R. TYPHOON HARRIET (24 DECEMBER 1959 - 02 JANUARY 1960)

On 22 December a 1002 millibar tropical low was evident to the southeast of Truk. Reconnaissance aircraft were sent to investigate, and throughout the 23rd reported increasing precipitation and wall clouds forming around the center. The next day at 0215Z a definite eye was located approximately 300 miles southeast of Truk and based on this fix, JTWC issued warning number 1 on Tropical Storm HARRIET.

Movement was erratic until 250000Z when HARRIET was upgraded to a typhoon. She then started moving toward the northwest at the steady speed of 10 knots. This track moved HARRIET to a point 200 miles south of Guam, at which time Guam's upper winds backed to the east. As a result, Typhoon HARRIET turned abruptly westward, gradually veering 6 hours later to a west-northwesterly course at 17 knots. On 28 December HARRIET appeared to be coming under the influence of a trough in the westerlies. However, the trough was not strong enough to produce recurvature and once again HARRIET turned abruptly toward the west. At 281800Z, some 500 miles east of Catanduanes Island, HARRIET reached her maximum intensity with surface winds of 130 knots near the center. At the same time a 1062 millibar high centered over Siberia was gradually spreading southward over the Philippines, and this blocked the typhoon from any northward movement. Slow deceleration then commenced and the cold air associated with the high gradually weakened HARRIET. Steering rapidly dropped to the 500 millibar level and a west-southwesterly

movement began. At approximately 312130Z the typhoon passed directly over Catanduanes Island with winds well in excess of 100 knots. Movement over the Philippines further weakened HARRIET, steering dropped to the 700 millibar level, and at 010000Z she was downgraded to a tropical storm. By 020000Z January 1960, HARRIET was dissipating rapidly over the South China Sea and JTWC issued the final warning.

Typhoon HARRIET was one of those rare December storms extending into the New Year. Her early path followed December climatology quite closely, but the southwesterly movement was unusual. No similar climatological path has been recorded in the past 10 years. HARRIET was also characterized by her comparatively small eye, averaging only 25 miles. Thirty-seven warnings were issued covering a period of 10 days.

For damage caused by Typhoon HARRIET see Section VI, "Destructive Effects of Typhoons."

RECONNAISSANCE AIRCRAFT FIXES - TYPHOON HARRIET

FIX NO.	TIME	LAT.	LONG.	*UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX FLT LVL WND	700MB TEMP (°C)	700MB DEWPT (°C)	EYE CHARACTERISTICS
1	230520Z	03.2N	153.5E	54-P-15	994	40	9860	—	25	25	CIRC DIA 30 MI
2	240215Z	02.8N	153.8E	54-P-5	993	65	9910	30	14	11	CIRC DIA 25 MI
3	240630Z	03.6N	153.3E	54-P-5	993	70	9920	40	15	12	CIRC DIA 25 MI
4	242030Z	04.5N	152.2E	54-P-5	984	60	9820	50	16	13	CIRC DIA 35 MI
5	250200Z	04.9N	151.4E	54-P-5	982	85	9720	50	14	12	CIRC DIA 10 MI
6	250345Z	05.1N	151.2E	54-P-5	979	55	9670	50	15	14	CIRC DIA 15 MI
7	252045Z	06.7N	148.4E	54-P-5	975	85	9480	50	18	14	CIRC DIA 25 MI
8	260315Z	07.8N	148.0E	54-P-5	975	85	9540	50	18	14	CIRC DIA 20 MI
9	260700Z	08.4N	147.2E	54-P-5	981	100	9640	60	18	15	CIRC DIA 20 MI
10	261400Z	09.8N	145.7E	54-R-5	- -	- -	- -	- -	- -	- -	CIRC DIA 50 MI
11	262045Z	10.3N	143.6E	54-P-10	978	65	9460	60	18	10	CIRC DIA 20 MI
12	270215Z	10.7N	142.3E	54-P-5	983	50	9630	- -	17	12	NOT WELL DEFINED
13	270800Z	11.4N	140.7E	54-P-2	976	65	9410	90	15	08	CIRC DIA 25 MI
14	281400Z	12.1N	139.0E	54-R-10	- -	- -	- -	- -	- -	- -	ELLIP NNE/SSW 25MI
15	280030Z	13.0N	136.4E	54-P-5	950	120	8750	80	18	16	ELLIP 15X20 MI
16	280200Z	13.1N	135.9E	54-P-5	936	120	8590	120	18	16	ELLIP 15X20 MI
17	280800Z	13.4N	134.4E	54-P-5	926	150	8140	90	21	18	CIRC DIA 12 MI
18	281615Z	13.8N	132.9E	54-R--	- -	- -	- -	- -	- -	- -	ELLIP N/S 20X15 MI
19	282200Z	14.6N	131.3E	54-P-15	930	- -	8800	95	19	19	ELLIP N/S 25X15 MI

RECONNAISSANCE AIRCRAFT FIXES - TYPHOON HARRIET (CONT'D)

FIX NO.	TIME	LAT.	LONG.	*UNIT METHOD & ACCY	MIN SLP MBS	MAX SFC WND	MIN 700MB HGT	MAX FLT LVL WND	700MB TEMP (°C)	700MB DEWPT (°C)	EYE CHARACTERISTICS
20	290200Z	14.5N	130.3E	54-P-2	956	100	8940	80	19	16	ELLIP N/S 20X15 MIL
21	290915Z	14.4N	129.4E	54-P-1	940	150	8500	112	17	12	CIRC DIA 20 MIL
22	291400Z	13.8N	128.4E	54-R-25	- -	- -	- -	- -	- -	- -	CIRC DIA 25 MIL
23	292000Z	14.5N	128.0E	54-T-30	- -	- -	- -	- -	- -	- -	———
24	292200Z	14.3N	127.8E	54-P-10	946	150	8530	110	17	14	CIRC DIA 25 MIL
25	300200Z	14.2N	127.5E	54-P-10	965	150	8680	110	16	16	CIRC DIA 25 MIL
26	301100Z	14.0N	126.3E	54-R-10	- -	- -	- -	- -	- -	- -	CONTIN RAIN TURBLC LGT
27	301615Z	13.6N	125.1E	54-R-1	- -	- -	- -	- -	- -	- -	CIRC DIA 35 MIL
28	302000Z	13.7N	124.7E	54-R-15	- -	- -	- -	- -	- -	- -	CIRC DIA 45 MIL
29	310000Z	13.8N	124.1E	54-P-1	955	- -	- -	90	- -	- -	EYE DIFFUSE
30	311529Z	13.5N	121.8E	VW-R-3	- -	- -	- -	- -	- -	- -	CIRC DIA 15 MIL
31	312315Z	13.0N	121.1E	54-P—	- -	80	- -	45	- -	- -	———
32	010800Z	12.0N	119.8E	54-P-3	- -	60	- -	50	12	10	EYE DIFFUSE
33	012000Z	11.0N	118.2E	54-R-10	- -	- -	- -	- -	- -	- -	CIRC DIA 30 MIL
34	020020Z	10.3N	117.2E	54-P-10	- -	40	10200	- -	14	10	CIRC DIA 30 MIL

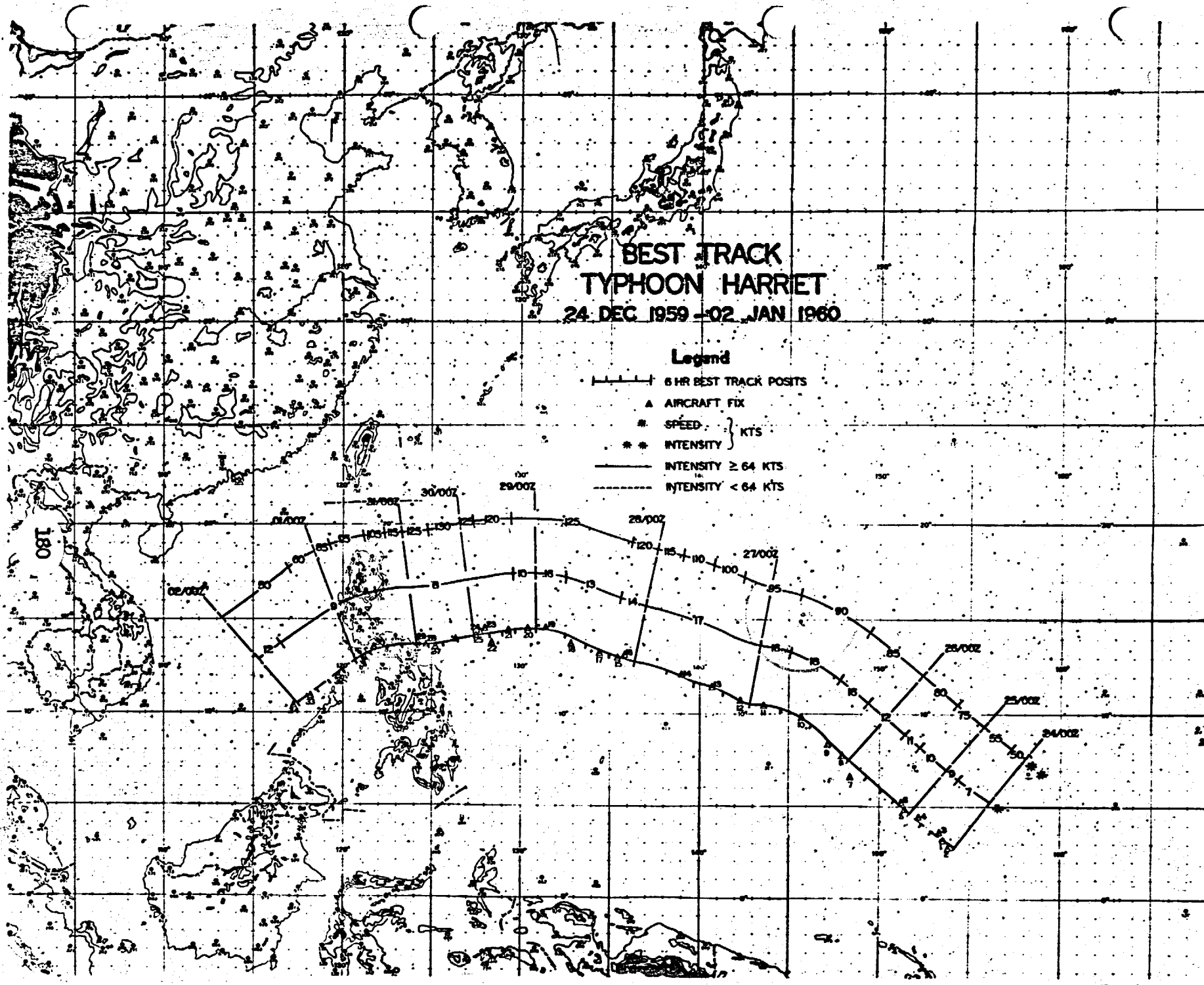
TYPHOON HARRIET 24 DEC - 02 JAN 1959 - 60
POSITION AND FORCAST VERIFICATION DATA

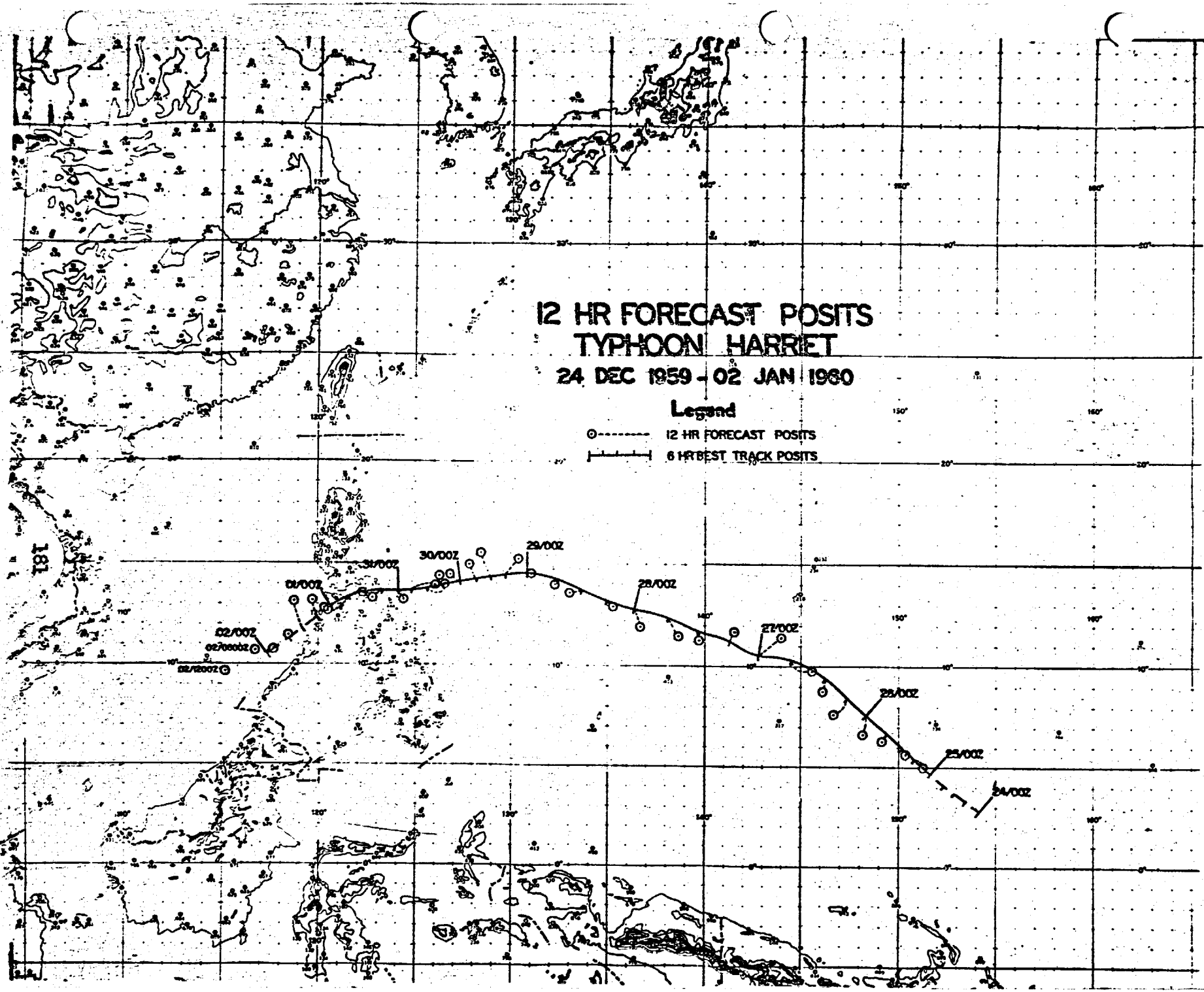
DTG	STORM POSITION LAT.	LONG.	12 HR ERROR DEG.	DISTANCE	24 HR ERROR DEG.	DISTANCE
240000Z	02.9N	154.1E	- - - -		- - - -	
240600Z	03.3N	153.5E	- - - -		- - - -	
241200Z	03.6N	152.9E	122	85	- - - -	
241800Z	04.1N	152.4E	127	85	- - - -	
250000Z	04.7N	151.7E	129	96	127	180
250600Z	05.4N	150.9E	134	33	128	201
251200Z	06.0N	150.2E	153	29	130	218
251800Z	06.7N	149.3E	199	28	138	91
260000Z	07.5N	148.3E	189	57	155	76
260600Z	08.3N	147.4E	218	55	186	67
261200Z	09.3N	146.2E	185	27	171	111
261800Z	10.2N	144.6E	110	61	175	85
270000Z	10.5N	142.9E	049	80	096	86
270600Z	11.2N	141.3E	193	45	078	146
271200Z	11.8N	139.8E	178	40	050	193
271800Z	12.4N	138.1E	150	66	036	102
280000Z	12.9N	136.4E	157	62	145	88
280600Z	13.3N	135.0E	156	21	146	107
281200Z	13.8N	133.8E	090	44	178	105
281800Z	14.2N	132.5E	240	20	176	44
290000Z	14.5N	130.9E	090	08	308	25
290600Z	14.5N	129.8E	040	54	007	43
291200Z	14.4N	129.0E	331	71	345	76
291800Z	14.3N	128.2E	343	45	049	125
300000Z	14.2N	127.4E	306	32	354	162
300600Z	14.0N	126.5E	326	35	001	127
301200Z	13.9N	125.7E	084	48	310	55
301800Z	13.9N	124.9E	082	70	319	52
310000Z	13.8N	124.1E	153	34	084	64
310600Z	13.7N	123.3E	222	34	090	104
311200Z	13.6N	122.5E	270	08	170	45
311800Z	13.3N	121.6E	232	75	243	94

TYPHOON HARRIET 24 DEC - 02 JAN 1959 - 60
POSITION AND FORECAST VERIFICATION DATA (CONT'D)

DTG	STORM POSITION LAT.	LONG.	12 HR ERROR DEG.	DISTANCE	24 HR ERROR DEG.	DISTANCE
010000Z	12.9N	120.7E	242	16	335	35
010600Z	12.4N	120.0E	352	49	261	114
011200Z	11.8N	119.2E	347	81	314	51
011800Z	11.2N	118.5E	360	10	351	119
020000Z	10.5N	117.4E	067	22	349	139

AVERAGE 12 HOUR ERROR 46.5 NM
AVERAGE 24 HOUR ERROR 100.9 NM


BEST TRACK
TYPHOON HARRIET
24 DEC 1959 – 02 JAN 1960
Legend
6 HR BEST TRACK POSITS
AIRCRAFT FIX
SPEED
INTENSITY
KTS
INTENSITY ≥ 64 KTS
INTENSITY < 64 KTS
180
24/00Z
25/00Z
26/00Z
27/00Z
28/00Z
29/00Z
30/00Z
31/00Z
01/00Z
02/00Z


12 HR FORECAST POSITS
TYPHOON HARRIET
24 DEC 1959 - 02 JAN 1960
Legend
12 HR FORECAST POSITS
6 HR BEST TRACK POSITS
24/00Z
25/00Z
26/00Z
27/00Z
28/00Z
29/00Z
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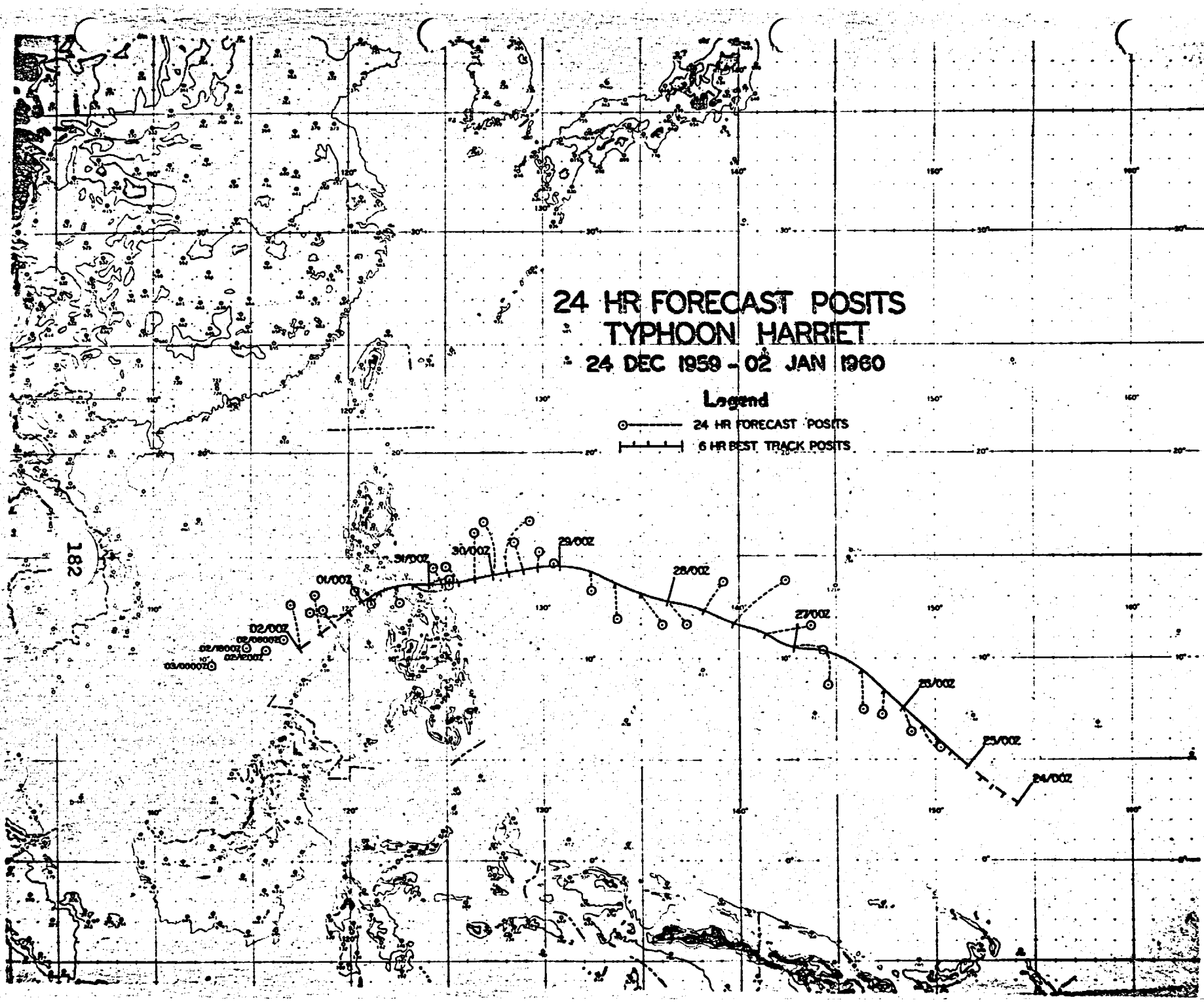
31/00Z
01/00Z
02/00Z


24 HR FORECAST POSITS
TYPHOON HARRIET
24 DEC 1959 - 02 JAN 1960
Legend
24 HR FORECAST POSITS
6 HR BEST TRACK POSITS
24/00Z
25/00Z
26/00Z
27/00Z
28/00Z
29/00Z
30/00Z
31/00Z
01/00Z
02/00Z
02/06Z
02/18Z
02/12Z
03/00Z
182