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(OCEANOGRAPHIC and LIMNOLOGICAL)**

No. 8

**Bathythermograms and Meteorological
Data Record**

**Swiftsure Bank and Umatilla Reef Lightships
June 1954 to December 1956**

**Pacific Oceanographic Group
Nanaimo, B.C.**

January 1, 1958

**Programmed
by
THE CANADIAN JOINT COMMITTEE ON OCEANOGRAPHY**

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AUTHORSHIP

Pacific Oceanographic Group
Nanaimo, B.C.

Establishment

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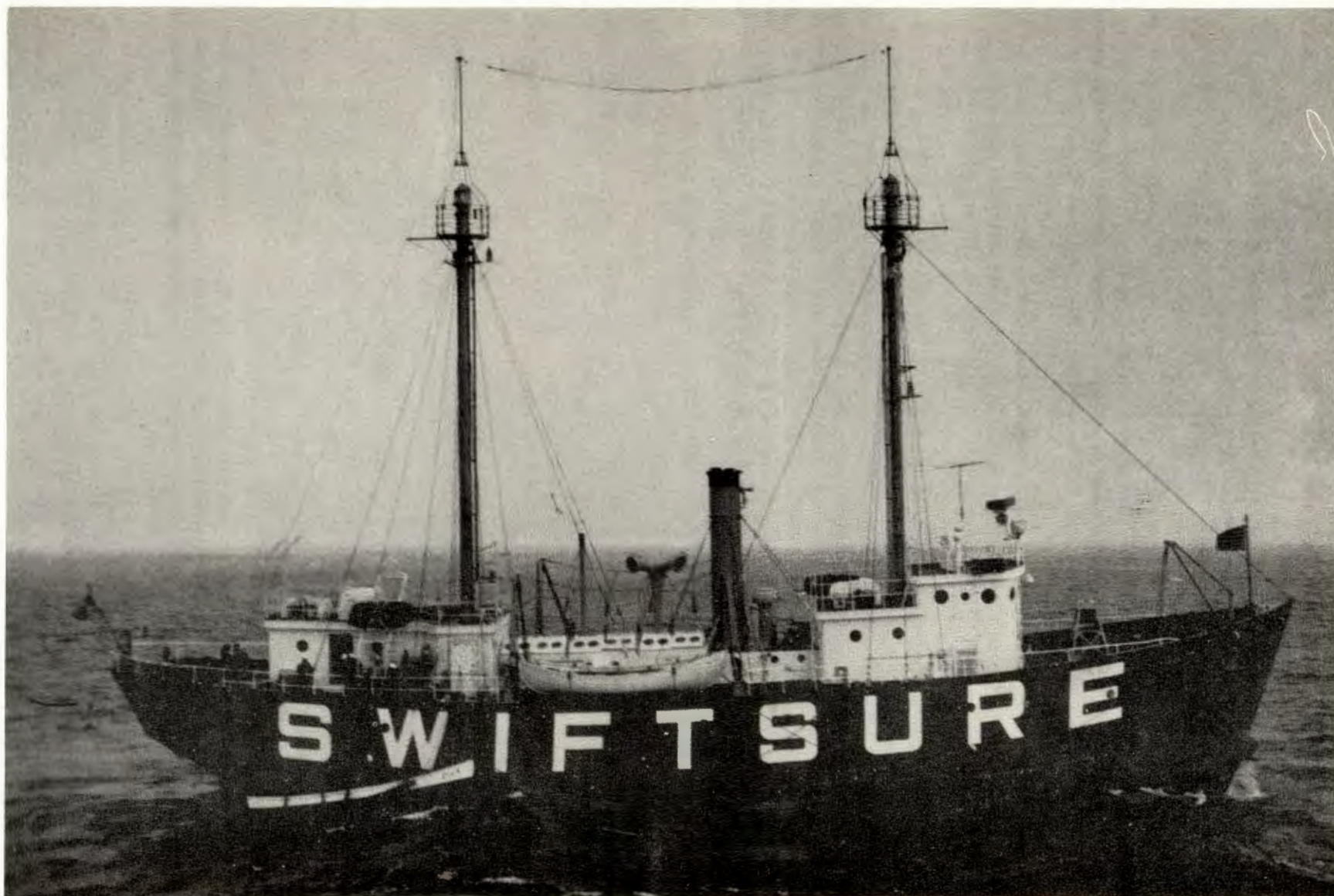


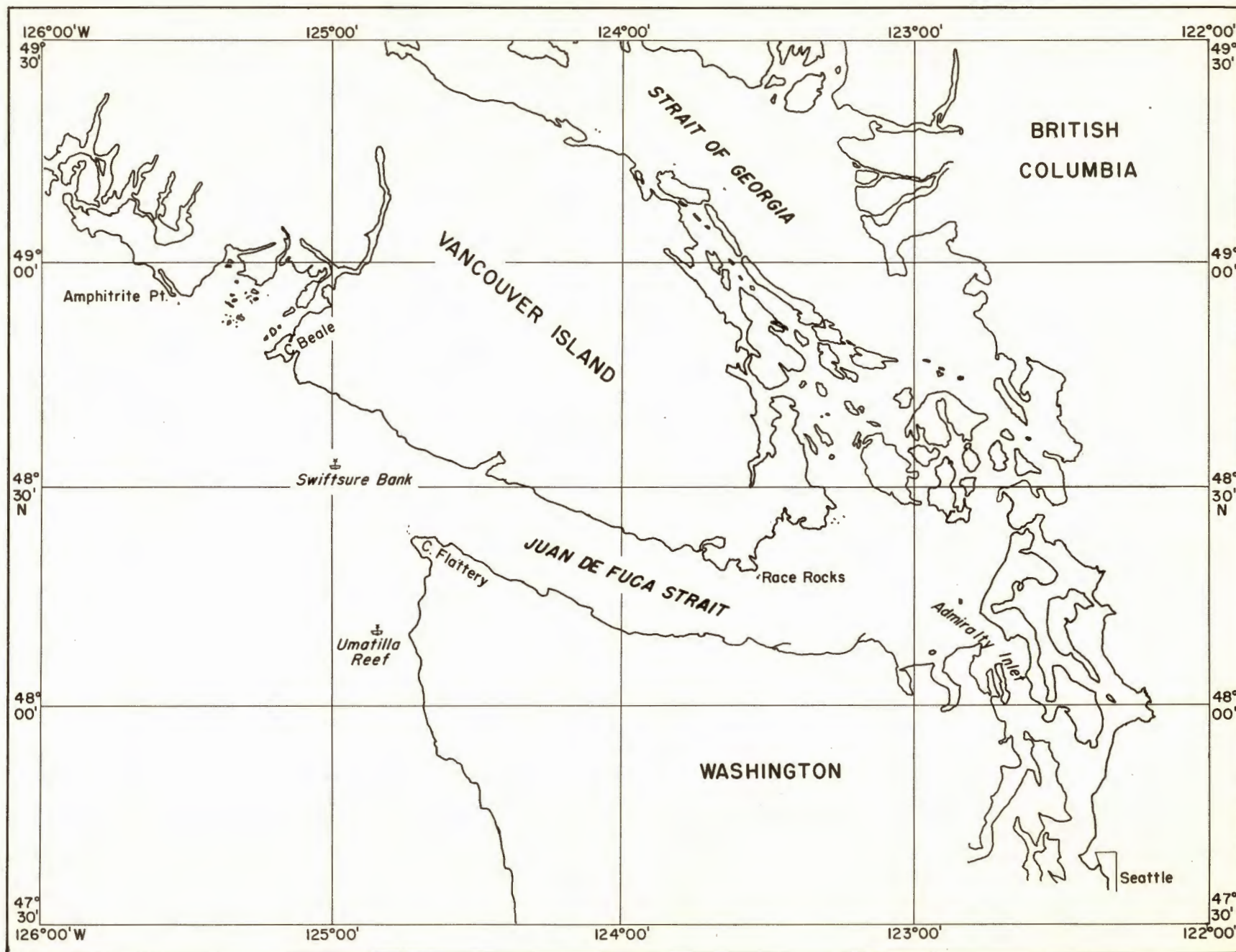
Figure 1

A photograph of the lightvessel "Swiftsure" (WAL 535). The Umatilla Reef Lightship is of similar design.

U.S.C.G. Photo.

Chart showing the locations of Swiftsure Bank and Umatilla Reef
lightships.

Figure 2



Introduction

Lightships are maintained by the United States Coast Guard at stations on Swiftsure Bank and Umatilla Reef (Figures 1 and 2). The position coordinates are:

Swiftsure Bank - 48° 32.0' N 124° 59.7' W

48° 32.6' N 124° 59.6' W
(prior to August 1, 1956)

Umatilla Reef - 48° 10.0' N 124° 50.4' W

The depth of water at the Swiftsure Bank position is approximately 180 feet, while that at the Umatilla Reef position is 150 feet.

In February 1954 the Pacific Oceanographic Group received permission from the Commander of the 13th Coast Guard District in Seattle, Washington, to inaugurate a program of bathythermograph observations and surface seawater sampling at both these positions. The first observation at Swiftsure Bank was made on June 17, 1954, and at Umatilla Reef on June 18, 1955. The observations are made by the U.S.C.G. personnel who operate the lightships. Liaison between the Pacific Oceanographic Group and the ships' Commanding Officers is provided by the Chief of the Aids to Navigation Section of the 13th District.

This report presents all the data observed to the end of 1956. It is planned to publish subsequent observations in annual volumes.

Observational Equipment and Procedures

Year-round occupancy of each lightship station is maintained by two ships. Lightship "Swiftsure" (WAL 535) occupies the Swiftsure Bank Station for nine months, from June 20 through to March 20, when it is relieved for three months by the lightship "Relief" (WAL 508). Lightship "Umatilla Reef" (WAL 513) occupies the Umatilla Reef position from September 20 through to June 20, being relieved for three months by the WAL 508 on termination of its stay at Swiftsure.

Swiftsure Bank

In order to maintain the continuity of the bathythermograph observations at Swiftsure Bank it was necessary to equip both WAL 535 and WAL 508. Two U.S.N. surplus bathythermograph winches of the "Lietz" type were installed by the Pacific Oceanographic Group, one on each ship. The winch is located on the main deck aft, directly over the stern. A metal sounding boom, 15 feet in length, similar in construction to that illustrated in H.O. Pub. No. 606-C, "Bathythermograph Observations", is used to raise and lower the BT over the ship's side. The ship is provided with two 200-foot (135-meter) bathythermographs and the various accessories and log sheets required. Maintenance and replacement of all the bathythermograph equipment is done by the Pacific Oceanographic Group.

Bathythermograph lowerings to 175 feet depth are made twice daily at the Swiftsure Bank position, at 0900 and 1800 hours Pacific Standard Time. A surface water temperature reading is also taken at these times. On the 0900 hours observation a sample of sea water for salinity analysis is collected and stored in a 3 oz. glass sample bottle which is sealed by a waxed cork. In conjunction with the BT observations, a general description of weather, sea, and surface current conditions is also recorded.

Umatilla Reef

Bathythermograph observations are obtained twice daily (0900 and 1800 hours) at this position only during the period of occupancy by the lightship "Relief" (WAL 508) - June 20 to September 20.

Twice-daily observations of surface water temperatures, general weather, sea, and current conditions are continued throughout the whole year by the WAL 508 and the lightship "Umatilla Reef" (WAL 513). A surface water sample is collected at the 0900 hours observation.

Description of the Data

The bathythermograph slides, record logs, and seawater samples are all sent to the Pacific Oceanographic Group, Nanaimo, B.C., for processing and analysis. Tables I and II list the extent and type of data presented in this first volume of data.

Bathythermograms

The BT traces are reproduced by drawing them on a standard grid which was pre-printed on multilith masters. The time-date group (P.S.T./day-month-year) is presented below each bathythermogram. The traces were positioned on the grids using an aligning temperature value calculated according to the methods described by LaFond in H.O. Pub. No. 614.

The BT traces obtained with 200-foot bathythermographs are generally characterized by a considerable hysteresis (double trace), especially in the thermocline portion of the trace. Sometimes the spread between the two traces amounted to 2 F°, more often 1 F°. The bathythermograms presented in this data record are the mean of the two traces. Considering this and the qualifying factors of the LaFond alignment method, and the degree of hand-drawing accuracy, it is estimated that temperature values read from these bathythermograms would have an accuracy of $\pm 1.0^\circ \text{F}$ and ± 7 feet.

Meteorological Records

The twice-daily meteorological observations were made at the same time as the BT soundings. If a BT observation was missed, the meteorological data is still presented in this record. The codes used for presentation of the data in this record are tabulated in Table III and are generally those

described in H.O. Pub. No. 606-C. A change was made in the weather and sea codes during May 1956. The dates of these changes are indicated in the body of the record.

The records of current directions were obtained by a visual estimation. Personnel of the lightships have reported that they can differentiate between the directions of movement of sea and swell, and the actual movement of the anchored ship due to water currents.

Earlier records of weather data and barographs from both stations, extending back to 1944 in broken intervals, are available from the National Weather Records Center of the U.S. Weather Bureau.

Daily records of surface water temperatures and salinities are presented in Volumes XIV (1954), XV (1955), and XVI (1956) of the Fisheries Research Board of Canada manuscript report series "Observations of Seawater Temperature and Salinity on the Pacific Coast of Canada".

Table I

Tabulation of Data Records for Swiftsure Bank Position

<u>Ship</u>	<u>Period of</u> <u>From</u>	<u>Occupancy</u> <u>To</u>	<u>Description of Data</u>
WAL 535	June 17/54	Mar. 18/55	BT traces showed excessive hysteresis to Aug. 27/54. No BT observations during period Aug. 28 - Nov. 10/54. Data record bathythermograms and meteorological records commenced Nov. 11/54. Surface temperature and salinity data available for whole period.
WAL 508	Mar. 19/55	June 16/55	Bathythermograms and meteorological records presented for whole period. Surface salinity records till June 11/55.
WAL 535	June 17/55	Mar. 20/56	No bathythermograms for period Feb. 12 - Mar. 20/56. No meteorological records Feb. 12 - 29/56. Surface salinity record for whole period.
WAL 508	Mar. 21/56	June 19/56	Complete records for whole period.
WAL 535	June 20/56	Dec. 31/56	Complete records for whole period.

Table II

Tabulation of Data Records for Umatilla Reef Position

<u>Ship</u>	<u>Period of Occupancy</u>		<u>Description of Data</u>
	<u>From</u>	<u>To</u>	
WAL 508	June 17/55	Sept. 16/55	Bathythermograms and meteorological records presented for whole period. Surface salinity records June 24 - Sept. 16/55.
WAL 513	Sept. 17/55	June 20/56	No observations until Mar. 14/56. Meteorological and surface salinity records Mar. 14 - June 20/56.
WAL 508	June 21/56	Sept. 18/56	Bathythermograms, meteorological records and surface salinity records for whole period.
WAL 513	Sept. 21/56	Dec. 31/56	Meteorological and surface salinity records missing Oct. 1 - 24/56.

Tables III

Meteorological Codes used in Data Record

STATE OF WEATHER
(Code No. 1)

STATE OF WEATHER
(Code No. 2)

Code	Description	Code	Description
<u>00</u>	Cloudless	<u>00</u>	Cloud development not observable
<u>01</u>	Partly cloudy	<u>01</u>	Clouds generally dissolving
<u>02</u>	Cloudy	<u>02</u>	State of sky unchanged
<u>03</u>	Overcast	<u>03</u>	Clouds developing
<u>04</u>	Haze	<u>04</u>	Smoke haze
<u>07</u>	Distant lightning	<u>05</u>	Dry haze
<u>13</u>	Threatening sky	<u>10</u>	Light fog, vis. 1100 yds or more
<u>14</u>	Squally weather	<u>11</u>	Shallow fog in patches
<u>16</u>	Waterspout seen	<u>16</u>	Precipitation near ship
<u>19</u>	Signs of tropical storm	<u>18</u>	Squall(s)
<u>40</u>	Fog	<u>41</u>	Fog in patches
<u>49</u>	Fog in patches	<u>43</u>	Fog, thinning in last hour
<u>50</u>	Drizzle	<u>45</u>	Fog, unchanging in last hour
<u>60</u>	Rain	<u>47</u>	Fog, thicker in last hour, no sky
<u>69</u>	Rain and snow, mixed	<u>50</u>	Drizzle
<u>70</u>	Snow	<u>57</u>	Drizzle, freezing
<u>81</u>	Showers of rain	<u>60</u>	Rain, slight, intermittent
<u>83</u>	Showers of snow	<u>62</u>	Rain, moderate, intermittent
<u>88</u>	Showers of hail, or rain and hail	<u>63</u>	Rain, moderate, continuous
<u>90</u>	Thunderstorm	<u>67</u>	Rain, freezing, moderate
<u>97</u>	Thunderstorm, heavy	<u>69</u>	Rain and snow mixed, moderate
		<u>72</u>	Snow, moderate, intermittent
		<u>73</u>	Snow, moderate, continuous
		<u>81</u>	Rain shower(s), moderate
		<u>84</u>	Shower of rain and snow
		<u>86</u>	Snow shower(s), moderate
		<u>88</u>	Hail showers, moderate
		<u>95</u>	Thunderstorm, slight
		<u>97</u>	Thunderstorm, heavy

WIND FORCE

Beau- fort	Knots	mph	Description
<u>0</u>	1	1	Calm
<u>1</u>	1-3	1-3	Light air
<u>2</u>	4-6	4-7	Light breeze
<u>3</u>	7-10	8-12	Gentle breeze
<u>4</u>	11-16	13-18	Moderate breeze
<u>5</u>	17-21	19-24	Fresh breeze
<u>6</u>	22-27	25-31	Strong breeze
<u>7</u>	28-33	32-38	Moderate gale
<u>8</u>	34-40	39-46	Fresh gale
<u>9</u>	41-47	47-54	Strong gale
<u>10</u>	48-55	55-63	Whole gale
<u>11</u>	56-65	54-75	Storm
<u>12</u>	65	75	Hurricane

Table III (cont'd)

HEIGHT OF SEA (Code No. 1)		HEIGHT OF SEA (Code No. 2)	
<u>Code</u>	<u>Appr. Height of Sea</u>	<u>Code</u>	<u>Mean Max. Height</u>
<u>0</u>	0	<u>0</u>	1 foot
<u>1</u>	Less than 1 foot	<u>1</u>	1.5 feet
<u>2</u>	1 to 3 feet	<u>2</u>	3 feet
<u>3</u>	3 to 5 feet	<u>3</u>	5 feet
<u>4</u>	5 to 8 feet	<u>4</u>	6.5 feet
<u>5</u>	8 to 12 feet	<u>5</u>	8 feet
<u>6</u>	12 to 20 feet	<u>6</u>	9.5 feet
<u>7</u>	20 to 40 feet	<u>7</u>	11 feet
<u>8</u>	40 feet and over	<u>8</u>	13 feet
<u>9</u>	Confused	<u>9</u>	14 feet
		<u>51</u>	17.5 feet
		<u>52</u>	19 feet
		<u>53</u>	21 feet
		<u>54</u>	22.5 feet
		<u>55</u>	24 feet
		<u>56</u>	25.5 feet
		<u>57</u>	27 feet
		<u>58</u>	29 feet
		<u>59</u>	30.5 feet
		<u>x</u>	Height impossible to determine
			Over 31 feet, give height.

CLOUD TYPES

<u>Name</u>	<u>Code</u>
Stratocumulus	<u>Sc</u>
Stratus	<u>St</u>
Fractostratus	<u>Fs</u>
Nimbostratus	<u>Ns</u>
Cumulus	<u>Cu</u>
Cumulonimbus	<u>Cb</u>
Fractocumulus	<u>Fc</u>
Altostratus	<u>As</u>
Alto cumulus	<u>Ac</u>
Cirrus	<u>Ci</u>
Cirrocumulus	<u>Cc</u>
Cirrostratus	<u>Cs</u>

EXPLANATION OF DATA RECORD HEADINGS

Meteorological Records

<u>Wind Dir. and Force:</u>	True direction and speed reported in Beaufort scale (Table III).
<u>Air Temp.</u> <u>Wet, Dry:</u>	Air temperatures (Fahrenheit). Wet and dry bulb observed with a sling hygrometer.
<u>Weather:</u>	State of present weather reported in Codes 1 and 2, (Table III).
<u>Cloud:</u> <u>Cover, Type:</u>	Sky coverage in tenths, and type of predominant clouds (Table III).
<u>Sea:</u>	Approximate height of sea reported in Codes 1 and 2, (Table III).
<u>Current Dir:</u>	True direction towards which the surface current is flowing.

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
November, 1954						
11	1800	090 3	53 51	03	9 Cu	2
12	0900	135 4	56 55	02	8 Cu	2
12	1800	090 6	55 54	02	8 Cu	3
13	0900	112 7	54 53	60	10 Ns	4
13	1800	135 8	55 55	60	10 Ns	4
14	0900	090 5	55 54	50	10 Ns	3
14	1800	135 6	55 53	50	8 Ns	3
15	0900	068 6	53 51	60	10 Ns	2
15	1800	045 4	52 51	60	9 Ns	2
16	0900	180 5	53 54	02	9 Ns	3
16	1800	180 3	55 55	02	9 Ns	2
17	0900	135 7	53 52	60	10 Ns	5
20	0900	135 5	53 54	03	10 Ns	3
20	1800	112 5	55 54	60	10 Ns	4
21	0900	112 4	53 52	03	9 Ns	2
21	1800	135 5	53 52	60	10 Ns	3
22	0900	315 2	55 57	02	8 Ns	1
22	1800	270 3	53 54	01	5 Cu	2
23	0900	090 6	54 56	02	8 Ns	3
23	1800	045 5	55 56	02	8 Ns	3
24	0900	090 5	53 55	02	9 Ns	2
24	1800	158 5	50 52	03	10 Ns	3
25	0900	225 5	53 54	01	6 Ns	3
25	1800	202 5	56 57	03	10 Ns	3
26	0900	225 7	53 52	03	10 Ns	5
26	1800	225 8	53 54	03	10 Ns	5
27	0900	270 5	50 52	01	5 Ns	3
27	1800	270 4	53 54	01	7 Cu	2
28	0900	045 2	53 54	01	6 Ac	1
28	1800	292 2	50 52	01	7 Cu	1
29	0900	045 2	50 52	01	5 Cu	1
29	1800	045 4	45 46	01	8 Cu	1
30	0900	090 5	44 45	02	8 Ns	2
30	1800	090 2	50 49	01	4 Cu	1
December, 1954						
1	1800	090 5	46 48	00	0	1
2	0900	045 4	42 42	01	2 Cu	1
2	1800	090 6	45 47	01	2 Cu	2
3	1800	090 6	44 44	03	10 Cu	2
4	0900	090 6	44 44	50	10 Cu	2
5	0900	158 6	46 47	13	9 Ns	8

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
December, 1954						
6	0900	135 6	45 46	60	10 Cu	3
6	1800	270 6	47 48	02	7 Ns	3
7	0900	270 3	46 47	01	6 Cu	2
7	1800	090 5	47 48	03	10 Cu	2
8	1800	090 6	47 48	60	10 Cu	4
9	1800	135 3	47 48	01	5 Cu	2
10	0900	135 4	49 50	02	8 Cu	2
10	1800	135 6	47 47	03	9 Ns	3
11	0900	135 8	47 48	14	10 Cu	4
11	1800	135 10	47 48	14	10 Cu	5
12	0900	135 2	48 49	02	10 Ns	3
12	1800	248 2	48 50	01	4 Cu	2
13	0900	090 6	48 49	02	7 Ns	2
13	1800	135 5	49 50	03	10 Ns	3
14	0900	135 8	49 49	60	10 Cu	4
14	1800	248 6	48 49	03	9 Cu	3
15	0900	270 3	47 47	02	6 Ns	2
15	1800	225 1	48 49	02	9 Cu	2
16	0900	090 3	46 47	02	9 Sc	2
16	1800	090 4	50 51	01	1 Sc	2
17	0900	090 7	45 46	00	0	3
17	1800	090 8	48 49	00	0	3
18	0900	090 6	49 50	00	0	2
18	1800	090 7	47 48	00	0	2
19	0900	090 6	47 48	03	10 Sc	2
20	0900	090 5	47 48	03	10 Sc	2
20	1800	090 5	45 45	03	10 Sc	2
21	0900	045 5	52 51	81	8 Ns	9
21	1800	202 2	48 49	01	8 Ns	3
22	0900	112 4	47 46	01	4 Ns	2
22	1800	112 6	48 49	02	8 Sc	3
23	0900	112 8	47 48	14	10 Fc	3
23	1800	135 10	46 45	02	8 Cu	5
24	0900	225 8	46 46	14	10 Sc	5
24	1800	338 3	46 47	02	8 Sc	3
25	0900	090 2	37 37	01	8 Sc	2
25	1800	270 4	43 44	03	10 Ns	2

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
December, 1954						
26	0900	045 3	41 40	01	3 Cu	2
26	1800		43 42	50	10 Ns	1
27	0900	135 6	45 44	03	10 Sc	2
27	1800	135 6	41 40	60	10 Ns	3
28	0900	135 7	42 41	60	10 Ns	3
28	1800	248 6	43 42	02	8 Cu	3
29	0900	135 4	42 41	40	Fog	2
29	1800	112 7	43 42	60	10 Ns	3
30	0900	180 5	44 43	60	10 Ns	2
30	1800	248 6	43 41	81	10 Ns	3
31	0900	202 5	47 46	81	10 Ns	3
31	1800	202 4	49 47	81	10 Ns	4
January, 1955						
1	0900	315 6	46 44	01	3 As	3
1	1800	045 3	45 44	01	3 As	3
2	0900	000 2	41 42	01	3 Sc	1
2	1800	112 5	41 42	01	3 Sc	2
3	0900	090 6	41 42	02	10 Sc	2
3	1800	090 7	43 44	02	10 Sc	2
4	0900	135 6	42 43	02	10 Sc	3
4	1800	158 3	45 45	02	9 Sc	2
5	0900	045 3	48 49	01	7 Sc	2
5	1800	090 2	50 51	01	4 Cb	4
6	0900	158 3	47 48	50	10 Ns	3
6	1800	135 3	45 45	50	10 Ns	2
7	0900	112 3	43 42	50	10 Ns	1
7	1800	090 6	43 42	50	10 Ns	1
8	0900	090 6	44 45	03	10 Ns	1
8	1800	090 3	48 49	02	10 Ns	2
9	0900	068 2	46 46	01	2 Ci	1
9	1800	045 3	47 48	01	5 Sc	1
10	0900	090 4	45 45	02	8 Sc	1
10	1800	112 3	46 46	02	8 Sc	2
11	0900	270 3	47 47	02	9 Sc	2
11	1800	090 1	50 50	02	10 Sc	1
12	0900	090 7	49 49	50	10 Sc	3
12	1800	135 8	47 45	14	10 Ns	4
13	0900	225 9	43 44	14	6 Sc	5
13	1800	225 5	44 45	01	4 Sc	3
14	0900	090 4	42 43	03	6 Ns	2
14	1800	068 4	43 44	02	10 Ns	2
15	0900	090 6	42 43	60	10 Ns	3
15	1800	090 6	44 43	60	10 Ns	3

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
January, 1955						
16	0900	090 6	43 44	60	10 Ns	2
16	1800	225 8	45 44	14	41 Ns	3
17	0900	225 6	43 45	03	8 Ns	2
17	1800	045 6	44 43	03	10 Ns	3
18	0900	045 5	44 45	01	2 Cu	3
18	1800	045 3	44 45	01	3 Sc	2
19	0900	090 2	44 45	03	8 Ns	1
19	1800	315 3	44 45	02	10 Cu	2
20	0900	315 1	45 46	01	3 Sc	1
20	1800	068 1	43 44	02	9 Sc	2
21	0900	068 5	42 43	03	9 Ns	3
21	1800	068 6	43 44	14	10 Sc	3
22	0900	068 5	43 43	60	10 As	3
22	1800	112 6	49 46	02	10 Ns	3
23	0900	090 1	48 49	03	8 Ns	2
23	1800	068 5	48 49	02	9 Sc	2
24	0900	090 6	43 44	60	10 Ns	2
24	1800	225 6	44 45	50	10 Ns	3
25	0900	225 5	44 46	03	10 Ns	3
25	1800	248 1	49 50	03	10 Ns	2
26	0900	045 4	50 51	02	7 Sc	1
26	1800	225 4	50 52	02	5 Sc	1
27	0900	090 6	48 49	01	4 Sc	3
27	1800	045 7	46 45	01	5 Ac	3
28	0900	090 5	45 46	03	9 Sc	1
28	1800	045 5	47 48	03	8 Cu	2
29	0900	090 5	46 47	03	8 Ns	3
29	1800	068 5	45 46	03	10 Ns	3
30	0900	090 5	46 47	02	8 Sc	2
30	1800	135 5	45 46	03	8 Ns	3
31	0900	090 5	46 46	60	8 Ns	2
31	1800	270 8	48 46	03	10 Ns	3
February, 1955						
1	0900	090 5	46 47	01	6 Cu	3
1	1800	225 1	47 48	01	1 Sc	2
2	0900	090 1	47 48	01	8 Sc	2
2	1800	135 3	46 47	50	8 Ns	3
3	0900	135 5	46 46	50	8 Ns	3
3	1800	225 5	46 46	50	10 Ns	3
4	0900	225 5	47 47	50	10 Ns	3
4	1800	225 8	46 46	50	10 Ns	4
5	0900	180 1	43 44	01	4 Cu	3
5	1800	270 1	47 48	02	10 Cu	3

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
February, 1955						
6	0900	135 8	44 44	60	10 Cu	4
6	1800	180 4	44 45	03	9 Ns	3
7	0900	135 3	47 47	03	8 Ns	3
7	1800	135 2	46 46	02	10 Ns	1
8	0900	225 7	44 44	03	8 Ns	3
8	1800	225 5	43 43	01	5 Ac	3
9	0900	180 1	44 45	01	0	2
9	1800	045 2	43 44	00	0	1
10	0900	090 6	43 43	00	0	1
10	1800	090 7	43 44	01	1 Cu	3
11	0900	090 7	43 43	03	8 Cu	3
11	1800	090 8	43 42	03	8 Cu	2
12	0900	068 7	42 43	02	8 Cu	3
12	1800	225 4	46 46	03	8 Fs	2
13	0900	022 3	47 48	02	8 Cu	1
13	1800	045 4	47 45	02	8 Cu	1
14	0900	225 3	47 47	60	8 Cu	1
14	1800	225 2	47 47	01	3 Ns	3
15	0900	090 3	47 47	01	5 Ns	1
15	1800	225 1	47 46	01	3 Cu	1
16	0900	270 6	47 48	14	8 As	3
16	1800	225 6	46 46	01	3	3
17	0900	315 2	46 47	00	0	2
17	1800	045 4	46 48	00	0	2
18	0900	045 3	38 37	00	0	0
18	1800	180 2	46 47	01	2	0
19	0900	045 2	39 39	00	0	0
19	1800	090 2	41 42	00	0	0
20	0900	045 3	40 39	00	0	0
20	1800	045 2	40 41	00	0	0
21	0900	045 3	41 42	00	0	0
21	1800	315 4	39 40	03	7 Ns	2
22	0900	090 3	39 39	00	0	3
22	1800	270 3	40 43	00	0	2
23	0900	090 4	41 40	03	8 Ns	2
23	1800	225 6	39 39	14	10 Ns	
24	0900	315 6	40 39	01	3 Cu	
24	1800	292 3	43 44	01	3 Cu	
25	0900	292 4	42 41	02	8 Cu	
25	1800	225 3	39 40	01	3 Cu	2

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
February, 1955						
26	0900	270 7	33 33	03	5 Cu	2
26	1800	045 6	36 37	01	4 Sc	2
27	0900	068 4	34 35	01	1 Ac	2
27	1800	225 5	38 36	69	8 Cu	4
28	0900	225 5	37 36	03	8 Cu	4
28	1800	248 7	37 37	69	10 Ns	5
March, 1955						
1	0900	248 3	37 38	02	6 Sc	3
1	1800	225 5	37 36	02	6 Sc	2
2	0900	270 5	39 39	03	8 Cu	2
2	1800	248 5	35 36	02	8 Ns	2
3	0900	292 8	30 31	01	6 Cu	4
3	1800	270 4	35 36	01	4 Cu	2
4	0900	315 5	28 27	00	0	1
4	1800	090 3	31 32	01	1 Sc	1
5	0900	068 4	32 33	03	9 Cu	1
5	1800	calm 0	37 36	03	8 Cu	0
6	0900	090 3	39 37	03	8 Cu	0
6	1800	090 5	41 40	03	10 Ns	1
7	0900	090 3	41 40	03	10 Ns	1
7	1800	045 4	43 41	03	10 Ns	1
8	0900	022 4	41 40	03	10 Cu	1
8	1800	270 3	42 43	03	10 Ns	1
9	0900	270 6	43 44	02	7 Sc	3
9	1800	270 6	44 44	03	10 Cu	3
10	0900	270 7	42 42	03	10 Cu	3
10	1800	248 6	44 43	02	8 Cu	4
11	0900	248 3	41 40	02	8 Ns	4
11	1800	225 6	43 42	81	10 Cu	4
12	0900	202 8	39 38	03	10 Ns	4
12	1800	202 5	37 38	02	7 Ns	4
13	0900	315 2	39 40	02	8 Ns	3
13	1800	315 3	42 42	01	5 Cu	2
14	0900	338 3	38 38	00	0	1
14	1800	248 4	43 45	01	2 Cu	1
15	0900	090 4	40 41	02	7 Sc	1
15	1800	calm 0	45 44	01	3	1

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
March, 1955						
16	0900	calm 0	42 41	03	10	1
16	1800	calm 0	42 43	02	7	1
17	0900	045 2	42 43	02	8 Sc	1
17	1800	022 4	44 43	03	10 Sc	1
18	0900	022 5	42 41	00	0	1
18	1800	315 7	42 43	01	2	1
19	1800	336 3	41 46	00	0	4
20	0900	045 4	40 43	01	7 Ac	4
20	1800	245 3	40 43	02	10 Ac	4
21	0900	183 6	40 44	60	10 Ns	5
21	1800	261 7	45 46	14	10 Ns	6
22	0900	223 6	45 52	01	2 Ac	4
22	1800	289 5	40 43.5	01	7 Ac	5
23	0900	296 5	48 51	01	4 Ac	4
23	1800	289 4	35 41	01	6 Ac	5
24	0900	116 6	35 40	02	10 Sc	4
24	1800	090 7	35 40	03	10 St	4
25	0900	090 7	36.5 38	03	10 St	5
25	1800	113 6	43 44	02	9 St	4
26	0900	113 6	45 47	03	10 As	3
26	1800	068 4	45 46	03	10 As	3
27	0900	090 4	47 48	03	10 Ns	4
27	1800	113 3	42 42	01	8 Sc	3
28	0900	113 5	45 46	03	10 As	3
28	1800	113 6	47 47.5	60	10 Ac	4
29	0900	183 5	45 47	01	3 Cu	4
29	1800	145 4	39 41	01	6 Cu	5
30	0900	145 4	47 47	03	10 Cu	4
30	1800	158 6	45 45	03	10 Cu	5
31	0900	183 3	46 46.5	60	10 Cu	5
31	1800	183 2	44 44	60	10 Ns	5
April, 1955						
1	0900	223 1	41 41	01	7 Ns	5
1	1800	245 3	44 44.5	01	7 Cu	4
2	0900	183 3	43.5 43.5	02	8 Cu	5
2	1800	261 4	46 46	01	5 Nb	4
3	0900	090 1	43 45	01	6 Cu	3
3	1800	090 1	47 47	00	0	3
4	0900	calm 0	41.5 43	00	0	3
4	1800	289 4	40 42	01	3 Ac	3
5	0900	245 2	43.5 44	01	1 Ci	3
5	1800	calm 0	51 52	01	1 Cu	3

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
April, 1955						
6	0900	090 5	47 51	01	3 Ci	3
6	1800	223 2	46 50	01	3 Ci	3
7	0900	183 5	46 54	14	10 Ns	4
7	1800	158 6	47 48	03	10 Ns	5
8	0900	158 6	44 46	03	8 Ci	4
8	1800	158 4	42 42	60	10 Ns	5
9	0900	183 3	41.5 42.5	01	5 Cu	3
9	1800	223 3	44 47	01	6 Cu/Ns	4
10	1800	245 2	42 43	02	10 Cu/Ns	5
11	0900	245 6	43 48	01	7 Cu/Ns	5
11	1800	158 4	42 45	01	6 Cu/Ns	5
12	0900	245 8	36 44	14	10 Ns	6
12	1800	261 6	44 46.5	14	10 Ns	6-7
13	0900	223 1	39 41	01	7 Cu/Ns	5
13	1800	336 1	38 40	01	8 Cu/Ns	4
14	0900	calm 0	40 42	01	8 Cu	4
14	1800	289 4	43 45.5	02	7 Cu	4
15	0900	183 7	41.5 42	14	10 Ns	5
15	1800	158 2	43 44	03	10 Cu/Ns	4
16	0900	145 4	42 44	02	10 Cu/Ns	5
16	1800	113 4	42 45	02	10 Cu/Ns	4
17	0900		43 44.5	01	6 Cu	3
17	1800	289 3	44 47	01	3 Cu	3
18	0900		42 44	01	4 Cu	3
18	1800		43 45.5	02	9 Cu	3
19	0900	045 5	44 46.5	01	5 Cu	4
19	1800	158 5	44 46	03	10 Ns	4
20	0900		43 45.5	01	4 Cu	3
20	1800	090 3	43 46	01	1 Cu	3
21	0900	261 1	44.5 48	02	6 Cu	3
21	1800	261 1	44 47	02	9 Ns	4
22	0900	204 3	45 49	02	9 Cu	3
22	1800	183 5	39 45	03	10 Ns	5
23	0900	245 7	44 47	01	6 Cc	6
23	1800	223 5	41 44	02	7 Cu	6
24	0900		44 45	01	5 Cu	4
24	1800	313 3	39 43	01	4 Cu	4
25	0900		41 43	01	3 Ac	3
25	1800	336 5	43.5 48	01	2 Cu	4

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
April, 1955						
26	0900	289 6	43 46	01	4 Ci/Cu	5
26	1800	289 6	42 41	01	3 Cu	5
27	0900	290 6	43 46	01	4 Cu	5
27	1800	290 4	40 42	02	8 Cu	3
28	0900	290 5	44 48	01	7 Cc	3
28	1800	116 2	46 47	01	6 Cu	3
29	0900	085 1	45 43	01	1 Cu	2
29	1800	116 1	53 56	01	1 St	2
30	0900	calm 0	49 52	03	10 Ns	2
30	1800	313 5	46 49	01	4 Cu	4
May, 1955						
1	0900	261 1	47 48	03	10 Cu	2
1	1800	calm 0	48 49	01	4 Cu	2
2	0900	204 3	46 49	03	10 Cu	3
2	1800	183 1	46 47	04	10 Cu	3
3	0900	145 0	50 50	02	8 Cu	3
3	1800	calm 0	59 60	01	2 Cu	2
4	0900	calm 0	46 49	00	0	2
4	1800	223 5	49 52	02	8 Cu	3
5	0900	223 6	48 50	02	8 Cu	4
5	1800	290 5	45 49	00	0	5
6	0900	068 2	44 47	00	0	3
6	1800	068 2	42 50	02	8 Cu	4
7	0900	359 3	47 49	03	10 Ns	3
7	1800	359 3	44 46	03	8 Ns	3
8	0900	359 5	43 47	02	7 Cu	5
8	1800	359 4	44 46	01	4 Cu	4
9	0900	162 4	46 49	03	10 St	3
9	1800	183 4	46 48	03	10 St	4
10	0900	290 2	45 48	03	10 Ns	3
10	1800	calm 0	47 49	01	6 Cu	3
11	0900		48 51	03	10 Ns	4
11	1800	162 1	47 50	01	4 Ns	3
12	0900	290 3	42 47	01	5 Cb	4
12	1800		43 45	01	5 Cu	3
13	0900		49 53	01	7 Cu	3
13	1800	245 2	51 52	01	6 Ci/Cu	3
14	0900	145 4	48 51	01	2 Ci	3
14	1800		48 50	00	0	2
15	0900		48 52	02	7 Cu	3
15	1800	204 3	52 53	02	7 Cu	3

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
May, 1955						
16	0900	calm 0	51 54	02	7 Cu	2
16	1800	calm 0	50 54	02	7 Cu	3
17	0900	068 4	49 51	70	10 St	4
17	1800	131 5	50 52	40	10 Ns	4
18	1800	000 1	50 51.5	40	10 Ns	4
19	0900	280 5	53 55	01	2 Cu	5
19	1800	280 5	48 52	00	0	5
20	0900	000 1	49 52	02	9 Cu	3
20	1800	290 6	47 51	00	0	5
21	0900	290 5	54 63	00	0	4
21	1800	290 5	47 50	00	0	4
22	0900	225 4	46 48	02	6 Cu	3
22	1800	290 3	47 52	02	3 Cu	3
23	0900		45 48	00	0	3
23	1800	270 3	50 52	01	5 Cu	3
24	0900		51 56	03	10 Cu	3
24	1800		51 53.5	02	8 Cu	3
25	0900	080 3	47 50	03	10 Cu/Ns	3
25	1800	185 4	48 50	03	10 Cu/Ns	3
26	0900	274 3	46 48	01	7 Cu	3
26	1800	295 4	48 52.5	01	5 Cu	4
27	0900	231 2	41.5 45.5	01	7 Cu	3
27	1800		45 52	01	2 Cu	3
28	0900	110 4	49 52	02	10 Cu/Ns	3
28	1800	084 4	47 50	03	10 Cu/Ns	3
29	0900	306 5	43 52	02	10 Cu/Ns	3
29	1800	235 5	41 47	03	10 Ns	4
30	0900	270 6	46 51	01	4 Cu	4
30	1800	270 6	47 51	01	3 Cu	5
31	0900	084 3	52 59	01	4 Cu/Ci	3
31	1800	245 4	47.5 50.5	02	9 Cu	4
June, 1955						
1	0900	225 2	47 50	02	10 Cu/Ns	3
1	1800		46.5 50	03	10 Cu	3
2	0900	180 2	52 55	40	10 Cu/Ns	3
2	1800		54 55	04	10 St/Ns	3
3	0900	100 2	51 53	03	10 Cu/Ns	3
3	1800	110 2	49 51	40	10 Ns	2
4	0900	259 4	48 52	40	10 Ns	2
4	1800	260 3	51 55	02	9 Cu/St	4
5	0900	260 3	50 54	02	9 Nc/Cu	3
5	1800	264 4	50 52	02	8 Cu	3

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
June, 1955							
6	0900	311 3	50 52	02	9 St	3	
6	1800	300 4	49 52	01	2 Ci/St	4	
7	0900	100 4	53 55	01	4 Ci/As	3	
7	1800	105 5	56 66	01	2 Ci/As	3	
8	0900	084 5	53 67	00	0	2	
8	1800	068 6	65 76	00	0	2	
9	0900	094 6	55 66	01	4 Ci/As	4	
9	1800	116 1	55 57	03	10 Ns	1	
10	0900	311 6	50 52	02	8 As/Cu	6	
10	1800	306 6	51 55	02	7 As/Cu	6	
11	0900	116 1	51 54	01	6 Ci	5	
11	1800	290 4	51 55	01	6 Ci	4	
12	1800	290 5	49 52	04		4	
13	0900	150 4	49 52	07	10 Ns	5	
13	1800	162 2	50.5 53	03	10 Ns	3	
14	0900	274 2	52 55	02	8 Cu	2	
14	1800	259 2	48 51	01	4 Sc	2	
15	0900	259 2	48 51	01	4 Sc	2	
15	1800		47 50	01	4 Cu/Sc	2	
16	0900	116 3	49 51	03	10 Ns/St	2	
16	1800	116 3	48 51	03	10 Ns	3	
17	1800	180 1	49 48	03	10 Ns	2	315
18	0900	270 4	55 54	03	10 Ns	2	000
18	1800	270 4	54 52	01	5 Ns	2	090
19	0900	090 3	54 55	02	7 Cu	1	315
19	1800	135 2	51 51	04	8 Ns	1	315
20	0900	090 4	51 52	01	6 Ns	1	112
20	1800	225 3	63 65	01	2 Sc	1	135
21	0900	270 1	54 53	02	10 Sc	1	315
21	1800	248 5	54 55	01	3 Cu	1	045
22	0900	225 3	50 51	40	Fog	1	000
22	1800	225 3	50 51	40	Fog	1	045
23	0900	180 4	51 52	40	Fog	1	000
23	1800	270 1	50 50	60	10 Ns	1	045
24	0900	270 3	49 50	03	8 Ns	2	090
24	1800	045 3	54 54	02	10 Sc	1	090
25	0900	270 3	52 52	02	10 Ns	1	225
25	1800	135 3	53 54	03	8 Ns	1	270

Meteorological Observations at Swiftsure Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		Dir.
June, 1955										
26	0900	180	4	52	53	40	Fog		1	315
26	1800	045	2	53	54	02	10	Sc	1	045
27	0900	180	2	52	51	02	10	Ns	1	090
27	1800	225	1	53	54	03	10	Ns	1	022
28	0900	270	2	55	56	02	8	Ns	1	068
28	1800	270	4	51	52	01	5	Sc	2	315
29	0900	225	3	49	50	30	10	Ns	2	045
29	1800	270	5	49	49	60	10	Ns	2	045
30	0900	270	3	50	49	01	8	Ns	2	090
30	1800	270	5	54	55	01	3	Ns	2	045
July, 1955										
1	0900	270	5	53	54	03	10	Ns	2	045
1	1800	270	3	54	54	01	2	Ns	1	045
2	0900	270	3	56.5	59	01	2	Ns	1	090
2	1800	270	3	55	55	01	2	Ns	1	090
3	0900	270	2	57	58	03	10	Ns	1	225
3	1800	225	2	55	55	03	10	Ns	2	045
4	0900	090	2	51	52	02	10	Ns	1	090
4	1800	180	1	55	55	02	8	Ns	1	090
5	0900	calm	0	56	58	01	3	Ns	1	090
5	1800	270	2	55	56	01	5	Ns	1	090
6	0900	270	2	54	56	01	3	Ns	1	090
6	1800	270	1	56	57	01	6	Cu	0	045
7	0900	158	1	54	55	00	7	Ns	0	090
7	1800	022	2	54	55	01	6	Ns	0	068
8	0900	068	4	53	54	01	5	Ns	1	022
8	1800	calm	0	58	59	01	2	Ci	1	045
9	0900	calm	0	59	60	01	2	Cu	1	022
9	1800	225	3	55	56	01	5	Ns	1	022
10	0900	270	3	53	54	40	Fog		1	045
10	1800	338	1	52	53	03	1	Ns	1	090
11	0900	270	1	53	54	03	10	Ns	1	068
11	1800	270	2	51	52	03	10	Ns	1	090
12	0900	270	3	52	53	03	10	Ns	1	090
12	1800	270	4	53	55	00	0		1	045
13	0900			58	59	40	Fog		1	090
13	1800	292	2	54	53	01	4	Cu	2	112
14	0900	090	1	54	55	49	Fog		1	045
14	1800	135	1	56	57	01	1	Cu	1	090
15	0900	135	2	53	54	03	8	Ns	1	068
15	1800	225	1	60	61	03	10	Ns	1	045

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.		
July, 1955									
16	0900	135 4	54 53	50	10 Ns	1	045		
16	1800	135 6	55 56	60	8 Ns	2	315		
17	0900	090 3	59 60	01	2 Ns	1	315		
17	1800		58 59	03	7 Ns	1	270		
18	0900	135 3	55 55	03	7 Ns	1	315		
18	1800	135 1	65 66	03	1 Ns	1	000		
19	0900		58 59	40	Fog	1	000		
19	1800	135 4	57 58	00	0	2	000		
20	0900	225 2	53 53	03	10 Ns	1	000		
20	1800	225 4	55 55	00	0	1	045		
21	0900	248 3	55 56	03	8 Cu	1	045		
21	1800	202 3	55 55	02	8 Cu	1	045		
22	0900	270 3	58 56	02	7 Ns	1	045		
22	1800	270 4	54 53	00	0	1	090		
23	0900	135 3	52 53	40	Fog	3	090		
23	1800	225 5	53 53	00	0	3	090		
24	0900	225 3	51 51	03	10 Ns	2	045		
24	1800	225 4	53 52	02	7 Cu	3	045		
25	0900	135 1	53 52	40	Fog	1	112		
25	1800	248 2	53 52	03	10 Ns	1	045		
26	0900	090 5	52 51	40	Fog	2	315		
26	1800	135 4	59 60	01	4 Cu	2	315		
27	0900	270 1	59 60	01	5 Cu	1	338		
27	1800	270 2	57 58	01	3 Cu	1	315		
28	0900	180 3	58 57	81	10 Ns	2	045		
28	1800	158 6	59 60	40	Fog	4	000		
29	0900	248 5	56 57	02	10 Sc	3	068		
29	1800	225 2	57 58	03	10 Ns	3	045		
30	0900	090 6	59 58	53	10 Ns	4	292		
30	1800	135 3	57 57	40	Fog	2	315		
31	0900	180 3	56 56	50	10 Ns	2	022		
31	1800	180 5	57 57	40	10 Ns	2	045		
August, 1955									
1	0900	270 1	55 59	01	10 Ac	2	000		
1	1800	270 3	58 60	00	10 Sc	2	270		
2	0900	270 3	59 56	01	10 Sc	2	045		
2	1800	045 5	56 54	00	3 Sc	3	045		
3	0900	270 1	55 56	40	Fog	2	090		
3	1800	112 4	56 56	40	2 Cu	2	135		
4	0900	270 1	56 55	02	0	2	292		
4	1800	315 2	55 59	02	2 Cu	4	045		
5	0900	270 1	57 55	00	0	4	090		
5	1800	270 2	55 60	40	2 Cu	3	270		

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
August, 1955							
6	0900	270 1	58 58	00	0	3	090
6	1800	225 2	59 54	40	Fog	5	090
7	0900	225 1	55 53	40	Fog	4	090
7	1800	090 3	53 53	02	10 Ns	3	270
8	0900	270 1	53 55	02	10 Sc	3	045
8	1800	090 1	55 54	00	0	3	045
9	0900	270 1	53 55	40	Fog	4	135
9	1800	225 4	54 54	00	0	3	135
10	0900	270 6	52 52	40	Fog	2	090
10	1800	225 3	52 57	01		2	090
11	0900	225 2	55 55	40	Fog	2	045
11	1800	225 3	58 60	01		1	112
12	0900	270 3	54 55	01		1	045
12	1800	270 1	59 60	01		1	068
13	0900	270 1	56 58	04		1	045
13	1800	270 5	58 58	01	2 Ac	4	225
14	0900	calm 0	57 58	01	1 Ac	0	090
14	1800	315 3	61 61	01	3 Ac	3	090
15	0900	135 1	58 58	40	Fog	2	022
15	1800	270 3	60 60	00	0	1	090
16	0900	225 2	57 57	02	8 Cu	2	090
16	1800	225 1	58 60	01	6 Cu	1	090
17	0900	270 1	58 58	40	Fog	1	090
17	1800	270 3	63 64	49	Fog	1	090
18	0900	248 2	57 58	40	Fog	1	090
18	1800	270 4	55 56	01	2 Cu	2	248
19	0900	270 3	54 53	03	8 Ns	2	045
19	1800	225 3	55 55	01	3 Cu	2	045
20	0900	090 3	54 54	02	10 Sc	2	270
20	1800	270 1	55 55	40	Fog	1	045
21	0900	068 4	52 52	01	1 Ac	1	168
21	1800	248 4	50 51	01	6 Sc	1	090
22	0900	270 1	55 55	03	8 Ns	1	090
22	1800	225 1	56 57	02	7 Cu	1	090
23	0900	068 3	51 52	03	10 Ns	2	022
23	1800	202 2	54 55	02	10 Ns	3	112
24	0900	045 2	50 51	03	10 Ns	2	090
24	1800	225 3	51 52	02	2 Ns	3	090
25	0900	180 2	54 54	02	10 Sc	2	270
25	1800	270 3	54 55	01	5 Ns	2	045

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
August, 1955							
26	0900	225 1	51 52	01	6 Sc	1	090
26	1800	225 4	54 55	01	2 Cu	1	090
27	0900	calm 0	52 53	00	0	1	045
27	1800	270 2	54 55	01	1 Cu	1	068
28	0900	022 4	53 54	01	1 Cu	1	225
28	1800	315 3	55 56	00	0	3	292
29	0900	045 3	55 54	01	1 Cu	1	248
29	1800	202 3	58 58	01	3 Cu	2	090
30	0900	022 1	56 56	02	10 Sc	2	248
30	1800	135 3	56 56	01	2 Ns	2	292
31	0900	090 3	55 56	03	8 Ns	1	090
31	1800	calm 0	57 58	00	0	1	045
September, 1955							
1	0900	135 2	55 55	00	0	1	270
1	1800	270 2	56 57	02	1 Cu	1	090
2	0900	315 1	55 56	00	0	1	135
2	1800	270 4	56 57	00	0	4	090
3	0900	315 1	57 59	00	0	3	090
3	1800	338 3	55 56	01	4 Cu	3	112
4	0900	270 4	56 57	00	0	3	090
4	1800	315 4	57 57	00	0	2	135
5	0900	045 5	56 57	00	0	2	090
5	1800	090 1	58 59	00	0	1	045
6	0900	135 4	55 56	40	Fog	1	090
6	1800	calm 0	55 56	40	Fog	1	090
7	0900	090 2	59 60	02	8 Cu	1	090
7	1800	calm 0	55 56	40	Fog	1	090
8	0900	090 1	56 57	03	8 Ns	1	135
8	1800	270 3	59 60	03	8 Ns	1	135
9	0900	270 3	53 54	03	7 Ns	1	090
9	1800	270 1	55 56	03	7 Ns	1	090
10	0900	calm 0	55 56	03	8 Ns	1	112
10	1800	calm 0	56 57	03	8 Ns	1	068
11	0900	090 3	54 54	03	10 Ns	1	270
11	1800	180 1	54 55	02	7 Ns	1	090
12	0900	270 2	53 54	02	6 Cu	2	090
12	1800	270 2	53 54	60	10 Ns	2	090
13	0900	068 3	49 50	60	10 Ns	4	090
13	1800	090 1	51 52	03	10 Ns	2	090
14	0900	090 2	54 55	03	10 Ns	3	315
14	1800	090 2	53 54	03	10 Ns	3	315
15	0900	090 2	55 55	60	10 Ns	4	045
15	1800	090 2	52 53	03	10 Ns	3	022

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
September, 1955							
16	0900	270 1	56 57	01	3 Cu	2	090
16	1800	270 1	55 55	01	4 Ns	2	090
17	0900	calm 0	53 54	00	0	1	090
17	1800	315 2	56 57	01	3 Cu	1	090
18	0900	calm 0	56 57	01	3 Cu	1	090
18	1800	270 2	53 54	40	0	1	090
19	0900	calm 0	52 53	40	0	1	045
19	1800	270 2	54 55	00	0	1	090
20	0900	090 1	57 58	03	10 Ns	3	090
20	1800	090 1	55 56	00	0	1	090
21	0900	068 5	51 52	04	0	4	270
21	1800	090 3	54 55	00	0	1	270
22	0900	068 4	61 52	02	0	2	270
22	1800	090 3	53 54	03	10 Ns	1	270
23	0900	045 3	51 52	04	8 Ns	2	225
23	1800	270 3	55 55	00	0	1	270
24	0900	045 3	58 59	04		3	045
24	1800	202 3	53 54	00	0	1	045
25	0900	135 3	53 54	00	0	2	045
25	1800	090 4	53 54	40	Fog	1	045
26	0900	225 4	53 53	40	Fog	2	045
26	1800	225 5	54 54	13	10 Ns	2	045
27	0900	225 3	57 58	02	9 Cs	4	045
27	1800	270 5	56 57	02	10 Sc	3	292
28	0900	135 3	59 60	01	5 Cu	1	135
28	1800	112 1	55 56	02	8 Sc	2	270
29	0900	022 3	54 55	02	7 Cu	2	315
29	1800	225 4	55 56	02	7 Sc	2	315
30	0900	270 3	57 58	03	10 Ns	2	045
30	1800	270 3	55 56	02	Ns 10	2	270
October, 1955							
1	0900	315 4	54 55	03	Ns 10	2	135
1	1800	112 3	59 60	02	Ns 10	1	270
2	0900	315 3	58 59	50	10 Ns	1	045
2	1800	112 2	57 58	40	Fog	3	270
3	0900	090 4	56 57	03	10 Ns	1	045
3	1800	225 3	57 58	02	6 Sc	3	270
4	0900	315 4	55 56	03	10 Ns	6	135
4	1800	248 5	50 51	02	9 Ns	6	045
5	0900	270 2	55 56	01	2 Sc	3	270
5	1800	180 3	59 60	01	3 Cu	4	090

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
October, 1955							
6	0900	090 6	47 48	02	10 Sc	3	270
6	1800	090 5	51 51	02	10 Sc	4	090
7	0900	270 6	54 55	60	10 Ns	4	045
7	1800	225 3	53 54	01	5 Ns	6	338
8	0900	135 9	50 51	60	10 Cb	5	315
8	1800	180 5	56 57	02	9 Ns	7	315
9	0900	135 3	53 54	02	10 Sc	4	315
9	1800	180 3	55 56	01	7 Sc	5	315
10	0900	090 3	51 52	02	10 Sc	3	000
10	1800	180 2	55 56	01	8 Cu	3	338
11	0900	135 7	48 49	60	0	4	315
11	1800	112 5	52 53	60	0	4	315
12	1800	068 3	57 58	01	0	2	315
13	0900	090 2	53 54	01	1 Sc	2	270
13	1800	090 4	55 56	01	3 Sc	3	292
14	0900	180 2	56 57	40	Fog	2	045
14	1800	225 3	51 52	01		3	270
15	0900	315 1	53 54	01	3 Cu	1	045
15	1800	315 3	51 52	01	4 Cu	2	292
16	0900	090 1	56 57	01	3 Cu	2	045
16	1800	000 2	56 57	01	2 Cu	4	202
17	0900	045 1	56 57	01	3 Cu	2	045
17	1800	270 3	53 54	03	10	4	248
18	0900	135 2	56 58	03	10 Ns	2	068
18	1800	090 2	54 55	02	7 Cu	3	225
19	0900	045 1	54 55	01	6 Cu	2	225
19	1800	270 2	54 55	01	6 Cu	3	068
20	0900	090 2	54 55	01	6 Cu	2	068
20	1800	202 1	54 55	01	4 Cu	3	202
21	0900	045 1	48 49	01	7 Cu	1	225
21	1800	045 2	50 50	60		3	022
22	0900	068 5	49 50	02	7 Cu	4	248
22	1800	090 4	48 49	02	8 Ns	3	248
23	0900	135 6	48 49	01	6 Cu	4	292
23	1800	068 7	49 48	60	8 Ns	4	270
24	0900	045 4	49 50	02	8 Cu	5	225
24	1800	225 7	48 49	60	8 Ns	5	270
25	0900	225 5	50 51	60	8 Cu	6	225
25	1800	225 5	50 50	60	8 Ns	5	225

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
October, 1955							
26	0900	225 5	48 49	02	6 Cu	5	225
26	1800	225 3	49 50	02	7 Cu	4	225
27	0900	135 8	49 50	60		6	225
27	1800	090 5	49 50	60	7 Ns	4	225
28	0900	248 3	54 55	02	6 Cu	5	270
28	1800	270 3	52 53	03	6 Ns	4	248
29	0900	225 7	53 54	60	0	6	202
29	1800	225 7	50 50	60	8 Ns	5	225
30	0900	270 3	52 53	02	7 Ns	5	225
30	1800	270 4	50 50	03	8 Ns	5	248
31	0900	045 6	44 45	02	7 Ns	6	270
31	1800	068 4	49 50	02	6 Cu	4	225
November, 1955							
1	0900	068 5	48 49	01	2 Cu	3	315
1	1800	068 5	49 50	03	8 Ns	3	090
2	0900	068 8	44 44	60	8 Ns	7	090
2	1800	225 4	43 44	60	8 Ns	5	068
3	0900	202 8	41 42	60	8 Ns	8	225
4	0900	225 7	48 49	02	6 Ns	7	225
4	1800	248 5	47 50	02	8 Sc	3	248
5	0900	068 3	49 50	01	4 Cu	3	045
5	1800	045 4	49 50	02	7 Ns	3	045
6	0900	135 5	47 48	02	10 Ns	2	090
6	1800	045 7	48 49	02	9 Ns	2	090
7	0900	190 6	49 50	03	10 Ns	2	090
7	1800	190 3	48 49	50	10 Ns	2	000
8	0900	090 2	49 50	40	Fog	2	225
8	1800	090 2	50 51	40	Fog	4	225
9	0900	180 2	52 53	40	Fog	4	225
9	1800	248 6	54 55	02	10 Ns	3	225
10	0900	270 8	54 56	01	2 Ns	4	270
10	1800	270 8	51 52	00	0	5	270
11	0900	270 6	36 36	02	6 Sc	4	270
11	1800	045 5	28 29	00	0	3	270
12	0900	315 5	25 26	02	6 Ns	2	270
12	1800	090 2	24 25	01	5 Ns	1	270
13	0900	112 5	24 25	00	0	1	292
13	1800	045 6	26 24	01	1 Ns	2	022
14	0900	090 2	25 25	01	4 Cb	1	090
14	1800	090 2	29 29	01	3 Sc	2	090
15	0900	090 5	26 27	01	7 Cb	2	270
15	1800	135 7	29 29	70	10 Ns	3	090

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
November, 1955							
16	0900	135 6	31 32	02	10 Ac	3	090
16	1800	090 7	34 35	03	10 Ns	2	090
17	0900	068 7	35 35	03	10 Ns	3	090
17	1800	090 3	35 35	70		4	090
18	0900	135 5	43 43	60	8 Ns	4	158
18	1800	135 8	44 45	03	7 Ns	5	248
19	0900	135 2	46 45	01	5 Cu	4	225
19	1800	180 6	48 47	02	7 Ns	3	225
20	0900	135 3	46 46	01	5 Ns	2	225
20	1800	135 3	47 47	01	5 Ns	2	225
21	0900	270 5	44 44	02	6 Sc	2	270
21	1800	248 6	43 44	02	4 Sc	2	225
22	0900	270 5	42 42	03	10 Ns	2	225
22	1800	068 8	47 47	60	10 Ns	4	135
23	0900	090 5	44 44	03	10 Ns	3	135
23	1800	135 6	46 46	01	8 Ns	3	225
24	0900	135 7	45 46	60	8 Ns	3	225
24	1800	180 6	48 49	13	10 Cb	4	180
25	0900	225 5	46 47	02	8 Sc	3	225
25	1800	180 5	48 48	01	3 Sc	4	270
26	0900	045 7	47 47	03	8 Ns	4	068
26	1800	090 8	46 47	14		4	090
27	0900	090 8	40 40	14		4	090
27	1800	045 6	39 40	13	8 Ns	4	090
28	0900	090 5	45 45	14	10 Cu	3	135
28	1800	225 3	44 44	50		3	180
29	0900	090 3	48 49	50	10 Cb	3	225
29	1800	112 5	48 49	50	10 Cu	3	225
30	0900	090 5	46 46	50	10 Ns	3	180
30	1800	270 3	51 52	02	8 Sc	3	225
December, 1955							
1	0900	045 3	49 50	02	9 Sc	2	225
1	1800		48 49	50	9 Sc	4	225
2	0900	315 3	43 43	00	0	3	225
2	1800	090 2	49 49	01	3 Sc	2	225
3	0900	090 4	44 44	02	10 Sc	2	225
3	1800	090 2	48 48	01	6 Ns	2	225
4	0900	090 2	43 43	01	8 Cu	2	135
4	1800	090 7	43 42	01	2 Ns	2	225
5	0900	090 6	40 39	60		3	135
5	1800	158 2	49 49	50	10 Ns	3	225

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
December, 1955							
6	0900	112 3	47 47	60		3	248
6	1800	225 2	44 45	02	10 Sc	3	225
7	0900	180 3	46 46	02	10 Cb	5	225
7	1800	135 7	47 47	03	10 Ns	5	225
8	0900	135 6	44 44	03	10 Ns	3	225
8	1800	112 4	44 45	03	9 Ns	3	225
9	0900	135 4	45 45	01	6 Ns	3	225
9	1800	090 5	46 46	03	10 Ns	3	225
10	0900	112 7	43 43	49	9 Ns	4	225
10	1800	135 7	43 44	14	9 Ns	4	225
11	0900	045 2	47 48	14	9 Ns	1	180
11	1800	292 7	44 44	02	8 Ns	3	225
12	0900	292 4	40 40	01	4 Cu	3	225
12	1800	315 3	38 39	00	0	1	225
13	0900	045 4	38 38	00	0	2	225
13	1800	045 7	39 39	00	0	3	225
14	0900	090 7	41 41	01	6 Ci	3	135
14	1800	068 7	39 40	00	0	3	135
15	0900	090 7	38 38	01		3	090
15	1800	090 7	40 40	14	8 Ns	3	090
16	0900	090 7	40 41	13	8 Ns	3	090
16	1800	090 3	41 41	13	8 Ns	1	225
17	0900	022 3	38 38	01	5 Cu	1	225
17	1800	090 1	40 41	01	3 Cu	1	090
18	0900	045 7	34 34	01	6 Cu	2	068
18	1800	045 7	33 34	70	8 Ns	3	068
19	0900	045 7	38 38	50	8 Ns	4	112
19	1800	135 6	37 37	50	8 Ns	3	180
20	0900	068 6	39 39	50	8 Ns	2	135
20	1800	090 7	37 38	13	8 Ns	3	180
21	0900	090 7	47 47	60	9 Ns	4	225
21	1800	225 4	46 45	13	9 Ns	2	225
22	0900	000 4	46 47	60	8 Ns	5	225
22	1800	270 6	47 47	03	7 Ns	5	225
23	0900	045 5	40 40	83	8 Ns	5	225
23	1800	225 7	39 40	83	8 Cu	4	225
26	0900	000 3	41 42	02	8 Ns	2	135
26	1800	225 6	40 41	02	8 Ns	3	225
27	0900	225 1	40 40	01	2 Ns	2	225
27	1800	270 1	38 39	00	0	1	270
30	0900	090 5	33 33	00	0	3	090
30	1800	090 6	34 35	00	0	4	112
31	0900	090 5	39 40	00		1	090
31	1800	090 8	40 39	00		4	112

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
January, 1956							
1	0900	270 5	43 44	00		4	180
1	1800	270 4	44 44	02	10 Ns	6	225
2	0900	135 5	40 42	02	10 Ns	6	135
2	1800	112 5	42 42	60	10 Ns	6	135
3	0900	045 3	40 39	01	7 Ns	2	225
3	1800	090 4	41 41	60	10 Ns	3	225
4	0900	135 3	40 40	01	9 Ns	2	135
4	1800	135 2	44 45	01	6 Ns	2	225
7	0900	112 2	45 45	60	9 Ns	4	270
7	1800	135 3	46 46	50	8 Ns	5	248
8	0900	135 4	44 45	03	9 Ns	4	270
8	1800	090 3	44 44	03	6 Ns	3	248
9	1800	225 4	45 45	50	9 Ns	5	248
10	0900	225 5	41 42	60	10 Ns	3	270
11	1800	315 6	44 45	60	10 Ns	3	270
12	0900	090 6	46 46	02	8 Ns	3	225
12	1800	090 6	43 44	02	8 Ns	3	225
13	0900	225 1	45 46	08	5 Cu	2	248
13	1800	090 2	46 47	07	8 Ns	2	090
14	0900	068 5	44 45	03	10 Ns	4	068
14	1800	090 8	43 43	03	10 Ns	4	068
15	0900	090 8	44 44	60	10 Ns	5	090
15	1800	135 8	43 44	60	10 Ns	5	158
16	0900	315 8	44 44	60	10 Ns	5	135
16	1800	315 3	45 46	03	10 Ns	4	135
17	0900	135 4	43 43	60	10 Ns	6	158
17	1800	135 6	44 44	60	10 Ns	6	135
18	0900	225 5	46 46	02	8 Ns	6	315
18	1800	225 5	47 47	02	8 Ns	3	202
19	0900	135 6	44 45	60	8 Ns	3	158
19	1800	135 7	43 43	60	10 Ns	5	158
20	0900	022 2	50 51	03	10 Ns	2	135
20	1800		46 46	02	8 Ns	3	135
21	0900	090 6	45 45	60	10 Ns	3	090
21	1800	158 3	44 44	60	10 Ns	4	158
22	0900	158 6	45 45	60	10 Ns	5	158
22	1800	135 2	51 52	01	3 Cu	2	158
23	0900	045 1	50 51	02	4 Cu	2	090
23	1800	090 7	40 40	69	10 Ns	3	090
24	0900	202 5	40 40	01	5 Cu	4	135
24	1800	225 1	44 45	01	10 Ns	3	135
25	0900	068 1	39 40	01	3 Cu	3	068
25	1800	045 1	44 45	01	3 Cu	3	068

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
January, 1956							
26	0900	045 1	44 44	01	1 Cu	4	068
26	1800	045 1	43 44	01	1 Cu	3	068
27	0900	090 1	38 38	01	2 Cu	2	045
27	1800	090 1	38 39	01	3 Ns	3	068
28	0900	045 1	39 39	60	10 Ns	3	068
28	1800	090 1	38 38	60	10 Cu	3	225
29	0900	090 1	34 33	01	3 Cu	2	225
29	1800	090 1	44 44	60	10 Ns	2	225
30	0900	045 1	35 35	01	1 Cu	2	068
30	1800	045 1	31 31	01	2 Cu	2	068
31	0900	045 1	32 32	01	3 Ns	2	225
31	1800	045 2	33 33	01	3 Cu	2	225

February, 1956

1	0900	090 2	35 35	01	5 Ci	3	135
1	1800	090 2	38 38	01	3 Cu	2	135
2	0900	090 2	38 38	01	4 Cu	2	225
2	1800	090 2	36 36	40	Fog	3	158
3	0900	090 2	37 37	01	6 Cu	3	225
3	1800	090 2	36 36	03	10 Ns	3	225
4	0900	090 6	40 40	60	10 Ns	3	225
4	1800	135 6	37 37	40		3	225
5	0900	045 3	45 55	03	10 Ns	2	225
5	1800	090 4	47 47	60	10 Ns	2	225
6	0900	090 3	49 49	50	10 Ns	2	225
6	1800	135 4	49 49	03	10 Ns	2	225
7	0900	045 3	45 45	03	10 Cu	2	225
7	1800	090 3	47 47	02	6 Ns	2	225
8	0900	090 5	46 45	03	10 Ns	2	090
8	1800	090 3	46 46	03	10 Ns	2	270
9	0900	045 3	46 46	03	10 Ns	3	315
9	1800	090 3	45 45	02	7 Ns	3	225
10	0900	225 5	46 46	40		2	225
10	1800	135 2	43 43	60	8 Ns	4	202
11	0900	225 2	46 47	40	9	2	225
11	1800	225 5	46 47	60	10 Ns	2	225

Observations ceased until March 1, 1956.

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.	
March, 1956								
1	0900	202	7	41 42	50	10 Ns	6	068
1	1800	225	6	39 39	60	10 Ns	6	248
2	0900	225	11	39 39	60	10 Ns	6	270
2	1800	135	8	35 35	69	10 Ns	7	225
3	0900	270	8	42 43	60	10 Ns	7	225
3	1800	270	8	35 34	69	10 Ns	10	248
4	0900	225	4	37 37	01	6 Cu	8	068
4	1800	202	5	39 39	60	10 Ns	6	248
5	0900	180	2	37 37	88	9 Cu	3	068
5	1800	248	3	41 41	01	5 Cu	2	068
6	0900	068	4	38 37	03	10 Cu	3	248
6	1800	270	5	40 41	05	7 Cu	3	202
7	0900	248	5	39 38	12	7 Cu	3	068
7	1800	225	6	39 39	04	1 Cu	3	045
8	0900	270	7	42 43	01	6 Cu	3	022
8	1800	225	3	41 42	02	6 Cu	3	090
9	0900	225	4	46 47	02	3 Cu	2	135
9	1800	270	3	45 45	02	3 Cu	2	158
10	0900	180	2	44 45	01	8 Cu	2	158
12	1800	090	3	40 41	01	3 Cu	2	270
13	0900	112	5	40 41	02	6 Cu	2	225
13	1800	090	3	39 40	02	4 Cu	2	270
14	0900	090	5	41 42	02	7 Cu	2	225
14	1800	090	3	42 43	02	6 Cu	2	225
15	0900	000	2	41 42	02	7 Cu	2	225
15	1800	045	1	41 42	00		1	022
16	0900	068	2	41 42	02	7 Cu	1	315
16	1800	090	1	40 41	01	3 Cu	1	068
17	0900	022	2	41 41	00		2	090
17	1800	045	1	42 43	00		2	090
18	0900	315	2	40 41	02	8 Cu	2	202
18	1800	022	1	43 44	02	3 Cu	1	270
19	0900	225	5	40 41	02	7 Cu	4	270
19	1800	225	5	40 40	02	8 Cu	4	270
20	0900	135	5	39 40	60	8 Ns	4	112
20	1800	090	5	39 40	60	8 Ns	4	112

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
March, 1956							
21	0900	135 4	39 40	60	10 Ns	2	068
21	1800	163 6	47 43	03	10 Ns	5	183
22	0900	173 7	40 45	60	10 Ns	5	183
22	1800	173 3	41 45	02	6 Cc	5	183
23	0900	223 5	41 45	01	4 Cc/Cs	5	233
23	1800	183 4	40 46	81	4 Cc/As	5	173
24	0900	163 3	41 47	04	7 As/Cs	4	153
24	1800	143 3	42 48	03	10 Ac/As	4	123
25	0900	223 6	39 43	02	8 Ac/As	5	203
26	1800	133 1	38.5 45	01	3 Cc/Sc	3	183
27	0900	123 5	38. 44	03	10 Cc/Sc	5	143
28	1800	153 6	42 45.5	49	10 Ac/Cs	5	133
29	0900	183 5	40 45	14	10 Ac/Cs	4	193
29	1800	178 7	40 45	60	10 Ns	5	193
30	0900	213 5	39 45	02	7 Cu/Ci	5	188
30	1800	163 4	38 43.5	03	10 Cu/Ci	4	223
31	0900	113 2	38.5 43.5	02	6 Cc/Sc	4	233
31	1800	303 4	40 40	01	2 Cu	4	308
April, 1956							
1	0900	158 2	39 45	02	7 Ac	4	158
1	1800	163 4	40 46	03	10 Ac	4	163
2	0900	027 1	41 47.5	02	9 Ac	3	323
2	1800	092 1	42 44	02	7 Ac	3	
3	0900	188 3	42 45	03	10 Ns	3	193
3	1800	203 4	40 46	50	10 Ns	4	223
4	0900	315 6	45 55	04	7 Ac	6	315
4	1800	308 5	31 42	01	3 As	6	298
5	0900	293 4	43 51	03	2 As	3	303
5	1800	283 3	36 43	01	4 As/Cs	2	273
6	0900	093 5	41 48	02	9 As/Ac	4	093
6	1800	143 6	40 46	02	10 Ns	4	148
7	0900	293 4	43 50	02	4 Ac	2	293
7	1800	293 5	39 46	03	10 Ns	3	293
8	0900	083 2	41 43	02	8 Cs/Ns	3	263
8	1800	168 1	45 53	02	8 Ac/Cc	1	178
9	0900	calm 0	44 51	01	4 Ci/Cc	1	263
9	1800	003 1	46 54	02	8 Ci	2	103
10	0900	103 6	44 50	02	6 Ci/Cs	4	103
10	1800	calm 0	50 55	02	6 As/Ci	2	118

Meteorological Observations at Swiftsure Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current Dir.
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		
April, 1956										
11	0900	148	4	45	50	01	6	Ci	2	148
11	1800	calm	0	45	50	49	0		2	283
12	0900	103	6	48	53	02	10	Ns	3	273
12	1800	273	3	45	50	02	7	Ci/St	3	273
13	0900	calm	0	42	47	40	10	St/Cs	3	247
13	1800	293	3	45	51	49	0		3	283
14	0900	143	2	45	48	03	10	Ns	1	143
14	1800	298	1	45	47	40	0		1	303
15	0900	043	2	40	45	04	10	Ns	2	043
15	1800	308	3	45	48	01	4	Ci/Cu	2	303
16	0900	calm	0	40	42	02	4	As/Cu	0	073
16	1800	293	3	42	50	01	1	Ci/Cu	1	293
17	0900	059	3	45	52	04	7	St/Cs	3	295
17	1800	293	4	45	50	02	5	Ci	3	293
18	0900	323	1	50	65	01	2		1	323
18	1800	303	5	47	52	01	3	Ci	3	295
19	0900	315	3	48	54	01	8	Ci/Ac	2	295
19	1800	325	3	48	52	01	6	Ac	2	270
20	0900	068	5	47	50	03	10		2	068
20	1800	123	3	55	65	03	8	Ac	2	040
21	0900	153	4	48	50	03	10	Ns	3	200
21	1800	173	5	45	49	40	10		3	173
22	0900	303	5	50	55	03	10	Ns	3	303
22	1800	295	6	49	44	01	3	Ci	4	300
23	0900	110	2	45	41	01	2	Ci	3	270
23	1800	033	4	50	55	01	2	Ci	3	033
24	0900			46	50	04	10	St	3	290
24	1800	293	4	46	50	01	4	Ac	2	300
25	0900	290	3	47	51	01	3	Cu/Ci	2	290
25	1800	333	5	47	49	40	10		2	333
26	0900	calm	0	46	52	03	10	Ns	0	148
26	1800	273	4	45	51	01	4	Cc/St	1	288
27	0900	calm	0	45	48	01	10	Ns	1	143
27	1800	230	3	46	50	02	8	Ns	1	270
28	0900	128	2	43	47	03	10	Ns	2	133
28	1800	295	3	47	51	02	6	Cu	2	273
29	0900	103	2	45	48	01	2	Cu	2	103
29	1800	313	4	45	51	01	2	Cu	2	288
30	0900	290	2	44	49	01	2	Cu	2	250
30	1800	293	4	47	51	01	2	Cu	2	293

Meteorological Observations at Swiftsure Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		Dir.
May, 1956										
1	0900	323	5	45	51	03	10	Ns	3	343
1	1800	273	4	45	49	02	7	Ac	4	252
2	0900	030	2	45	52	03	10	Ns	2	337
2	1800	270	2	46	52	01	4	Ac/Cu	2	278
3	0900	073	3	48	51	01	3	Ac/Ci	1	075
3	1800	123	4	55	67	01	2	Ac/Ci	2	103
4	0900	calm	0	45	50	01	2	Sc	1	240
4	1800	143	3	50	55	02	4	Cu/Ac	1	143
5	0900	078	3	45	50	60	10	Ns	1	078
5	1800	088	3	53	63	02	6	Ac	3	167
6	0900	087	3	46	52	02	7	Ac/Cu	3	153
6	1800	033	3	48	50	00	0		1	033
7	0900	183	1	48	51	00	0		1	183
7	1800	112	4	47	52	00	0		1	112
8	0900	183	2	48	51	01	4	Ci	2	183
8	1800	calm	0	48	50		10	Ns	1	123

New State of Weather and Sea codes, cf. pages 6 and 7, Codes No. 2.

9	0900	153	2	44	50	02	10	St/Sc	2	333
9	1800	126	3	47	51	03	10	Sc/St	4	288
10	0900	326	7	43	49	01	7	Cu/As	7	179
10	1800	293	6	41	48	02	7	Cu/As	7	184
11	0900	223	2	41	48	03	7	Cu/As	4	065
11	1800	303	3	44	51	01	6	Cu	3	333
12	0900	300	3	45	53	01	5	Cu	4	333
12	1800	313	4	46	54	02	2	Ac	4	313
13	0900	068	2	46	52	03	10	Sc/St	4	248
13	1800	310	4	47	54	03	10	As	2	120
14	0900	calm	0	43	51	02	1	Cu	1	270
14	1800	293	4	45	53	03	1	Cu	2	313
15	0900	293	2	44	52	45	4	St/Ns	3	303
15	1800	315	5	45	52	00	0		3	110
16	0900	090	5	50	54	00	0		3	250
16	1800	313	4	49	52	00	0		1	263
17	0900	090	6	50	56	00	0		4	270
17	1800	333	2	68	74	01	3	Ci	1	050
18	0900	210	3	52	58	01	6	Ci	2	320
18	1800	153	2	52	57	01	10	Ns	1	163
19	0900	091	2	49	53	01	10	Ns	1	183
19	1800	153	3	50	53	47	10	Ns	1	183
20	0900	280	1	54	61	01	9	As/St	2	035
20	1800	205	1	48	55	00	0		1	233

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
May, 1956							
21	0900	243 1	48 51	00	0	1	233
21	1800	270 6	50 55	02	5 Ci	4	280
22	0900	255 5	52 56	02	10 Ns	5	270
22	1800	103 6	50 54	01	9 Ns/St	5	313
23	0900	249 3	48 53	00	0	4	288
23	1800	278 4	50 55	02	10 St	6	220
24	0900	calm 0	48 54	02	10 Cu	1	336
24	1800	293 3	53 58	03	10 St	5	263
25	0900	253 2	46 51	02	10 St	2	248
25	1800	270 3	48 52	02	10 St	2	223
26	0900	320 4	46 50	01	6 Cu	4	320
26	1800	288 6	45 51	01	4 Cu	6	273
27	0900	073 2	46 51	02	4 Cu	5	248
27	1800	290 4	46 51	03	6 Ci	4	280
28	0900	calm 0	47 51	01	3 Ci	3	293
28	1800	298 4	51 56	02	1 Cs	3	113
29	0900	083 4	48 56	01	1 Cu	3	253
29	1800	calm 0	50 58	01	2 Ci	3	100
30	0900	045 5	52 60	01	0	5	067
30	1800	225 4	53 59	03	4 Cu/Cs	2	259
31	0900	160 4	45 50	45	10 St/Ns	3	256
31	1800	163 4	47 50	45	10 Ns	3	153
June, 1956							
1	0900	108 3	44 51	43	10 Ns	1	118
1	1800	173 3	50 54	03	10 St/Ns	2	000
2	0900	153 4	52 50	47	10 St/Ns	3	023
2	1800	calm 0	56 63	03	4 Ci/Cu	0	143
3	0900	253 4	47 54		10 Ns/St	2	263
3	1800	276 4	47 53	01	5 Cu/Ac	3	080
4	0900	293 4	51 58	62	10 Ns	4	248
4	1800	223 4	48 55	01	4 Cu/Ci	2	233
5	0900	273 3	51 62	03	7 Cu/As	3	273
5	1800	calm 0	52 54	03	7 Cu/Ns	3	035
6	0900	269 4	46 51	62	10 Ns	3	269
6	1800	158 7	45 50	63	10 Ns	7	158
7	0900	133 4	49 51	18	9 Ns	4	133
7	1800	107 6	47 57	18	10 Ns	5	304
8	0900	183 6	53 55	18	10 Ns	6	163
8	1800	133 3	47 52	43	10 Ns	2	138
9	0900	173 4	50 55	43	10 Ns	2	168
9	1800	315 3	56 59	01	3 Cu/Cs	3	240
10	0900	268 4	47 51	01	4 Cu/Ac	3	027
10	1800	168 4	51 55	01	4 Cu/Ac	3	193

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
June, 1956							
11	0900	143 4	45 50	50	10 Ns/Cu	2	148
11	1800	283 3	53 57	01	3 Cu/Ac	3	275
12	0900	113 5	50 55	62	10 Ns	5	113
12	1800	198 3	55 60	03	7 As/Cu	2	213
13	0900	103 4	50 55	03	10 St/Ns	1	098
13	1800	107 3	48 52	63	10 Ns	3	356
14	0900	273 3	52 52	43	10 Ns	3	223
14	1800	323 3	52 58	03	6 Ac/Cu	1	327
15	0900	calm 0	54 60	03	7 Cb/Ns	1	083
15	1800	213 3	55 60	03	8 Cb/Ac	1	213
16	0900	263 3	51 57	01	7 Cu/St	3	255
16	1800	263 5	50 56	03	10 Ns/St	3	258
17	0900	093 3	50 54	03	10 Ns/St	2	083
17	1800	calm 0	53 59	50	8 Ns/St	3	011
18	0900	113 4	52 56	50	10 Ns/St	4	293
18	1800	128 3	50 56	11	10 Ns	1	133
19	0900	243 4	47 52	41	10 Ns	3	266
19	1800	290 5	47 51	03	10 Cu/Ns	5	291
20	1800	292 2	54 55	02	6 Cu	2	045
21	0900	112 1	57 58	01	3 Ac	2	045
21	1800	135 1	56 57	01	4 Cu	2	068
22	0900	225 1	54 56	02	6 Cu	2	068
22	1800	225 2	53 54	01	7 Ns	2	045
23	0900	270 2	54 55	01	5 Cu	2	045
23	1800	292 2	53 54	01	4 Cu	2	045
24	0900	225 1	59 60	01	3 Cu	2	248
24	1800	225 1	54 55	01	4 Cu	3	068
25	0900	090 1	53 54	02	8 Cu	1	158
25	1800	315 2	54 55	02	8 Ns	2	090
26	0900	090 4	53 54	01	9 Ns	2	045
26	1800	135 4	50 51	43	0	2	045
27	0900	315 2	52 53	01	3 Ac	2	068
28	1800	315 2	55 56	01	2 Cu	3	248
28	0900		55 56	01	4 Cu	3	068
28	1800	270 4	56 57	01	3 Cu	4	225
29	0900	045 1	55 56	00	0	5	045
29	1800	315 3	54 55	01	4 Cu	2	045
30	0900	112 4	57 58	01	1 Cu	2	045
30	1800	315 1	55 56	00		2	248

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
July, 1956							
1	0900		54 55	40	Fog	3	068
1	1800	270 3	53 54	02	8 Cu	2	045
2	0900	225 1	54 55	03	9 Ns	1	225
2	1800	270 3	59 60	02	10 Ns	2	022
3	0900	045 2	58 59	02	2 Ns	1	045
3	1800	045 1	60 61	02	8 Cu	1	068
4	0900	090 1	54 55	03	9 Ns	1	068
4	1800	045 2	52 53	03	7 Ns	5	315
5	0900	135 1	52 53	02	7 Ns	2	225
5	1800	202 2	62 63	02	7 Ns	2	045
6	0900	135 1	63 64	02	7 Ns	1	045
6	1800	168 1	69 70	00		1	045
7	0900	112 1	66 67	00		1	045
7	1800	135 2	67 68	00		4	135
8	0900	090 4	56 57	00		4	180
8	1800	338 4	59 60	02	3 Cu	2	045
9	0900	090 2	65 66	02	4 Cu	2	045
9	1800	225 1	62 63	02	3 Cu	4	045
10	0900	225 2	58 60	01	2 Cu	2	068
10	1800	270 1	55 58	02	4 Cu	3	068
11	0900	calm 0	55 56	03	8 Ns	3	090
11	1800	135 1	54 55	40	Fog	3	045
12	0900	090 1	54 55	40	Fog	2	225
12	1800	045 1	58 59	40	Fog	2	135
13	0900	158 4	54 55	02	10 St	2	045
13	1800	135 3	53 54	02	10 Ns	2	045
14	0900	calm 0	57 58	40	Fog	2	045
14	1800	135 1	58 59	01	2 Cu	2	068
15	0900		59 60	03	8 Ns	1	090
15	1800	270 3	57 58	02	5 Cu	1	045
16	0900	calm 0	53 54	01	7 Cu	0	045
16	1800	270 5	59 60	02	4 Ac	1	045
17	0900	calm 0	56 57	02	0	1	090
17	1800	090 5	57 58	02	0	1	112
18	0900	045 5	60 61	00	0	1	045
18	1800	270 1	62 63	00	0	1	045
19	0900	068 3	60 61	02		1	045
19	1800	270 1	60 61	02		1	068
20	0900	225 1	59 60	45	Fog	1	090
20	1800	248 3	64 65	45	Fog	2	045

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
July, 1956							
21	0900	090 1	56 57	43	Fog	2	045
21	1800	045 1	53 54	45	Fog	1	090
22	0900	135 1	60 61	45	Fog	1	045
22	1800	270 1	61.5 62	01	3 Cu	1	045
23	0900	315 2	61 62	43	Fog	1	045
23	1800	225 2	57 58	00	1 Cu	3	090
24	0900	calm 0	59 60	45	Fog	2	270
24	1800	270 1	61 62	00		2	068
25	0900	090 2	55 56	41	Fog	4	045
25	1800	270 1	52 53	00		2	270
26	0900	045 1	53 54	00		3	068
26	1800	270 2	54 55	00		4	068
27	0900	270 1	57 58	00		3	045
27	1800	315 1	55 56	00		2	112
28	0900	calm 0	50 51	00		1	315
28	1800	270 2	54 55	00		2	090
29	0900	180 1	55 56	03	8 Cu	2	045
29	1800	225 1	52 53	03	6 Cu	1	135
30	0900	270 4	51 52	03	9 Ns	2	045
30	1800	248 3	53 54	00		2	090
31	0900		55 56	02	6 Cu	2	045
31	1800	225 2	61 62	03	7 Ns	2	045
August, 1956							
1	0900	090 1	53 54	02	6 Cu	1	045
1	1800	090 2	56 57	45	Fog	1	045
2	0900	090 1	54 55	02	6 Cu	2	045
2	1800	225 2	57 58	01	2 Cu	2	045
3	0900	135 1	60 61	02	4 Cu	6	045
3	1800	090 1	57 58	43	Fog	3	045
4	0900		59 60	47	Fog	1	045
4	1800	090 1	58 59	45	Fog	2	068
5	0900	225 1	59 60	45	Fog	1	068
5	1800	270 1	54 55	01	1 Cu	1	045
6	0900	270 1	58 59	02		1	045
6	1800	270 4	62 63	40	Fog	1	045
7	0900		54 55	40	Fog	1	045
7	1800	248 1	58 59	01	3 Cu	1	248
8	0900	225 1	60 61	01	0	3	068
8	1800	270 1	61 62	00	0	2	045
9	0900	090 1	55 56	00	3	2	315
9	1800	270 2	57 58	40	Fog	2	045
10	0900	090 3	56 57	02	10 Ns	2	045
10	1800	315 1	57 58	03	10 Cu	2	045

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
August, 1956							
11	0900	158 1	56 57	47	Fog	2	022
11	1800	248 1	57 59	40	Fog	2	068
12	0900	090 1	52 54	02	9 Sc	2	068
12	1800	248 1	60 62	01	0	2	248
13	0900	068 1	56 57	45	Fog	1	
13	1800	180 1	55 56	47	Fog	1	068
14	0900	338 1	53 55	01	9 Cu	1	045
14	1800	000 1	57 58	02	8 Cu	1	045
15	0900	270 1	56 57	03	8 Cu	1	045
15	1800	270 1	58 58	03	8 Cu	1	068
16	0900	270 1	55 56	03	8 Cu	1	068
16	1800	270 1	60 61	02	5 Cu	2	068
17	0900	calm 0	57 58	01	1 Cu	1	045
17	1800	270 1	58 59	00	0	1	045
18	0900	045 2	58 60	00	0	3	068
18	1800	270 1	60 61	47	Fog	1	045
19	0900	225 1	59 60	47	Fog	1	068
19	1800	225 1	57 59	47	Fog	1	068
20	0900	225 1	58 61	45	Fog	1	248
20	1800	225 5	59 60	01	7 Sc	1	068
21	0900	315 2	52 54	47	Fog	4	068
21	1800	270 2	54 54	47	Fog	3	248
22	0900	315 4	54 55	01	2 Cu	2	068
22	1800	315 3	62 64	47	Fog	2	068
23	0900	158 4	63 64	45	Fog	2	068
23	1800	135 3	55 57	45	Fog	2	248
24	0900	135 3	59 59	45	Fog	3	068
24	1800	135 1	56 57	45/50	Fog	2	068
25	0900	090 1	60 61	01	8 Cu	3	068
25	1800	225 2	59 60	02	3 Cu	3	068
26	0900	225 1	56 58	02	9 Ns	2	068
26	1800	225 2	56 57	47	9 Ns	2	068
27	0900	270 1	59 60	02	9 Ns	2	248
27	1800	270 3	60 61	02	9 Ns	2	068
28	0900	068 3	53 54	02	10 Cu	2	068
28	1800	000 2	58 59	02	9 Ns	3	248
29	0900	315 4	53 54	01	9 Ns	3	068
29	1800	248 4	56 57	02	9 Ns	3	068
30	0900	045 2	56 59	00	0	2	292
30	1800	090 2	57 58	00	0	2	068
31	0900	calm 0	54 55	03	6 Cu	2	068
31	1800	090 1	52 53	40	Fog	2	068

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
September, 1956							
1	0900	270 5	50 51	01	0	2	068
1	1800	135 2	50 54	01	0	4	068
2	0900	090 3	54 56	01	0	3	068
2	1800	135 1	53 54	01	0	2	248
3	0900	calm 0	53 54	01	0	1	292
3	1800	225 2	53 55	02	1 Cu	2	068
4	0900	135 3	54 60	00	0	2	292
4	1800	315 2	56 57	00	0	2	068
5	0900	068 5	55 56	02	2 Cu	3	068
5	1800	315 1	53 54	03	3 Cu	2	292
6	0900	315 5	53 54	03	0	2	068
6	1800	135 5	55 56	45	Fog	2	068
7	0900	045 5	52 54	01	0	2	068
7	1800	045 3	53 54	02	0	2	068
8	0900	090 3	54 55	01	2 Cu	5	068
8	1800	045 2	53 54	02	0	1	068
9	0900	090 5	51 52	02	10 Cu/Ns	2	068
9	1800	045 5	50 51	11	8 Ns	2	068
10	0900	090 6	55 56	63	0	3	068
10	1800	135 3	53 54	11	0	3	068
11	0900	045 3	59 60	11	0	2	248
11	1800	135 3	58 59	45	Fog	1	068
12	0900	180 1	53 54	01	0	2	068
12	1800	135 1	55 56	60	0	1	292
13	0900	045 1	52 53	40	Fog	1	248
13	1800	045 1	53 55		10 Ns	1	068
14	0900	068 1	51 52	03	10 Cu	2	068
14	1800	225 1	53 55		10 Ns	2	068
15	0900	135 1	51 52	03	10 Ns	2	202
15	1800	225 1	52 53	03	10 Ns	2	068
16	0900	090 1	52 53	02	10 Ns	1	248
16	1800	000 1	54 55	02	9 Ns	1	270
17	0900	315 1	55 56	02	9 Ns	1	022
17	1800	270 1	54 56	49	5 Ns	1	068
18	0900	068 1	52 54	43	10 Ns		248
18	1800	292 1	51 52	47	Fog		292
19	0900	135 1	59 60	01	8 Cu		068
19	1800	112 1	55 56	40	Fog		068
20	0900	270 2	54 55	01	4 Cu		068
20	1800	270 2	52 53	01	3 Cu		068

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
September, 1956							
21	0900	270 1	60 63	01	2 Cu		248
21	1800	248 1	59 60	00	2 Cu		068
22	0900	045 1	58 58	04	7 Cu		068
22	1800	068 1	56 57	04	6 Ns		068
23	0900	180 2	56 57	63	10 Ns		068
23	1800	180 1	53 54	63	10 Ns		248
24	0900	090 2	54 56	41	8 Cu		068
24	1800	112 1	54 56	62	Fog		068
25	0900	112 2	56 57	62	Fog		068
25	1800	135 2	54 55	63	Fog		068
26	0900	315 2	55 56	01	7 Cu		292
26	1800	045 1	52 54	02	2 Cu		248
27	0900	225 1	56 57	02	2 Cu		068
27	1800	202 1	55 56	03	9 Cu		068
28	0900	225 2	55 56	01	4 Cu		068
28	1800	225 2	54 55	01	7 Ns		270
29	0900	180 2	53 54	03	9 Ns		068
29	1800	135 2	52 53	18	10 Ns		248
30	0900	225 1	55 56	01	4 Cu		068
30	1800	158 1	54 55	03	8 Cu		068
October, 1956							
1	0900	112 1	54 55	50	8 Cu		068
1	1800	135 1	53 54	50	7 Ns		022
2	0900	270 1	54 55	01	8 Cu		022
2	1800	270 1	51 52	01	3 Cu		068
3	0900	090 2	52 53	62	8 Ns		248
3	1800	192 1	54 55	01	5 Cu		022
4	0900	000 1	50 51	01	5 Cu		068
4	1800	192 1	53 54	02	0		068
5	0900	045 1	52 53	03	8 Cu		248
5	1800	090 1	51 52	03	8 Cu		022
6	0900	022 2	51 52	01	4 Cu		022
6	1800	045 1	53 54	01	0		248
7	0900	000 1	53 54	01	0		248
7	1800	068 2	55 56	04	2 Cu		068
8	0900	045 2	52 53	01	6 Cu		045
8	1800	068 1	51 52	03	8 Cu		068
9	0900	090 2	53 54	03	8 Ns		248
9	1800	112 2	51 52	47/50	10 Ns		315
10	0900	180 1	54 55	01	6 Cu		022
10	1800	000 1	52 54	01	2 Cu		

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
October, 1956							
11	0900	045 1	50 51	03	8 Ns		
11	1800	225 1	49 50	01	8 Cu		068
12	0900	270 3	51 52	01	6 Cu		068
12	1800	270 2	50 51	01	3 Cu		248
13	0900	202 1	54 55	81	7 Sc		068
13	1800	158 1	54 55	01	5 Cu		248
14	0900	180 2	53 54	03	8 Cu		270
14	1800	225 2	51 52	47/50	10		270
15	0900	225 2	52 53	45	Fog		045
15	1800	180 1	49 50	02	8 Cu		068
16	0900	068 1	50 52	01	7 Cu		068
16	1800	135 7	51 52	62		3	045
17	0900	135 5	48 49	62		5	045
17	1800	158 4	52 53	02	6 Cu	4	045
18	0900	068 1	50 51	01	6 Cu	2	045
18	1800	045 1	50 51	01	5 Cu	2	045
19	0900	135 10	48 49	62		6	045
19	1800	158 3	54 55	63		4	045
20	0900	000 3	52 53	01	7 Cu	3	045
20	1800	045 2	52 53	01	7 Cu	3	045
21	0900	315 4	53 54	01	5 Cu	2	045
21	1800	135 5	51 52	01	3 Cu	3	045
22	0900	135 8	47 48	18	8 Ns	5	045
22	1800	135 5	48 49	01	6 Cu	5	045
23	0900	315 3	44 45	01	4 Cu	2	045
23	1800	045 3	47 48	01	3 Cu	2	045
24	0900	135 7	50 51	63		5	045
24	1800	135 7	48 49	63		4	045
25	0900	045 2	52 53	62		2	045
25	1800	045 4	55 56	50	9 Ns	2	045
26	0900	045 3	55 56	50		3	045
26	1800	068 4	47 48	02	6 Cu	3	045
27	0900	045 2	50 51	04	6 Ns	2	045
27	1800	338 4	47 48	02		3	045
28	0900	045 3	49 50	03	10 Ns	3	045
28	1800	180 6	47 48	63		3	045
29	0900	000 2	49 50	00	10 Ns	3	045
29	1800	045 3	42 43	50	10 Ns	3	045
30	0900	225 5	49 50	50	10 Ns	3	202
30	1800	225 1	56 57	18		4	225
31	0900	180 4	43 44	62		2	045
31	1800	158 7	44 45	63		8	045

Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
November, 1956							
1	0900	045 3	44 45	02	3 Cu	7	045
1	1800	180 1	44 45	02	3 Cu	3	090
2	0900	180 7	45 46	02	10 Cu	5	045
2	1800	045 7	46 47	18	Ns	1	045
3	0900	135 6	46 47	02	10 Cu	5	045
3	1800	090 3	49 50	02	10 Ns	2	135
4	0900	090 1	48 49	02	8 Ns	2	045
4	1800	045 1	48 50	00		3	045
5	0900	045 6	48 49	18		4	045
5	1400	202 4	49 50	43		3	045
5	1800	225 3	49 50	43		2	225
6	0900	090 1	48 49	02	4 Cu	2	045
6	1800	090 1	50 51			2	045
7	0900	090 4	45 46	11		2	045
7	1800	090 4	49 50	02	10 Ns	2	045
8	0900	090 5	48 49	50	10 Ns	2	045
8	1800	090 6	46 47	45/63		3	045
9	0900	045 4	49 50	00		3	045
9	1800	135 8	51 52	63		5	045
10	0900	225 3	48 49	50	10 Ns	3	225
10	1800	180 2	51 52	02	3 Cu	2	045
11	0900	045 3	52 53	02	7 Cu	2	068
11	1800	045 1	51 52	02	3 Cu	2	045
12	0900	225 5	49 50	02	8 Cc	3	045
12	1800	225 7	49 50	18		7	045
13	0900	292 5	50 51	02	3 Cu	4	045
14	0900	045 2	56 57	00	8 Cu	4	270
14	1800	135 6	47 48	63	10 Ns	9	315
15	0900	248 5	54 55	01	5 Cu	5	270
15	1800	135 3	46 47	03	6 Cu	4	292
16	0900	135 5	47 48	63	10 Ns	5	292
16	1800	158 7	47 49	18	9 Ns	6	292
17	0900	270 7	44 45	01	5 Cu	6	315
17	1800	270 5	46 47	03	6 St	7	338
18	1800	225 2	48 49	00	0 O	2	022
19	0900	045 3	45 46	03	5 Cu	2	045
19	1800	090 2	48 49	00	0	2	090
20	0900	090 2	41 42	01	3 Cu	2	292
20	1800	045 1	49 50	03	5 Cu	2	045

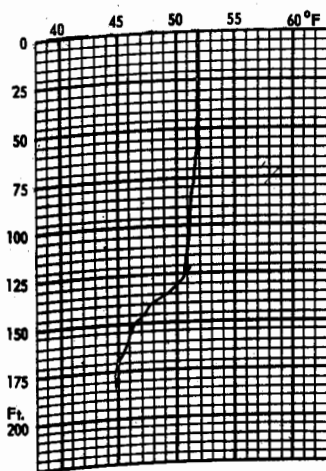
Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
November, 1956							
21	0900	090 4	44 45	00	0	2	270
21	1800	068 3	43 44	00	0	2	090
22	0900	068 5	44 45	01	3 Cu	2	225
22	1800	068 5	43 44	00	0	2	270
23	0900	090 5	44 45	00	0	3	270
23	1800	112 5	43 44	00	0	3	270
24	0900	090 6	44 45	00	0	4	225
24	1800	068 5	44 45	00	0	3	270
25	0900	090 6	43 44	00	0	4	248
25	1800	090 5	44 45	00	0	3	270
26	0900	090 3	46 47	03	10 Ns	3	292
26	1800	112 3	45 46	03	9 Fs	2	248
27	0900	045 3	41 42	01	2 Ns	3	225
27	1800	068 4	45 46	00	0	4	248
28	0900	090 7	47 48	00	0	3	270
28	1800	090 6	47 48	00	0	4	248
29	0900	045 5	47 48	00	0	3	248
29	1800	112 4	44 45	03	10 Ns	3	248
30	0900	112 3	48 49	01	4 Ns	3	270
30	1800	090 2	48 49	00	0	2	045
December, 1956							
1	0900	112 3	42 43	03	10 Ns	2	270
1	1800	135 1	47 48	43	10 Ns	2	045
2	0900	135 5	44 45	47	Fog	3	248
2	1800	090 3	45 46	43	Fog	3	238
3	0900	270 6	45 46	18	8 Fs	6	202
3	1800	270 7	37 38	88	10 Ns	9	045
4	0900	112 3	37 38	72	8 Fs	6	225
4	1800	045 5	31 32	41	8 Ns	6	225
5	0900	090 6	30 32	03	6 Ns	3	248
5	1800	090 5	30 30	01	4 Ns	4	225
6	0900	135 2	25 26	01	2 Cu	2	270
6	1800	112 5	30 31	03	9 Cu	3	225
7	0900	090 5	35 36	01	9 Ns	2	248
7	1800	090 6	30 31	84	10 Ns	4	248
8	0900	225 7	30 32	63	18 Ns	9	022
8	1800	068 3	37 38	63	10 Ns	5	248
9	0900	180 6	40 41	63	10 Ns	6	315
10	0900	225 5	45 46	01	7 Ns	8	045
10	1800	225 11	47 48	01	6 Ns	5	045

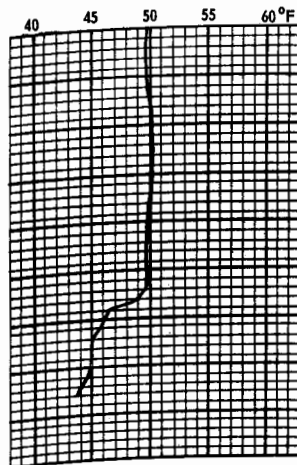
Meteorological Observations at Swiftsure Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
December, 1956							
11	0900	315 4	41 42	01	7 Cu	2	045
11	1800	315 2	47 48	00	0	2	158
12	0900	090 6	42 43	18	9 Ns	3	248
12	1800	202 3	46 47	50	10 Ns	2	315
13	0900	180 3	47 48	11	10 Ns	3	045
13	1800	202 3	46 47	03	7 Fs	4	022
14	0900	202 3	45 46	41	8 Cu	3	045
14	1800	225 2	46 47	50	10 Ns	2	045
15	0900	180 5	47 48	63	10 Ns	5	248
15	1800	270 6	45 46	63	10 Ns	6	045
16	0900	338 6	44 45	02	7 Cu	3	045
16	1800	135 3	46 47	50	8 Ns	2	022
17	0900	135 8	43 44	63	10 Ns	6	338
17	1800	135 3	45 45	03	10 Ns	3	292
18	0900	180 2	47 48	02	10 Ns	3	315
18	1800	202 3	46 47	18	8 Fs	4	248
19	0900	135 5	46 47	50	8 Ns	4	315
19	1800	225 7	45 46	62		5	022
20	0900	225 2	47 48	01	8 Cu	5	225
20	1800	248 5	45 46	18	7 Cu	3	045
21	0900	270 5	43 44	01	3 Cu	3	045
21	1800	225 3	46 47	01	4 Ns	4	022
22	0900	045 8	42 43	81	8 Ns	6	315
22	1800	112 3	44 45	00	8 Ns	3	292
23	0900	135 3	47 48	00	10 Ns	3	338
23	1800	112 3	45 46	01	8 St	4	248
24	0900	158 4	46 47	03	7 Sc	2	292
24	1800	090 4	45 46	03	6 Ci	2	022
25	0900	022 4	43 44	01	5 Cu	3	068
25	1800	135 5	47 48	02	4 Cu	2	045
26	0900	090 3	43 44	02	7 Cu	2	045
26	1800	135 3	47 48	62	8 Ns	2	180
27	0900	090 3	45 46	01	8 Cu	2	045
27	1800	090 5	43 44	01	4 Cu	4	270
28	0900	090 6	44 45	00	0	4	270
28	1800	090 5	46 47	03	0	4	315
29	0900	090 3	42 42	43	6 Sc	1	292
29	1800	090 5	43 44	95	6 Cu	2	022
30	0900	090 6	42 43	01	6 Cu	2	248
30	1800	180 4	44 45	43	7 Cu	4	045
31	0900	090 3	43 44	63	10 Fog	3	270
31	1800	135 5	45 46	63		3	045

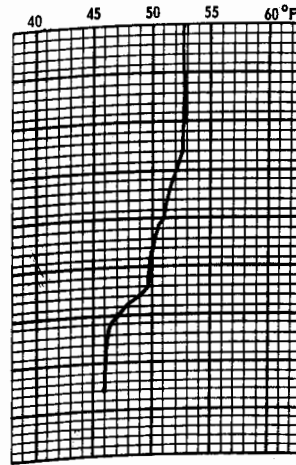
Bathythermograms



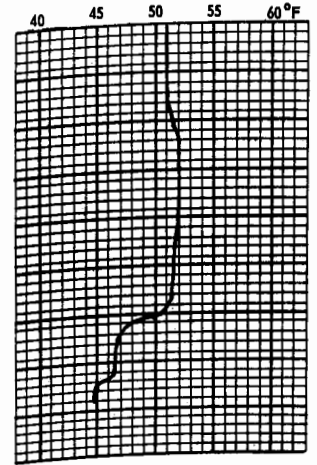
1800/11-XI-54



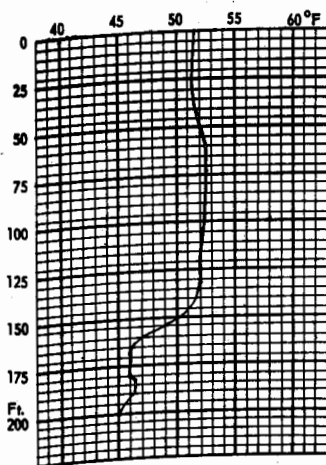
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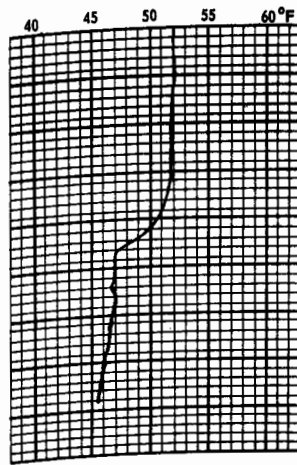
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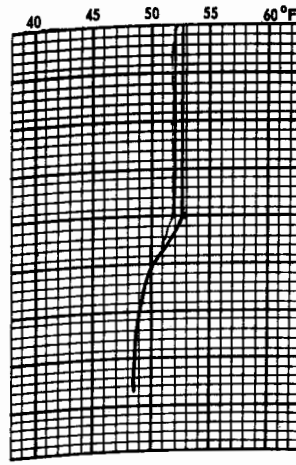
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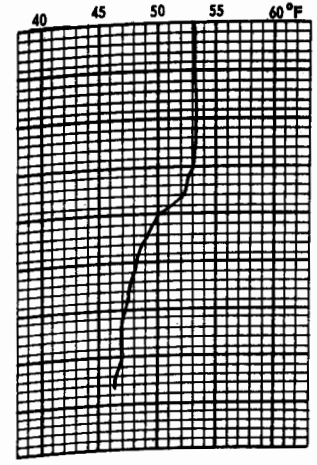
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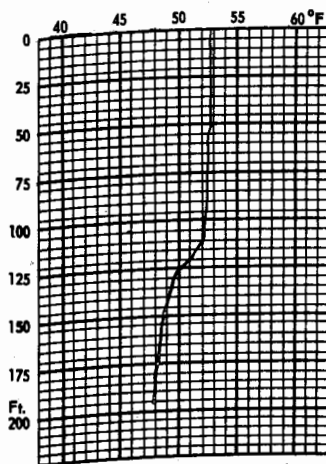
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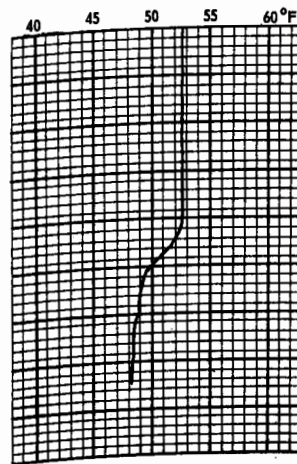
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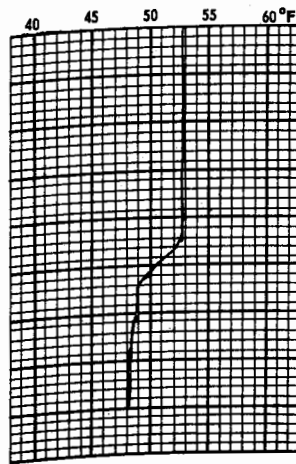
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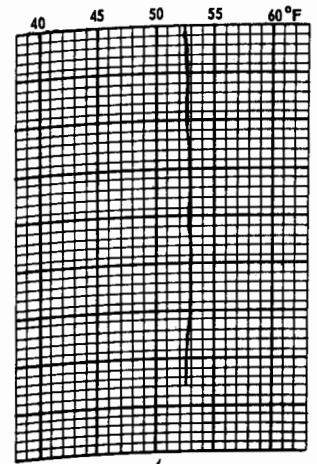
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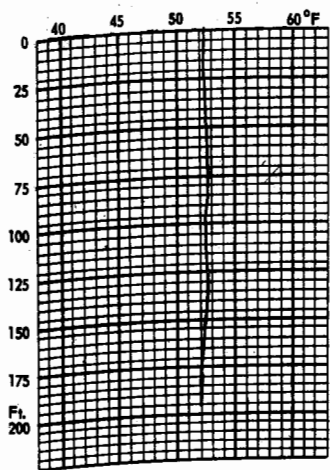


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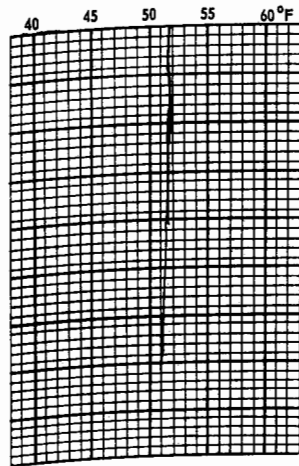


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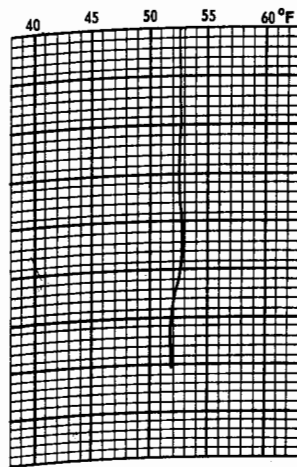
Bathythermograms



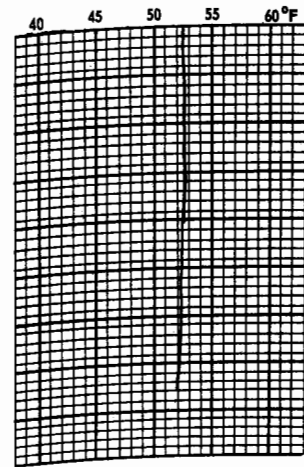
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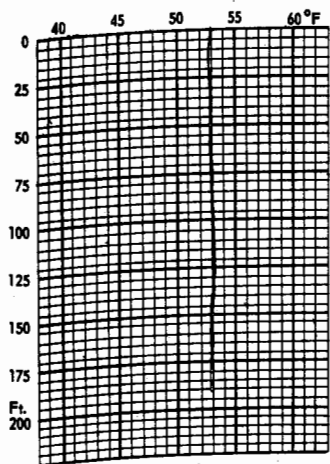
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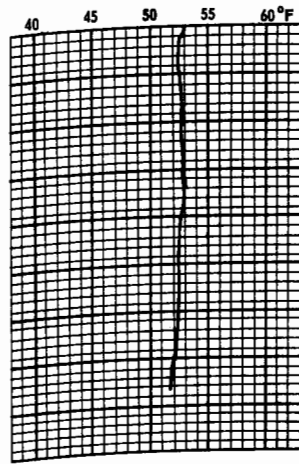
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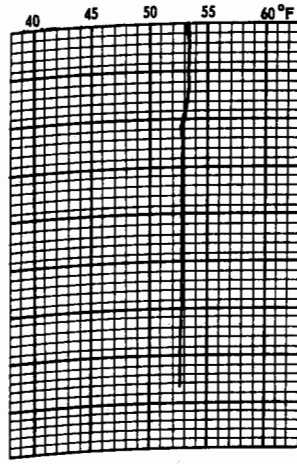
1800/22-XI-54



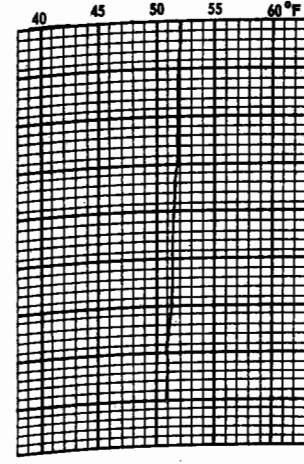
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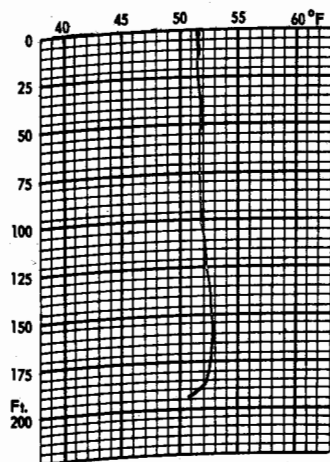
1800/24-XI-54



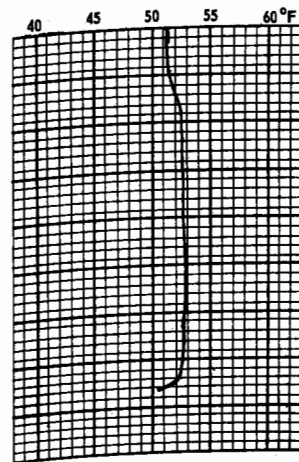
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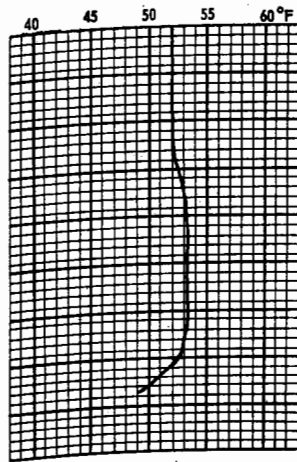
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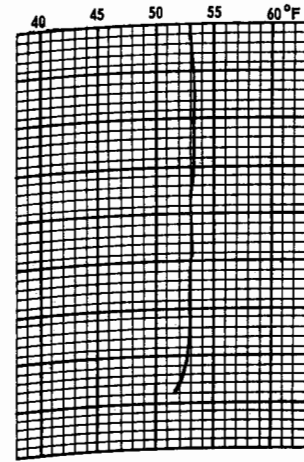
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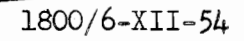
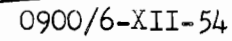
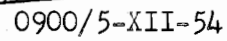
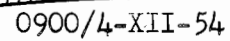
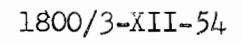
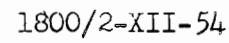
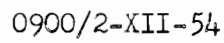
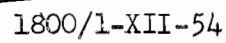
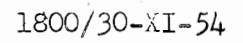
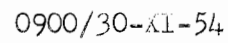
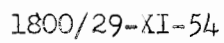
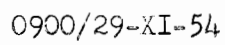
1800/27-XI-54



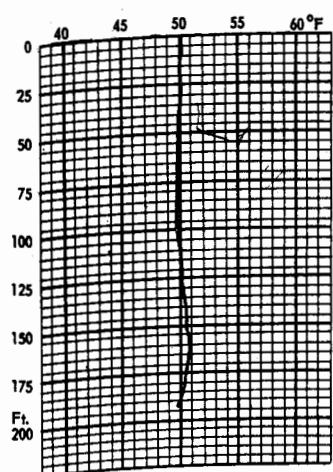
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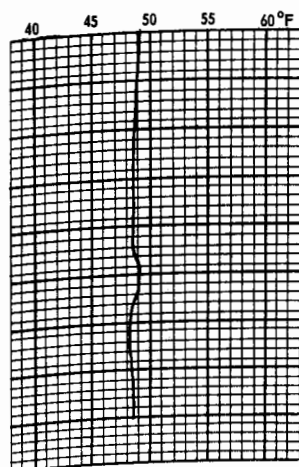
1800/28-XI-54



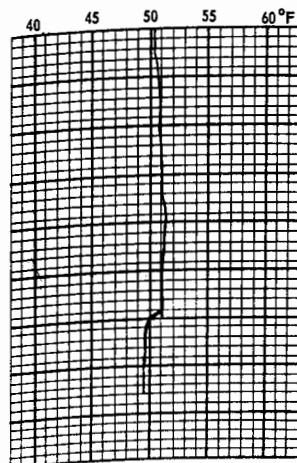
Bathythermograms



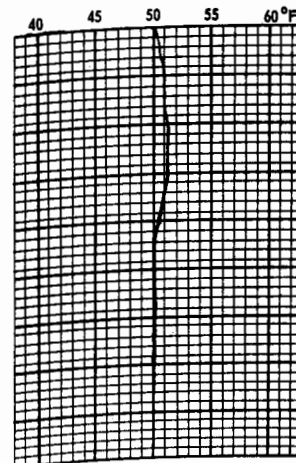
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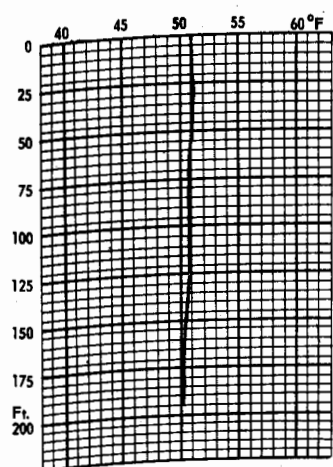
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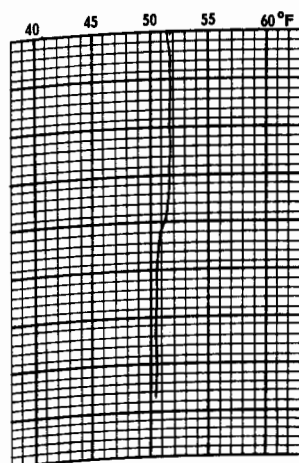
1800/8-XII-54



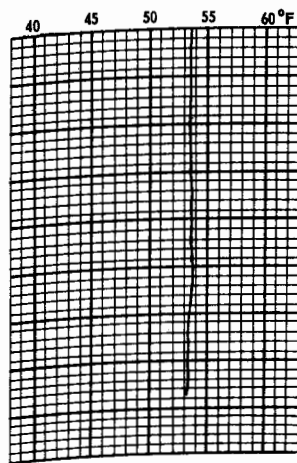
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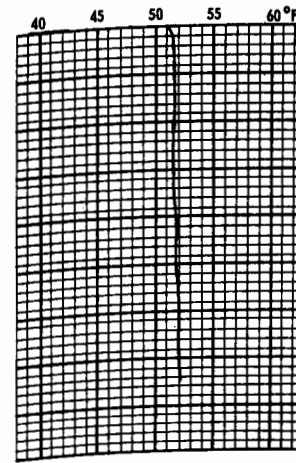
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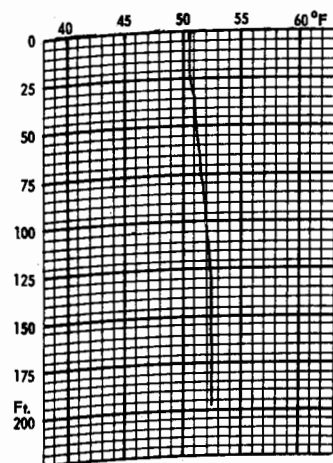
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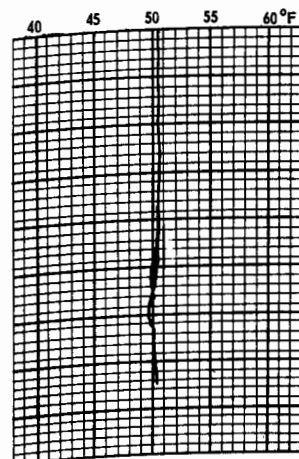
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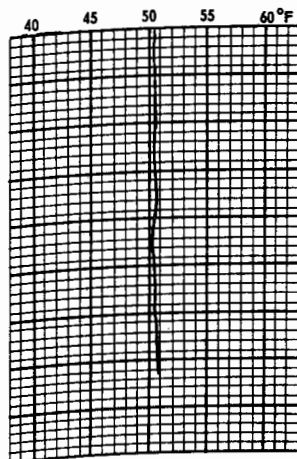
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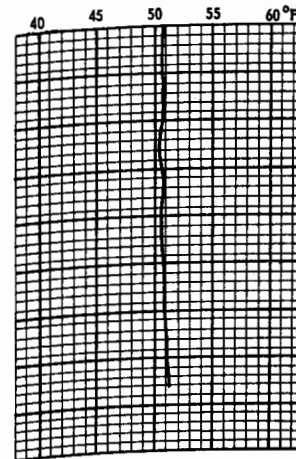
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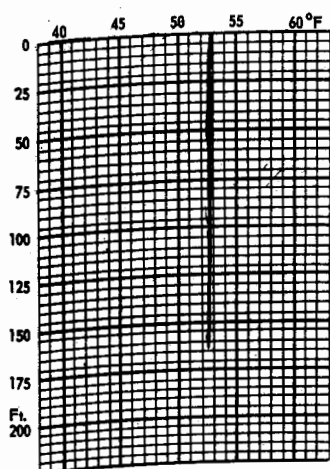


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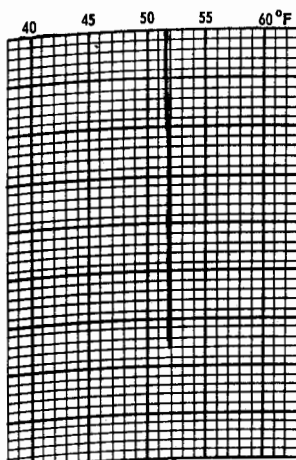


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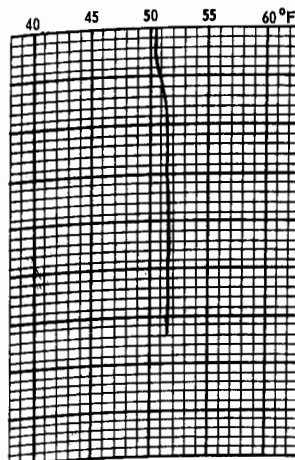
Bathythermograms



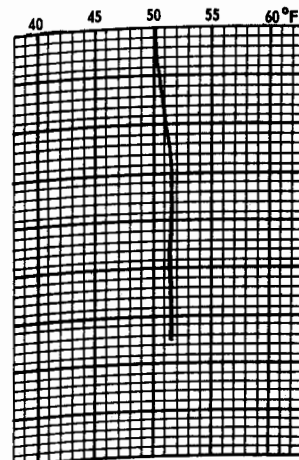
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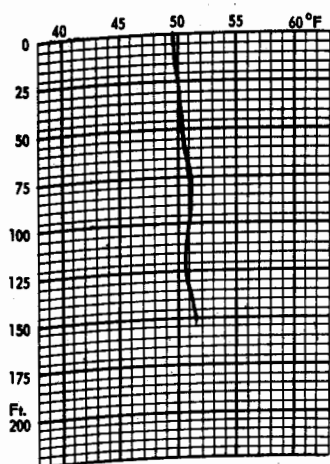
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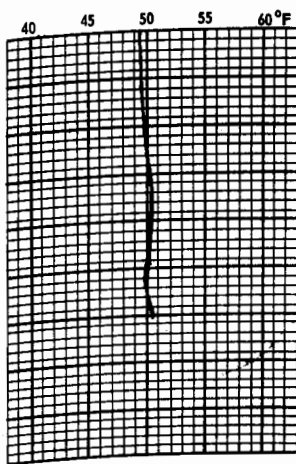
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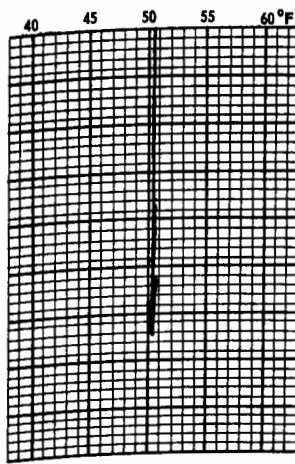
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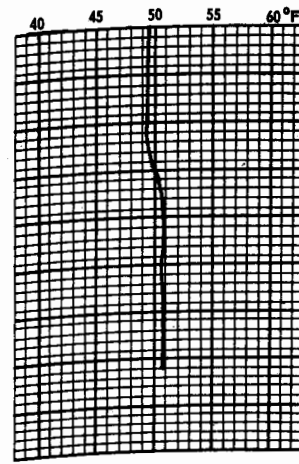
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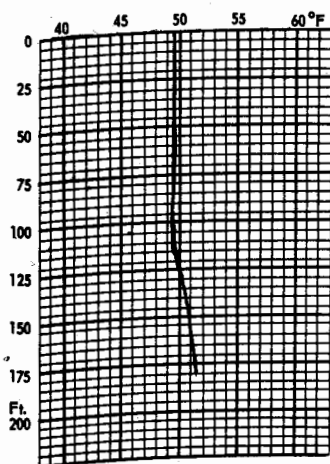
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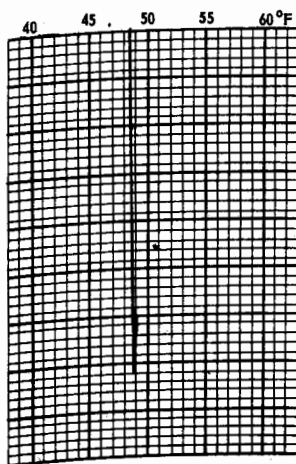
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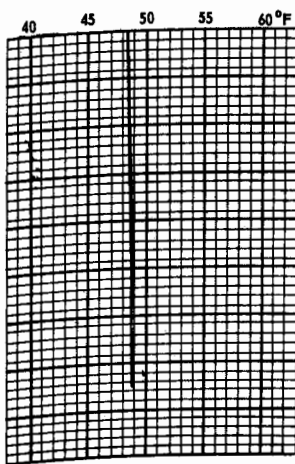
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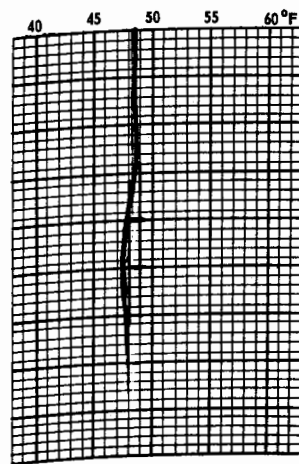
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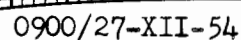
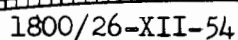
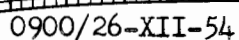
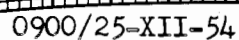
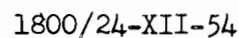
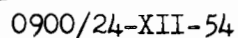
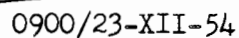
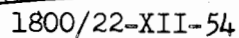
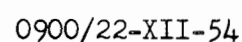
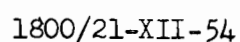
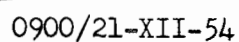
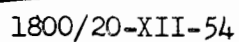
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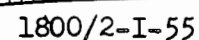
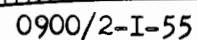
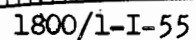
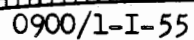
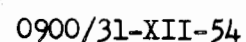
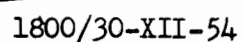
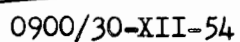
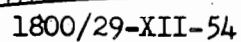
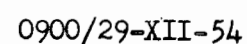
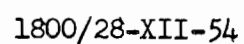
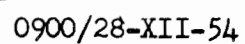
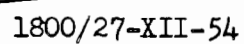


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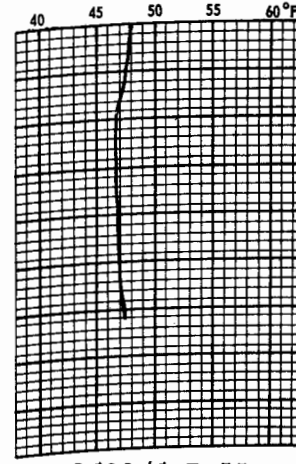
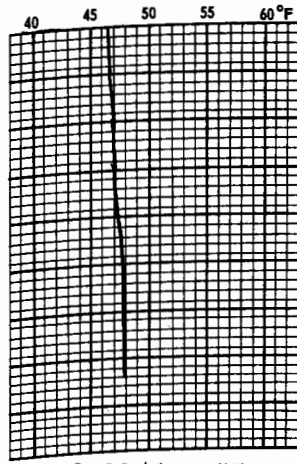
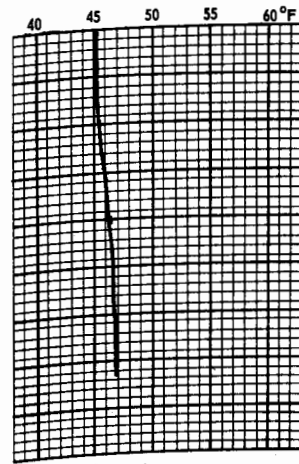
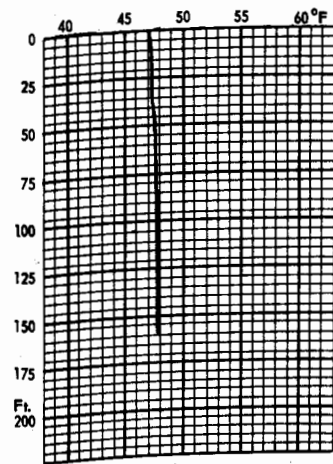
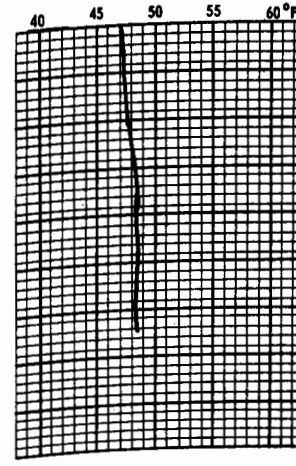
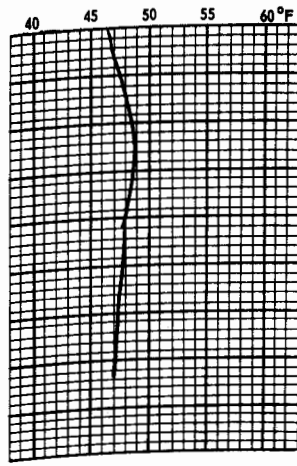
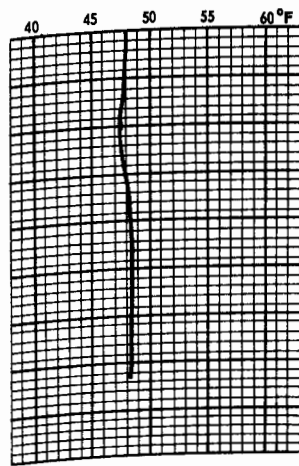
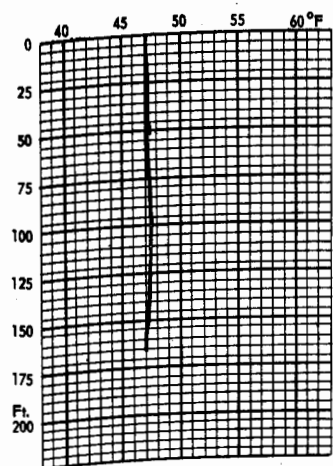
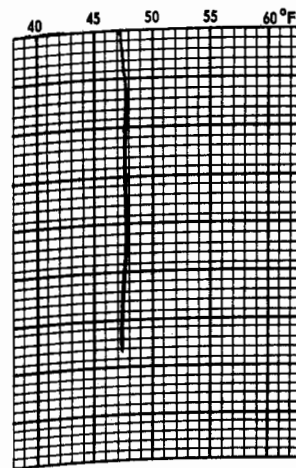
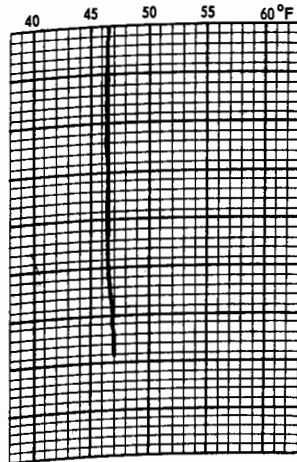
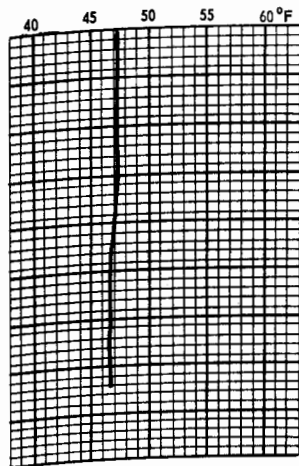
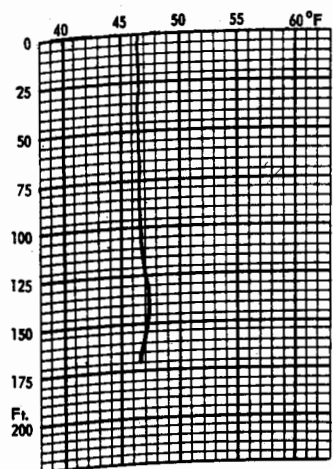


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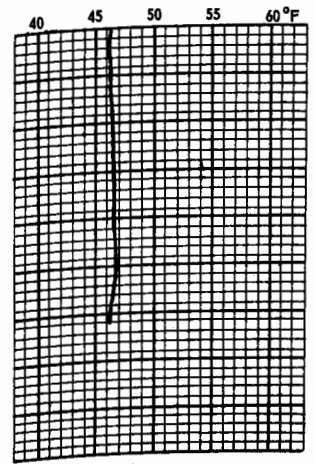
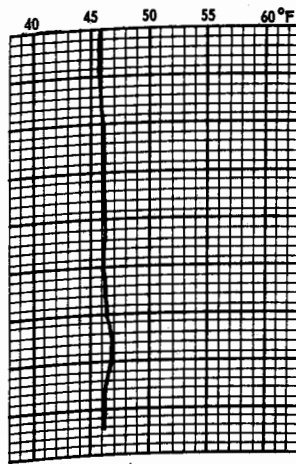
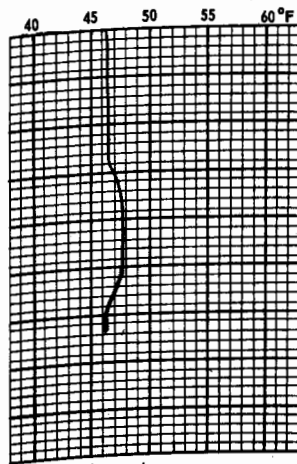
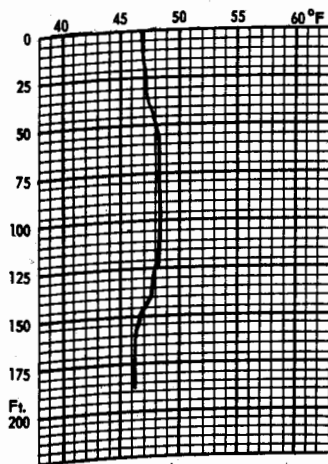
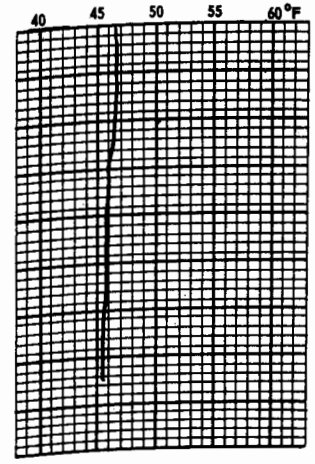
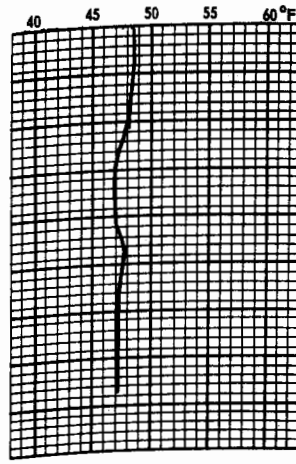
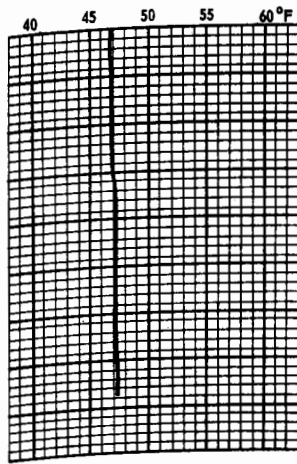
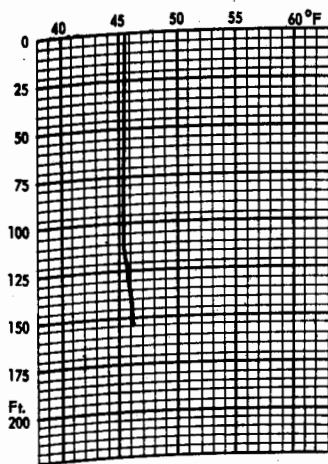
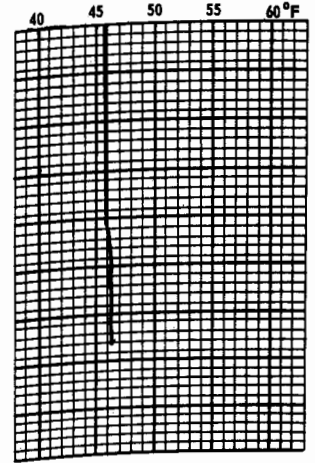
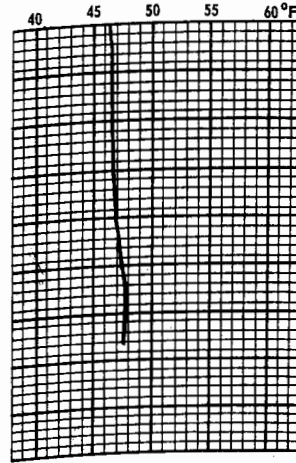
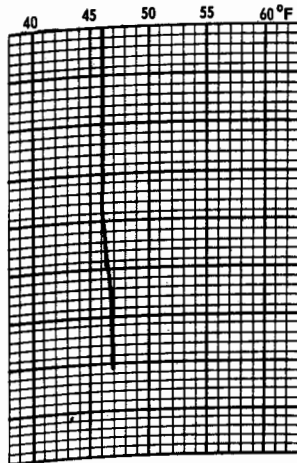
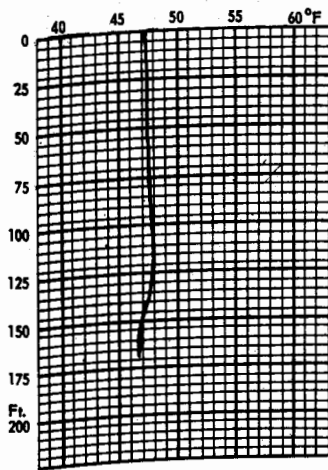




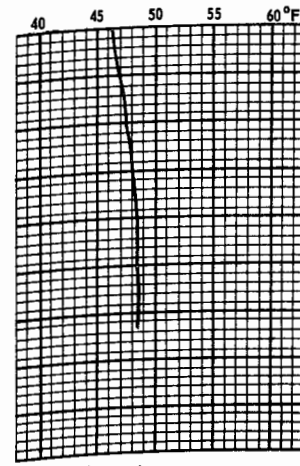
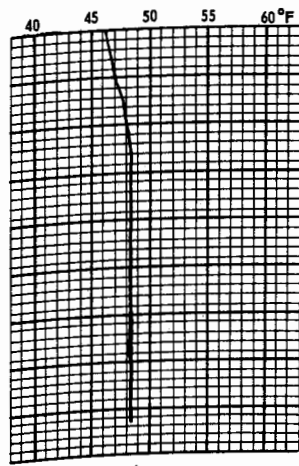
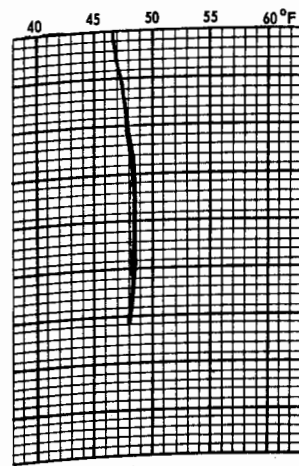
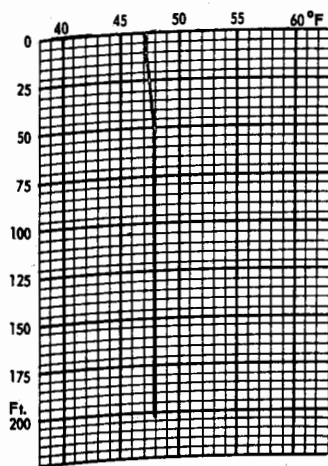
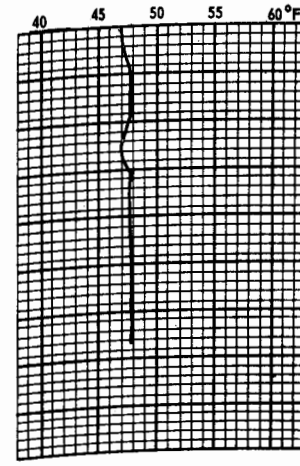
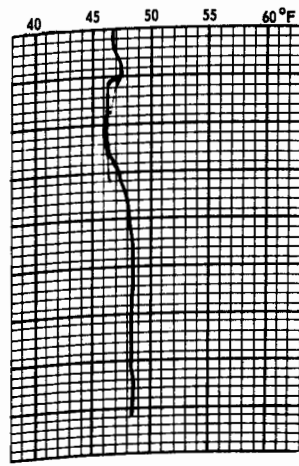
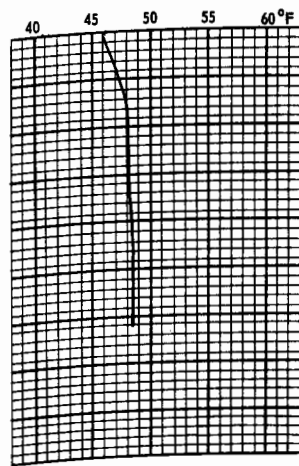
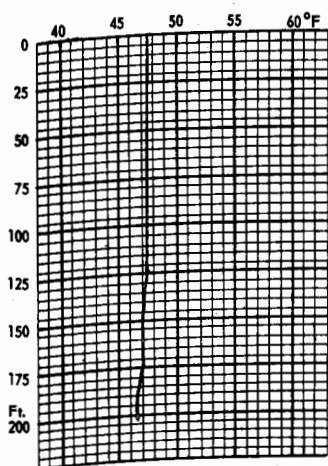
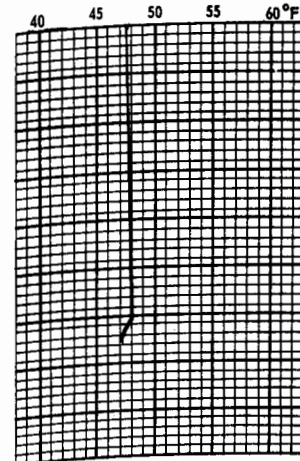
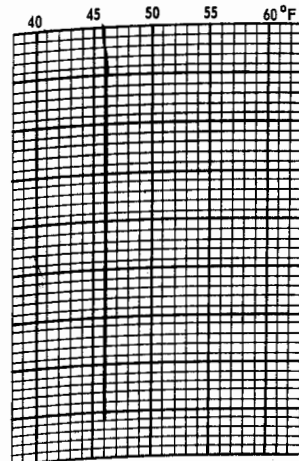
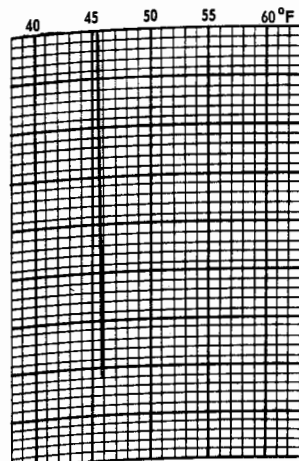
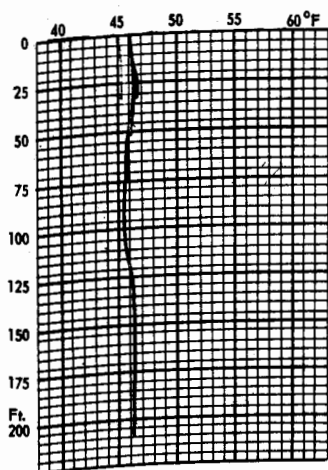
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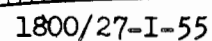
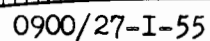
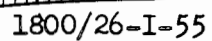
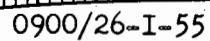
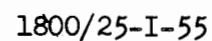
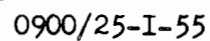
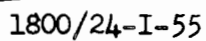
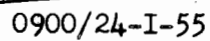
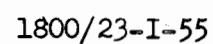
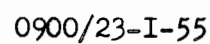
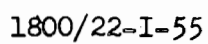
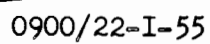


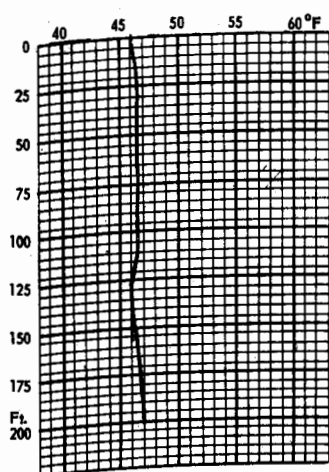
Bathythermograms



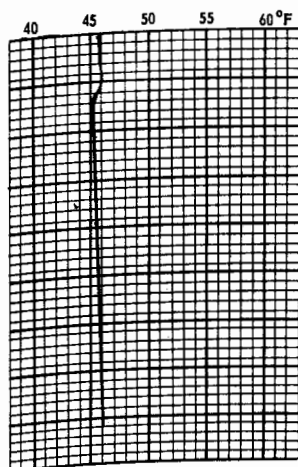
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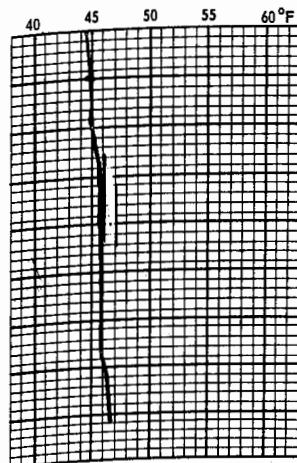




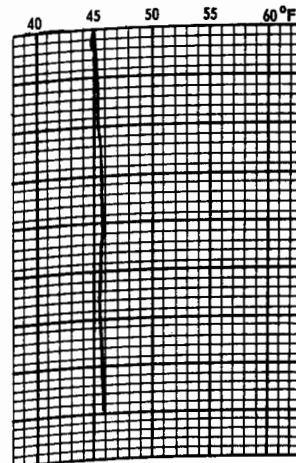
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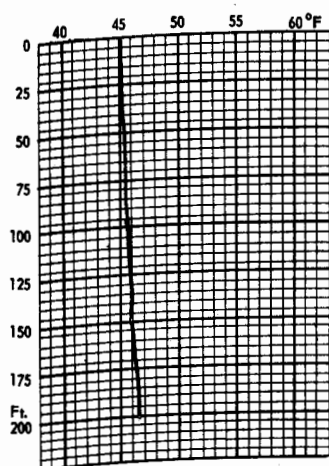
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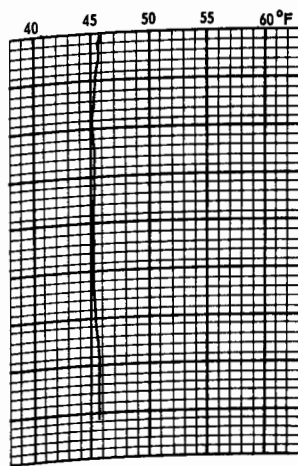
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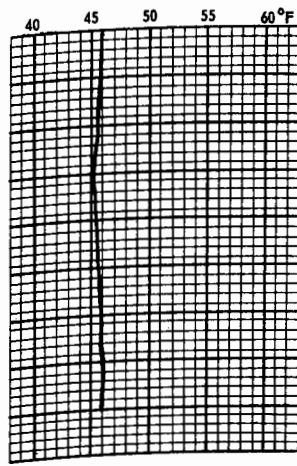
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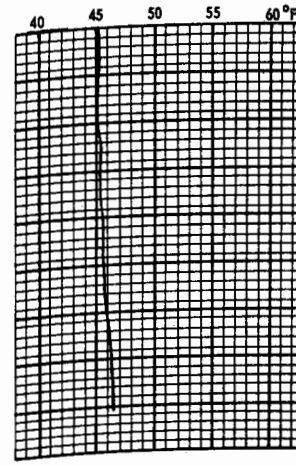
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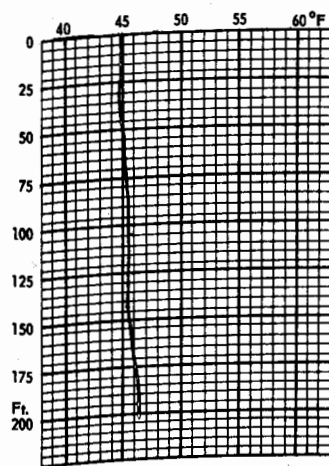
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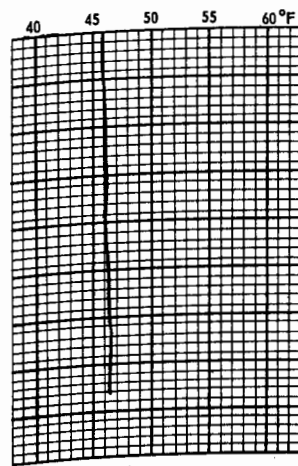
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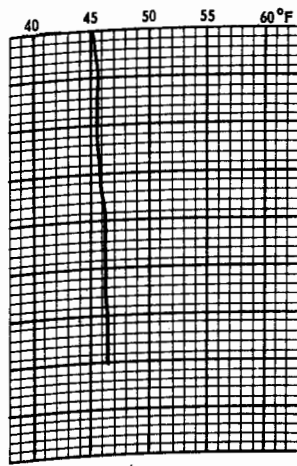
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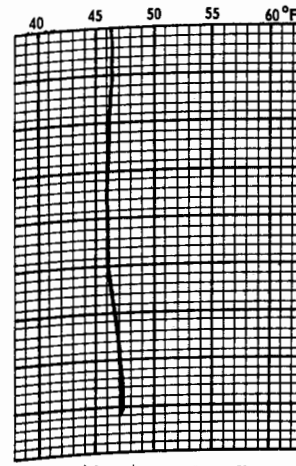
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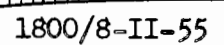
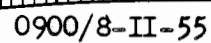
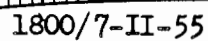
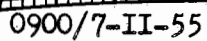
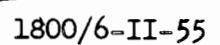
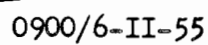
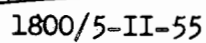
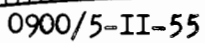
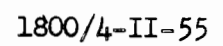
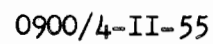
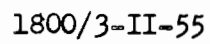
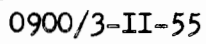
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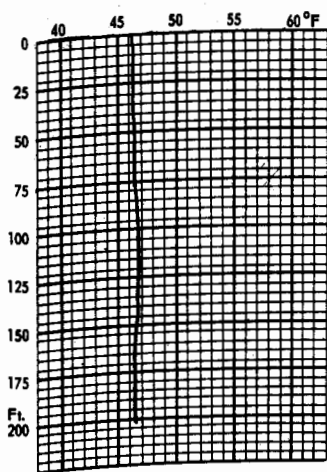


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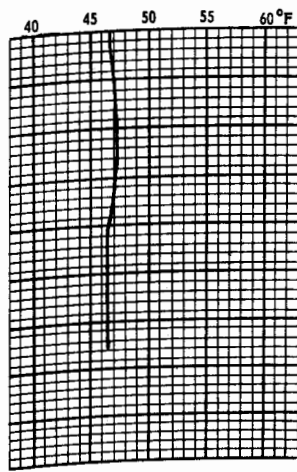


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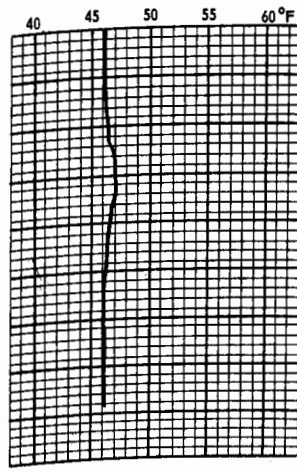




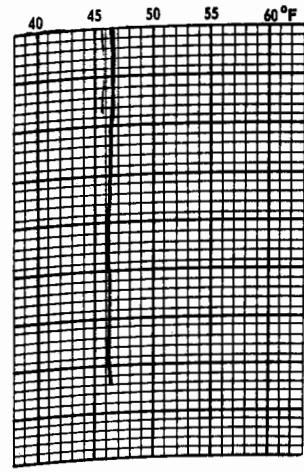
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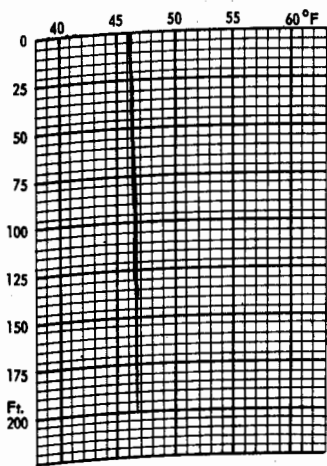
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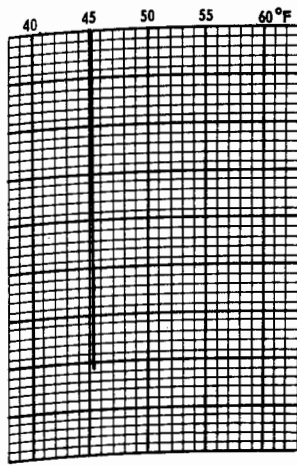
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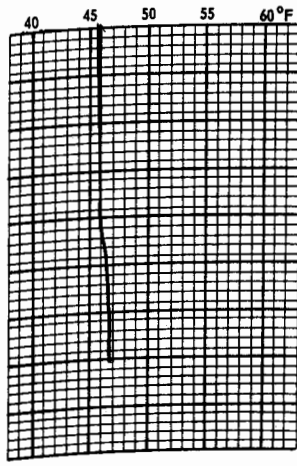
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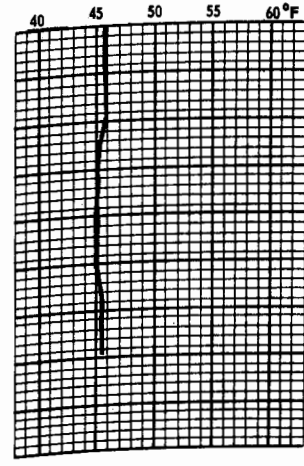
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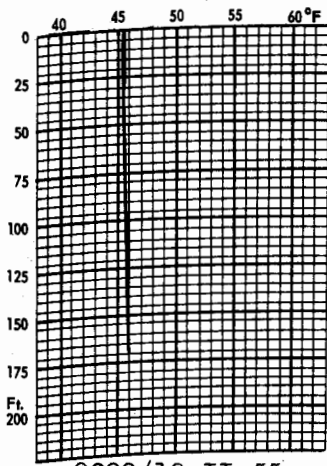
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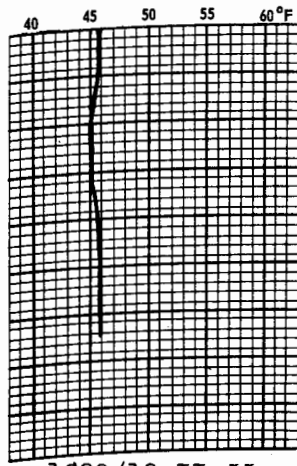
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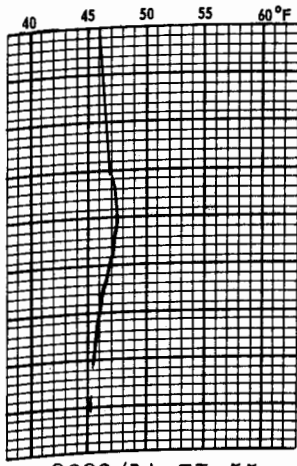
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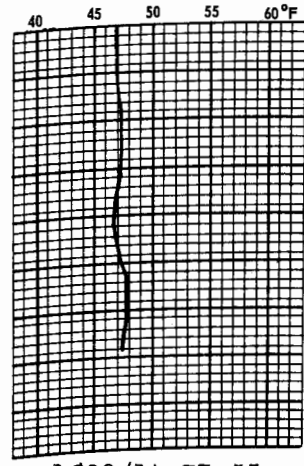
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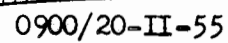
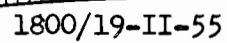
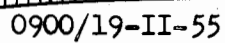
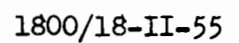
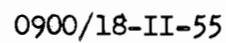
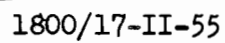
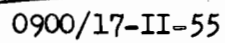
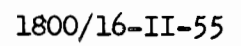
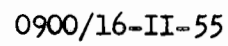
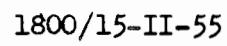
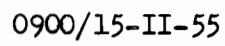
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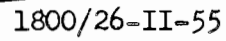
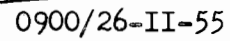
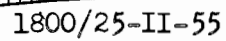
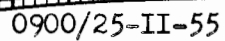
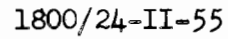
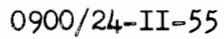
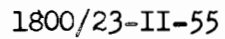
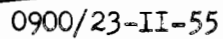
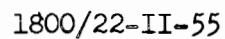
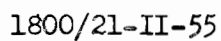
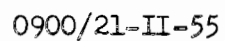


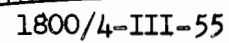
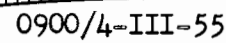
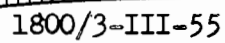
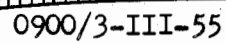
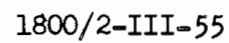
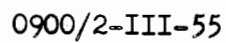
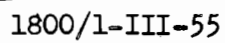
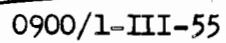
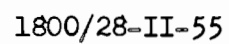
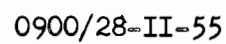
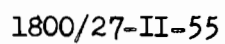
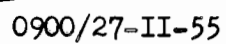
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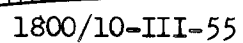
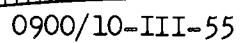
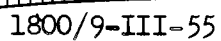
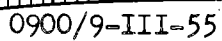
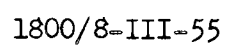
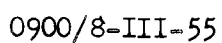
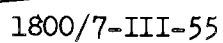
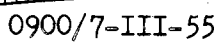
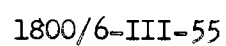
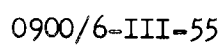
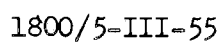
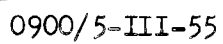


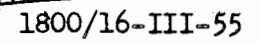
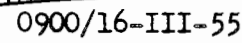
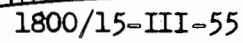
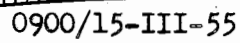
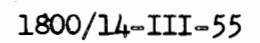
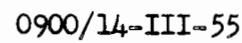
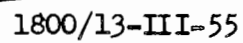
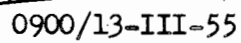
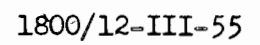
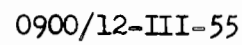
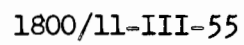
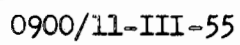
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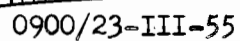
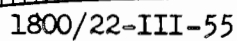
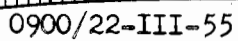
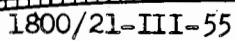
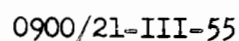
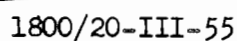
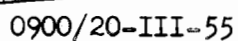
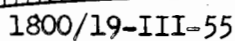
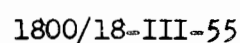
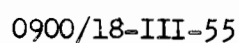
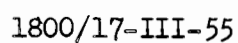
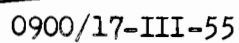




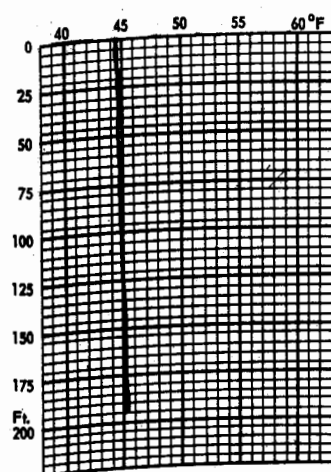




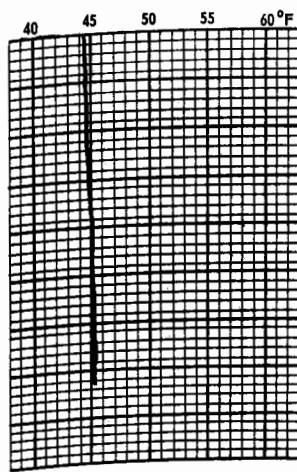




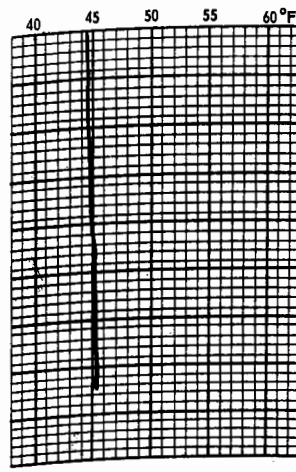
Bathythermograms



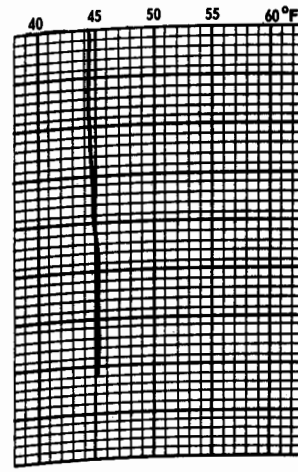
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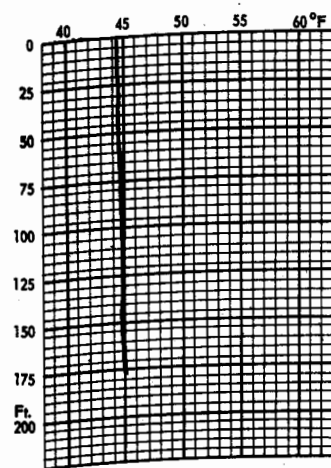
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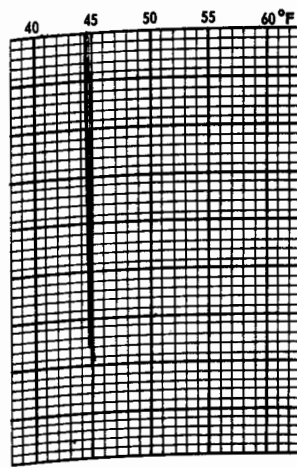
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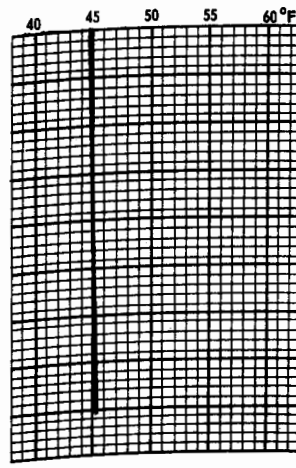
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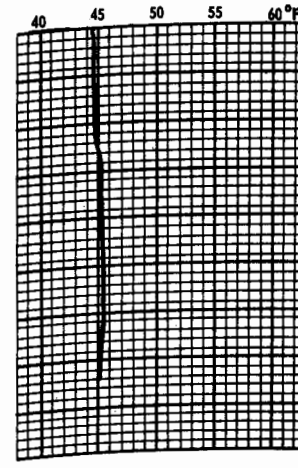
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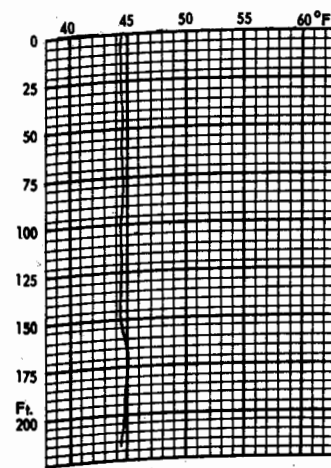
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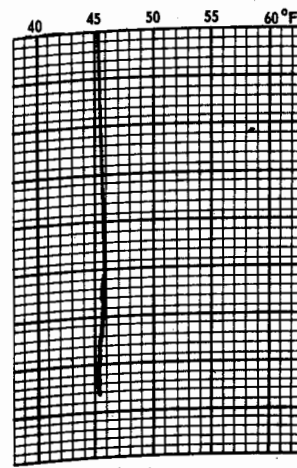
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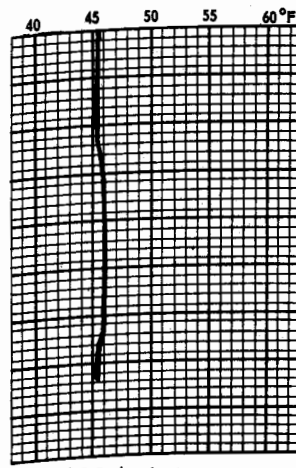
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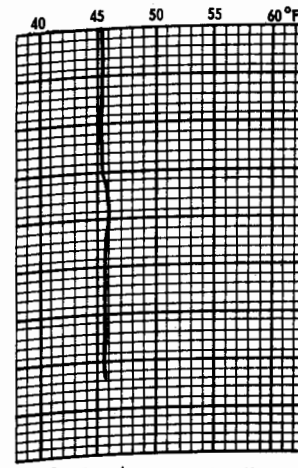
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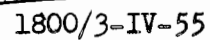
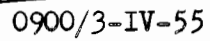
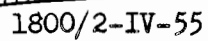
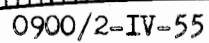
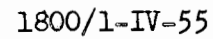
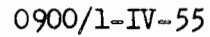
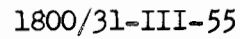
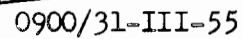
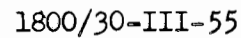
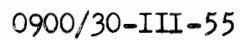
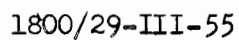
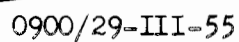
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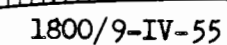
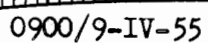
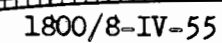
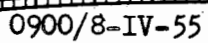
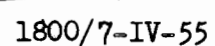
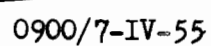
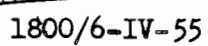
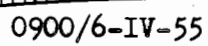
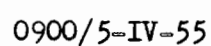
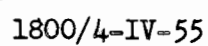
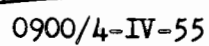


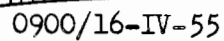
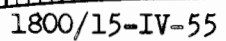
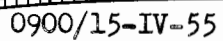
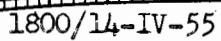
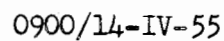
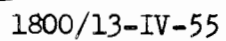
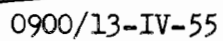
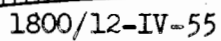
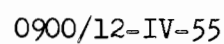
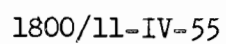
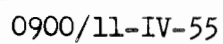
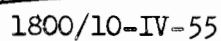
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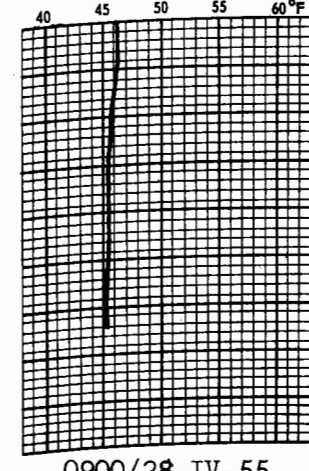
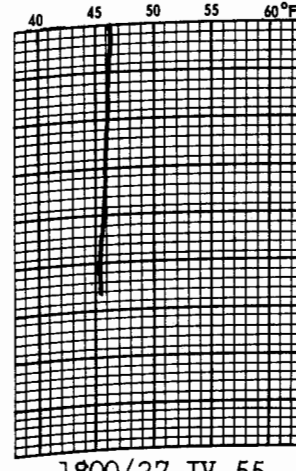
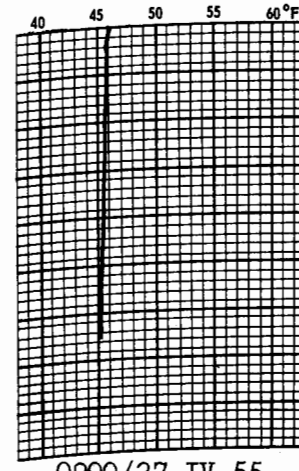
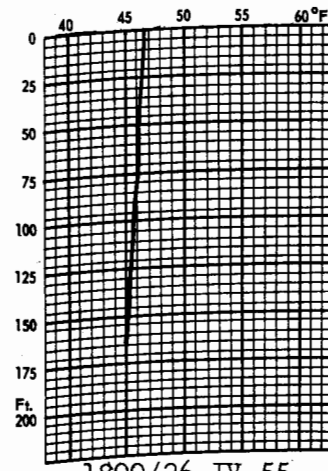
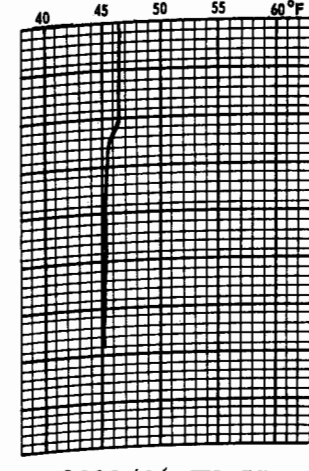
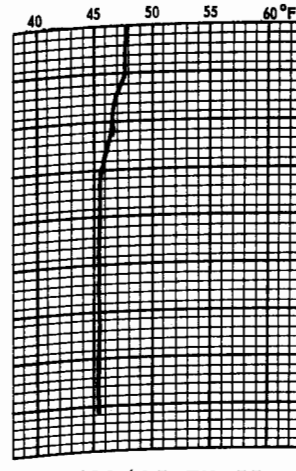
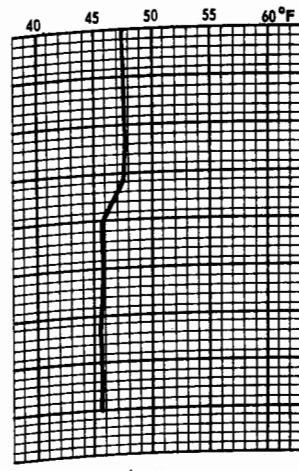
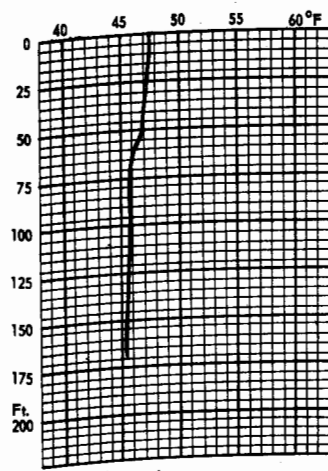
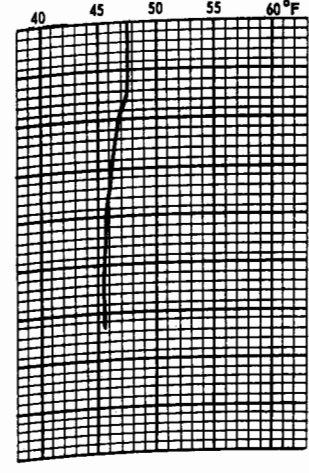
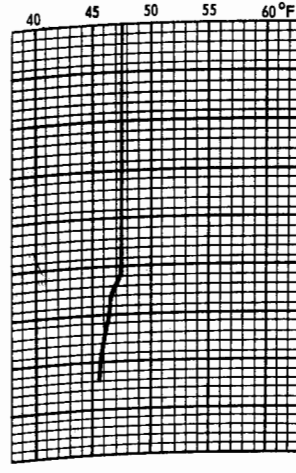
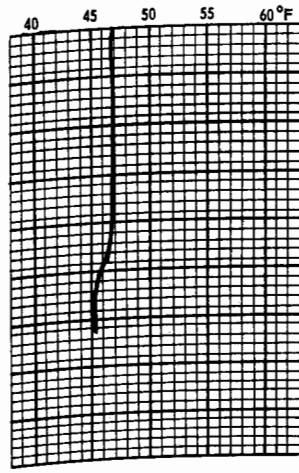
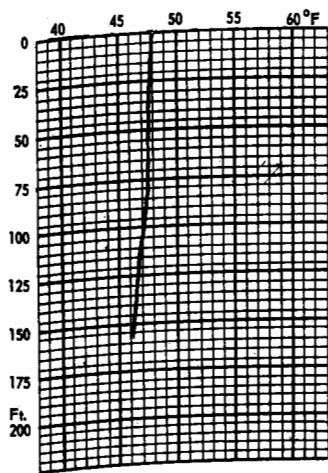
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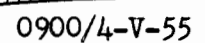
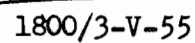
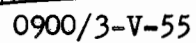
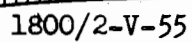
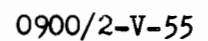
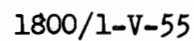
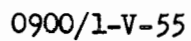
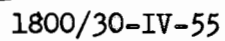
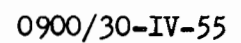
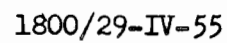
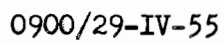
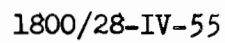




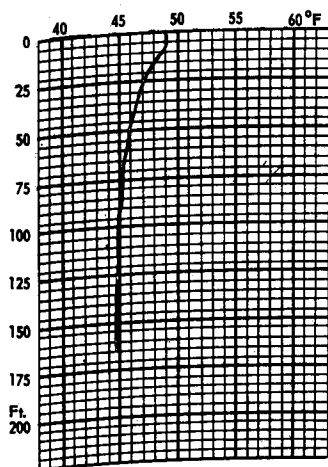


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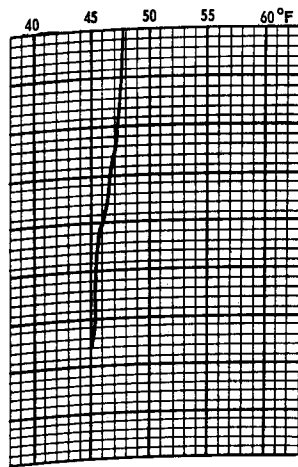




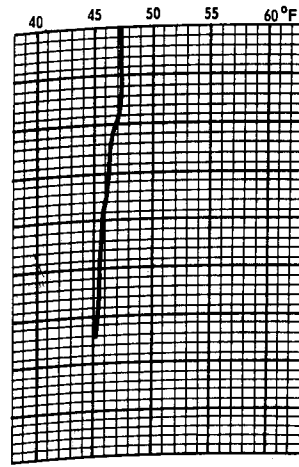
Bathythermograms



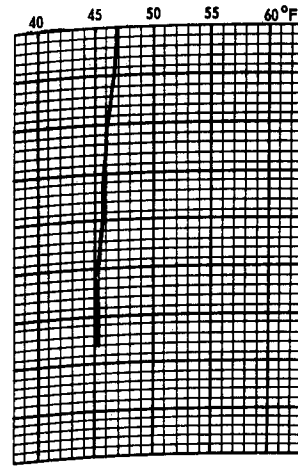
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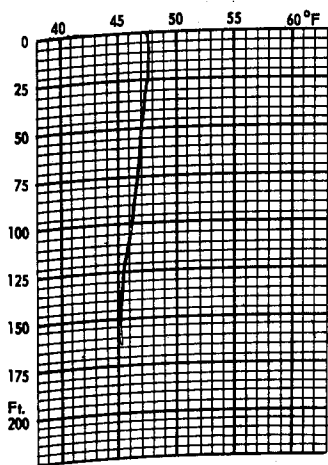
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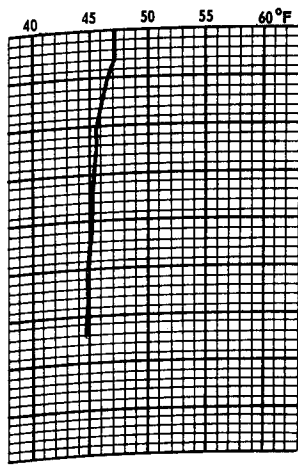
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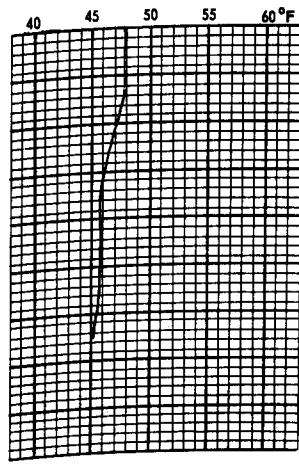
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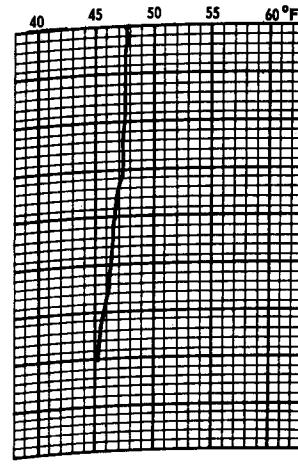
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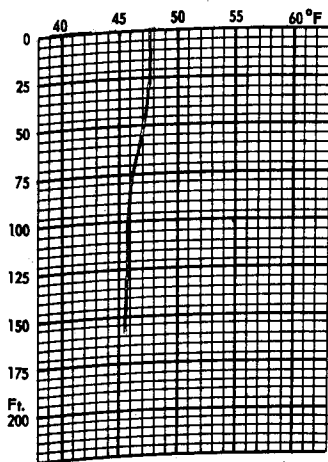
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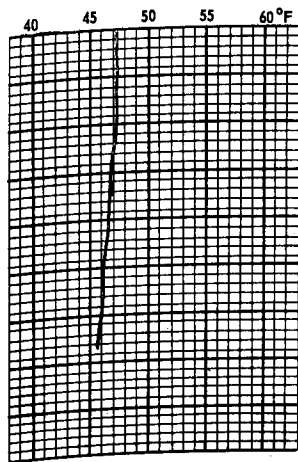
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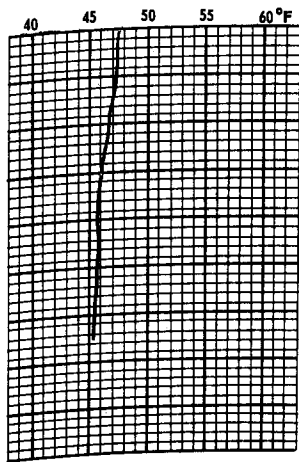
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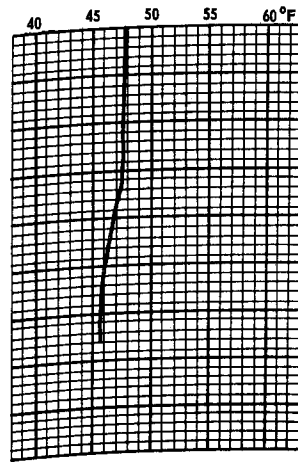
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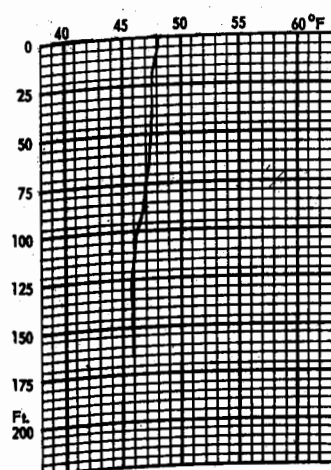


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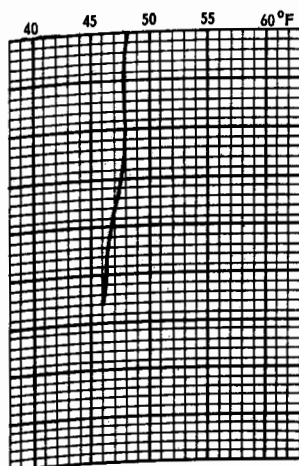


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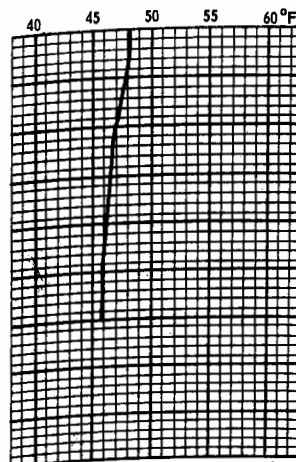
Bathythermograms



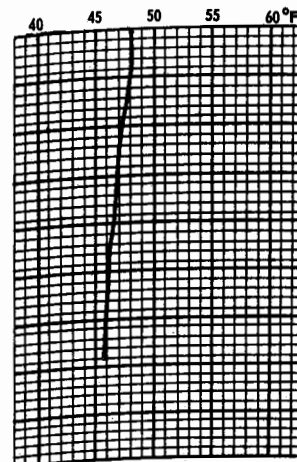
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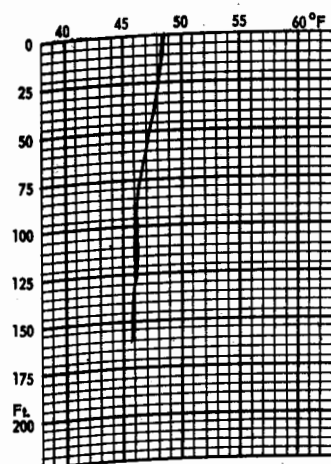
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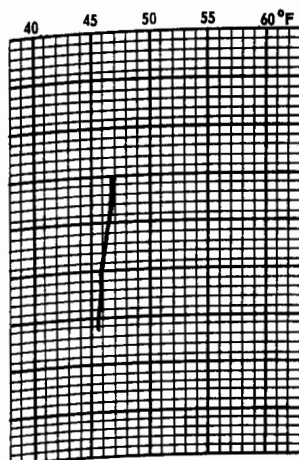
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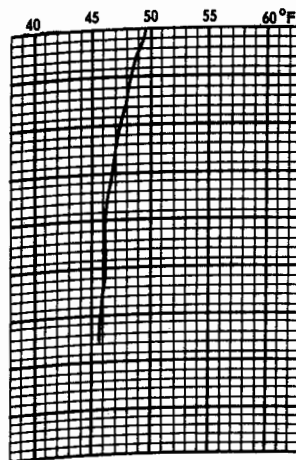
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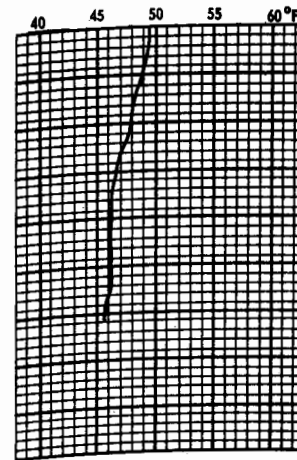
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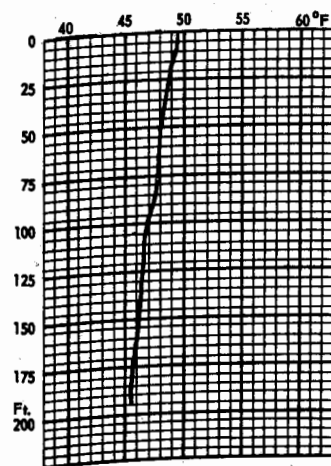
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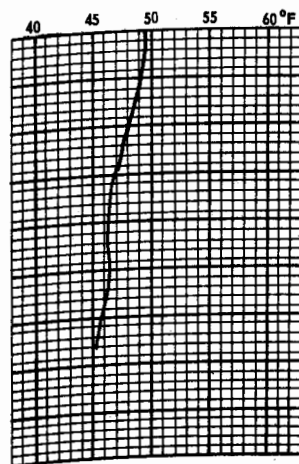
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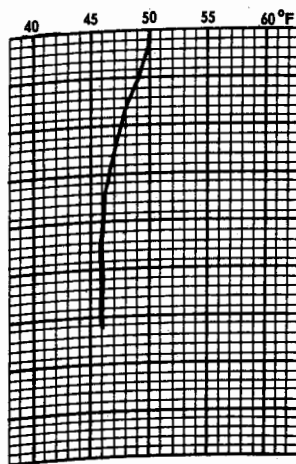
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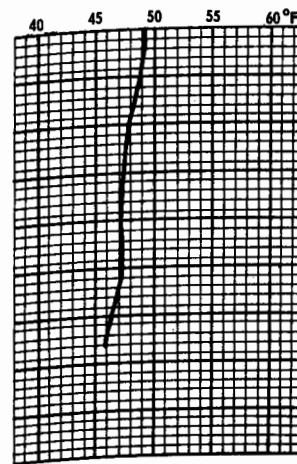
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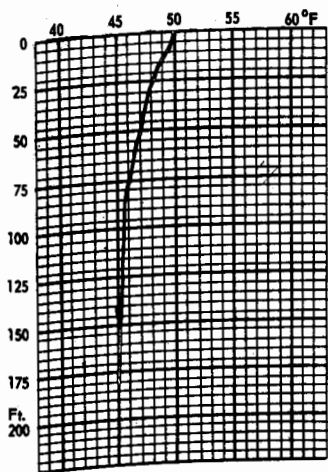


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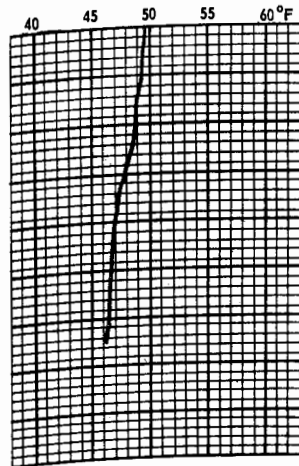


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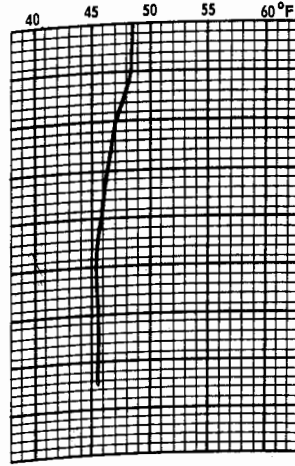
Bathythermograms



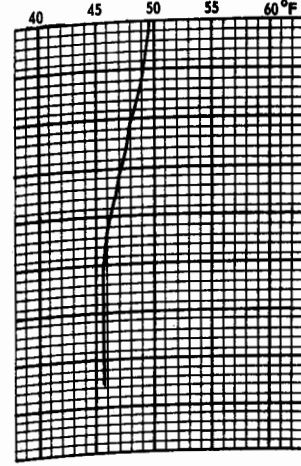
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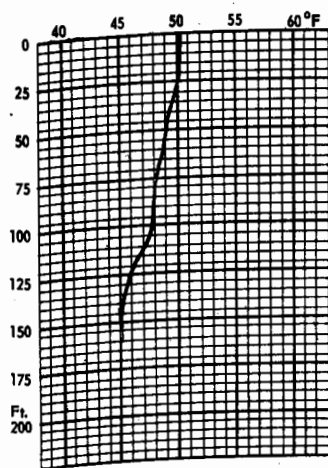
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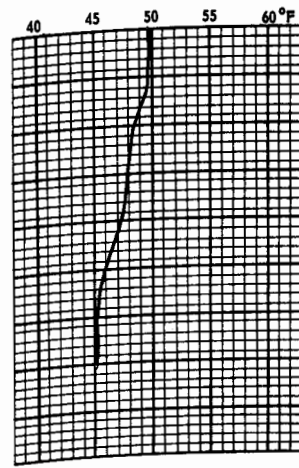
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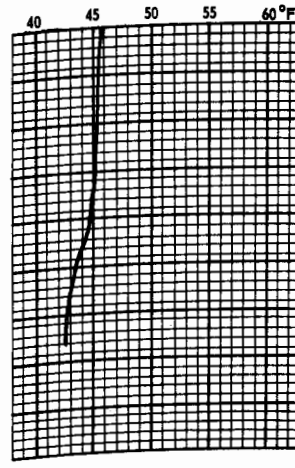
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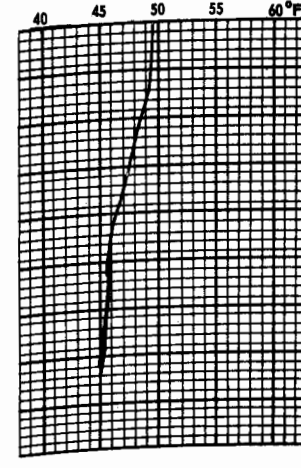
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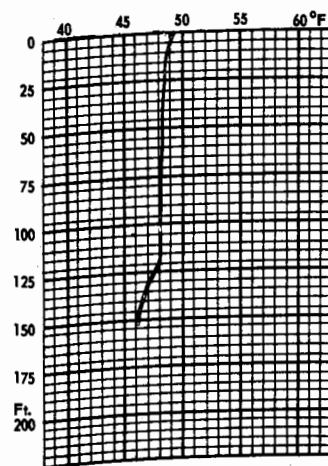
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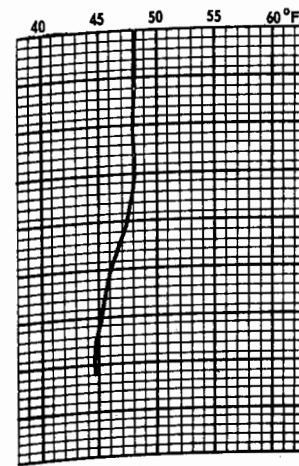
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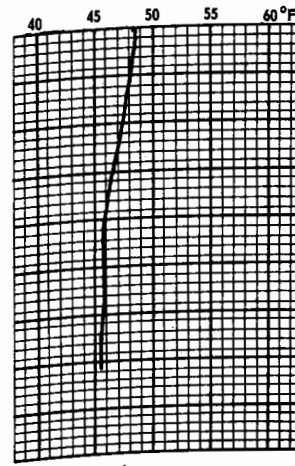
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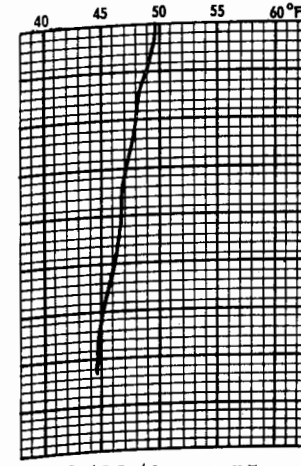
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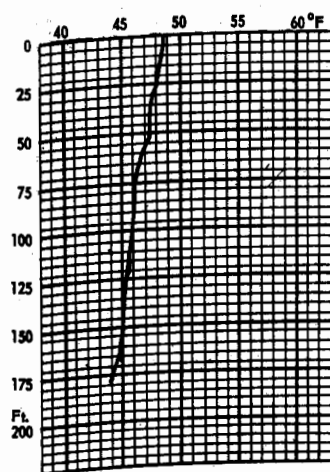
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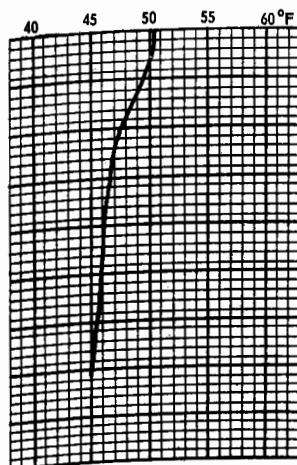
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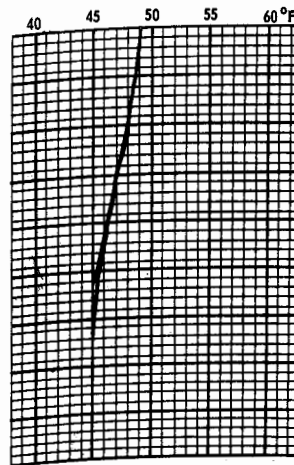
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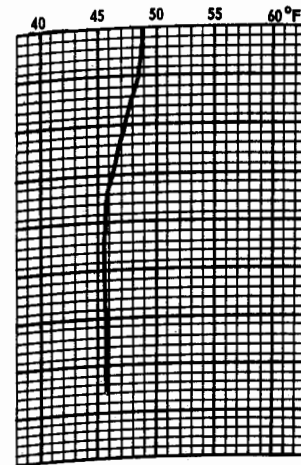
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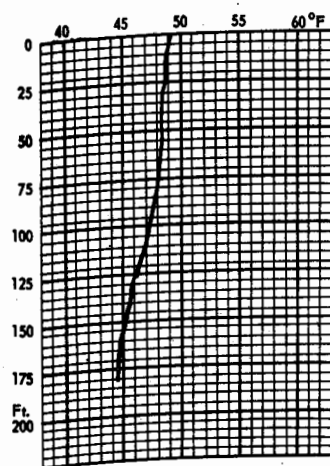
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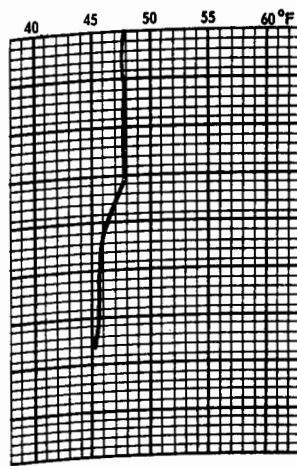
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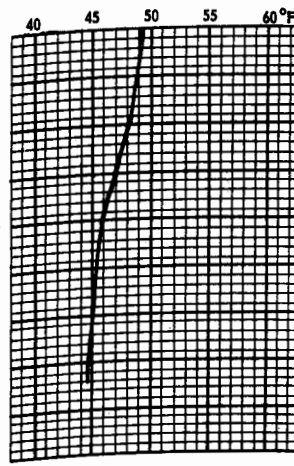
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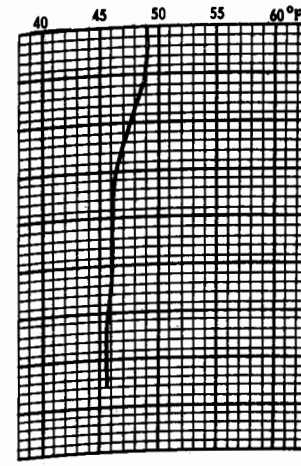
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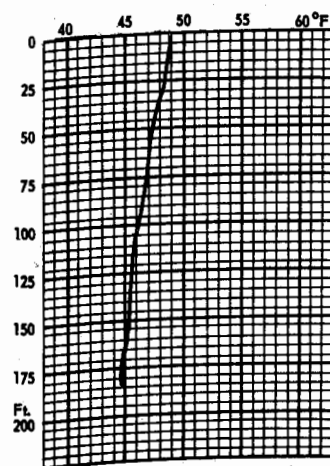
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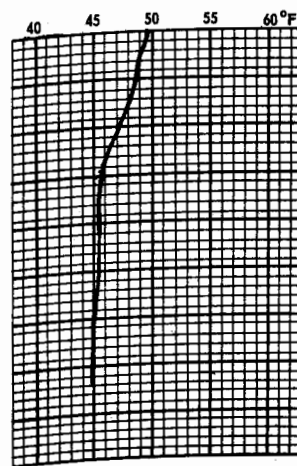
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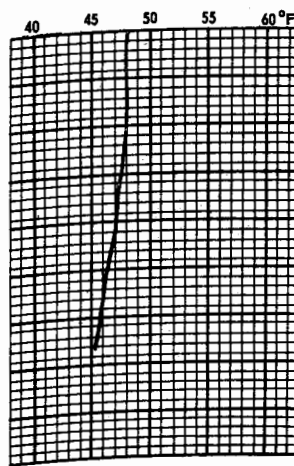
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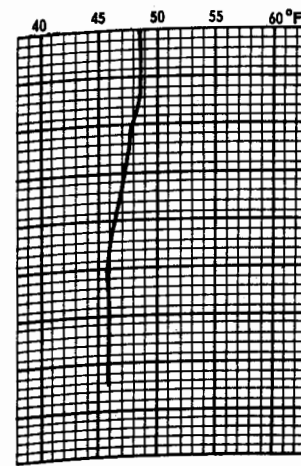
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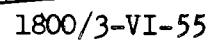
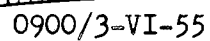
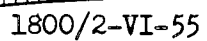
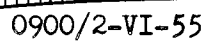
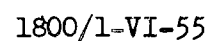
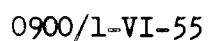
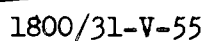
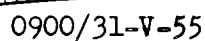
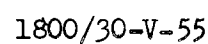
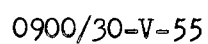
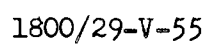
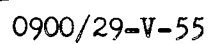
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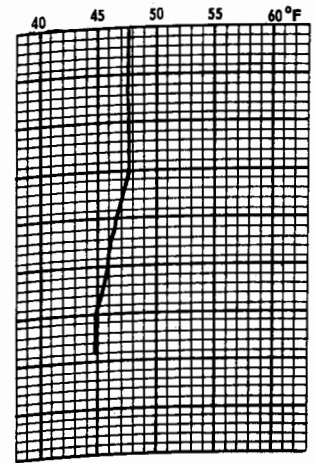
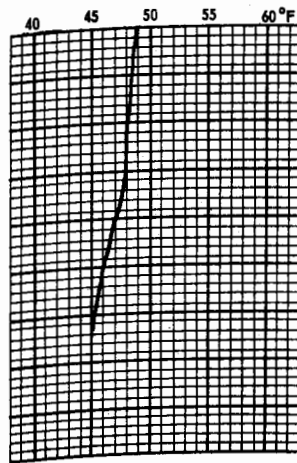
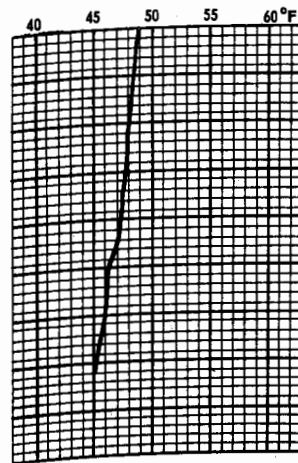
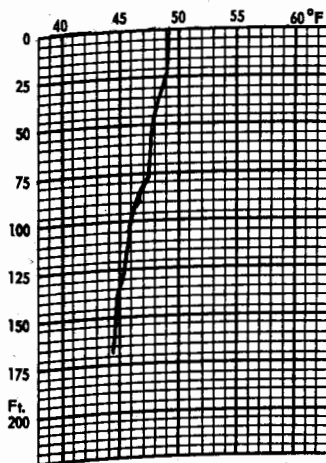
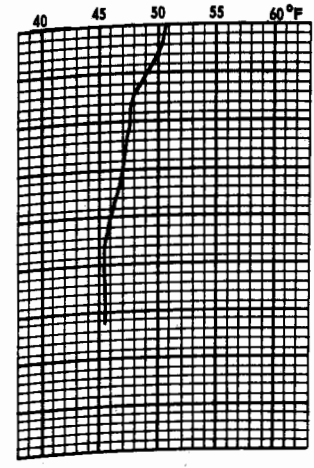
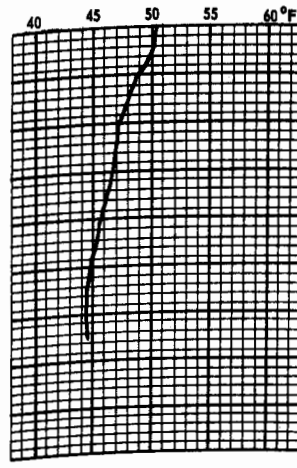
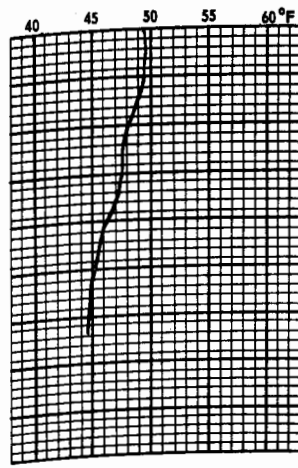
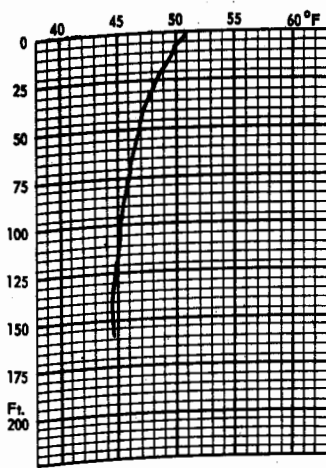
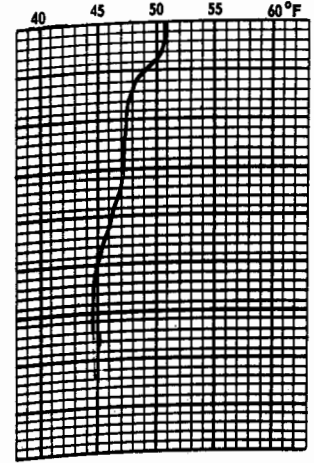
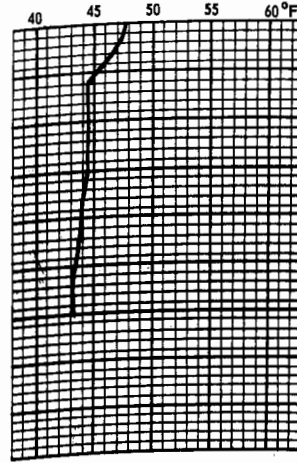
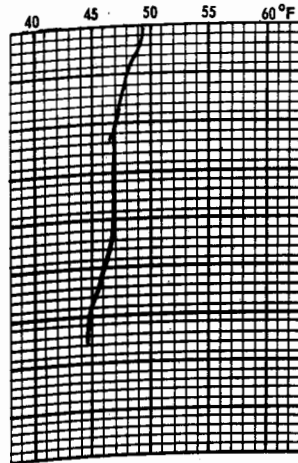
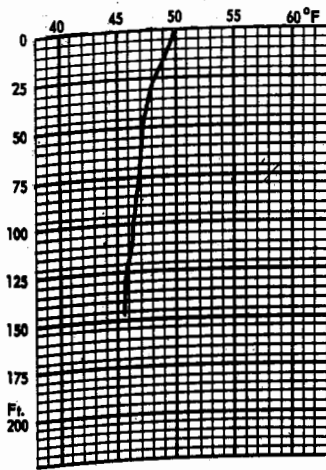
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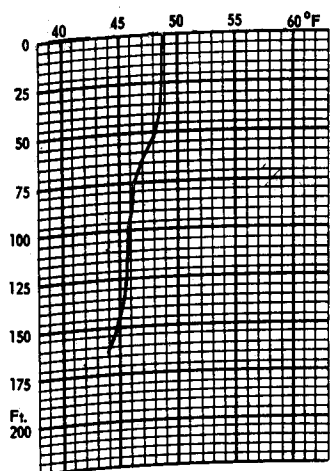
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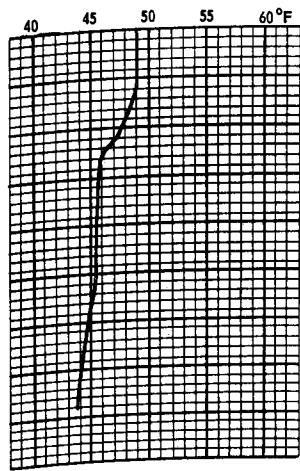
Bathythermograms



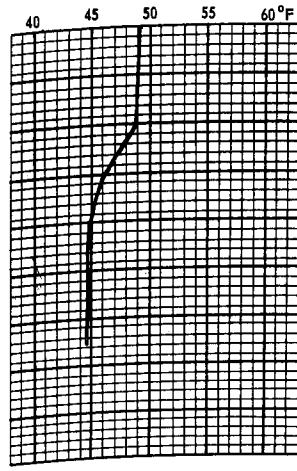
Bathythermograms



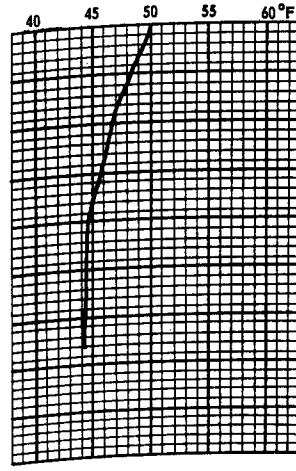
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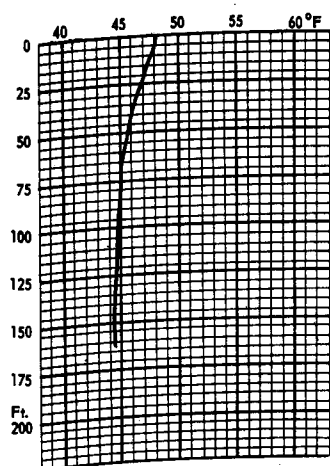
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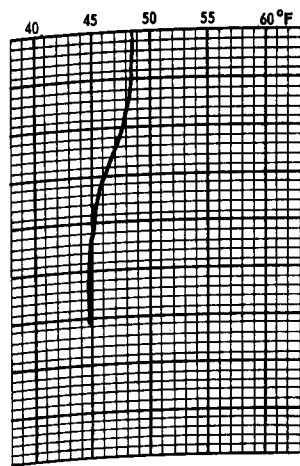
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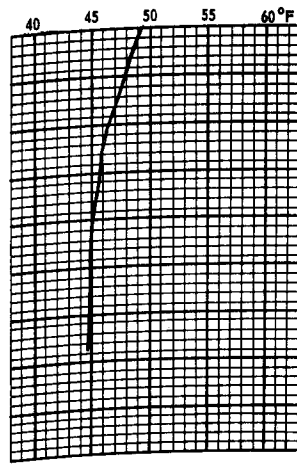
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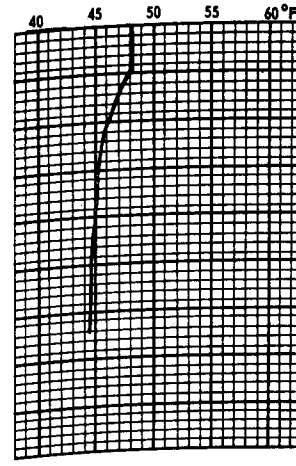
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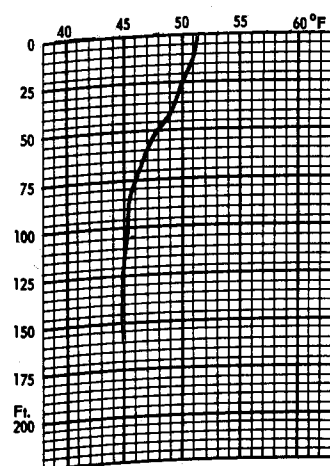
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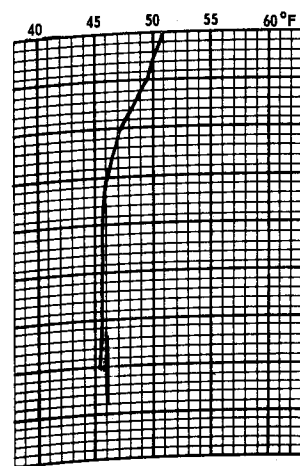
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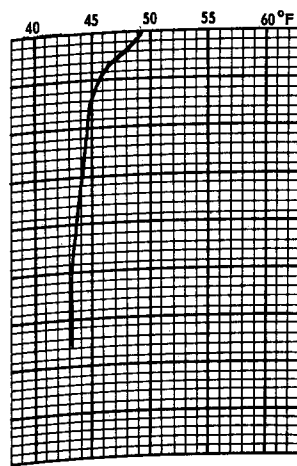
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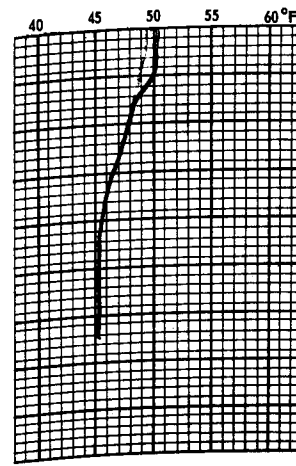
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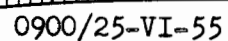
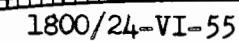
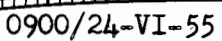
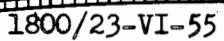
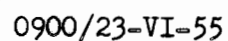
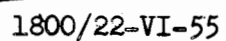
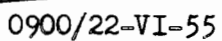
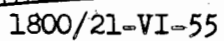
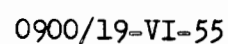
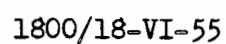
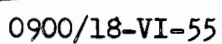
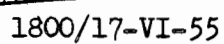
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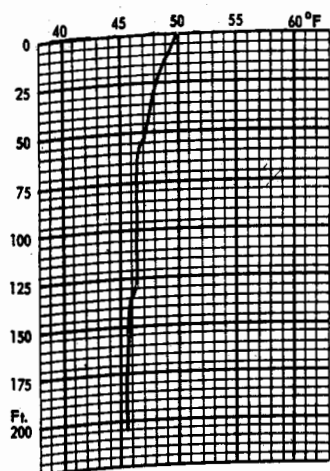
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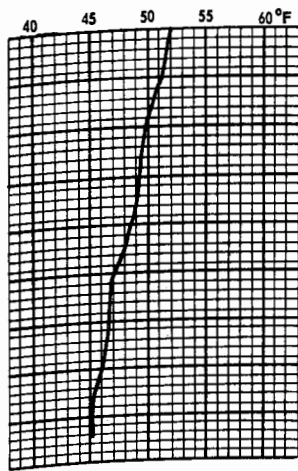
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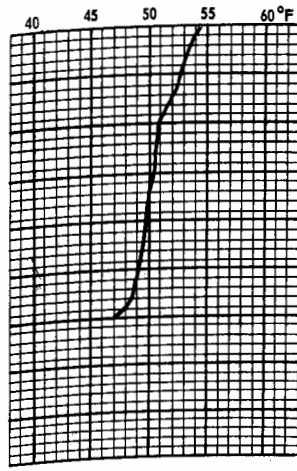
Bathythermograms



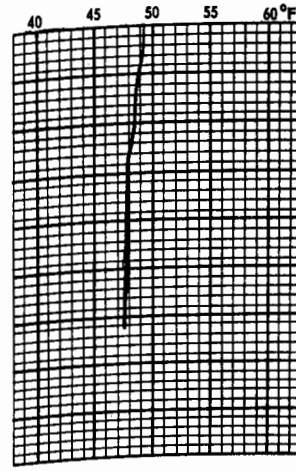
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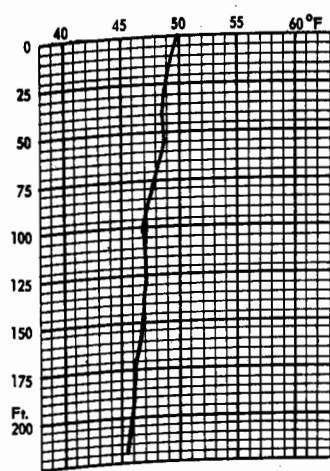
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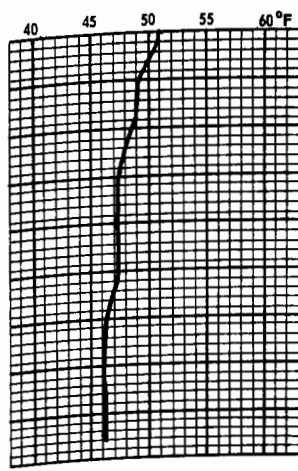
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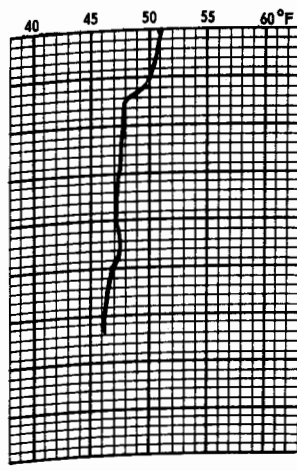
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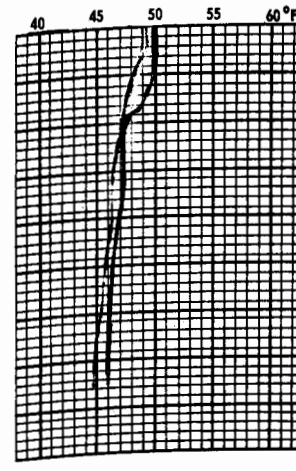
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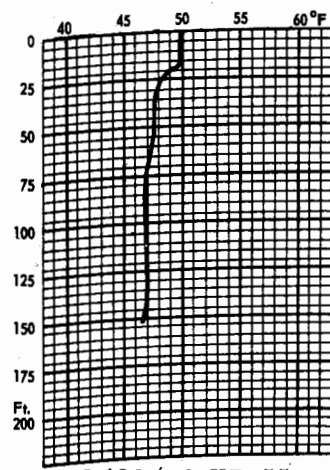
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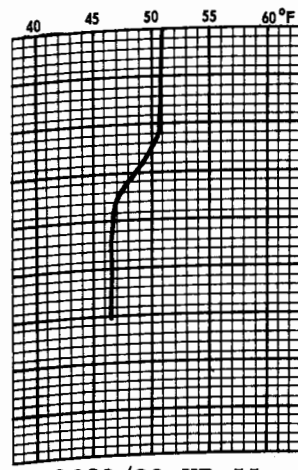
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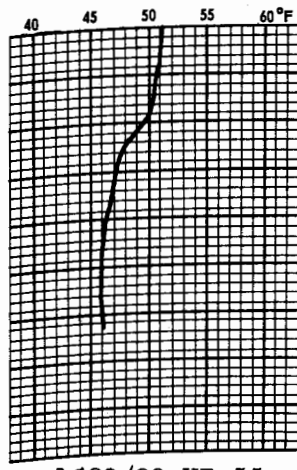
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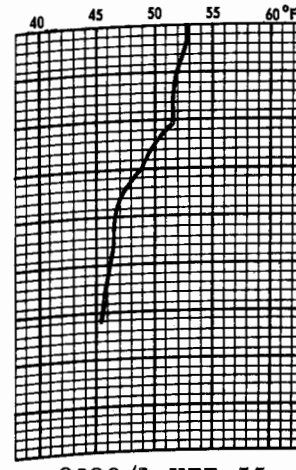
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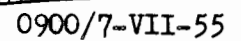
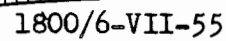
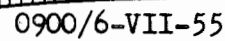
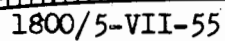
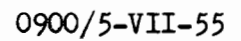
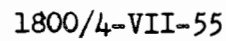
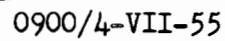
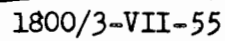
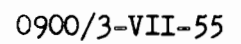
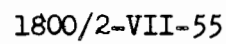
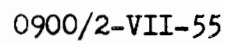
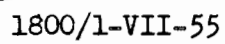
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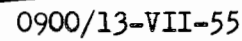
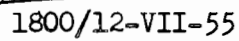
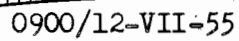
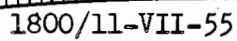
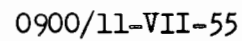
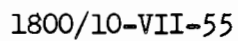
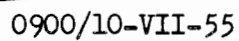
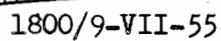
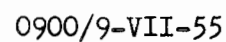
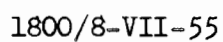
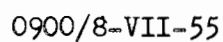
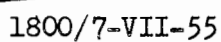


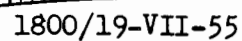
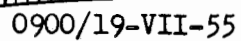
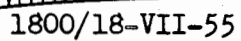
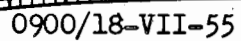
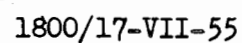
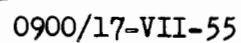
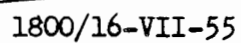
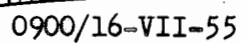
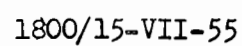
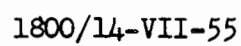
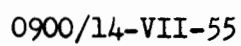
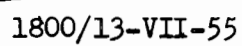
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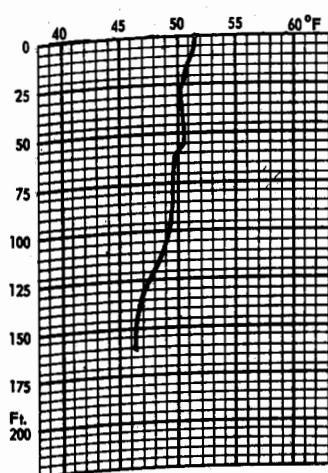
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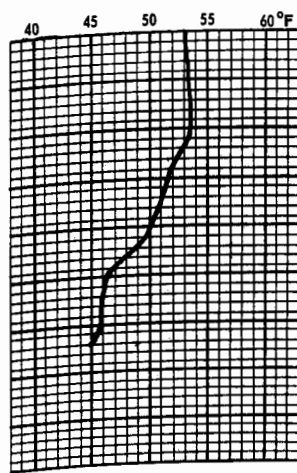




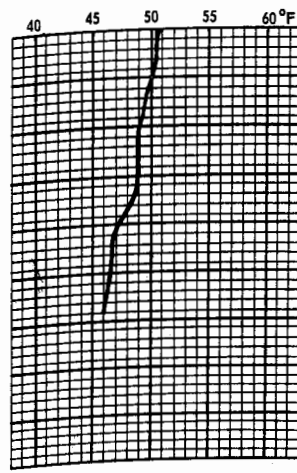
Bathythermograms



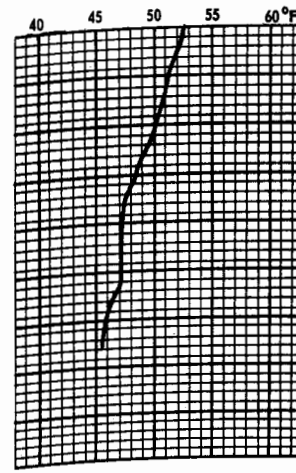
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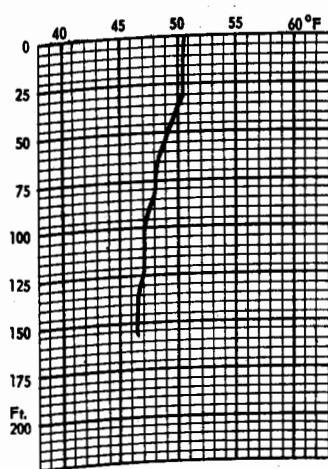
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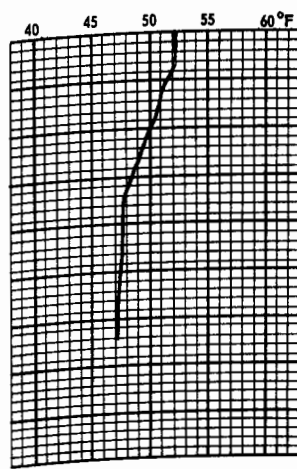
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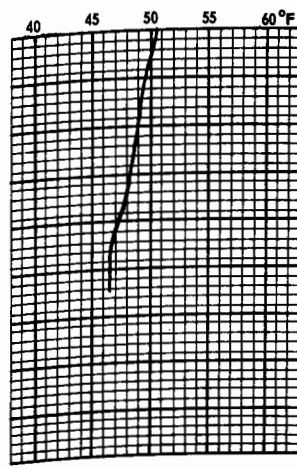
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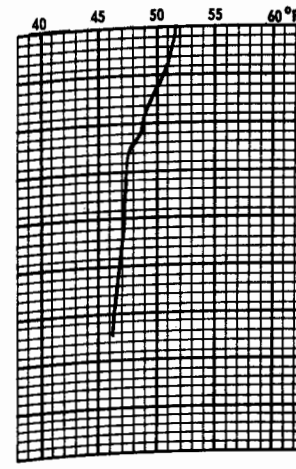
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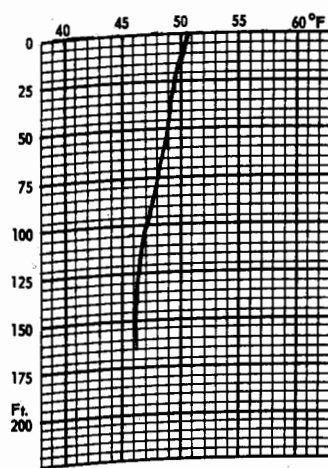
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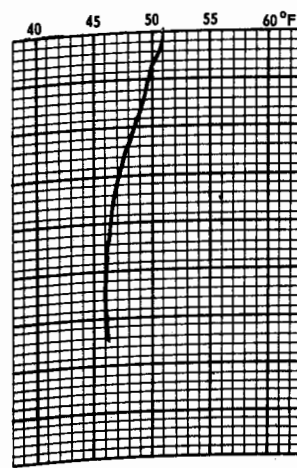
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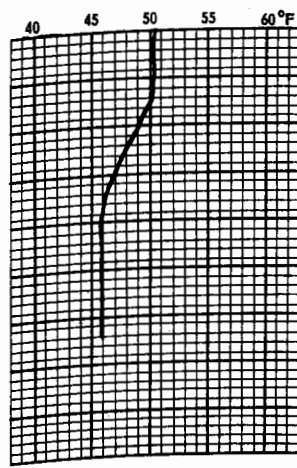
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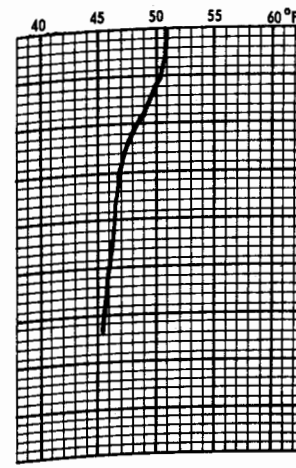
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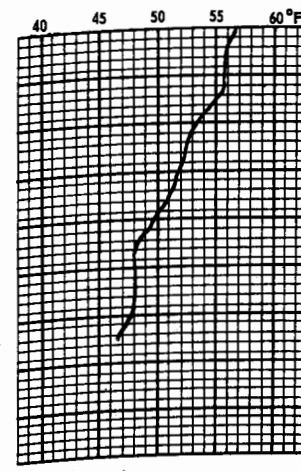
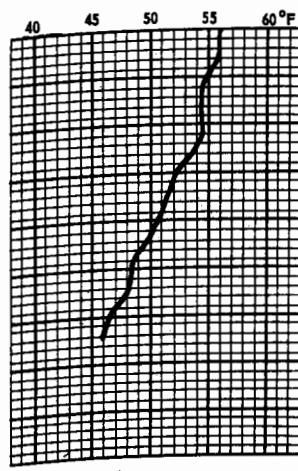
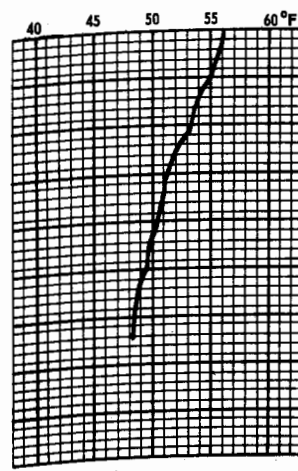
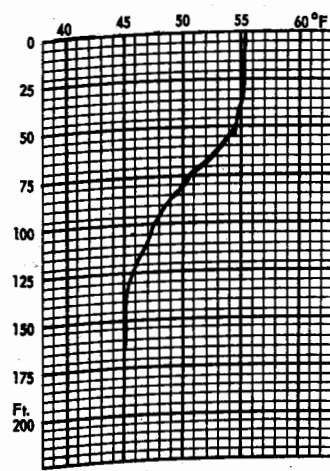
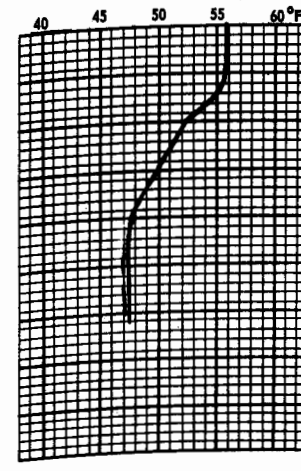
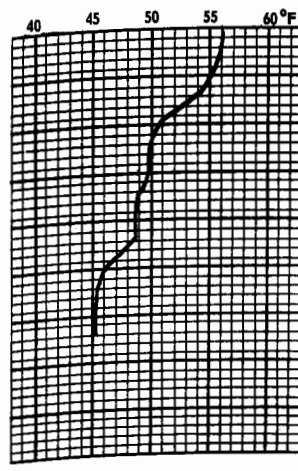
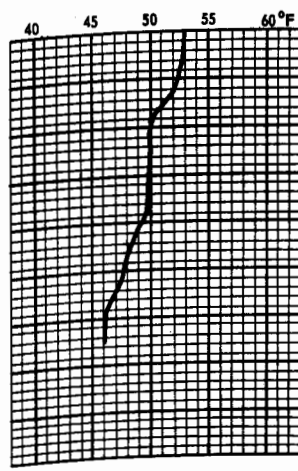
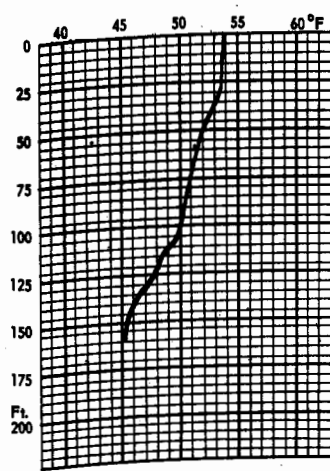
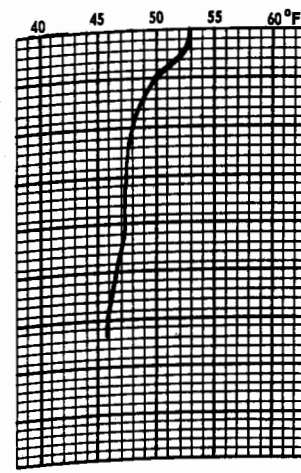
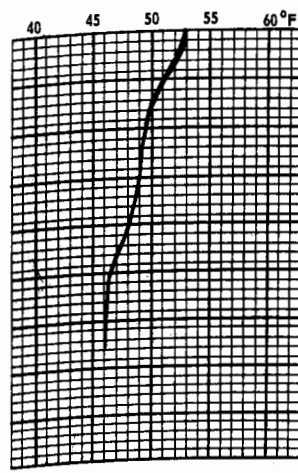
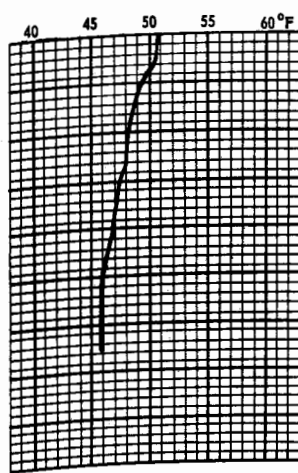
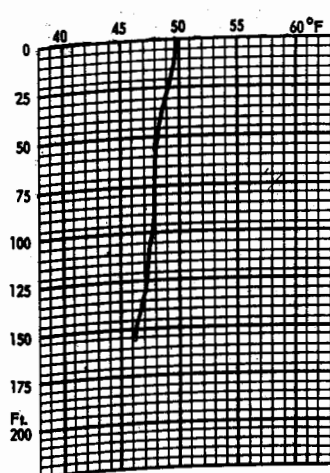


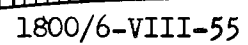
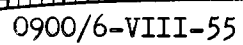
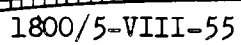
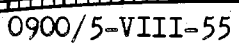
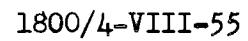
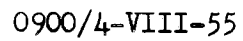
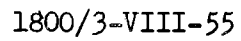
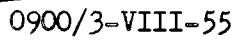
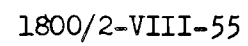
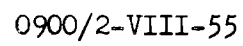
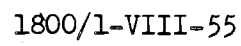
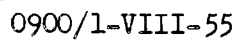
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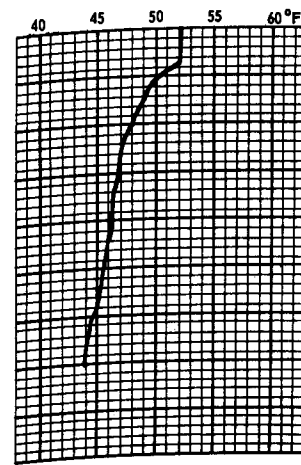
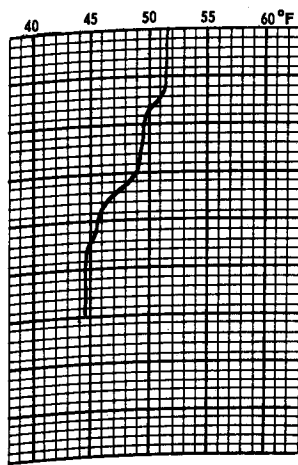
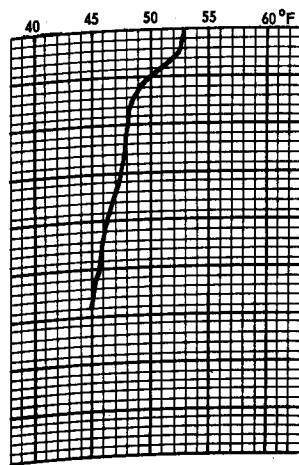
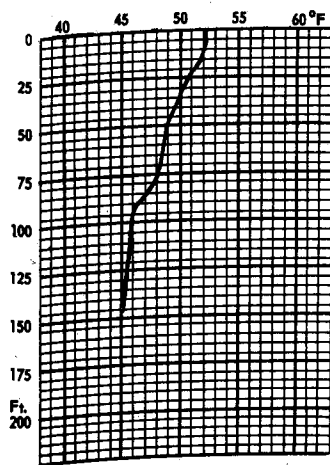
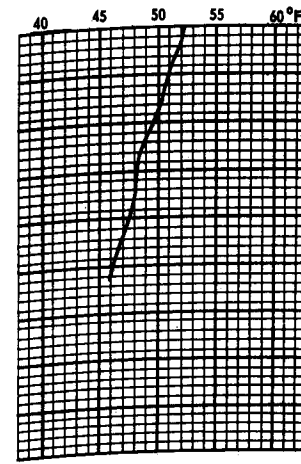
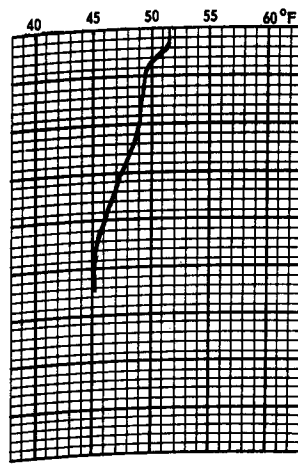
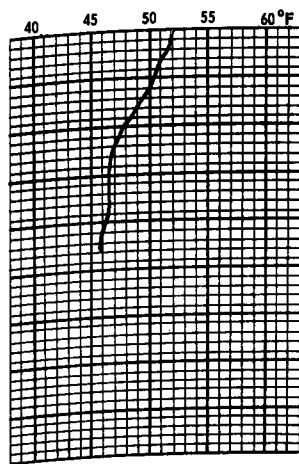
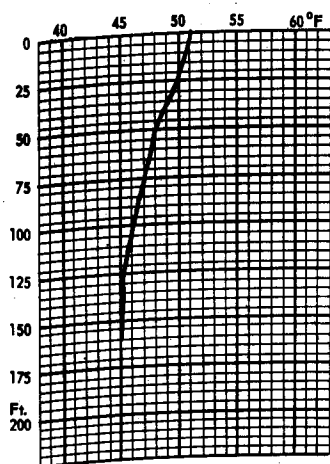
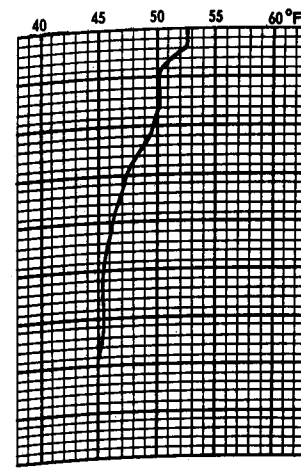
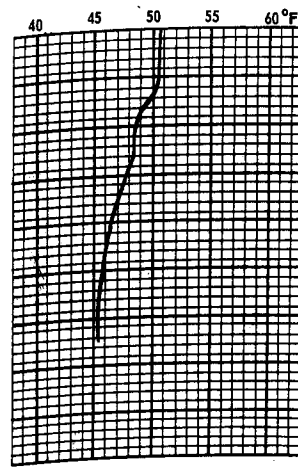
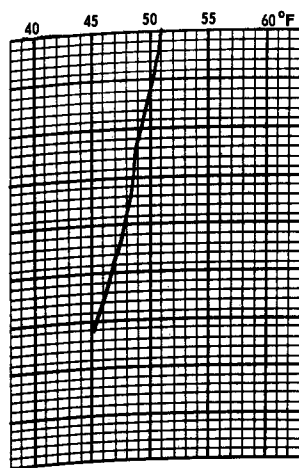
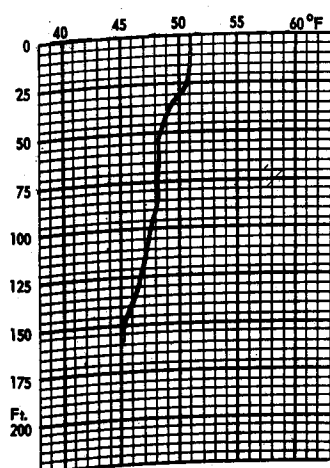
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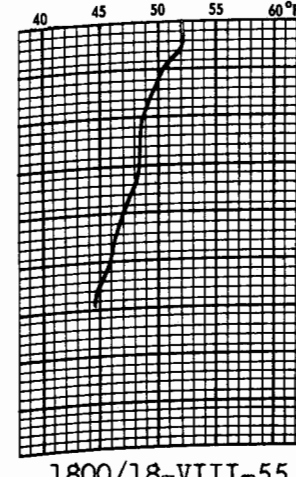
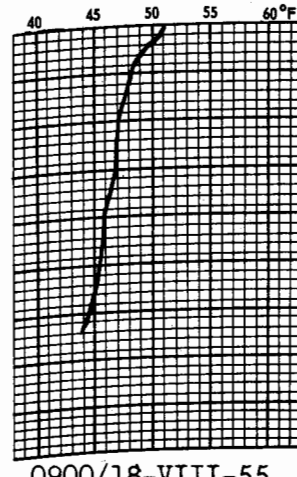
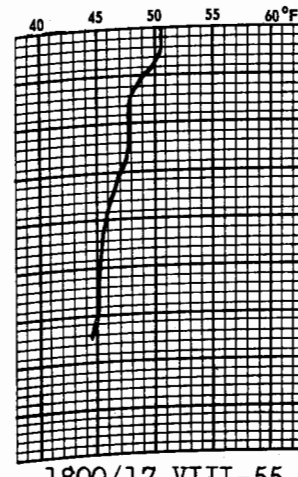
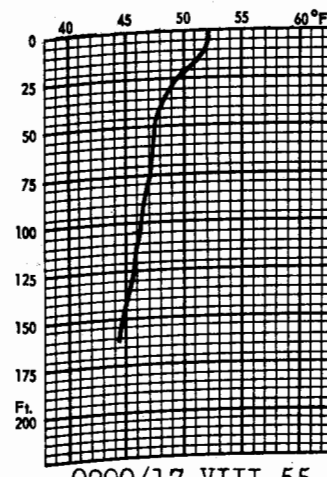
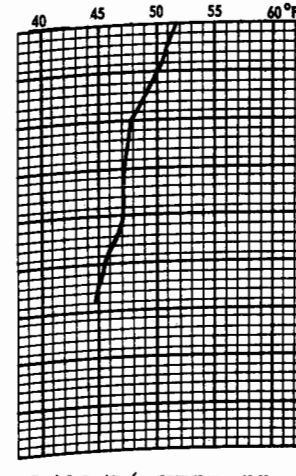
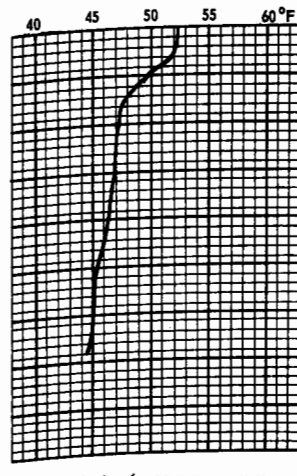
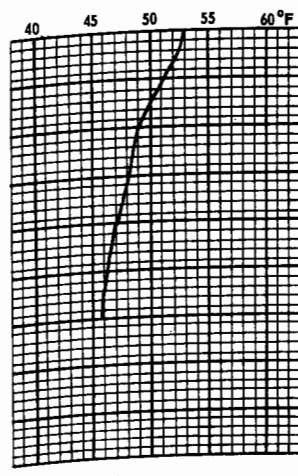
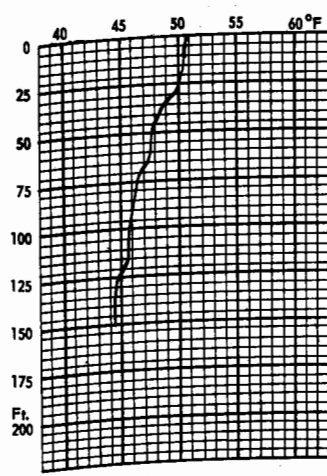
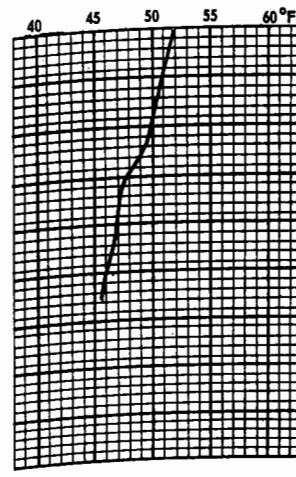
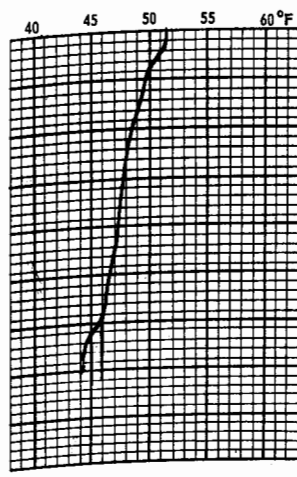
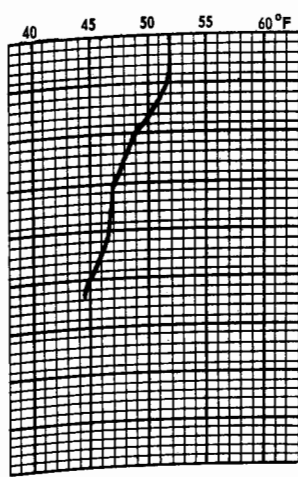
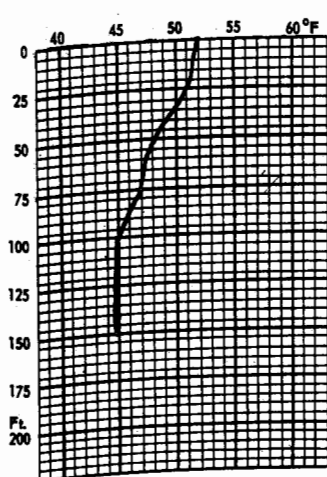


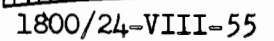
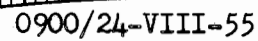
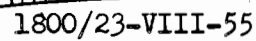
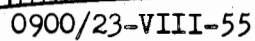
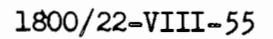
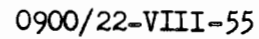
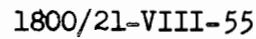
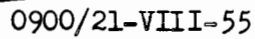
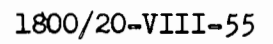
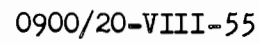
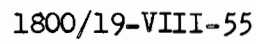
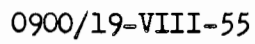


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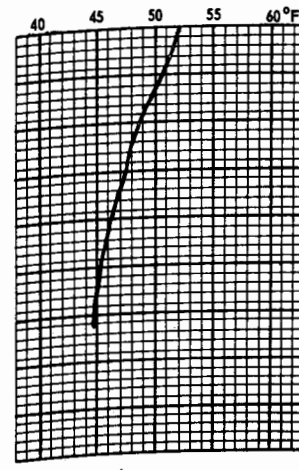
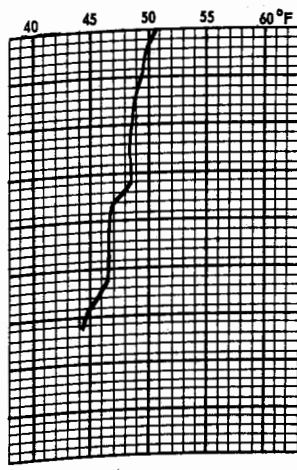
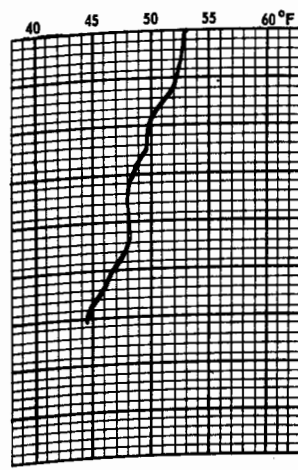
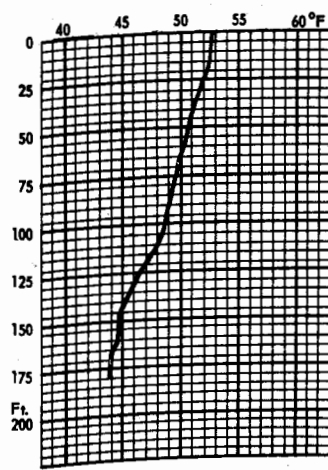
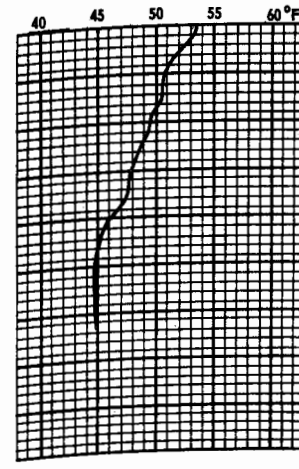
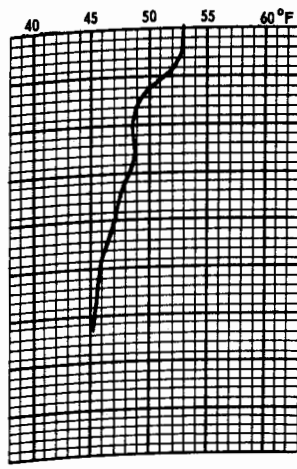
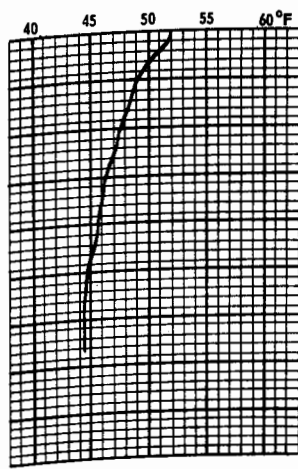
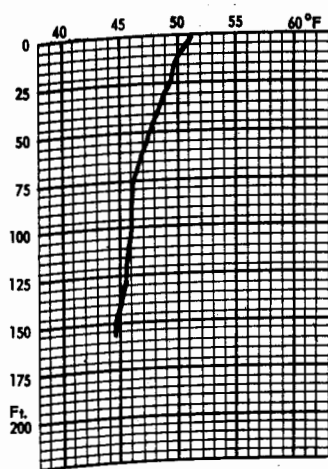
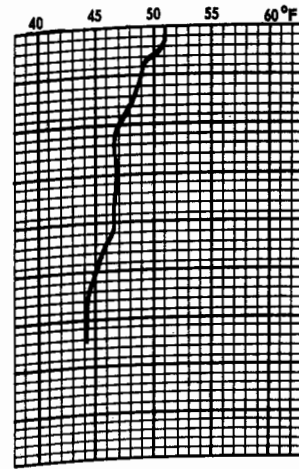
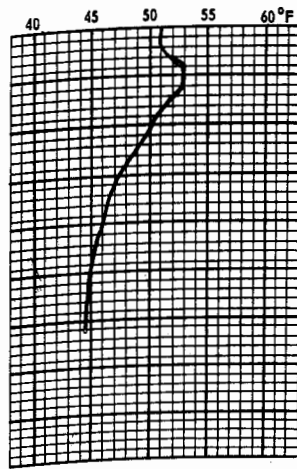
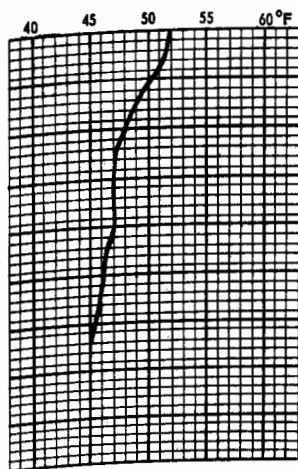
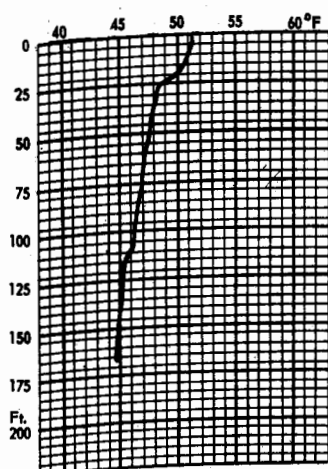


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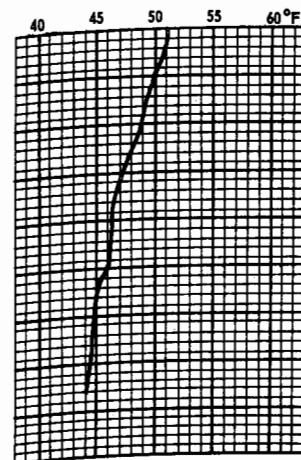
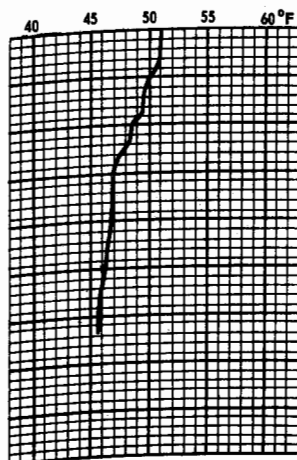
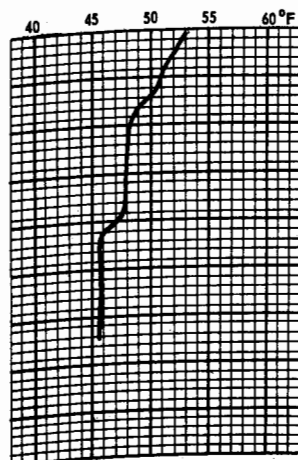
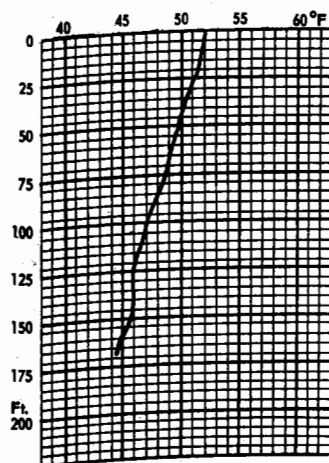
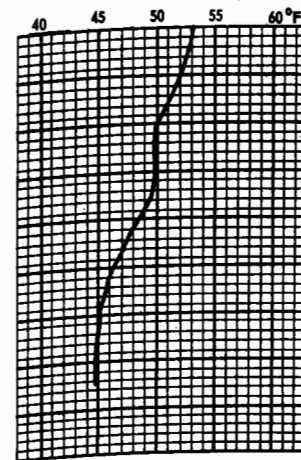
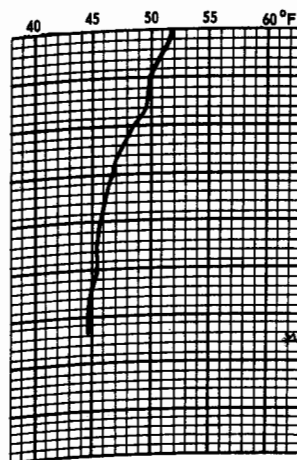
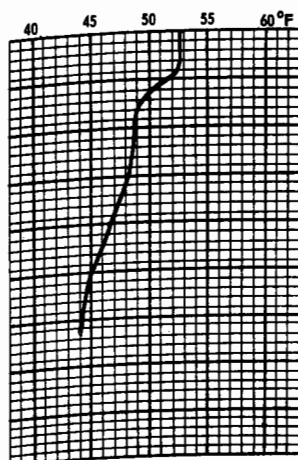
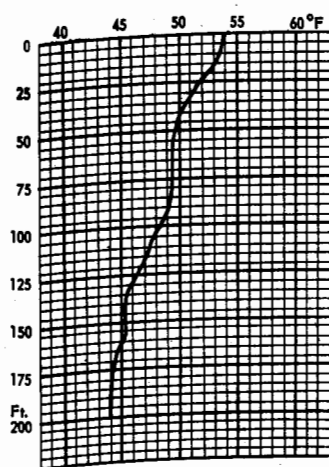
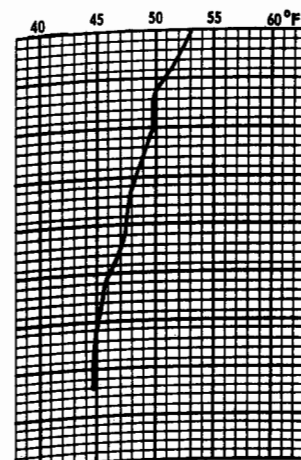
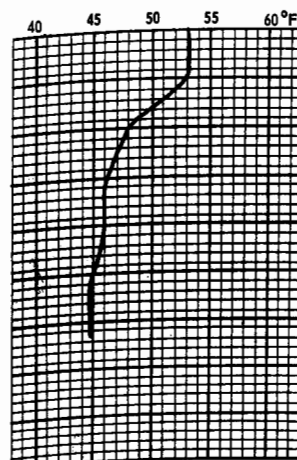
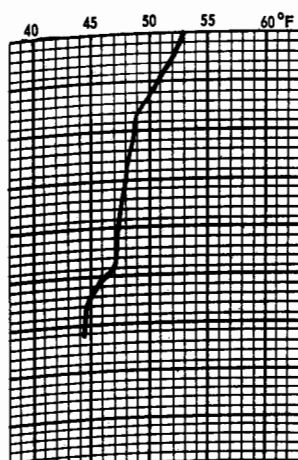
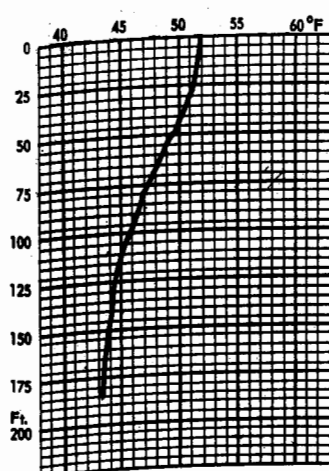


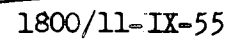
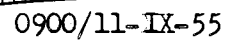
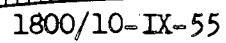
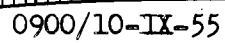
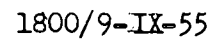
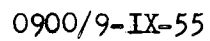
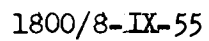
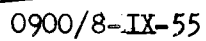
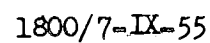
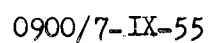
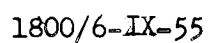
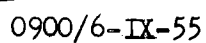


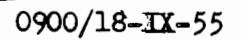
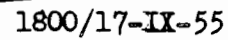
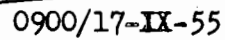
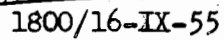
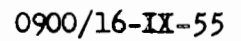
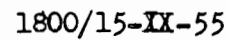
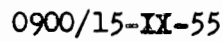
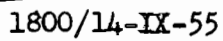
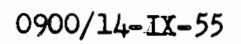
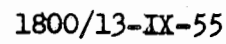
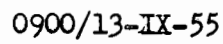
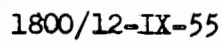
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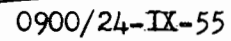
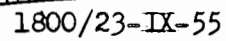
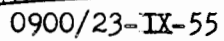
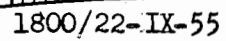
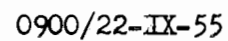
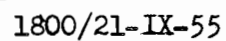
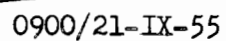
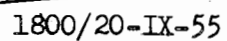
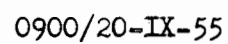
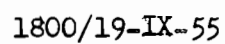
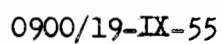
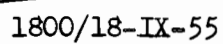


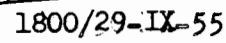
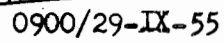
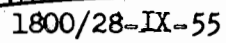
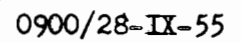
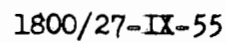
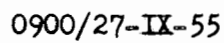
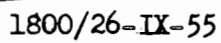
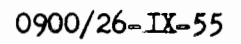
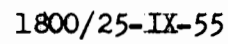
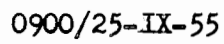
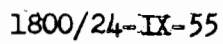
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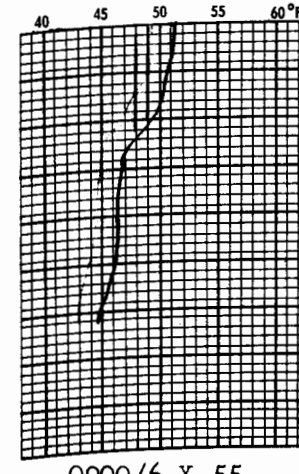
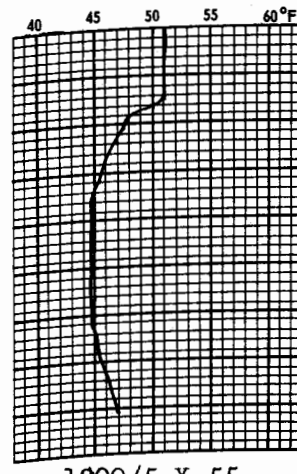
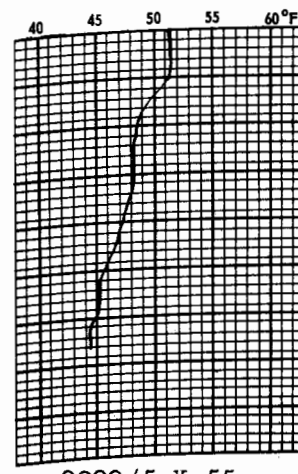
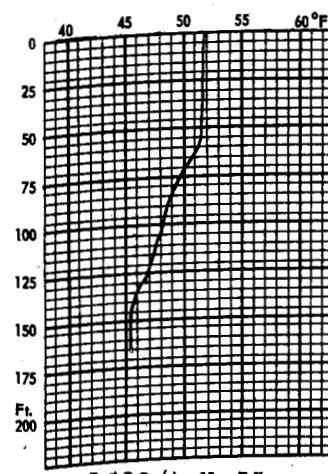
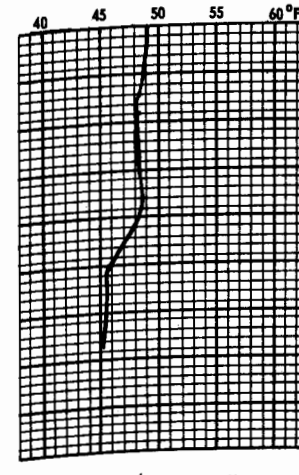
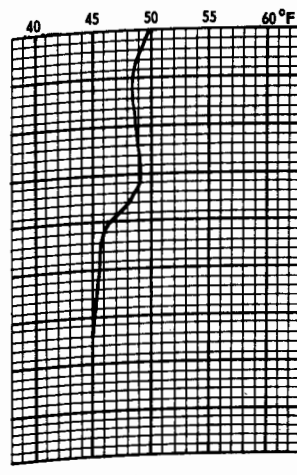
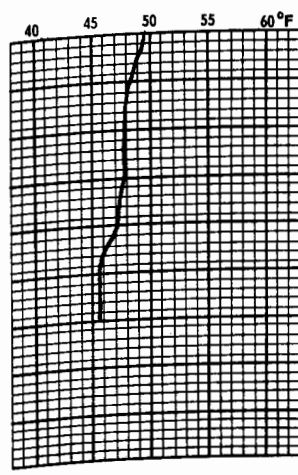
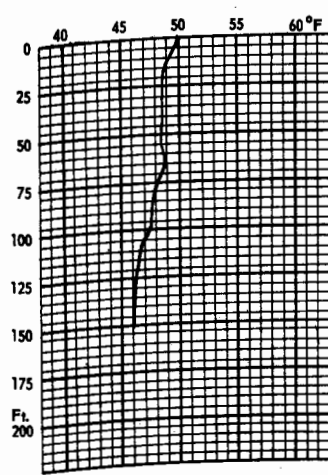
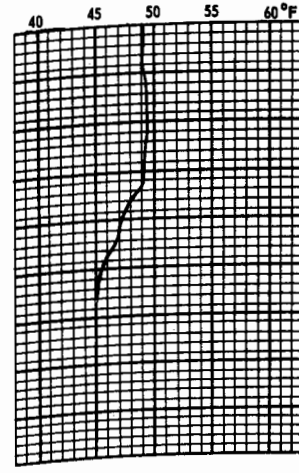
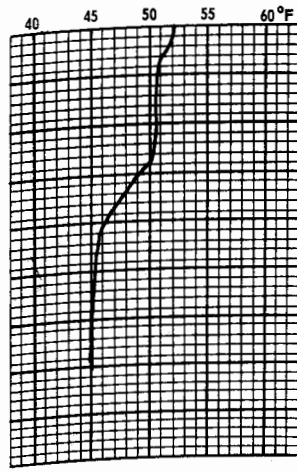
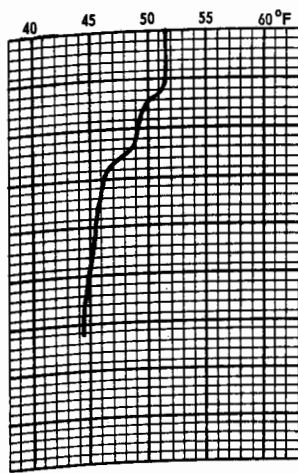
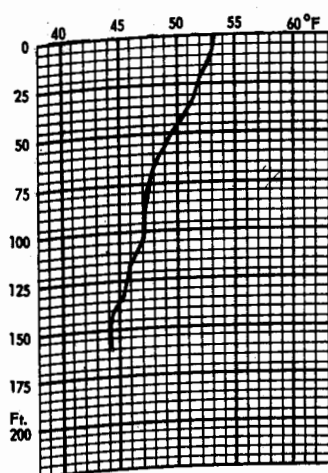


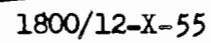
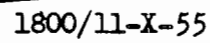
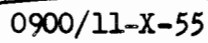
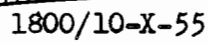
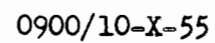
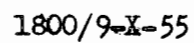
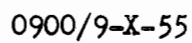
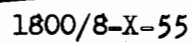
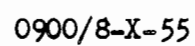
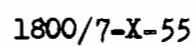
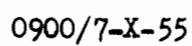
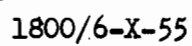


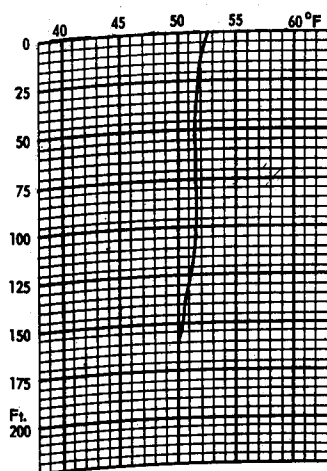




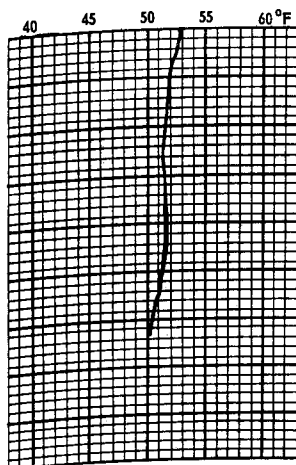
Bathythermograms



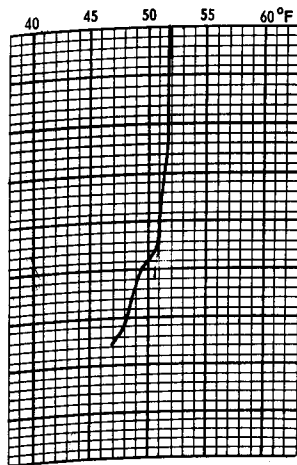




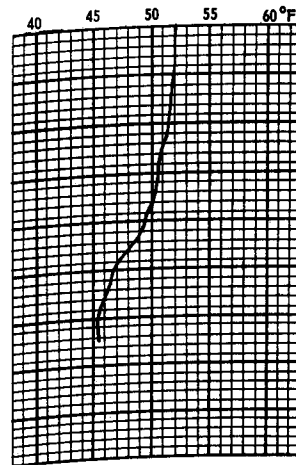
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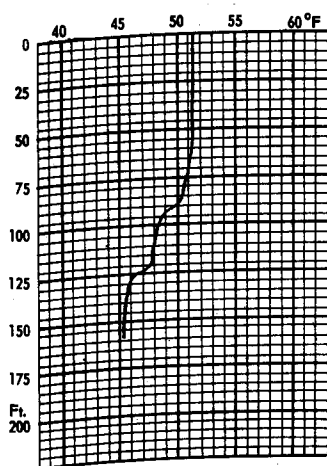
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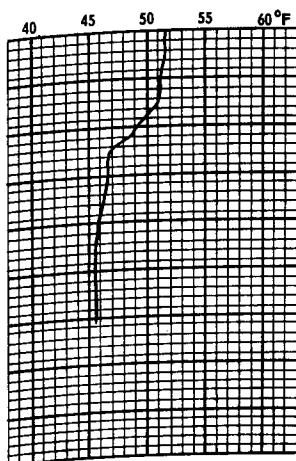
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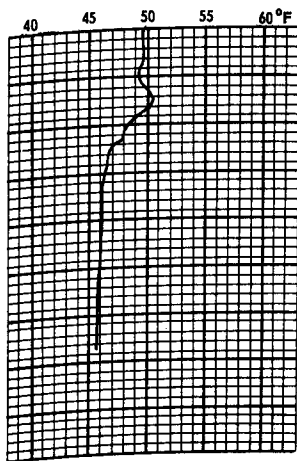
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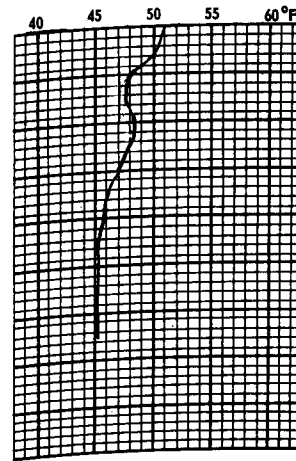
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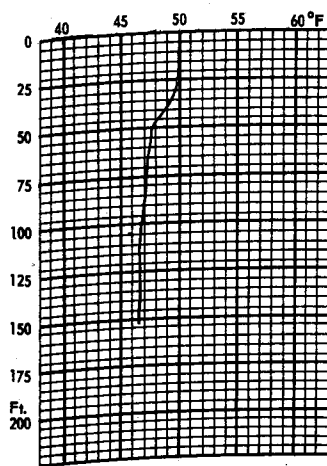
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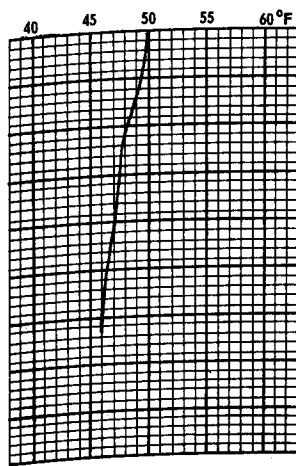
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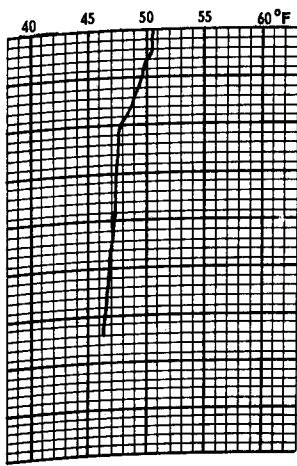
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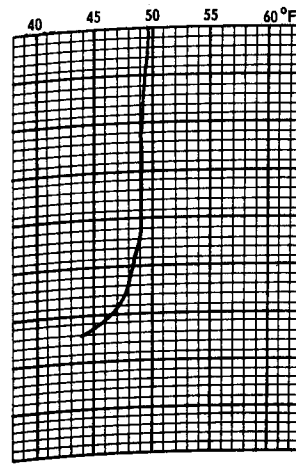
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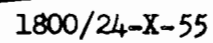
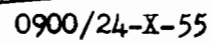
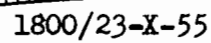
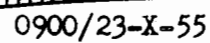
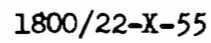
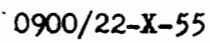
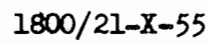
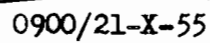
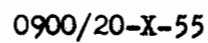
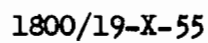
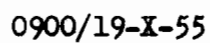
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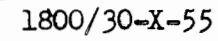
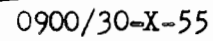
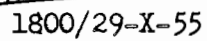
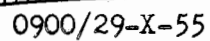
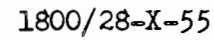
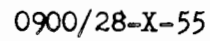
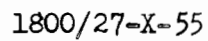
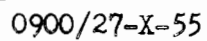
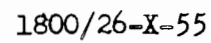
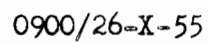
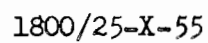
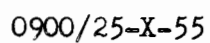


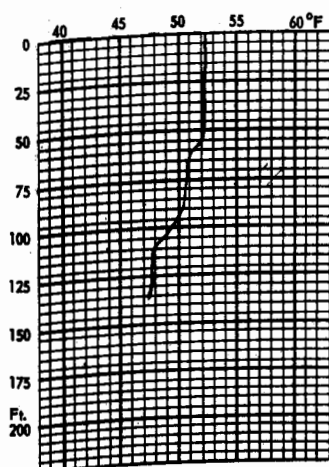
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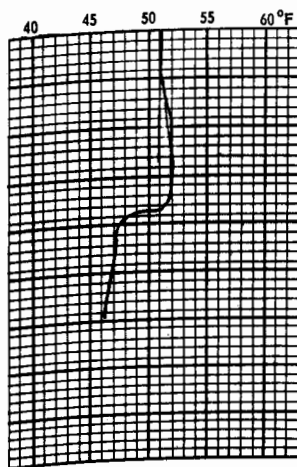
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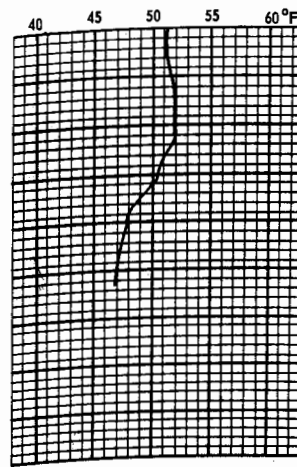




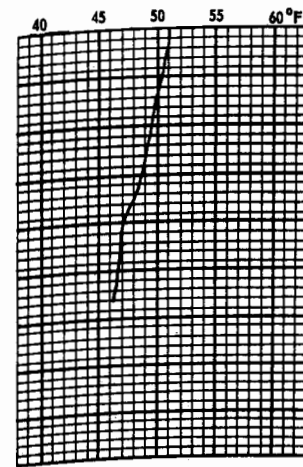
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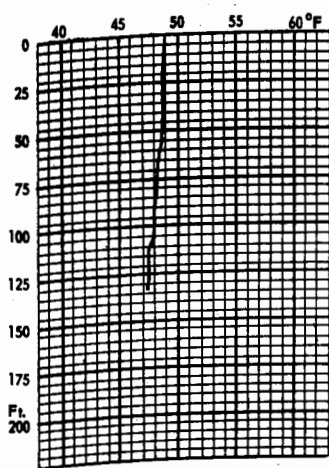
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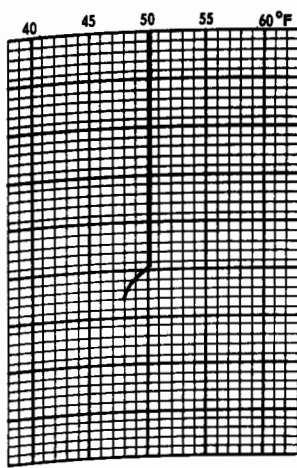
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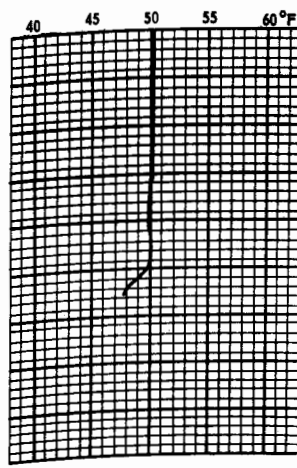
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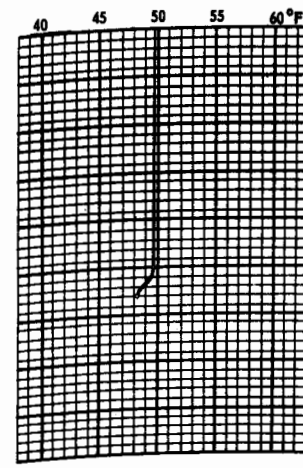
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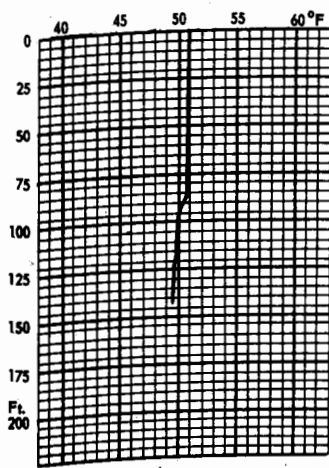
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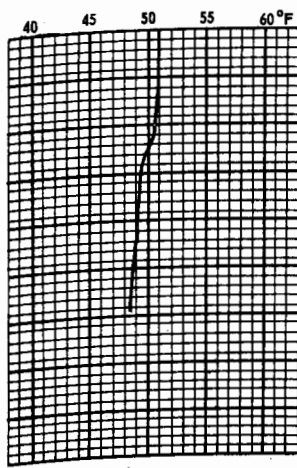
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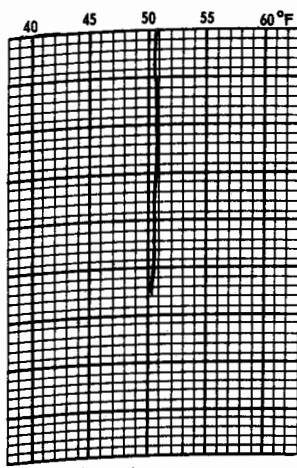
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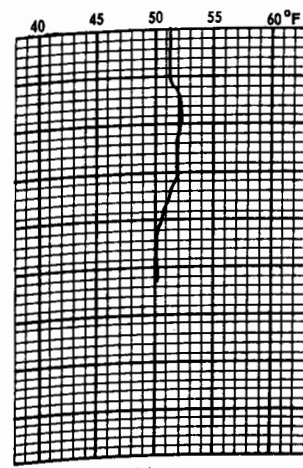
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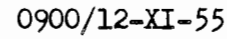
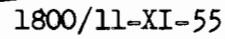
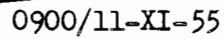
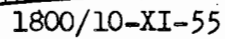
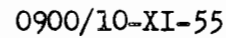
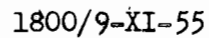
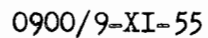
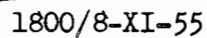
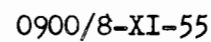
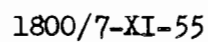
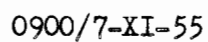
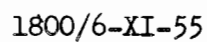
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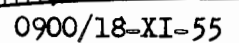
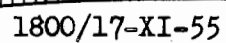
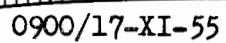
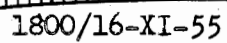
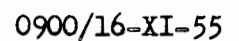
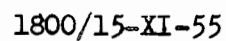
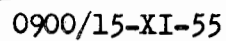
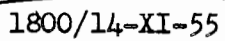
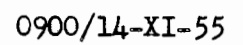
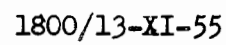
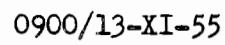
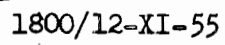


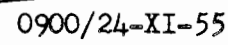
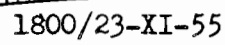
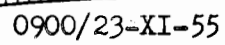
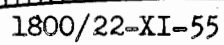
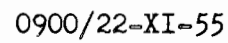
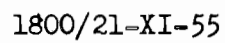
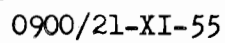
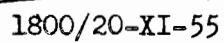
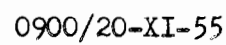
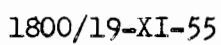
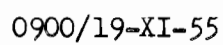
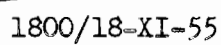
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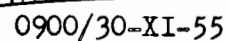
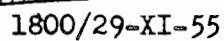
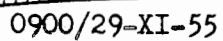
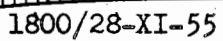
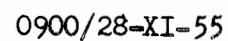
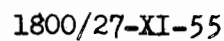
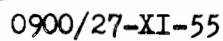
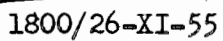
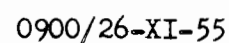
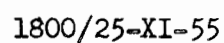
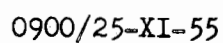
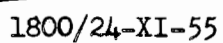


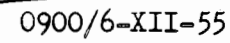
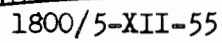
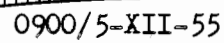
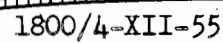
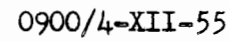
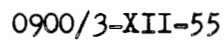
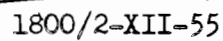
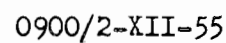
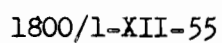
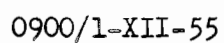
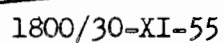
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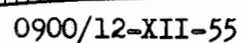
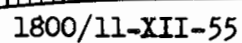
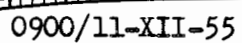
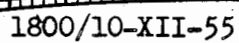
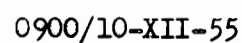
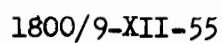
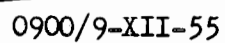
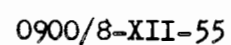
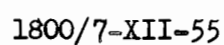
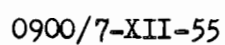
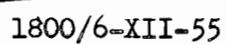


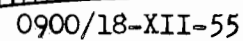
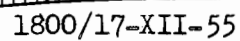
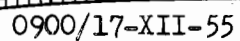
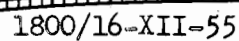
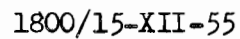
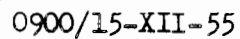
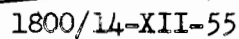
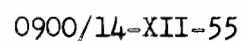
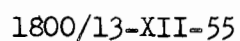
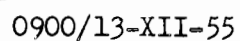
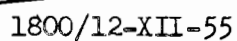


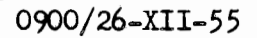
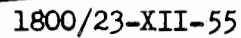
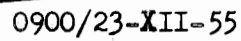
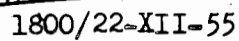
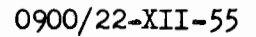
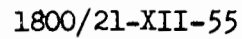
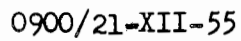
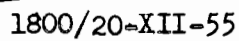
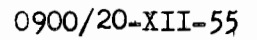
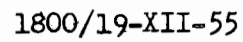
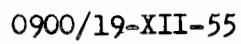
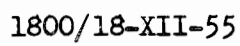




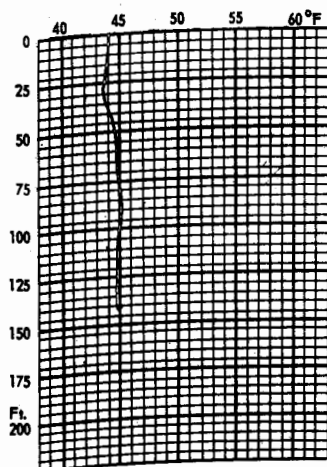




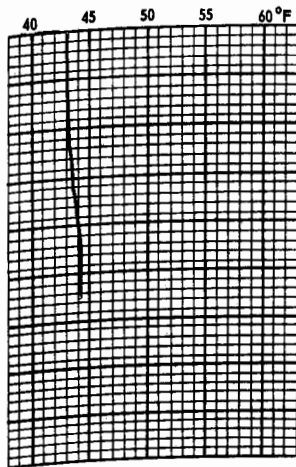




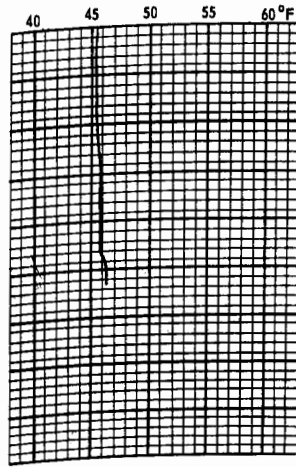
Bathythermograms



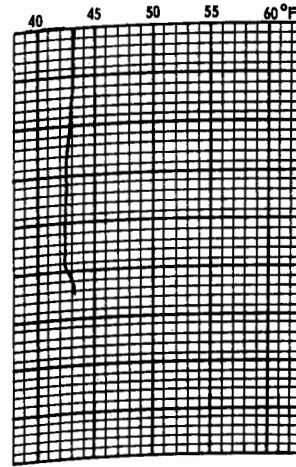
1800/26-XII-55



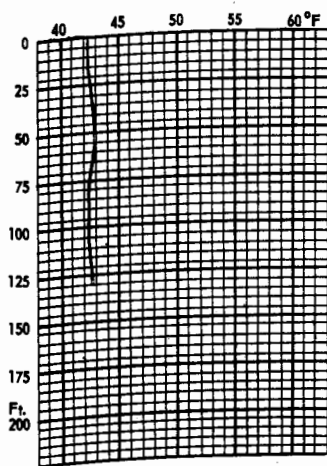
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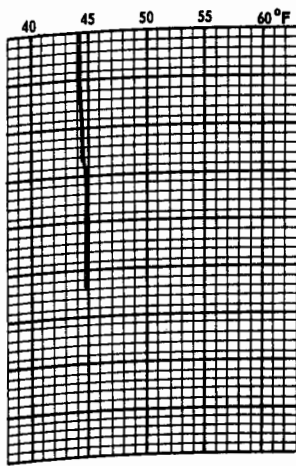
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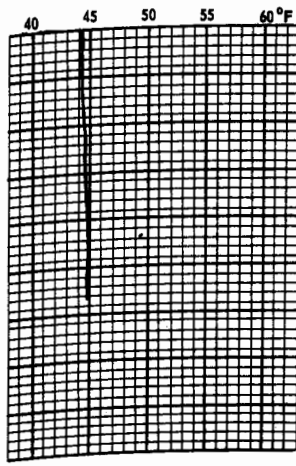
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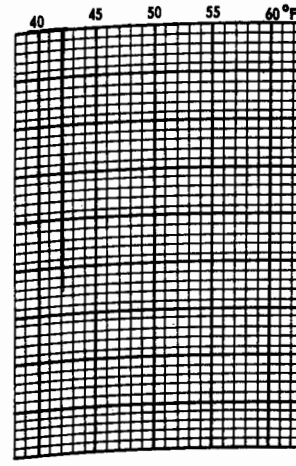
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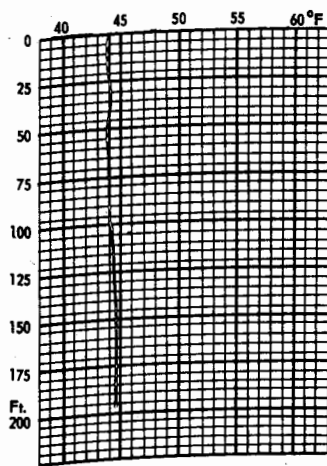
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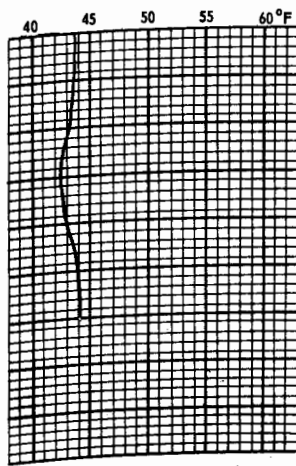
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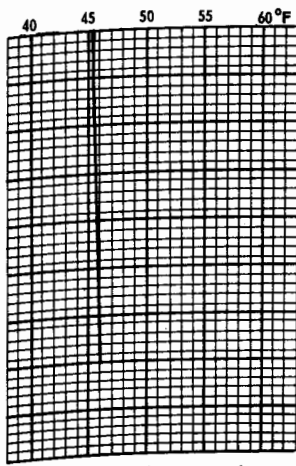
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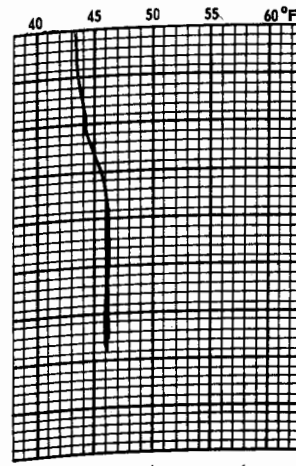
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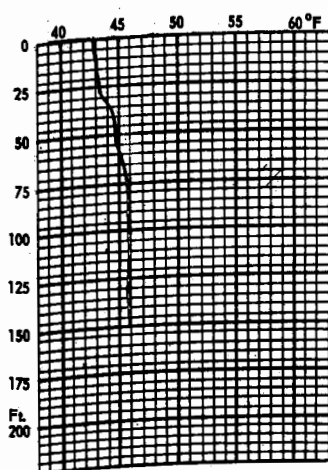


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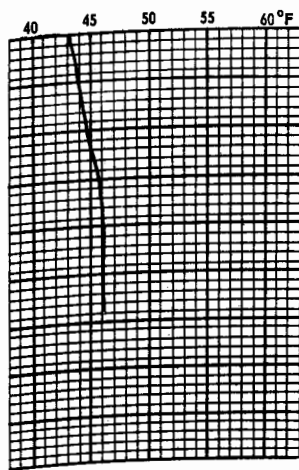


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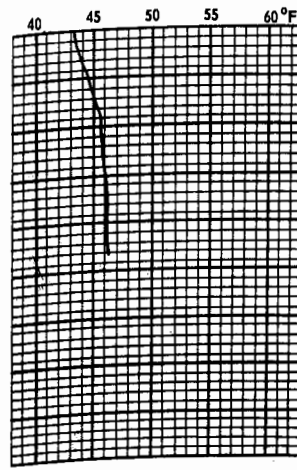
Bathythermograms



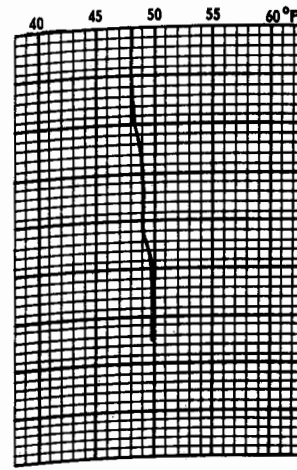
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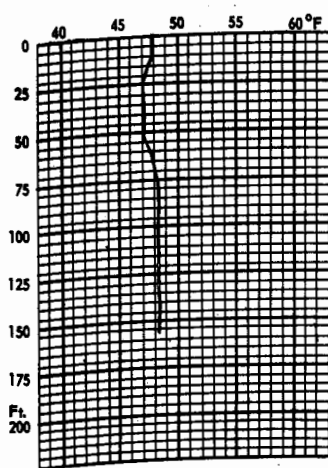
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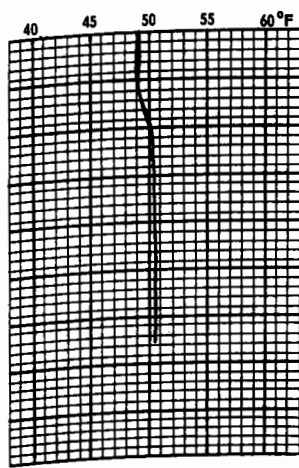
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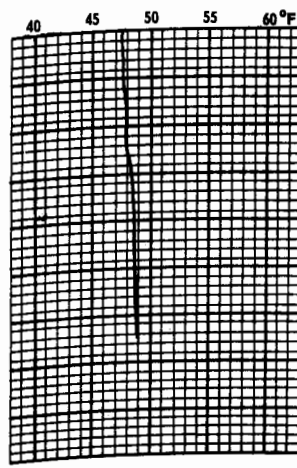
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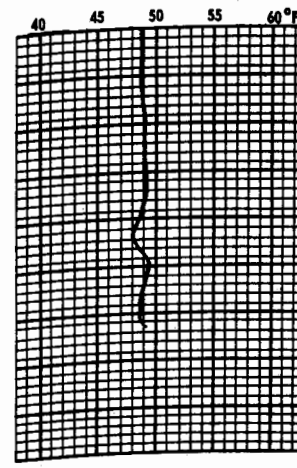
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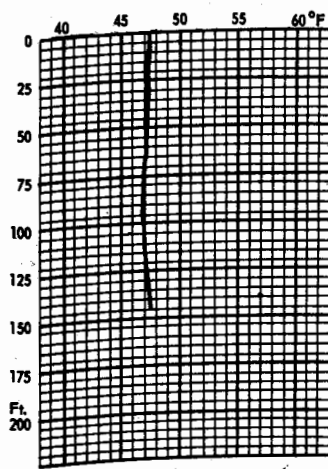
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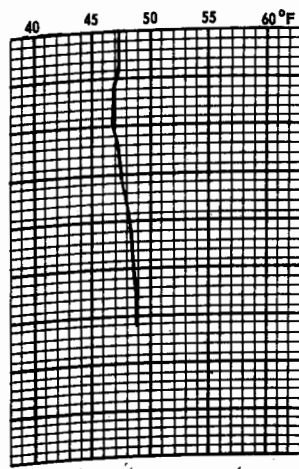
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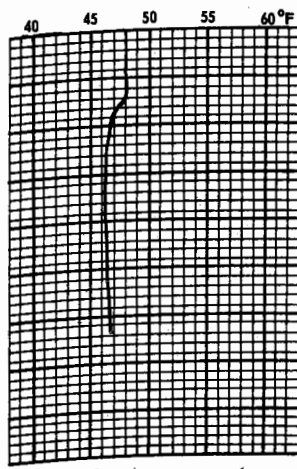
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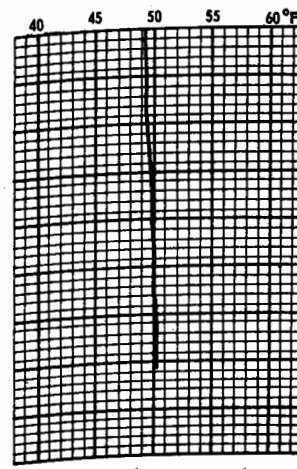
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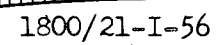
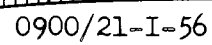
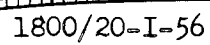
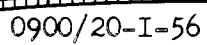
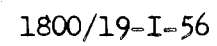
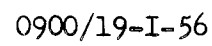
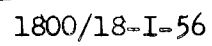
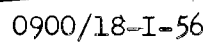
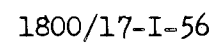
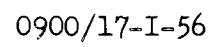
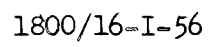
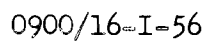
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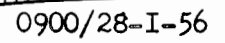
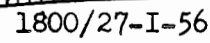
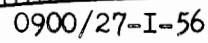
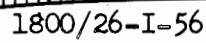
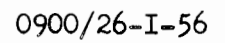
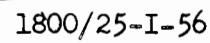
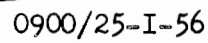
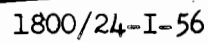
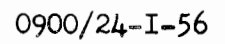
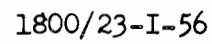
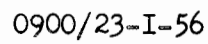
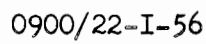


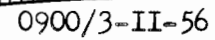
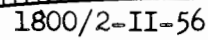
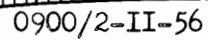
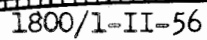
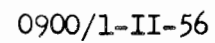
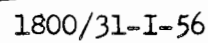
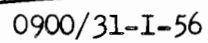
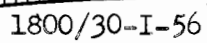
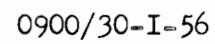
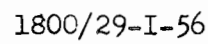
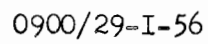
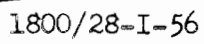
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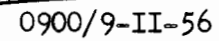
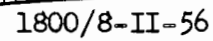
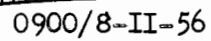
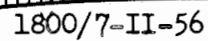
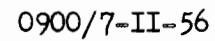
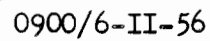
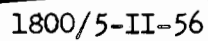
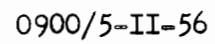
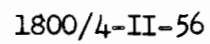
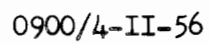
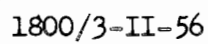


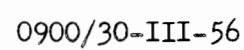
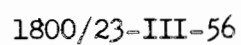
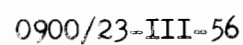
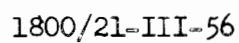
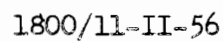
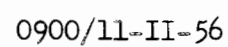
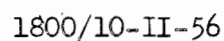
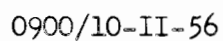
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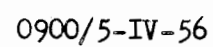
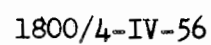
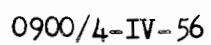
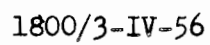
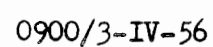
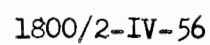
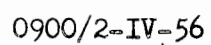
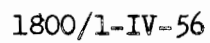
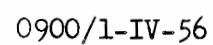
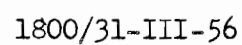
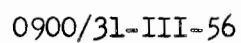
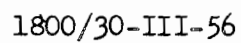




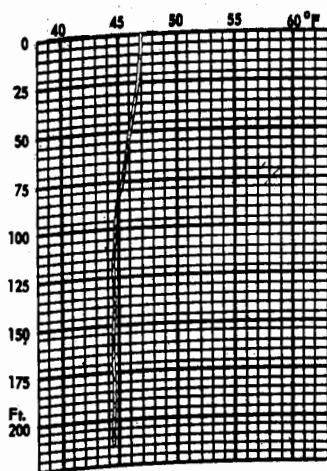




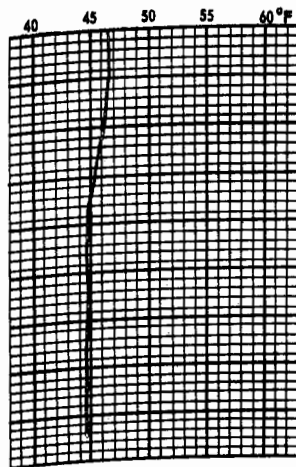




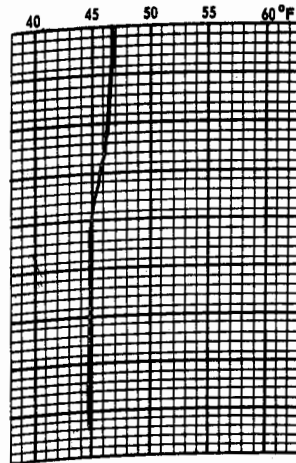
Bathythermograms



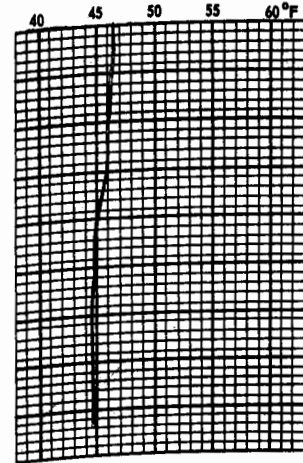
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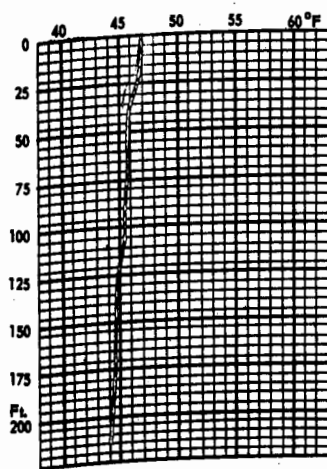
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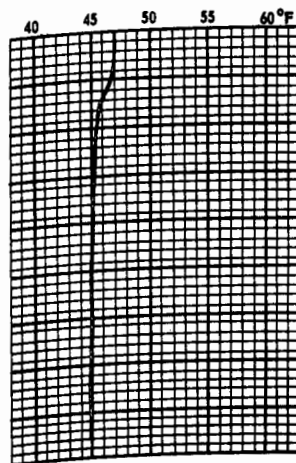
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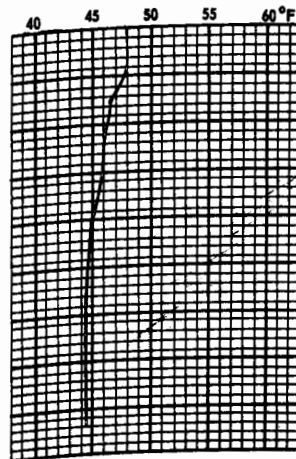
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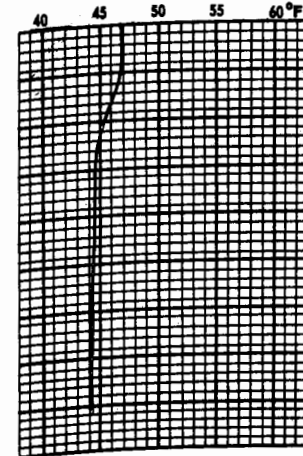
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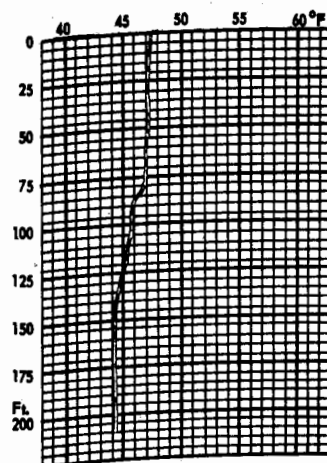
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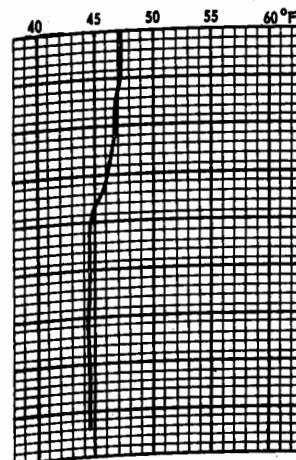
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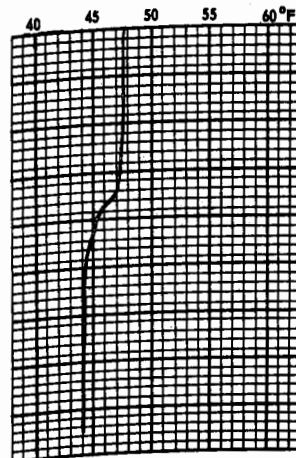
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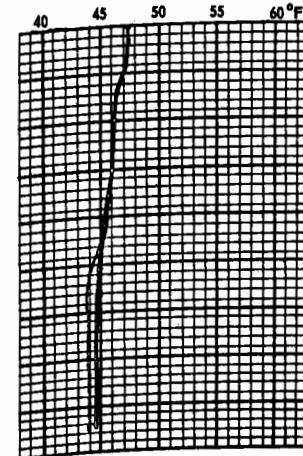
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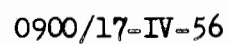
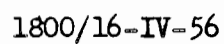
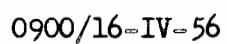
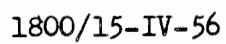
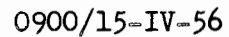
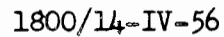
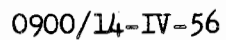
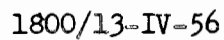
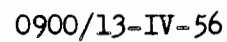
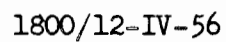
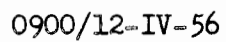
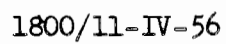
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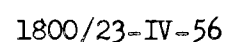
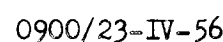
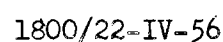
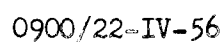
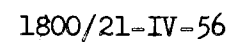
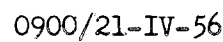
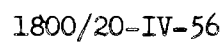
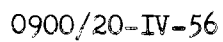
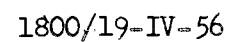
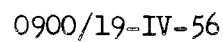
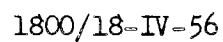
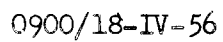


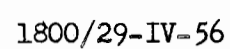
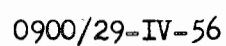
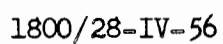
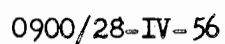
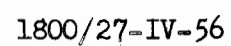
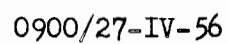
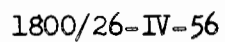
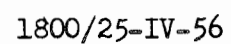
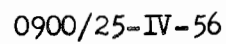
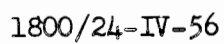
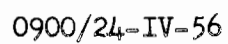
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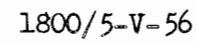
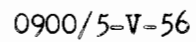
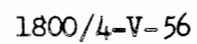
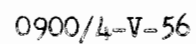
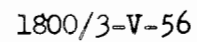
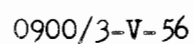
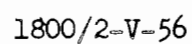
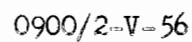
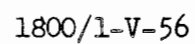
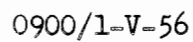
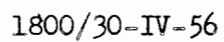
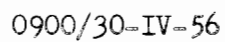


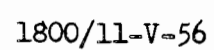
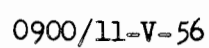
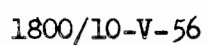
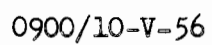
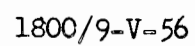
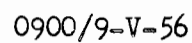
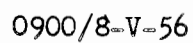
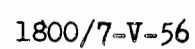
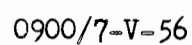
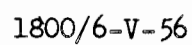
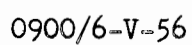
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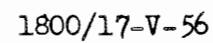
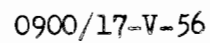
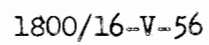
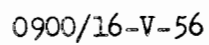
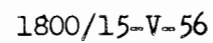
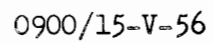
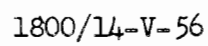
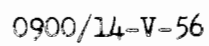
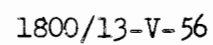
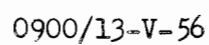
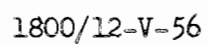
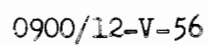


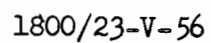
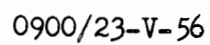
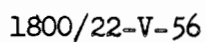
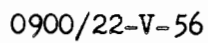
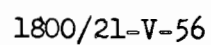
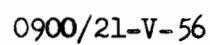
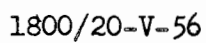
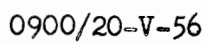
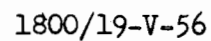
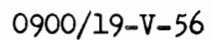
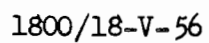
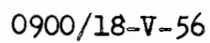


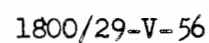
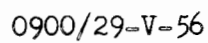
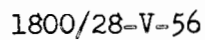
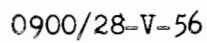
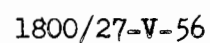
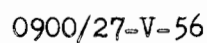
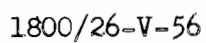
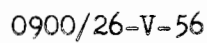
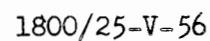
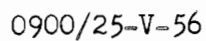
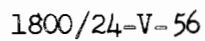
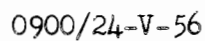


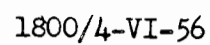
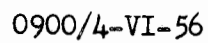
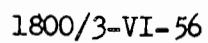
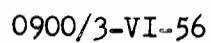
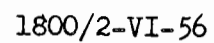
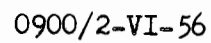
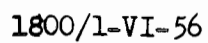
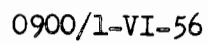
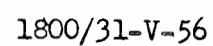
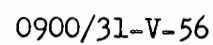
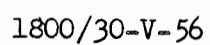
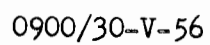


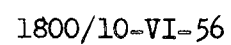
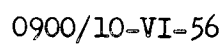
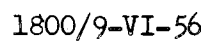
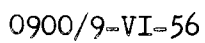
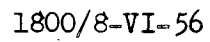
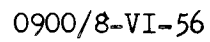
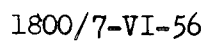
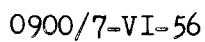
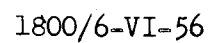
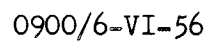
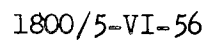
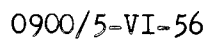


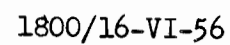
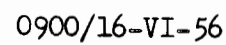
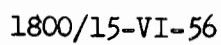
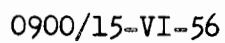
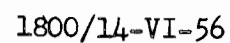
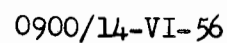
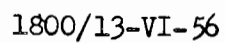
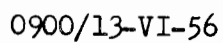
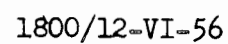
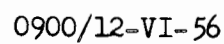
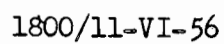
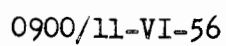


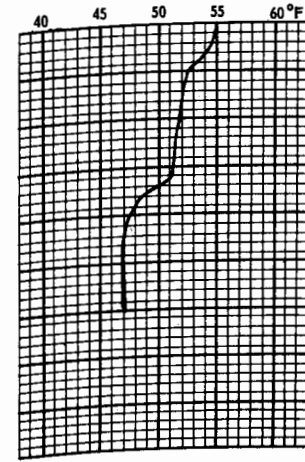
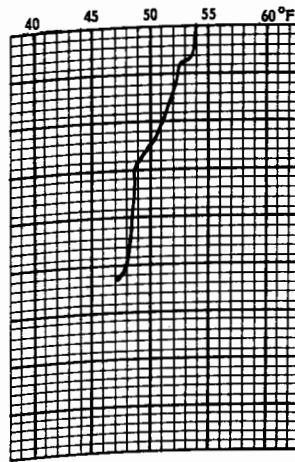
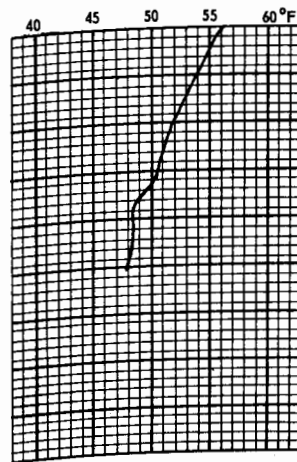
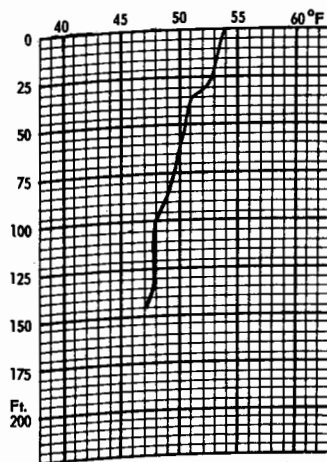
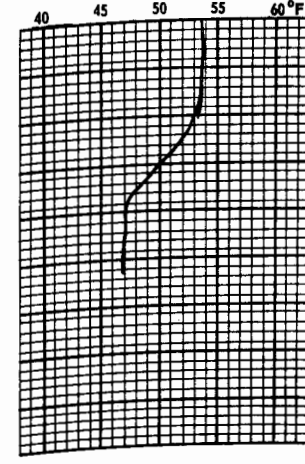
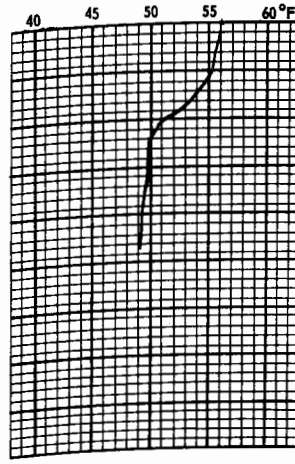
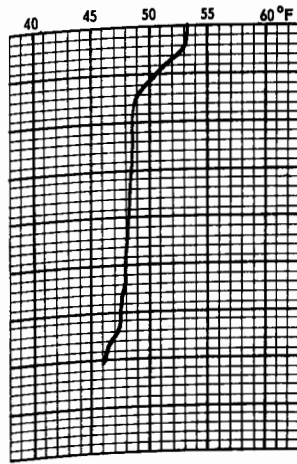
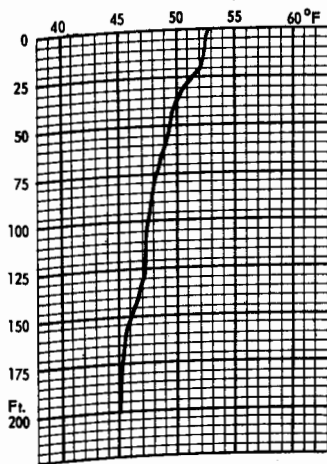
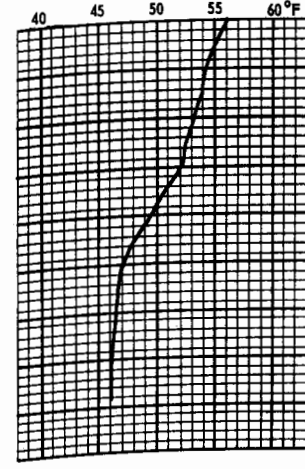
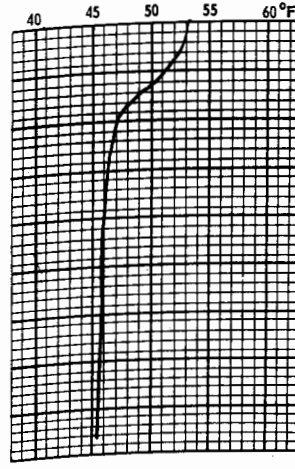
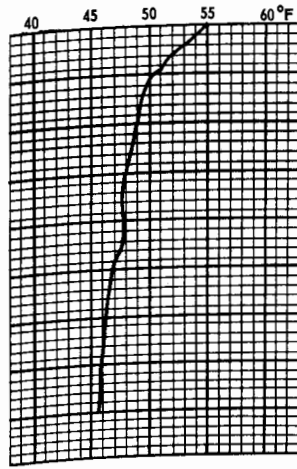
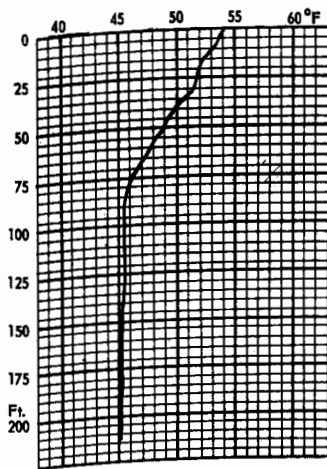


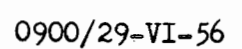
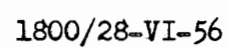
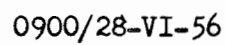
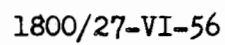
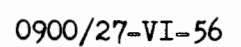
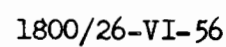
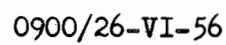
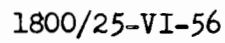
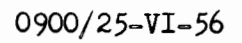
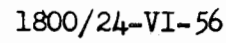
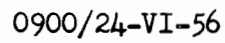
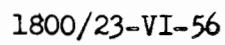


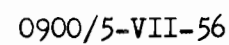
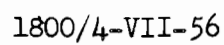
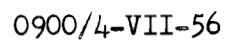
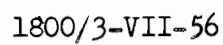
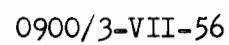
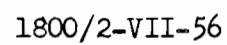
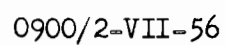
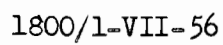
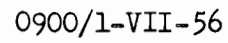
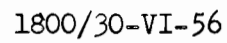
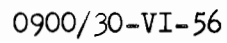
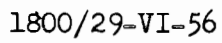




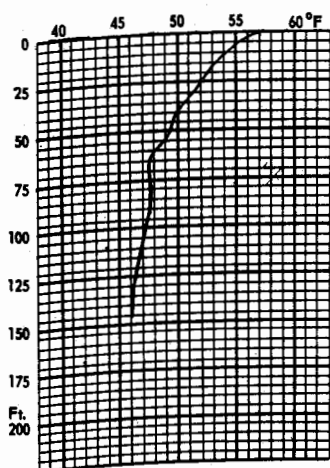




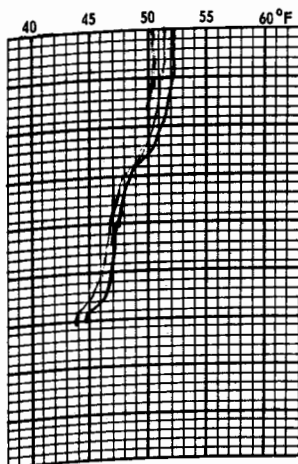




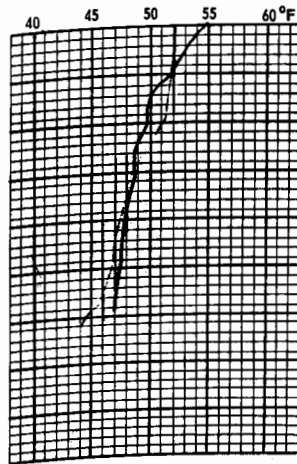
Bathythermograms



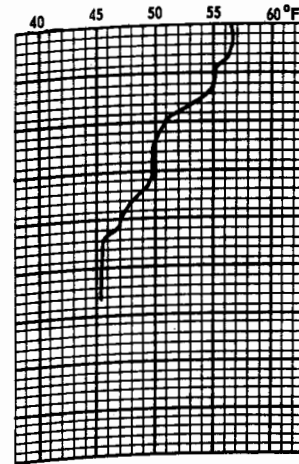
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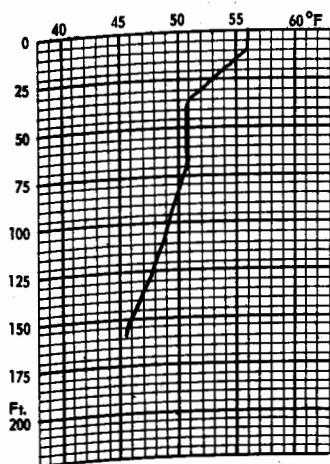
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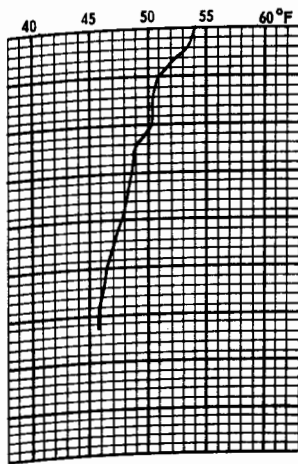
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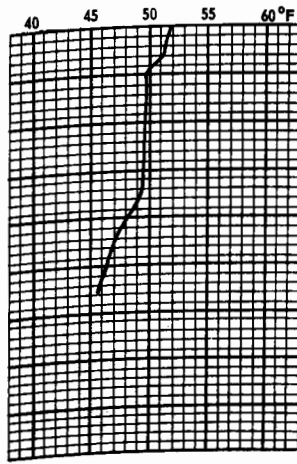
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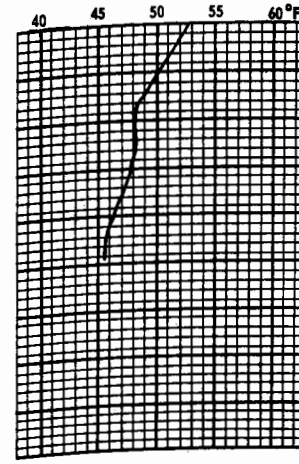
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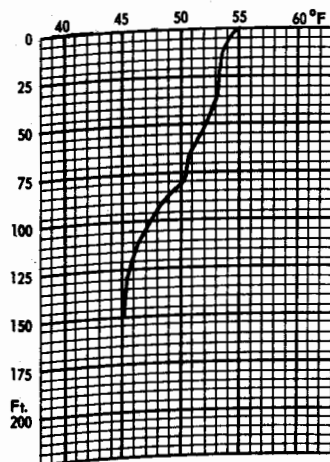
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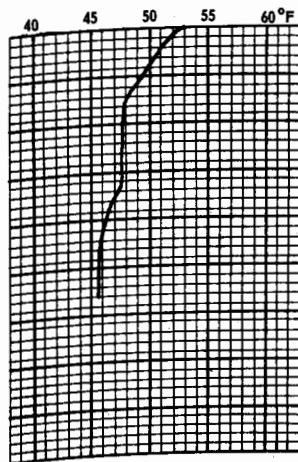
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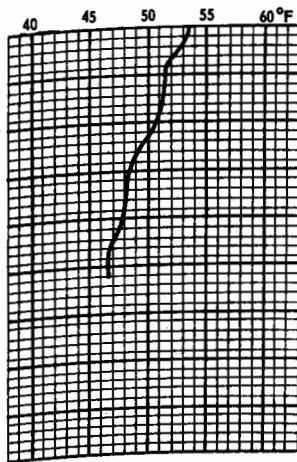
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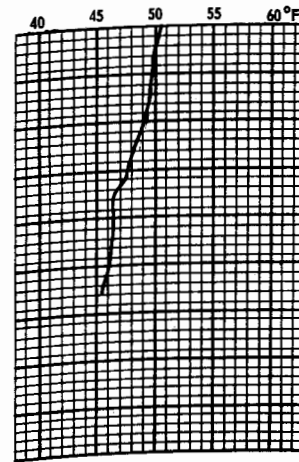
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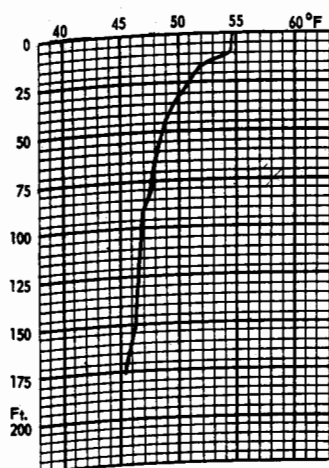


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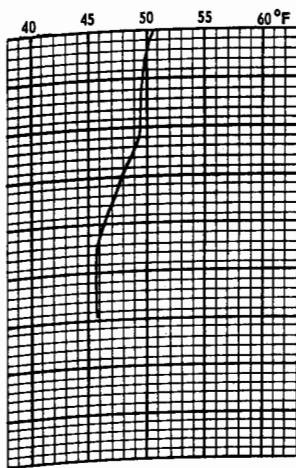


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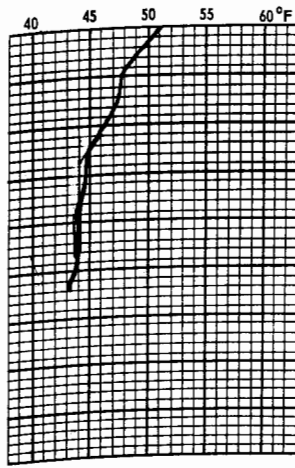
Bathythermograms



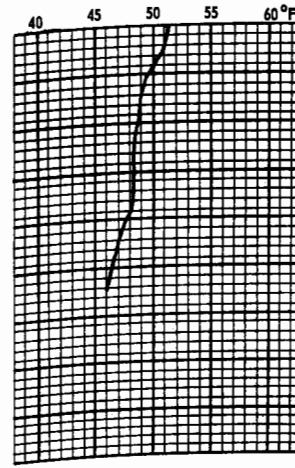
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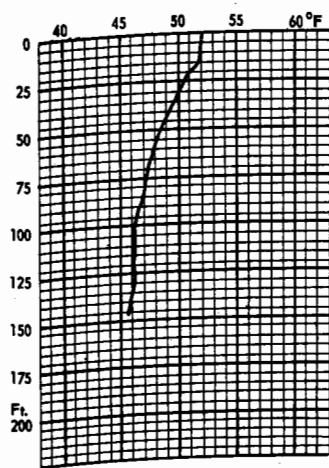
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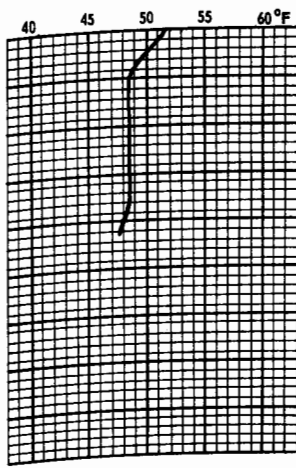
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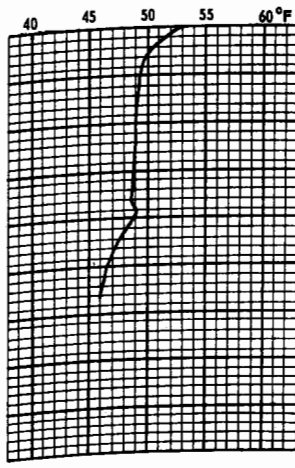
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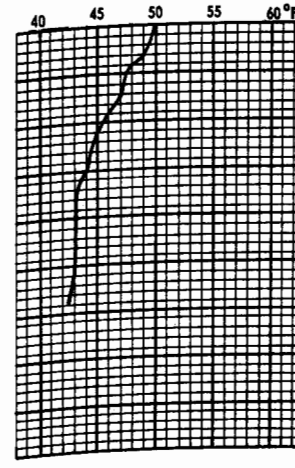
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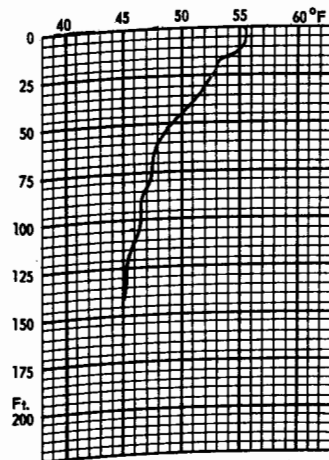
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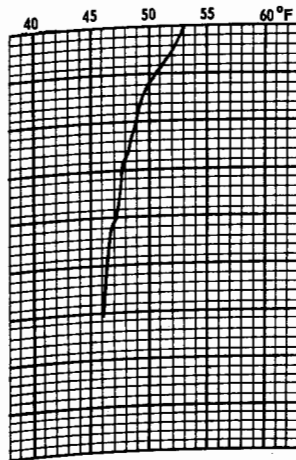
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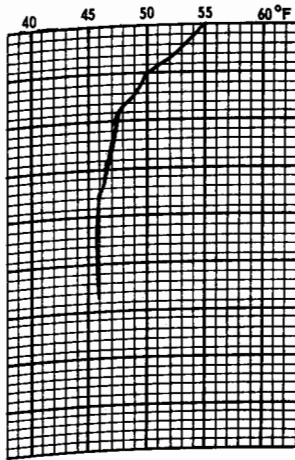
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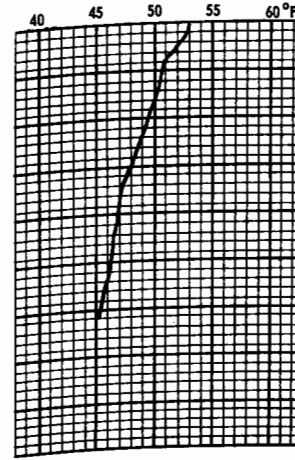
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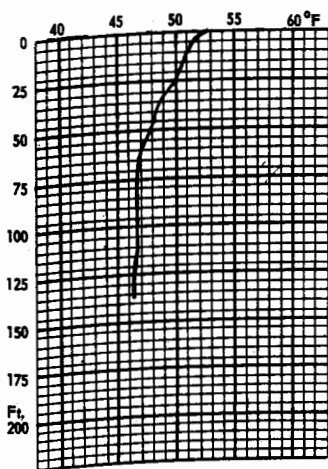


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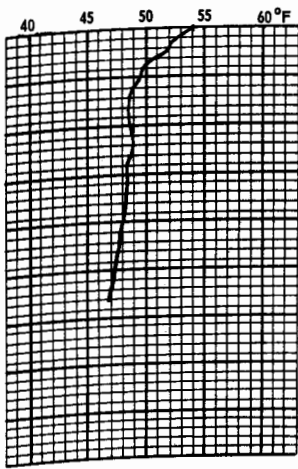


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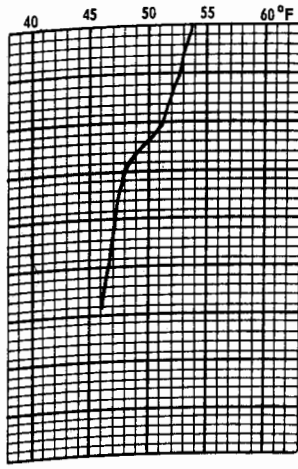
Bathythermograms



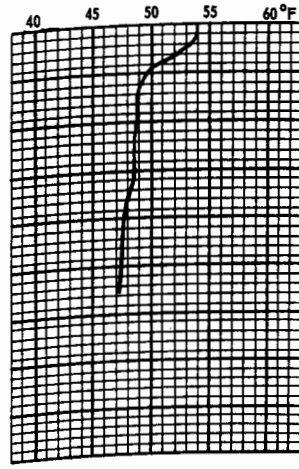
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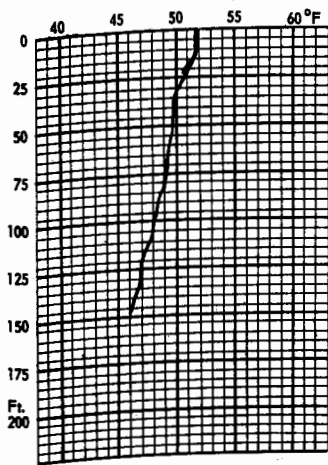
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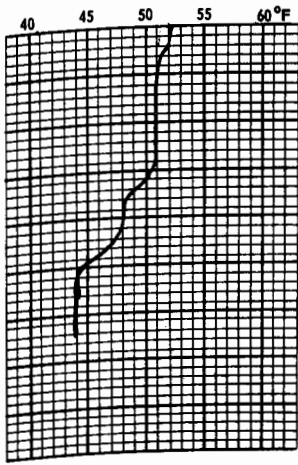
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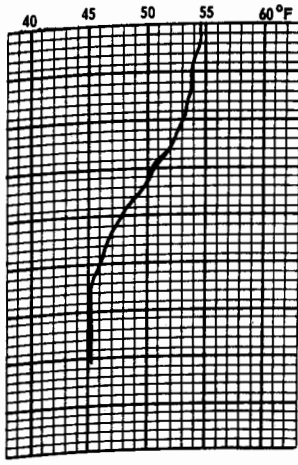
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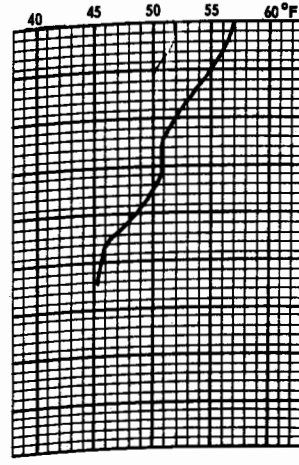
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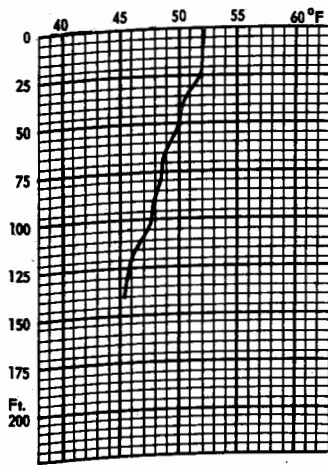
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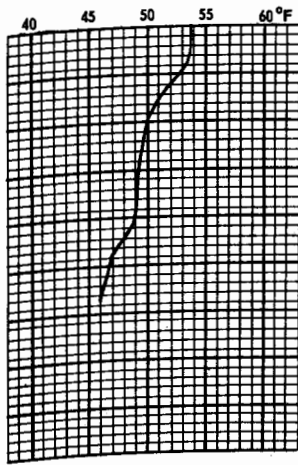
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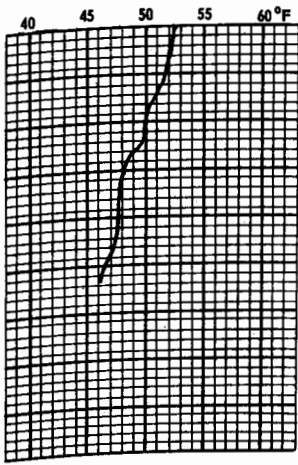
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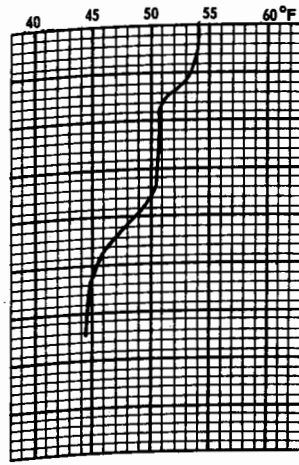
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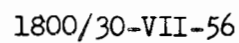
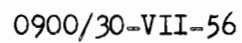
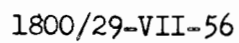
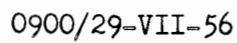
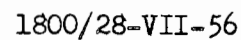
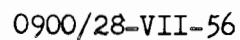
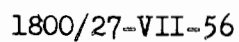
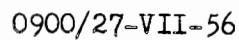
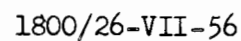
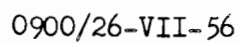
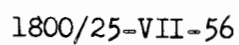
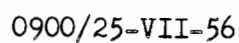
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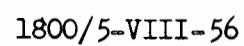
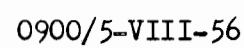
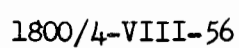
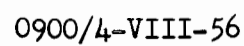
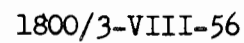
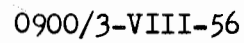
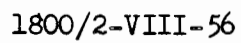
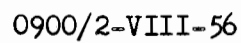
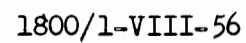
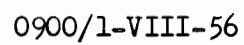
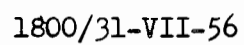
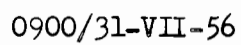


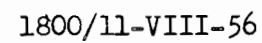
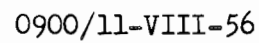
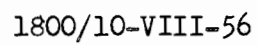
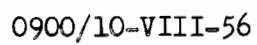
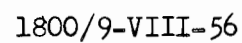
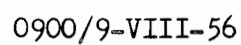
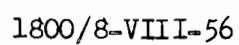
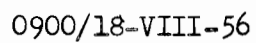
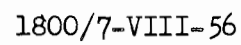
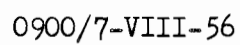
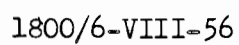
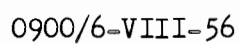
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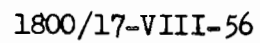
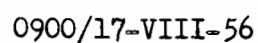
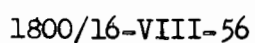
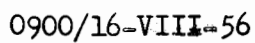
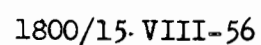
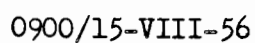
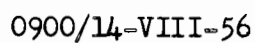
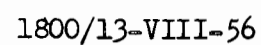
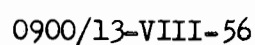
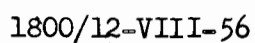
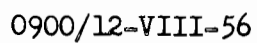


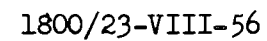
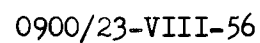
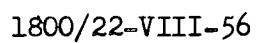
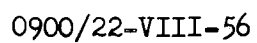
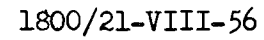
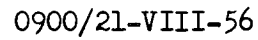
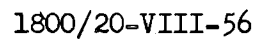
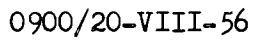
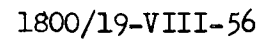
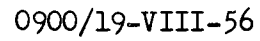
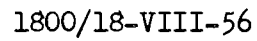
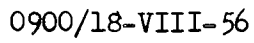
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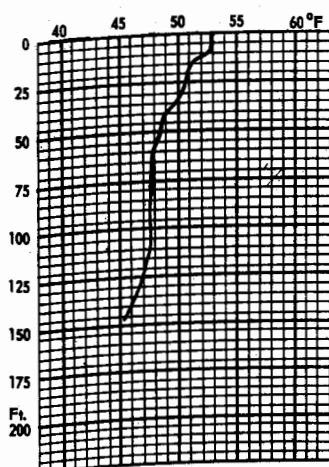




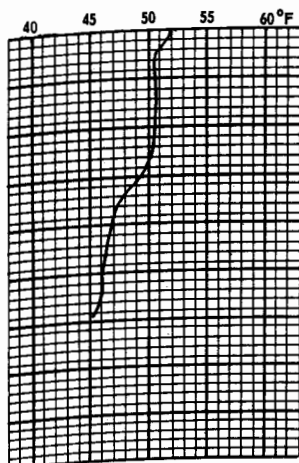




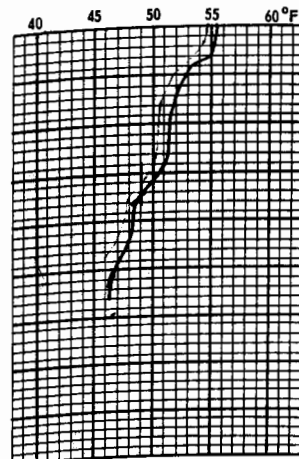
Bathythermograms



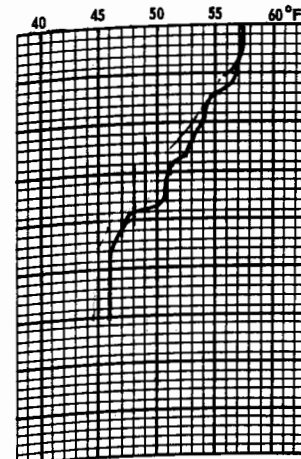
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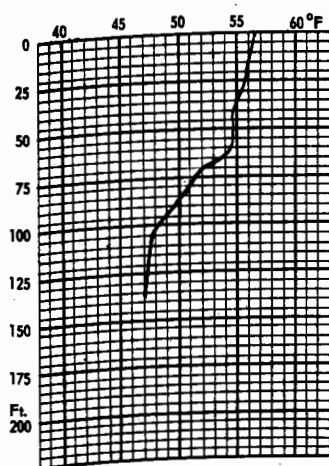
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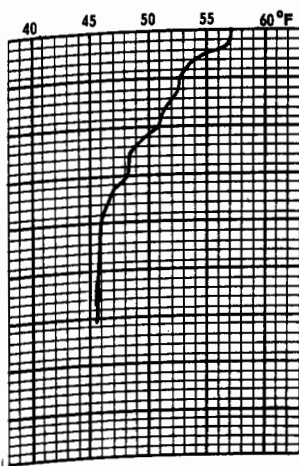
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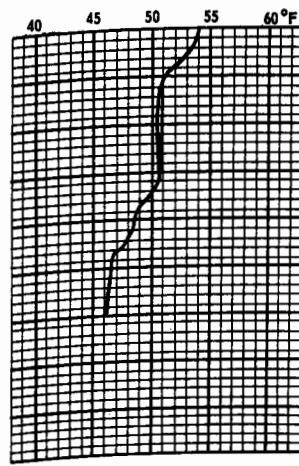
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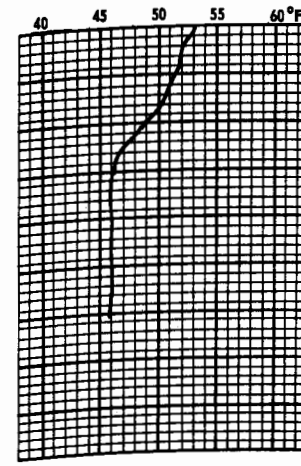
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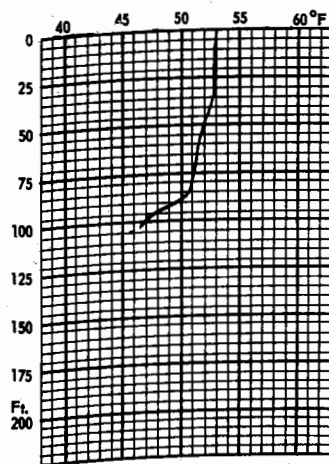
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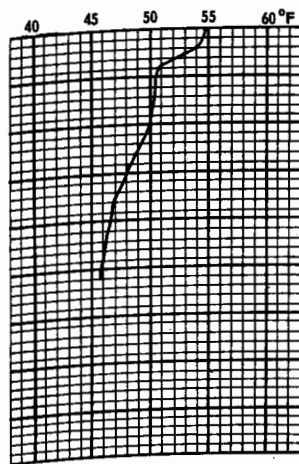
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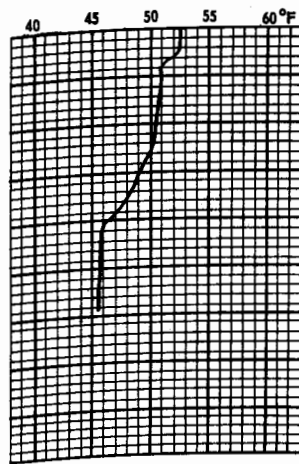
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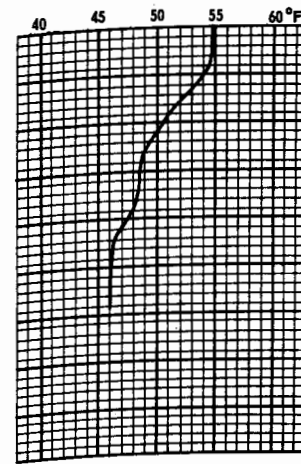
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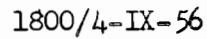
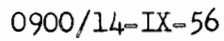
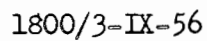
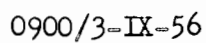
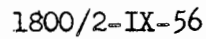
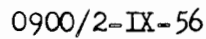
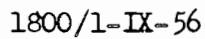
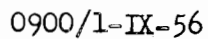
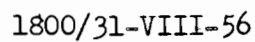
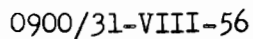
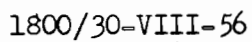
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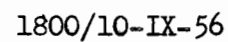
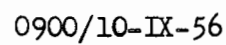
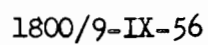
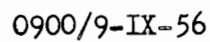
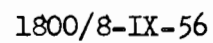
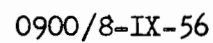
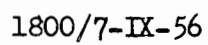
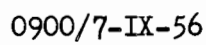
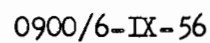
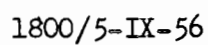
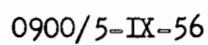


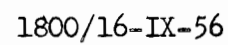
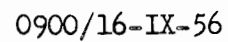
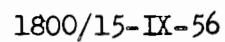
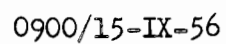
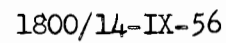
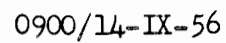
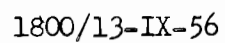
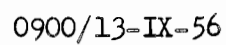
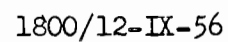
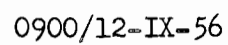
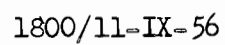
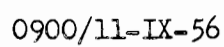
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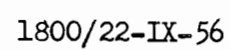
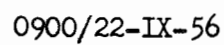
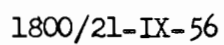
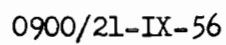
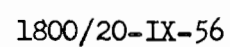
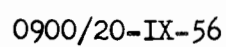
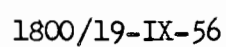
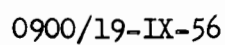
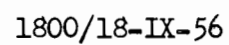
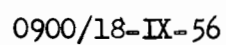
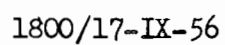
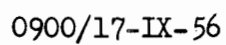


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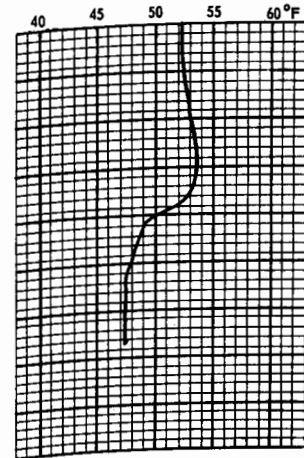
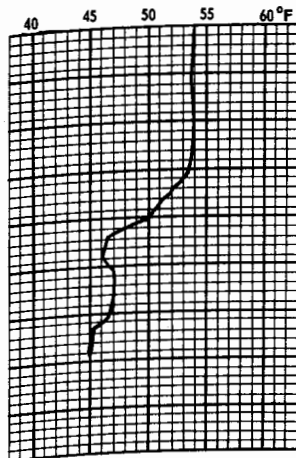
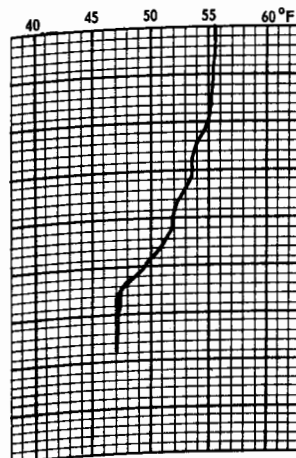
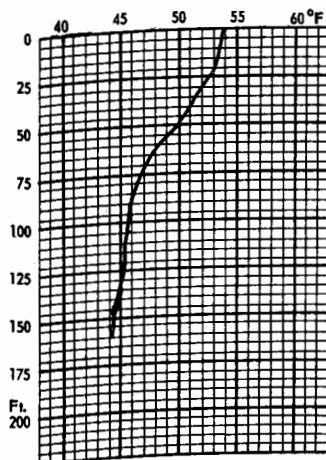
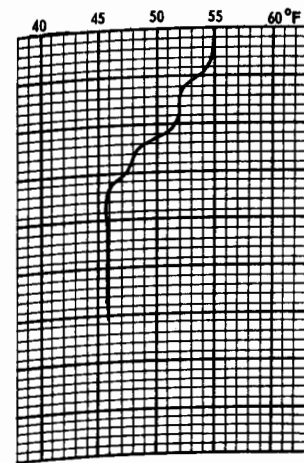
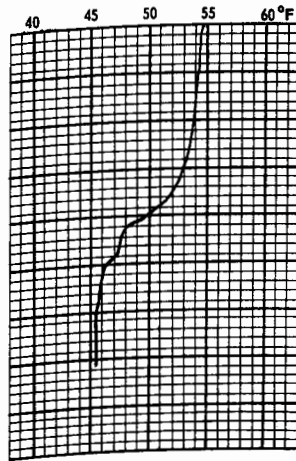
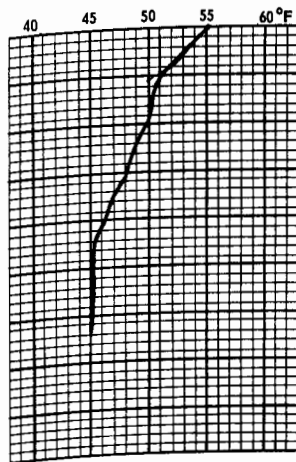
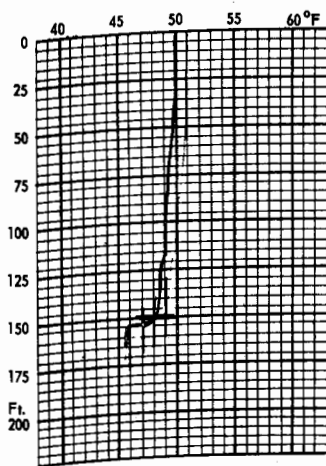
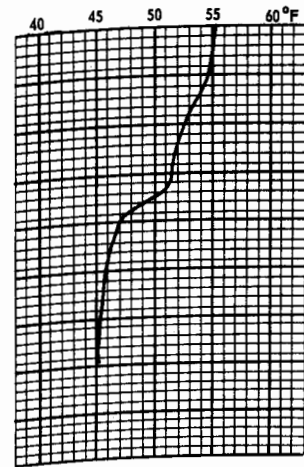
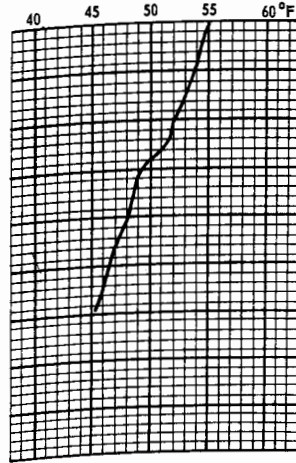
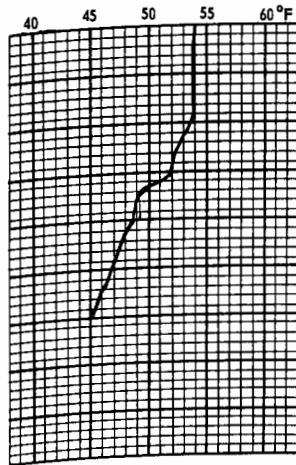
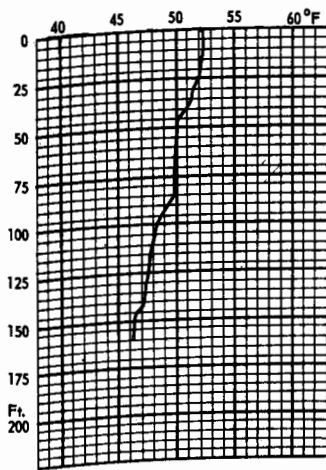


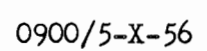
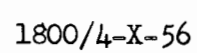
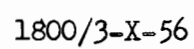
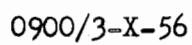
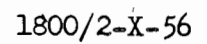
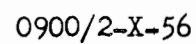
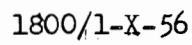
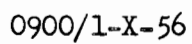
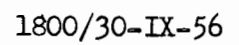
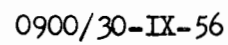
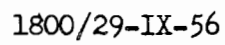
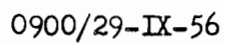


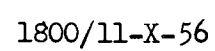
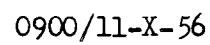
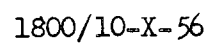
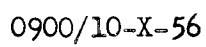
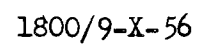
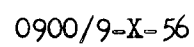
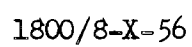
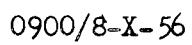
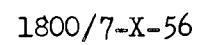
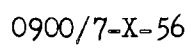
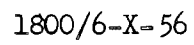
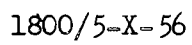




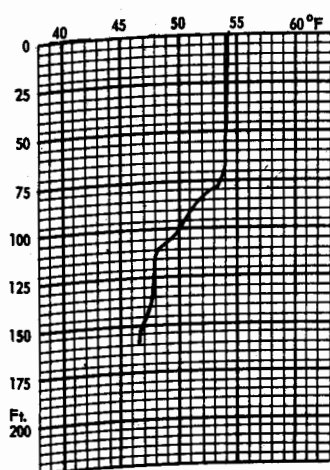
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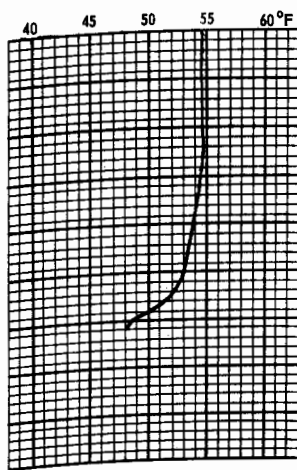




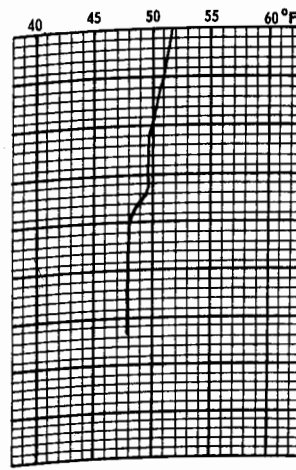
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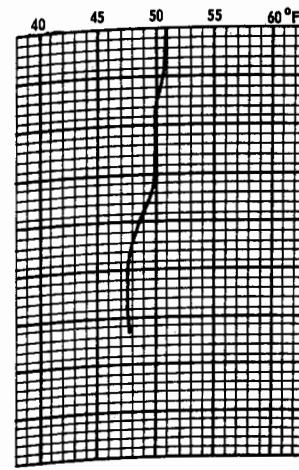
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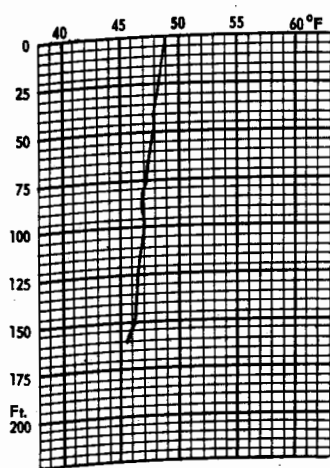
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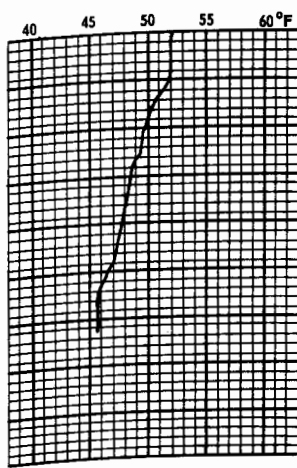
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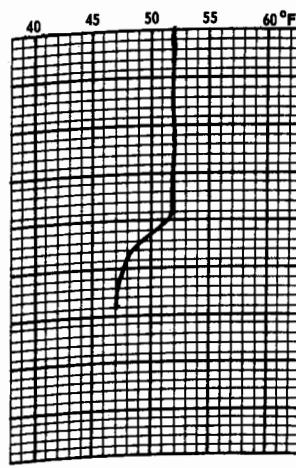
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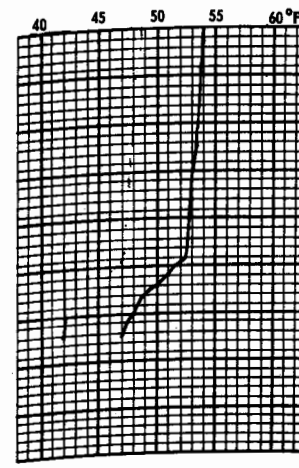
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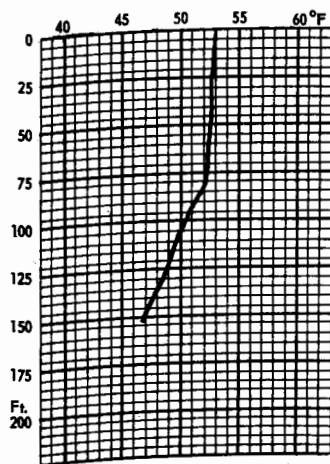
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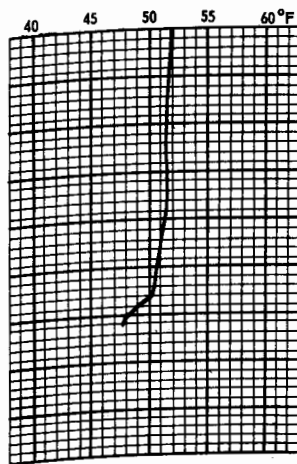
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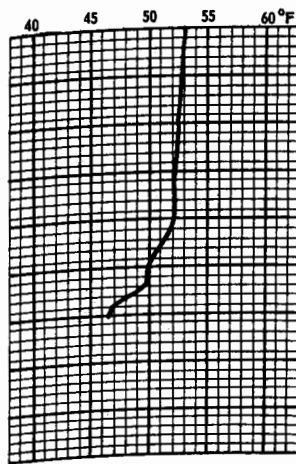
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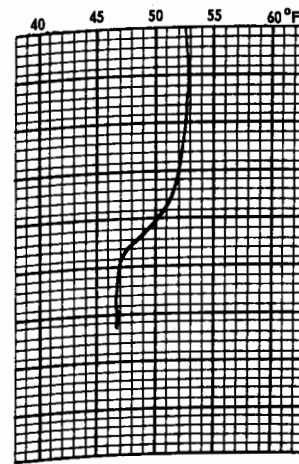
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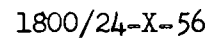
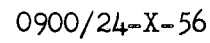
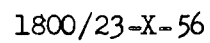
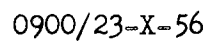
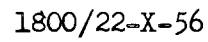
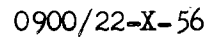
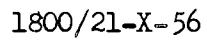
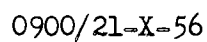
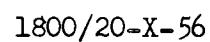
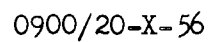
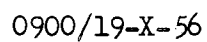
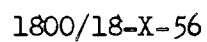
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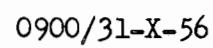
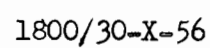
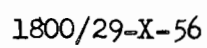
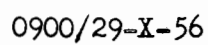
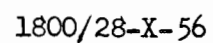
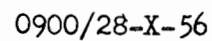
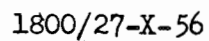
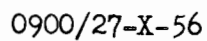
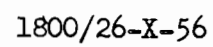
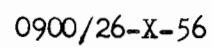
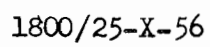
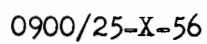


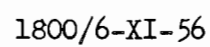
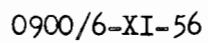
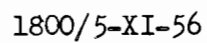
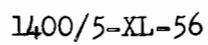
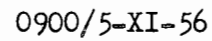
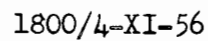
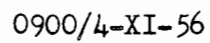
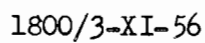
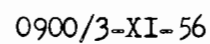
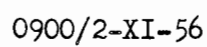
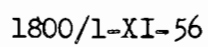
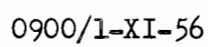
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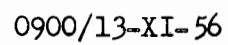
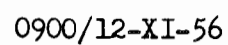
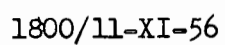
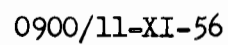
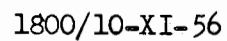
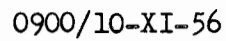
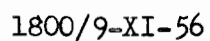
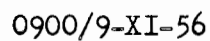
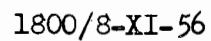
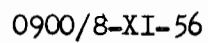
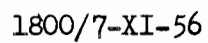
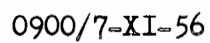


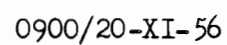
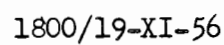
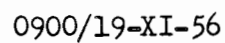
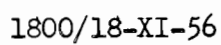
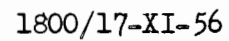
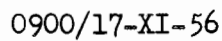
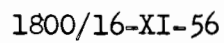
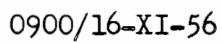
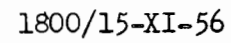
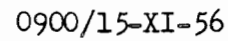
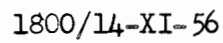
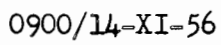
0900/18-X-56



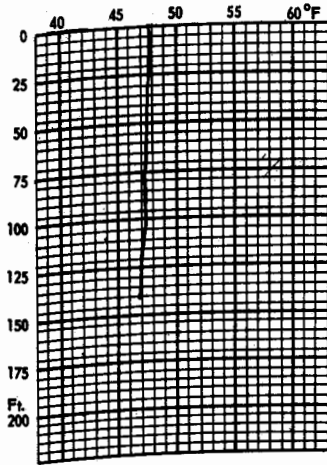




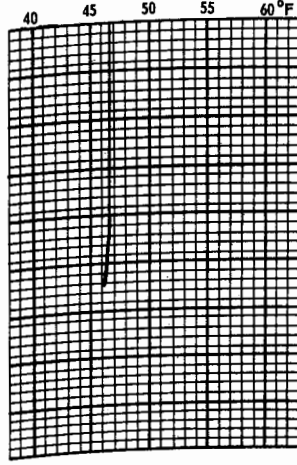




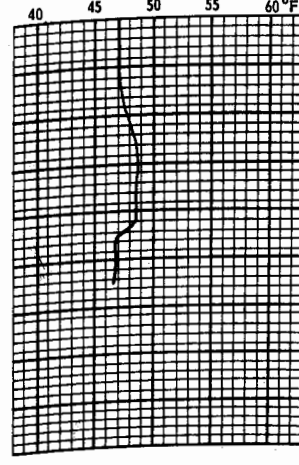
Bathythermograms



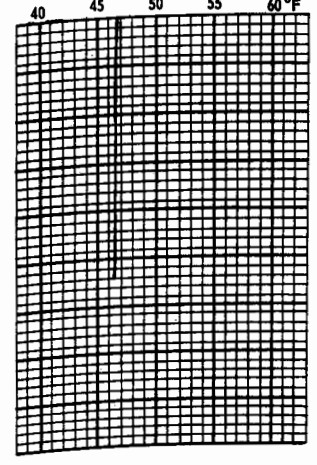
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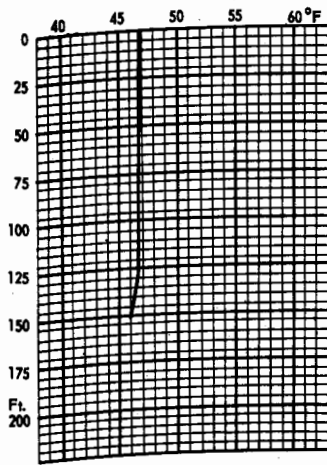
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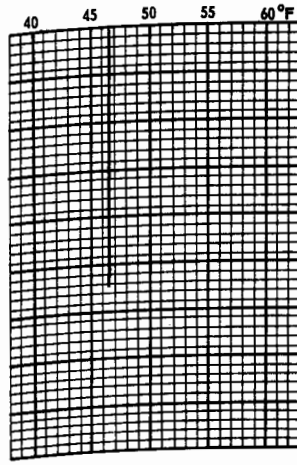
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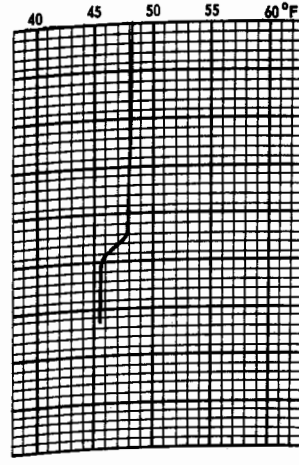
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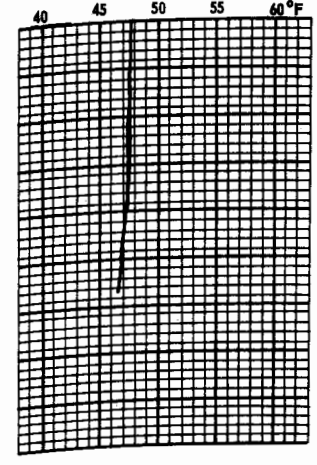
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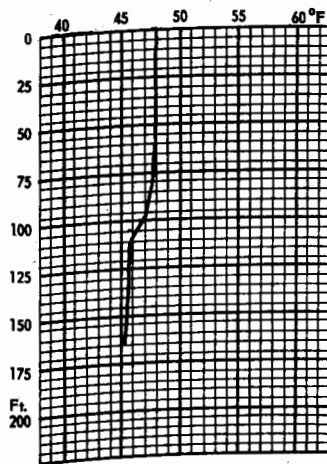
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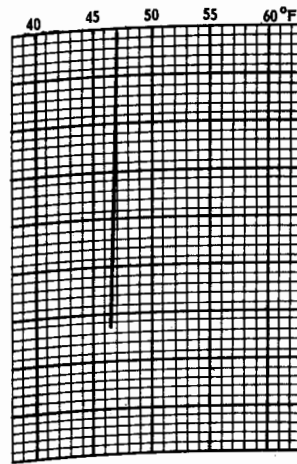
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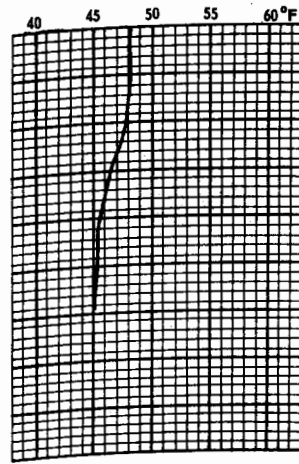
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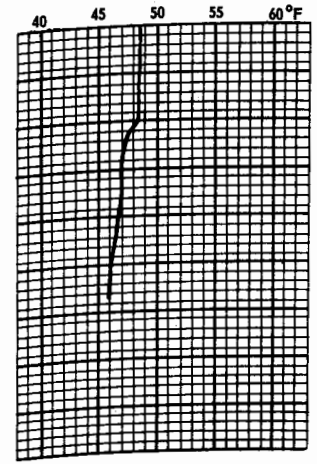
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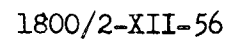
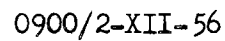
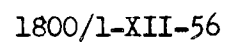
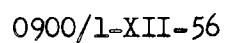
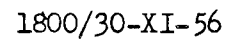
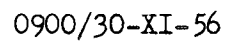
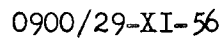
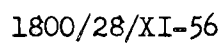
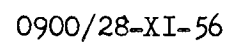
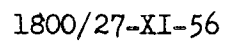
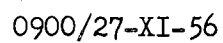
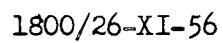
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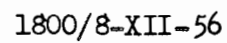
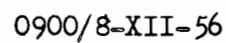
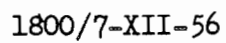
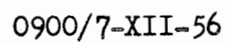
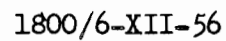
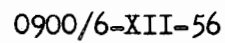
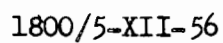
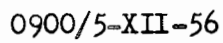
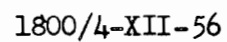
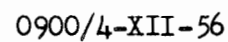
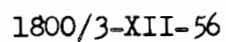
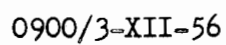


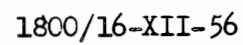
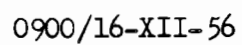
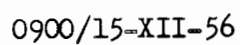
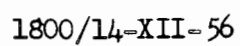
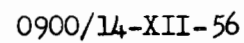
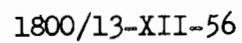
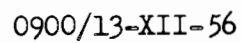
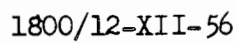
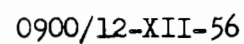
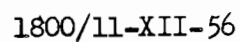
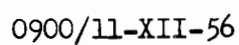
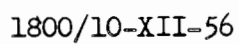
1800/25-XI-56



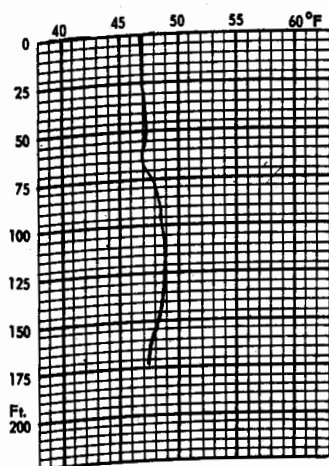
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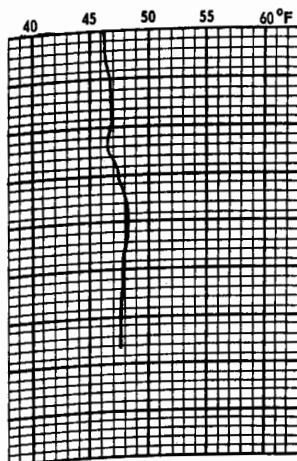




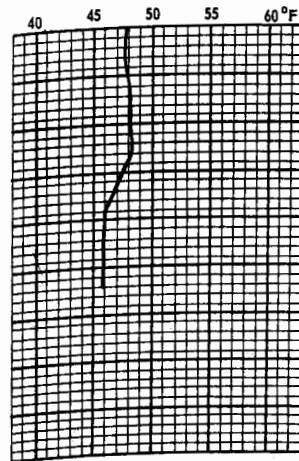
Bathythermograms



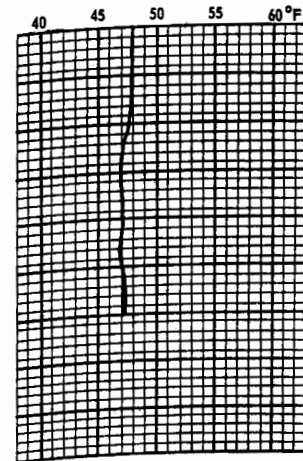
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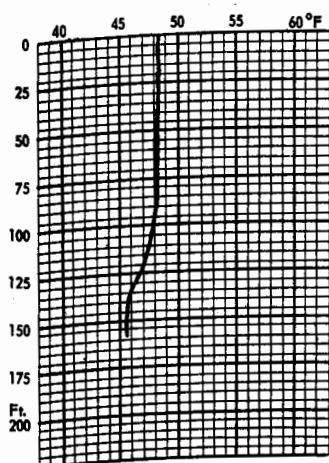
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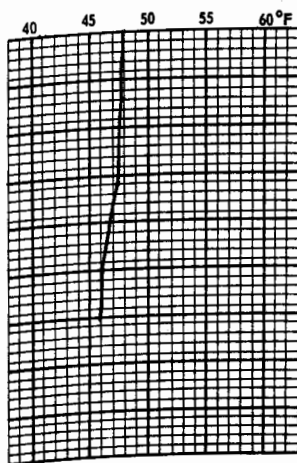
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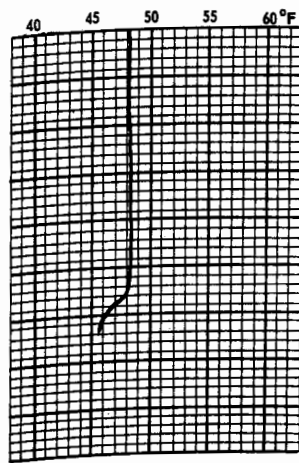
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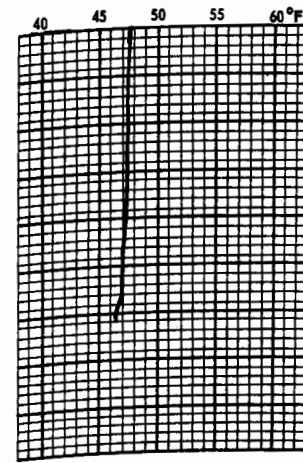
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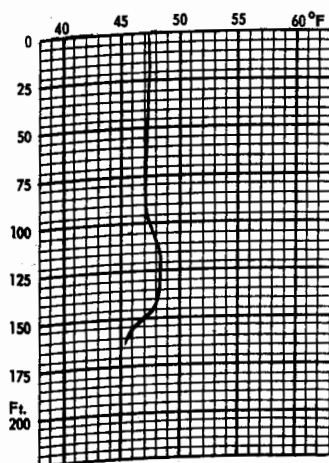
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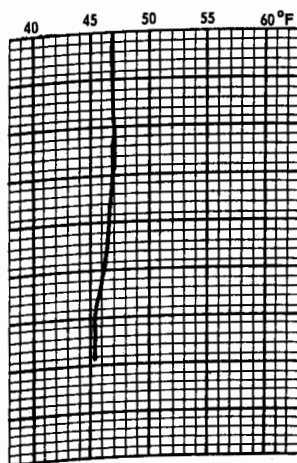
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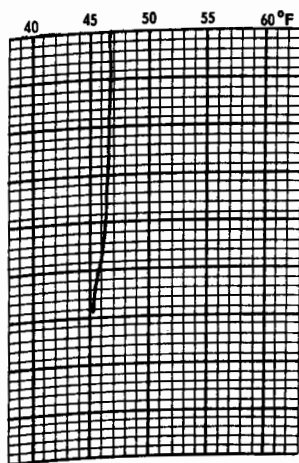
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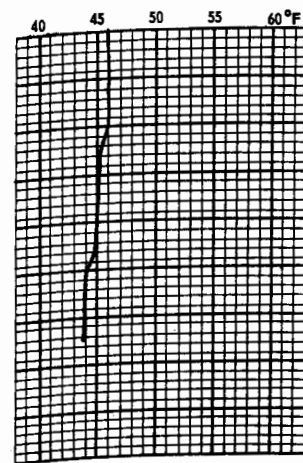
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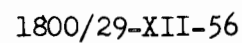
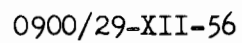
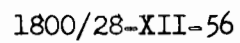
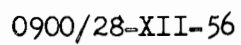
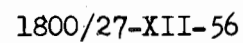
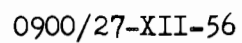
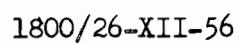
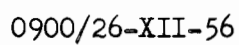
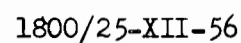
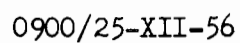
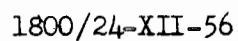
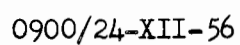
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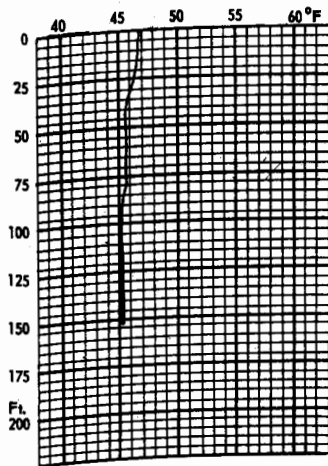
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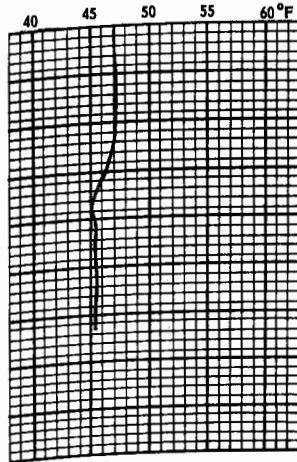
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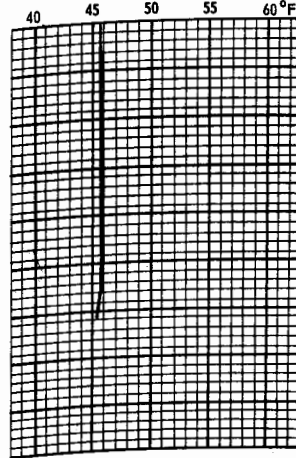
Bathythermograms



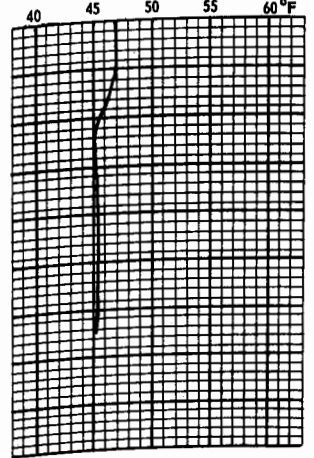
0900/30-XII-56



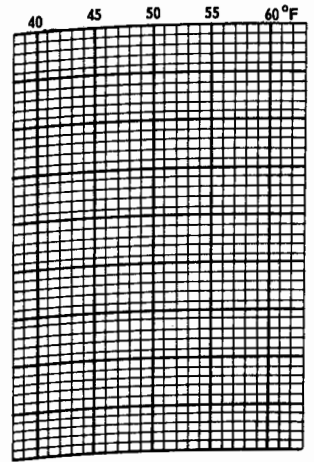
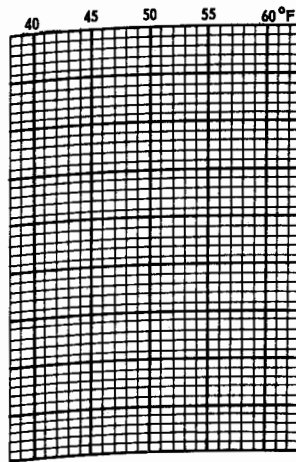
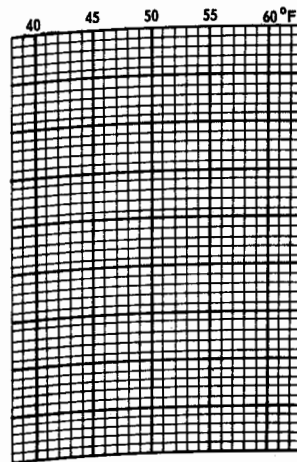
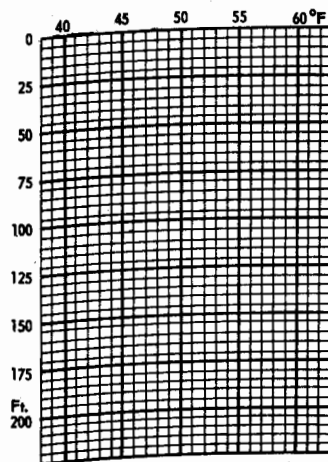
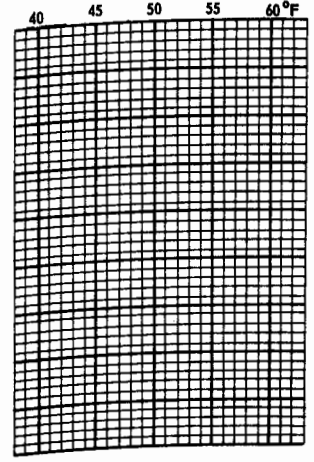
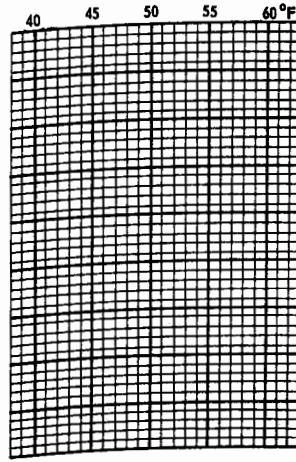
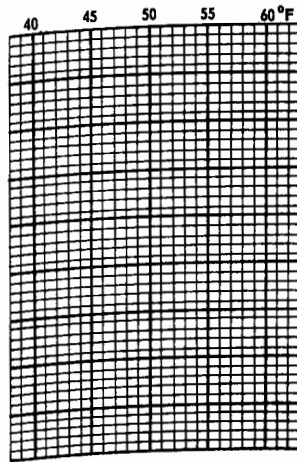
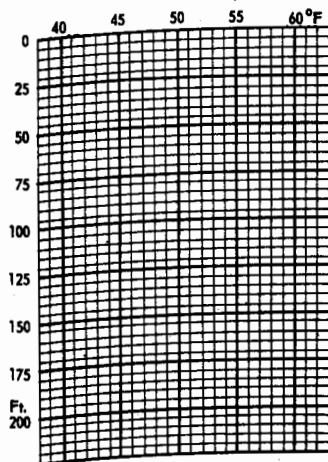
1800/30-XII-56



0900/31-XII-56



1800/31-XII-56



Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current Dir.
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		
June 1955										
18	0900	245	4	53	57	02	7	Cu	3	
19	0900	306	3	60	68	04	8	Cu	2	
19	1800	006	4	48	51	02	7	Cu	3	
20	0900			61	73	01	2	As	2	
20	1800			61	69	00			2	
21	0900			63	68	03	10	Ac	2	
21	1800	290	2	58	61	01	3	Ac	2	
22	0900	190	1	55	57	02	7	Ac	3	
22	1800	096	1	56	61	02	9	Cu/Ns	4	
23	0900	204	3	53	54	03	10	Ns	4	
24	1800	231	2	58	63	02	8	Cu/Ns	3	
25	0900	336	2	55	58	02	8	Ac	3	
25	1800	336	2	58	62	02	8	Ac	3	
26	0900	245	1	56	58	40	10	Ns	3	
26	1800	231	3	56	60	02	10	Cu/Ns	3	
27	0900	218	1	54	56	49	10	Ns	2	
27	1800	180	3	53.5	55	03	10	Cu/Ns	3	
28	0900	290	2	54	56	01	7	Cu/Ns	3	
28	1800	290	4	54	58	02	8	Cu/Ns	4	
29	0900	177	4	54	56	03	10	Ns	3	024
29	1800	162	3	50	53	05	10	Ns	4	010
30	0900	245	3	51	54	03	10	Ns	5	342
30	1800	245	4	53	56	02	8	Cu/Sc	6	342
July 1955										
1	0900	245	3	50	55	02	6	Cu	6	300
1	1800	245	3	54	59	02	6	Cu	5	342
2	0900	290	3	52	55	02	6	Cu	4	
2	1800	336	4	52	55	01	4	Ac	4	342
3	0900	204	2	54	57	03	10	Cu/St	5	175
3	1800	290	3	53	56	02	8	Cu/St	5	
4	0900	218	2	54	57	02	8	Ac	3	156
4	1800	245	3	54	58	02	7	Cu	4	110
5	0900	290	3	58	64	01	2	Cu	2	110
5	1800	290	3	64	74	01	4	Cu	1	186

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind Dir.	Force	Air Temp. Wet Dry	Weather	Cloud Cover	Type	Sea	Current Dir.
July 1955									
6	0900	220	2	58 62	01	5	Cu	1	040
6	1800	190	3	58 62	02	8	Cu	1	329
7	0900	162	3	58 62	02	8	Cu	1	327
7	1800	053	1	56 59	03	10	Sc	1	
8	0900	336	2	62 68	02	8	St/Cu	1	171
8	1800	336	2	62 68	02	8	St/Cu	1	327
9	0900	290	2	58 64	03	10	As	3	
9	1800	240	1	52 58	03	10	As	3	171
10	0900	290	2	57 59	03	10	Ns/St	3	345
10	1800	260	1	57 62	04	10	Ns/St	3	
11	0900	310	3	57 60	03	10	Ns	3	060
11	1800	276	3	51 58	04	10	Ns	3	156
12	0900	321	2	59 62	02	8	Ns	2	070
12	1800	290	1	55 58	03	10	Ns/St	2	156
13	0900	355	1	58 60	40	10	Ns	3	110
13	1800	336	4	57 62	01	4	Cu	4	169
14	0900	177	3	56 60	01	4	Cs	3	115
14	1800	245	4	57 60	02	8	St	4	185
15	0900			55 57	03/40	10	Ns	4	181
15	1800			57 61	03	10	Sc	3	175
16	0900	162	4	54 55	01	10	Ns/Sc	3	171
16	1800	162	6	55 58	02	6	Sc	5	342
17	0900	190	3	57 64	01	6	Ac	5	156
17	1800	162	3	57 62	02	8	St	3	024
18	0900	162	5	57 61	01	7	Sc	4	302
18	1800	177	2	60 64	01	3	Sc	4	357
19	0900			56 58	40	10	Ns	1	296
19	1800	321	4	55 60	01	3	Cl	4	141
20	0900	259	2	55 59	02	10	Cu	5	110
20	1800	337	4	54 61	02	8	Cu	3	131
21	0900	330	2	58 64	02	10	St	3	110
21	1800	290	2	59 62	03	10	St	3	110
22	0900	321	3	65 75	01	3	Sc	3	115
22	1800	321	4	57 60	00	0		3	118
23	0900	301	3	55 58	03	10	Cu/Ns	3	121
23	1800	301	4	51 55	03	10	Cu/St	4	121
24	0900	311	1	53 55	02	10	Cu/St	3	131
24	1800	274	3	54 60	02	9	Cu/St	2	110
25	0900	157	4	53 55	02	7	Cu/St	3	327
25	1800	157	4	51 54	81	10	Cc/Ac	3	060

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		
July 1955										
26	0900	167	2	54	55	60	10	Ns	4	357
26	1800	158	5	59	63	02	8	Cu/St	4	357
27	0900	240	2	54	59	01	1	Cu	2	024
27	1800	Calm	0	58	61	40	10	Cu/Ns	2	050
28	0900	172	5	52	56	40	10	Ns	3	332
28	1800	130	6	52	56	40	10	Ns	5	310
29	0900	269	3	56	59	40	10	Ns	4	079
29	1800	195	3	50	57	14	10	Ns	4	065
30	0900	167	6	52	57	40	10	Ns	4	327
30	1800	149	5	58	59	40	10	Ns	3	340
31	0900	167	5	57	59	40	10	Ns	3	041
31	1800	148	5	59	60	40	10	Ns	4	321
August 1955										
1	0900	162	3	59	63	02	8	Cu	3	033
1	1800	297	3	61	67	00	0		3	300
2	0900	301	4	54	57	02	9	St	3	100
2	1800	273	4	52	58	02	8	St	3	051
3	0900	236	4	56	59	02	7	St/Ci	3	081
3	1800	321	4	60	62	01	4	St/Ci	3	135
4	0900	334	0	58	59	40	10	Ns	3	160
4	1800	341	4	63	63	01	3	Ci/Cu	3	151
5	0900	Calm	0	64	68	40	10	St	3	160
5	1800	336	4	58	61	01	1	Ci	3	146
6	0900	0	0	72.5	74	00	0		3	147
6	1800	336	4	56	62	40	10	St	4	110
7	0900	142	1	49.5	51	40	10	St	3	102
7	1800	300	1	52	56	02	9	St/Ac	3	110
8	0900	290	3	51	55	02	7	Cu/As	3	120
8	1800	336	0	52	59	01	1	Cu	3	089
9	0900	Calm	0	50	55	40	10	St	4	270
9	1800	341	4	59	64	00	0		2	110
10	0900	292	2	50	51	03	10	St	3	120
10	1800	290	3	52	59	00	0		4	148
11	0900	259	2	64	77	00	0		2	040
11	1800			52	57	40	10	Ns	2	216
12	0900	290	3	59	72	02	6	St/Ci	3	126
12	1800	290	3	53	58	00	0		2	171
13	0900			52	59	03	10	Ns/St	2	156
13	1800	321	4	57	61	00	0		3	156
14	0900			57	62	02	6	Cu	3	156
14	1800	306	3	55	60	01	4	Ci	1	186
15	0900			54	59	40	10	Ns	2	186
15	1800	336	3	53	62	01	3	Ci	2	156

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea	Current Dir.
August 1955							
16	0900	290 2	50 55	03	10 Ac	2	150
16	1800		52 57	03	10 Ac	2	156
17	0900	204 1	51 55	03	10 Ns	1	141
17	1800	336 3	55 66	01	2 Cu	3	171
18	0900		51 63	40	10 Ns	2	156
18	1800	290 3	55 61	01	4 St	3	156
19	0900	231 2	54 58	03	10 Ns/St	2	141
19	1800	245 3	52 57	40	10 Ns	3	126
20	0900	204 2	53 62	02	6 St	3	171
20	1800	006 1	47 52	40	10 Ns	2	186
21	0900		63 70	00	0	2	156
21	1800		55 65	02	6 Ci	2	156
22	0900	245 2	55 57	03	10 As	3	141
22	1800	290 3	50 55	03	10 As	3	065
23	0900	204 2	51 56	13	10 Ns	3	
23	1800	279 3	53 60	01	4 Ac/Cu	3	094
24	0900	185 2	51 58	02	9 Ac/Cu	3	079
24	1800	204 2	52 58	03	2 Cu	3	079
25	0900	204 3	50 55	03	9 Ac	3	110
25	1800	104 3	52 57	02	6 Ac/Cu	2	089
26	0900	185 2	50 54	02	9 As	2	110
26	1800	336 2	55 62	00	0	1	010
27	0900	177 1	63 75	01	3 As	1	126
27	1800	316 3	52 57	03	10 St	3	151
28	0900		61 74	01	2 Ci	2	110
28	1800	036 3	60 62	00		2	110
29	0900		66 82	00	0	2	
29	1800		58 62	01	4 Ci	2	196
30	0900		58 60	02	9 St/As	2	089
30	1800	259 2	56 62	02	9 As	2	186
31	0900		52 61	02	9 Cu	2	156
31	1800		55 61	01	4 Ac	3	171
September 1955							
1	0900		64 76	01	5 Ac	2	156
1	1800		51 64	04	7 As	2	158
2	0900		53 58	40	10 Ns	3	160
2	1800	290 4	52 56	49	0	3	160
3	0900	290 3	56 65	04	0	3	155
3	1800	351 5	58 51	00	0	4	171
4	0900	353 5	58 72	00	0	4	130
4	1800	336 5	51 60	00	0	3	135
5	0900		57 71	00	0	3	195
5	1800	079 1	60 72	00	0	3	232

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		Dir
September 1955										
6	0900	170	4	50	54	40	10	Ns	3	186
6	1800	162	3	51	54	03	10	Ns	3	186
7	0900	204	3	52	55	03	10	Ns	2	024
7	1800	177	3	51	57	49	9	Ns/St	2	110
8	0900			53	56	40	10	Ns	2	110
8	1800			54	59	02	10	Ns	1	228
9	0900			53	57	02	10	Ns	1	188
9	1800			55	60	02	9	St	2	097
10	0900			48	52	02	8	Cu	2	113
10	1800			61	70	01	1	Cu	1	125
11	0900	162	3	52	57	02	9	Cu	1	115
11	1800	240	3	54	57	02	9	Ac/Cu	2	162
12	0900	167	3	52	59	02	8	As	3	327
12	1800	165	3	52	58	02	9	As	3	211
13	1800	231	4	51	56	02	7	Ns/Cu	5	186
14	0900	162	6	49	54	14	9	Ns	5	280
14	1800	162	4	50	55	14	10	Ns/Cu	5	196
15	0900	140	5	49	52	14	10	Ns/Cu	5	000
15	1800	68	4	43	47	81	9	Ns	4	148
16	0900	321	3	55	61	01	3	Cu	3	280
16	1800	245	3	50	56	01	4	Cu	3	288

No further observations until March 14, 1956.

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type	
March 1956									
14	0800	069	1	41	42	02	9		2
14	1700	069	1	46	48	01	9		2
15	0800	069	1	44	46	01	7		2
15	1700	069	2	42	43	01	4		2
16	0800	069	3	44	44	03	9		1
16	1700	069	2	46	48	01	8		1
17	0800	069	2	48	50	01	3		2
17	1700	069	3	51	51	00	0		2
18	0800	Calm	0	47	47	02	7		1
18	1700	069	2	52	54	01	6		1
19	0900	249	4	43	44	01	5		2
19	1700	249	3	45	45	01	3		2
20	0800	294	2	40	40	01	5		2
20	1700	294	2	42	43	03	9		2
21	0800	069	6	47	47	03	9		3
21	1700	159	3	46	46	02	9		3
22	0800	159	9	44	44	02	10		4
22	1700	159	5	44	45	02	7		4
23	0800	249	7	43	45	02	8		4
23	1700	249	3	47	47	01	7		3
24	0800	159	4	44	44	01	5		3
24	1700	159	3	49	49	01	3		3
25	0800	159	4	46	46	01	6		2
25	1700	249	2	45	46	01	5		2
26	0800	249	3	42	44	01	8		3
26	1700	249	3	45	45	01	5		2
27	0800	159	4	46	47	01	7		3
27	1700	159	5	45	46	01	9		4
28	0800	159	8	42	44	02	8		4
28	1700	159	8	47	47	02	10		4
29	0800	159	5	45	45	02	7		3
29	1700	159	5	43	43	02	8		4
30	0800	249	5	45	46	02	7		4
30	1700	249	3	44	46	02	8		4
31	0800	204	3	44	46	01	4		3
31	1700	204	1	45	45	01	3		4

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind		Air Temp.		Weather	Cloud		Sea
		Dir.	Force	Wet	Dry		Cover	Type	
April 1956									
1	0800	339	2	44	44	01	4		3
1	1700	316	2	52	54	01	4		3
2	0800	339	3	44	46	01	6		3
2	1700	339	2	46	45	01	4		3
3	0800	113	2	41	41	01	5		2
3	1700	159	5	42	44	02	8		2
4	0800	294	5	44	46	01	7		4
4	1700	339	5	44	45	01	4		4
5	0800	339	3	44	45	01	3		3
5	1700	294	2	48	52	01	6		3
6	0800	294	2	42	44	02	9		2
6	1700	294	3	44	42	01	6		2
7	0800	294	4	42	41	01	6		3
7	1700	316	4	42	42	02	7		4
8	0800	339	2	43	44	02	5		4
8	1700	249	1	47	49	01	2		2
9	0800	339	2	47	47	01	6		1
9	1700	002	4	45	46	02	5		3
10	0800	114	3	53	54	01	4		2
10	1700	113	2	55	56	01	3		2
11	0800	249	3	48	48	01	3		2
11	1700	159	2	49	50	01	4		3
12	0800	Calm	0	48	48	02	10		4
12	1700	Calm	0	49	50	02	10		4
13	0800	Calm	0	46	48	02	8		2
13	1700	339	2	42	43	03	10		2
14	0800	339	3	48	49	02	8		2
14	1700	339	3	46	47	02	8		2
15	0800	339	3	46	48	02	8		2
15	1700	339	2	50	49	01	6		2
16	0800	Calm	0	47	49	01	4		2
16	1700	Calm	0	54	56	01	3		2
17	0800	339	4	48	48	01	4		3
17	1700	339	3	53	52	01	4		2
18	0800	069	1	47	48	01	4		2
18	1700	069	3	62	64	01	2		2
19	0800	339	2	49	50	01	3		1
19	1700	339	2	59	65	01	3		1
20	0800	Calm	0	55	59	01	5		1
20	1700	Calm	0	65	66	01	5		1

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud	Sea
	P.S.T.	Dir	Force	Wet	Dry		Cover Type	
April 1956								
21	0800	159	5	49	49	02	10	3
21	1700	159	4	48	49	02	9	3
22	0800	159	3	49	50	02	8	2
22	1700	339	4	48	50	01	4	2
23	0800	159	2	46	46	02	8	2
23	1700	339	2	64	66	01	2	2
24	0800	249	2	47	47	01	9	1
24	1700	339	2	62	64	01	7	2
25	0800	002	3	49	50	02	9	1
25	1700	339	4	59	61	01	2	2
26	0800	339	3	47	48	02	9	1
26	1700	249	3	58	59	01	4	1
27	0800	271	3	48	49	02	9	2
27	1700	294	3	48	50	02	8	2
28	0800	294	3	48	50	02	9	2
28	1700	294	2	48	50	01	6	2
29	0800	159	3	47	48	01	1	2
29	1700	159	2	59	60	01	3	2
30	0800	249	2	51	53	01	7	2
30	1700	339	2	58	59	01	3	2
May 1956								
1	0800	249	4	50	49	02	9	3
1	1700	249	4	58	59	01	7	3
2	0800	249	2	48	49	02	8	1
2	1700	294	2	54	55	02	5	1
3	0800	024	5	53	54	02	3	2
3	1700	024	4	57	59	02	4	2
4	0800	Calm	0	53	53	02	3	0
4	1700	159	2	60	61	02	3	0
5	0800	159	5	51	51	02/60	10	3
5	1700	159	4	49	50	02	1	4
6	0800	159	2	51	52	01	7	2
6	1700	339	3	57	58	01	4	2
7	0800	Calm	0	52	52	01	3	0
7	1700	339	2	58	61	01	3	2
8	0800	159	4	52	51		0	4
8	1700	159	2	58	59		3	3
9	0800	159	3	51	52	02	10	3
9	1700	159	3	53	53	02	9	2
10	0800	249	6	50	51	01	8	5
10	1700	249	5	49	49	01	4	5

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type	
May 1956									
11	0800	339	3	47	48	02	3		3
11	1700	294	2	51	51	02	7		2
12	0800	249	2	55	57	01	3		2
12	1700	249	2	54	57	01	3		3
13	0800	339	1	50	50	01	3		2
13	1700	339	2	56	58	01	3		2
14	0800	249	2	50	51	01	4		2
14	1700	249	4	56	56	01	3		2
15	0800	339	2	50	51	40	8		2
15	1700	339	2	50	51	49	8		2
16	0800	339	3	54	55	01	3		2
16	1700	339	4	53	58	01	4		2
17	0800	339	1	54	55	01	3		0
17	1700	Calm	0	53	64	01	2		0
18	0800	339	1	52	53	40	3		0
18	1700	249	2	53	53	40	10		2
19	0800	159	3	55	54	40	9		2
19	1700	159	3	55	56	40	10		2
20	0800	159	1	54	55	03	3		3
20	1700	249	2	54	56	01	6		2
21	0800	339	2	51	51	01	3		2
21	1700	249	4	55	56	01	3		3
22	0800	339	1	55	55	01	3		2
22	1700	294	3	57	58	03	4		3
23	0800	339	3	55	55	01	5		3
23	1700	339	3	54	54	02	8		2
24	0800	339	2	55	56	02	9		3
24	1700	339	2	56	57	02	7		2
25	0800	339	2	55	55	01	5		0
25	1700	339	2	56	56	02	7		0
26	0800	339	6	52	53	03	9		3
26	1700	339	5	54	55	01	3		4
27	0800	339	3	52	51	01	2		4
27	1700	339	2	54	54	01	2		3
28	0800	339	1	54	55	01	5		2
28	1700	339	2	56	57	01	6		2
29	0800	339	2	59	60	01	2		2
29	1700	339	3	59	59	01	2		2
30	0800	Calm	0	61	65	01	2		2
30	1700	339	2	60	60	01	2		1
31	0800	159	5	54	54	03	10		3
31	1700	159	7	52	53	03	10		5

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type	
June 1956									
1	0800	159	3	53	53	03	10		3
1	1700	159	3	55	55	03	10		3
2	0800	159	3	52	54	03	8		3
2	1700	159	2	55	56	01	7		2
3	0800	159	2	52	53	01	9		2
3	1700	339	3	55	56	02	9		2
4	0800	339	6	51	52	02	8		2
4	1700	249	3	55	55	01	4		2
5	0800	159	3	53	54	02	7		3
5	1700	249	3	55	55	01	4		2
6	0800	159	5	53	54	02	7		2
6	1700	159	6	53	53	14	10		4
7	0800	159	3	51	51	01	6		2
7	1700	159	6	57	56	14	10		4
8	0800	159	8	54	55	40	10		5
8	1700	159	3	52	52	40	10		2
9	0800	249	2	50	52	40	9		3
9	1700	249	2	55	57	01	6		2
10	0800	249	2	54	54	01	6		2
10	1700	249	4	53	54	02	9		2
11	0800	159	4	52	53	01	5		2
11	1700	249	2	54	55	01	2		2
12	0800	159	2	56	57	02	8		2
12	1700	Calm	0	60	60	02	9		0
13	0800	159	2	57	57	02	7		2
13	1700	159	4	57	56	02	10		2
14	0800	204	2	55	55	03	9		2
14	1700	249	2	55	56	02	9		2
15	0800	249	2	56	57	01	7		0
15	1700	204	3	61	62	01	7		2
16	0800	204	2	58	59	01	6		2
16	1700	249	4	56	56	02	8		3
17	0800	Calm	0	54	55	02	9		0
17	1700	249	3	60	60	01	7		2
18	0800	204	3	58	59	02	9		0
18	1700	069	2	60	60	02	10		2
19	0800	249	5	53	54	02	10		5
19	1700	249	3	52	53	02	9		3

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current Dir.
	P.S.T	Dir.	Force	Wet	Dry		Cover	Type		
June 1956										
20	0800	249	2	53	54	02	8		2	
*20	1800	293	0	54	58	02	4	Cu	9	093
21	0900	212	2	50	56	02	3	Cu/Ci	2	043
21	1800	Calm	0	55	58	03	9	Sc	0	033
22	0900	290	4	53	56	02	9	St	2	273
22	1800	234	3	49	54	02	9	St	3	095
23	0900	280	4	62	68	01	7	Sc	3	280
23	1800	297	5	52	54	01	4	Cu	4	323
24	0900	290	3	61	64	02	6	Cu	4	273
24	1800	293	3	50	58	03	10	St	3	113
25	0900	153	2	52	56	02	10	St	0	203
25	1800	213	4	45	55	62	10	Ns	2	295
26	0900	158	5	56	60	62	10	Ns	3	223
26	1800	160	4	52	56	47	10	Ns	2	122
27	0900	293	4	52	57	01	3	Cu	2	253
27	1800	330	4	48	52	01	3	Cu	2	320
28	0900	293	3	56	61	01	3	Ci	4	273
28	1800	308	5	54	50	01	2	Ci	4	303
29	0900	343	2	56	61	01	2	Cu	5	283
29	1800	273	3	50	54	02	1	Ci	5	190
30	0900	158	4	52	57	01	3	Ci	5	263
30	1800	Calm	0	57	59	00	0		1	163
July 1956										
1	0900	Calm	0	61	65	01	0		1	303
1	1800	353	3	55	61	03	4	Cu/Ci	1	343
2	0900	248	3	56	59	02	10	Ns	4	313
2	1800	270	3	51	55	41	10	Ns	1	150
3	0900	173	4	57	54	02	10	Ns	1	203
3	1800	308	3	57	54	01	5	Cu/Ci	0	133
4	0900	123	4	56	61	02	10	St	0	153
4	1800	213	5	52	55	45	10	Ns	3	208
5	0900	203	0	54	58	43	10	Ns	4	183
5	1800	183	3	58	62	01	9	Ns	1	183
6	0900	163	2	55	60	02	10	Ns	1	233
6	1800	Calm	0	60	70	00	0		0	360
7	0900	333	0	62	67	00	0		0	358
7	1800	343	5	51	56	01	3	Ci/St	1	353
8	0900	333		58	62	0	0		0	313
8	1800	323	4	55	60	00	0		3	150
9	0900	223	1	60	65	43	10	Ns	2	343
9	1800	320	1	60	65	45	6	St	1	140
10	0900	193	5	53	53	43	4	St	2	158
10	1800	293	3	54	59	01	3	Ci	1	283

* State of Weather and Sea Codes changed at June 20 1800 entry; cf pages 6 and 7, Codes No. 2.

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		Dir.
July 1956										
11	0900	143	3	53	55	02	10	St	3	093
11	1800	190	3	54	58	02	3	St	1	103
12	0900	163	1	53	57	43	10	St	4	154
12	1800	239	3	55	62	00	1	Ci	4	060
13	0900	158	5	53	57	02	3	Ns	4	263
13	1800	225	3	51	55	02	10	St	3	230
14	0900	293	1	58	62	01	6	St	1	303
14	1800	Calm	0	52	64	03	7	Ac/Cu	2	089
15	0900	023	2	56	61	01	5	Cu/St	2	343
15	1800	296	2	56	62	02	5	Ac/Cu	3	141
16	0900	313	0	58	64	11	10	Ns	2	123
16	1800	313	3	59	65	01	4	Ci/Ac	3	313
17	0900	Calm	0	63	68	43	10	St	1	163
17	1800	343	4	56	60	00	0		1	150
18	0900	323	1	60	65	00	0		1	203
18	1800	344	4	62	67	00	0		2	165
19	0900	Calm	0	76	80	00	0		1	173
19	1800	323	5	66	68	00	0		2	337
20	0900	113	3	58	62	47	10	Ns	3	133
20	1800	270	2	58	62	47	10	Ns	1	182
21	0900	175	3	56	62	41	8	St/Ac	1	087
21	1800	223	3	54	60	47	10	Ns/St	3	133
22	0900	153	3	58	63	01	9	St	2	084
22	1800	003	1	62	65	43	9	Ns/St	1	023
23	0900	293	4	60	63	11	10	Ns	3	333
23	1800	174	3	51	56	43	1	Ac	4	333
24	0900	253	1	62	65	43	10	St	3	283
24	1800	295	3	60	62	00	0		3	167
25	0900	193	4	60	64	00	0		4	173
25	1800	197	4	58	60	00	0		5	155
26	0900	203	3	59	63	01	3	Cu	4	123
26	1800	273	5	52	56	02	2	St	4	150
27	0900	293	3	60	65	01	3	St	3	133
27	1800	298	3	56	62	02	1	Ac	3	180
28	0900	Calm	0	53	58	43	10	Ns/St	2	316
28	1800	293	3	53	58	01	4	St	2	211
29	0900	275	2	51	55	03	9	Cu/Sc	3	163
29	1800	300	3	52	57	02	9	Cu/Ac	2	293
30	0900	343	3	55	59	01	3	Cu	2	028
30	1800	280	4	54	58	01	1	Cu	2	143
31	0900	203	1	60	64	00	0		1	343
31	1800	274	2	56	60	03	6	Cu/Ac	1	247

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea	Current
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type		Dir.
August 1956										
1	0900	053	1	68	72	00	0		1	210
1	1800	Calm	0	56	62	03	5	Cs/Cu	2	180
2	0900	293	2	52	55	03	10	Ns/St	2	113
2	1800	293	2	54	56	01	5	Ci/Cu	2	093
3	0900	177	2	51	55	01	5	Ci/Cu	2	267
3	1800	158	1	55	60	03	10	Ns	1	323
4	0900	Calm	0	60	66	03	10	Sc/St	1	080
4	1800	138	2	55	59	47	10	St	2	008
5	0900	Calm	0	56	62	43	9	St	1	333
5	1800	Calm	0	57	63	45	10	St	1	177
6	0900	315	3	51	55	45	10	St/Ns	1	176
6	1800	113	1	60	65	01	4	Cu/Ci	1	113
7	0900	290	3	55	58	45	10	St	1	290
7	1800	319	3	57	62	43	10	St	1	146
8	0900	205	3	60	67	00	00		2	283
8	1800	273	3	56	62	00	00		2	295
9	0900	158	4	52	55	03	10	Ns	3	297
9	1800	286	2	55	61	03	09	Sc/Cu	4	139
10	0900	163	4	53	56	03	09	Ns/Cu	4	124
10	1800	158	3	51	55	45	10	Ns/St	3	248
11	0900	Calm	0	52	55	45	10	Ns/St	3	278
11	1800	330	2	49	51	45	10	Ns/St	3	219
12	0900	Calm	0	51	54	00	00		3	217
12	1800	338	3	59	64	00	00		2	245
13	0900	163	3	53	55	45	10	Ns/St	3	183
13	1800	179	4	54	57	45	10	Ns/St	4	141
14	0900	206	3	56	59	03	7	Ns/St	2	175
14	1800	293	2	55	60	01	03	St	1	233
15	0900	203	3	56	60	03	08	Ns	1	313
15	1800	147	2	56	61	02	8	Ac/Sc	2	059
16	0900	177	4	56	61	03	08	Sc/Cu	2	006
16	1800	023	1	55	60	01	05	Ci/Cs	1	008
17	0900	Calm	0	59	64	01	05	Ci		228
17	1800	Calm	0	59	64	00	0		1	223
18	0900	Calm	0	57	61	00	0		1	351
18	1800	313	3	57	61	47	10	St	1	293
19	0900	Calm	0	60	67	47	10	St	1	273
19	1800	346	2	61	67	45	10	St	1	164
20	0900	Calm	0	60	64	45	10	St	1	201
20	1800	313	2	61	66	01	6	Ci	1	313

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind		Air Temp.		Weather	Cloud		Current	
		Dir.	Force	Wet	Dry		Cover	Type	Sea	Dir.
August 1956										
21	0900	293	2	56	59	45	10	St	1	273
21	1800	357	3	56	59	45	10	St	1	183
22	0900	Calm	0	62	69	43	9	St	1	132
22	1800	Calm	0	54	60	43	10	St	1	010
23	0900	155	4	57	59	43	10	St	1	140
23	1800	170	3	55	60	43	10	St	1	223
24	0900	130	4	58	62	45	10	St	1	070
24	1800	153	4	54	60	81	10	Ns	1	243
25	0900	Calm	0	70	73	01	3	Ci	2	343
25	1800	293	3	52	57	01	2	Ac	3	283
26	0900	203	2	60	64	03	8	Sc	3	123
26	1800	283	3	55	60	43	10	Ns	1	053
27	0900	263	3	65	69	02	10	Ns	2	323
27	1800	313	3	56	59	01	3	Ci	3	164
28	0900	288	2	45	65	02	3	Ns	1	103
28	1800	348	2	55	60	02	3	Ns	2	040
29	0900	263	4	63	66	01	3	Ci	3	313
29	1800	203	5	52	56	00	0		5	125
30	0900	343	1	53	56	00	0		5	330
30	1800	053	4	52	57	00	0		3	273
31	0900	183	1	62	66	00	0		3	223
31	1800	253	2	54	60	45	10	St	2	033
September 1956										
1	0900	355	1	63	67	01	3	Ci	3	233
1	1800	293	3	49	54	01	2	Cu	3	303
2	0900	Calm	0	48	53	00	0		3	113
2	1800	323	2	50	54	00	0		3	343
3	0900	Calm	0	58	62	03	4	Ac	3	160
3	1800	333	3	45	51	01	0		2	323
4	0900	Calm	0	59	63	00	0		1	333
4	1800	343	6	52	56	00	0		4	169
5	0900	033	4	60	64	00	0		0	003
5	1800	348	5	45	55	03	1	As	1	153
6	0900	248	1	65	69	01	3	Ci	1	313
6	1800	163	4	49	55	03	10	St	2	193
7	0900	173	5	55	58	02	10	Ns	2	193
7	1800	171	4	51	56	02	10	As	3	010
8	0900	223	0	61	65	00	0		0	263
8	1800	087	3	57	60	03	9	Cu	0	300
9	0900	163	4	56	59	02	10	Ns	3	348
9	1800	150	4	52	55	18	10	Ns	5	323
10	0900	173	6	52	55	03	10	Ns	6	353
10	1800	158	3	55	59	62	10	Ns	2	343

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind Dir.	Force	Air Temp.		Weather	Cloud Cover	Type	Current Sea Dir.	
				Wet	Dry					
September 1956										
11	0900	193	1	51	54	43	10	Ns	1	263
11	1800	123	2	52	55	43	10	Ns	1	183
12	0900	183	0	52	55	03	10	Ns	1	010
12	1800	000	0	56	58	03	10	Ns	1	154
13	0900	313	0	48	51	45	10	Ns	1	183
13	1800	313	2	50	55	02	10	Ns	1	183
14	0900	113	1	52	55	43	10	St	1	133
15	0900	133	2	54	56	02	10	Ns	1	123
16	0900	113	3	51	56	01	8	Cu	1	293
17	0900	Calm	0	54	57	02	1	St	1	073
18	0900	Calm	0	50	54	47	10	Ns	1	233
21	0800	294	2			02	4	Ci	3	
21	1700	294	2			02	4	Ci	3	
22	0800	294	4	51	53	02	6	Ci	2	
22	1700	204	2	55	58	03	6	Ac	2	
23	0800	159	5	55	56	03	7	Ac	3	
23	1700	159	5	56	57	45/50	10	Ns	5	
24	0800	249	2	55	55	45/50	10	Ns	2	
24	1700	249	2	58	59	45/50	10	Ns	2	
25	0800	249	2	58	59	45/50	10	Ns	2	
25	1700	159	6	58	58	45/63	10	Ns	4	
26	0800	024	2	52	55	01	6	Ac	3	
26	1700	339	3	54	55	02	4	Ac	5	
27	0800	069	4	49	51	02	4	Ac	4	
27	1700	294	3	50	55	02	4	Ac	3	
28	0800	294	2	52	54	02	4	Ac	5	
28	1700	294	2	56	59	02	4	Ac	5	
29	0800	159	5	52	54	10	8	Ac	5	
29	1700	249	4	53	55	81	8	Ac	7	
30	0800	249	4	54	56	02	4	Ac	2	
30	1700	159	3	53	57	03	9	Ac	3	
Lightship off station.										
October 1956										
25	0800	249	3	50	50	03	3	Ac	4	
25	1700	249	2	51	52	03	4	Ac	3	
26	0800	114	3	46	47	03	7	Ac	3	
26	1700	114	3	44	45	03	8	Ac	3	
27	0800	339	3	44	46	01	3	Ac	2	
27	1700	339	3	50	51	00	1	Ac	2	
28	0800	159	5	47	47	03	9	Ac	4	
28	1700	159	5	48	50	03	9	Ac	5	
29	0800	159	6	50	50	62	10	Ns	3	
29	1700	114	5	45	45	81	10	Ns	2	

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type	
October 1956									
30	0800	159	3	45	45	03	6	Ac	2
30	1700	159	5	44	46	03	5	Ns	3
31	0800	159	6	40	44	63	10	Ns	4
31	1700	159	6	42	43	03	10	Ac	6
November 1956									
1	0800	159	3	46	46	01	8	Ac	4
1	1700	159	3	47	48	01	8	Ac	4
2	0800	159	2	44	46	02	9	Ac	2
2	1700	159	2	46	48	02	8	Ac	2
3	0800	159	3	44	46	43	10	St	3
3	1700	159	2	48	50	43	9	Ac	4
4	0800	114	3	46	48	43	7	St	4
4	1700	114	2	47	48	43	8	Ac	4
5	0800	114	3	45	47	43	10	St	6
5	1700	339	3	44	46	01	8	Ac	5
6	0800	114	3	47	48	01	8	Ac	3
6	1700	114	3	47	48	03	10	Ns	3
7	0800	159	2	46	48	03	10	Ns	2
7	1700	159	2	48	50	03	9	Ns	0
8	0800	159	3	47	49	03	9	Ns	3
8	1700	159	4	50	51	03	10	Ns	4
9	0800	159	4	50	51	03	10	Ns	4
9	1700	159	8	46	48	47	10	Ns	7
10	0800	159	4	44	46	43	10	Ns	7
10	1700	159	4	50	52	01	7	Ac	5
11	0800	159	4	46	50	01	8	Ac	4
11	1700	339	2	48	50	01	7	Ac	3
12	0800	159	4	47	49	01	8	Ac	4
12	1700	249	5	48	50	01	7	Ac	6
13	0800	249	4	46	48	01	6	Ac	6
13	1700	339	5	46	48	01	5	Ac	9
14	0800	339	3	47	49	01	5	Ac	6
14	1700	339	3	47	50	01	8	Ns	6
15	0800	069	4	47	49	01	5	As	8
15	1700	069	3	49	50	01	4	Ac	6

Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
November 1956						
16	0800	159 6	47 48	03	8 Ns	5
16	1700	159 6	46 50	03	10 Ns	8
17	0800	159 7	47 50	03	8 As	8
17	1700	249 5	47 49	03	8 Ac	8
18	0800	249 5	49 49	03	7 Ns	8
18	1700	249 4	46 47	02	5 Bc	5
19	0800	249 1	44 44	01	2 Ac	2
19	1700	249 2	49 49	01	2 Ac	2
20	0800	069 1	45 45	01	4 Ac	
20	1700	114 1	49 49	01	4 Ac	0
21	0800	Calm 0	46 46	01	3 Ac	0
21	1700	114 1	47 47	01	3 Ac	0
22	0800	Calm 0	49 49	01	3 Ac	0
22	1700	Calm 0	46 47	01	3 Ac	0
23	0800	Calm 0	49 51	01	2 Ac	0
23	1700	294 1	49 51	01	3 Ac	1
24	0800	294 1	51 51	01	3 Ac	1
24	1700	Calm 0	51 52	01	2 Ac	0
25	0800	Calm 0	51 50	01	2 Ac	0
25	1700	Calm 0	50 50	01	3 Ac	0
26	0800	114 3	46 46	01	3 Ac	1
26	1700	114 1	47 47	01	9 Ac	3
27	0800	069 3	47 49	01	4 Ac	3
27	1700	114 2	49 49	01	3 Ac	3
28	0800	159 4	49 50	01	3	1
28	1700	294 1	52 52	01	3	1
29	0800	069 2	47 47	01	2	3
29	1700	069 2	50 50	47	9	3
30	0800	069 3	48 49	01	5	2
30	1700	159 1	43 43	01	5	2
December 1956						
1	0800	159	44 44	04	10	2
1	1700	Calm 0	46 47	45	10 Ns	2
2	0800	159 5	41 42	43	10 Ns	3
2	1700	159 7	49 48	43	10 Ns	4
3	0800	226 5	41 39	40	10	6
3	1700	294 7	39 41	01	7	7
4	0800	294 4	39 39	18	8	6
4	1700	114 4	39 39	73	10	4
5	0800	091 5	29 30	02	10	4
5	1700	091 6	29 30	01	8	3

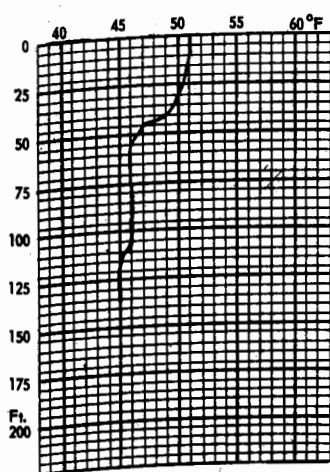
Meteorological Observations at Umatilla Reef Lightvessel

Day	Time P.S.T.	Wind Dir. Force	Air Temp. Wet Dry	Weather	Cloud Cover Type	Sea
December 1956						
6	0800	069 4	27 29	02	4	2
6	1700	136 4	29 29	02	8	3
7	0800	091 4	30 31	02	8 As	3
7	1700	114 3	30 30	02	8	2
8	0800	159 6	38 38	03	10	8
8	1700	182 7	51 51	62	10	8
9	0800	182 6	52 52	50	10	8
9	1700	204 8	48 49	45	10	9
10	0800	249 5	46 47	02	8	9
10	1700	249 3	47 46	02	10 Ns	4
11	0800	249 3	46 46	12	9 As	2
11	1700	159 2	47 47	02	5	3
12	0800	159 3	45 45	02	8	3
12	1700	159 4	49 50	18/45	10	4
13	0800	159 6	46 48	18	10 Ns	5
13	1700	159 4	47 49	02	6	3
14	0800	249 3	47 47	02	5	3
14	1700	249 3	48 49	03	10 As	3
15	0800	159 6	50 50	45	10 Ns	7
15	1700	159 7	47 48	45	10 Ns	7
16	0800	249 3	46 47	02	5	5
16	1700	159 4	47 48	03	9 As	5
17	0800	159 10	44 45	47	10 Ns	6
17	1700	249 4	50 50	45	10	4
18	0800	249 6	46 48	02	7	6
18	1700	159 5	48 49	03	9 Ac	6
19	0800	159 6	48 49	03	10 Ac	6
19	1700	159 8	45 48	03	10 Ns	6
20	0800	249 2	47 48	01	8 Ac	4
20	1700	249 3	43 44	03	9 Ac	4
21	0800	249 3	43 44	50	8 Ac	6
21	1700	339 4	44 44	02	7 Ac	5
22	0800	159 7	44 45	50	10 Ns	6
22	1700	159 4	43 44	11	10 Ns	6
23	0800	159 7	44 45	18	10 Ns	6
23	1700	159 3	49 50	02	8 Ns	5
24	0800	159 5	48 48	02	8 Ns	5
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25	1700	114 3	47 48	02	4 As	3

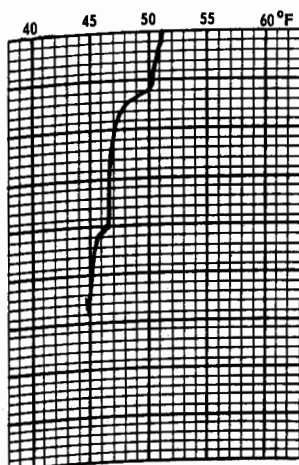
Meteorological Observations at Umatilla Reef Lightvessel

Day	Time	Wind		Air Temp.		Weather	Cloud		Sea
	P.S.T.	Dir.	Force	Wet	Dry		Cover	Type	
December 1956									
26	0800	114	3	46	45	02	7	Ac	5
26	1700	114	3	45	45	41	10	Ns	5
27	0800	024	2	45	45	01	3	Ac	3
27	1700	Calm	0	49	49	02	4	Ac	3
28	0800	159	1	49	50	02	3	Ac	3
28	1700	159	1	49	52	02	2	Ac	2
29	0800	159	2	46	49	03	6	Ac	2
29	1700	159	2	47	47	02	6	Ac	2
30	0800	159	2	45	46	02	8	Ac	2
30	1700	204	2	48	50	03	8	Ac	3
31	0800	114	3	44	46	03	9	Ac	3
31	1700	159	6	47	47	41	10	Ac	3

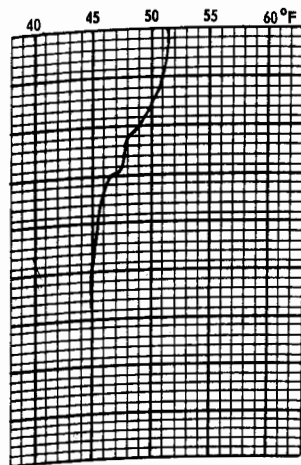
Bathythermograms, Umatilla Reef Lightvessel



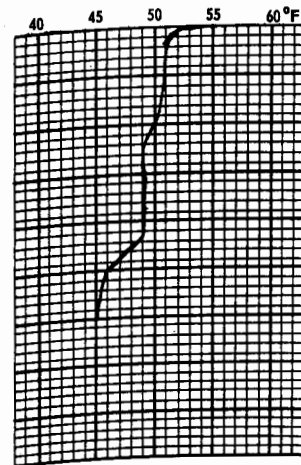
0900/18-VI-55



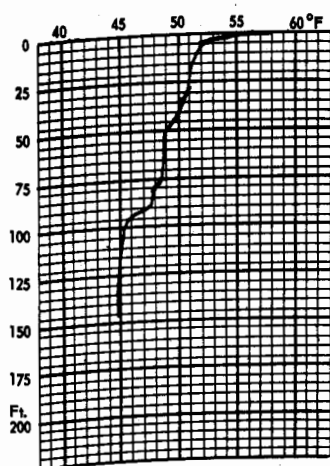
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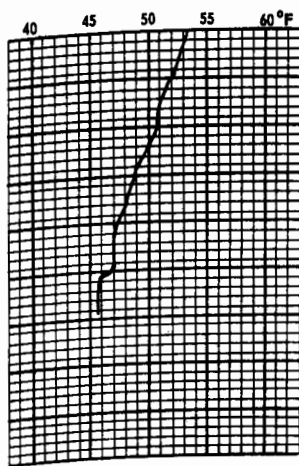
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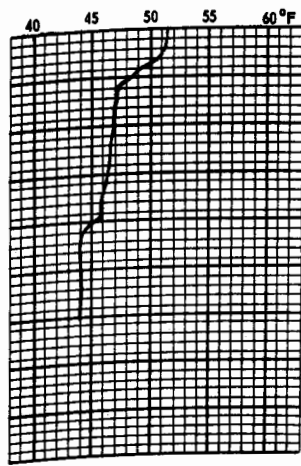
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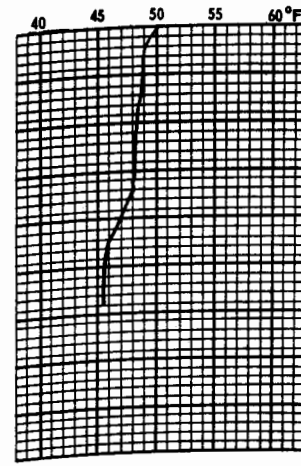
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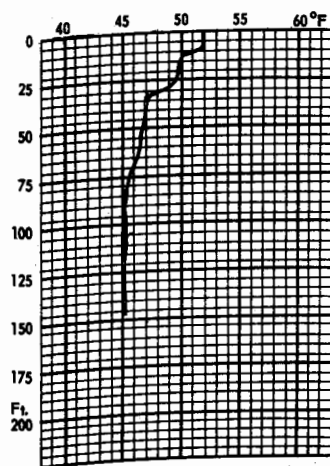
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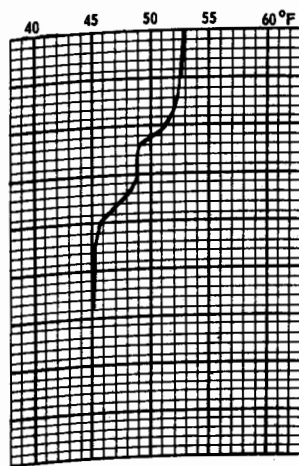
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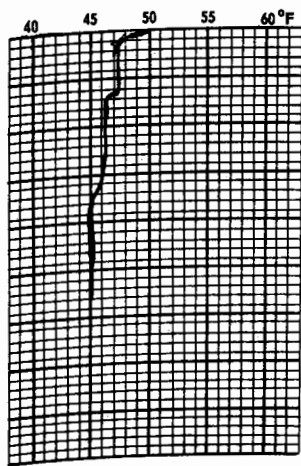
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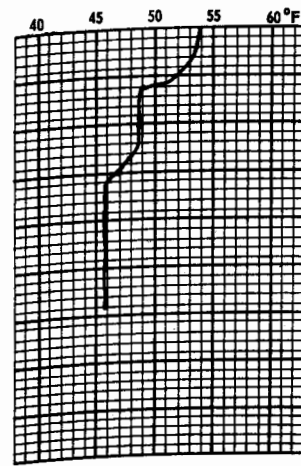
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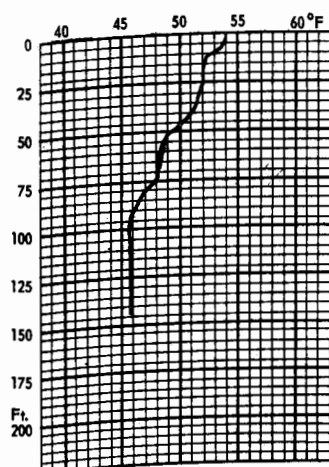


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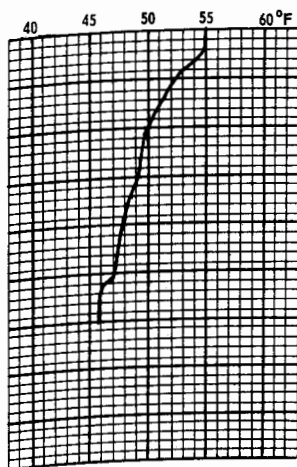


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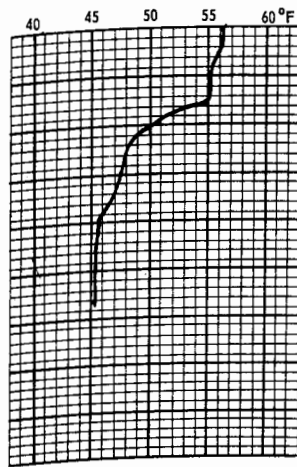
Bathythermograms, Umatilla Reef Lightvessel



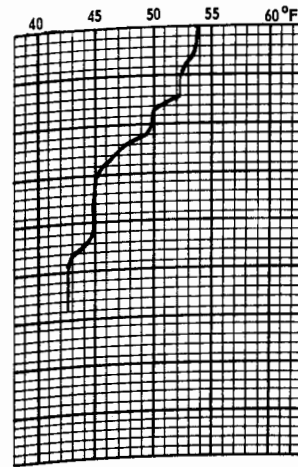
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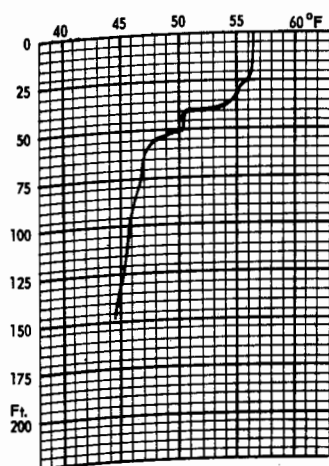
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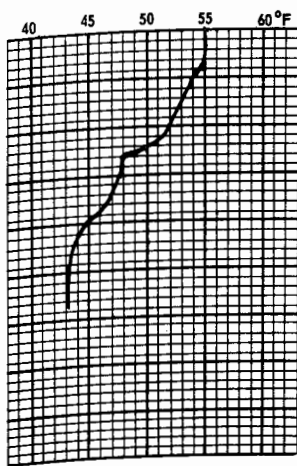
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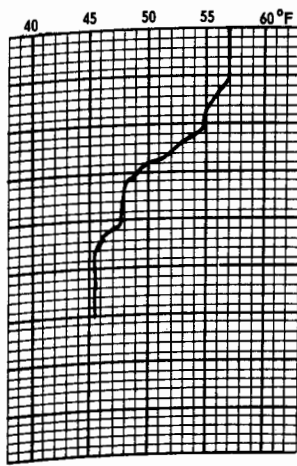
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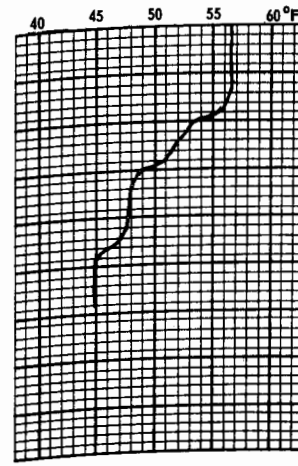
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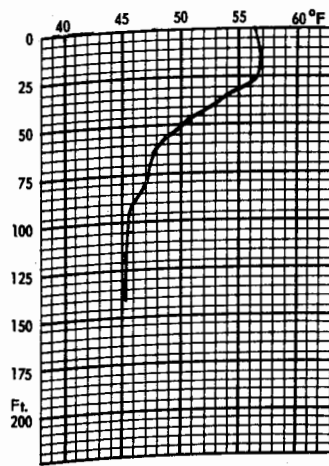
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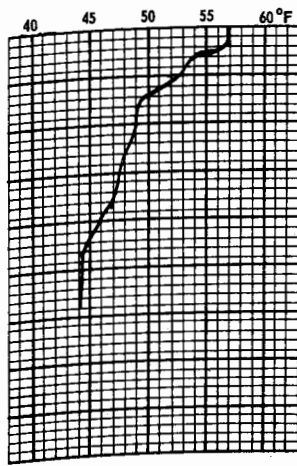
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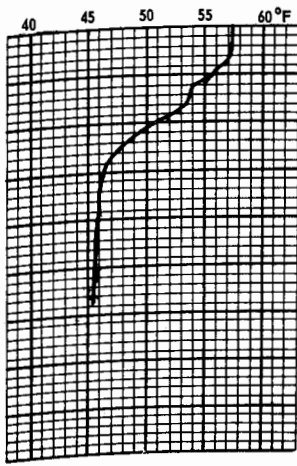
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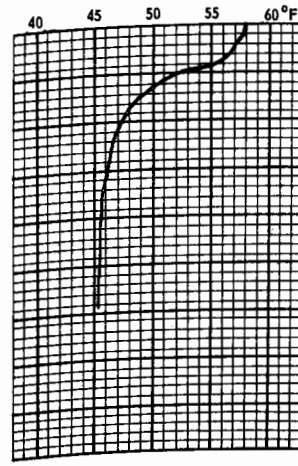
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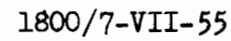
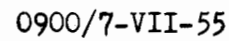
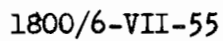
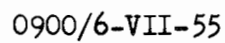
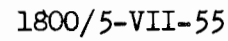
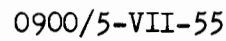
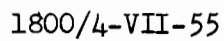
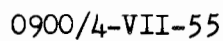
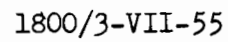
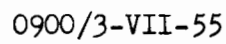
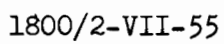
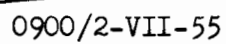
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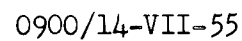
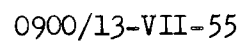
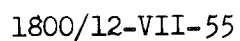
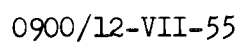
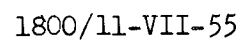
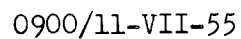
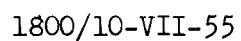
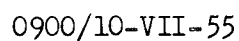
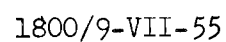
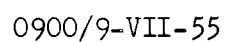
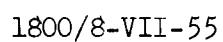
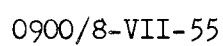


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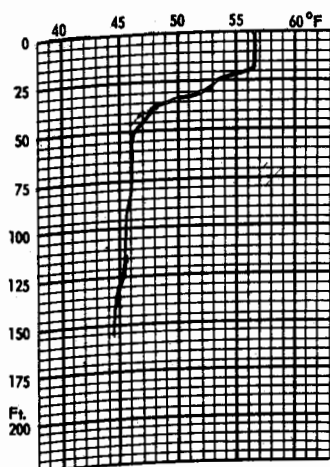


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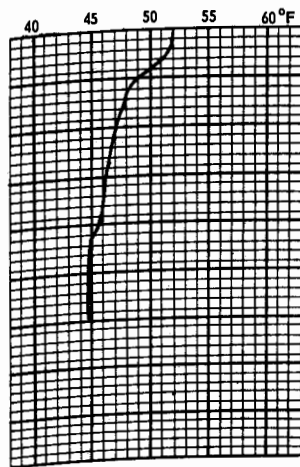




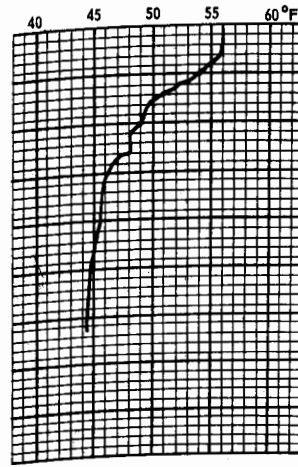
Bathythermograms, Umatilla Reef Lightvessel



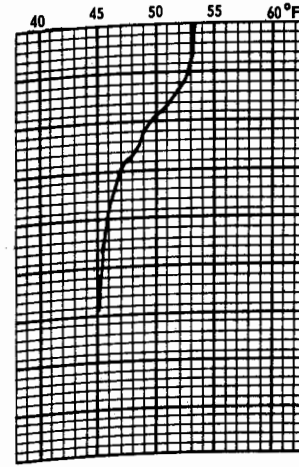
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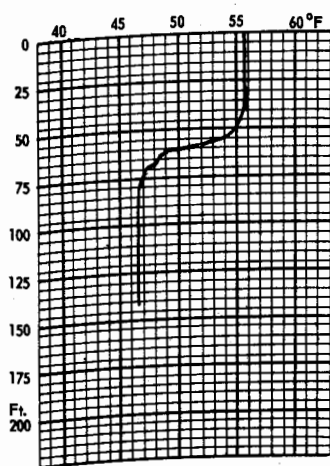
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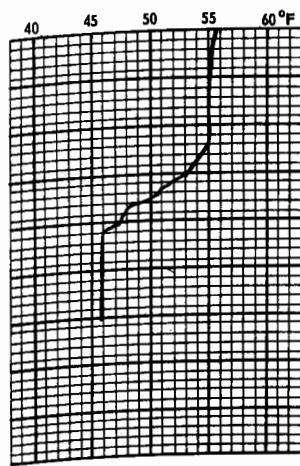
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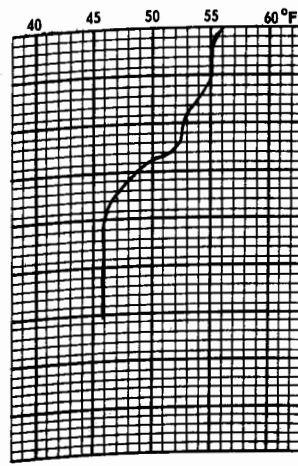
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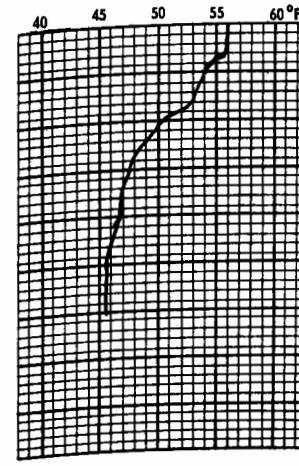
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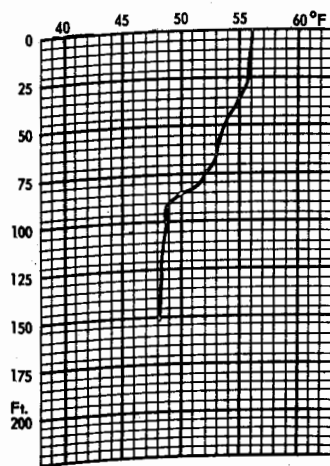
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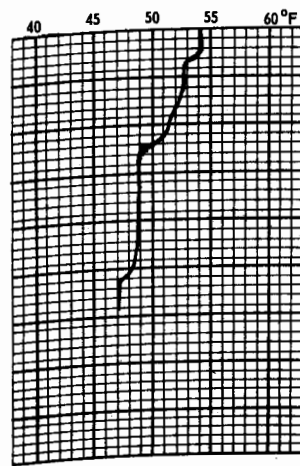
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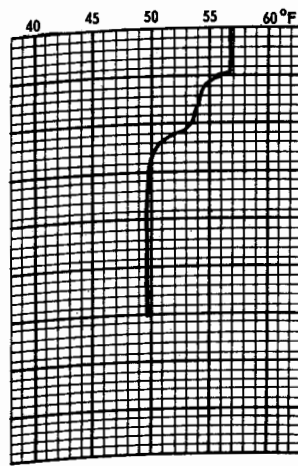
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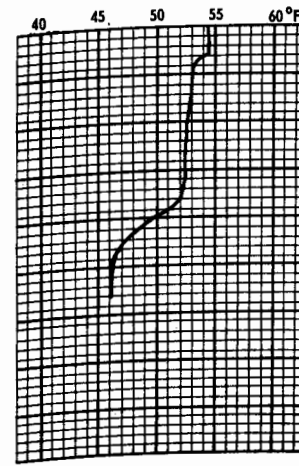
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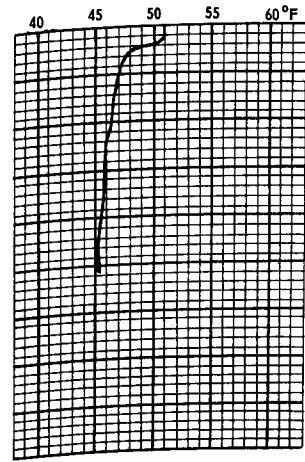
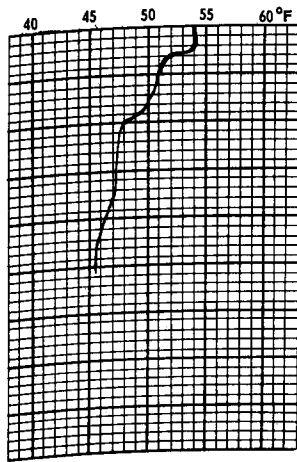
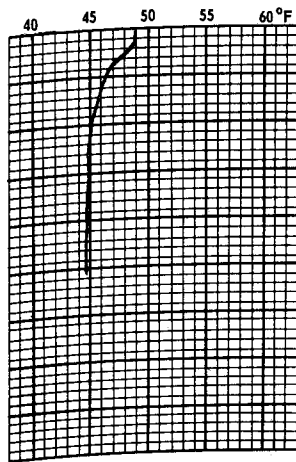
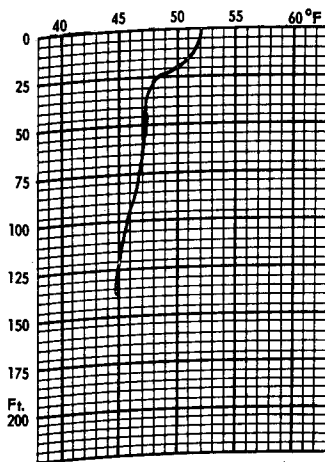
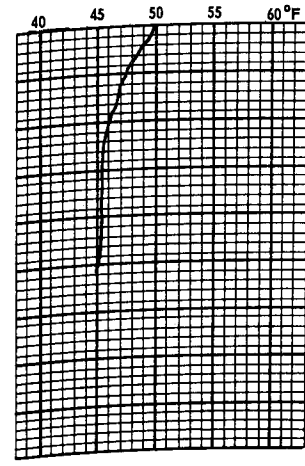
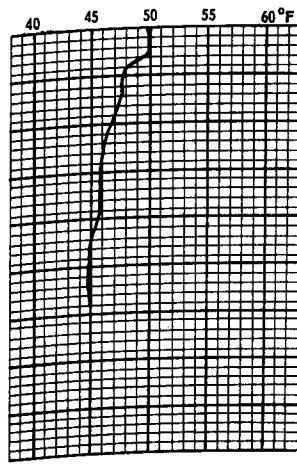
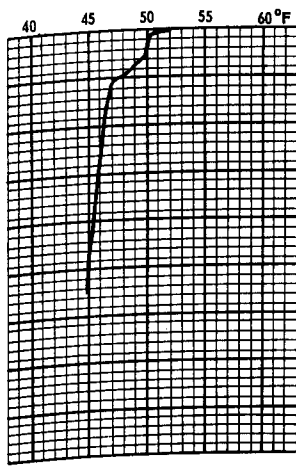
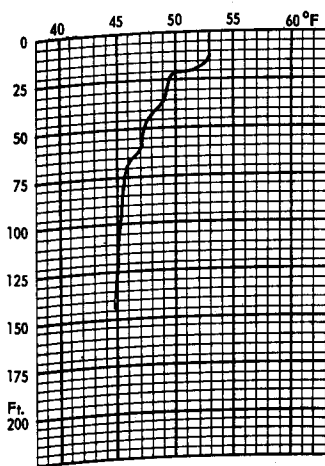
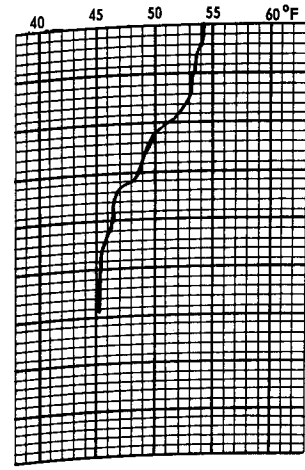
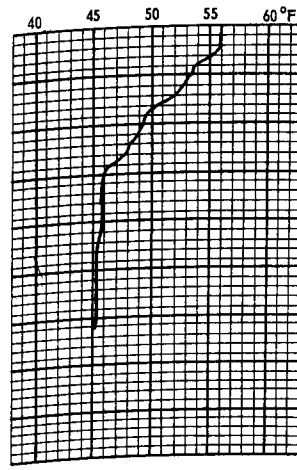
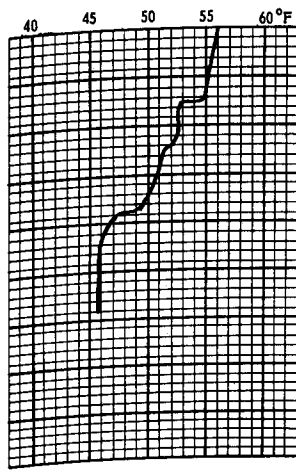
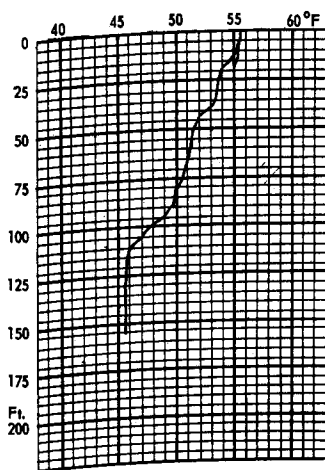
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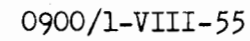
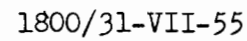
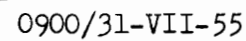
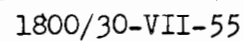
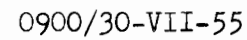
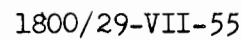
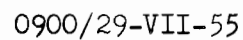
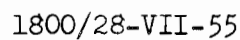
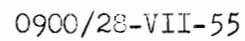
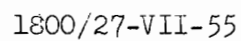
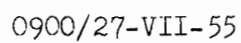
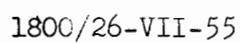


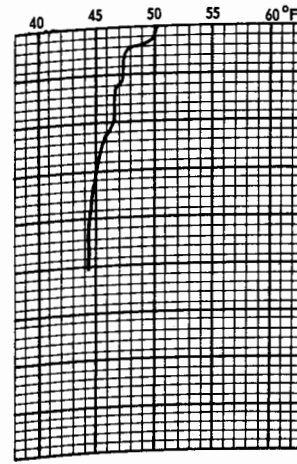
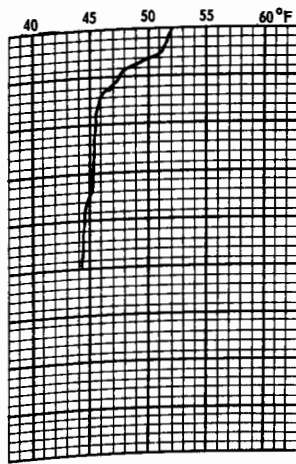
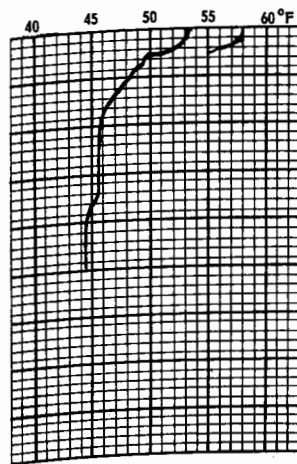
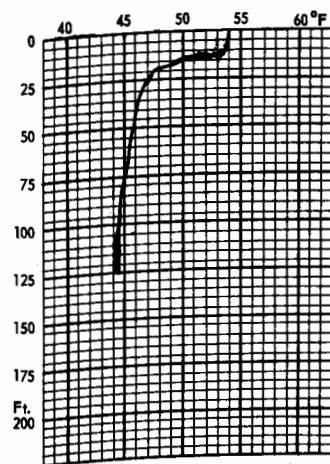
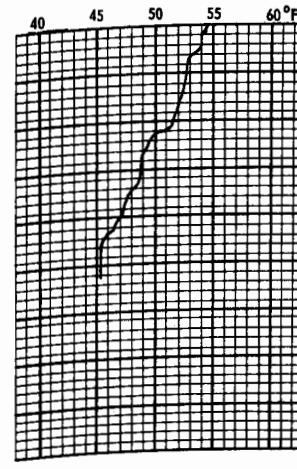
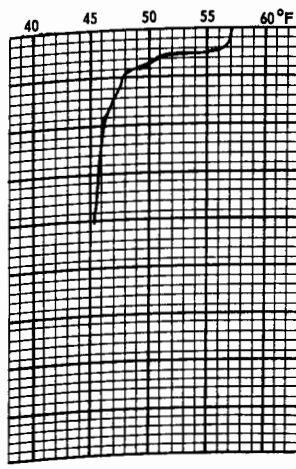
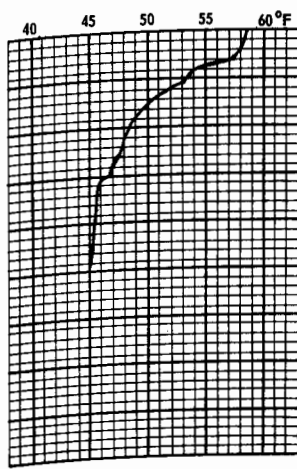
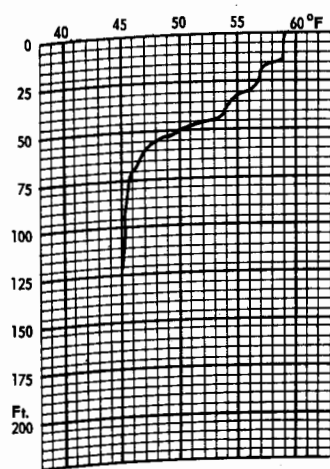
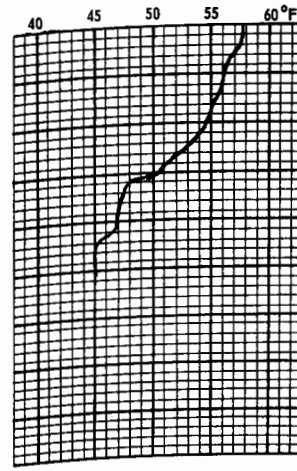
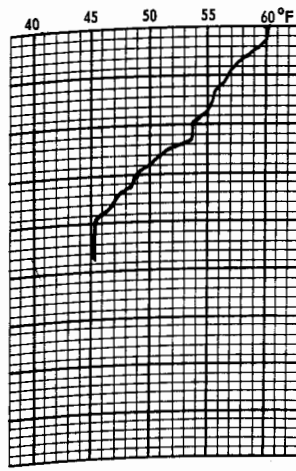
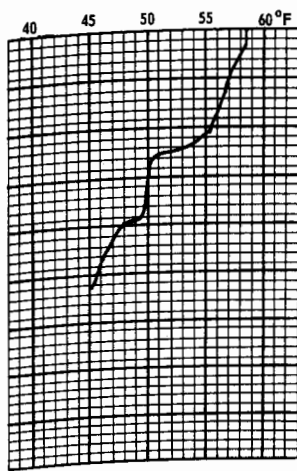
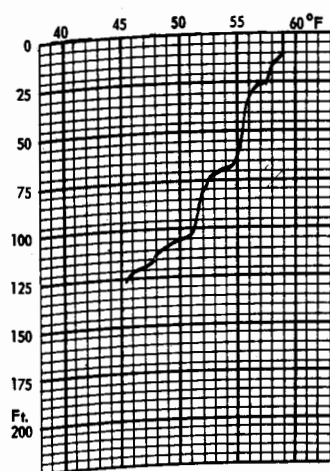
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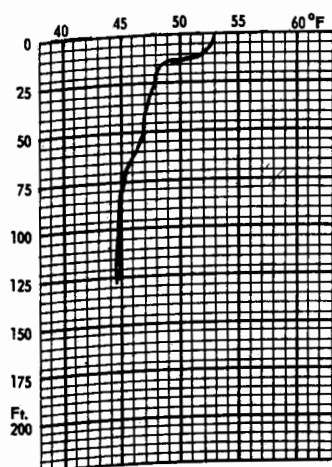
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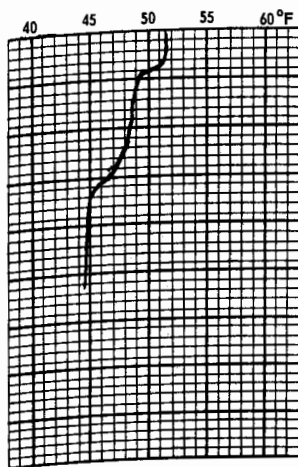




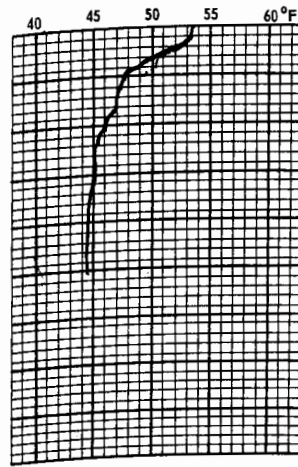
Bathythermograms, Umatilla Reef Lightvessel



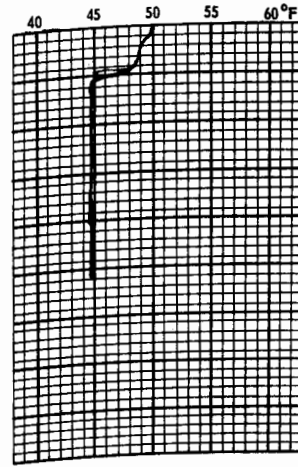
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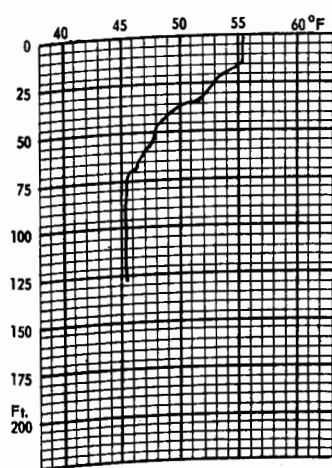
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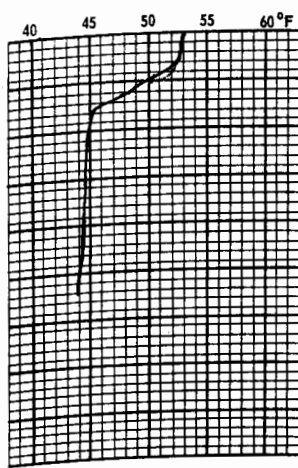
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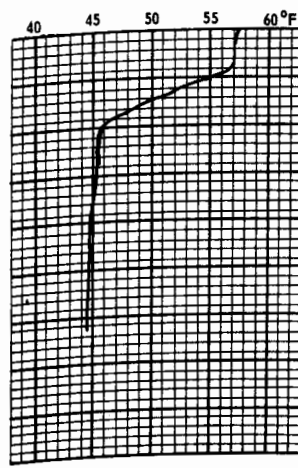
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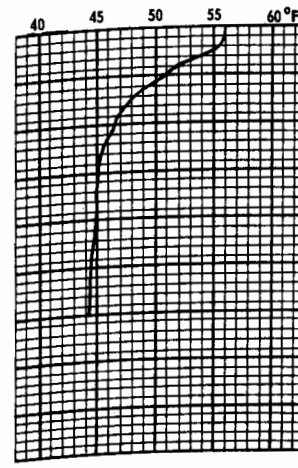
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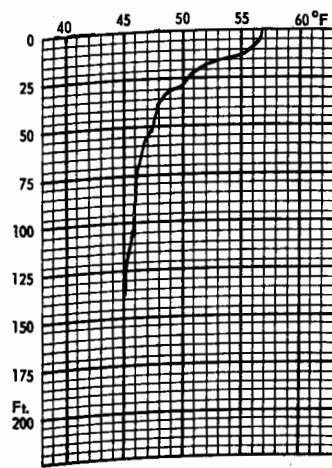
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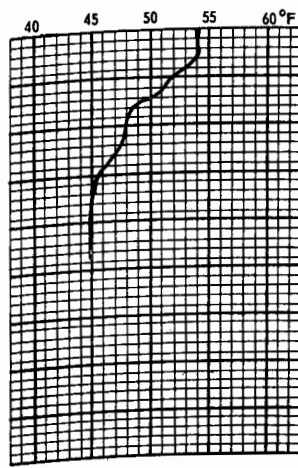
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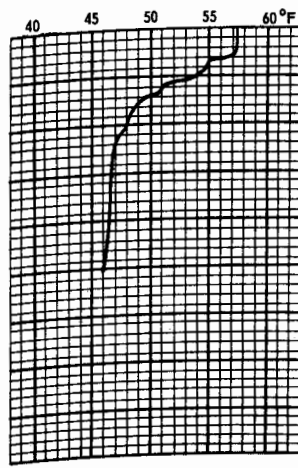
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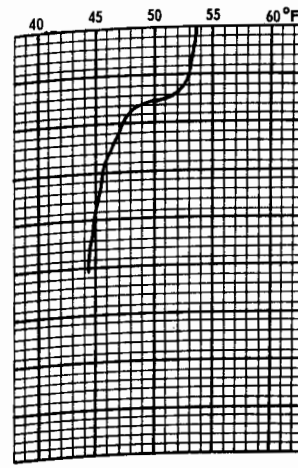
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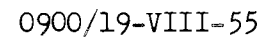
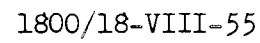
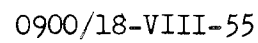
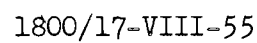
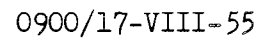
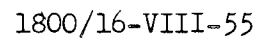
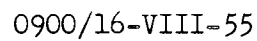
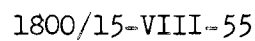
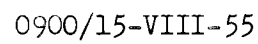
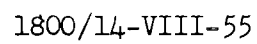
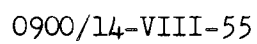
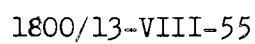
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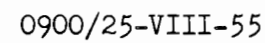
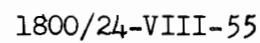
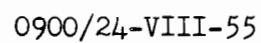
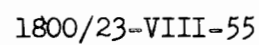
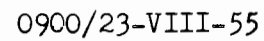
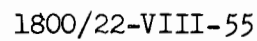
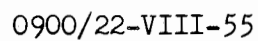
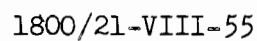
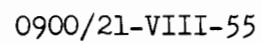
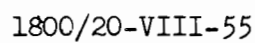
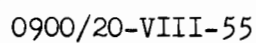
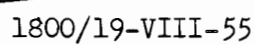


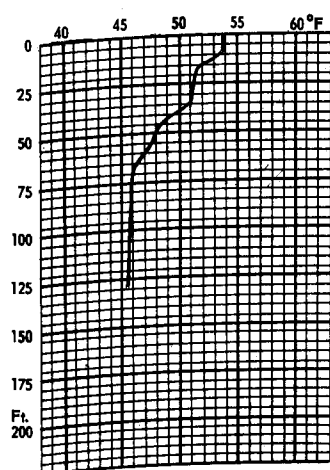
1800/12-VIII-55



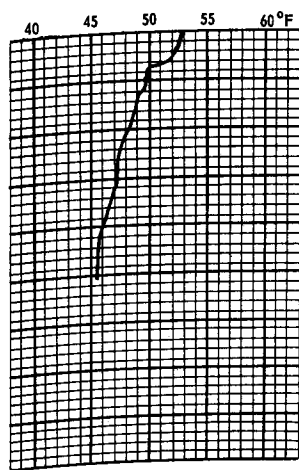
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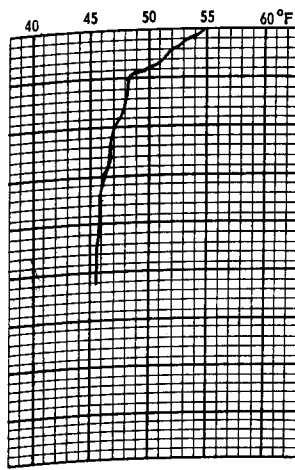




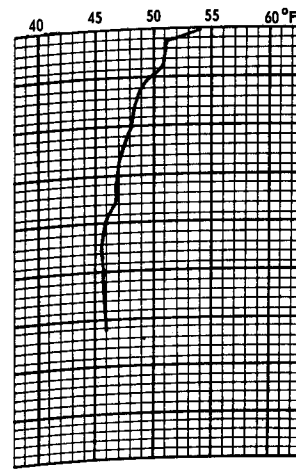
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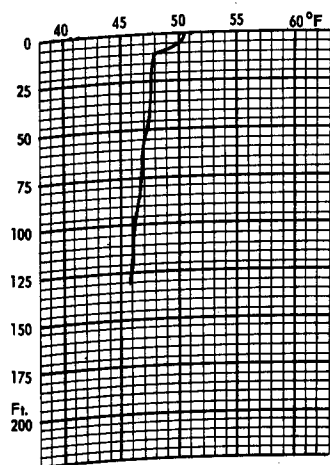
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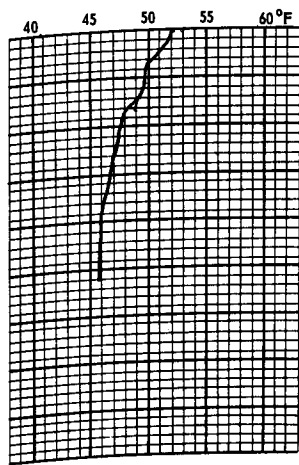
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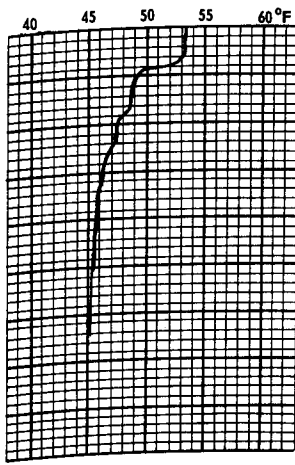
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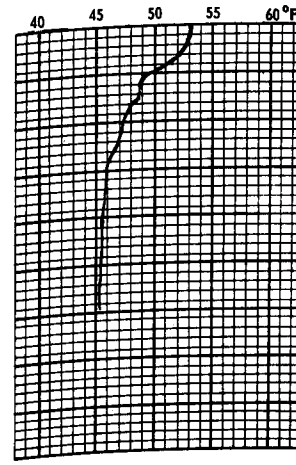
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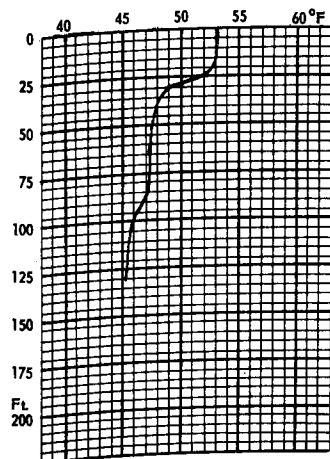
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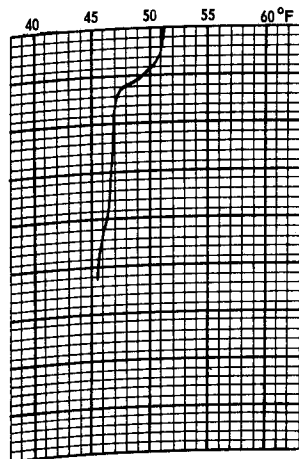
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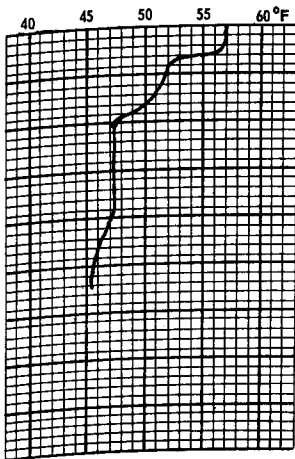
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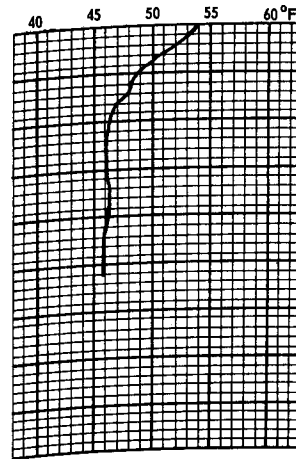
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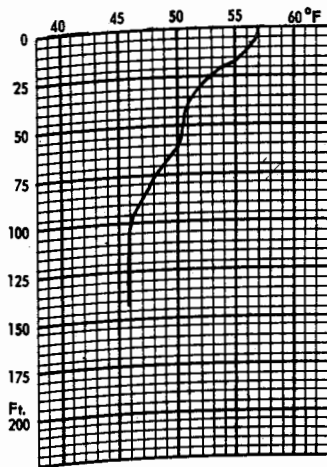


1800/30-VIII-55

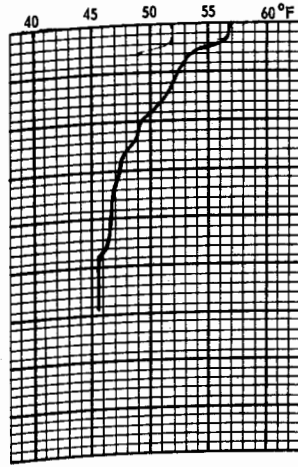


0900/31-VIII-55

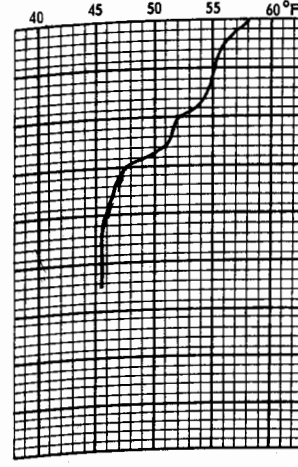
Bathythermograms, Umatilla Reef Lightvessel



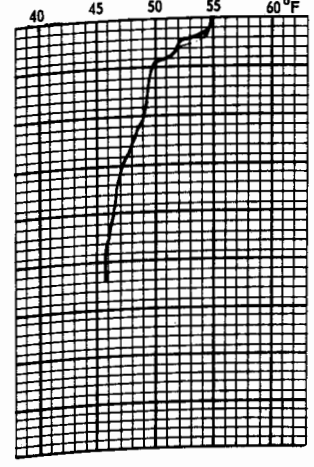
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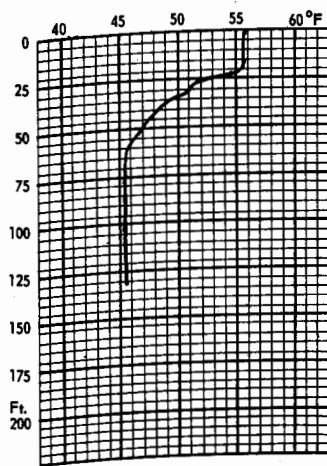
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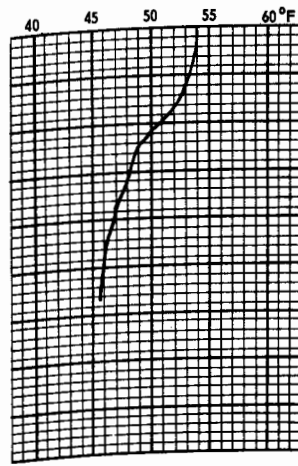
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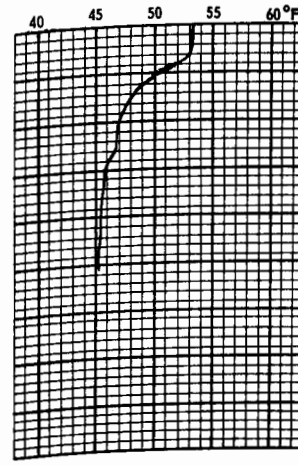
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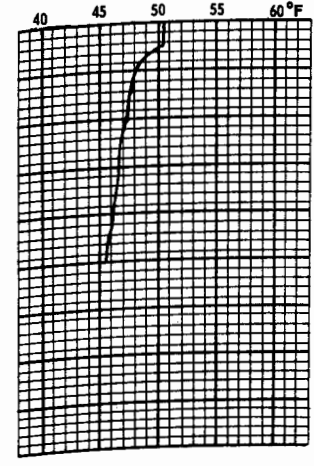
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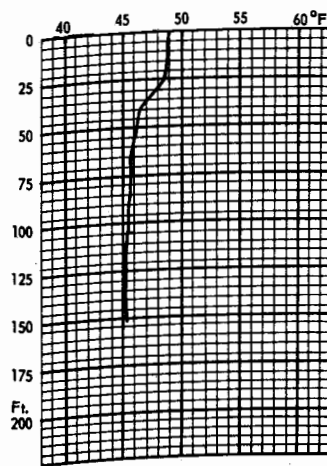
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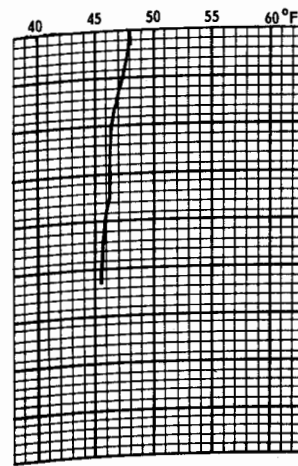
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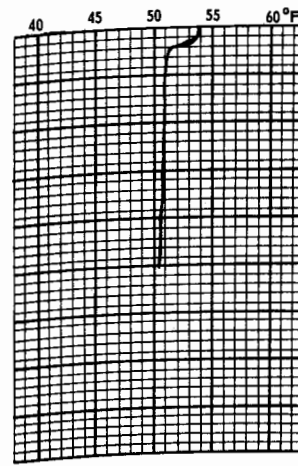
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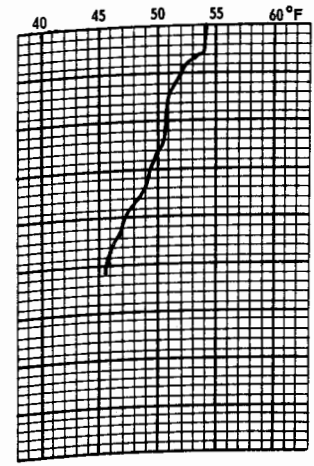
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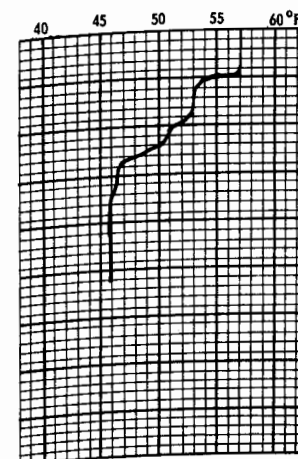
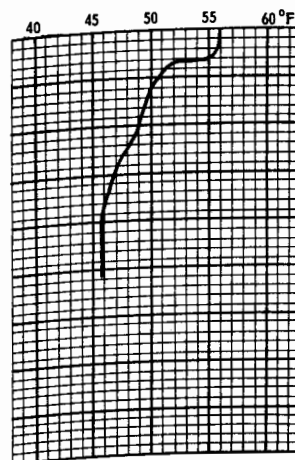
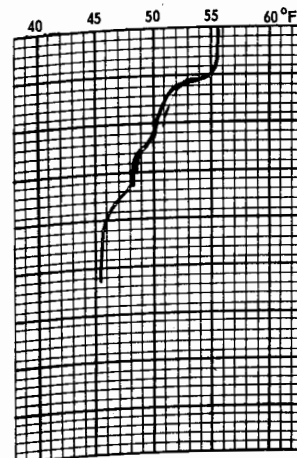
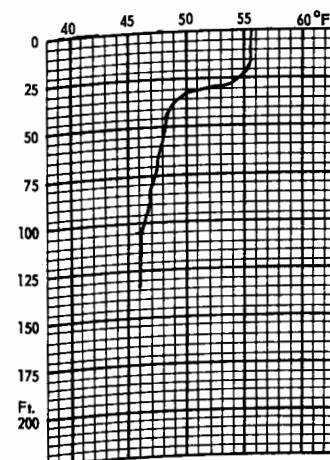
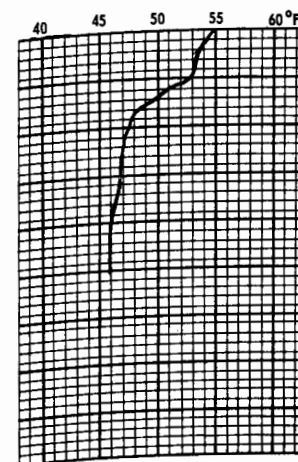
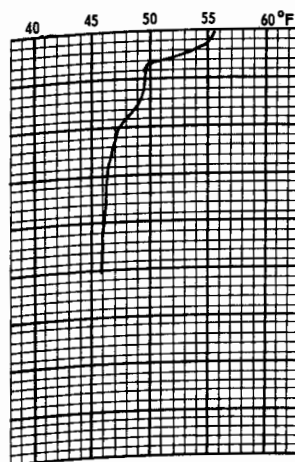
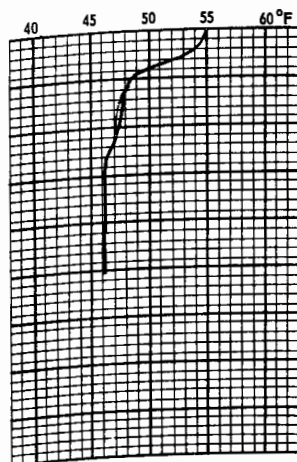
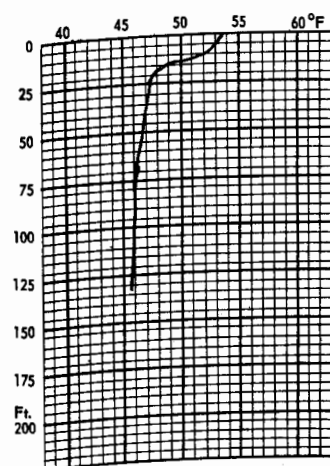
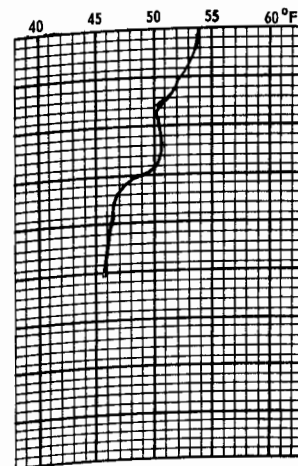
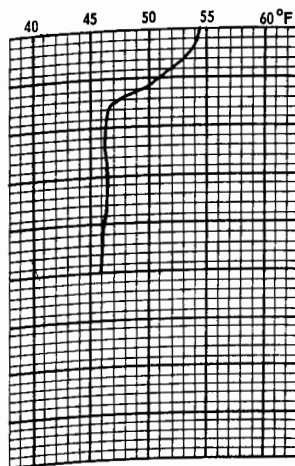
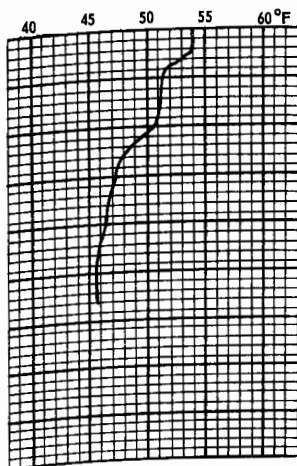
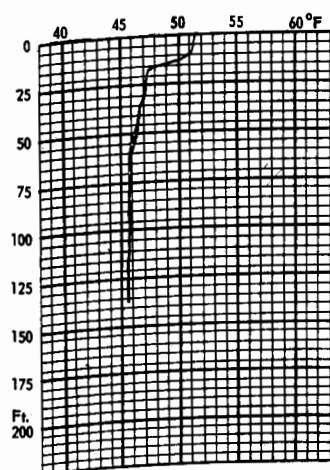
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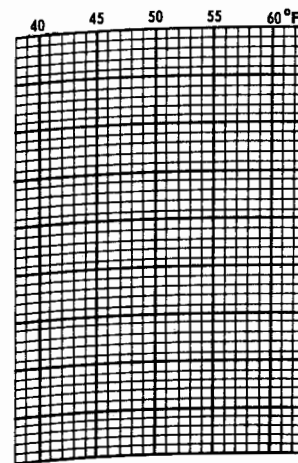
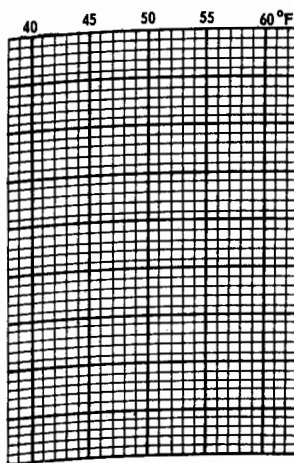
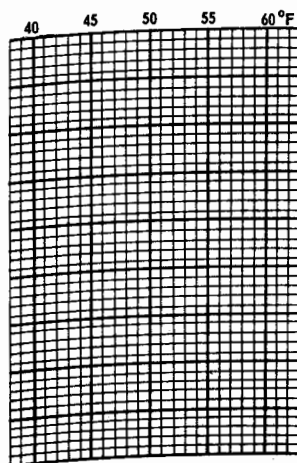
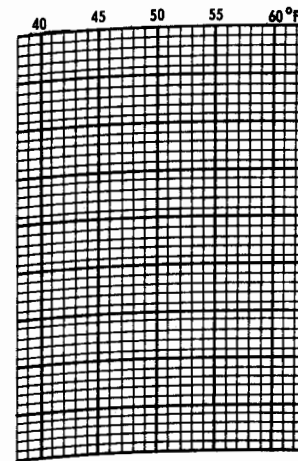
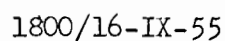
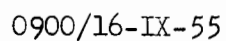
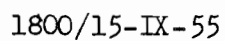
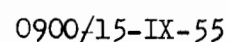
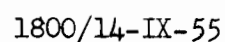
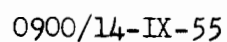
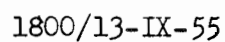


1800/5-IX-55

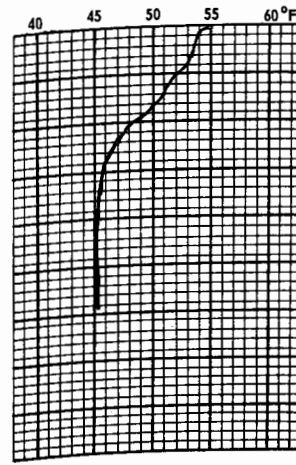
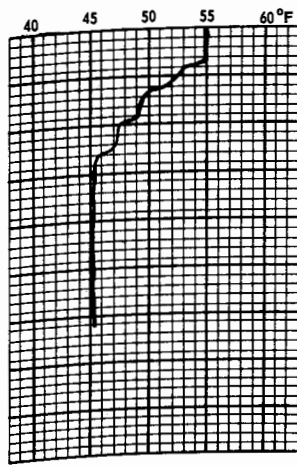
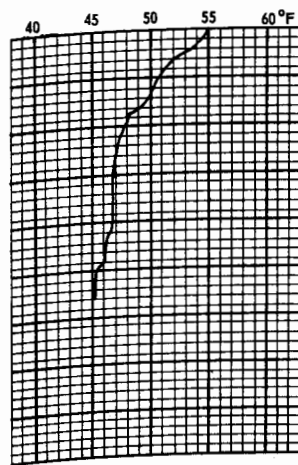
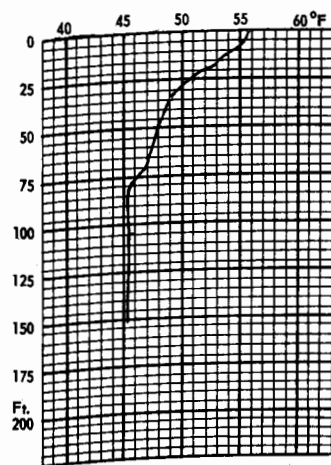
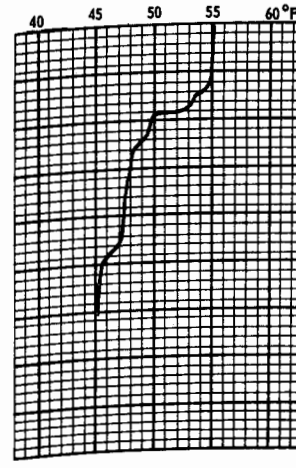
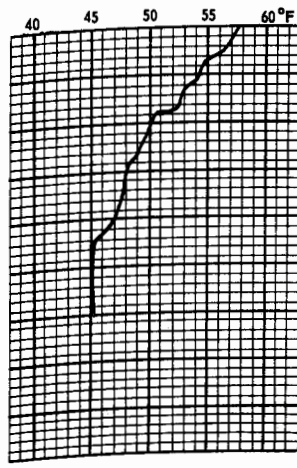
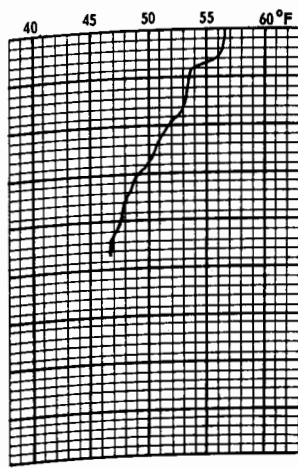
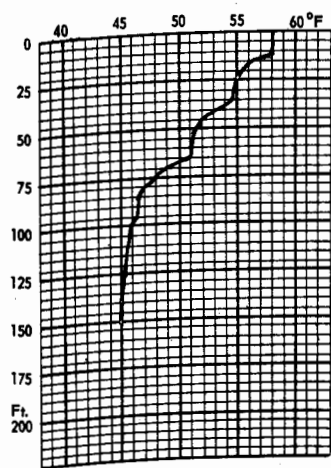
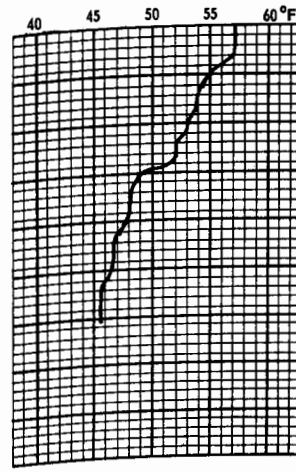
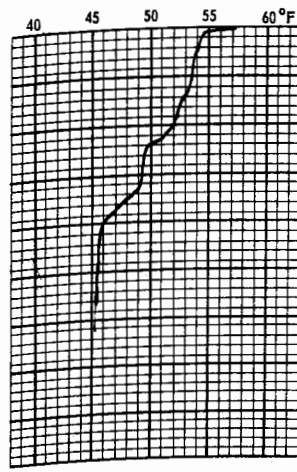
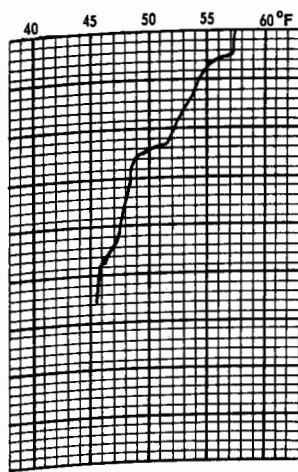
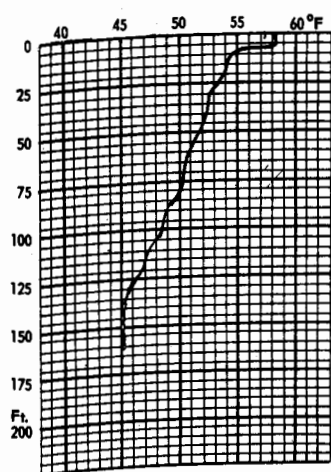


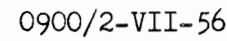
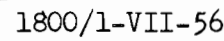
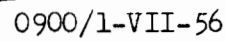
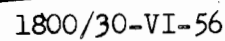
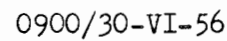
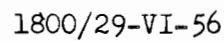
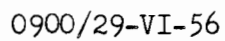
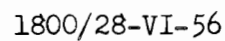
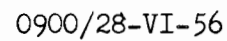
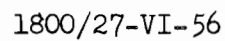
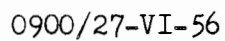
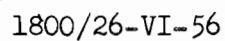
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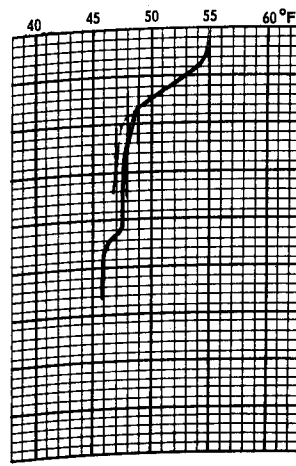
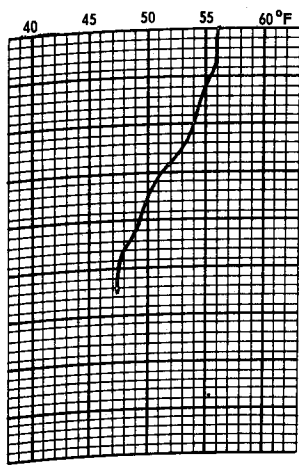
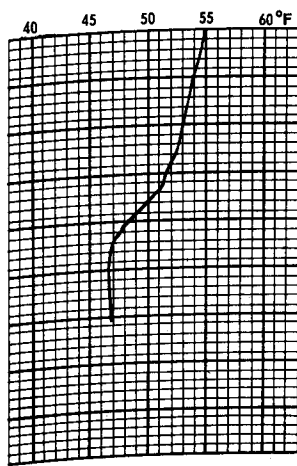
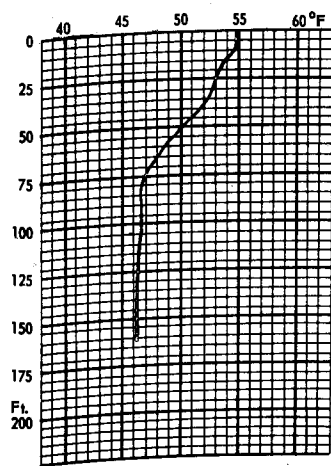
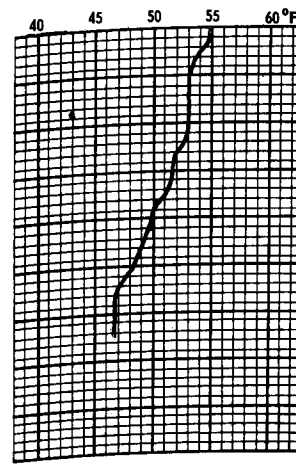
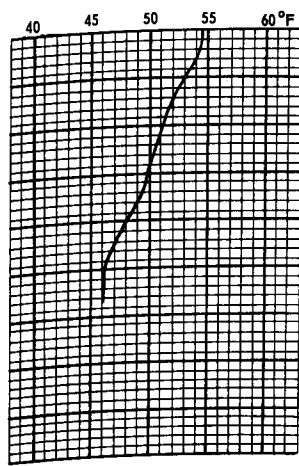
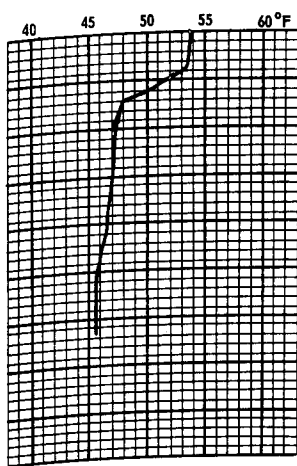
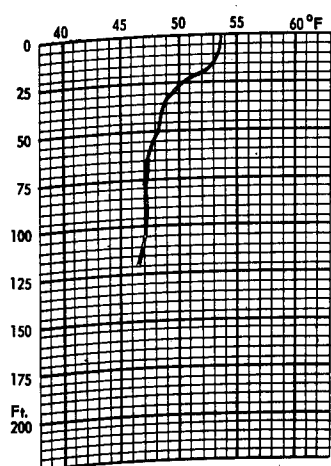
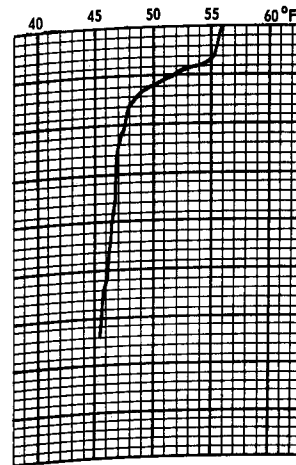
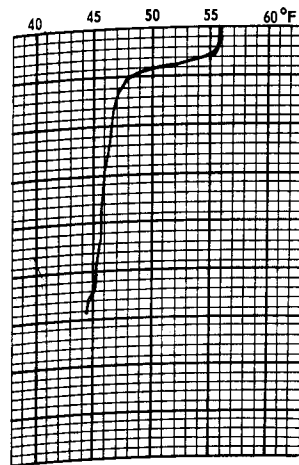
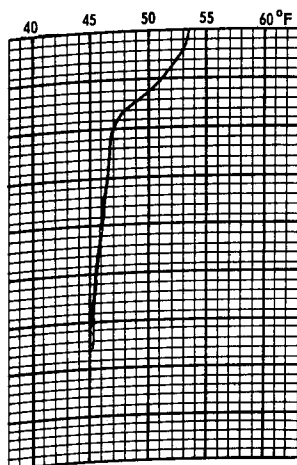
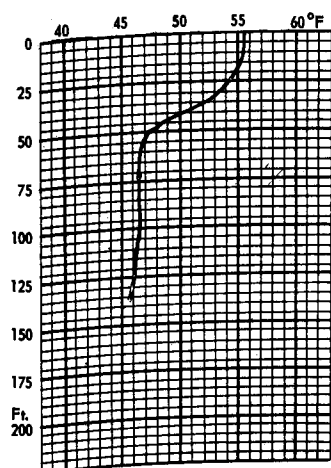


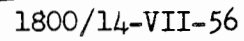
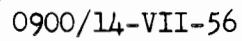
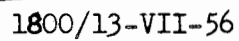
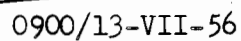
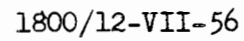
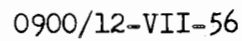
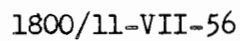
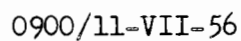
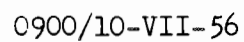
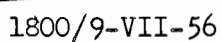
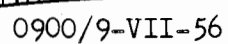


No further B. T. observations until June 20, 1956.

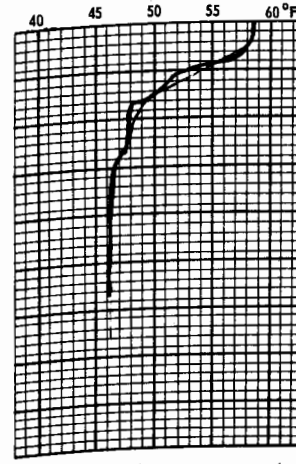
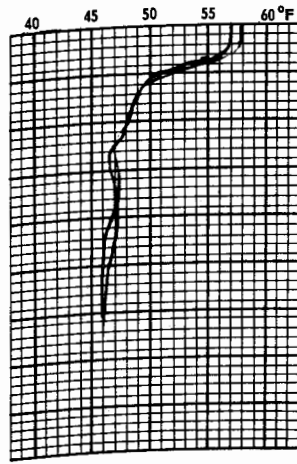
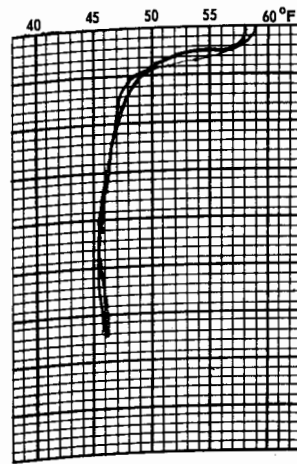
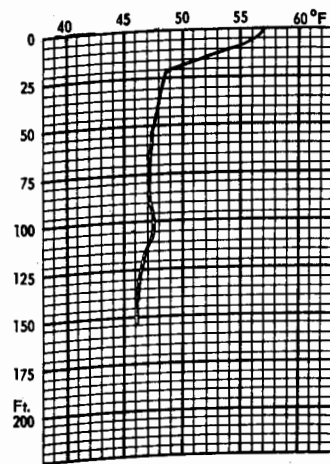
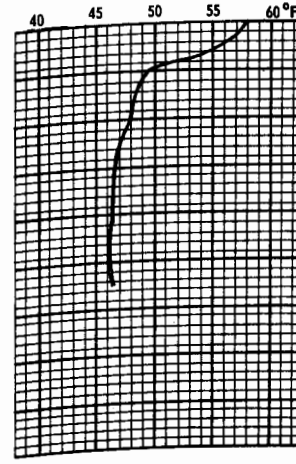
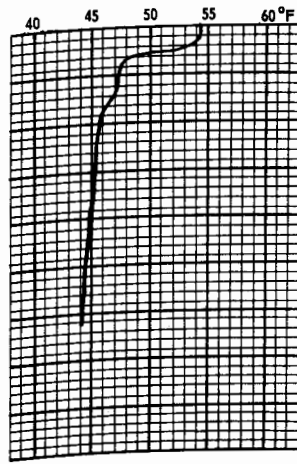
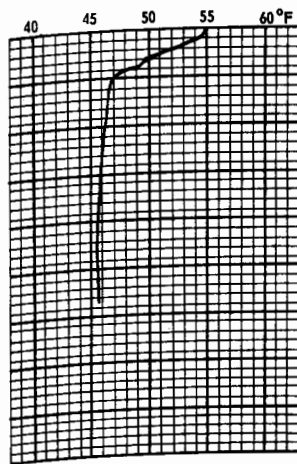
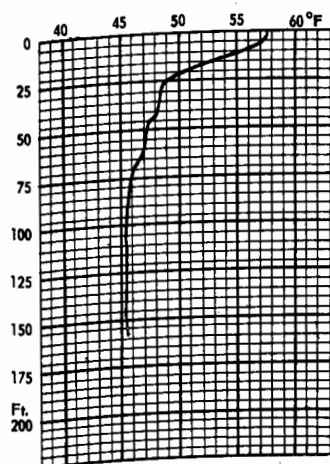
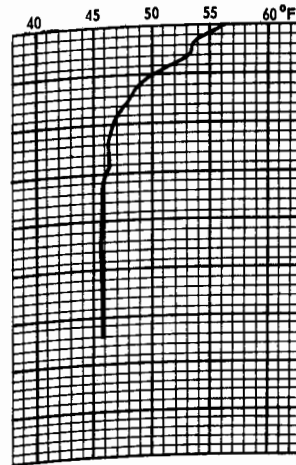
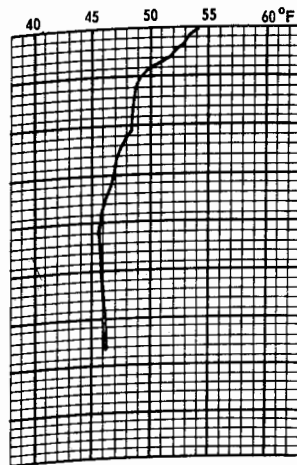
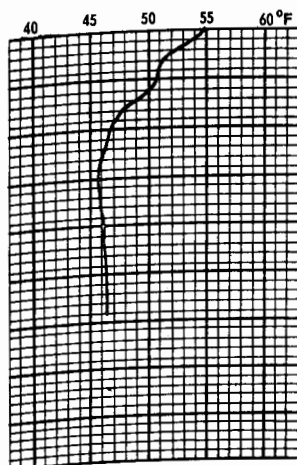
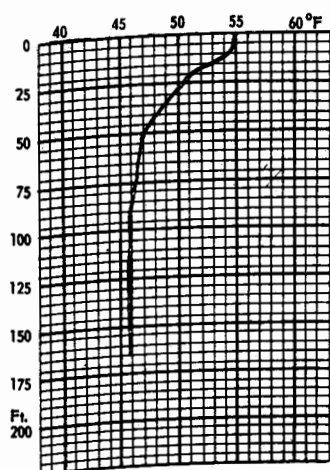




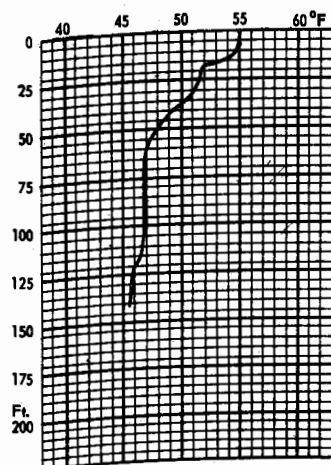




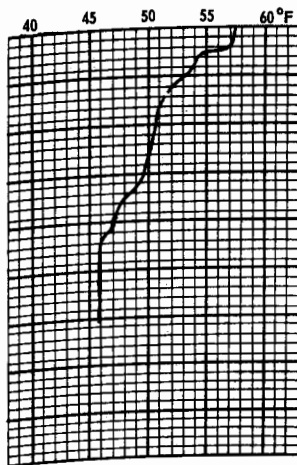
Bathythermograms, Umatilla Reef Lightvessel



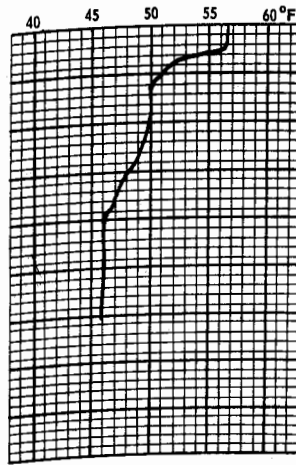
Bathythermograms, Umatilla Reef Lightvessel



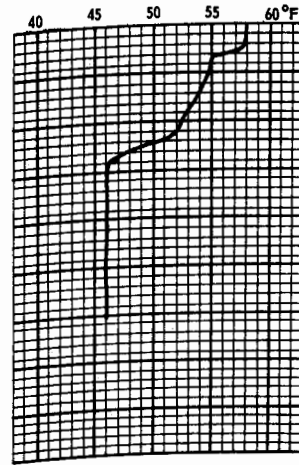
0900/21-VII-56



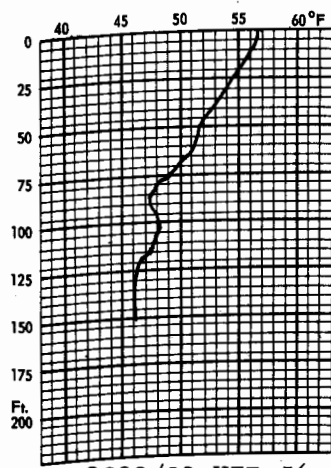
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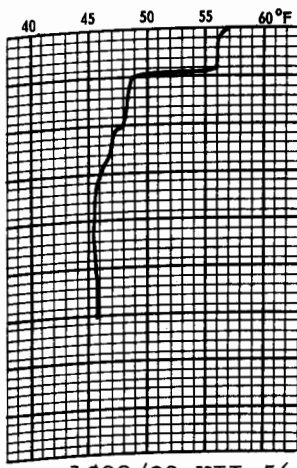
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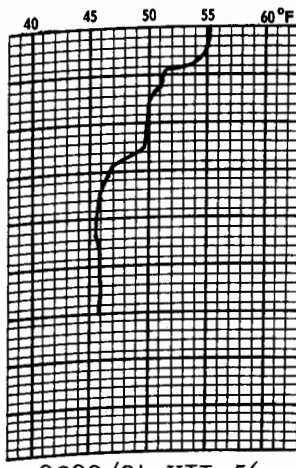
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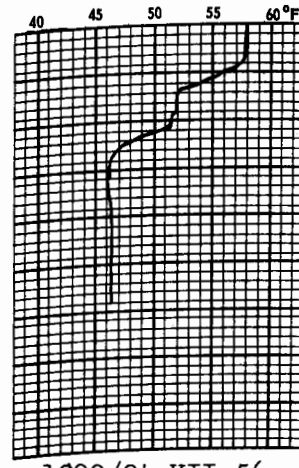
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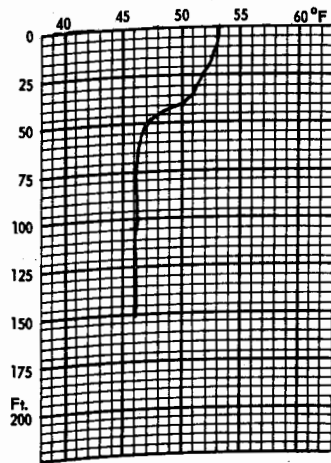
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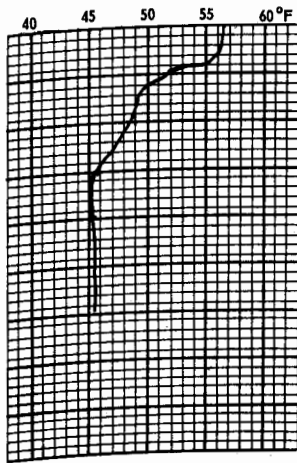
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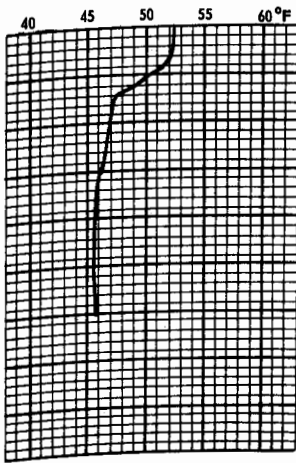
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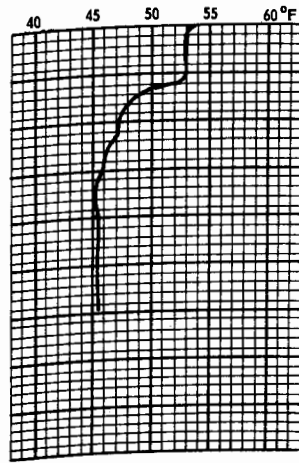
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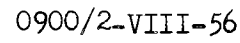
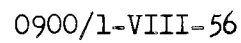
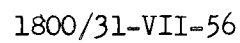
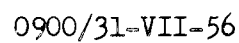
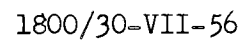
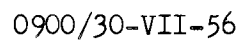
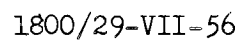
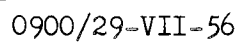
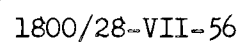
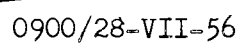
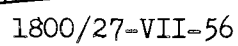
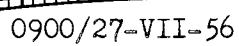
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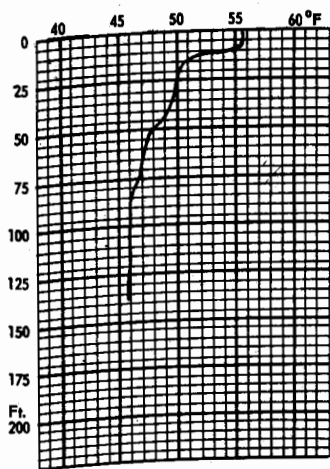


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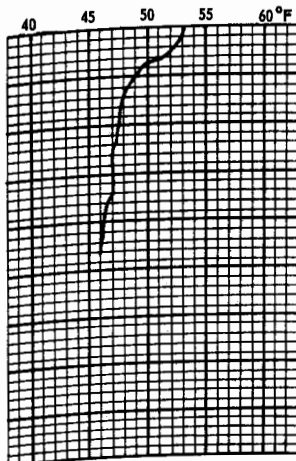


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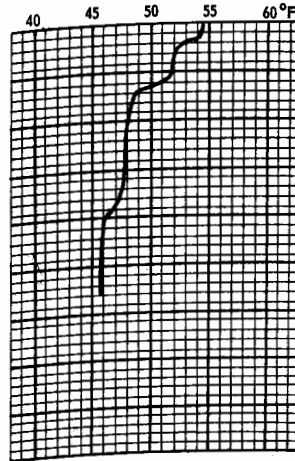




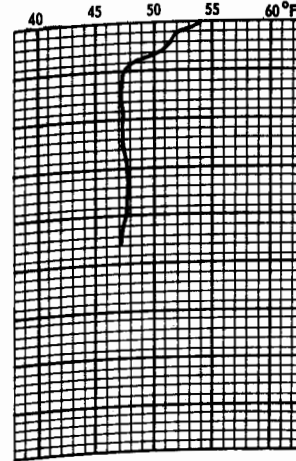
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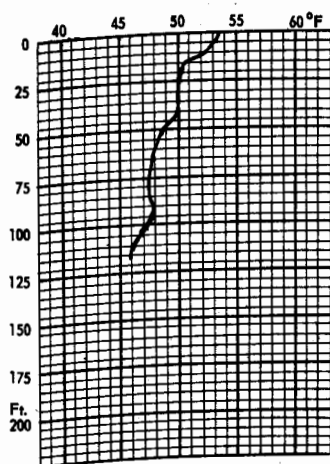
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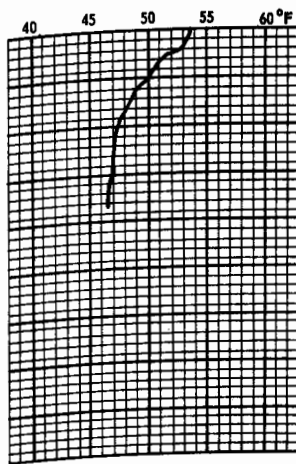
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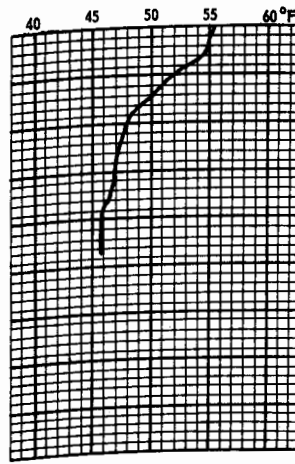
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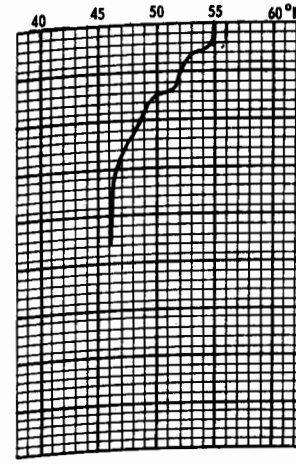
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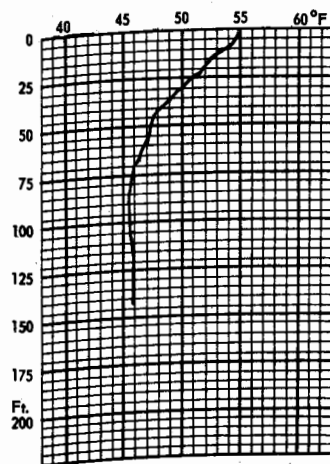
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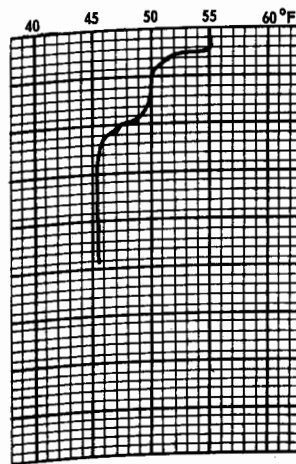
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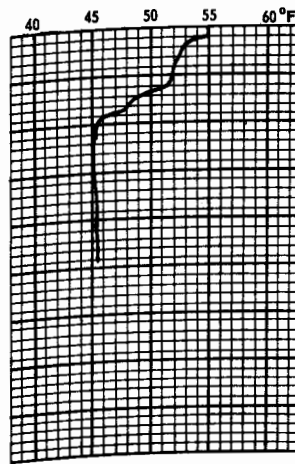
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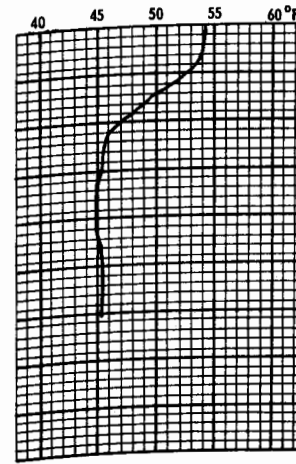
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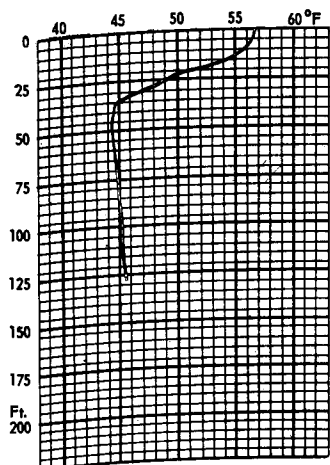


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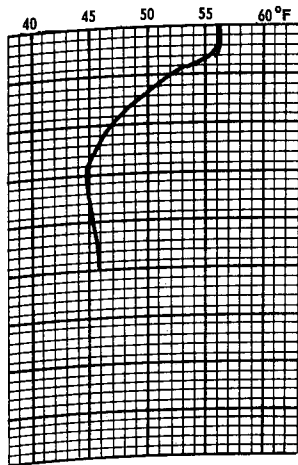


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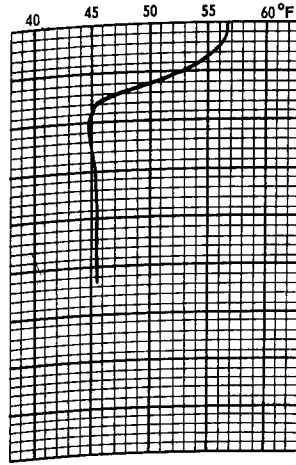
Bathythermograms, Umatilla Reef Lightvessel



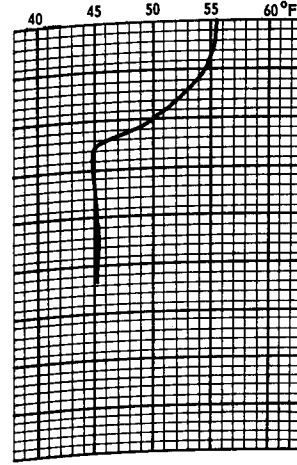
1800/8-VIII-56



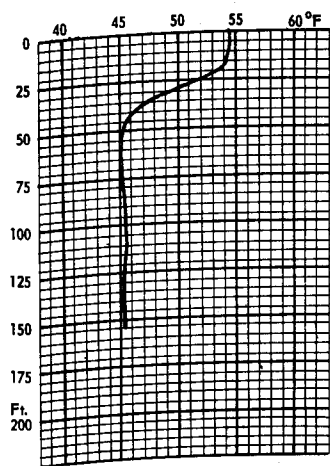
0900/9-VIII-56



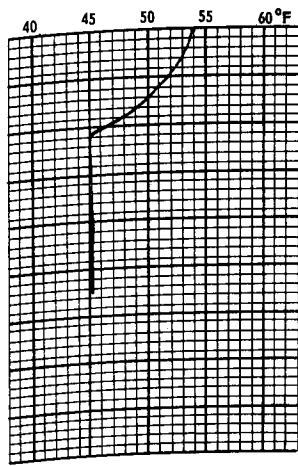
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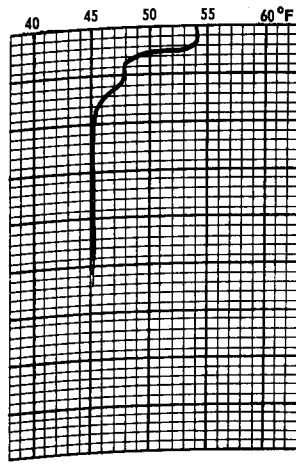
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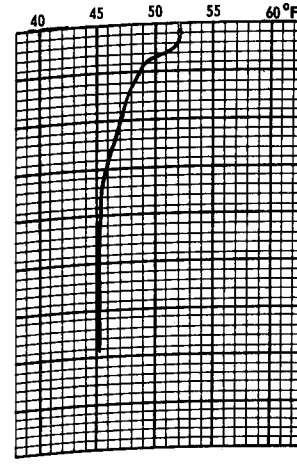
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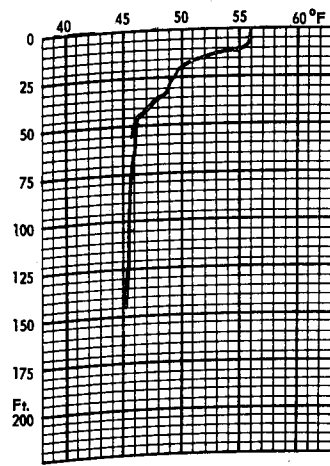
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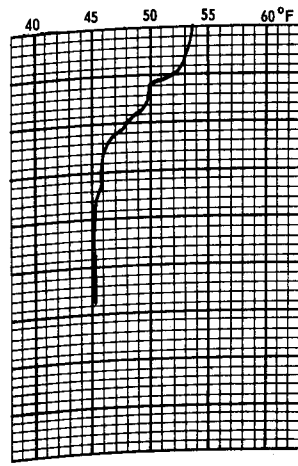
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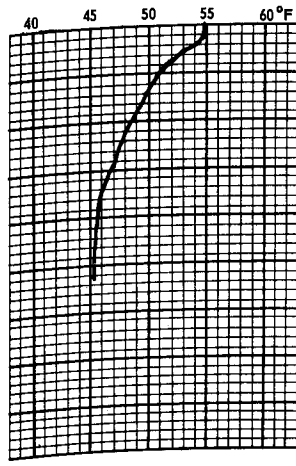
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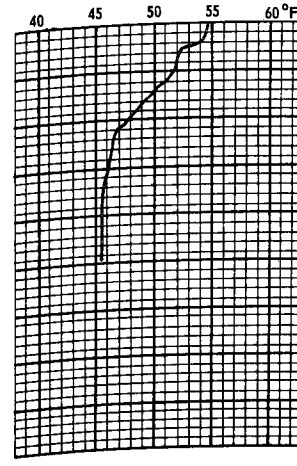
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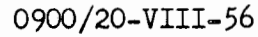
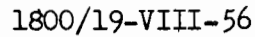
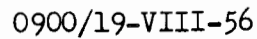
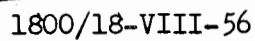
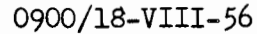
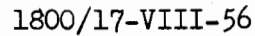
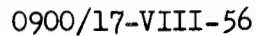
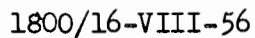
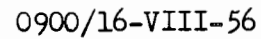
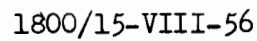
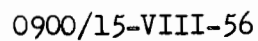
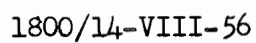
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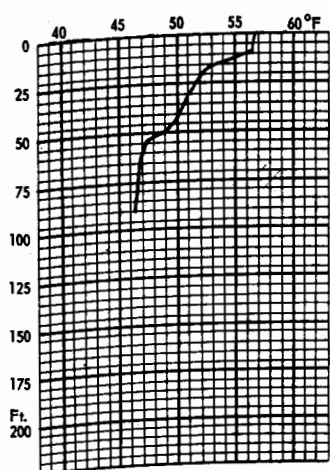
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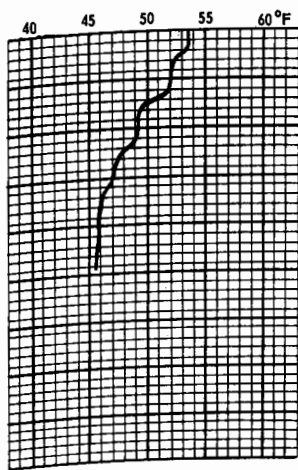
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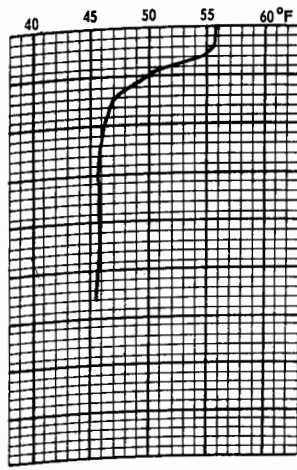
Bathythermograms, Umatilla Reef Lightvessel



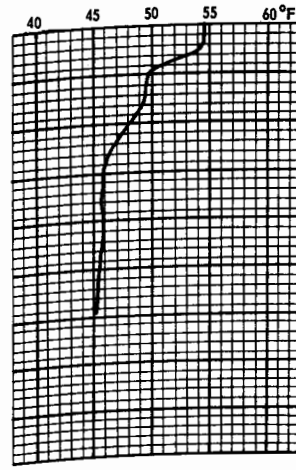
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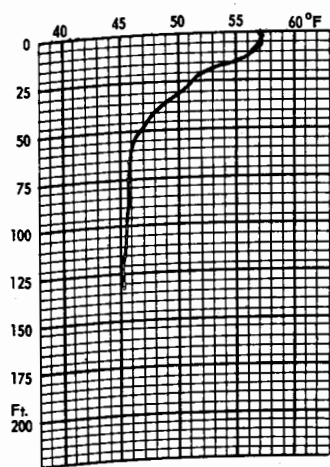
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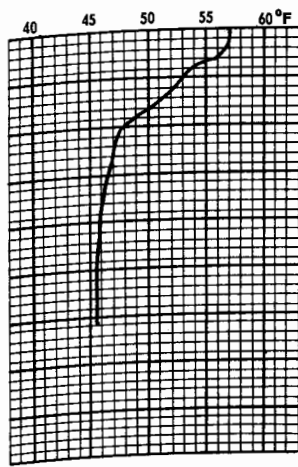
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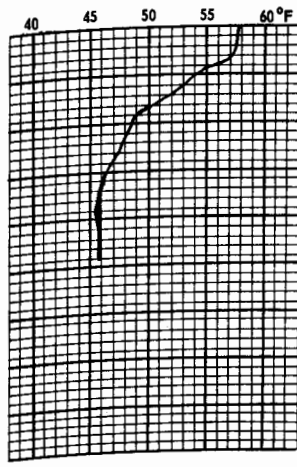
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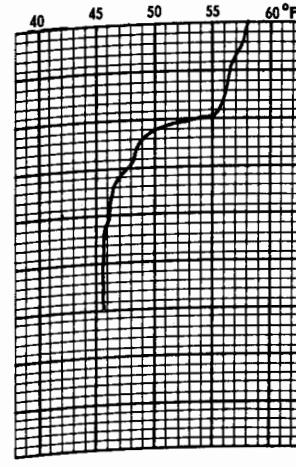
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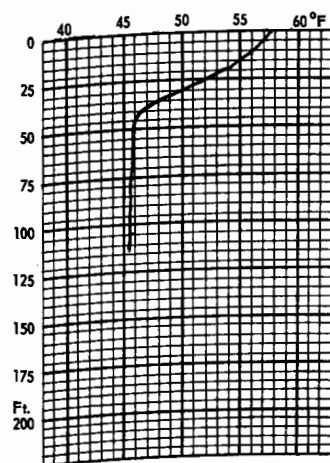
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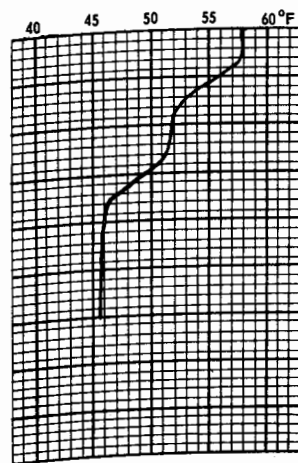
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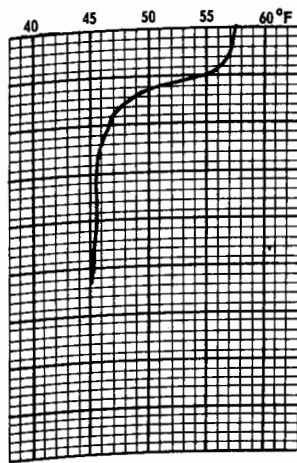
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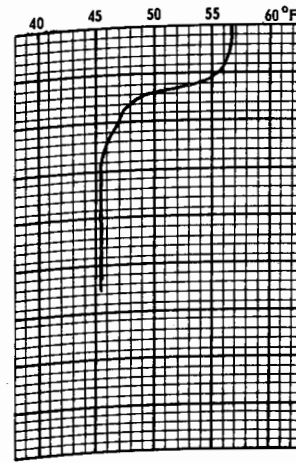
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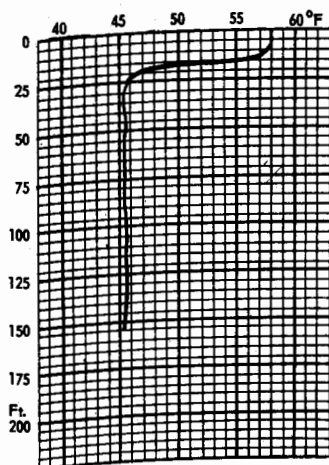


1800/25-VIII-56

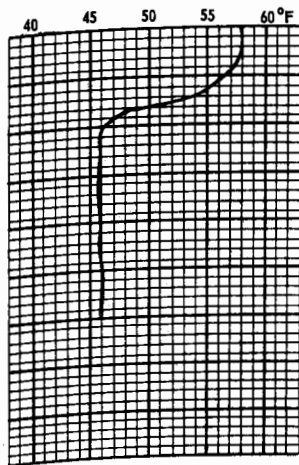


0900/26-VIII-56

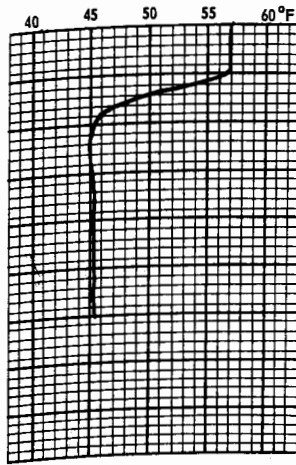
Bathythermograms, Umatilla Reef Lightvessel



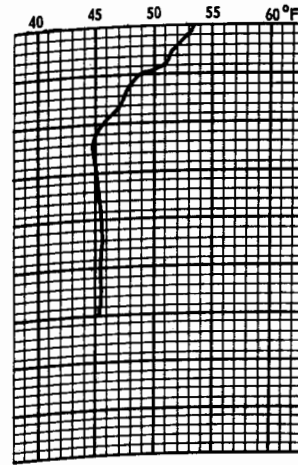
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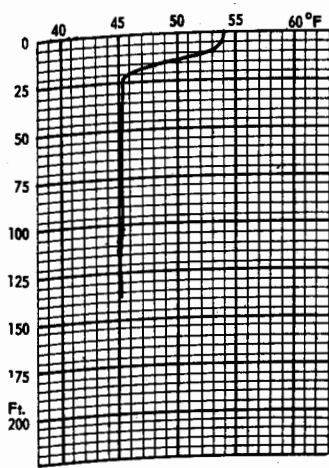
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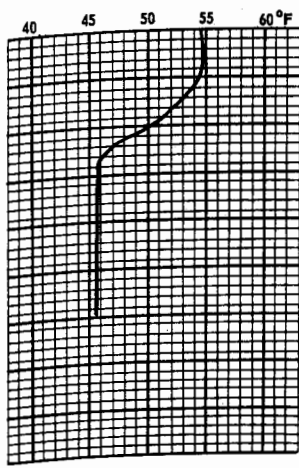
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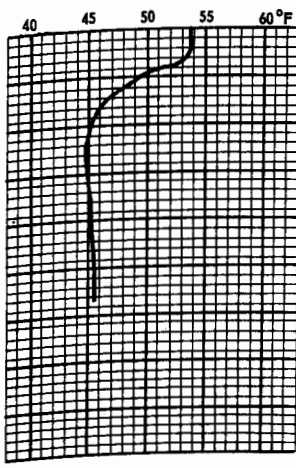
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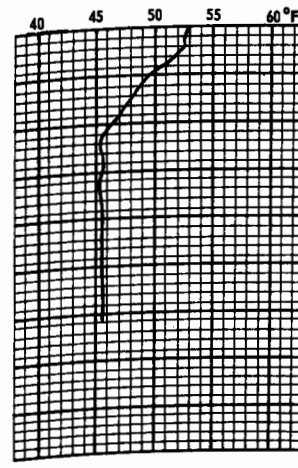
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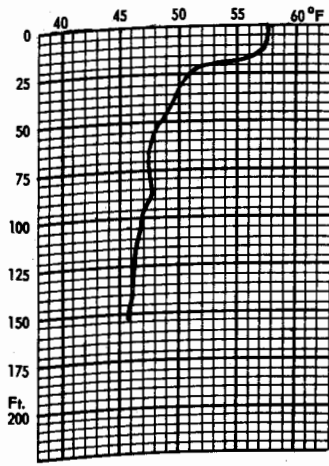
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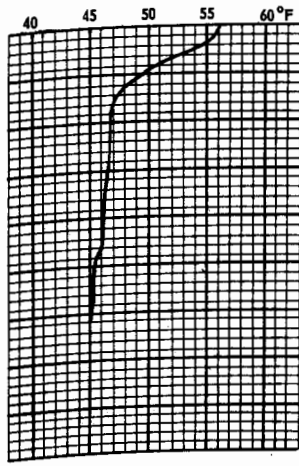
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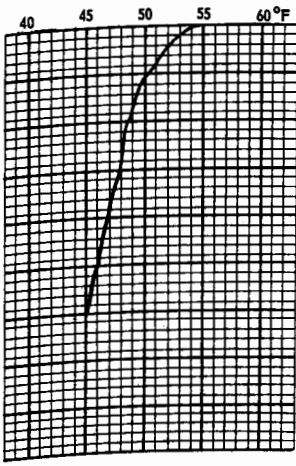
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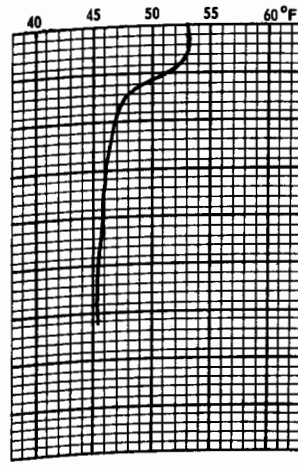
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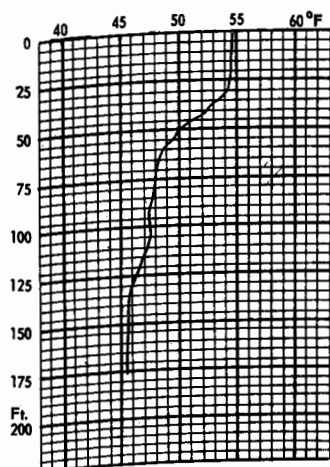
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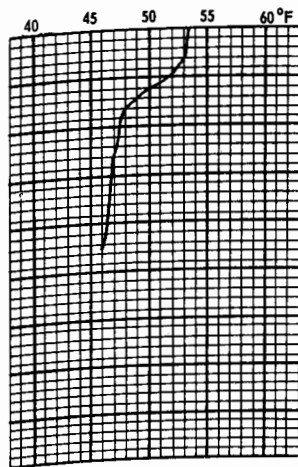
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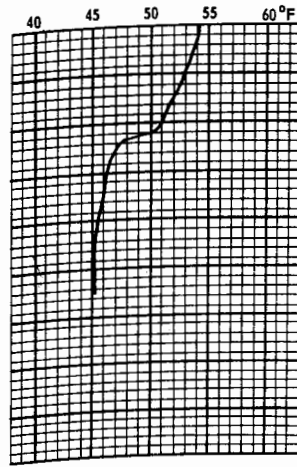
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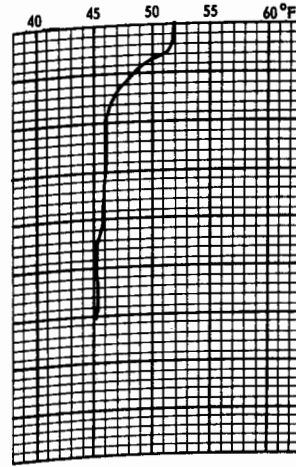
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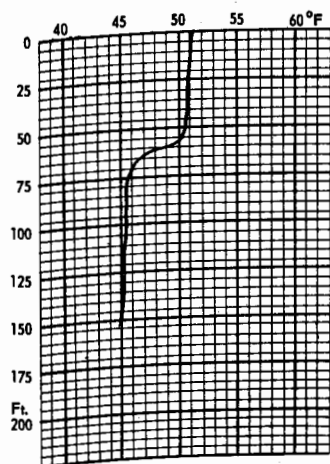
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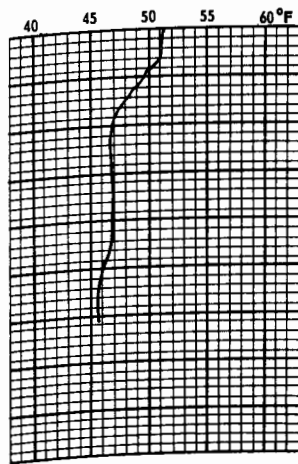
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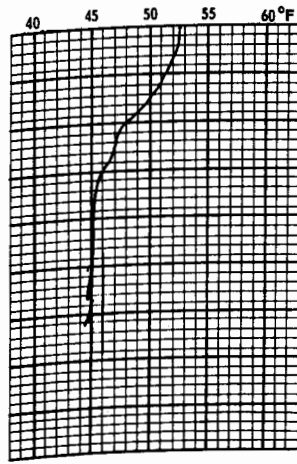
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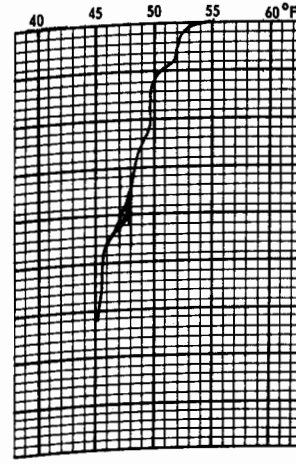
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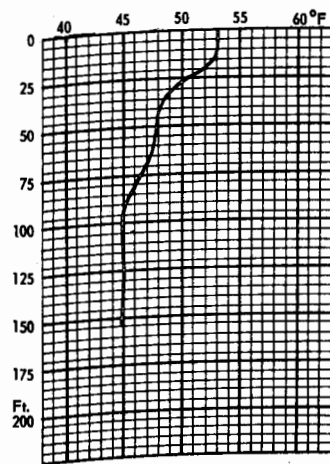
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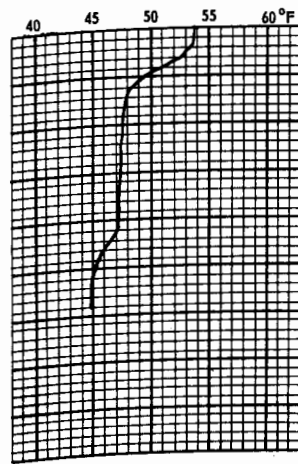
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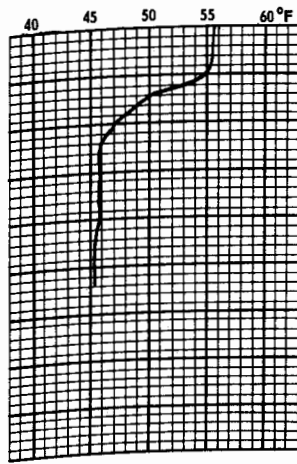
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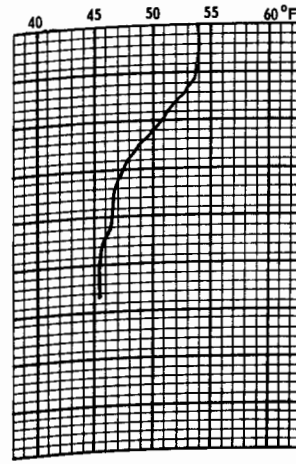
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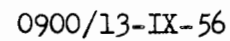
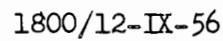
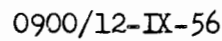
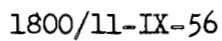
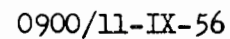
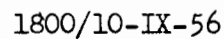
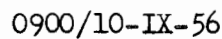
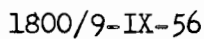
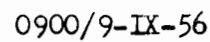
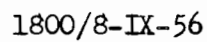
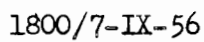
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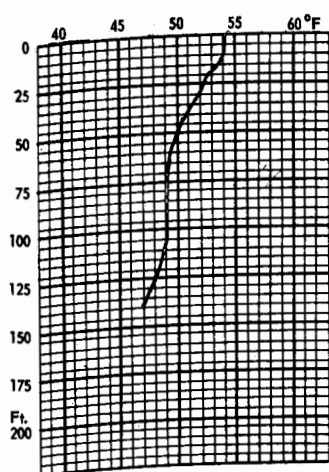
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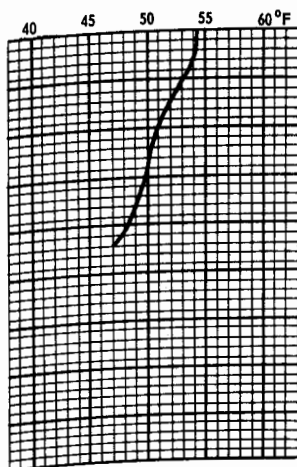
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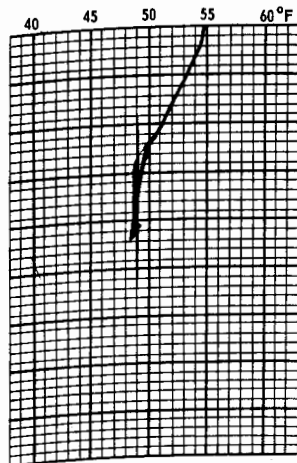
Bathythermograms, Umatilla Reef Lightvessel



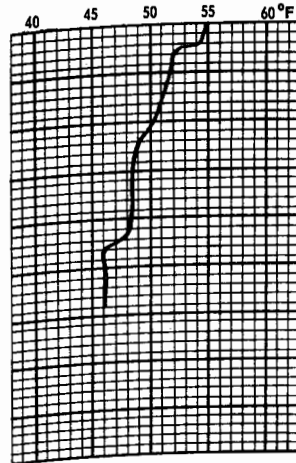
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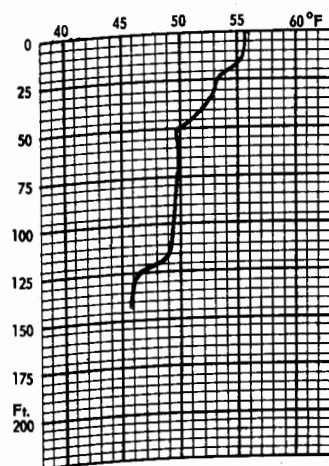
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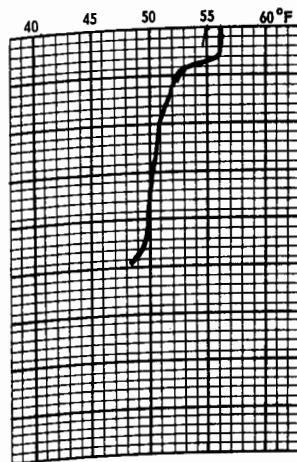
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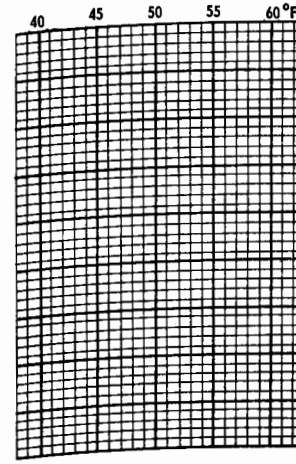
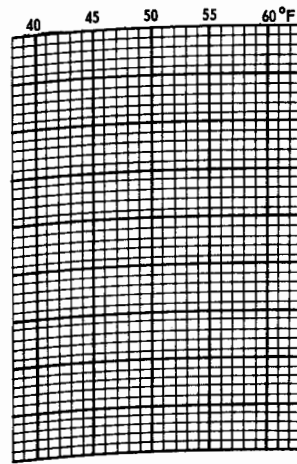
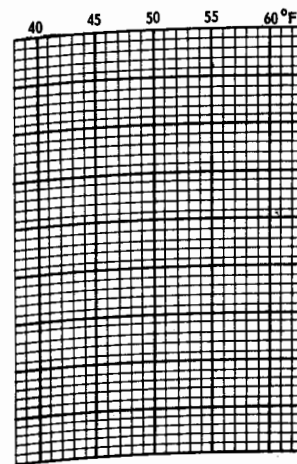
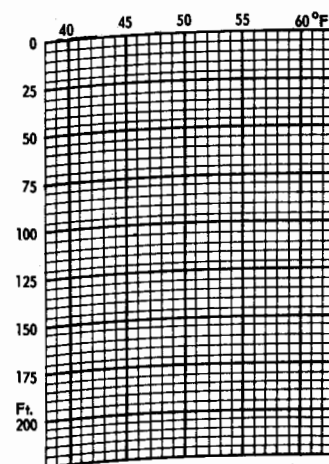
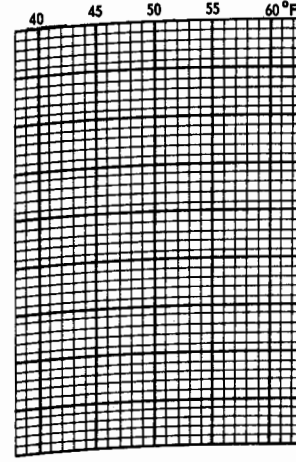
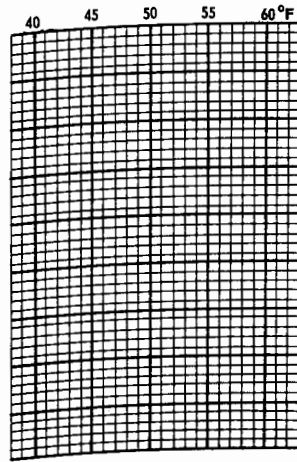
0900/16-IX-56



0900/17-IX-56



0900/18-IX-56



B. T. observations discontinued until June 21, 1957.