
81	1624:55	1627	61	"	260
82	1625:55	1628	60	"	260
83	1626:55	1629	60	"	260
84	1627:55	1630	60	"	260
85	1628:56	1631	61	"	260
86	1629:56	1632	60	"	260
87	1630:57	1633	61	"	260
88	1631:58	1634	61	"	260
89	1632:58	1635	60	"	260
90	1633:58	1636	60	"	260
91	1634:58	1637	60	"	260
92	1635:58	1638	60	"	260
93	1636:59	1639	61	"	260
94	1637:59	1640	60	"	260

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

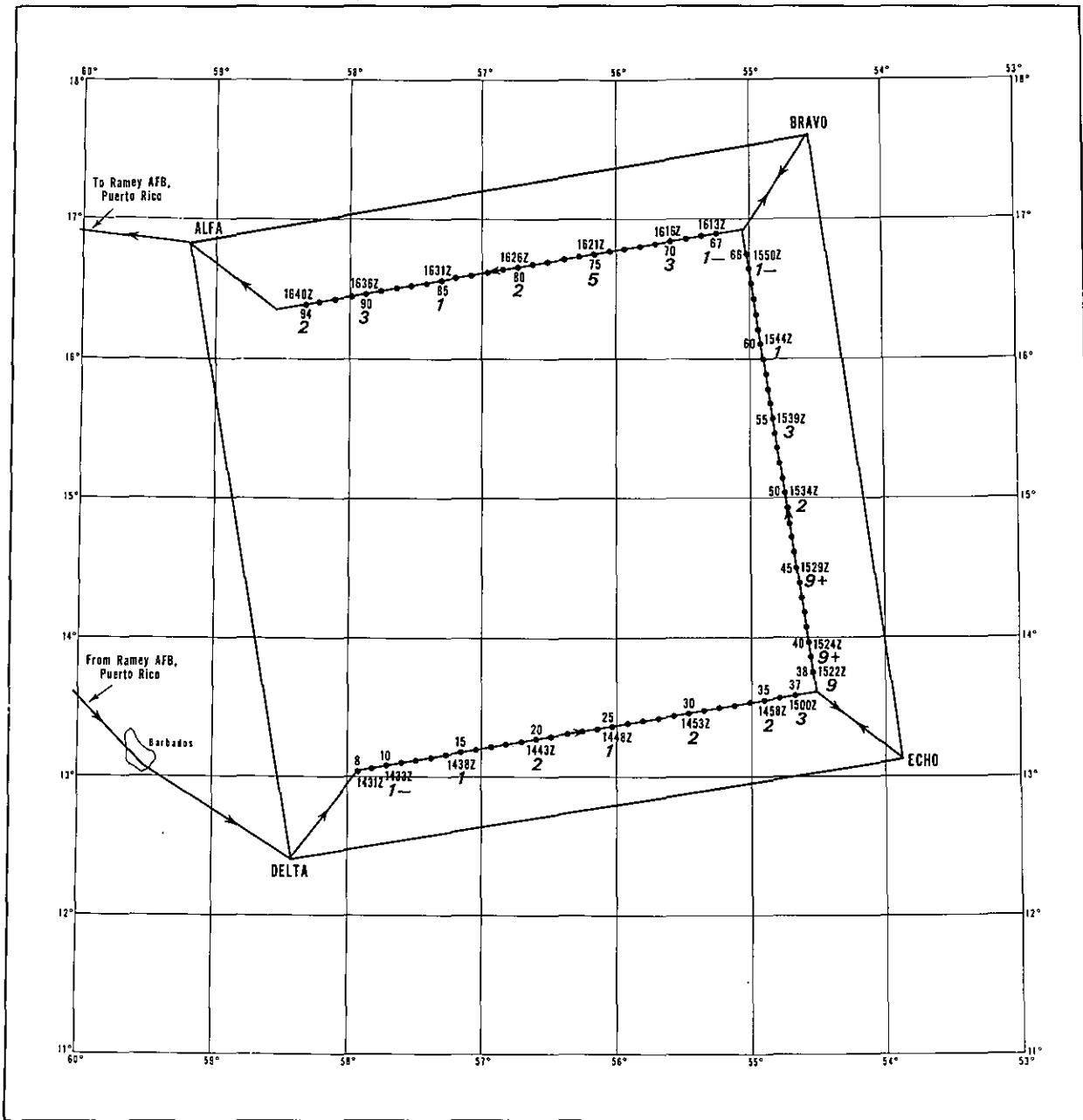


Figure 10.--RB-57F cloud photo track, May 14, 1969.