FISHERIES RESEARCH BOARD OF CANADA

MANUSCRIPT REPORT SERIES

(OCEANOGRAPHIC and LIMNOLOGICAL)

No. 14

TITLE

DATA RECORD

OCEAN WEATHER STATION "PAPA"

(Latitude 50° 00' N, Longitude 145° 00' W)

January 1, 1957 - January 24, 1958

AUTHORSHIP

Pacific Oceanographic Group

Nanaimo, B.C.

Establishment

Pacific Oceanographic Group

Nanaimo, B.C.

Dated May 1, 1958

These data are a contribution to the International Geophysical Year.

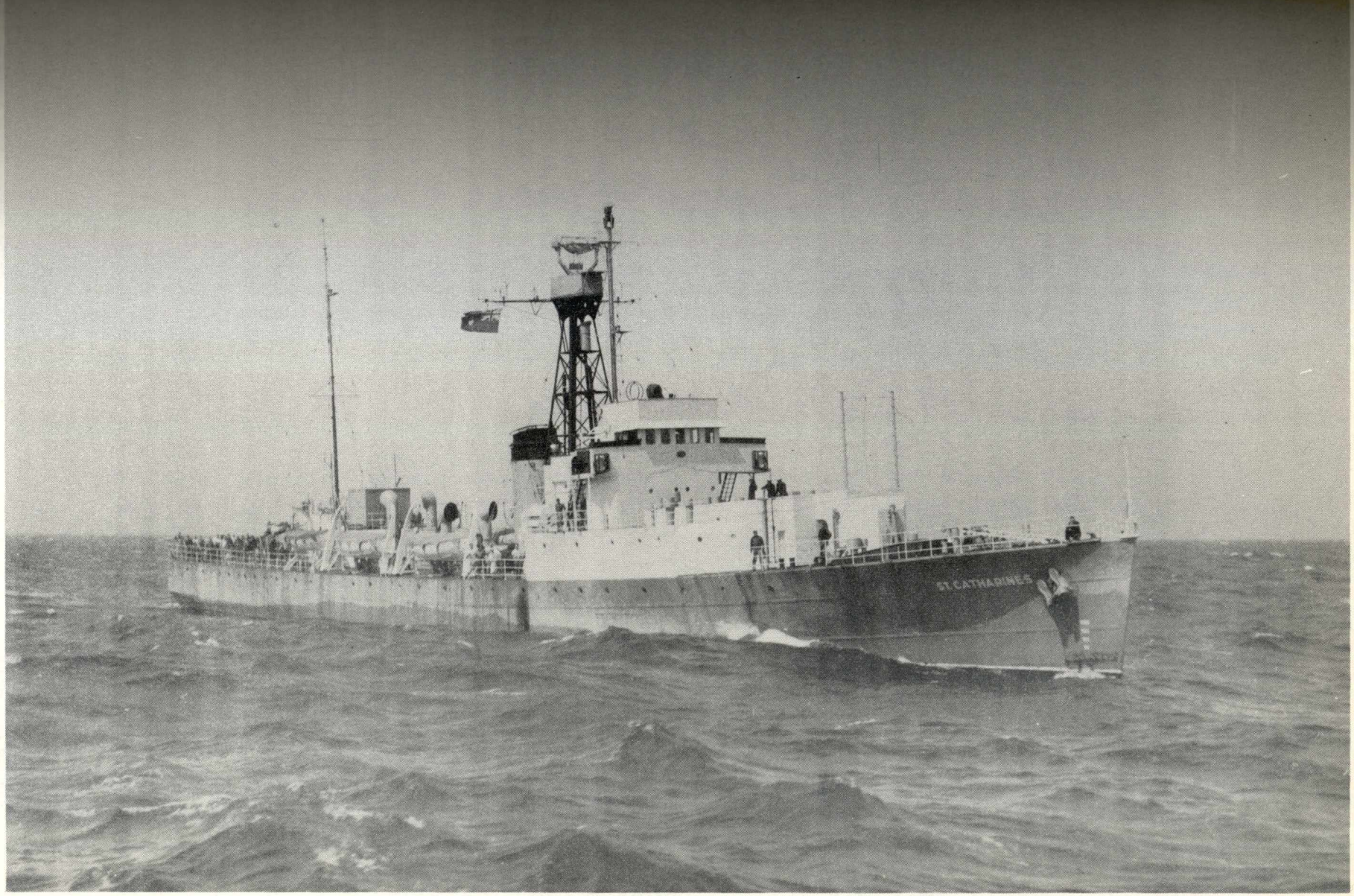


Figure 1

The weathership C.G.S. "St. Catharines". The oceanographic winch is located on the starboard side of the signal deck just aft of the bridge wing. C.G.S. "Stonetown" is of identical design.

(D.O.T. Photo)

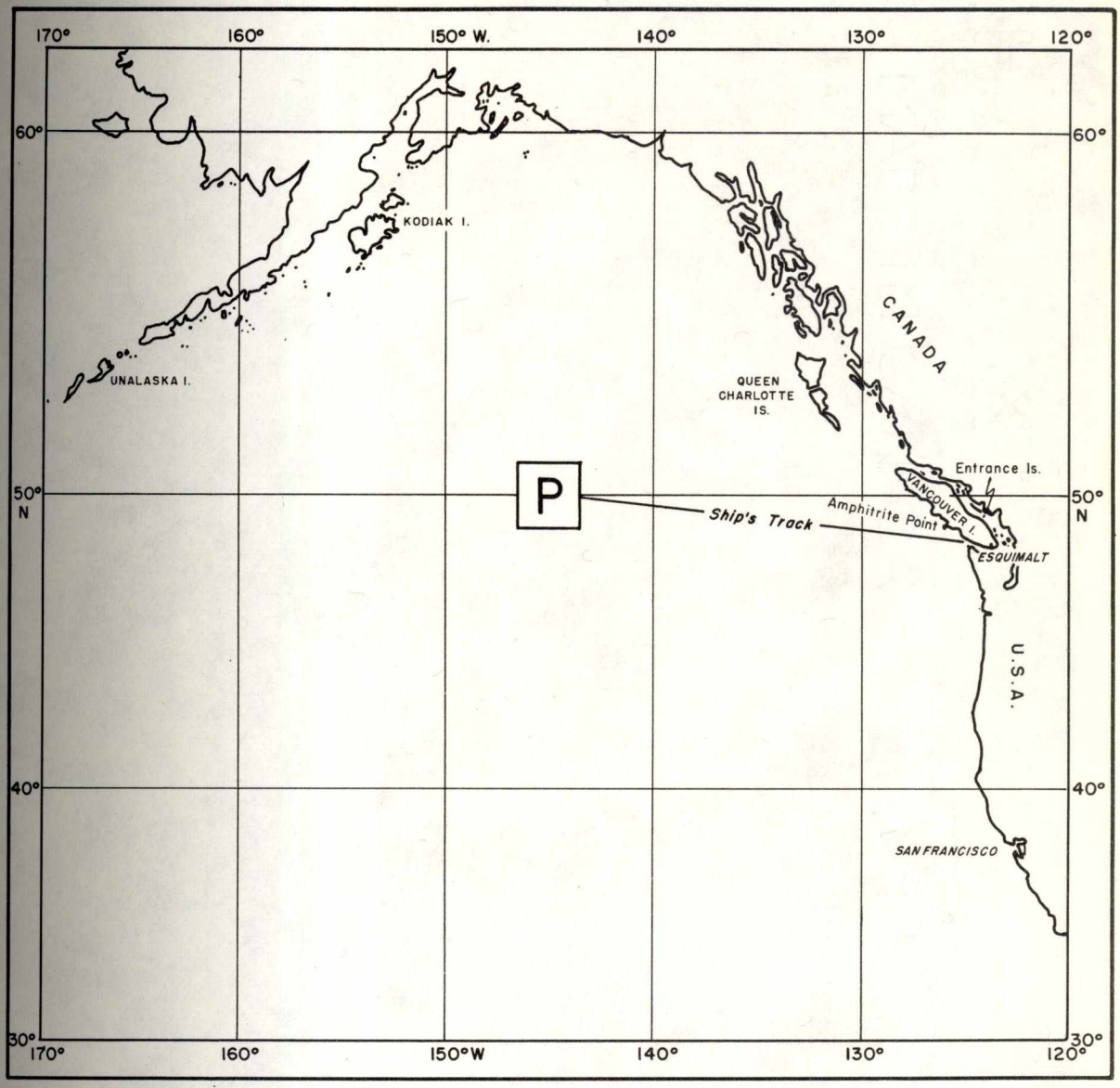


Figure 2.

Chart of the Northeast Pacific Ocean showing the position of Ocean Weather Station PAPA (50° 00' N, 145° 00' W).

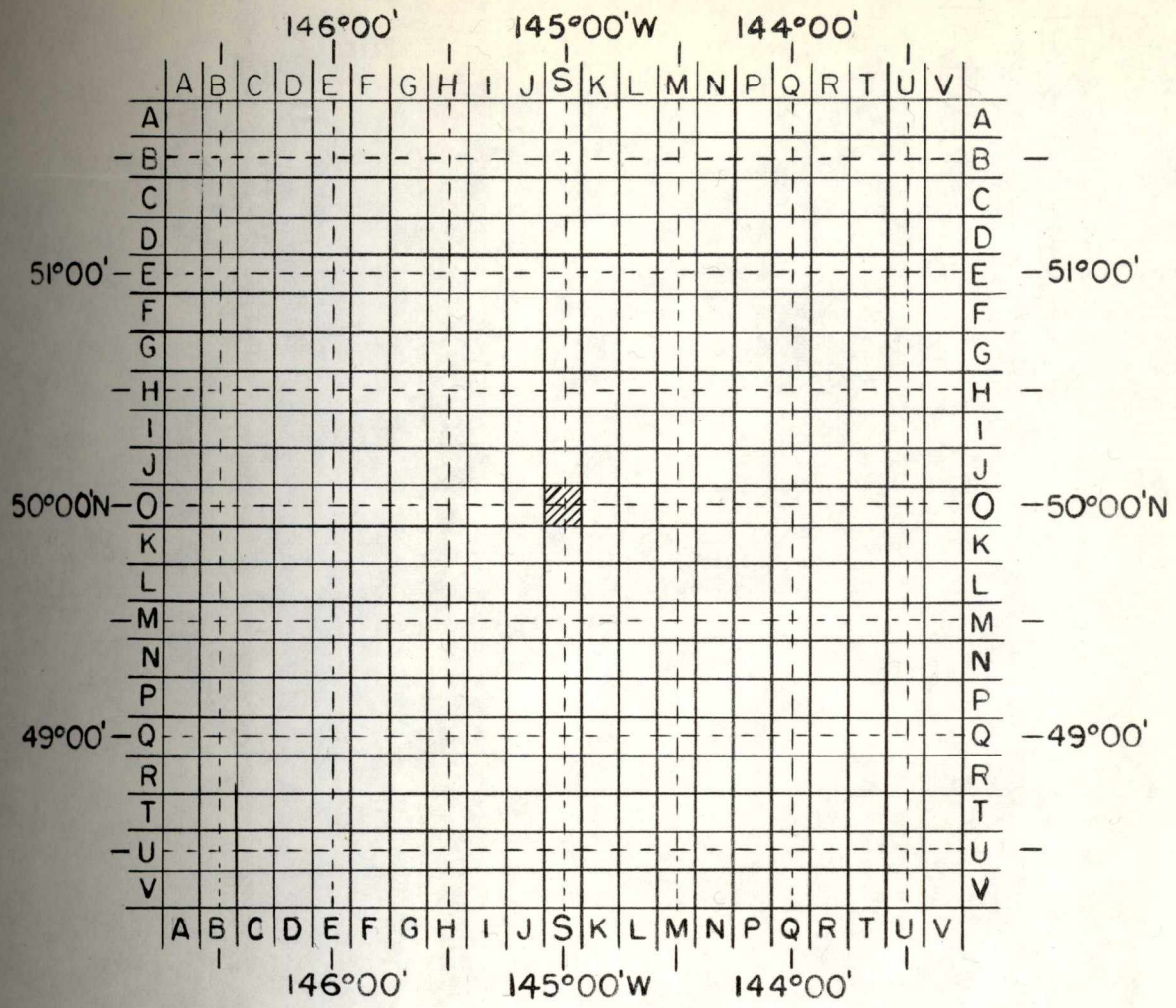


Figure 3

Position-indicating grid for ocean weather station vessels with mercator projection of latitude-longitude superimposed.

Description of Ocean Weather Station PAPA

The geographic position of Ocean Weather Station P (phonetically designated as PAPA) is 50° 00' N, 145° 00' W (Figure 2), some 800 miles west of Vancouver Island. The ships normally maintain an "on Station" position within a 10-mile square centered on this geographic location. However, an ocean weather station actually consists of a 210-mile square, centered on the geographic position (Figure 3), and the ships may steam anywhere in this larger square in order to avoid rough weather. For purposes of position location when transmitting radio messages, this 210-mile square is divided into 10-mile squares which are identified by a latitude-longitude designating letter group. If the ship is "on station" the letter group OS indicates the position. If the ship is off station - say in the 10-mile square immediately to the west of OS - then the letter group OJ would indicate the position.

Introduction

Bathythermograph observations have been made at irregular intervals from July 1943 to December 1950 at several weathership locations at and near the present position of Station PAPA (latitude 50° 00' N, longitude 145° 00' W) by U.S.C.G. patrol vessels.

Canadian operation of the station was inaugurated in December 1950. The station is manned by two vessels of the former Canadian naval frigate class, operated by the Marine Branch of the Department of Transport. They are the C.G.S. "Stonetown" and C.G.S. "St. Catharines" (Figure 1). Each ship remains on station for a period of 6 weeks, and is then relieved by the other ship, thus maintaining a continuous series of observations. The chief purpose of the station is to maintain a meteorological station for surface and upper-air observations.

The Pacific Oceanographic Group commenced bathythermograph observations in July 1952. Observations made in 1956 have been previously reported in a data record published in June 1957.

This volume will present the oceanographic and bathythermograph data observed in 1957. It is planned to publish volumes of pre-1956 bathythermograms as time permits, and to continue a regular semi-annual data record series as the program continues.

Program of Observations

The routine bathythermograph observations are taken twice daily on station usually at 0200 and 1700 G.M.T. During cruises P-2-57, P-3-57 and P-4-57 of "St. Catharines" the observations were made at 0000 and 1700 G.M.T. They are also taken every 2 hours during the passage to and from station, except for cruise P-4-57, when they were taken every 3 hours.

During the first half of 1957, the daily observations were taken with a 450-foot (135-meter) bathythermograph, or alternately with a 900-foot (270-meter) instrument. In the latter half of the year observations were made almost entirely with 900-foot (270 meter) bathythermographs.

One ship, C.G.S. "St. Catharines", is equipped with deck and laboratory equipment, and facilities required to make detailed oceanographic observations. An oceanographer from the Pacific Oceanographic Group accompanies the ship on each cruise. The basic oceanographic program consists of a weekly deep (to 1200 meters) serial reversing water bottle cast, and shipboard analyses of the samples for temperature, dissolved oxygen, phosphate and nitrite. Salinity analyses are done in the shore laboratory. Twice weekly a vertical plankton haul from various depths is made, as well as regular horizontal surface plankton tows. In addition, special series of hourly and bi-hourly bathythermograph lowerings and horizontal plankton hauls have been made.

Personnel

The routine twice-daily bathythermograph soundings are conducted by the ship's crew, supervised by the officer of the watch. On board the "St. Catharines" members of the crew ably assist the oceanographer in the extra work of taking serial sampling casts and plankton hauls.

Oceanographers who have served during 1957 are:

Cruise P-1-57	January 22 - March 11	C.D. McAllister
Cruise P-2-57	April 16 - June 3	Susumu Tabata
Cruise P-3-57	July 9 - August 26	C.D. McAllister
Cruise P-4-57	September 24 - November 4	Susumu Tabata
Cruise P-5-57	December 10 - January 27, 1958	K.S. Booth

Description of the 1957 Data

This data record volume contains reproductions of the bathythermograms, the pertinent shipboard meteorological observations, physical and chemical oceanographic records, and results of the analyses of plankton collections.

The bathythermograms are drawn on a standard grid which was preprinted on the multilith masters. The time-date group (G.M.T. time/day-month-year) and the position co-ordinates are noted below each bathythermogram. In the case of BT observations taken during the trips to and from base the positions are indicated by latitude and longitude co-ordinates. The locations of observations on station are indicated by the station grid letter-designator group, which is described in Figure 3. It is assumed that the ship is positioned in the center of the letter-group square. The bathythermograms are arranged in a chronological order and are divided in groups identified by the observing ship. When two different depth range bathythermographs were used during one cruise the shallow depth bathythermograms (450-foot or 135-meter) are presented first, in chronological order, followed by the group of deeper traces. The year 1957 was a transition period for conversion of the stock of bathythermographs from Fahrenheit/feet calibration grids to Centigrade/meters grids, and the data record for the first half of the year contains a mixture of bathythermogram scales. All future volumes of data will have Centigrade/meter bathythermogram grids.

The meteorological data presented in this record were observed by the same ship's personnel who made the routine bathythermograph observations. The positions of the ship at the time the individual daily observations were taken can be determined by reference to the corresponding bathythermogram record. In a few instances, a meteorological record entry has been listed when no bathythermograph observation was made. The location of this meteorological observation can be assumed to be at or near the next closest bathythermogram position. At the beginning and end of a ship's chronological series of meteorological observations there are a

number of observations overlapping with those of the relieving ship.

Microfilm copies of the detailed meteorological records obtained by the meteorological officers on board the weatherships can be obtained from the Director, Meteorological Branch, Department of Transport, Toronto, Ontario.

During the first cruise (P-1-57) on "St. Catharines" a sea sampler with 12 sampling chambers was lowered to a depth of 450 feet (135 meters) and the samples collected were analysed on shipboard for salinity and inorganic phosphate content. With the exception of the 51 meter depth, two chambers were used to obtain a sample from one depth. The records are identified by a time/date group and a letter-designator group for the PAPA grid position.

The data obtained in the weekly oceanographic serial casts are arranged in a chronological order in the record. Position on the station grid is indicated by the letter-designator group (Figure 3). The weather data are those observed by the oceanographer at the time of the cast. The samples were generally obtained in two casts.

In the 1956 data record volume, only the observed depths record of the oceanographic data were presented. The interpolated depths data for these stations are presented in this 1957 volume.

The records of the analyses of the plankton collections are arranged in a chronological order regardless of type of haul for cruises P-1-57 and P-3-57, and are arranged in a chronological order in vertical and horizontal haul sections for cruises P-2-57, P-4-57 and P-5-57.

Oceanographic Serial Cast Procedure

1. The serial casts were planned to extend to 1200 meters, but owing to winch power limitations and other equipment factors, this depth was not always obtained. Observations were generally made at depths of 10, 20, 30, 50, 75, 100, 125, 150, 200, 250, 300, 500, 750, 1000, and 1200 meters, in two casts.

2. Surface seawater samples were obtained with a canvas bucket enclosing a polyethylene container.

3. Samples were drawn for salinity, dissolved oxygen, dissolved inorganic phosphate, and inorganic nitrite. All analyses, except those for salinity, were done on shipboard.

4. Temperatures were obtained by deep-sea reversing thermometers, usually only one on each bottle. Unprotected thermometers were attached to the sampling bottles below 300 meters depth.

5. A secchi disc reading, using a 30 cm. diameter disc, was taken on all daylight stations.

Plankton Collection Procedure

Routine vertical plankton hauls from various depths were made on station twice weekly starting at 1800 hours G.M.T., by hauling a nylon net 45 cm. in diameter with a mesh aperture of about 0.33 mm. at a speed of 1 meter per second.

Horizontal surface plankton tows of half-hour duration were made on station at about weekly intervals, and in several instances every 2 hours. The standard 45 cm. net was generally towed from the side of the ship at speeds of a few knots. The mouth of the net was on the average only half submerged. The samples collected were preserved in 5% formalin solution.

Methods of Analyses

Bathythermograms: The temperature alignment values used to position the BT traces on the printed grids were calculated according to the methods described by LaFond in U.S. Navy H.O. Pub. No. 614, "Processing Oceanographic Data". It is considered that the bathythermogram temperatures have an accuracy of ± 0.5° F (± 0.3° C). Only the temperature correction of LaFond was used. The top of the BT trace was always aligned with the zero-depth grid line.

Salinity: The samples collected by the sea sampler on Cruise P-1-57 were analysed on shipboard, using a simply modified Mohr titration method. Seawater samples taken on the weekly oceanographic serial casts for Cruises P-1-57 and P-2-57 were preserved in glass 8-oz. medicine bottles sealed by a wax-impregnated cork. These were analysed at the base laboratory in Nanaimo, B.C. The salinity was determined by the Mohr titration method on Knudsen-type apparatus. Salinity samples collected on the Cruises P-3-57, P-4-57 and P-5-57 were analysed at the base laboratory in a modified Wenner-Smith-Soule salinity bridge.

Nutrient Ions and Other Analyses: The chemical analyses were made on shipboard using the methods described in Fisheries Research Board of Canada manuscript report "Standard Methods of Seawater Analyses, Volume I" by J.D.H. Strickland, July 31, 1957.

Plankton: Organisms longer than 1 1/2 inches were removed from the sample and the wet weight was then measured. The per cent of the total wet weight of each group was estimated, and the wet weight value was converted to grams per 1,000 cubic meters. The nets have been presumed to be 100% efficient in filtering the sea water.

Table I

Meteorological Codes used in Data Record

STATE OF PRESENT WEATHER
(Abstracted from H.O. Pub. No. 606C)

Code	Description
00	Cloud development not observable
01	Clouds generally dissolving
02	State of sky unchanged
03	Clouds developing
04	Smoke haze
05	Dry haze
10	Light fog, vis. 1100 yds or more
11	Shallow fog in patches
16	Precipitation near ship
18	Squall(s)
41	Fog in patches
43	Fog, thinning in last hour
45	Fog, unchanging in last hour
47	Fog, thicker in last hour, no sky
50	Drizzle
57	Drizzle, freezing
60	Rain, slight, intermittent
62	Rain, moderate, intermittent
63	Rain, moderate, continuous
67	Rain, freezing, moderate
69	Rain and snow mixed, moderate
72	Snow, moderate, intermittent
73	Snow, moderate, continuous
81	Rain shower(s), moderate
84	Shower of rain and snow
86	Snow shower(s), moderate
88	Hail showers, moderate
95	Thunderstorm, slight
97	Thunderstorm, heavy

CLOUD TYPES

Name	Code
Stratocumulus	Sc
Stratus	St
Fractostratus	Fs
Nimbostratus	Ns
Cumulus	Cu
Cumulonimbus	Cb
Fractocumulus	Fc
Altostratus	As
Altocumulus	Ac
Cirrus	Ci
Cirrocumulus	Cc
Cirrostratus	Cs

WAVE HEIGHT

Code	Mean Max. Height	Code	Mean Max. Height
0	< 1 foot	51	17.5 feet
1	1.5 feet	52	19 feet
2	3 feet	53	21 feet
3	5 feet	54	22.5 feet
4	6.5 feet	55	24 feet
5	8 feet	56	25.5 feet
6	9.5 feet	57	27 feet
7	11 feet	58	29 feet
8	13 feet	59	30.5 feet
9	14 feet	x	Height impossible to determine
50	16 feet	Over	31 feet, give height

WIND FORCE

Beaufort	Knots	Description	Av'ge Ht. of Seas
0	0-1	Calm	-
1	1-3	Light air	1/4 feet
2	4-6	Light breeze	0.5 feet
3	7-10	Gentle breeze	2 feet
4	11-16	Moderate breeze	3.5 feet
5	17-21	Fresh breeze	6 feet
6	22-27	Strong breeze	9.5 feet
7	28-33	Moderate gale	13.5 feet
8	34-40	Fresh gale	18 feet
9	41-47	Strong gale	23 feet
10	48-55	Whole gale	29 feet
11	56-63	Storm	37 feet
12	64-71	Hurricane	45 feet

EXPLANATION OF DATA HEADINGS

Meteorological Records

Wind Dir. and Force: True direction, and speed reported in Beaufort scale (Table I).

Air Temp: Wet and dry air temperatures (Fahrenheit) observed with a sling psycrometer.

Weather: Reported in code as presented in Table I.

Cloud: Sky coverage in tenths and type of predominating clouds (Table I).

Wave Height: Average height of the combined sea and swell as indicated by the code in Table I.

Sea Sampler Observations

Meters: Mean closing depth of two sampling chambers (except 51 meter depth); accuracy is ± 5 meters.

S ‰: Salinity values have an accuracy of ± 0.04 ‰.

PO μg.at/L: Dissolved inorganic phosphate concentrations. Values are only accurate to one place of decimal, although reported to two places.

Oceanographic Data Records

Observed Data

Station: Indicates chronological order of cruises and stations observed in each cruise.

Time: The time (G.M.T.) when the messenger was released. The position of the second and third casts in the depth series is indicated by asterisks.

Date: Day-month-year.

Position: Letter-designator group indicating where the ship was located on the ocean weather station grid (Figure 3) during the period of observation.

Weather: Reported in code as described in Table I.

Wind: True direction, and speed reported in Beaufort scale (Table I).

Air Temp: Dry and wet air temperatures (Fahrenheit) observed with a sling psycrometer.

Baro: Reading of ship's barometer.

Cloud: Type of predominating clouds reported in the code described in Table I, and amount of coverage in tenths.

Sea: / Swell: True direction from which sea and/or swell is coming, and height as in the sea code described in Table I.

Secchi Disc: Depth in meters at which a white disc 30 cm. in diameter just disappears from sight.

Depth (m): The difference between the thermometric depths (Z) and the meter wheel readings (L) were plotted against the meter wheel readings. From the smoothed graph, values of L-Z were subtracted from the measured wire length for each bottle depth to obtain the observed depth. Asterisks indicate the top bottle in second and third casts.

Temp. °C: Temperatures observed from reversing thermometers read to 0.01 °C.

S ‰: Salinity as defined by $S = 0.03 + 1.805\ Cl$ ‰. Values for cruises P-1-57 and P-2-57 have an accuracy of ± 0.02 ‰. For cruises P-3-57, P-4-57 and P-5-57 the values have an accuracy of ± 0.01 ‰.
N.B. Temperature and salinity values marked by an asterisk have been interpolated in the ALWAC computer. Those values marked by a plus (+) sign have been interpolated graphically.

σ_t : "Sigma-T". Density as defined by: (Specific gravity - 1) x 1000, expressed as milligrams per $cm.^3$; computed by ALWAC computer.

S/V, ft/sec: Sound velocity is calculated by the ALWAC computer using Del Gross's formula at zero pressure and corrected for pressure from Kuwahara's tables for sound velocity.

O_2 mg.at/L: Dissolved oxygen content expressed as milligram-atoms per liter.

PO_4 μg.at/L: Dissolved inorganic phosphate concentration expressed as microgram-atoms per liter. Values are only accurate to one place of decimal, although reported to two places.

NO_2 μg.at/L: Dissolved inorganic nitrite concentration expressed as microgram-atoms per liter to the nearest 0.01 unit. Values less than 0.005 μg.at/L are reported as trace (tr.).

Interpolated Data at Standard Depths

All calculations have been done on the ALWAC III-E digital computer at the computing center of the University of British Columbia, Vancouver, B.C., according to procedures consistent with those used by the Oceanography Division of the U.S.N. Hydrographic Office.

Depth (m): Standard depths in meters.

Temp. °C: Interpolated values at standard depths.

S ‰: Interpolated values at standard depths.

σ_t: "Sigma-T". Density as defined by: (Specific gravity - 1) x 1000 expressed as milligrams per $cm.^3$.

$\sigma_{s,t,p}$: Density in situ as defined by $\sigma_{s,t,p} = 10^3 (\rho_{s,t,p} - 1)$.

P: Pressure in decibars.

$10^5\delta$: Specific volume anomaly.

ΔD: Anomaly of dynamic height, in dynamic meters, of the sea surface relative to the indicated pressure surface. The calculations have been done using actual pressures in decibars rather than assuming that pressure in decibars = depth in meters.

Plankton Data Records

Time/Date: Time (G.M.T.) and date of collection.

Type of Haul: Cruise P-1-57: V - vertical haul from 150 meters depth. Remaining cruises: the depth of the vertical haul is recorded in meters.
H - indicates horizontal haul.

Total Wet Weight: gm/1000 m^3: Total weight of wet plankton sample.

Phytoplankton: Wet weight in gm/1000 m^3.

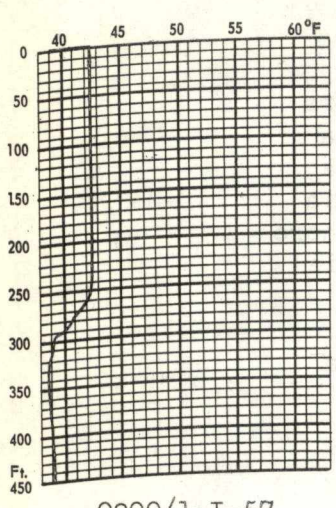
Zooplankton: Derived by subtracting wet weight of medusae, phytoplankton and detritus from total weight of plankton, in gm/1000 m^3.

Plankton Constituents: Weight (gm/1000 m^3) of five major constituents, and miscellaneous remainder. In records for cruises P-2-57 and P-3-57, the values following the fish entry in the miscellaneous column indicate the numbers of fish/1000 m^3. In the cruise P-4-57 and P-5-57 records the value preceding the fish entry indicates numbers/1000 m^3, while the number following indicates the wet weight in gm/1000 m^3.

Explanation of Abbreviations

Ann - Annelida
Dec - Decapoda
Det - Detritus
frag - fragment
Gast - Gastropoda
Glob - Globerina
larv - larvae
Naup - Nauplii
Myct - Myctophidae
Nem - Nematoda
Oik - Oikopleura
Ost - Ostracoda
Pt - Pteropoda
Radio - Radiolaria
Sipho - Siphonophore
Tom - Tomopteris
tr - trace
Vell - Vellela
Trem - Trematoda

C.G.S. "Stonetown"



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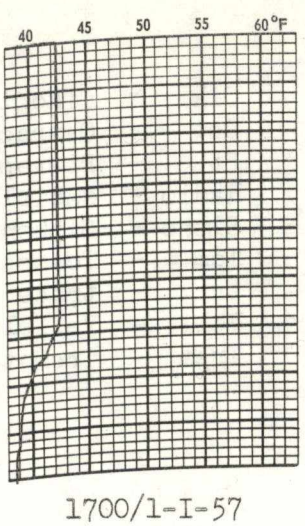

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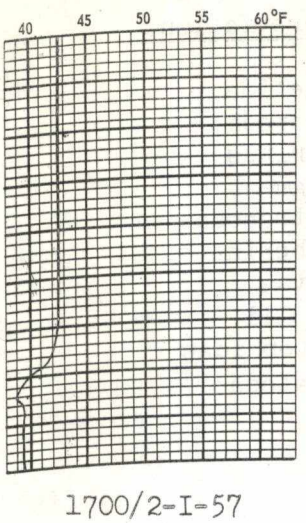

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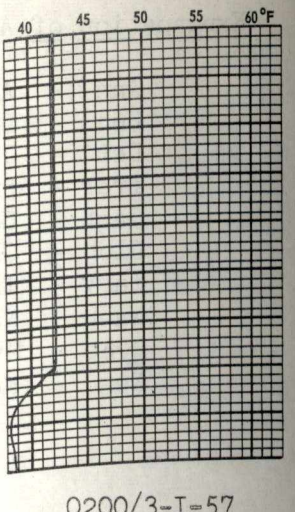

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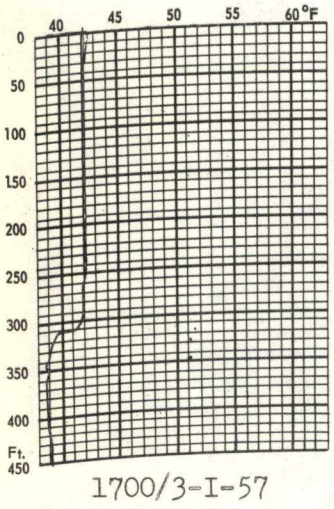

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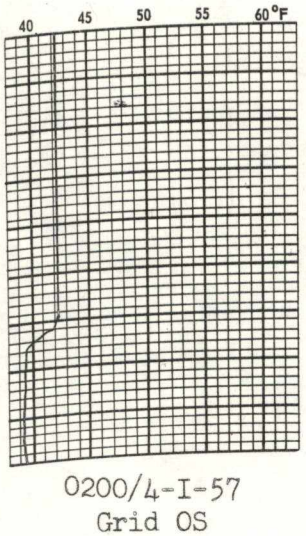

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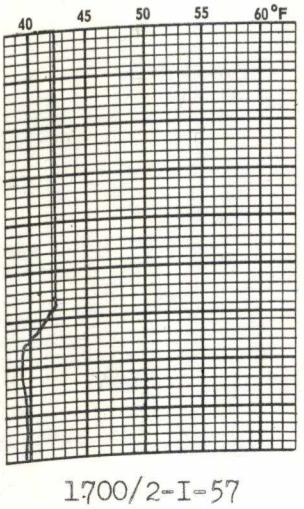

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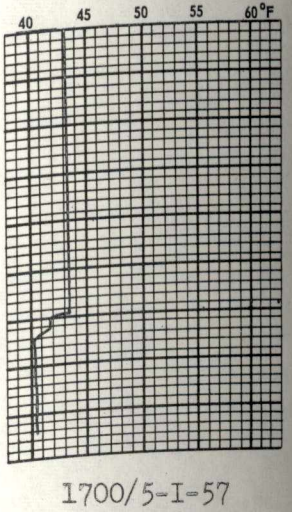

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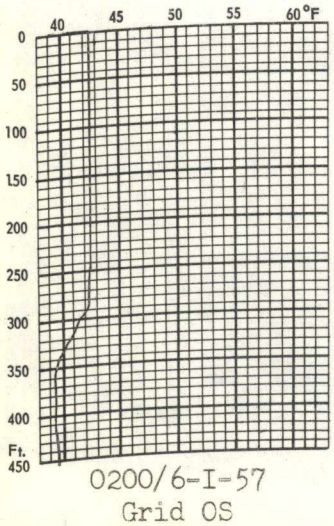

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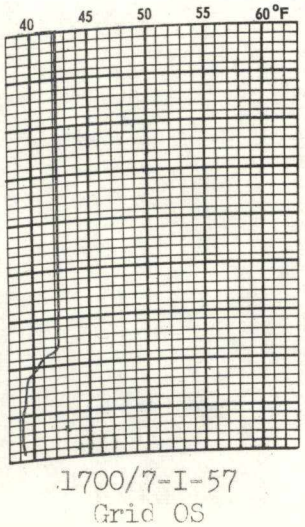

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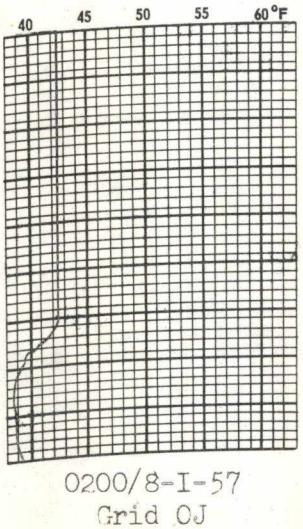

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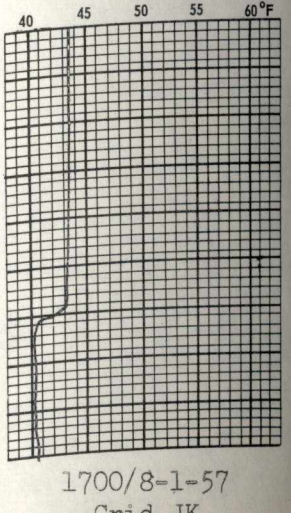

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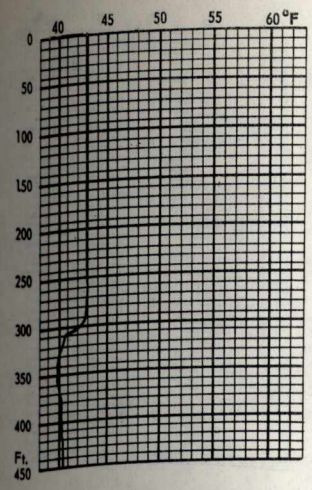
C.G.S. "Stonetown"



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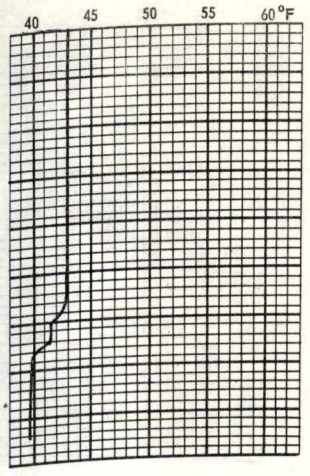

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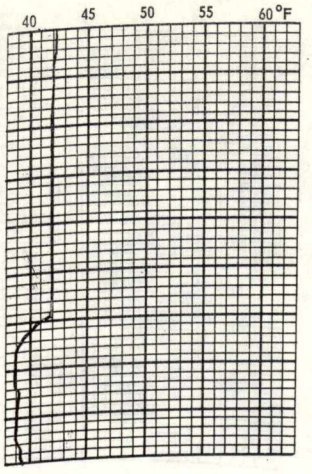

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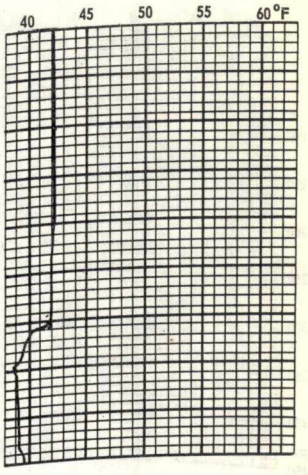

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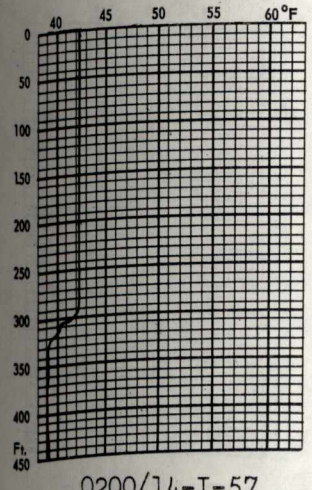
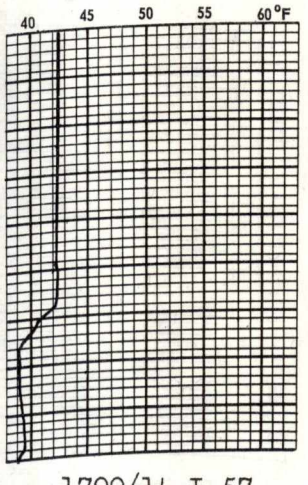
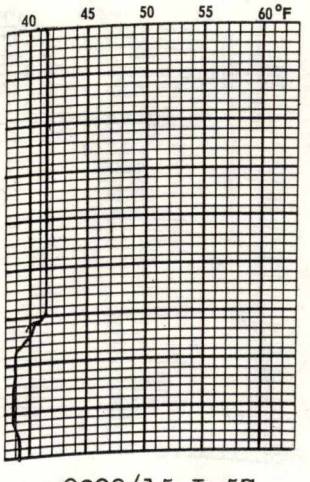


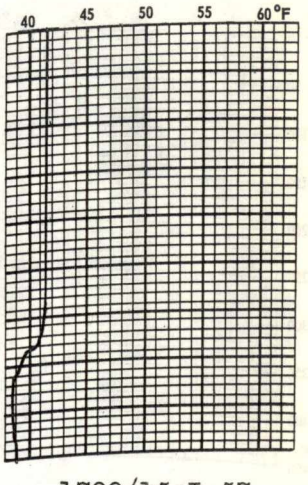
0200/14-I-57
Grid JS



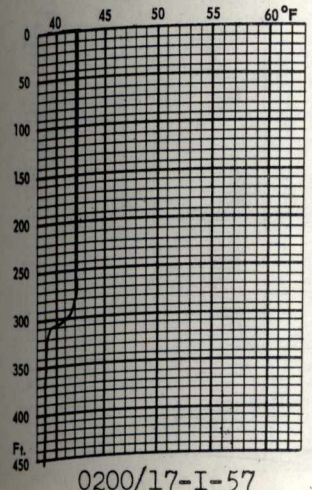
1700/14-I-57
Grid OS



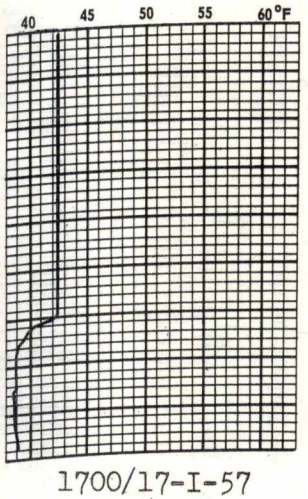
0200/15-I-57
Grid OS



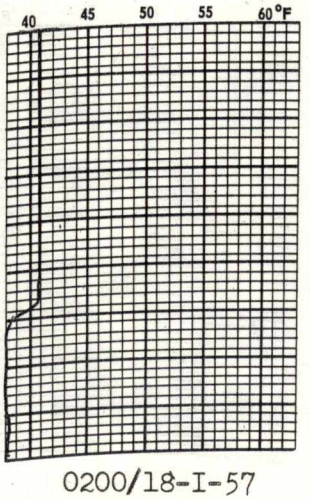
1700/15-I-57
Grid IS



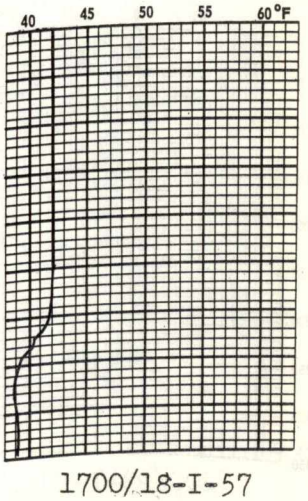
0200/17-I-57
Grid OK



1700/17-I-57
Grid OK

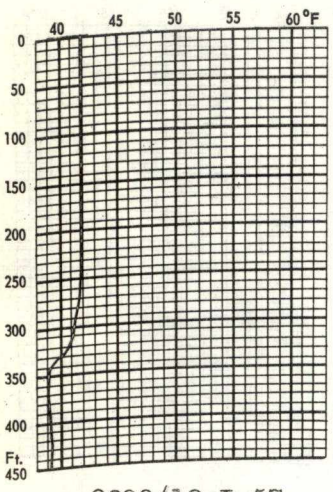


0200/18-I-57
Grid OS

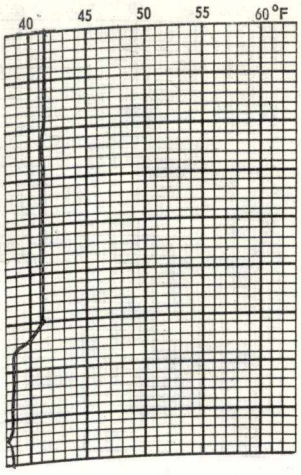


1700/18-I-57
Grid KS

C.G.S. "Stonetown"



0200/19-I-57
Grid OJ



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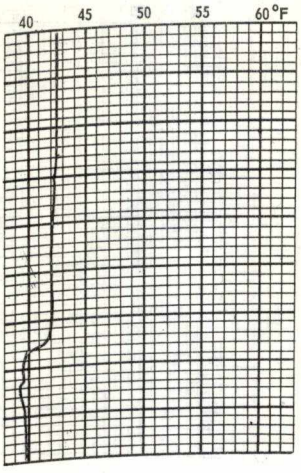
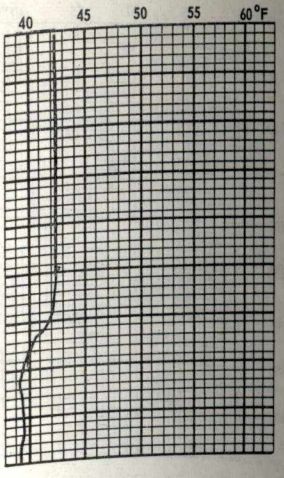
Grid JJ



0200/20-I-57
Grid OS



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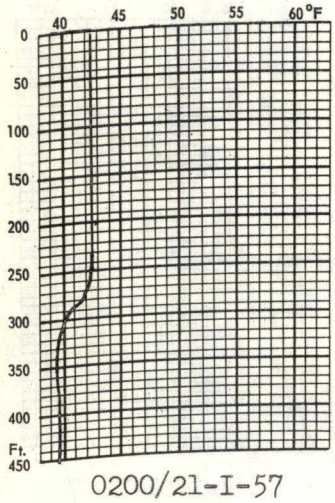

0200/21-I-57
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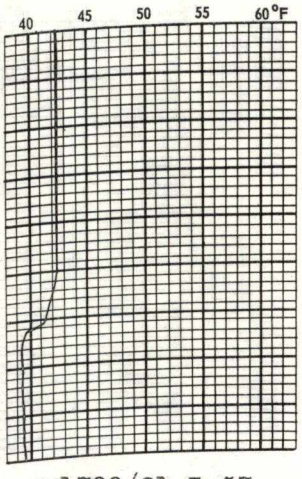
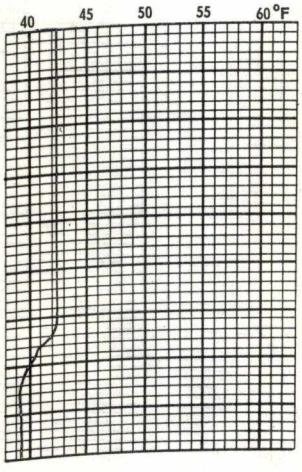
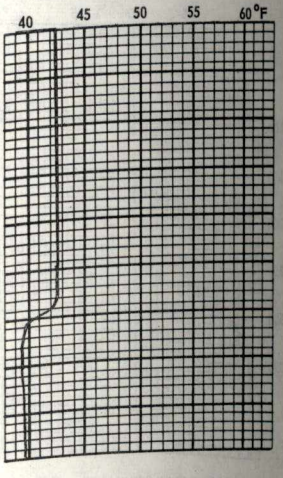


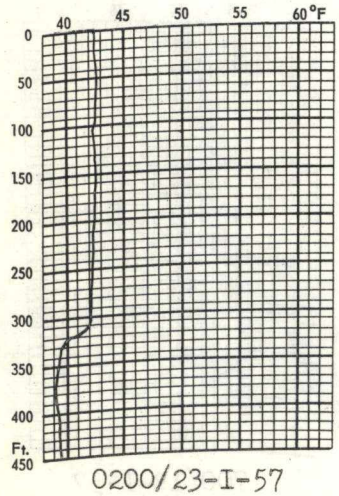
1700/21-I-57
Grid OS



0200/22-I-57
Grid OS



1700/22-I-57
Grid KK



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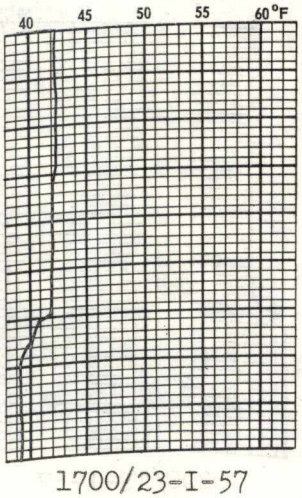
Grid KK



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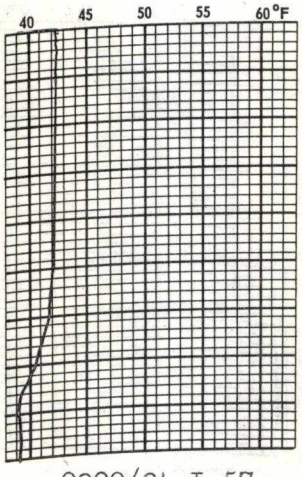
Grid OS



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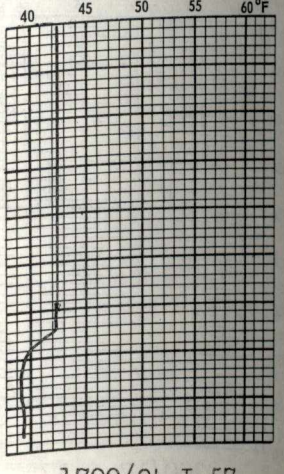
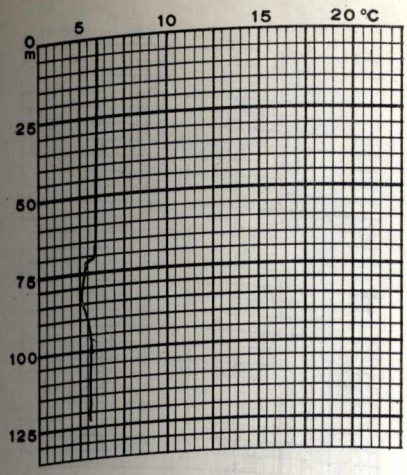
Grid JJ

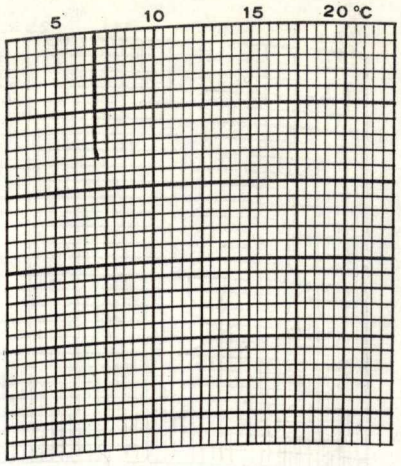


1700/24-I-57
Grid OK

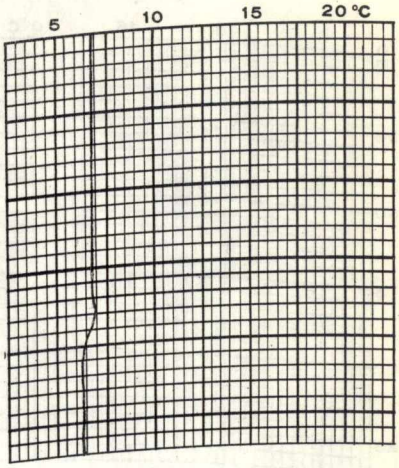
C.G.S. "St. Catharines"



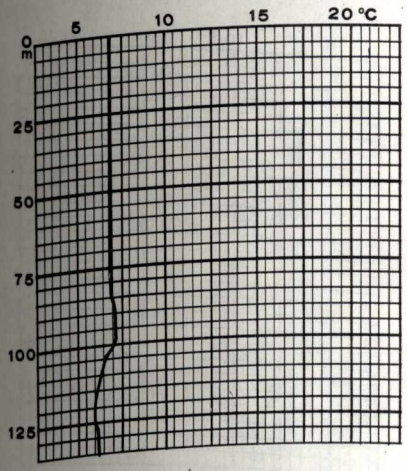
0500/23-I-57
48° 39' N
126° 37' W



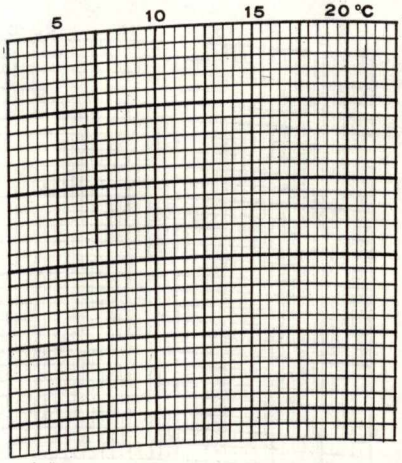
1930/23-I-57
49° 00' N
130° 30' W



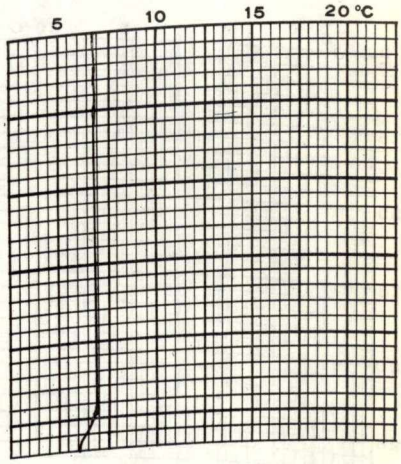
2100/23-I-57
49° 00' N
130° 54' W



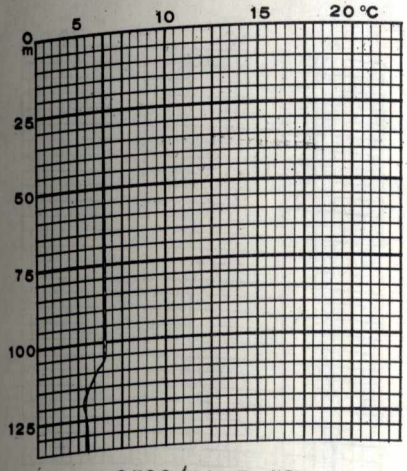
2300/23-I-57
49° 02' N
131° 40' W



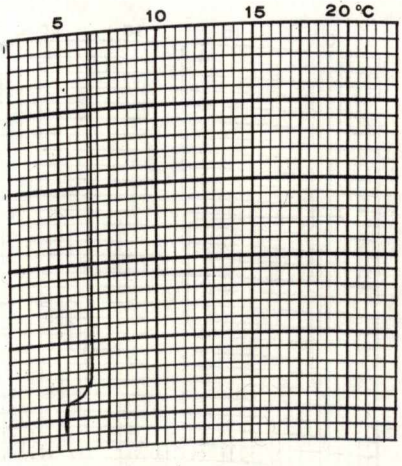
0100/24-I-57
49° 05' N
132° 08' W



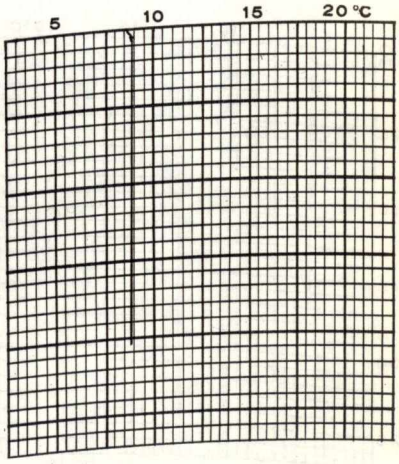
0300/24-I-57
49° 09' N
132° 40' W



0500/24-I-57
49° 11' N
133° 13' W

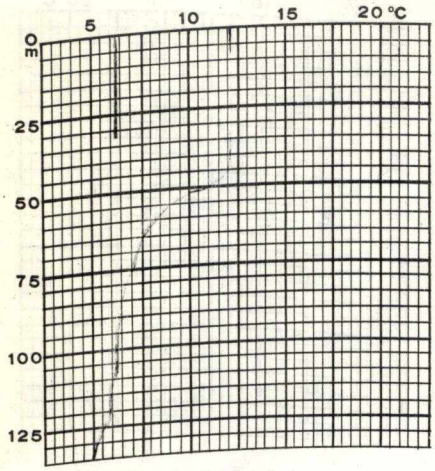


0700/24-I-57
49° 15' N
133° 42' W

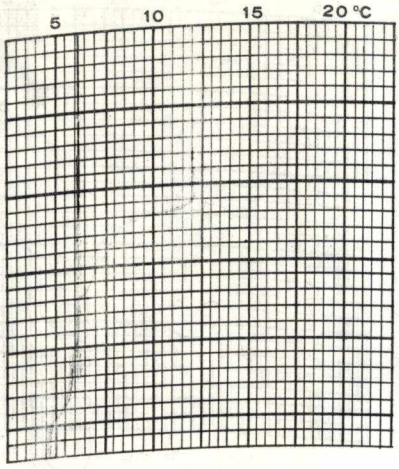


0900/24-I-57
49° 18' N
134° 12' W

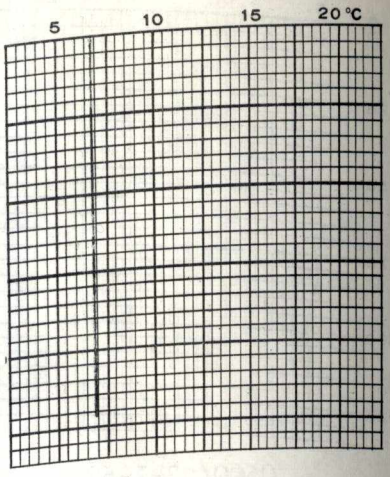
C.G.S. "St. Catharines"



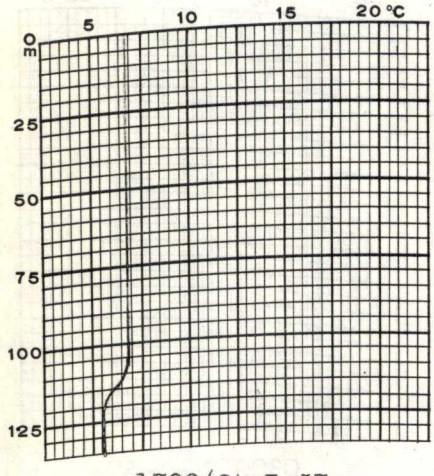
1100/24-I-57
49° 19' N
134° 50' W



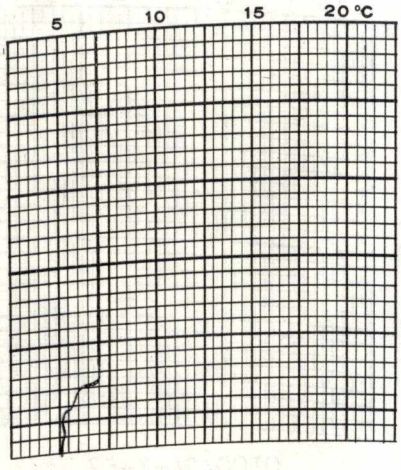
1300/24-I-57
49° 25' N
135° 25' W



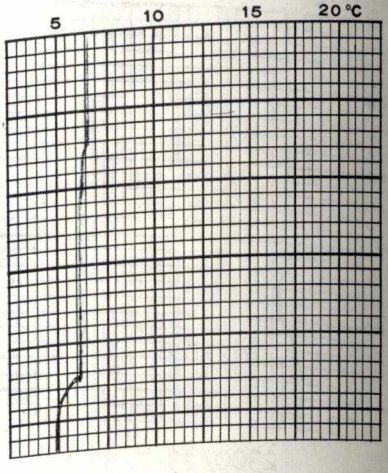
1500/24-I-57
49° 25' N
135° 55' W



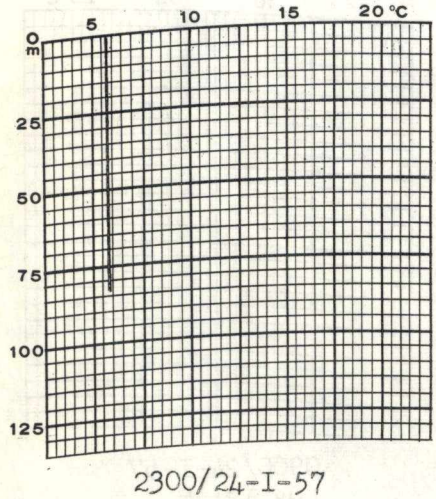
1700/24-I-57
49° 25' N
136° 30' W



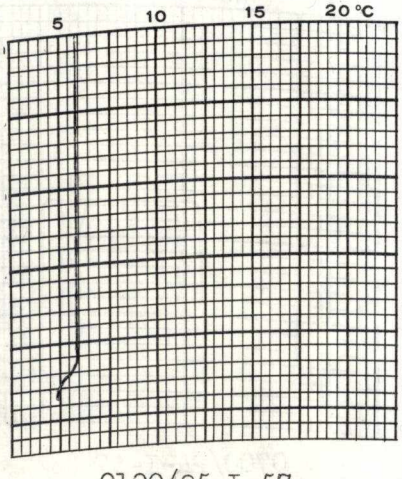
1900/24-I-57
49° 30' N
137° 05' W



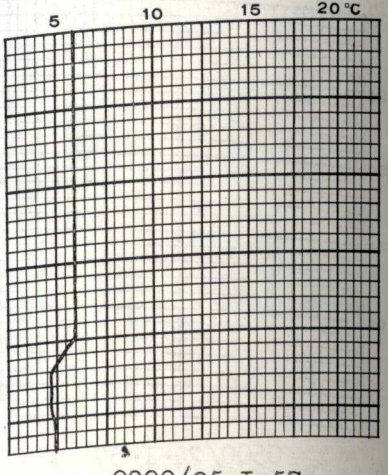
2100/24-I-57
49° 27' N
137° 36' W



2300/24-I-57
49° 35' N
138° 13' W

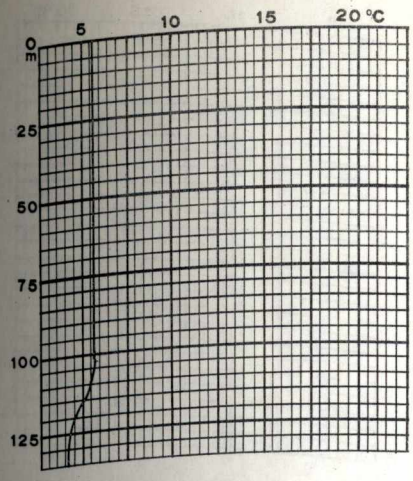


0100/25-I-57
49° 38' N
138° 47' W

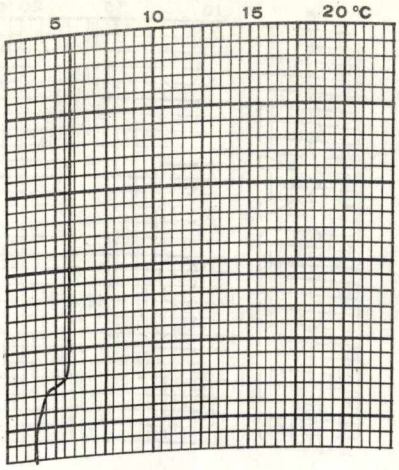


0300/25-I-57
49° 40' N
139° 20' W

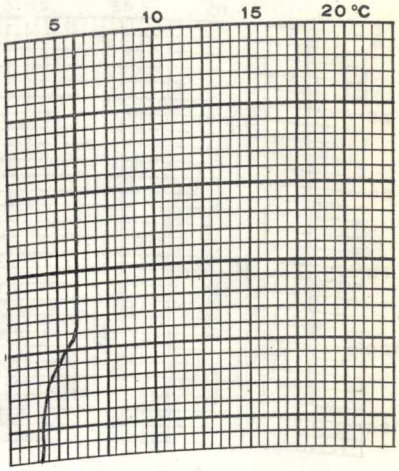
C.G.S. "St. Catharines"



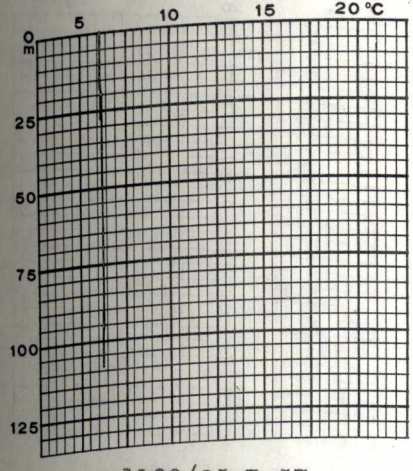
0500/25-I-57
49° 42' N
139° 56' W



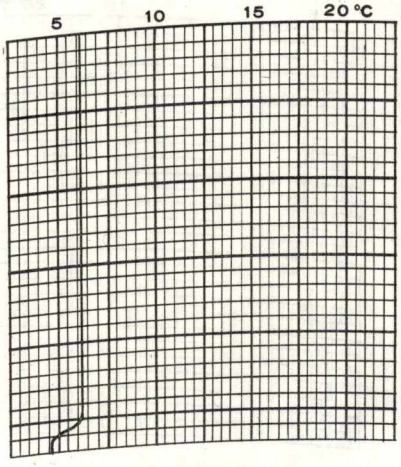
0700/25-I-57
49° 42' N
140° 35' W



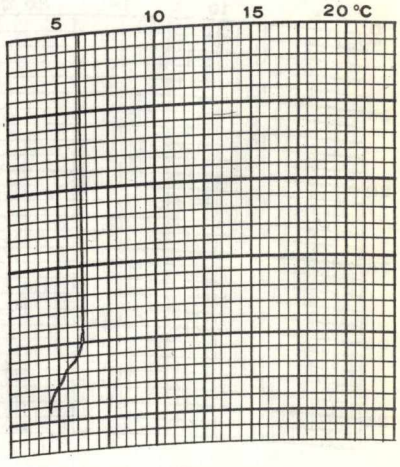
0900/25-I-57
49° 44' N
141° 00' W



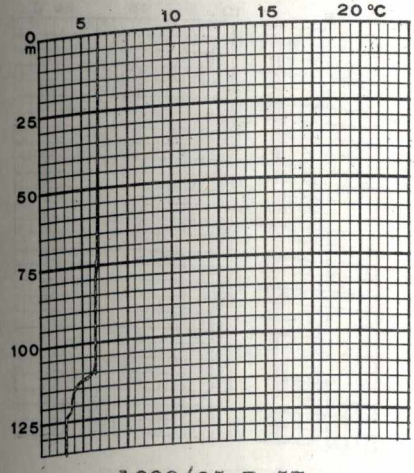
1100/25-I-57
49° 46' N
141° 41' W



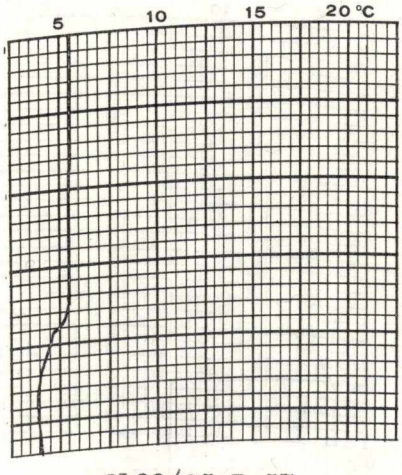
1300/25-I-57
49° 49' N
142° 18' W



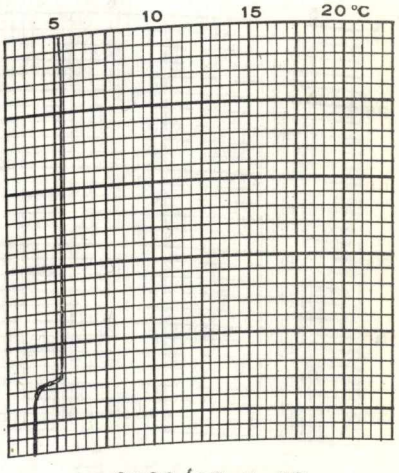
1700/25-I-57
49° 52' N
143° 04' W



1900/25-I-57
49° 55' N
143° 45' W

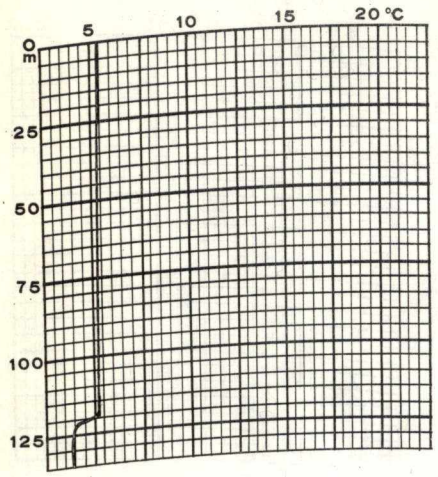


2100/25-I-57
49° 56' N
144° 12' W

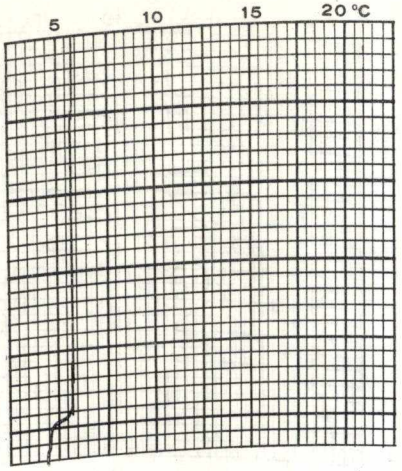


0200/27-I-57
Grid KS

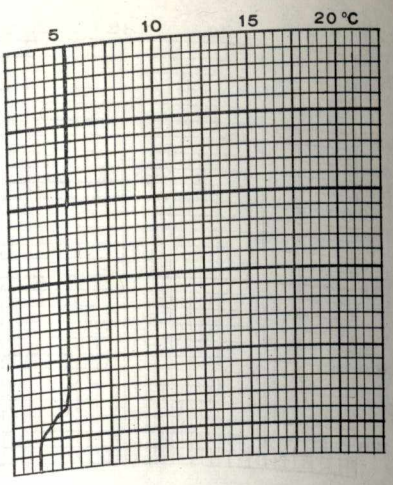
C.G.S. "St. Catharines"



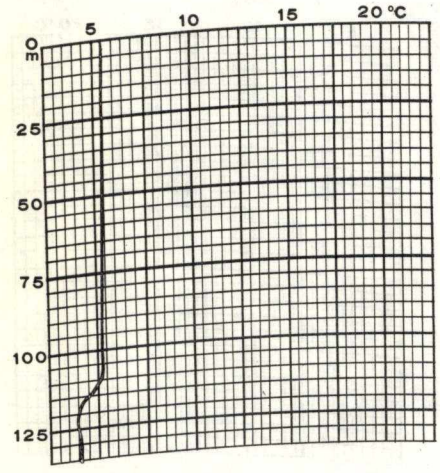
0200/28-I-57
Grid JS



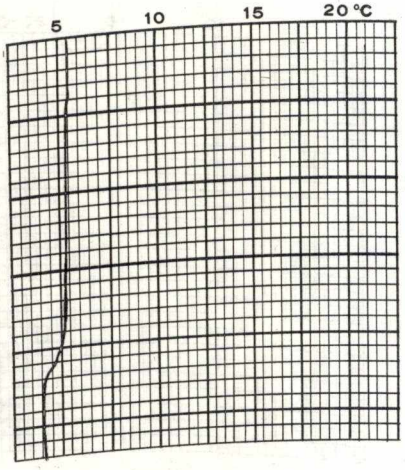
0200/29-I-57
Grid OS



0200/30-I-57
Grid JK



0200/31-I-57
Grid OJ



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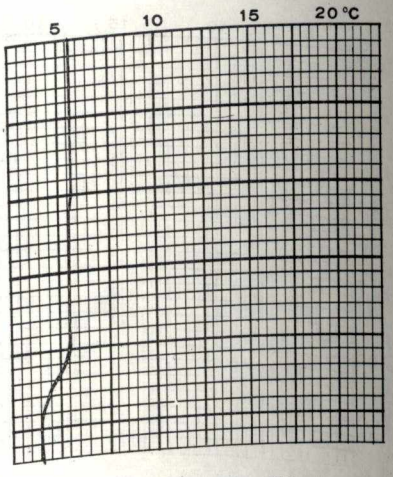

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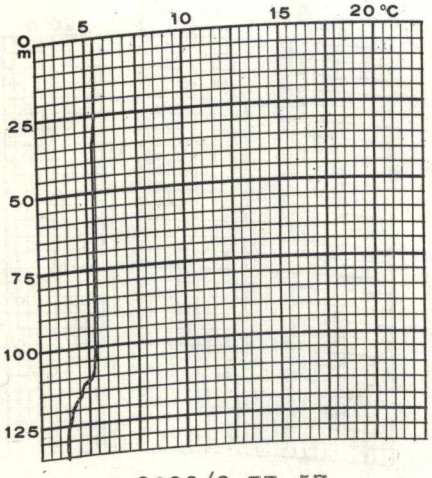
Grid OS



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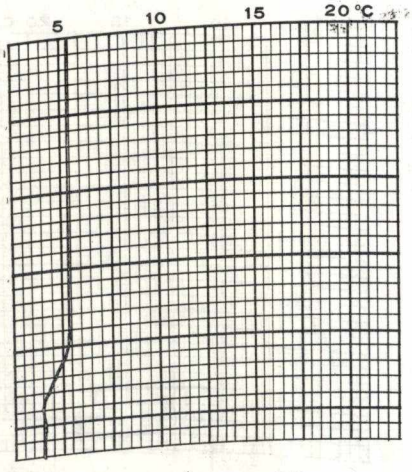
Grid JS



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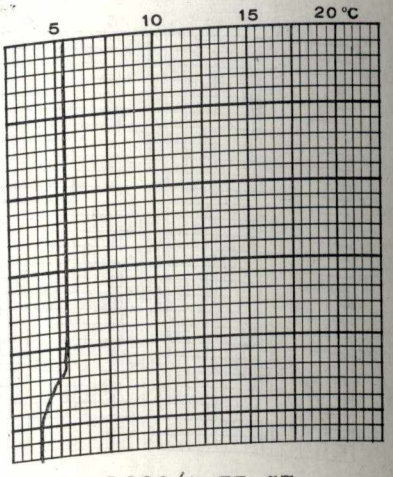
Grid KS



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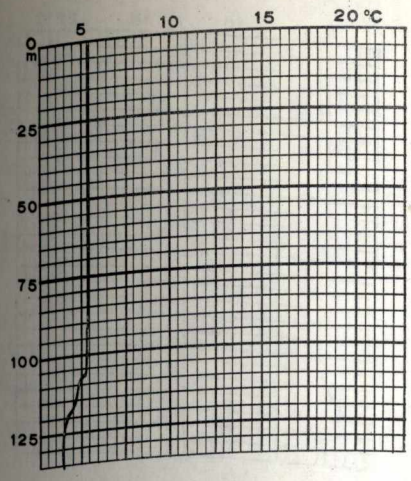
Grid OS

C.G.S. "St. Catharines"



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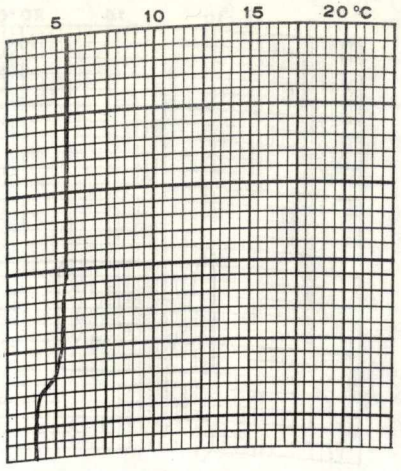

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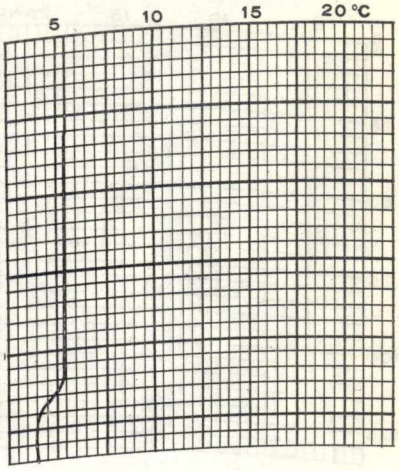
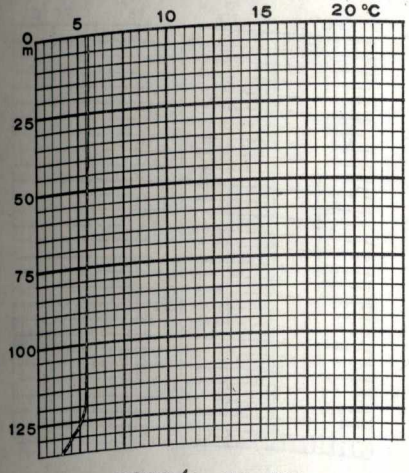
Grid OS



2200/4-II-57
Grid OS



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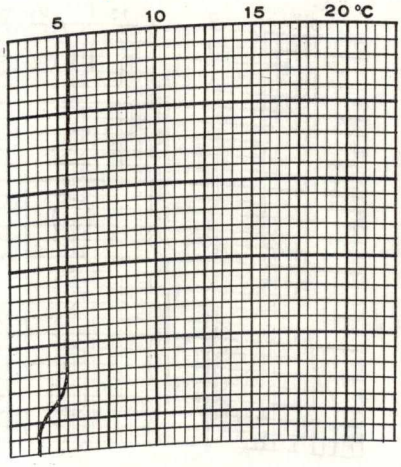

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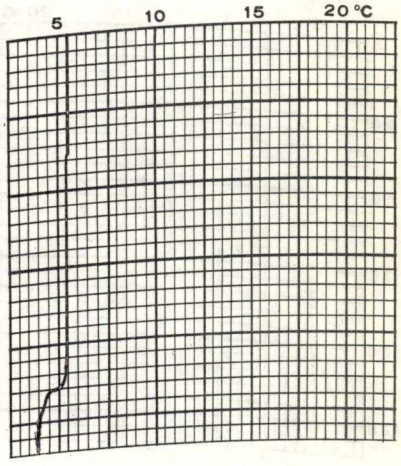
Grid OS



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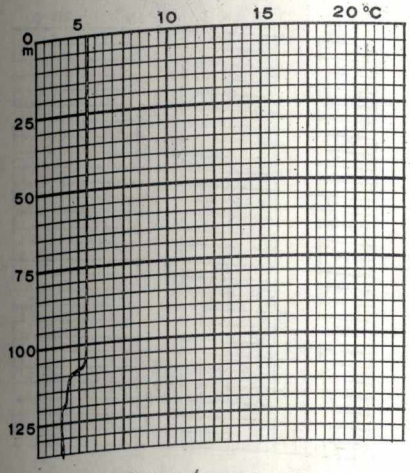
Grid KK



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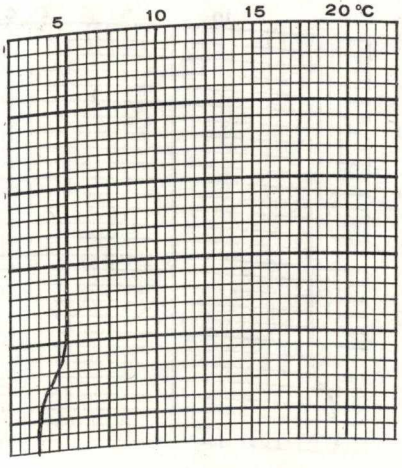
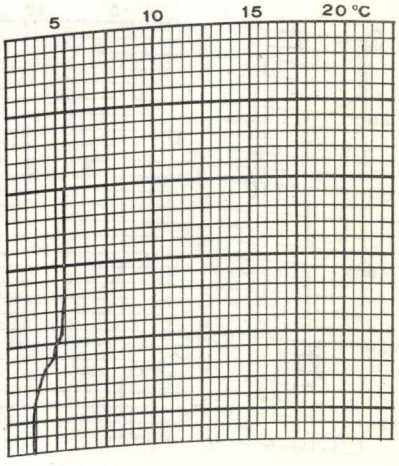
Grid OS

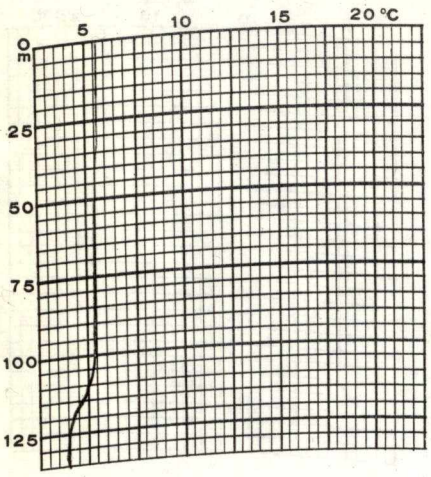


0400/5-II-57
Grid OX



0500/5-II-57
Grid OS

C.G.S. "St. Catharines"



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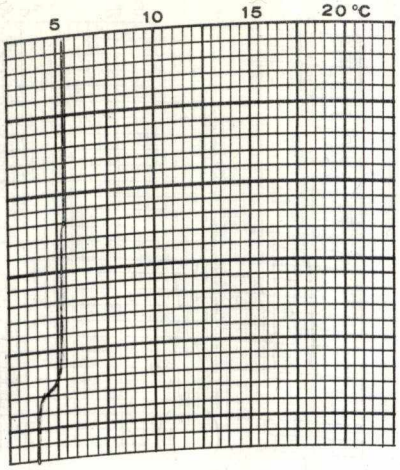
Grid OS



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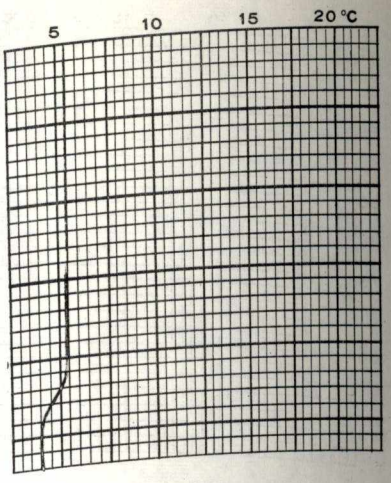
Grid OS



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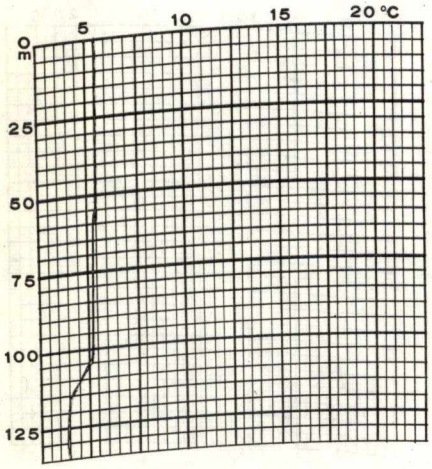
Grid OS



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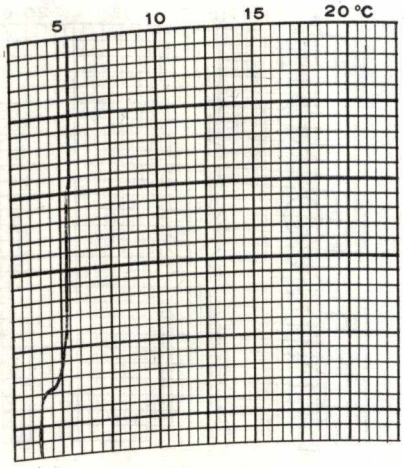
Grid OJ



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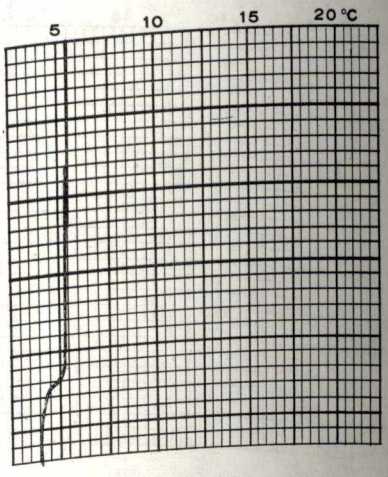

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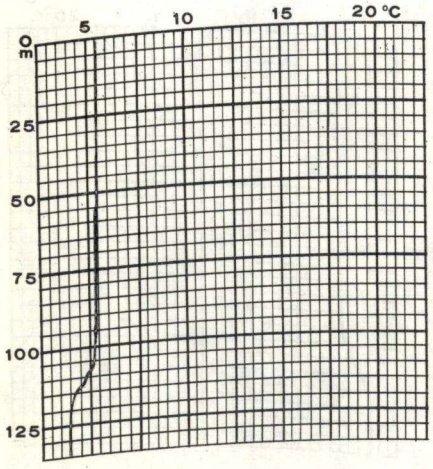

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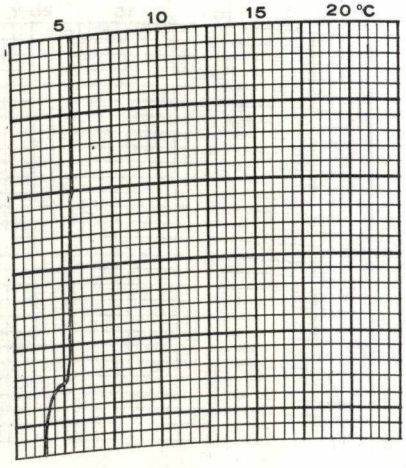

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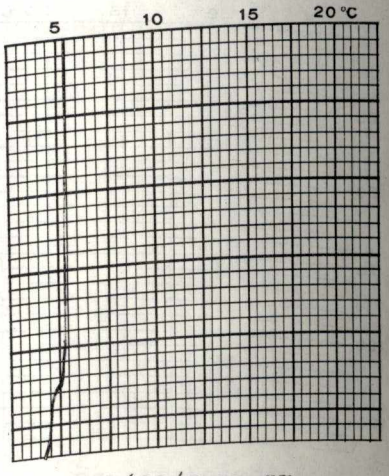

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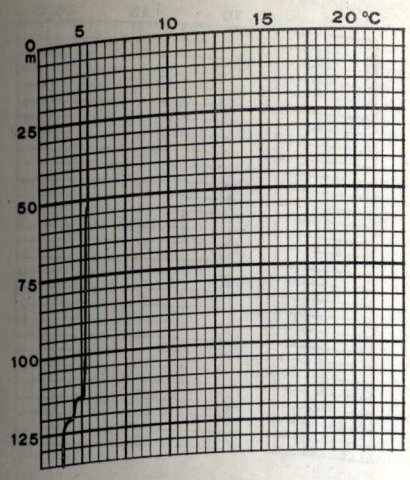
C.G.S. "St. Catharines"



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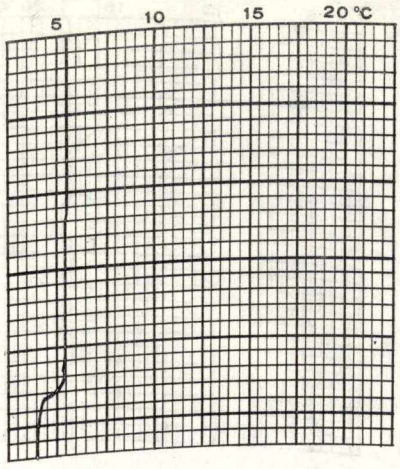
Grid OS



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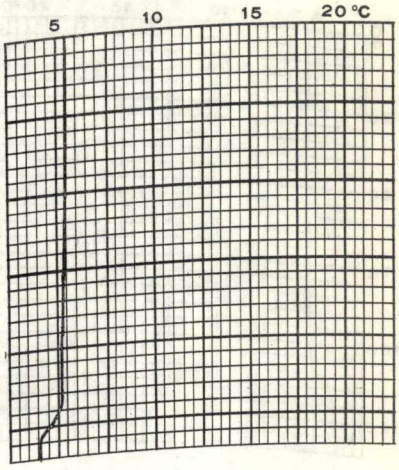
Grid OS



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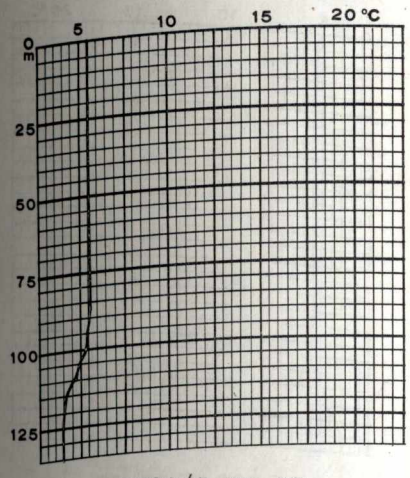

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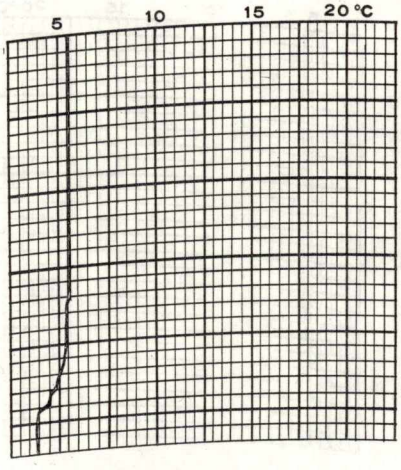

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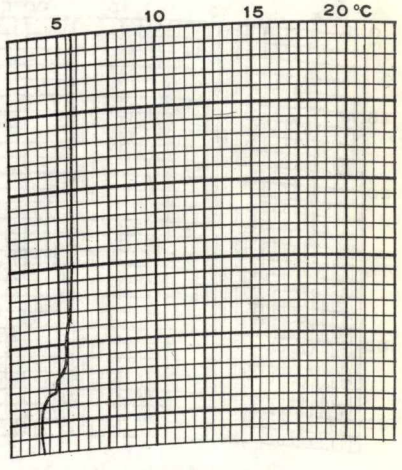
Grid JK



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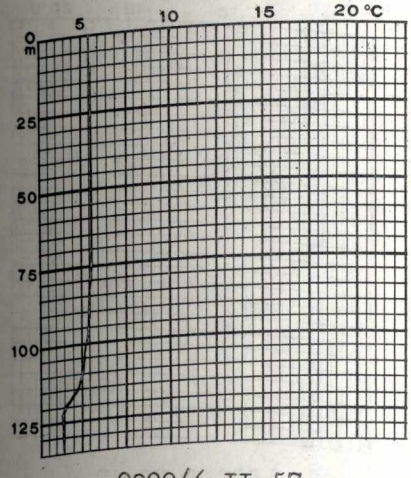

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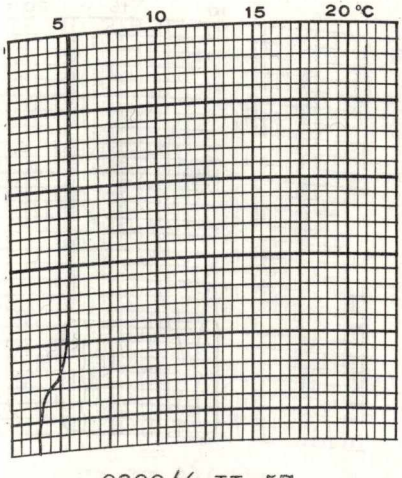

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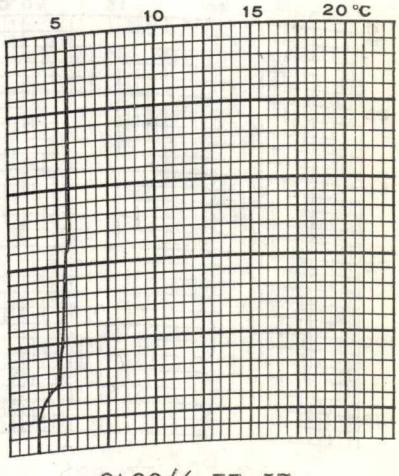

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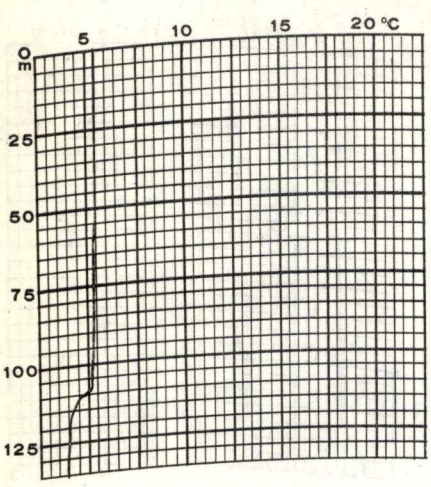
C.G.S. "St. Catharines"



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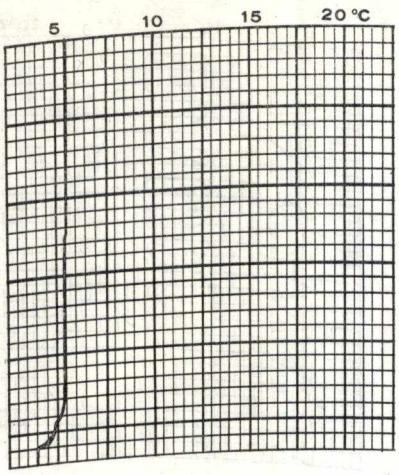
Grid JS



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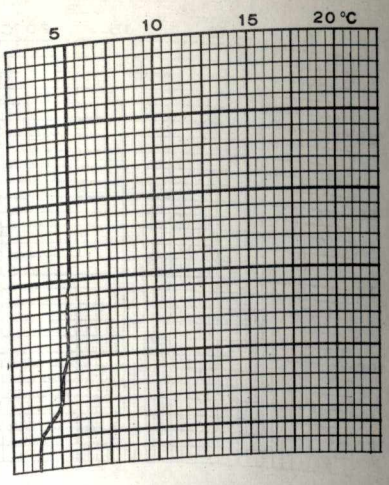

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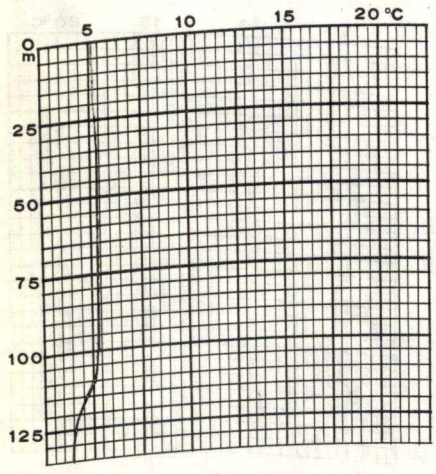

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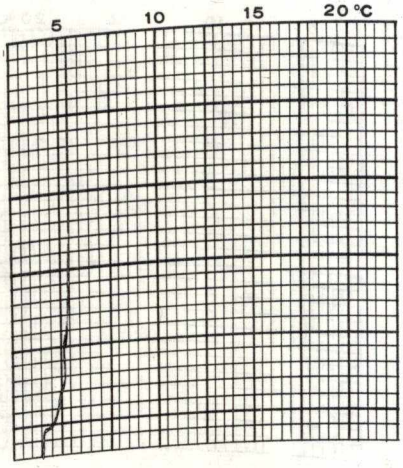

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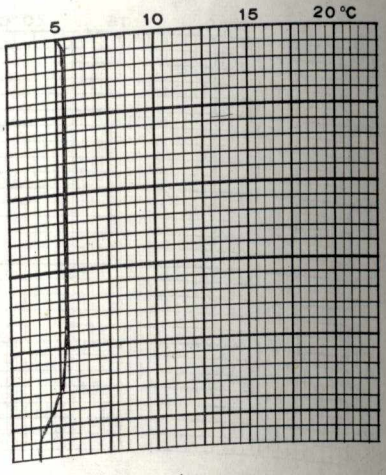

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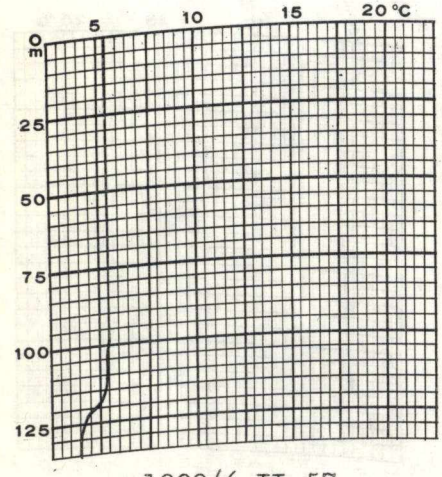

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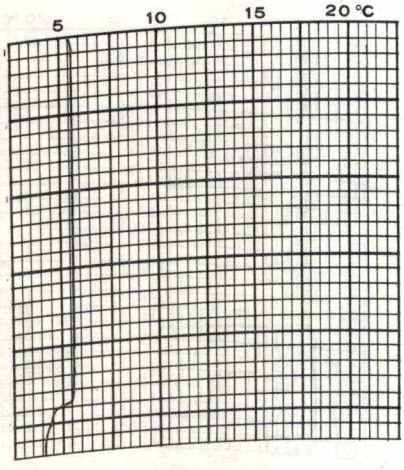

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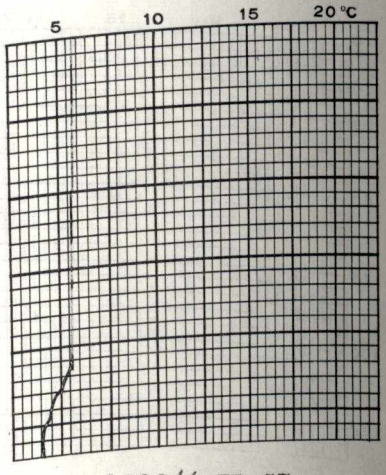

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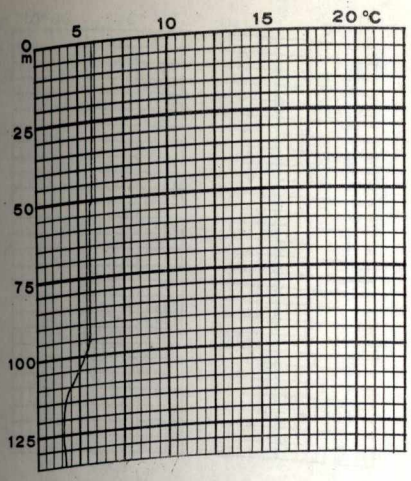
Grid OS

C.G.S. "St. Catharines"



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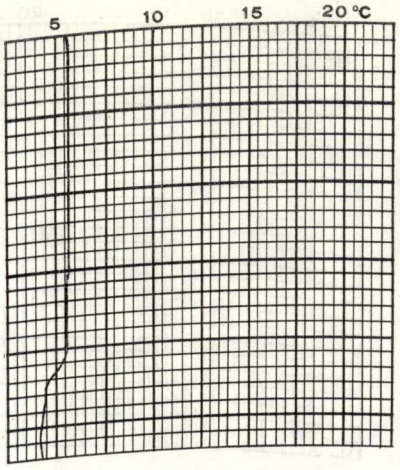

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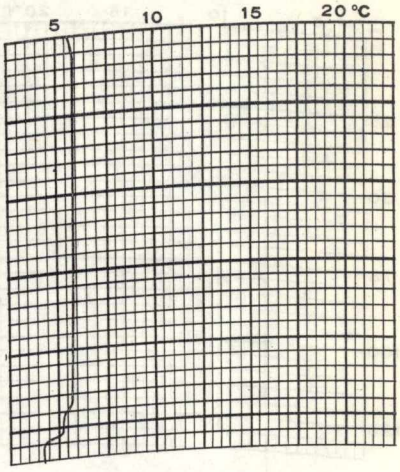
Grid OS



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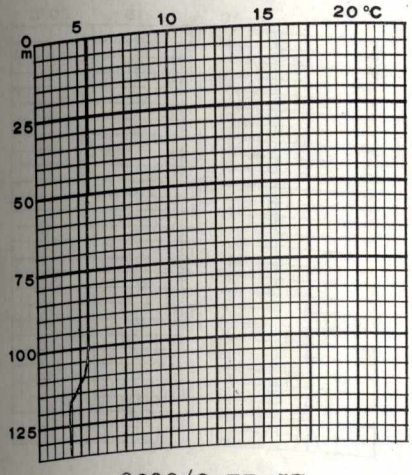

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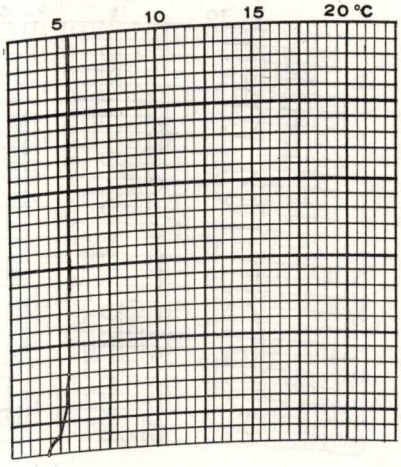
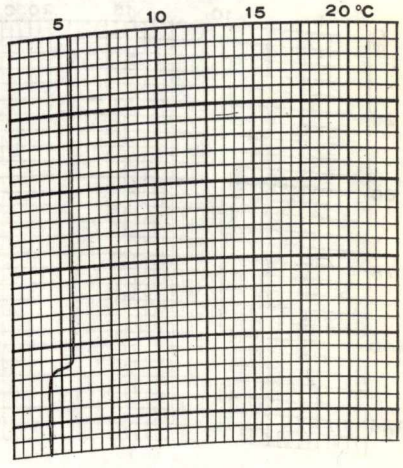


0200/14-II-57
Grid OS



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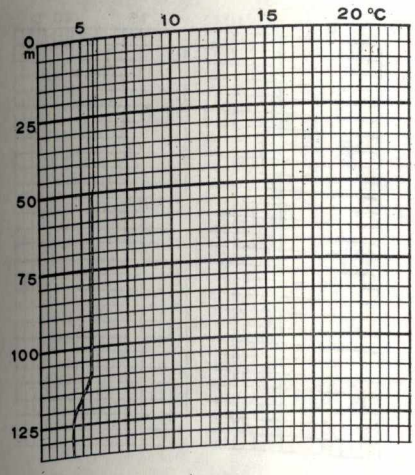
Grid KS



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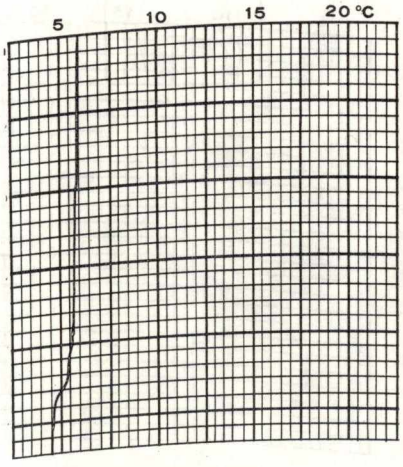

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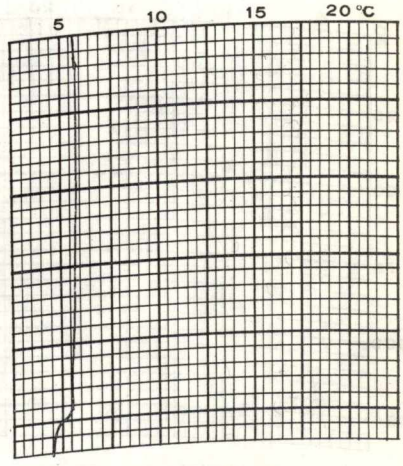

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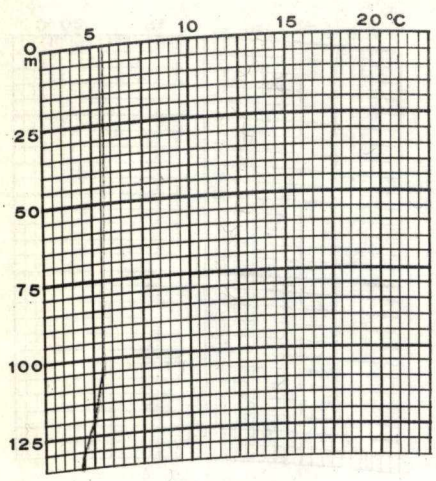
Grid OS

C.G.S. "St. Catharines"



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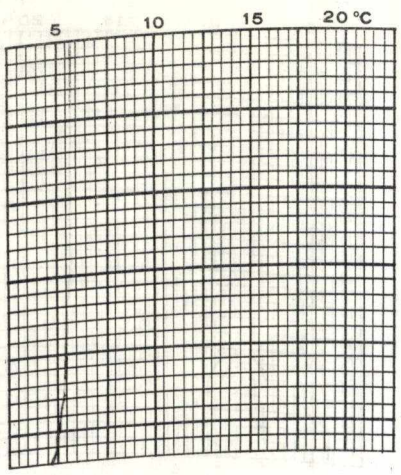

2200/18-II-57
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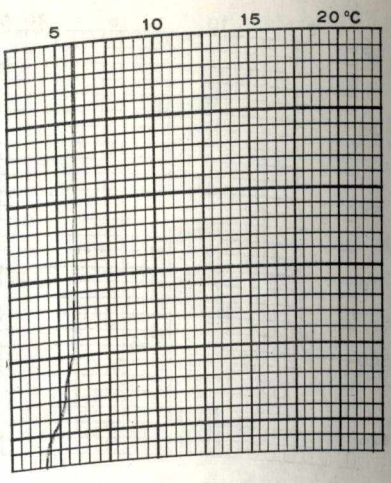

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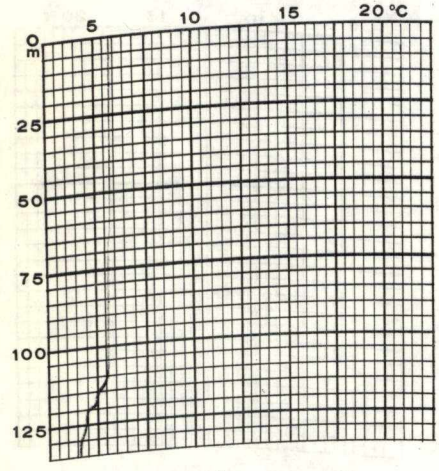

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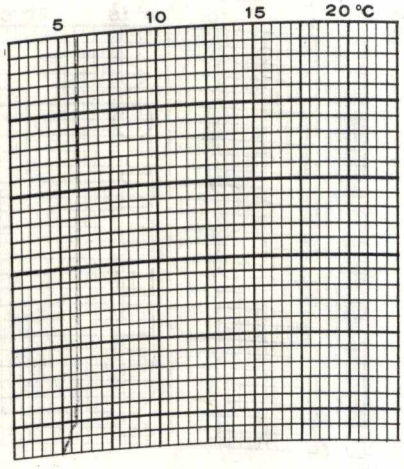

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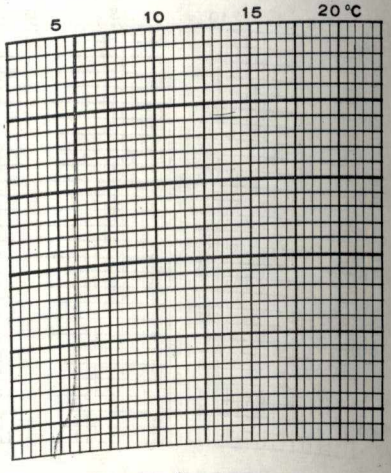
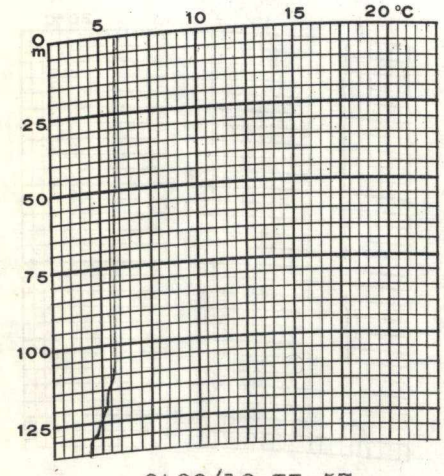


0300/19-II-57
Grid OL



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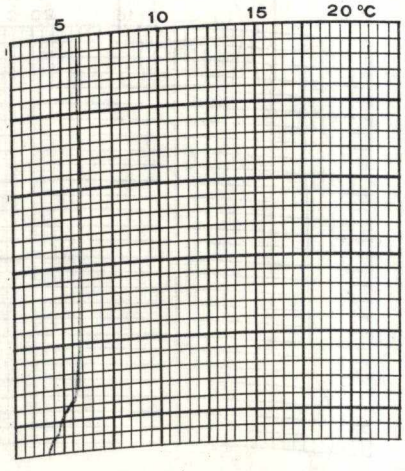
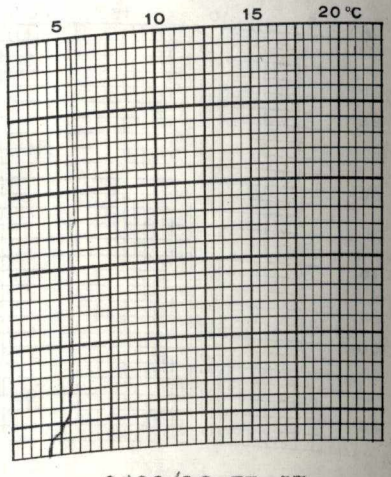
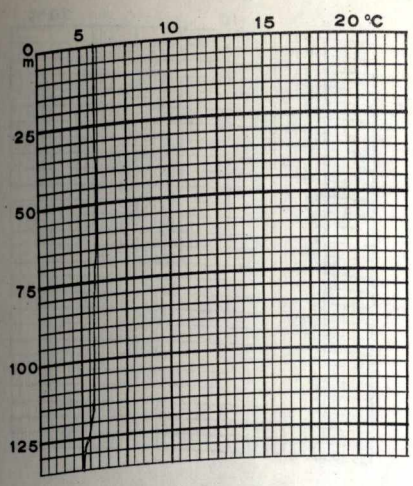


0700/19-II-57
Grid OS



0800/19-II-57
Grid OS

C.G.S. "St. Catharines"



1000/19-II-57
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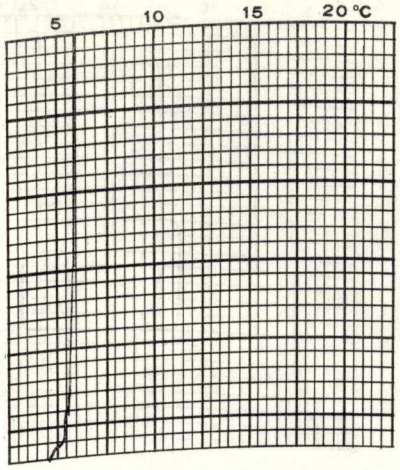

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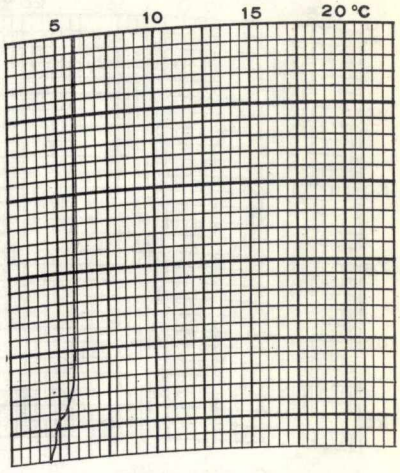
Grid OS



1200/19-II-57
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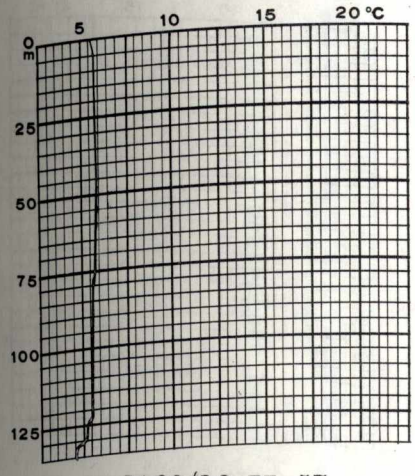

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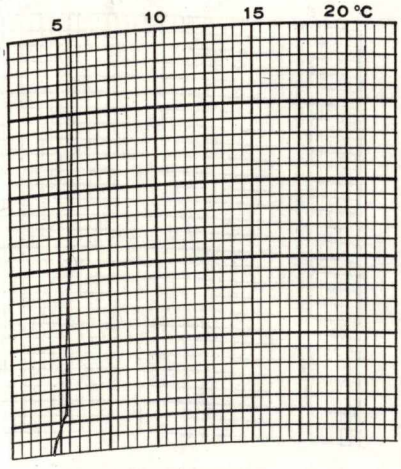

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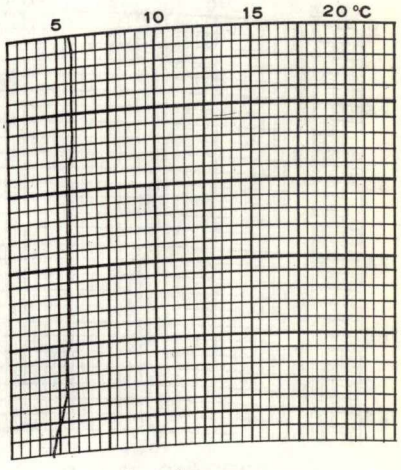
Grid OS



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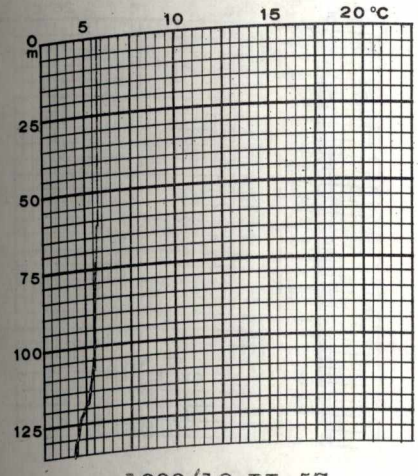
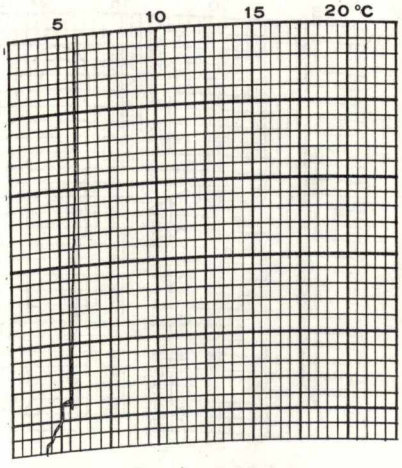


1900/19-II-57
Grid OJ



2000/19-II-57
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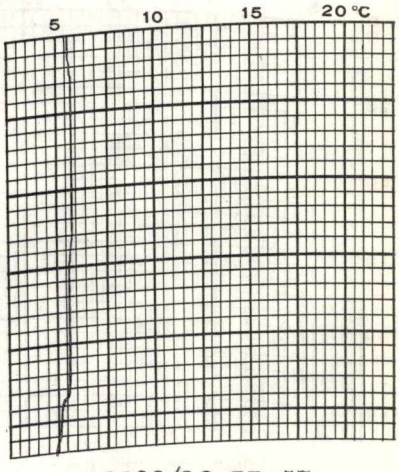
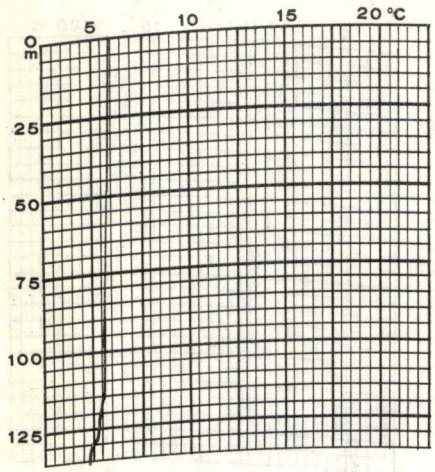
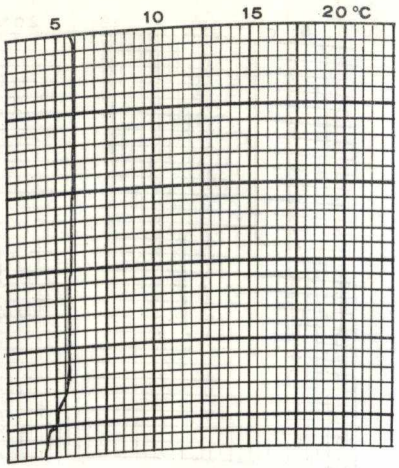


2200/19-II-57
Grid OJ

C.G.S. "St. Catharines"



2300/19-II-57
Grid OJ



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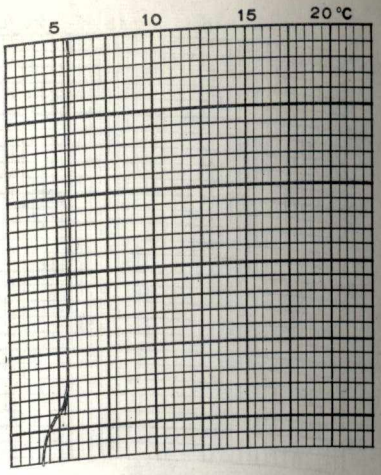
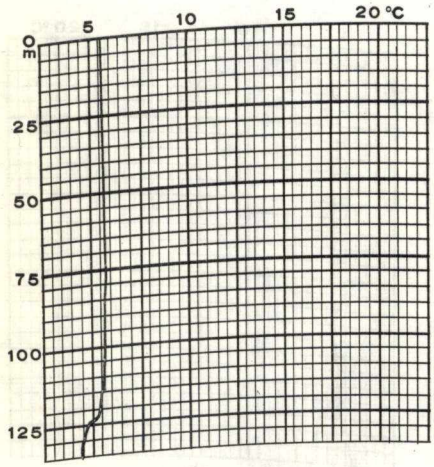
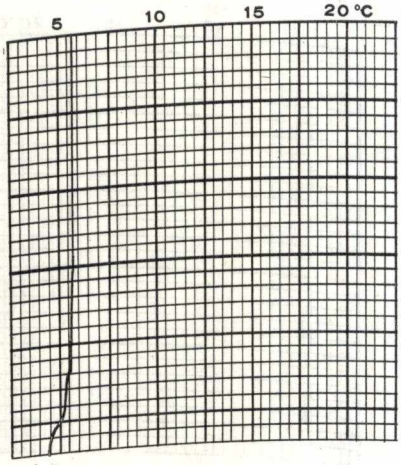
Grid OJ



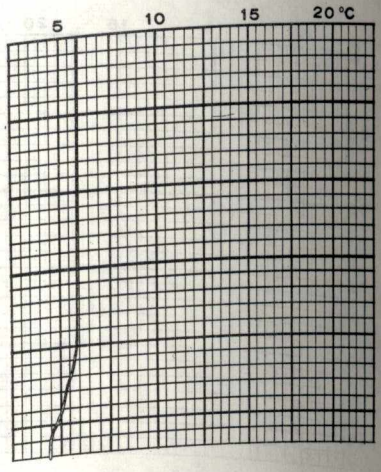
0200/20-II-57
Grid OJ



0300/20-II-57
Grid OS



0400/20-II-57
Grid OS



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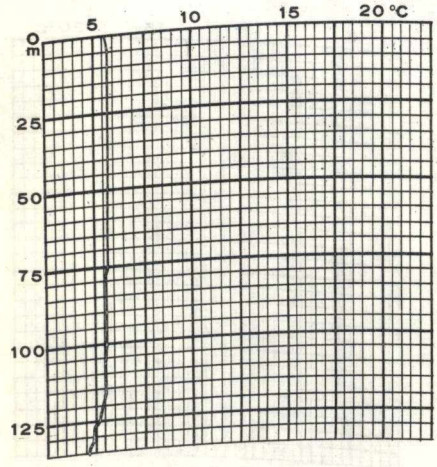

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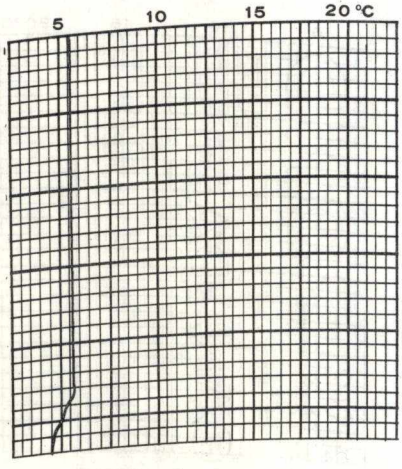

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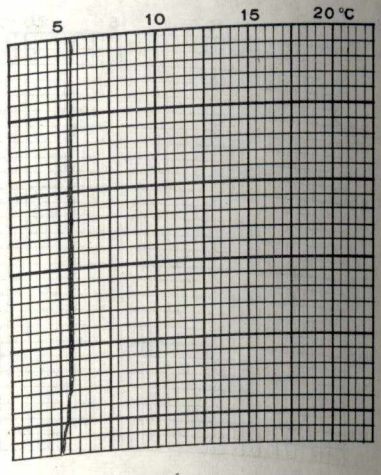

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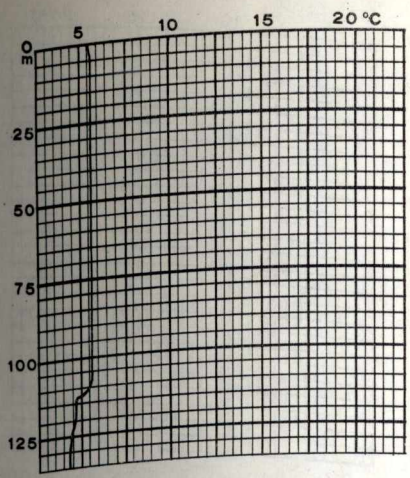
Grid OS

C.G.S. "St. Catharines"



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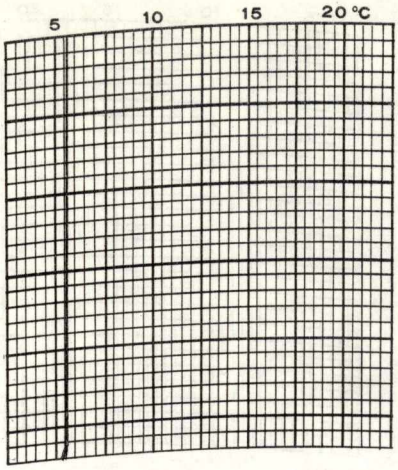

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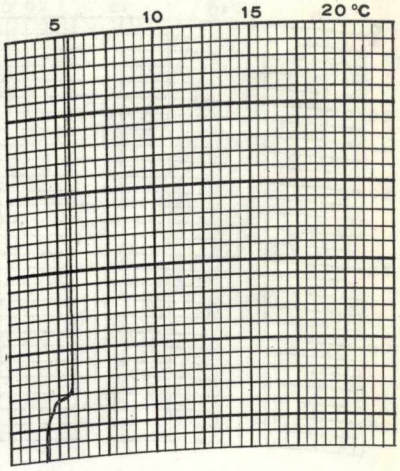
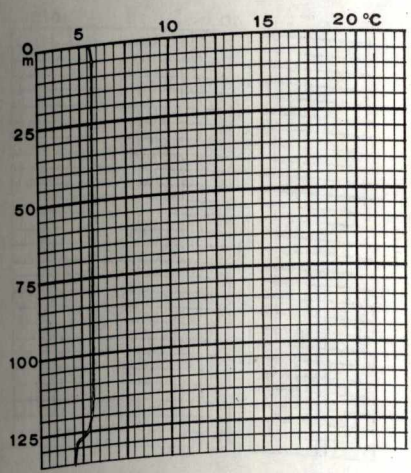
Grid OJ



0200/1-III-57
Grid KS



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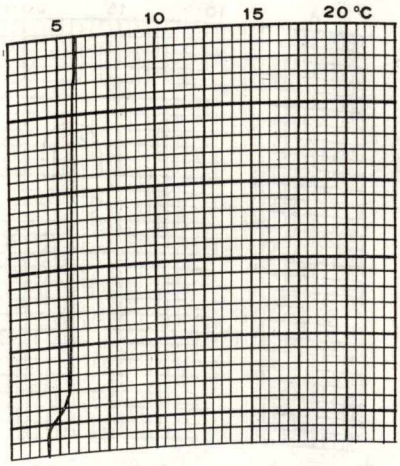

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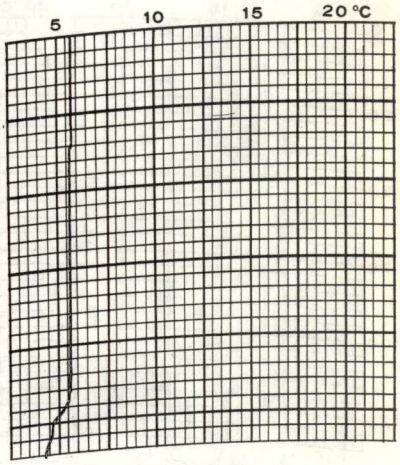
Grid OS



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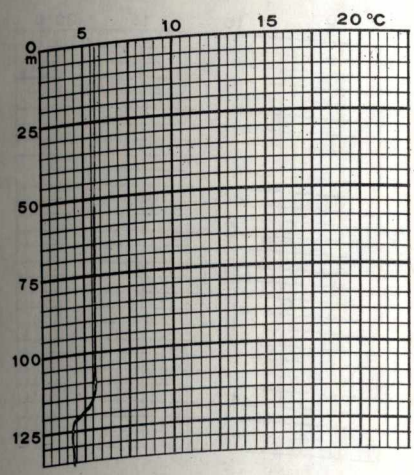
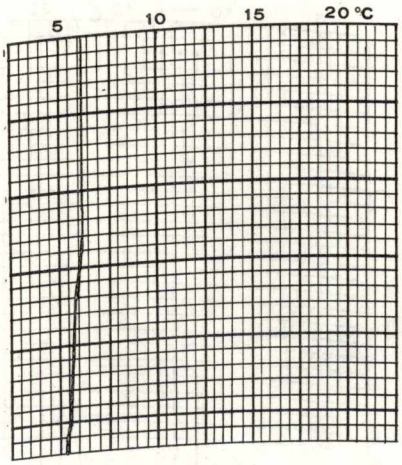
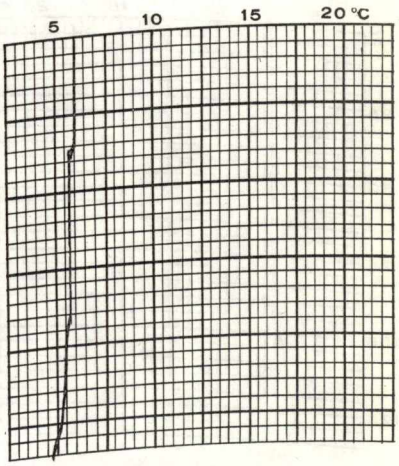
Grid JS



0200/7-III-57
Grid OS

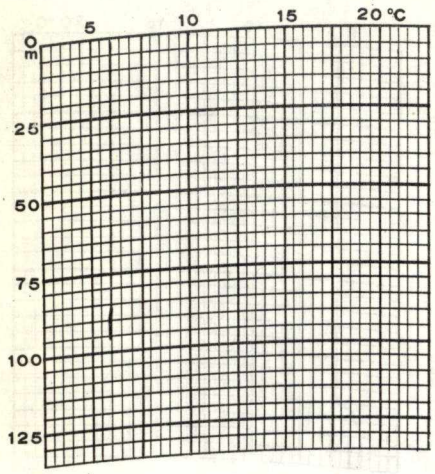


0400/9-III-57
49° 46' N
140° 55' W

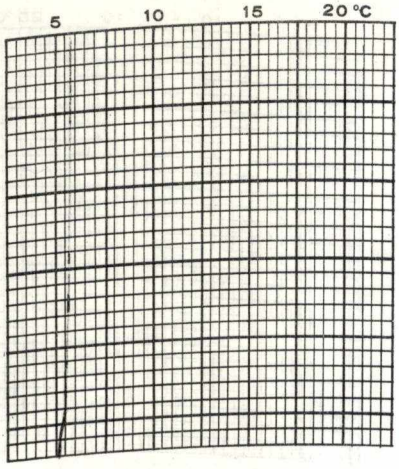


0700/9-III-57
49° 40' N
140° 10' W

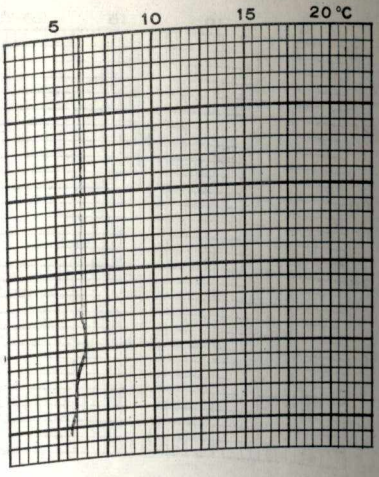
C.G.S. "St. Catharines"



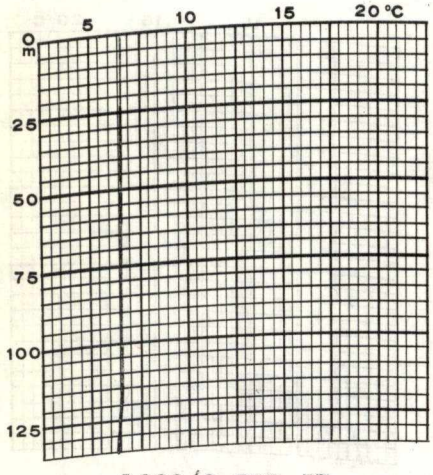
1100/9-III-57
49° 36' N
138° 49' W



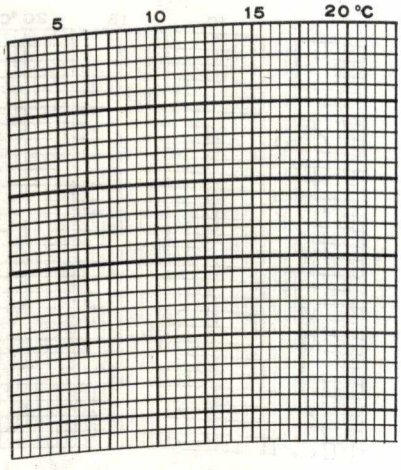
1300/9-III-57
49° 32' N
138° 15' W



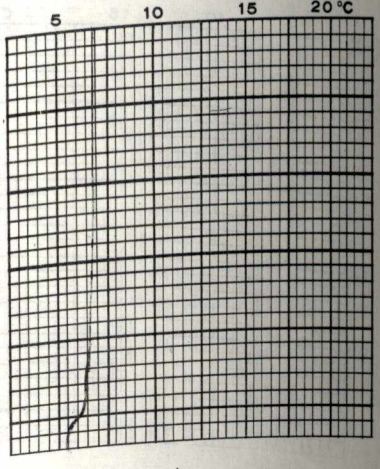
1500/9-III-57
49° 29' N
137° 40' W



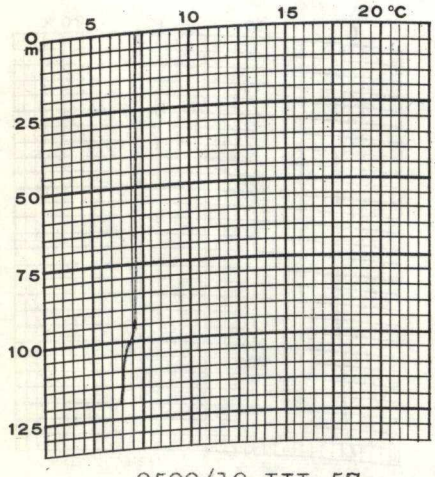
1900/9-III-57
49° 29' N
136° 27' W



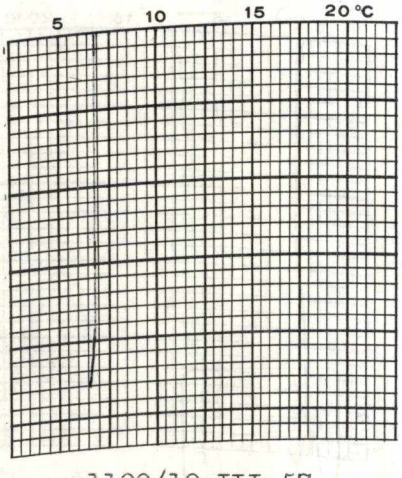
2100/9-III-57
49° 25' N
135° 48' W



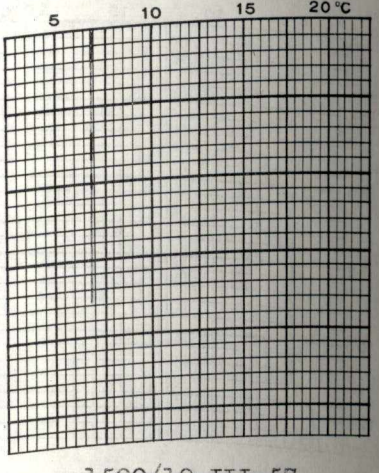
0100/10-III-57
49° 20' N
134° 40' W



0500/10-III-57
49° 05' N
133° 27' W

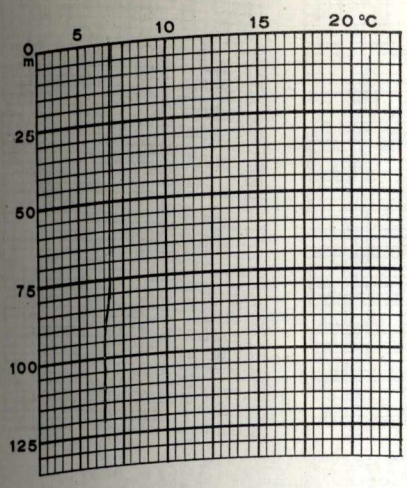


1100/10-III-57
49° 00' N
131° 42' W

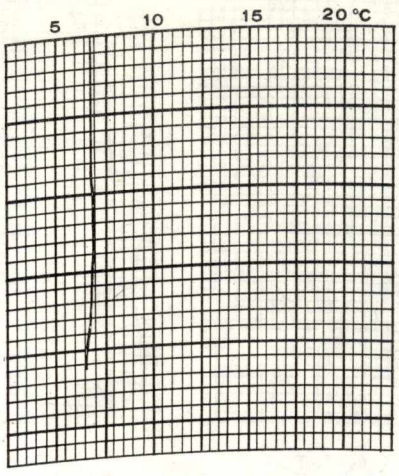


1500/10-III-57
48° 55' N
130° 30' W

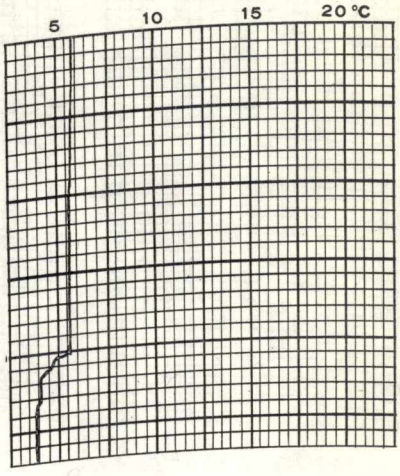
C.G.S. "St. Catharines"



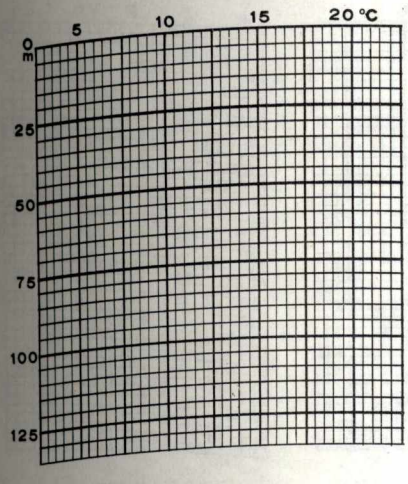
1700/10-III-57
48° 53' N
129° 56' W

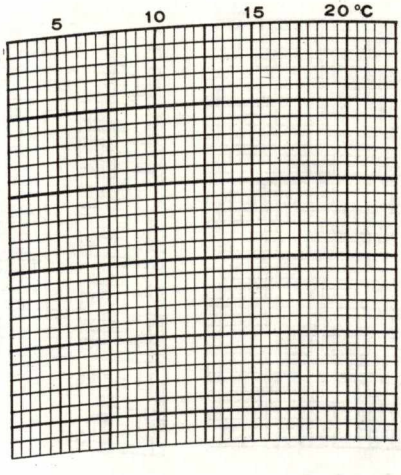


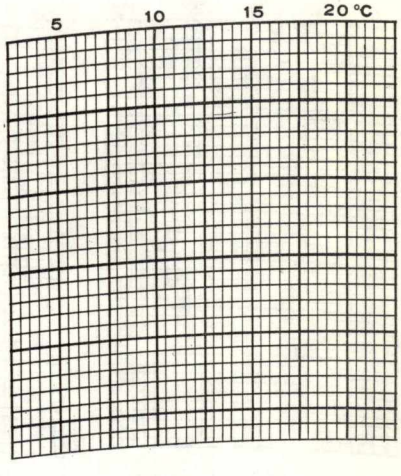
2100/10-III-57
48° 52' N
128° 51' W

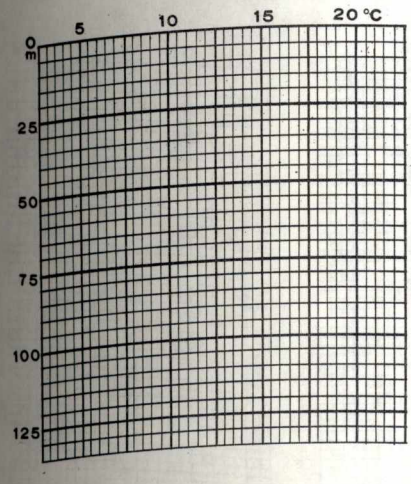


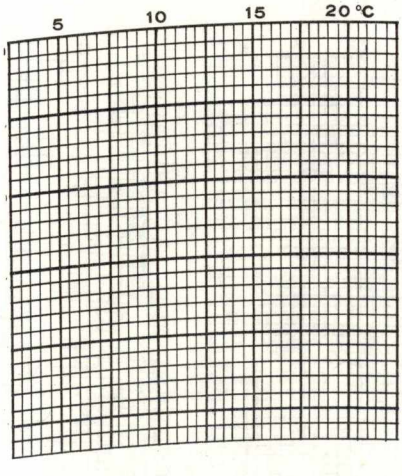
1800/28-I-57
Grid OS

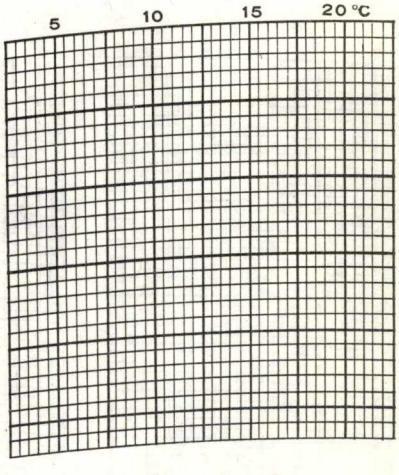




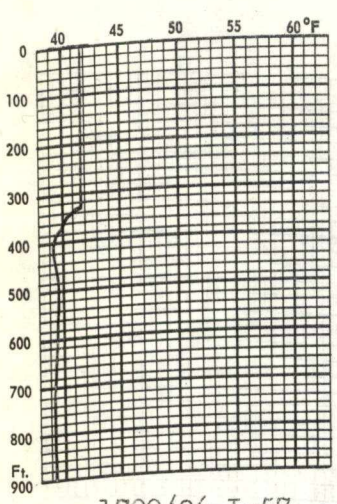




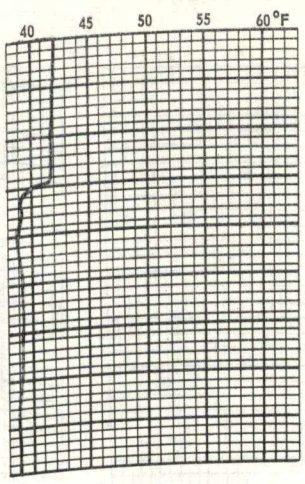




C.G.S. "St. Catharines"



1700/26-I-57
Grid OS



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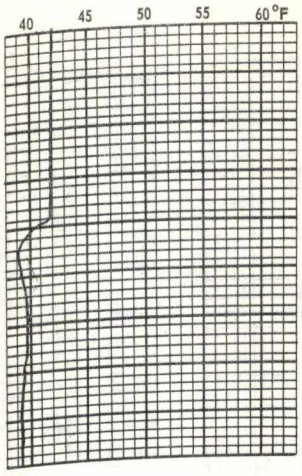

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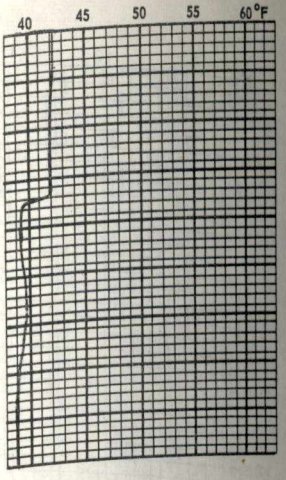
Grid OS



1700/29-I-57
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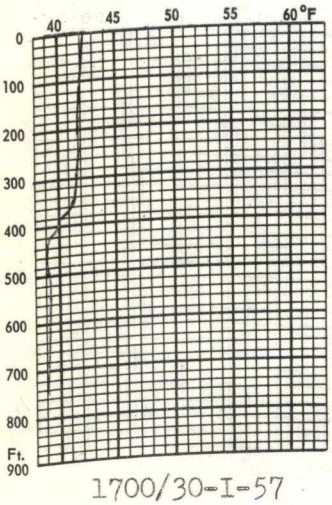

1700/30-I-57
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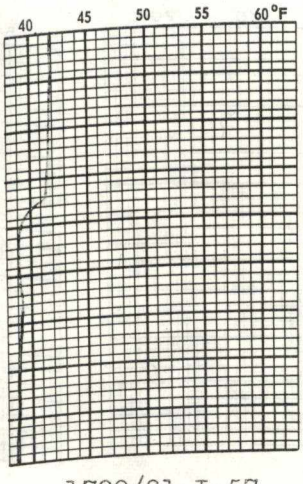

1700/31-I-57
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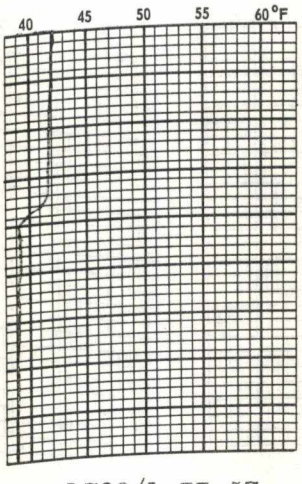
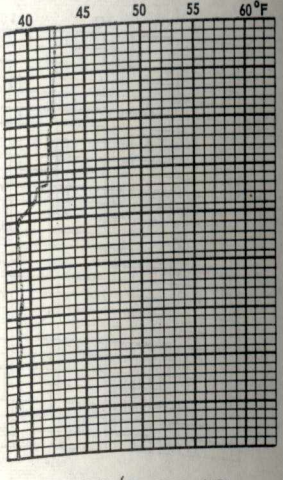
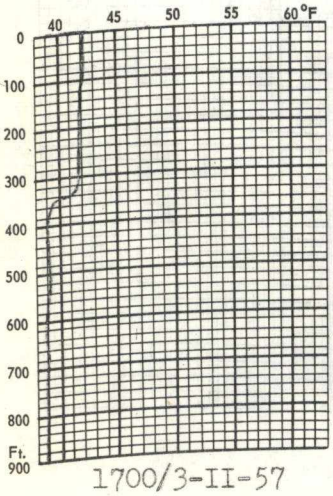


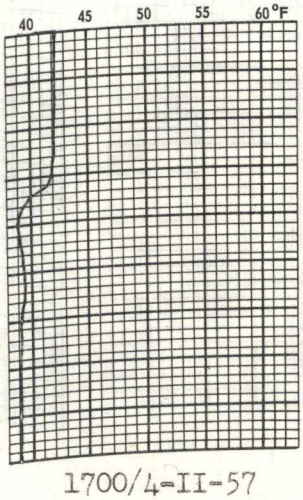
1700/1-II-57
Grid OS



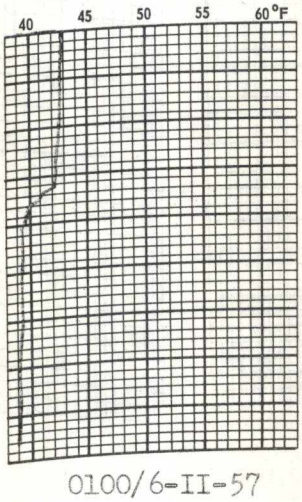
1700/2-II-57
Grid OS



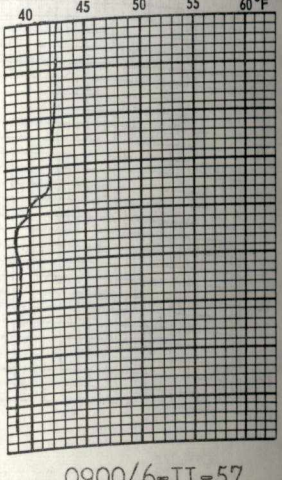
1700/3-II-57
Grid OS



1700/4-II-57
Grid OS

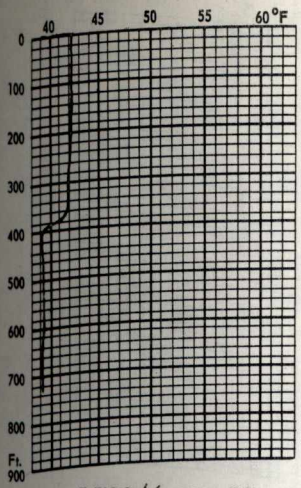


0100/6-II-57
Grid IK

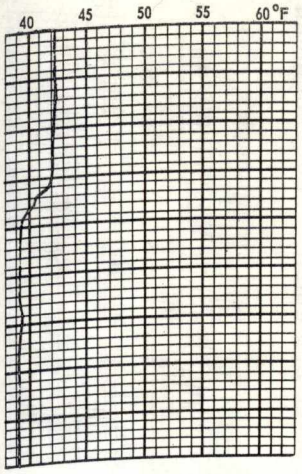


0900/6-II-57
Grid OS

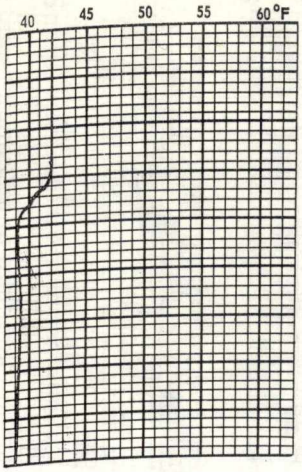
C.G.S. "St. Catharines"



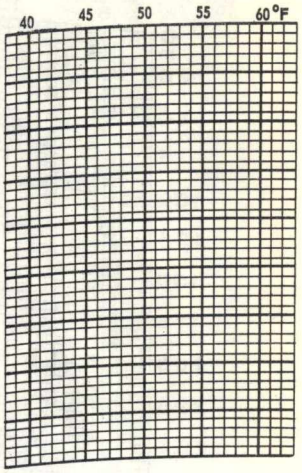
1700/6-II-57
Grid OS

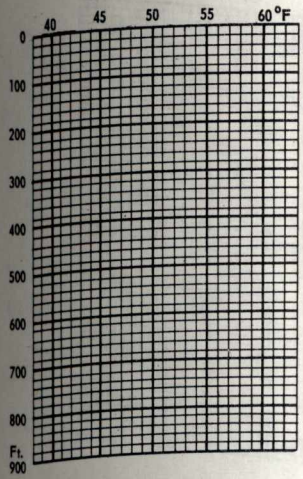


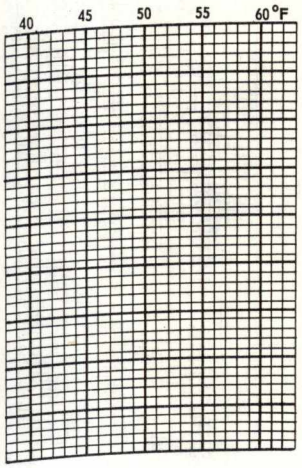
1700/7-II-57
Grid OS

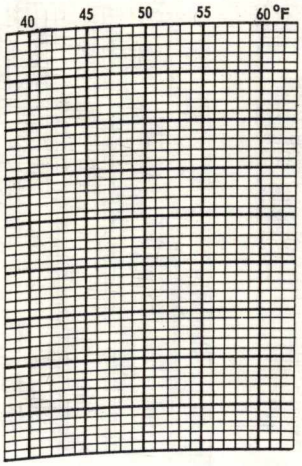


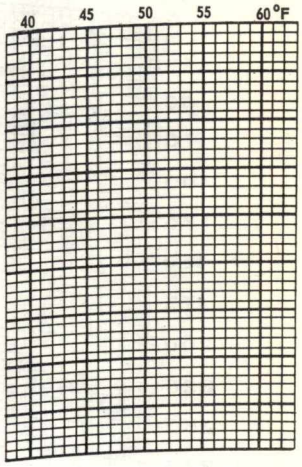
1700/8-II-57
Grid OJ

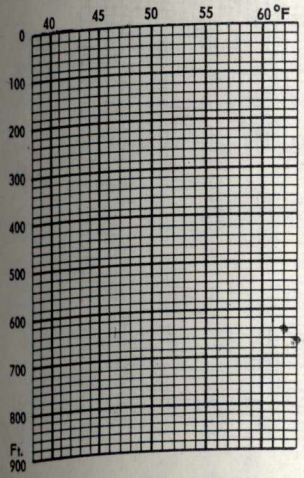


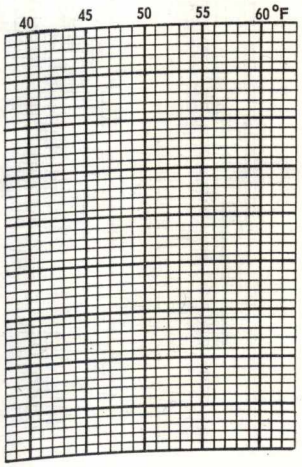


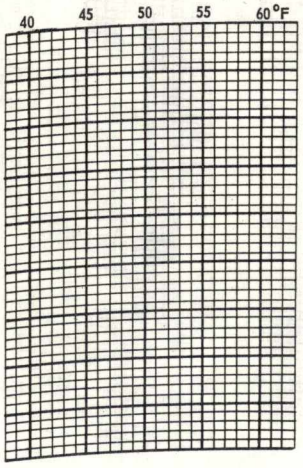


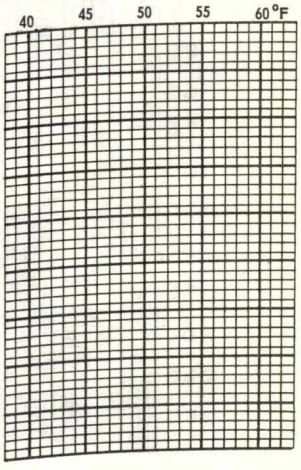




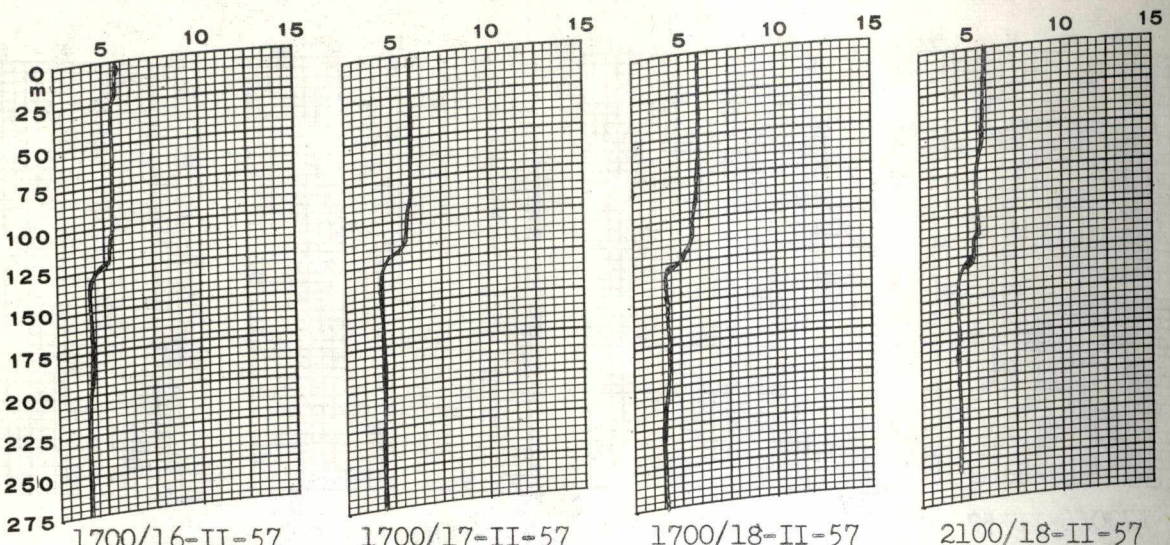








C.G.S. "St. Catharines"

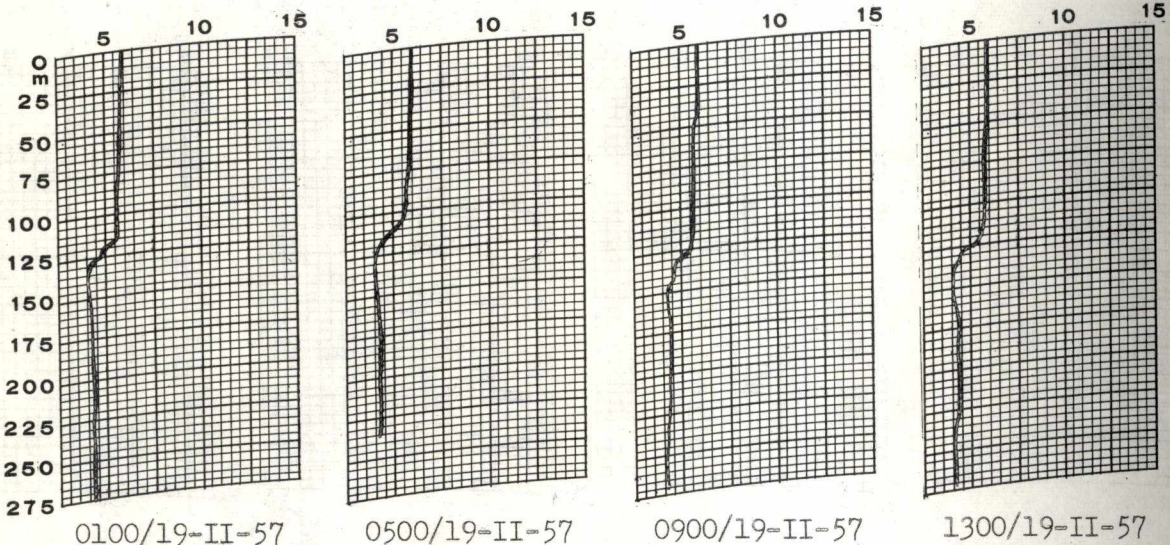


1700/16-II-57
Grid OS

1700/17-II-57
Grid OS

1700/18-II-57
Grid OS

2100/18-II-57
Grid OK

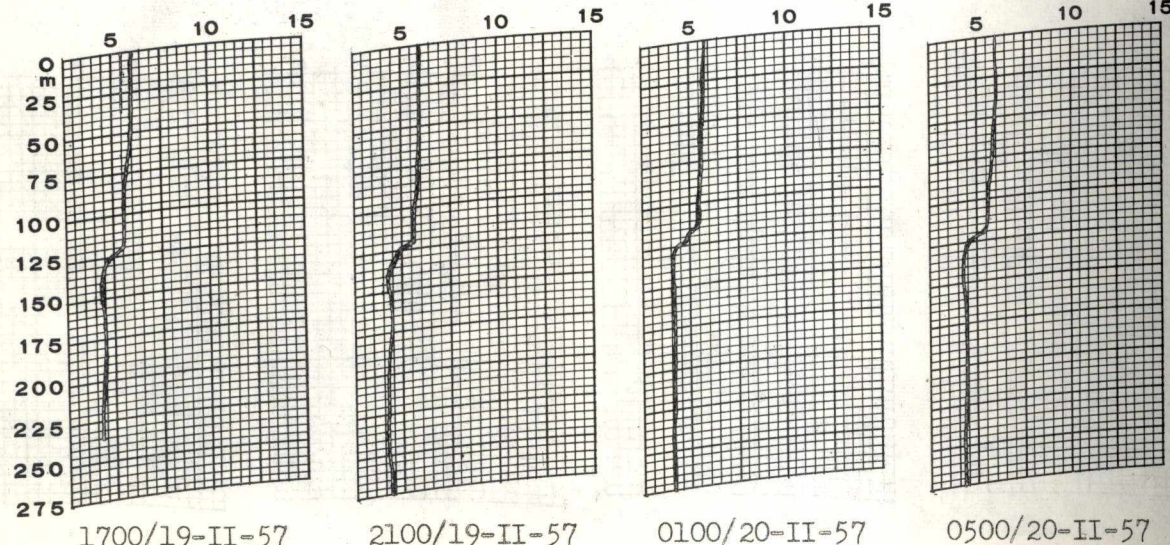


0100/19-II-57
Grid OL

0500/19-II-57
Grid OK

0900/19-II-57
Grid OJ

1300/19-II-57
Grid OS



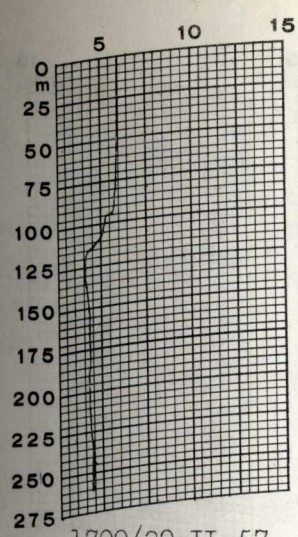
1700/19-II-57
Grid OS

2100/19-II-57
Grid OJ

0100/20-II-57
Grid OJ

0500/20-II-57
Grid OS

C.G.S. "St. Catharines"



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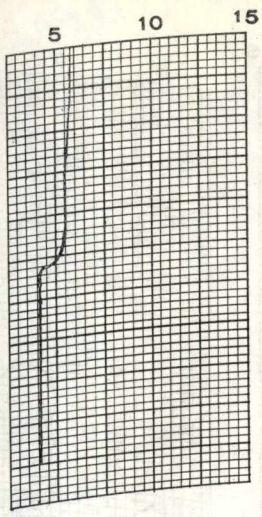
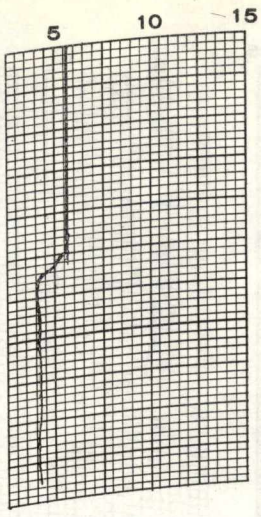
Grid OS



1700/25-II-57
Grid OS



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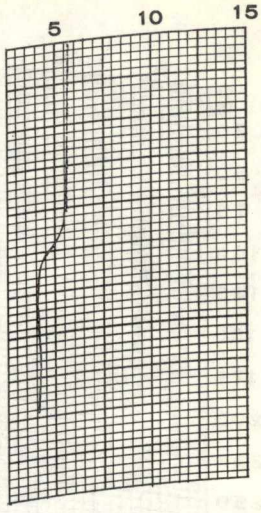
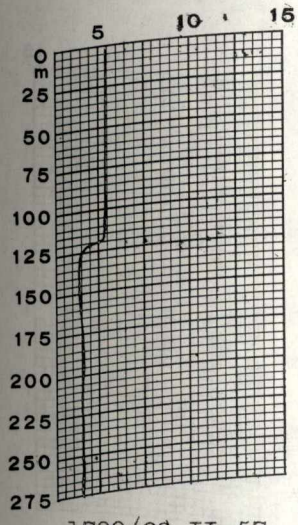
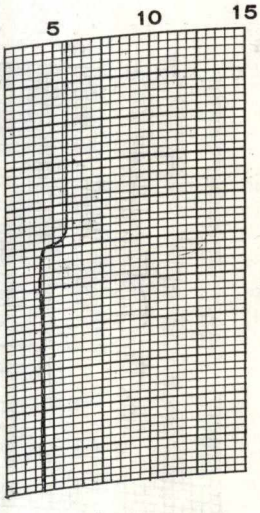
Grid OS



1700/27-II-57
Grid OS



1700/28-II-57
Grid OS



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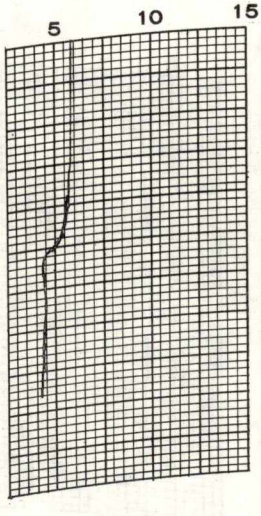
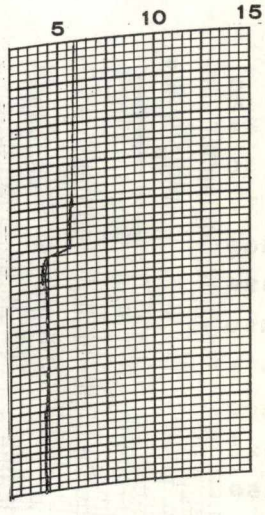
Grid OS



1700/3-III-57
Grid KJ



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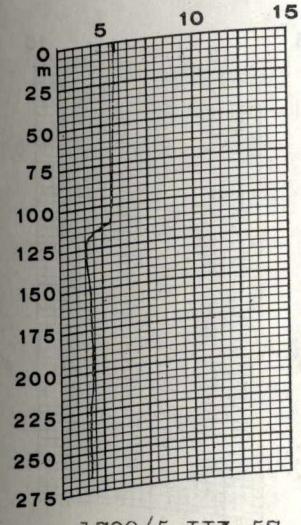
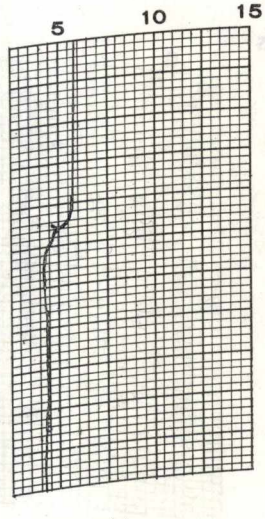
Grid OS



1700/5-III-57
Grid OS



1700/6-III-57
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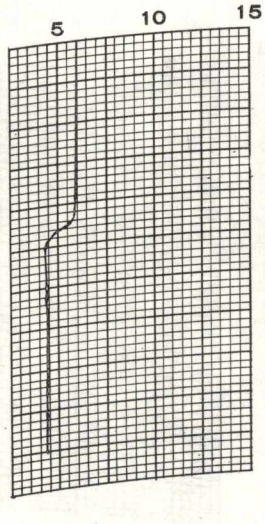
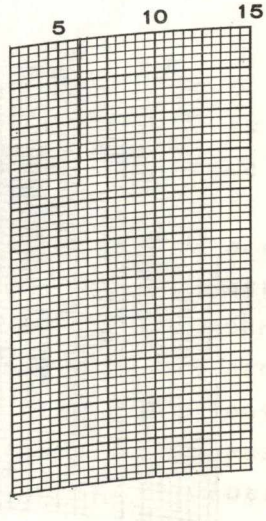
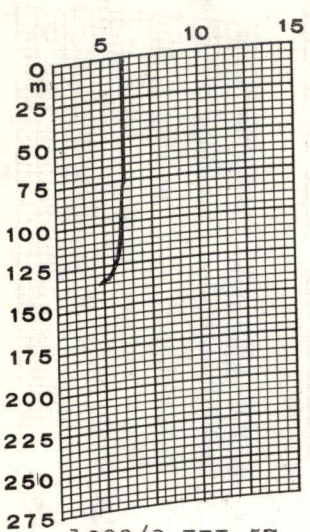


1700/27-III-57
Grid KS

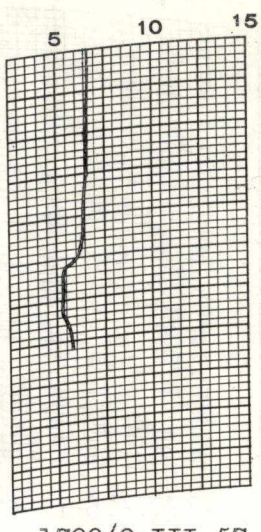


0900/9-III-57
49° 38' N
139° 24' W

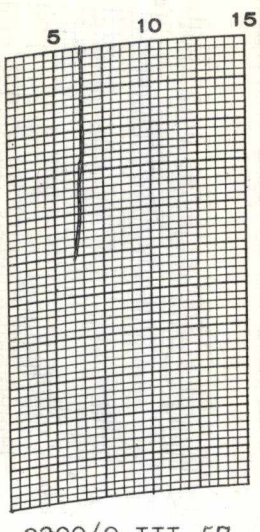
C.G.S. "St. Catharines"



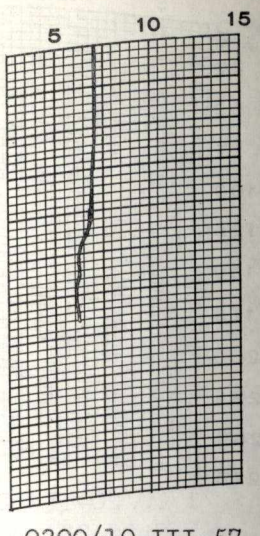
1200/9-III-57
49° 35' N
138° 15' W



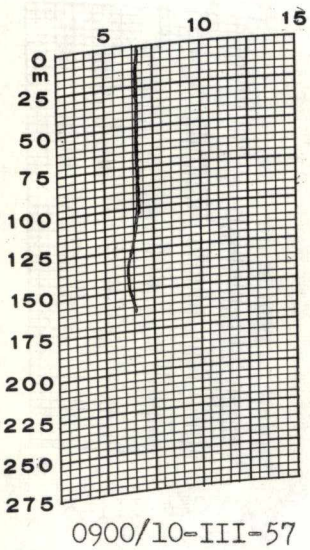
1700/9-III-57
49° 28' N
137° 00' W



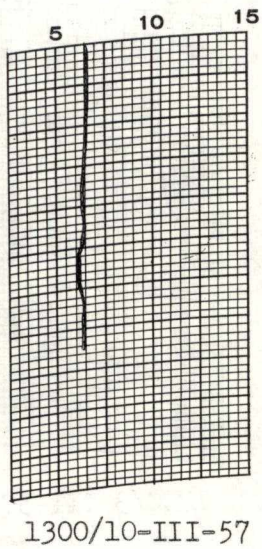
2300/9-III-57
49° 22' N
135° 13' W



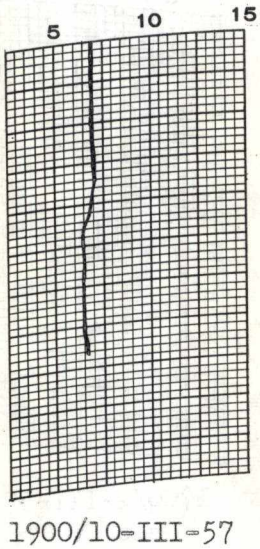
0300/10-III-57
49° 17' N
134° 05' W



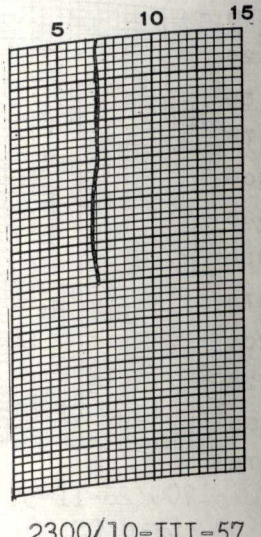
0900/10-III-57
49° 00' N
132° 14' W



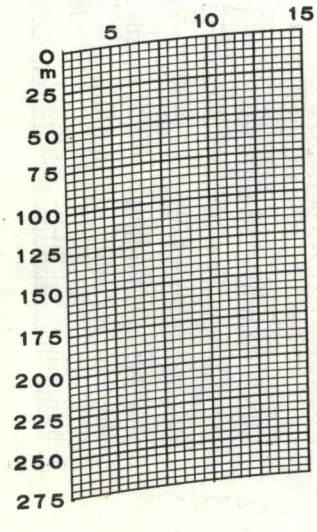
1300/10-III-57
48° 58' N
131° 04' W

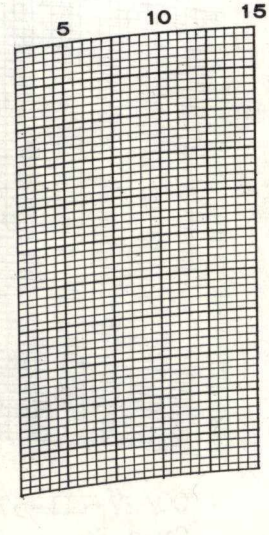


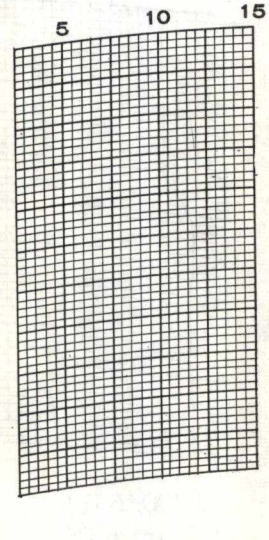
1900/10-III-57
48° 53' N
129° 53' W

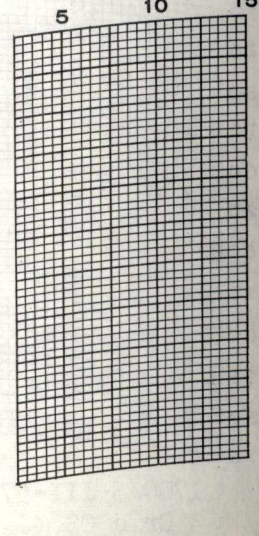


2300/10-III-57
48° 50' N
128° 18' W

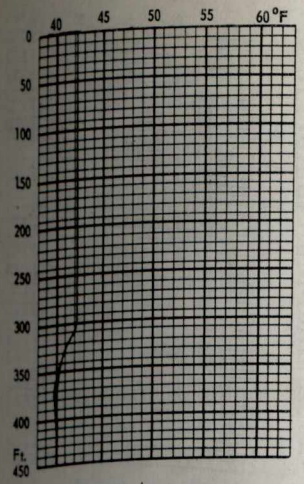




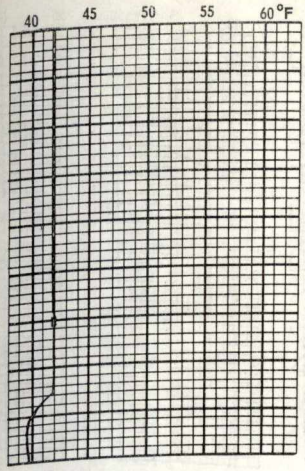




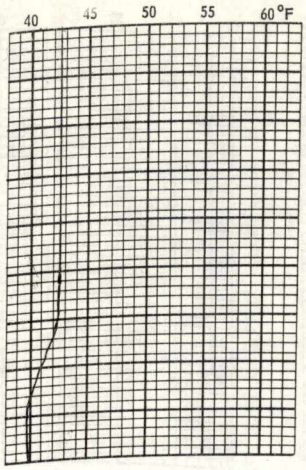
C.G.S. "St. Catharines"
Sea Sampler Bathythermograms



1730/26-I-57
Grid OS



1815/28-I-57
Grid OS



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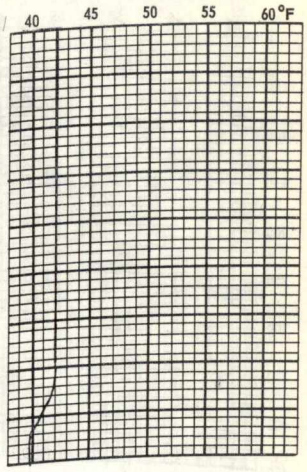

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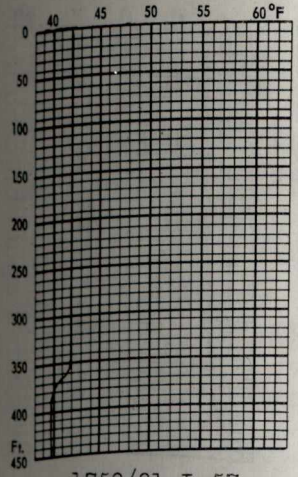
Grid KJ



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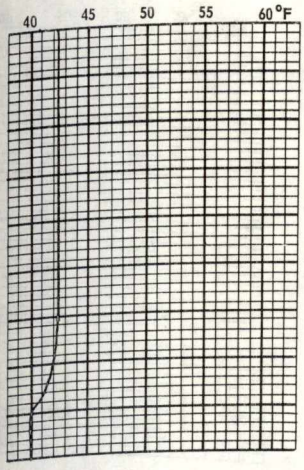

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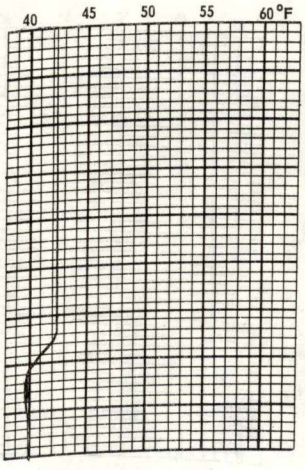

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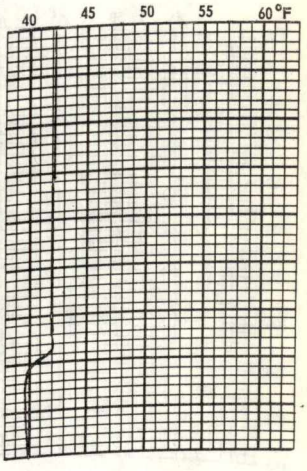

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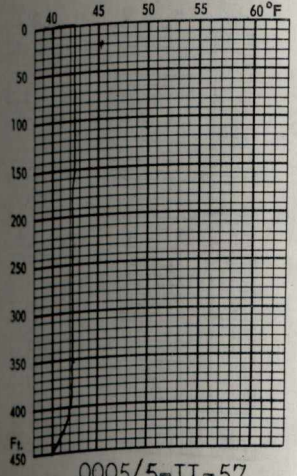
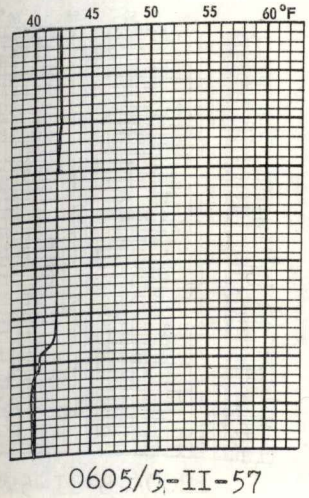


0005/5-II-57
Grid OS



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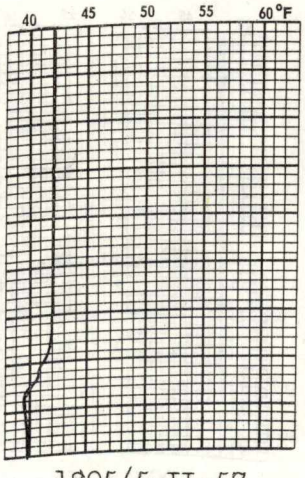

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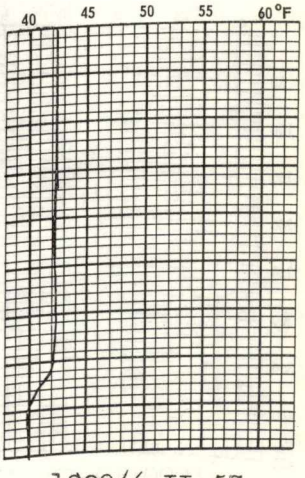

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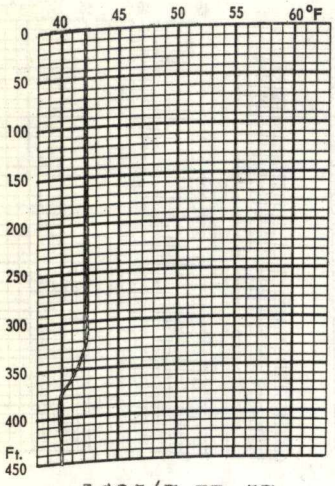
C.G.S. "St. Catharines"
Sea Sampler Bathythermograms



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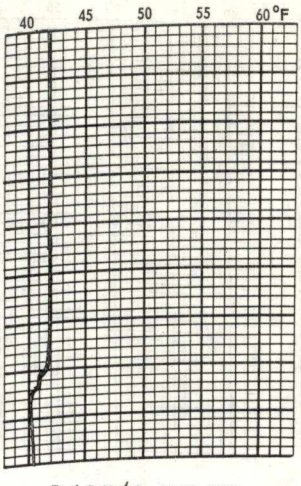
Grid JS



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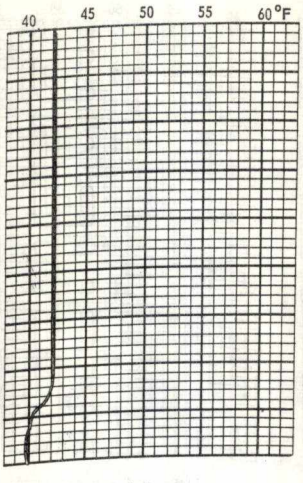

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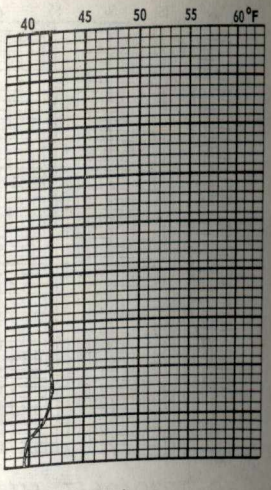

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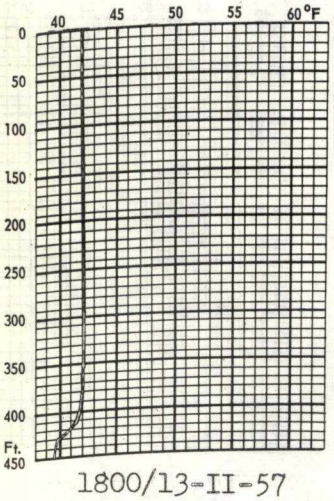

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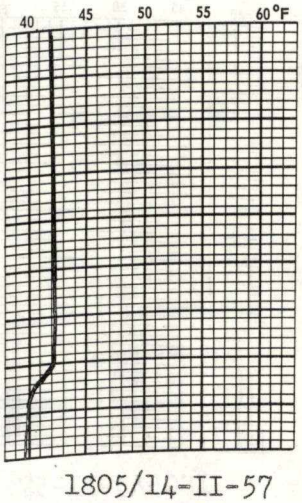

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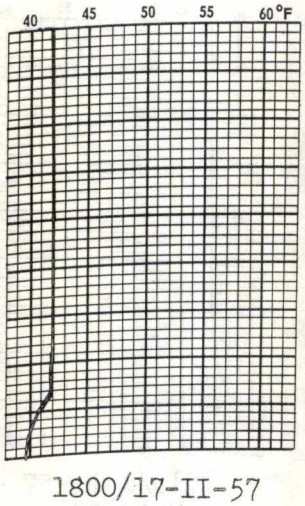

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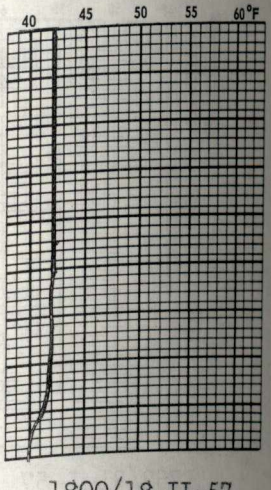

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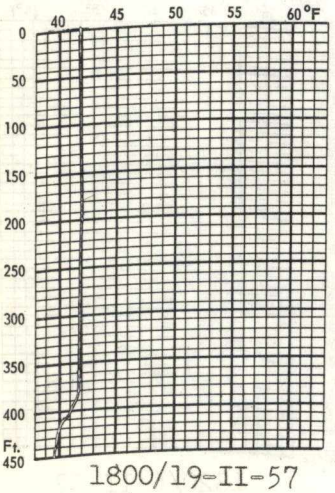

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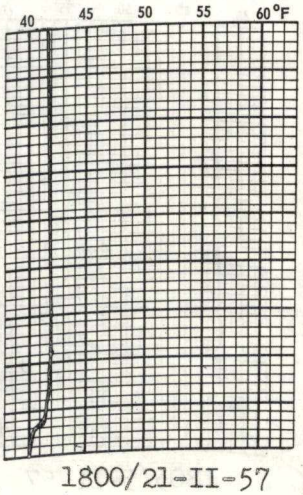

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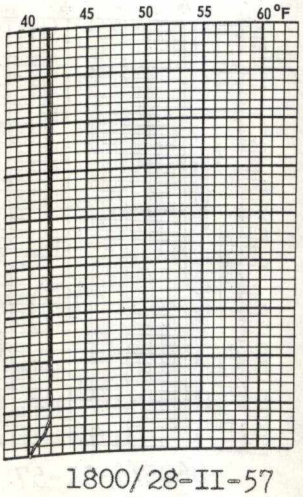

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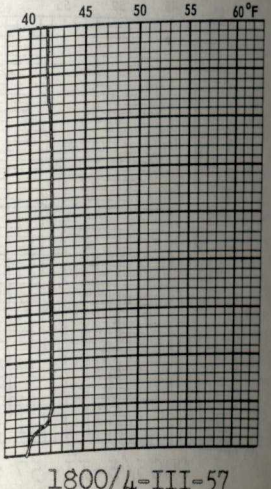

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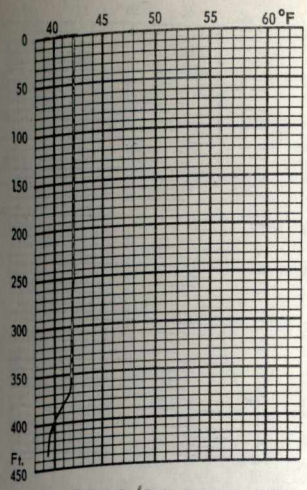
C.G.S. "Stonetown"



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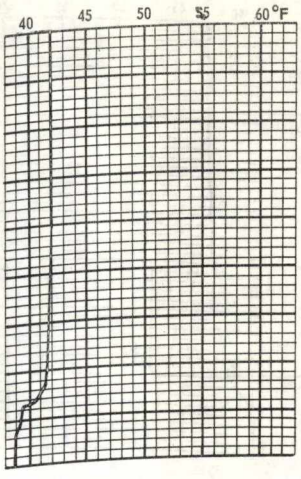

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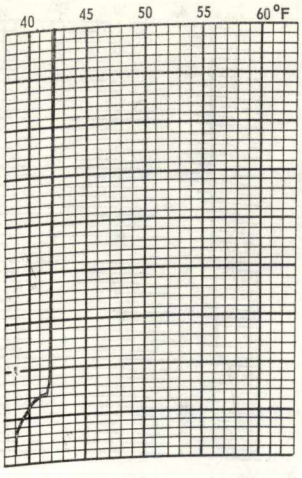

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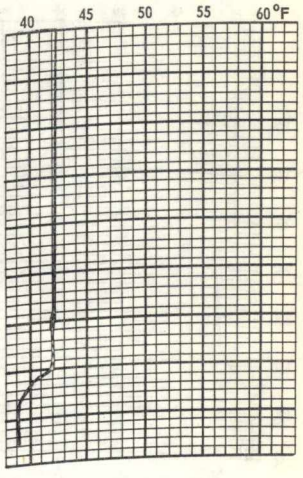

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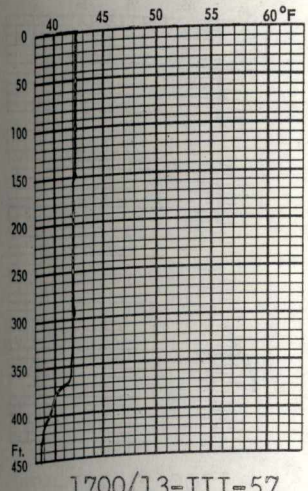

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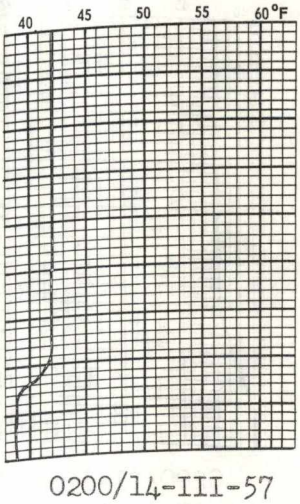

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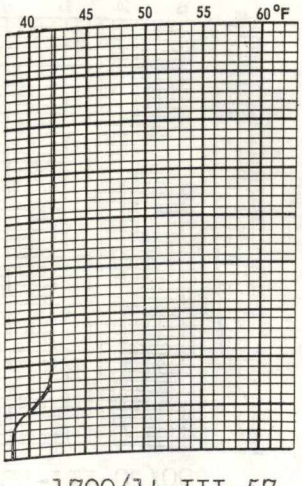

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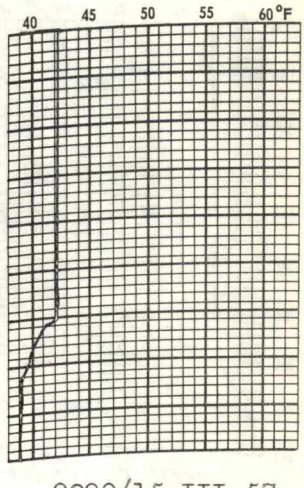

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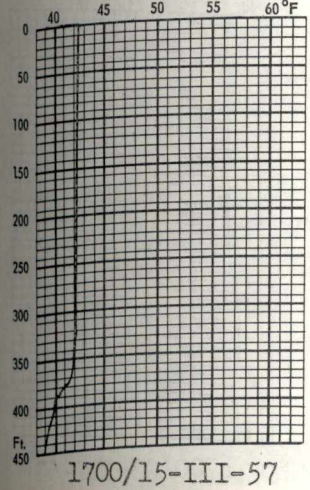

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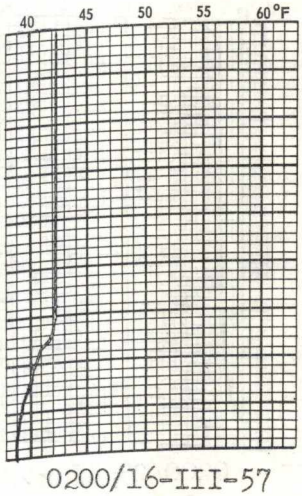

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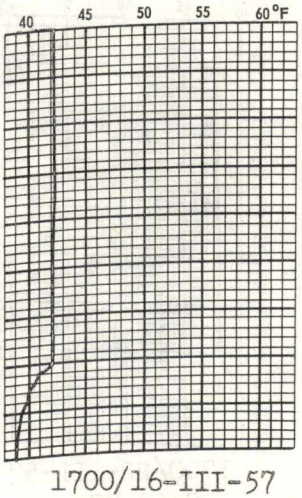

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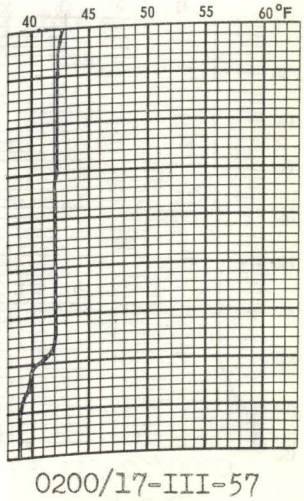

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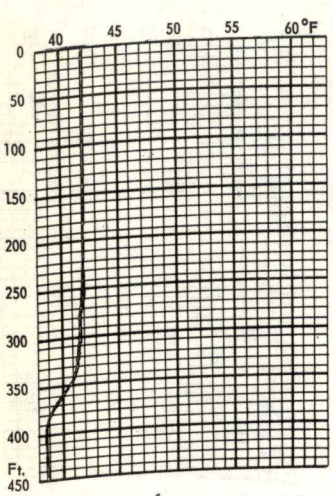
C.G.S. "Stonetown"



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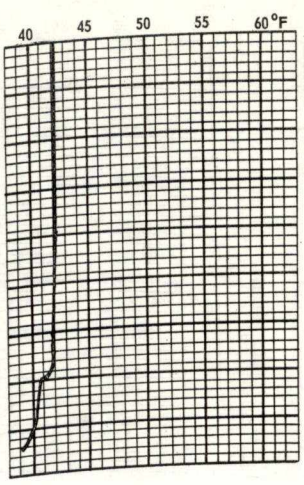

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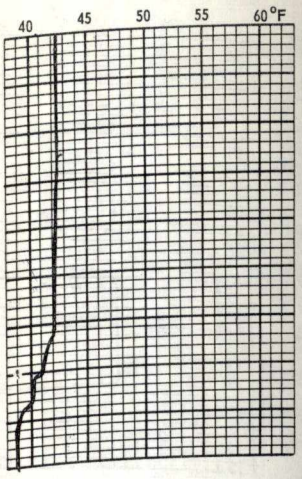

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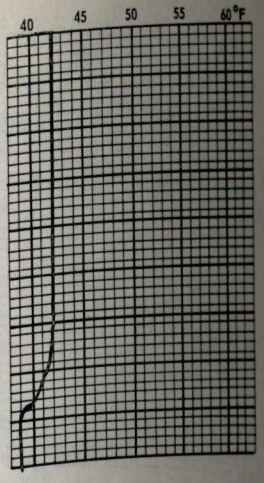

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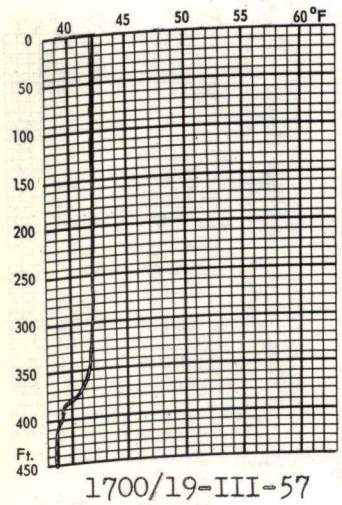

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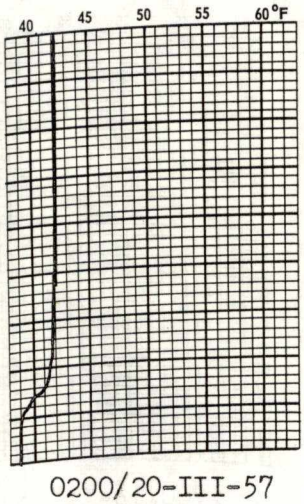

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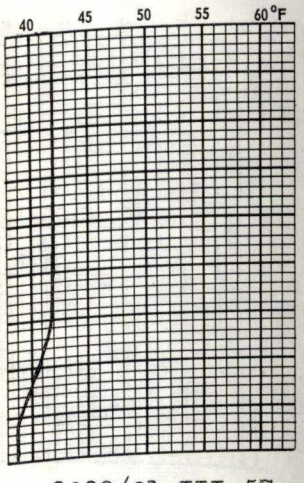

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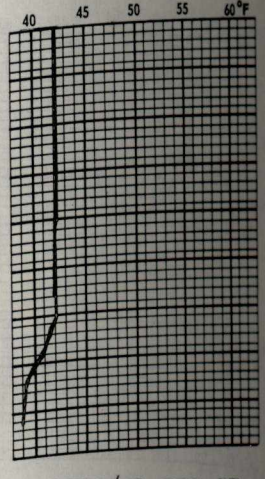

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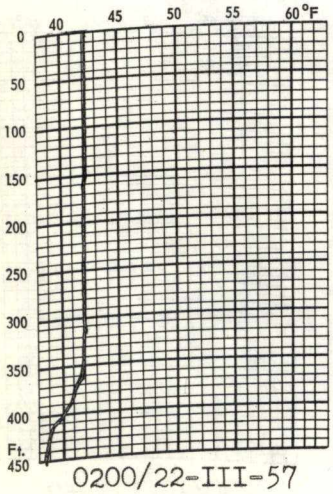

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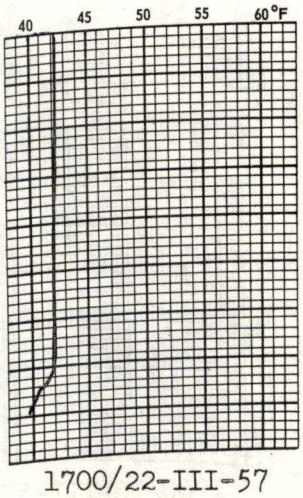
Grid KS



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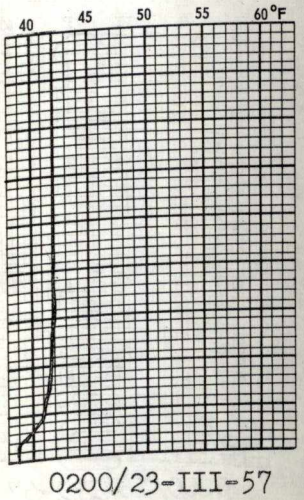

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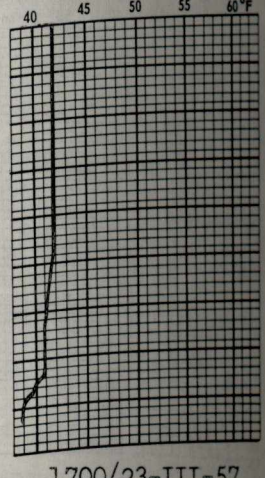

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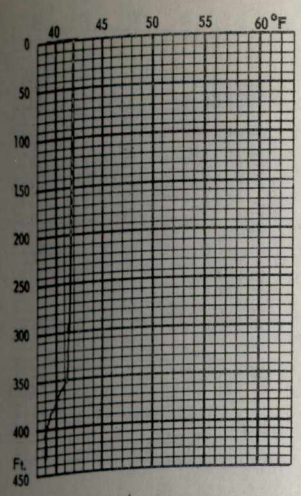
C.G.S. "Stonetown"



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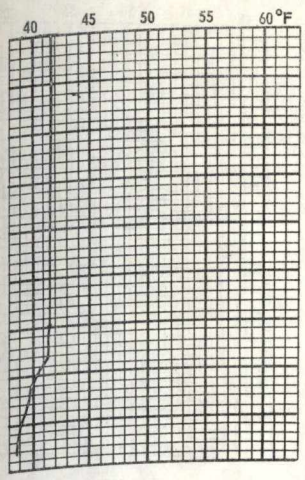

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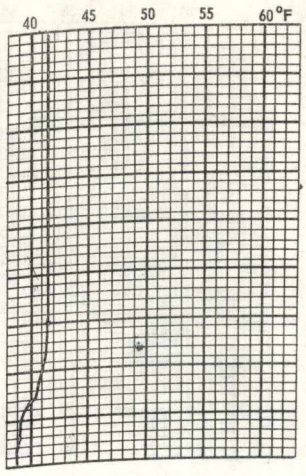

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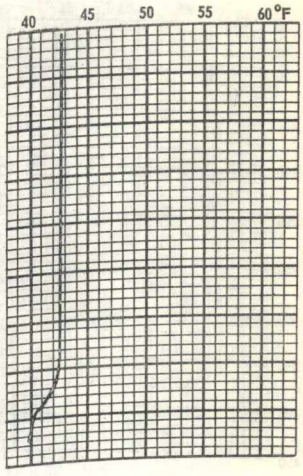
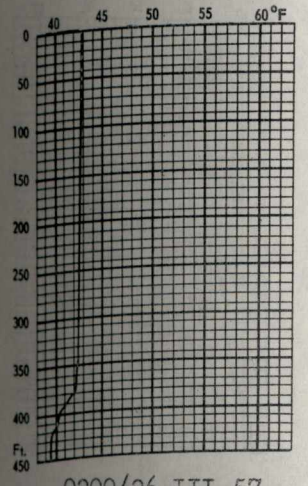
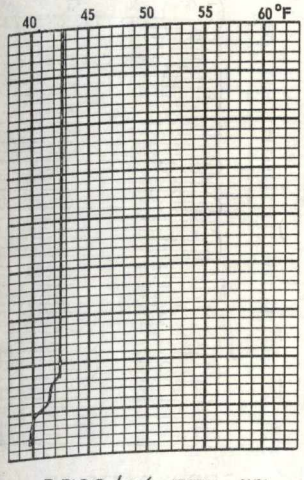


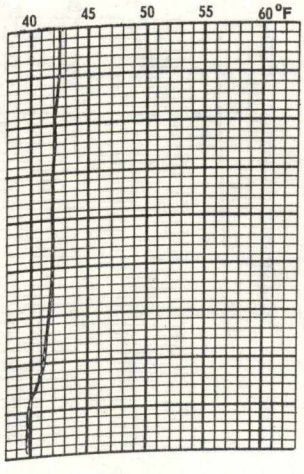
1700/25-III-57
Grid OJ



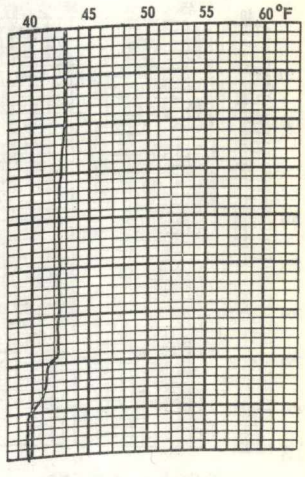
0200/26-III-57
Grid KS



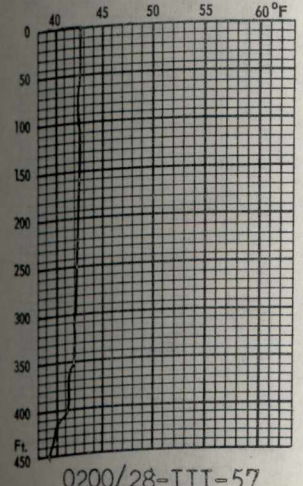
1700/26-III-57
Grid OJ



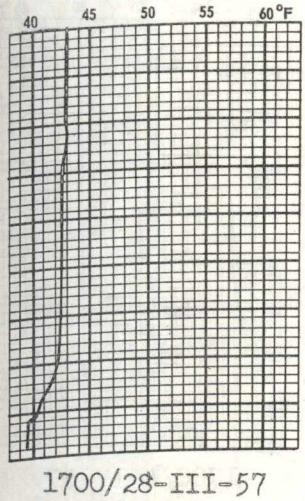
0200/27-III-57
Grid OJ



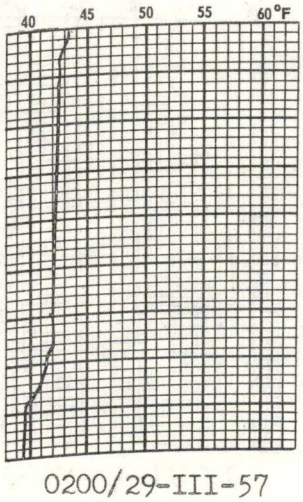
1700/27-III-57
Grid OS



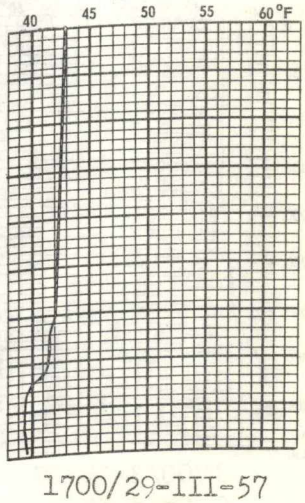
0200/28-III-57
Grid OJ



1700/28-III-57
Grid OK

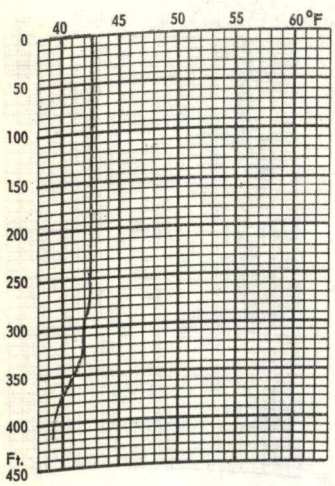


0200/29-III-57
Grid OJ

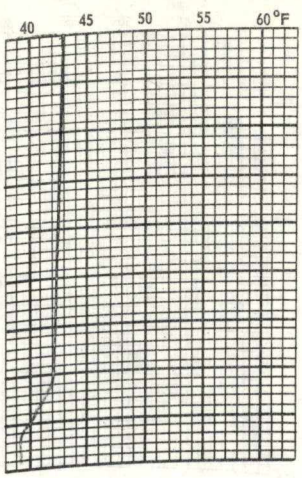


1700/29-III-57
Grid OS

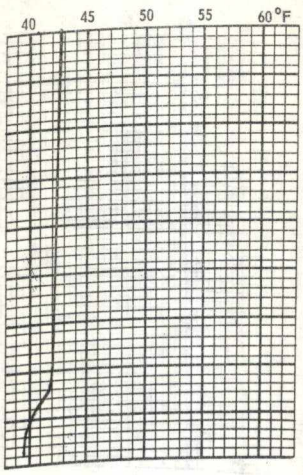
C.G.S. "Stonetown"



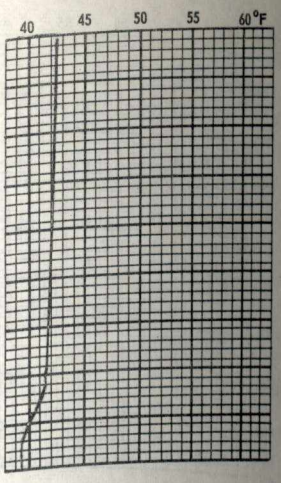
1700/30-III-57
Grid KS



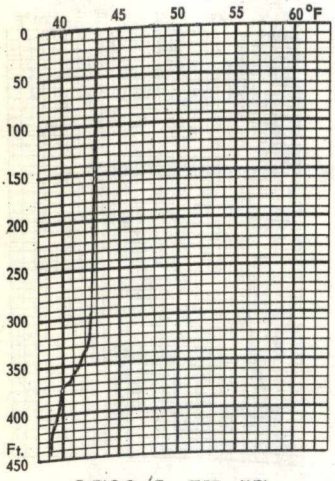
0200/31-III-57
Grid OK



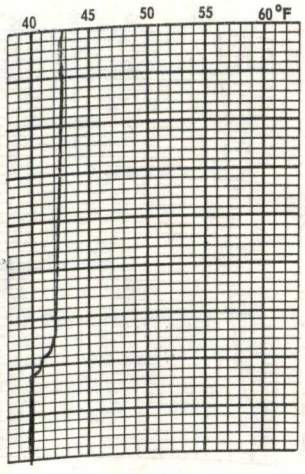
1700/31-III-57
Grid OJ



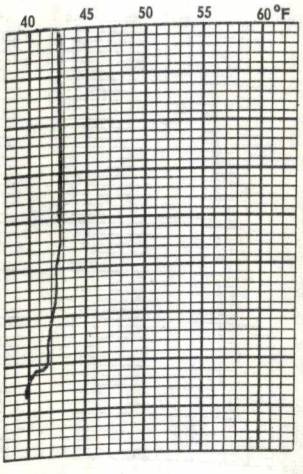
0200/1-IV-57
Grid OJ



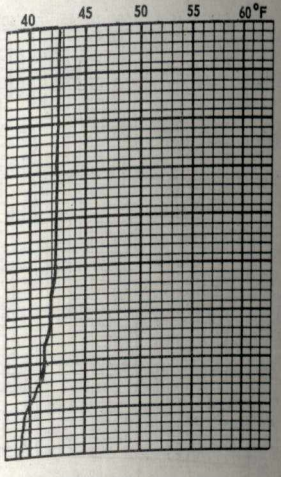
1700/1-IV-57
Grid OK



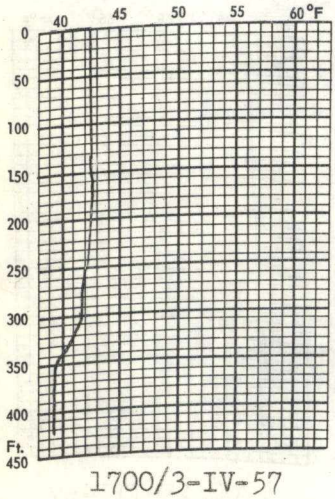
0200/2-IV-57
Grid KS



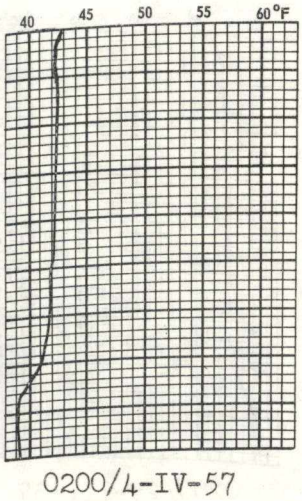
1700/2-IV-57
Grid OS



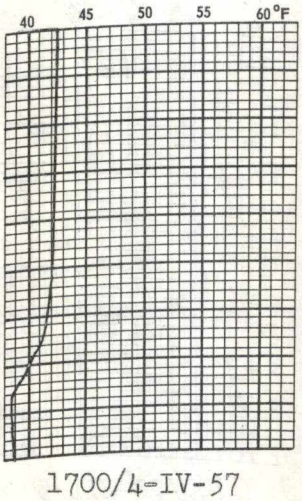
0200/3-IV-57
Grid KJ



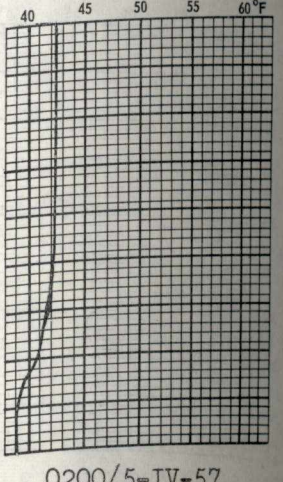
1700/3-IV-57
Grid KS



0200/4-IV-57
Grid OS

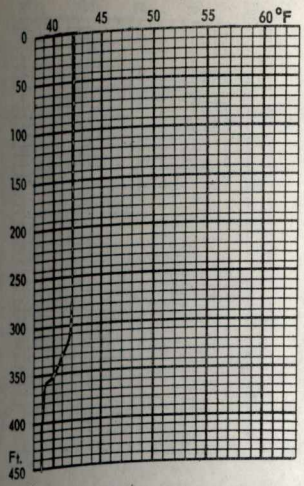


1700/4-IV-57
Grid OS

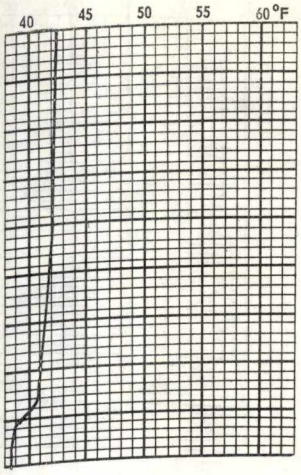


0200/5-IV-57
Grid KS

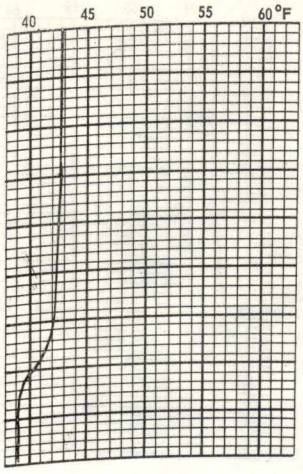
C.G.S. "Stonetown"



1700/5-IV-57
Grid OS



0200/6-IV-57
Grid OK



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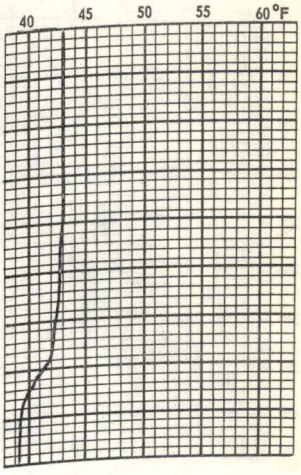
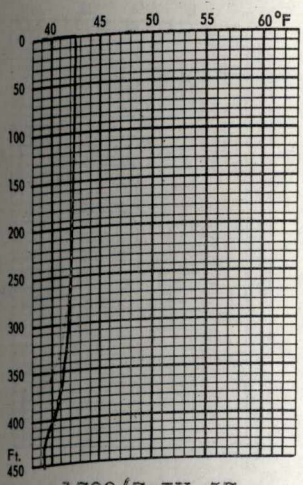
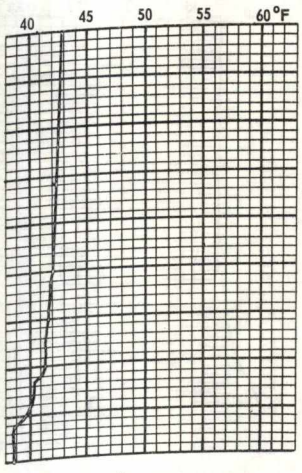
Grid OS



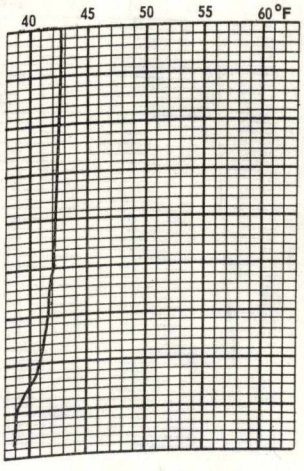
0200/7-IV-57
Grid OK



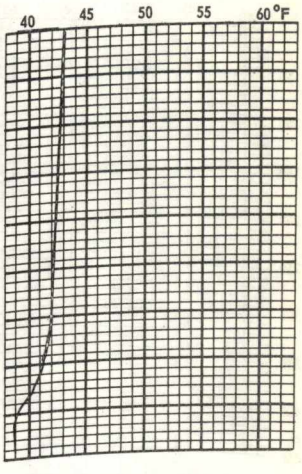
1700/7-IV-57
Grid OJ



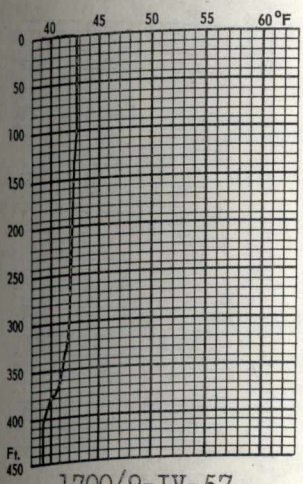
0200/8-IV-57
Grid OK



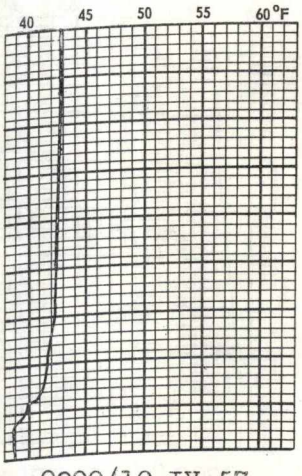
1700/8-IV-57
Grid OS



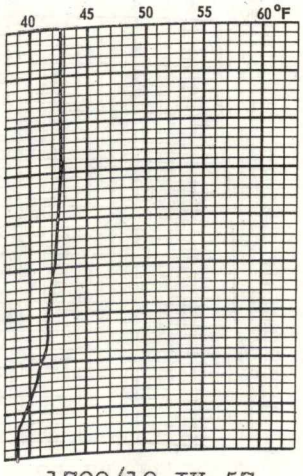
0200/9-IV-57
Grid OS



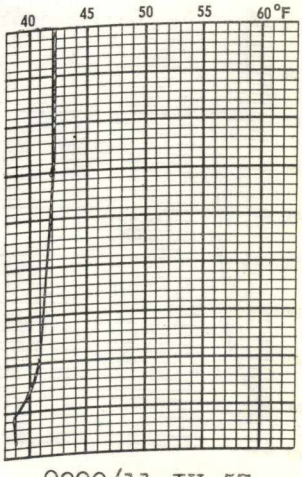
1700/9-IV-57
Grid KS



0200/10-IV-57
Grid OS

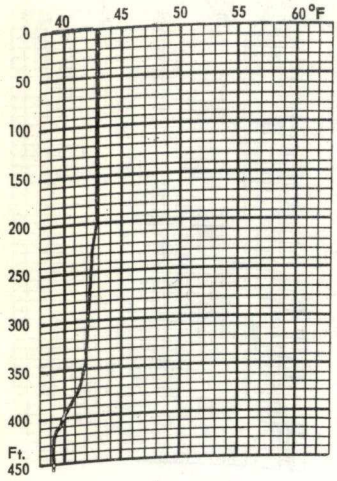


1700/10-IV-57
Grid OS

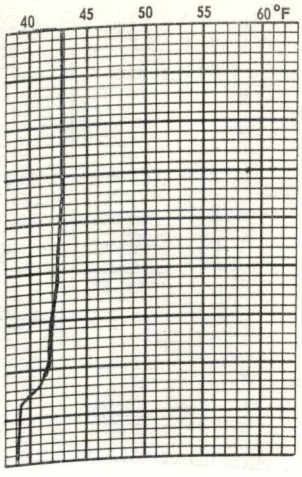


0200/11-IV-57
Grid KI

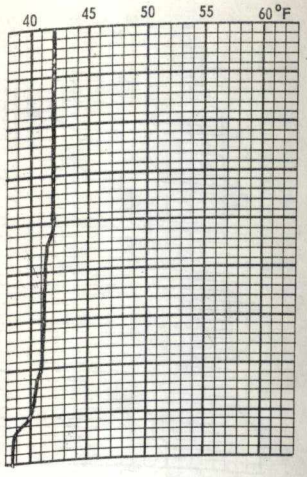
C.G.S. "Stonetown"



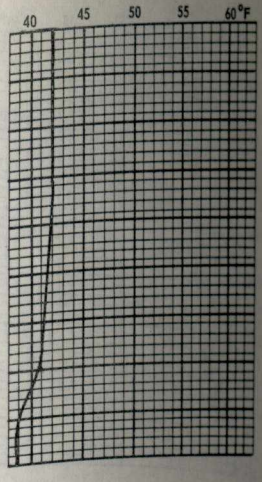
1700/11-IV-57
Grid OK



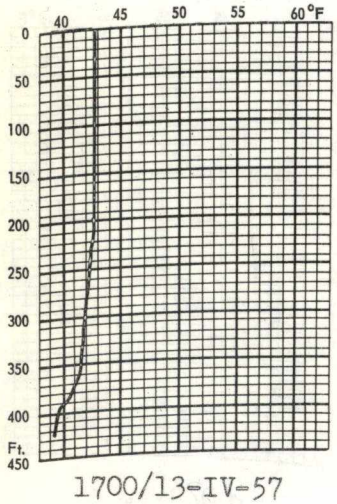
0200/12-IV-57
Grid OS



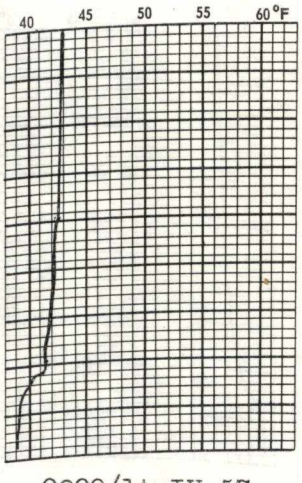
1700/12-IV-57
Grid OJ



0200/13-IV-57
Grid JJ



1700/13-IV-57
Grid OS



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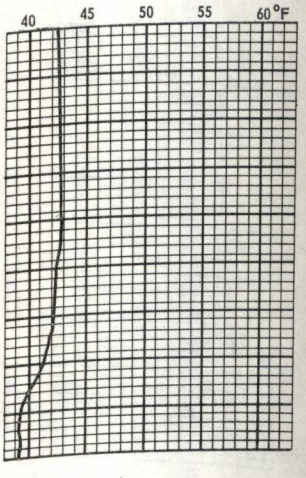
Grid OS



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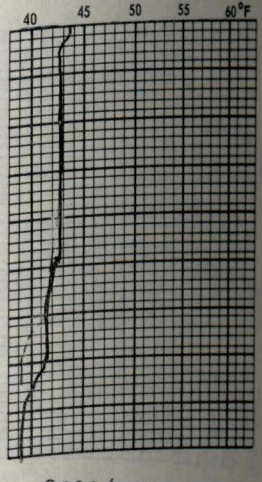
Grid OS



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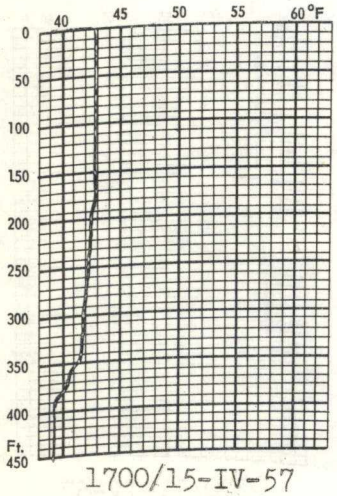
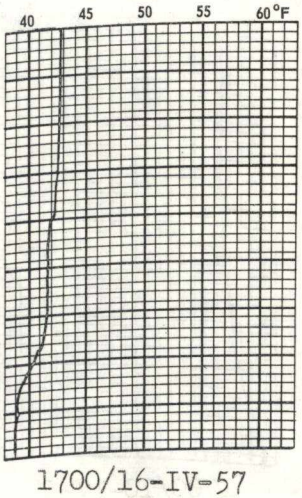
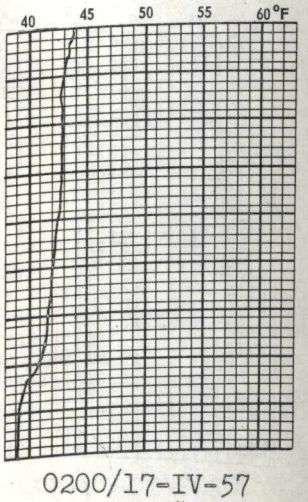
Grid OS



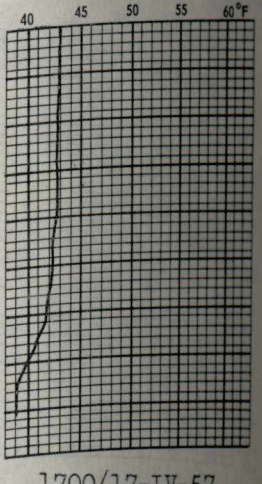
1700/15-IV-57
Grid OS



1700/16-IV-57
Grid OS

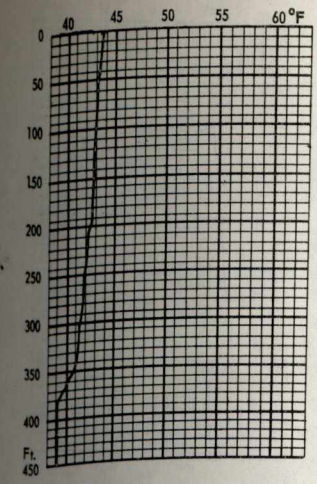


0200/17-IV-57
Grid OS



1700/17-IV-57
Grid OS

C.G.S. "Stonetown"



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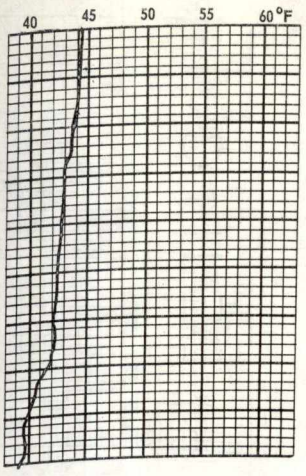
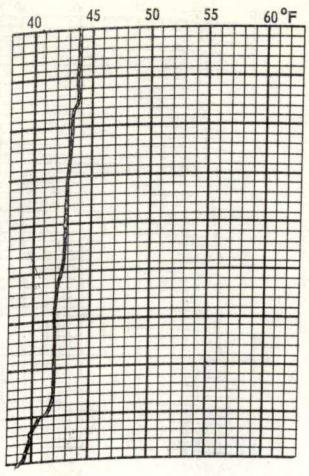
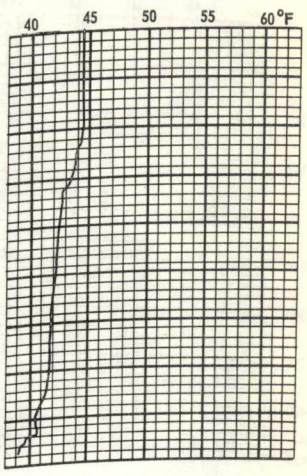
Grid OS



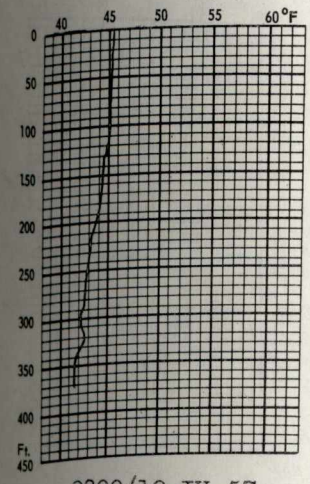
1700/19-IV-57
Grid OM



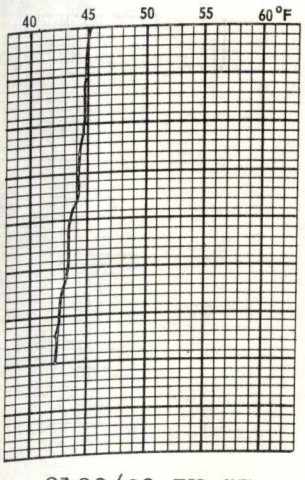
1900/19-IV-57
Grid OP



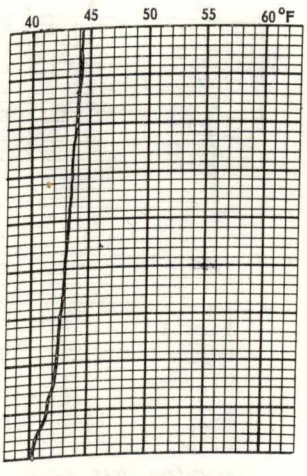
2100/19-IV-57
Grid OQ



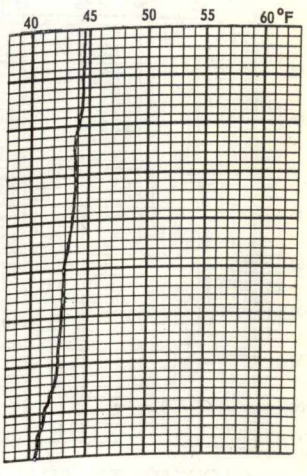
2300/19-IV-57
49° 51' N
142° 47' W



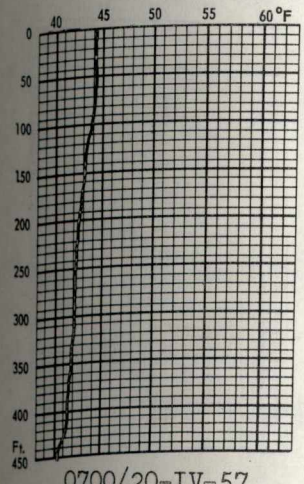
0100/20-IV-57
49° 48' N
142/ 11' W



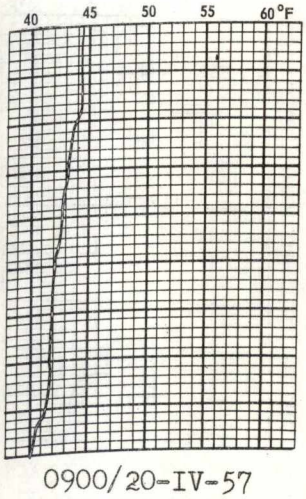
0300/20-IV-57
49° 47'
141° 17' W



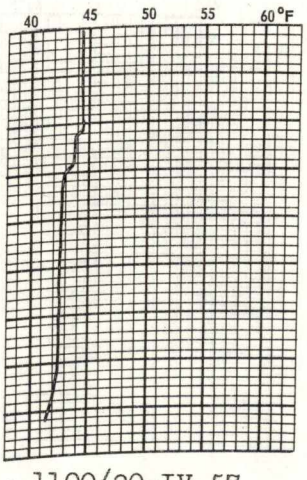
0500/20-IV-57
49° 44' N
141° 05' W



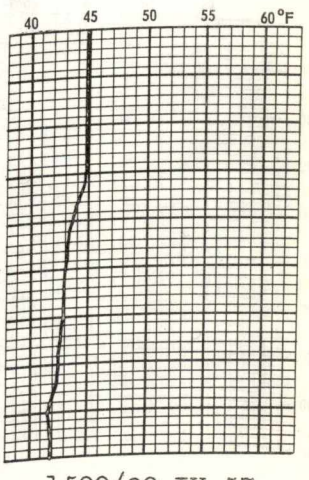
0700/20-IV-57
49° 40' N
140° 12' W



0900/20-IV-57
48° 38' N
139° 50' W

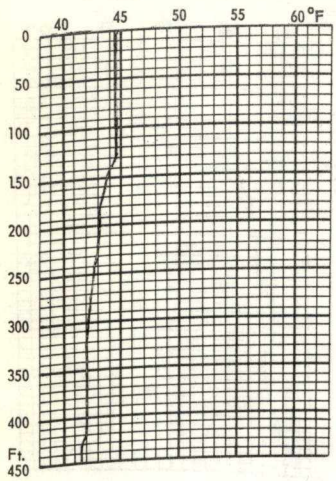


1100/20-IV-57
49° 34' N
138° 47' W

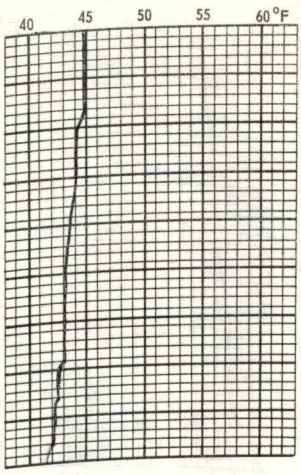


1500/20-IV-57
49° 27' N
137° 32' W

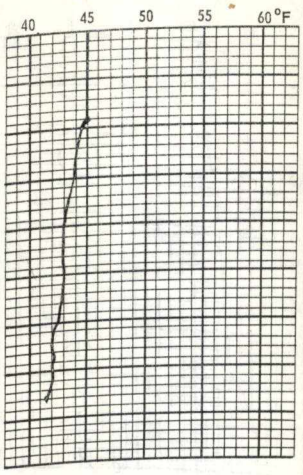
C.G.S. "Stonetown"



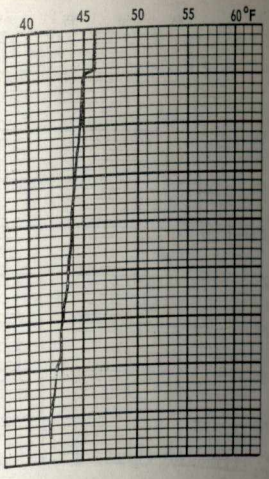
1700/20-IV-57
49° 24' N
136/ 53' W



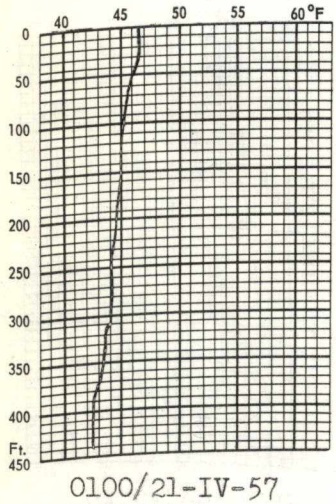
1900/20-IV-57
49° 23' N
136° 10' W



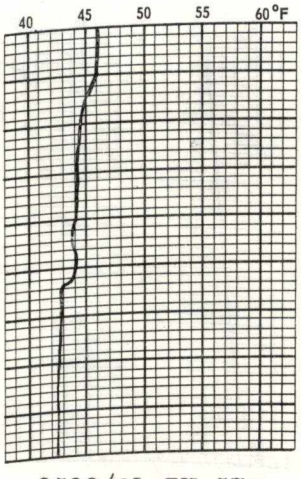
2100/20-IV-57
49° 20' N
135° 34' W



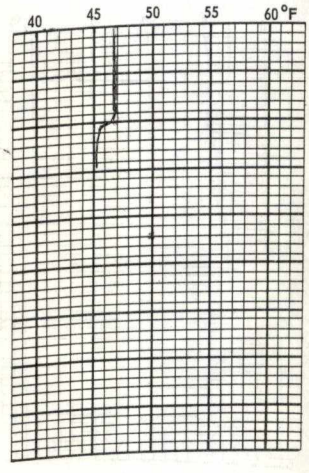
2300/20-IV-57
49° 16' N
134° 48' W



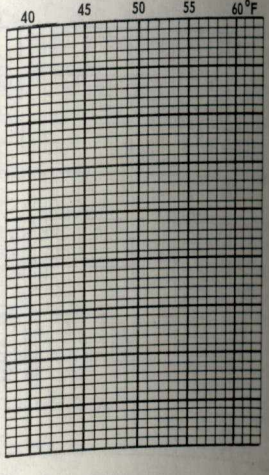
0100/21-IV-57
49° 15' N
134° 12' W

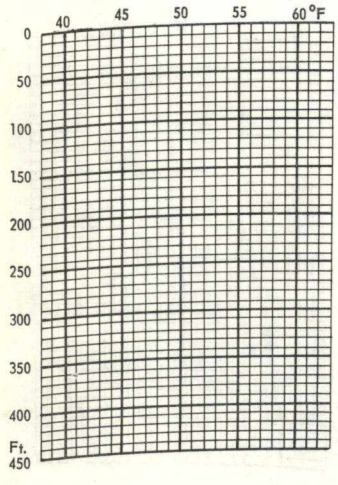


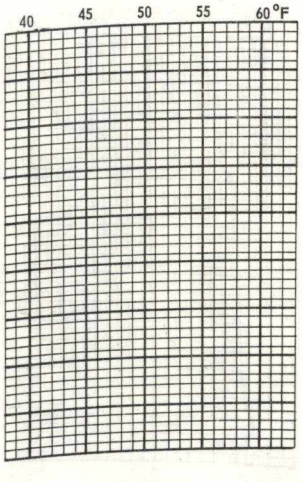
0500/21-IV-57
48° 58' N
132° 48' W

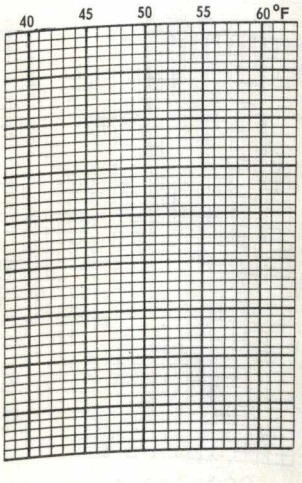


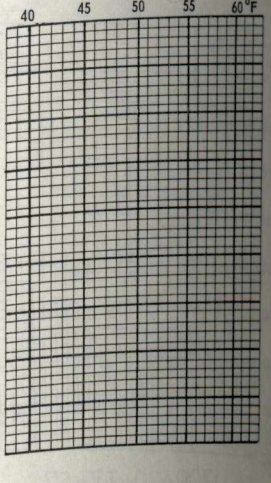
1700/21-IV-57
48° 43' N
128° 47' W



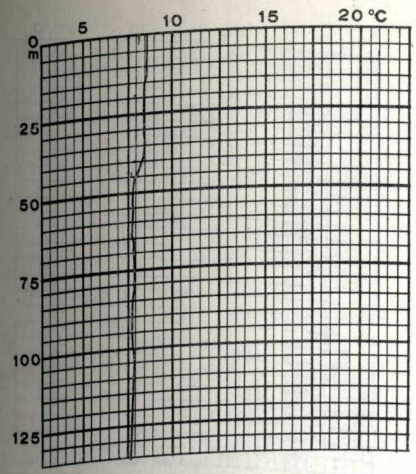




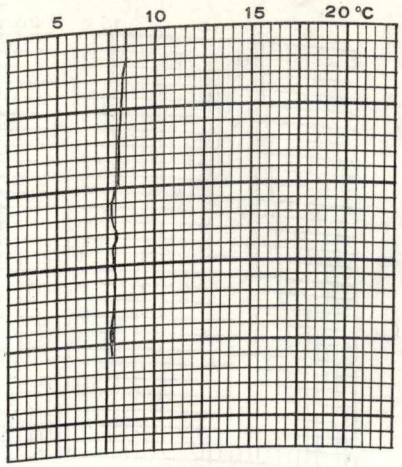




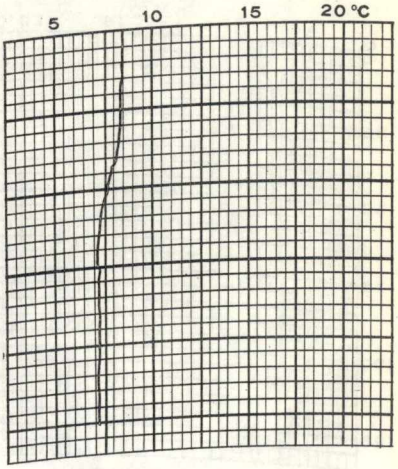
C.G.S. "St. Catharines"



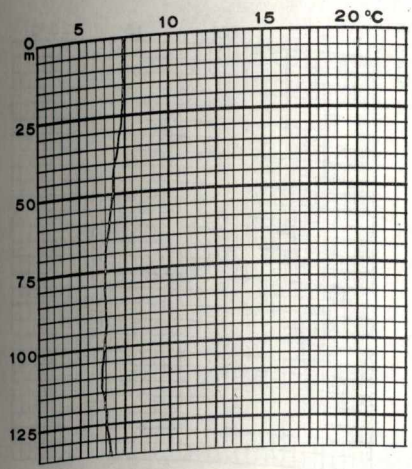
0900/17-IV-57
48° 37' N
126° 48' W



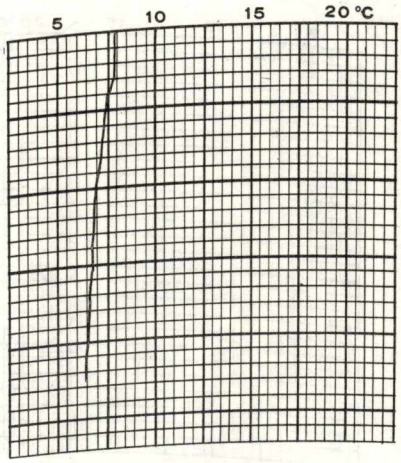
1200/17-IV-57
48° 39' N
127° 15' W



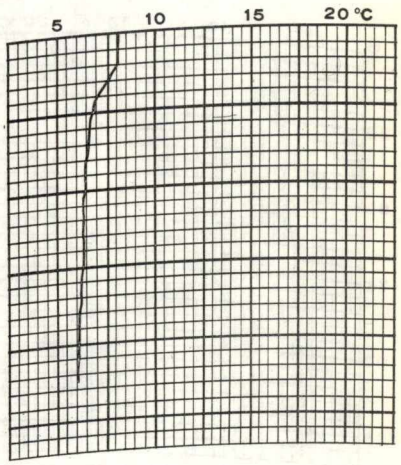
1400/17-IV-57
48° 41' N
127° 57' W



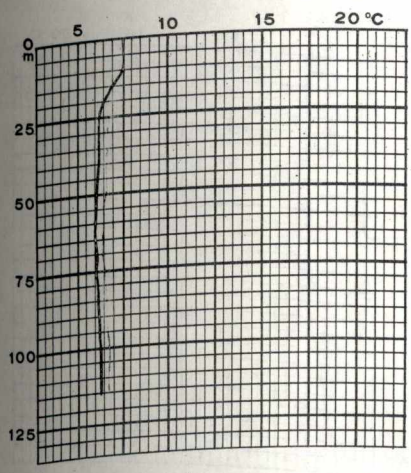
1800/17-IV-57
48° 54' N
129° 00' W



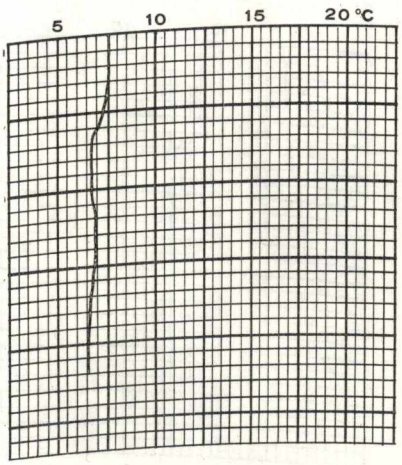
2200/17-IV-57
49° 00' N
130° 12' W



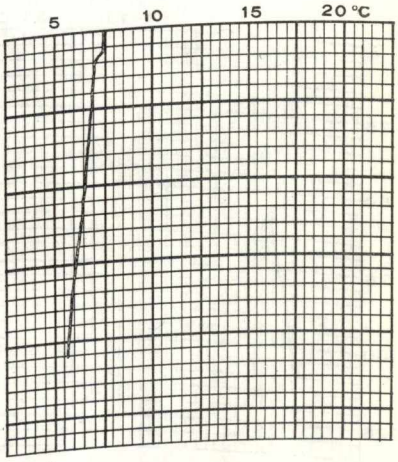
0200/18-IV-57
49° 06' N
131° 22' W



0600/18-IV-57
49° 08' N
132° 32' W

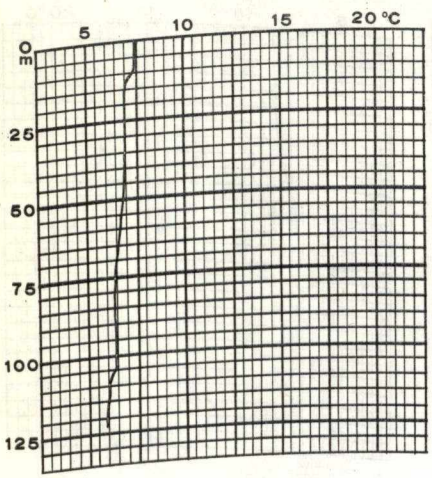


1000/18-IV-57
49° 15' N
133° 46' W

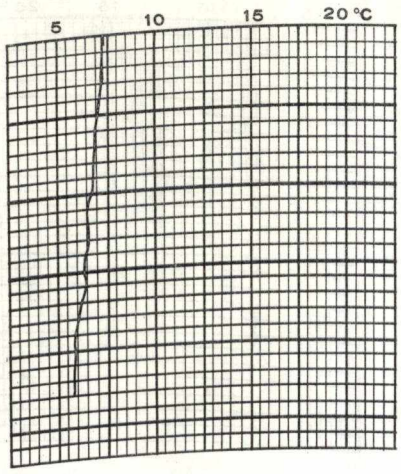


1400/18-IV-57
49° 20' N
134° 58' W

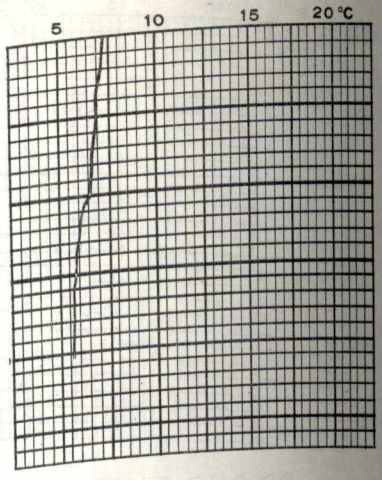
C.G.S. "St. Catharines"



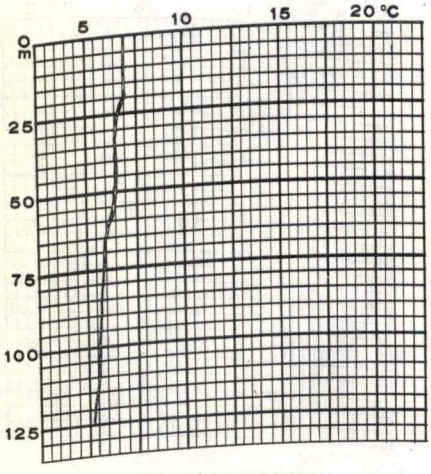
1800/18-IV-57
49° 23' N
136° 05' W



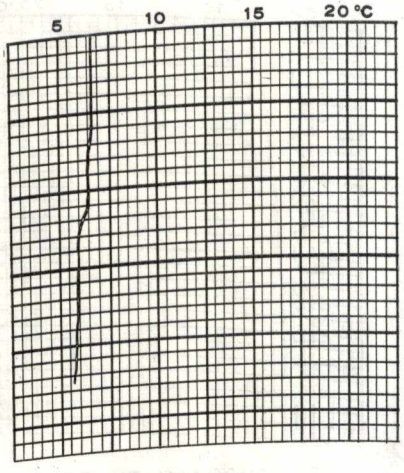
2200/18-IV-57
49° 29' N
137° 15' W



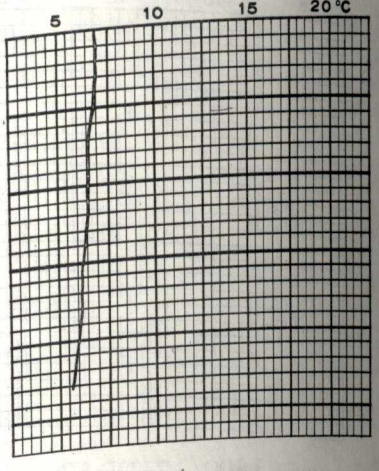
0200/19-IV-57
49° 33' N
138° 22' W



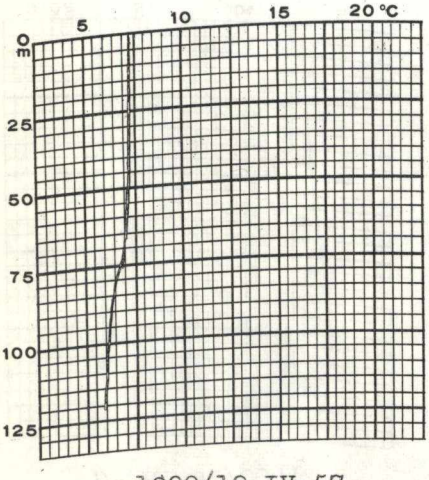
0600/19-IV-57
49° 37' N
139° 28' W



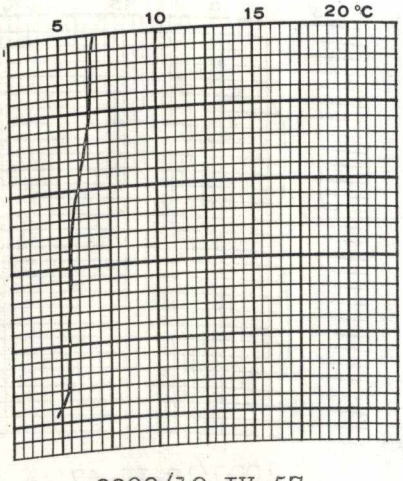
1000/19-IV-57
49° 42' N
140° 41' W



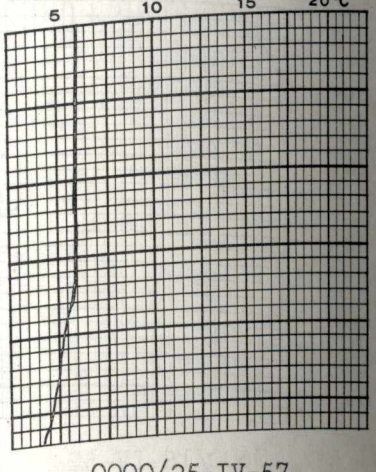
1400/19-IV-57
49° 44' N
141° 45' W



1800/19-IV-57
49° 48' N
142° 54' W

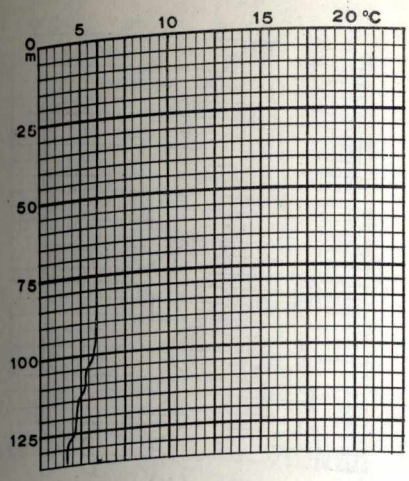


2200/19-IV-57
49° 53' N
143° 37' W

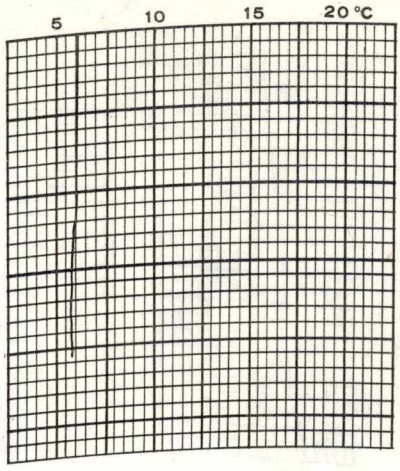


0000/25-IV-57
Grid OJ

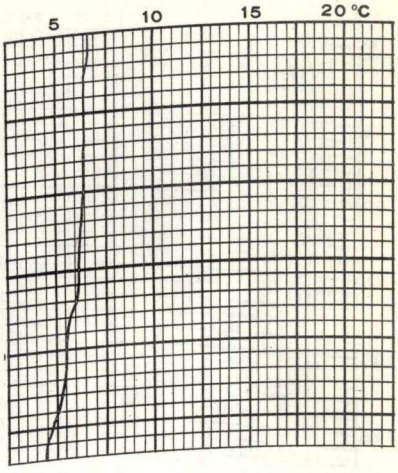
C.G.S. "St. Catharines"



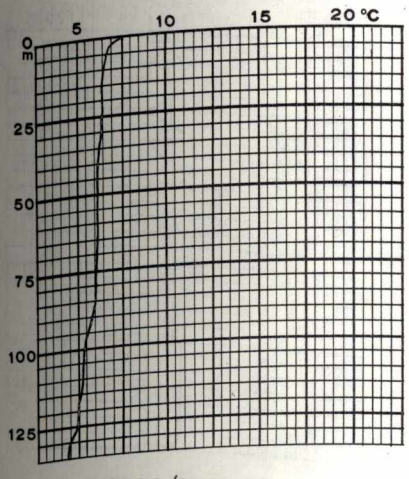
0000/26-IV-57
Grid OS



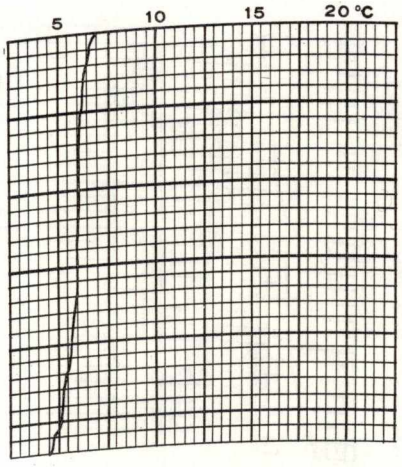
0000/27-IV-57
Grid OJ



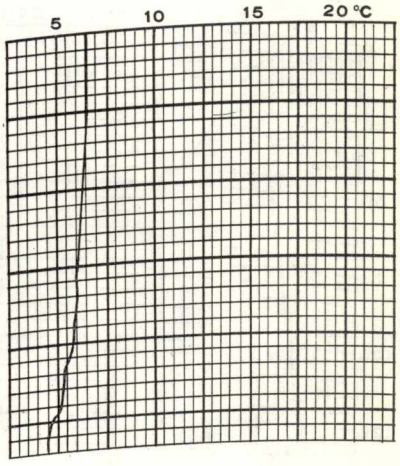
0000/28-IV-57
Grid OS



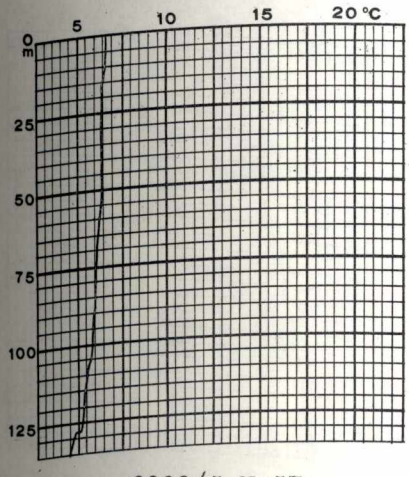
0000/1-V-57
Grid OS



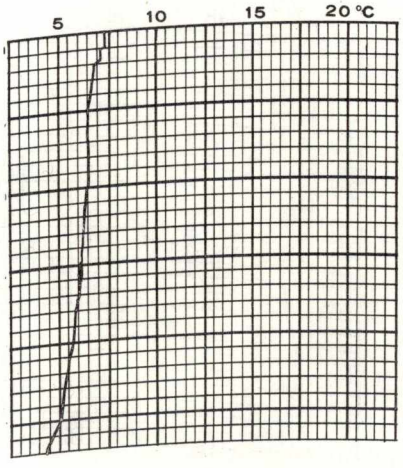
0000/2-V-57
Grid OS



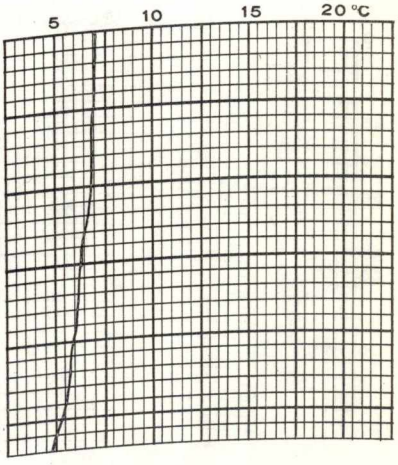
0000/4-V-57
Grid OK



0000/5-V-57
Grid OS

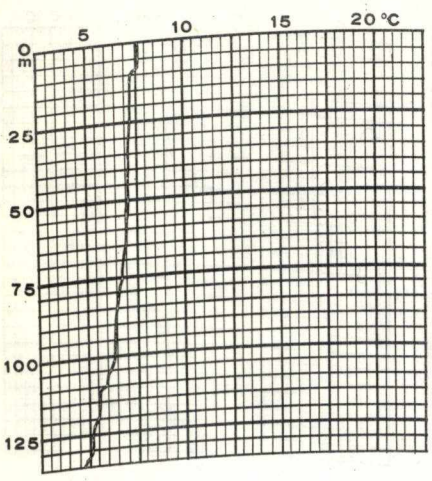


0000/6-V-57
Grid OS

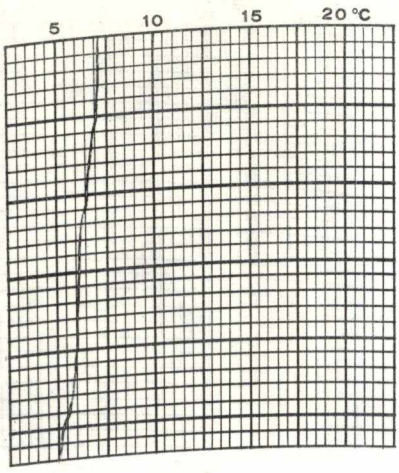


0000/8-V-57
Grid OK

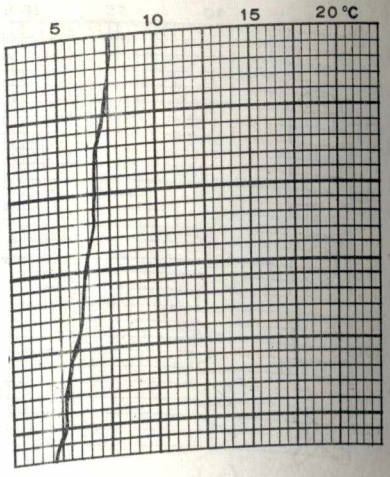
C.G.S. "St. Catharines"



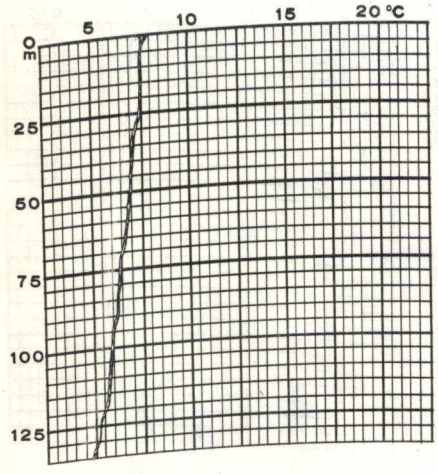
0000/9-V-57
Grid KJ



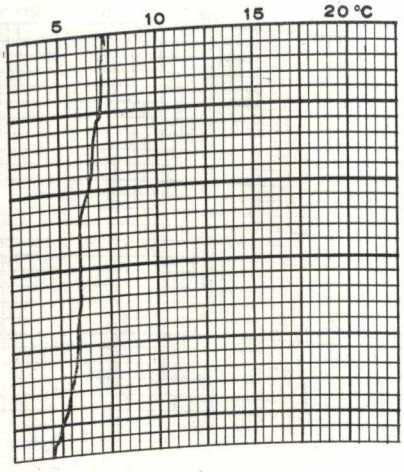
0000/10-V-57
Grid OS



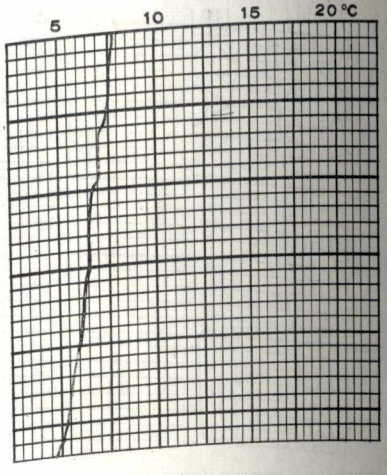
0000/11-V-57
Grid OS



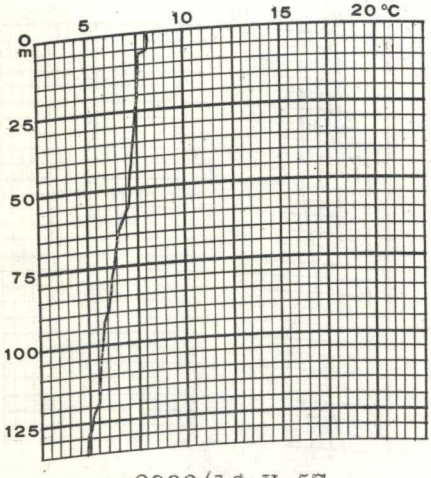
0000/12-V-57
Grid OS



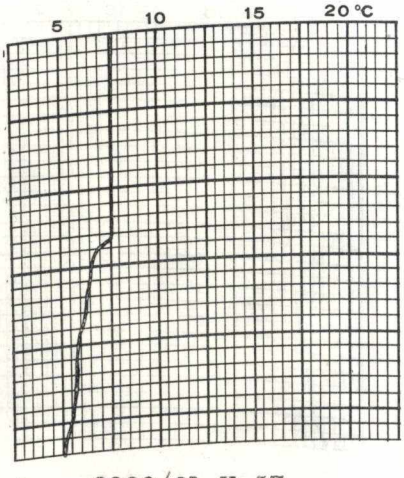
0000/13-V-57
Grid KS



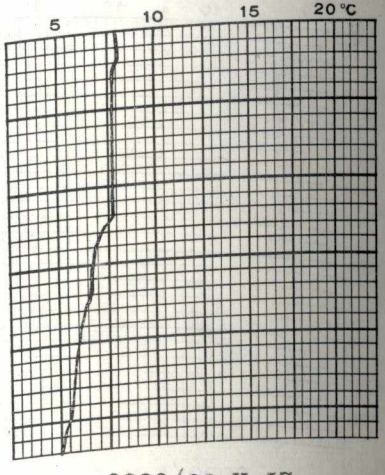
0000/14-V-57
Grid OS



0000/18-V-57
Grid OS

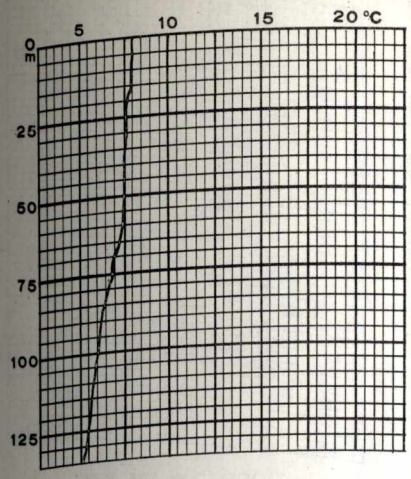


0000/21-V-57
Grid KK

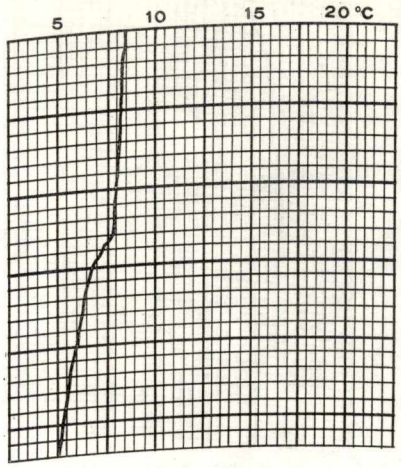


0000/22-V-57
Grid OS

C.G.S. "St. Catharines"



0000/23-V-57
Grid OS



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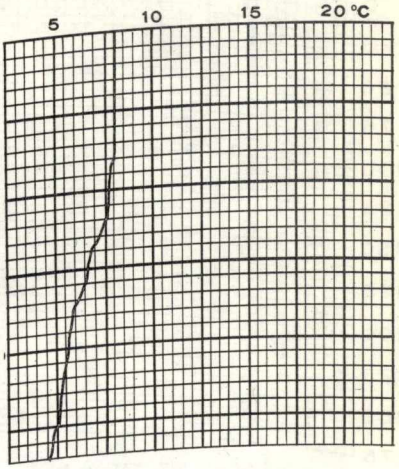
Grid OS



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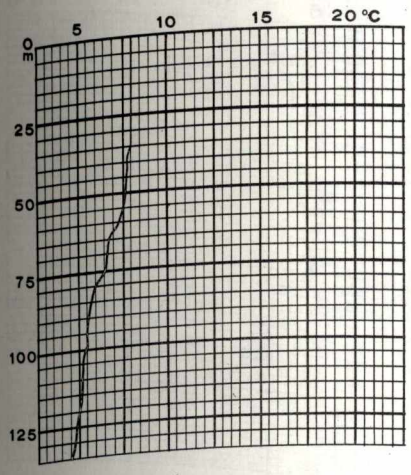
Grid OS



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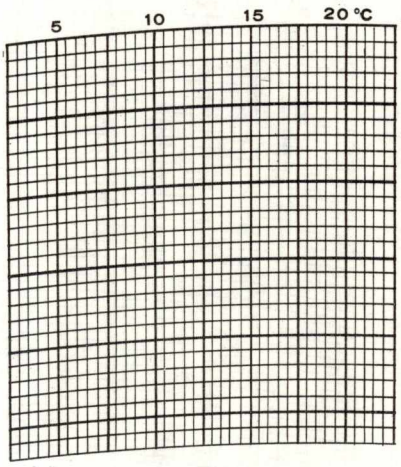
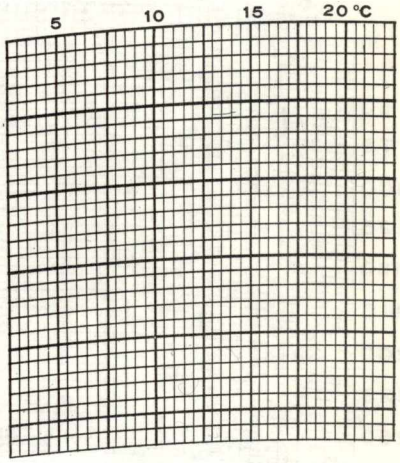
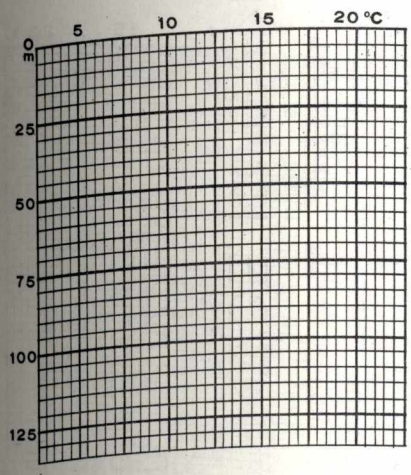
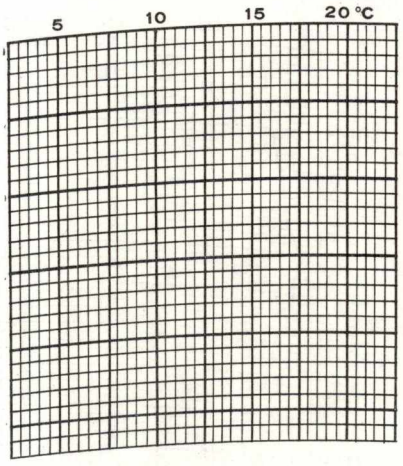
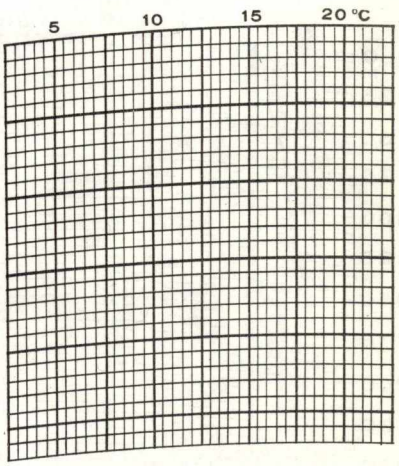
Grid OS



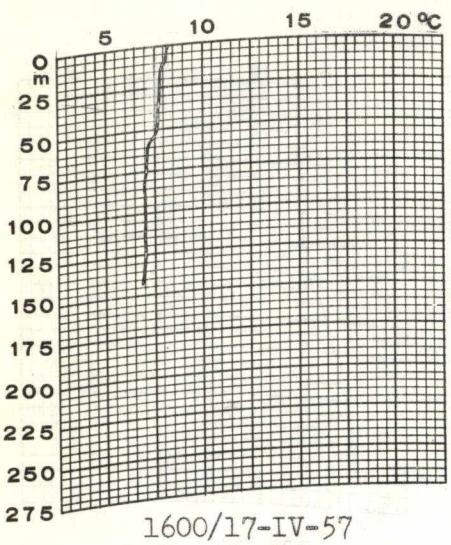








C.G.S. "St. Catharines"



1600/17-IV-57
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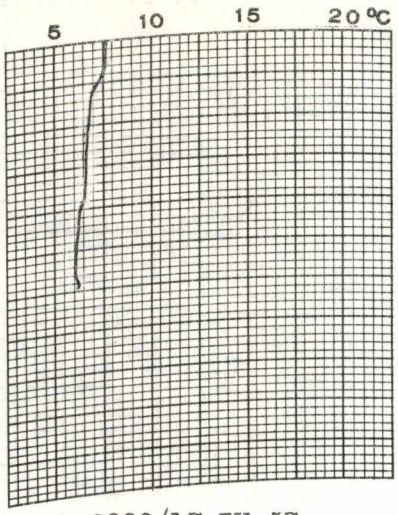
128° 27' W



2000/17-IV-57
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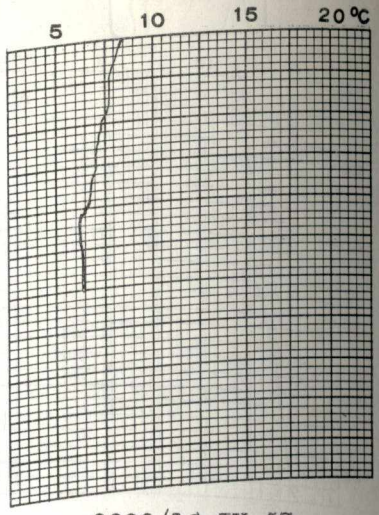

0000/18-IV-57
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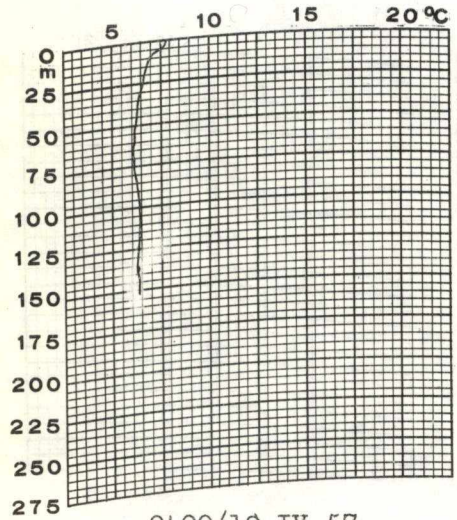

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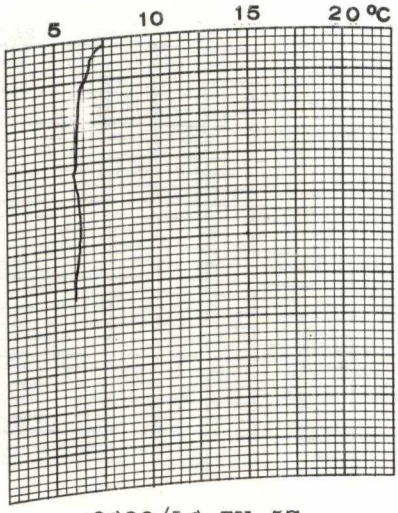
49° 06' N
131° 55' W



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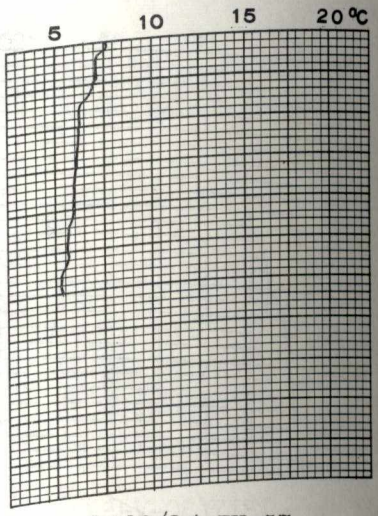

1200/18-IV-57
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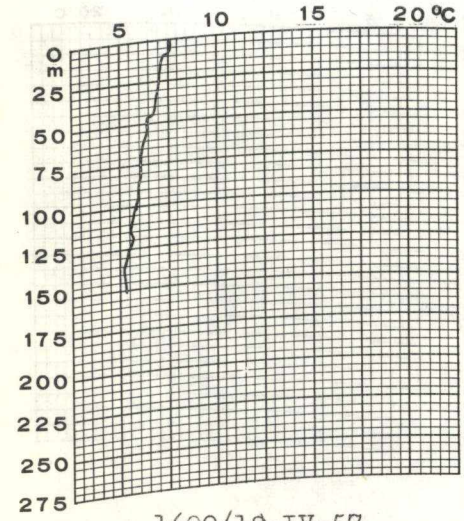
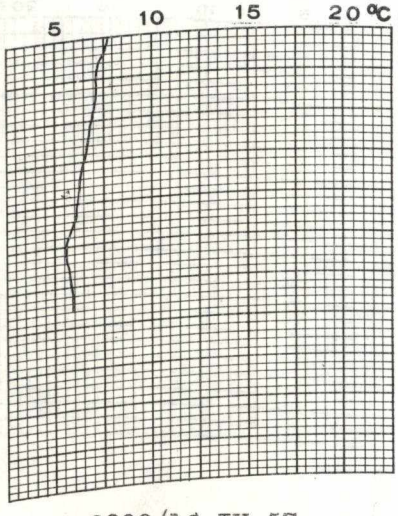


1600/18-IV-57
49° 22' N
135° 30' W



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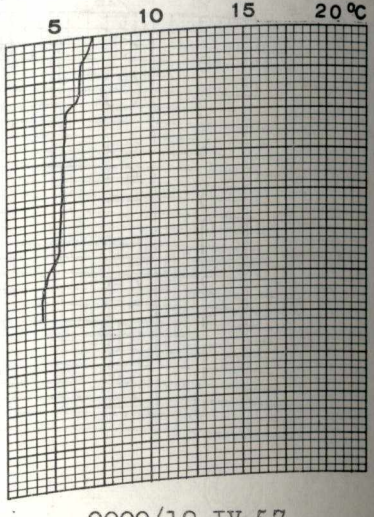
49° 28' N
136° 36' W



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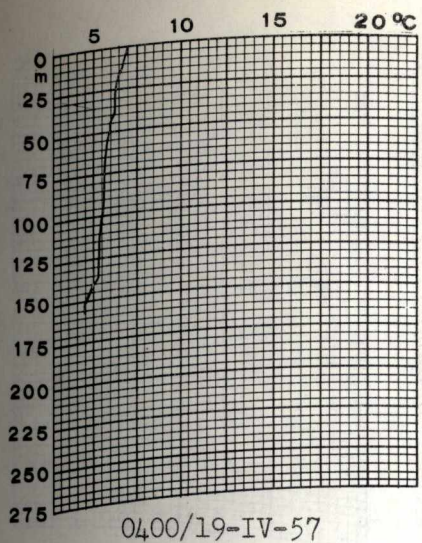
137° 43' W

C.G.S. "St. Catharines"



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49° 37' N
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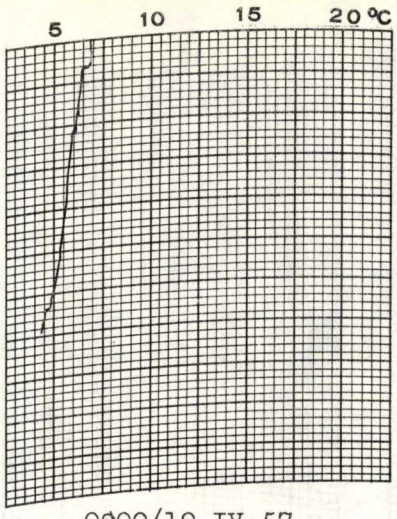

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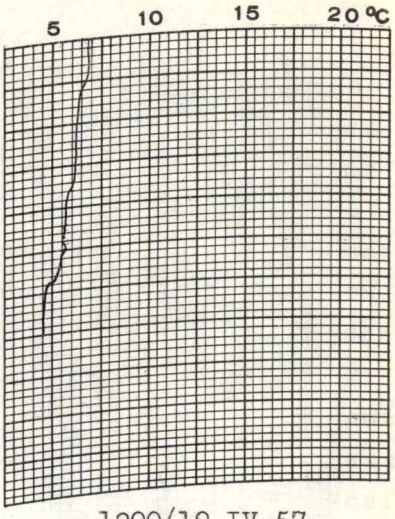
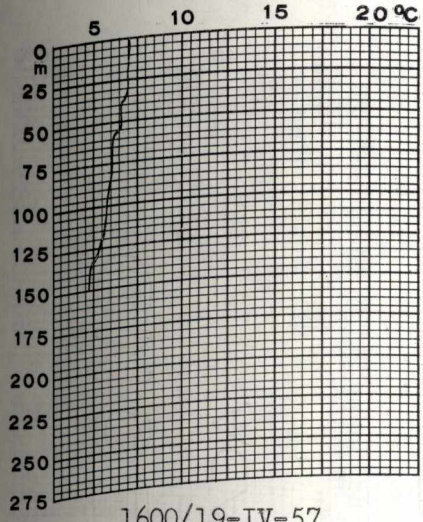
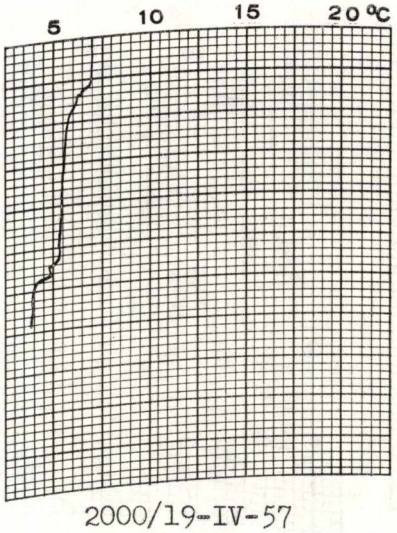
49° 35' N
140° 06' W



1200/19-IV-57
49° 44' N
141° 12' W



1600/19-IV-57
49° 46' N
142° 17' W



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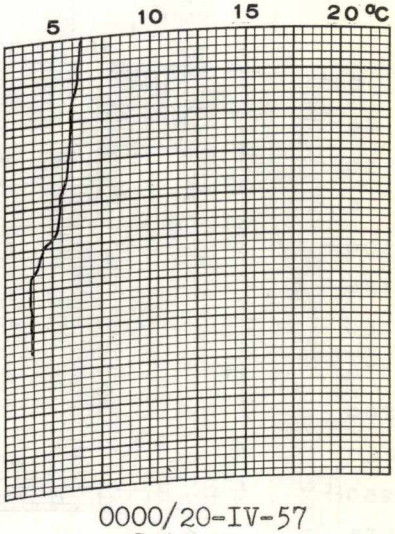
143° 28' W



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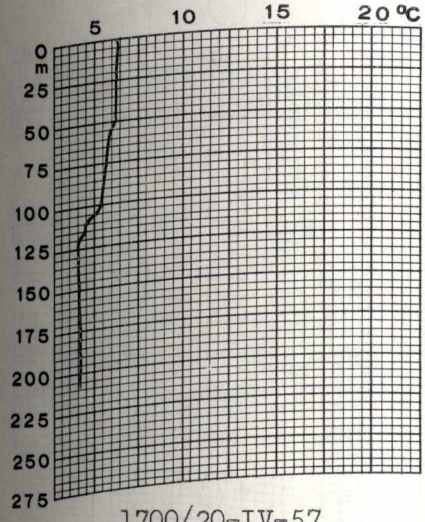
Grid OL



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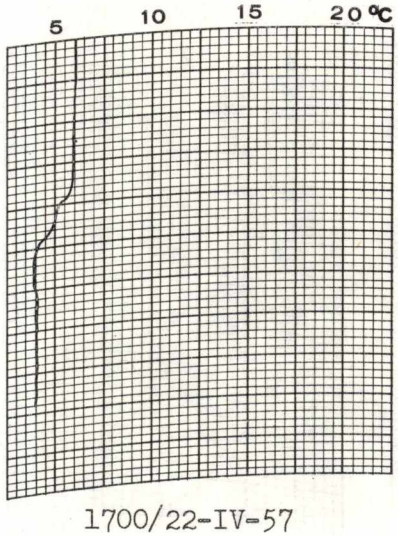

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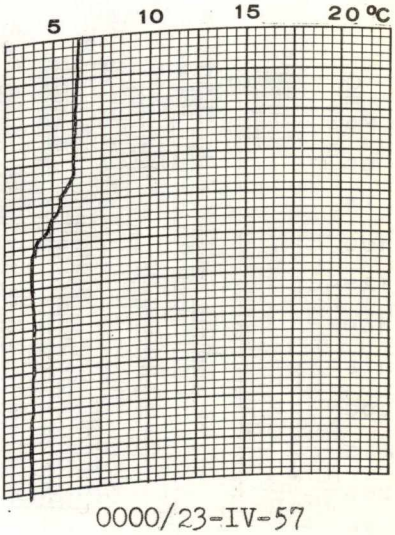
Grid KJ



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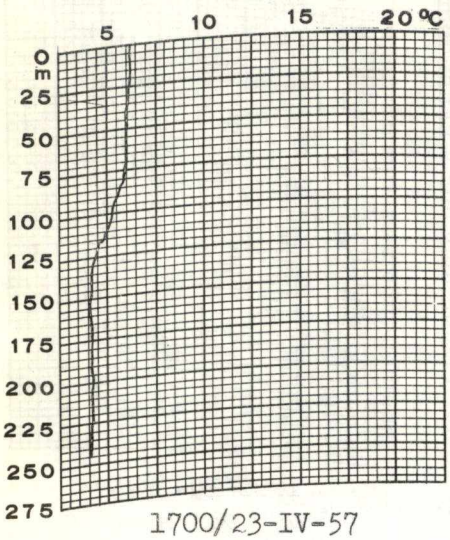
Grid OS

C.G.S. "St. Catharines"



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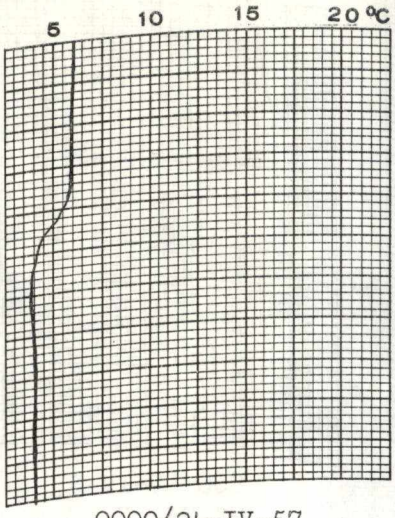

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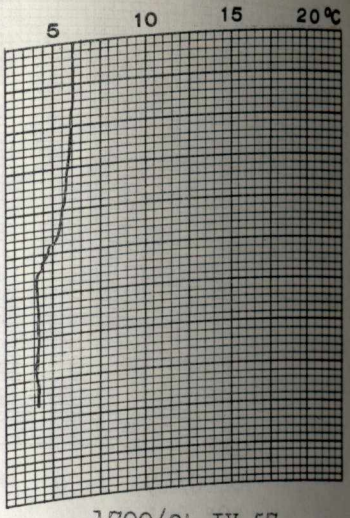
Grid OS



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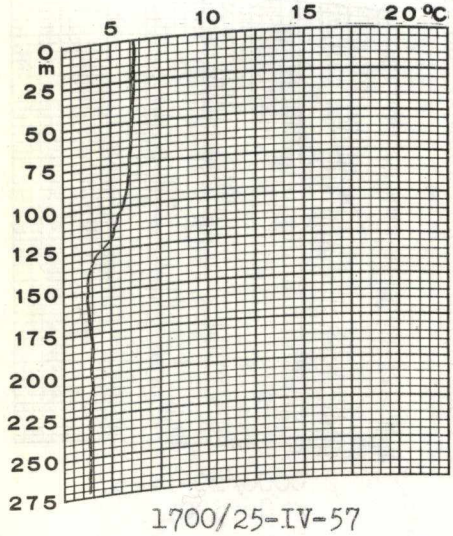

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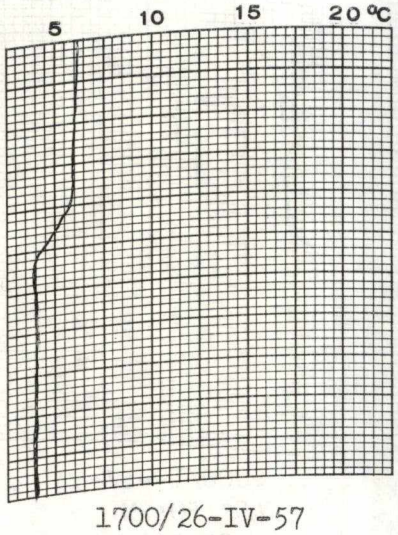
Grid OS



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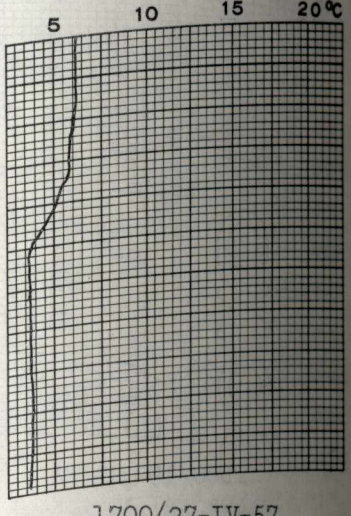
Grid OS



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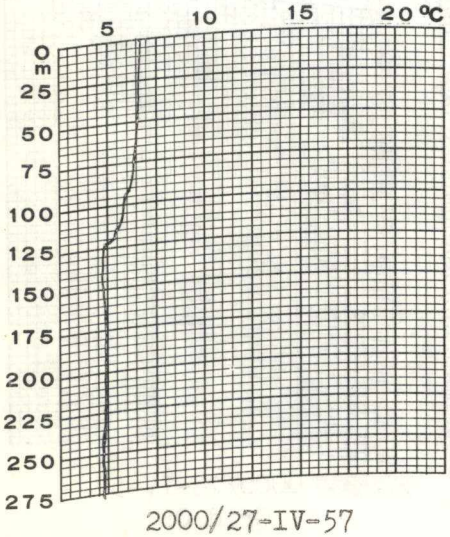

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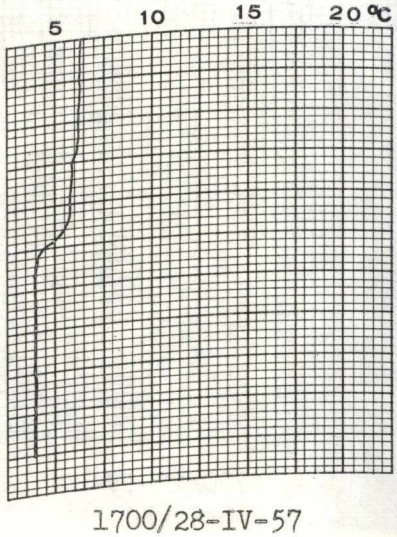
Grid OS



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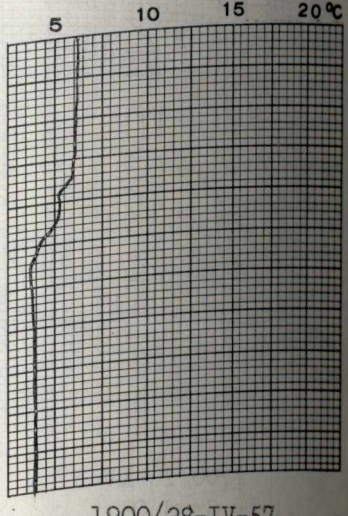
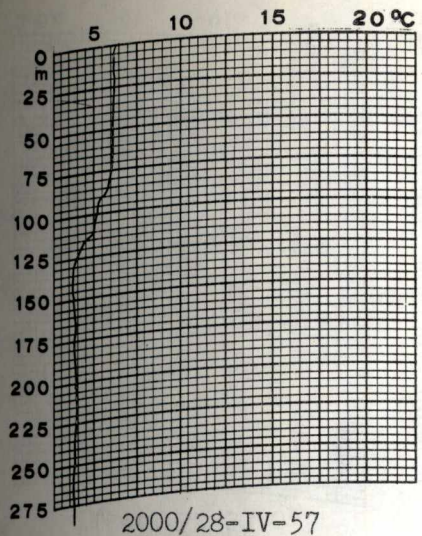
Grid OS



1900/28-IV-57
Grid OS

C.G.S. "St. Catharines"



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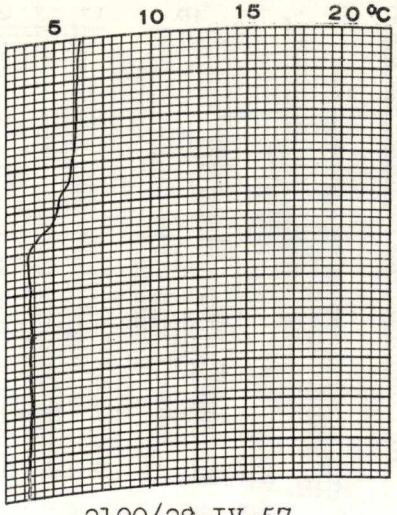
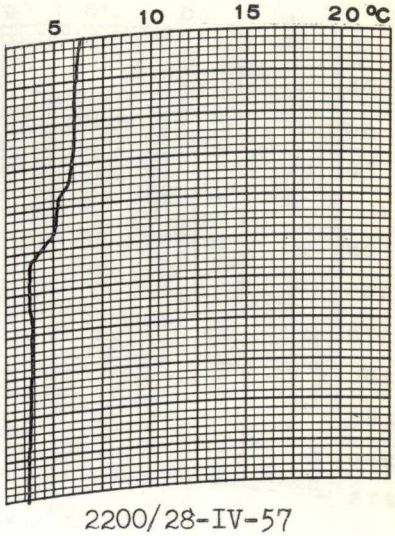
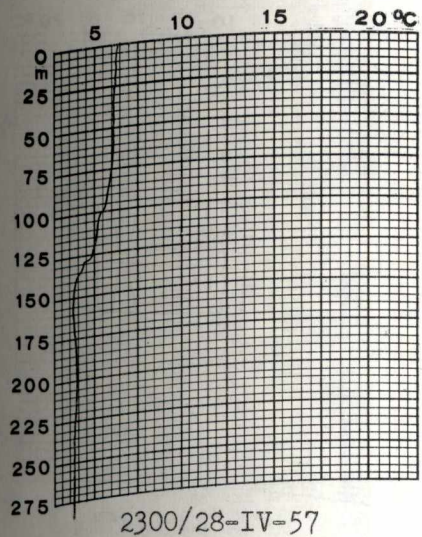
Grid OS



2100/28-IV-57
Grid OS



2200/28-IV-57
Grid OS



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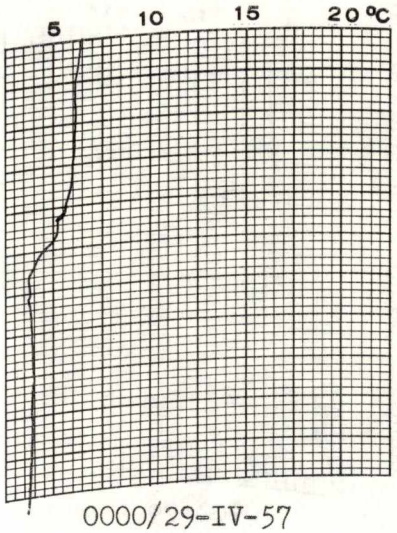

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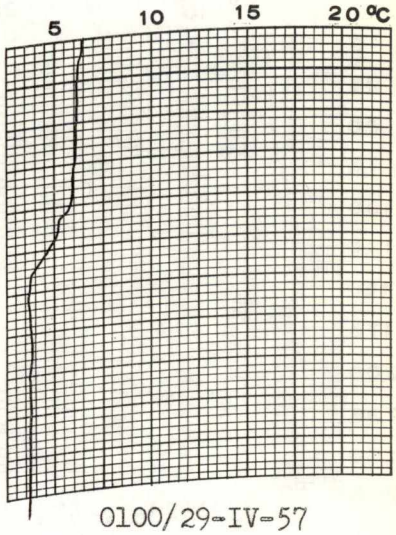
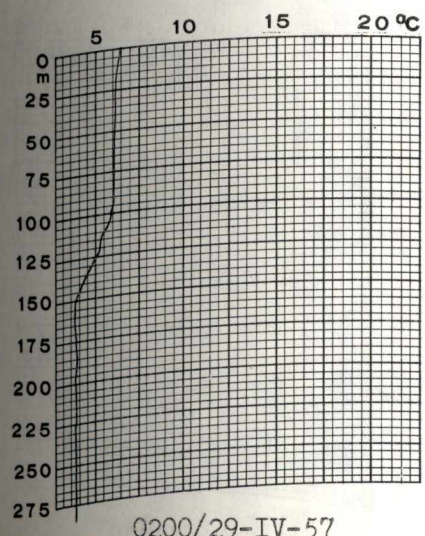
Grid OS



0100/29-IV-57
Grid OS



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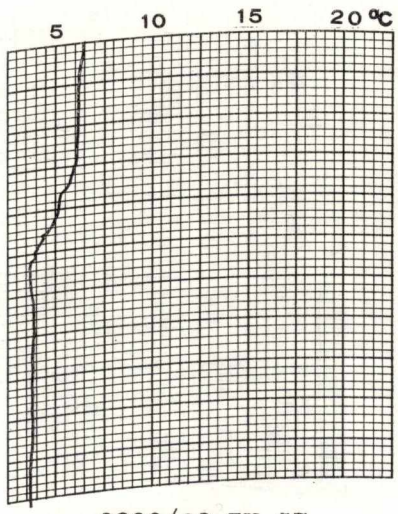

0300/29-IV-57
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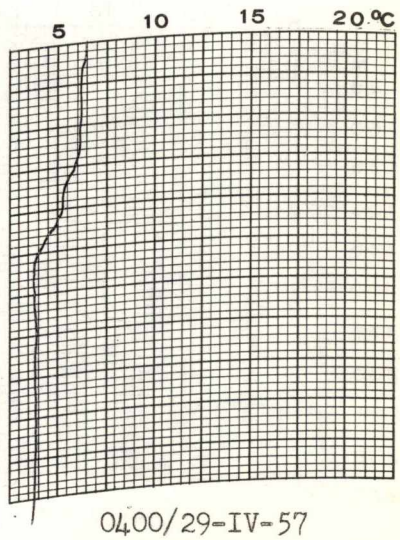

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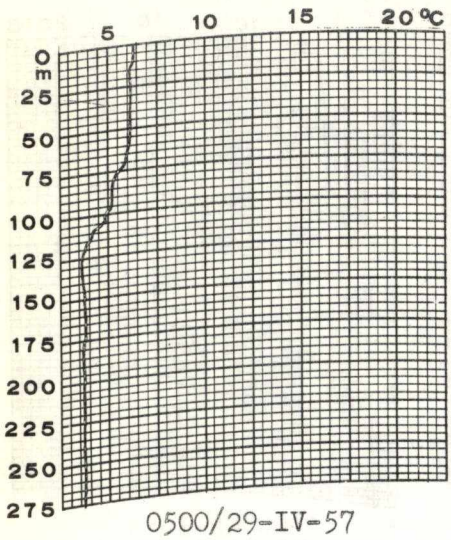
C.G.S. "St. Catharines"



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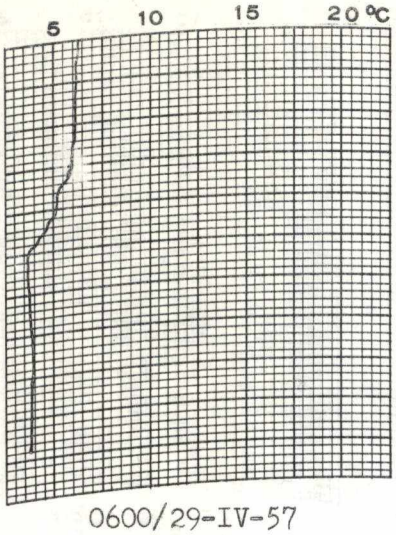
Grid OS



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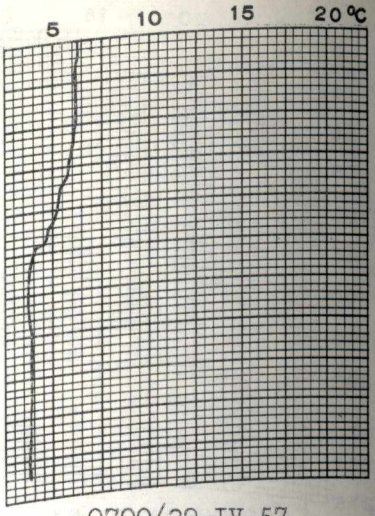

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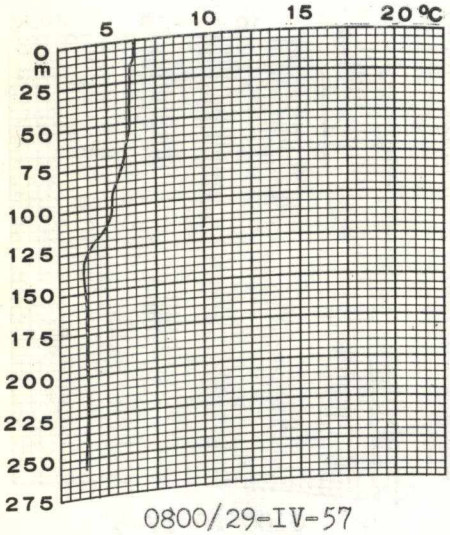

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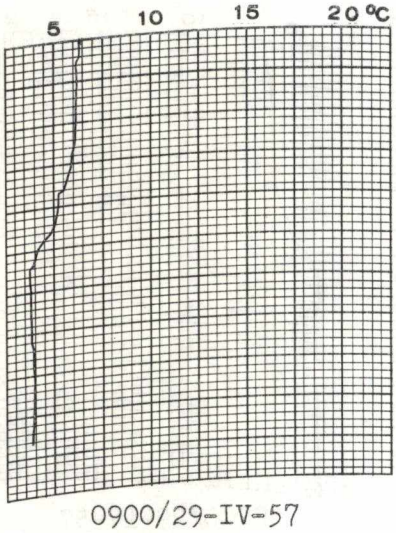

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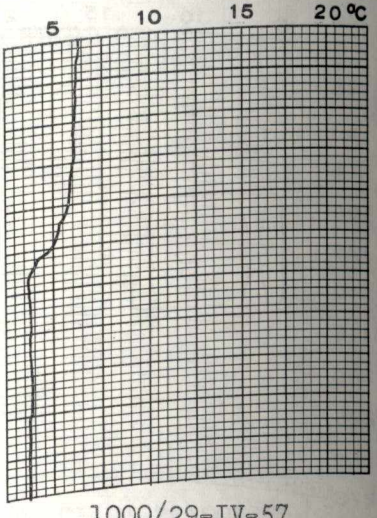

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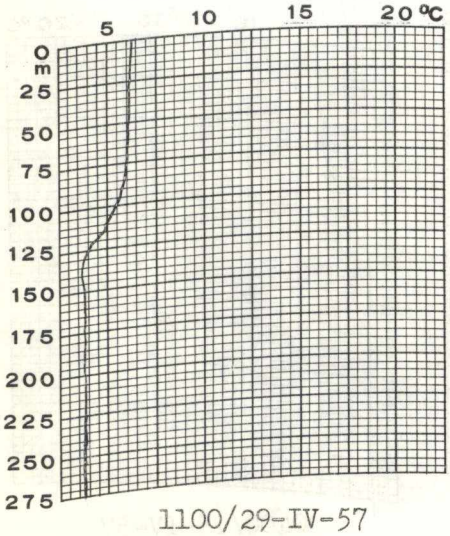
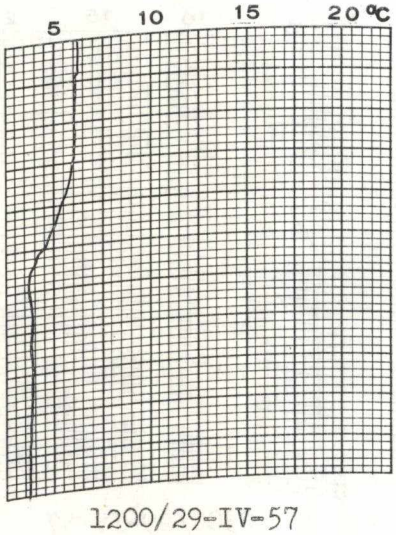
Grid OS



1100/29-IV-57
Grid OS



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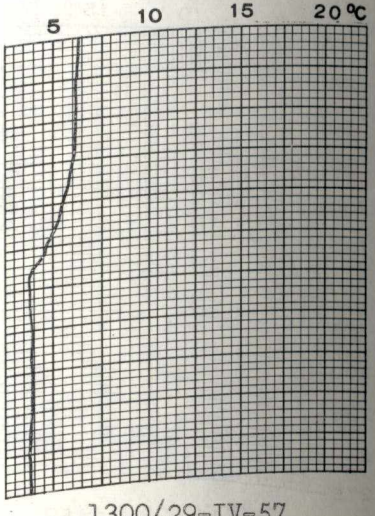
Grid OS



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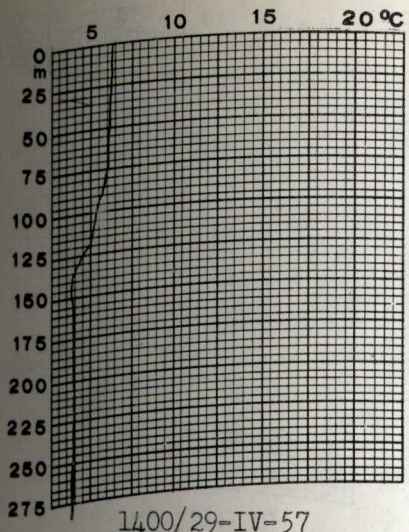
Grid OS

C.G.S. "St. Catharines"



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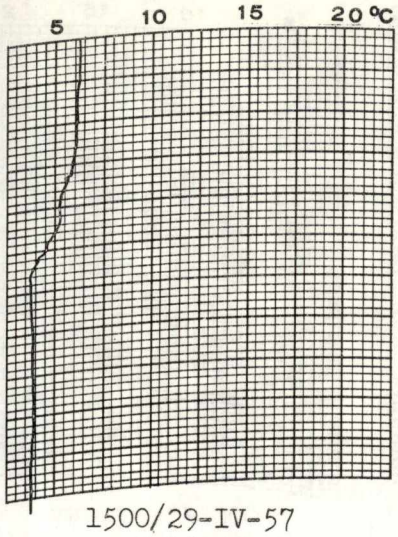
Grid OS



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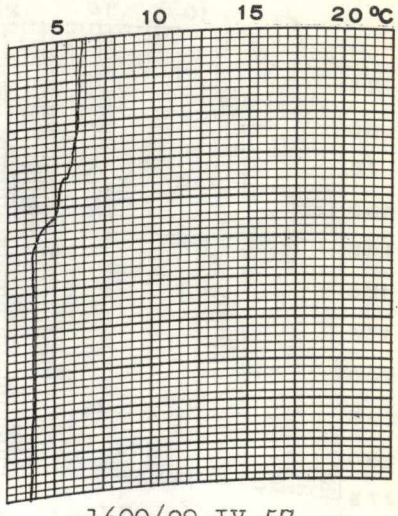
Grid OS



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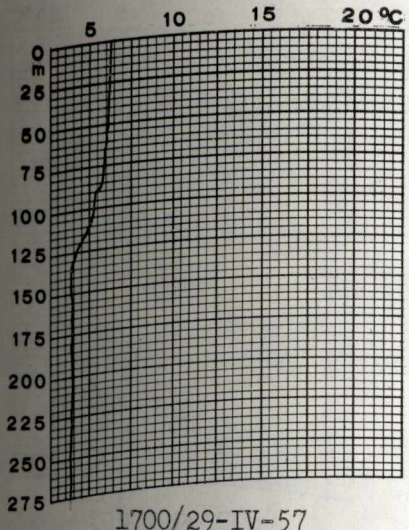
Grid OS



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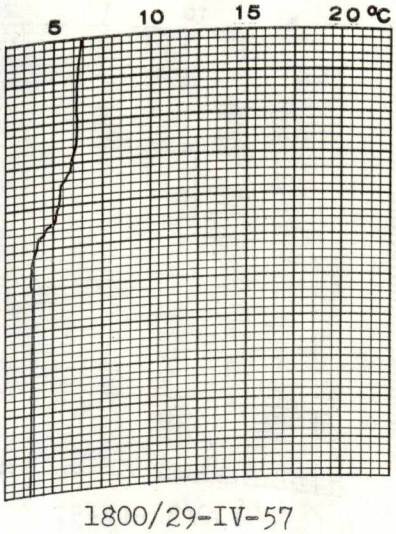

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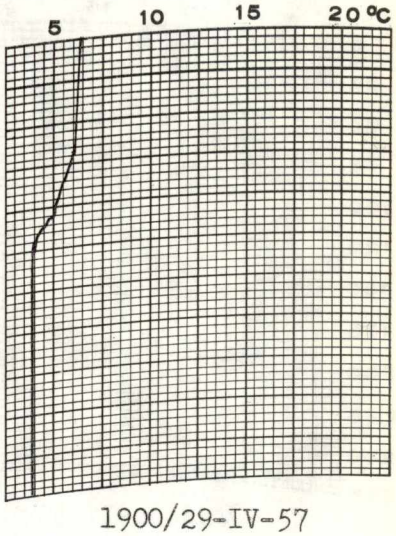
Grid JS



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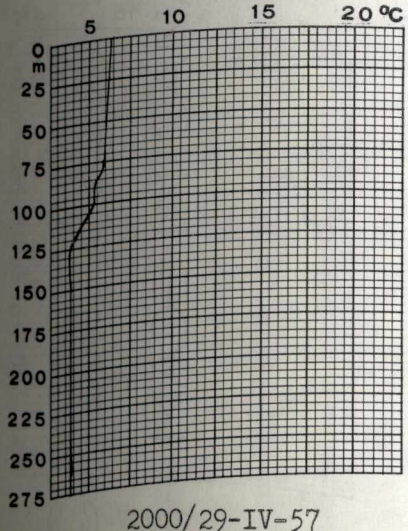

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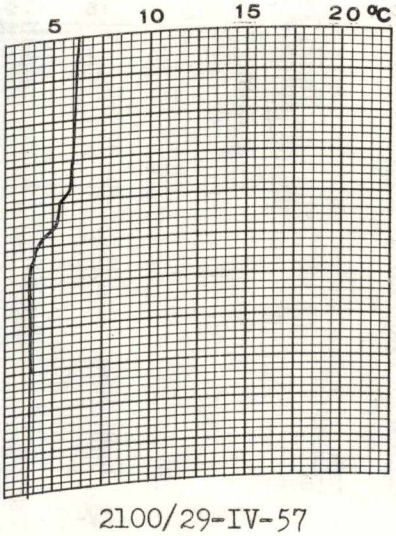
Grid JS



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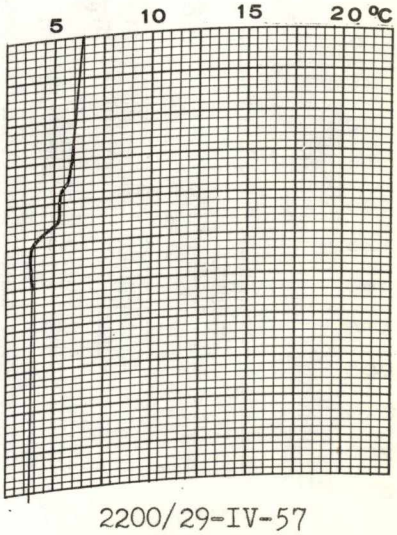

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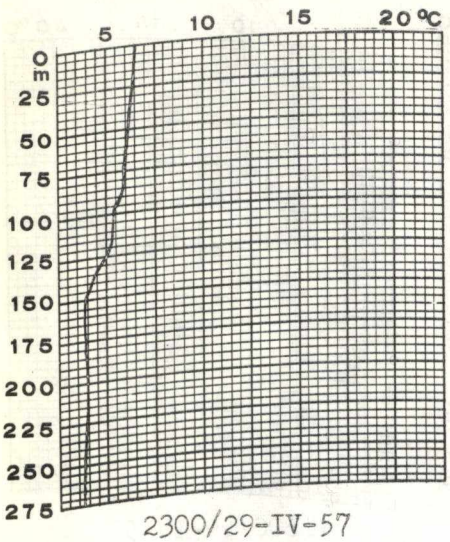
Grid JS

C.G.S. "St. Catharines"



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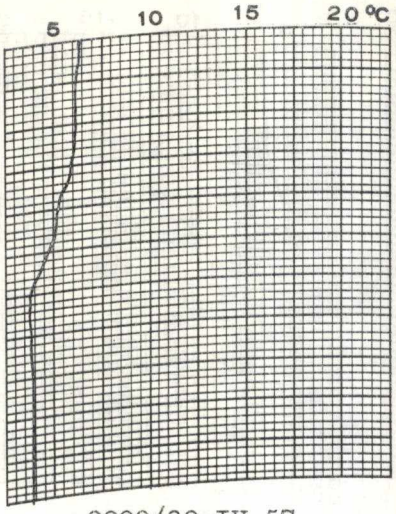
Grid JS



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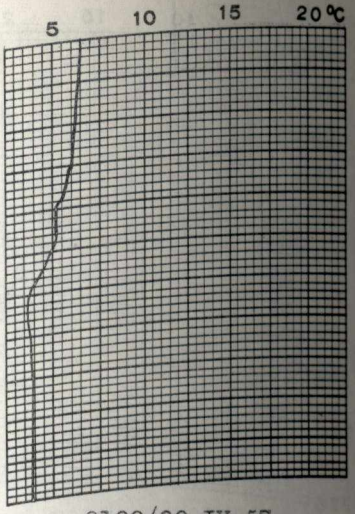

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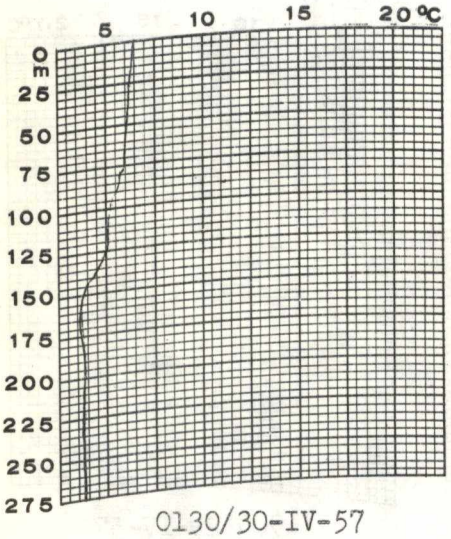

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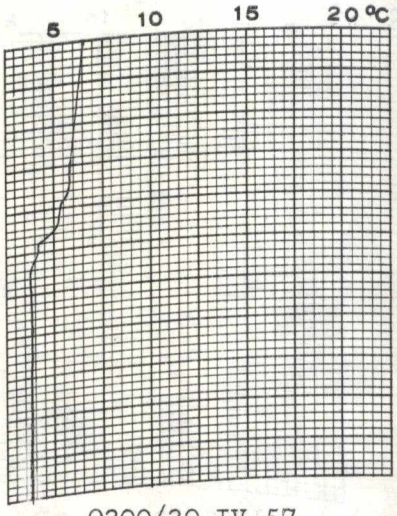
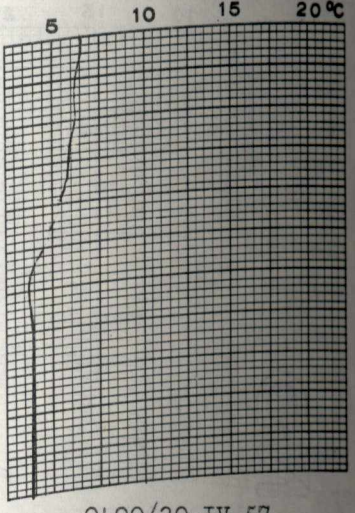


0300/30-IV-57
Grid JK



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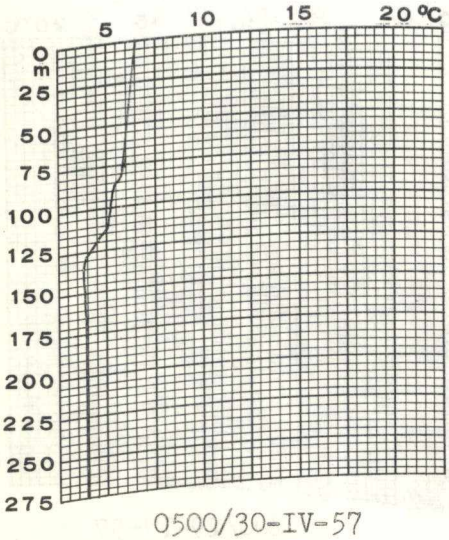

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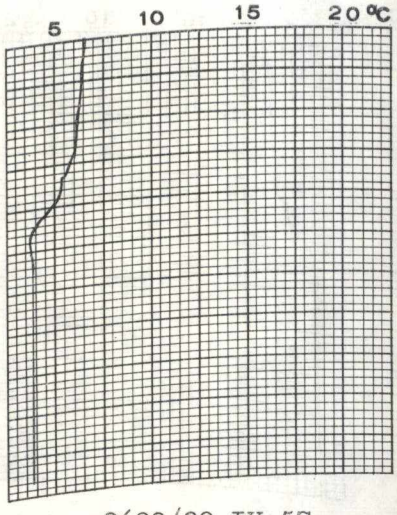

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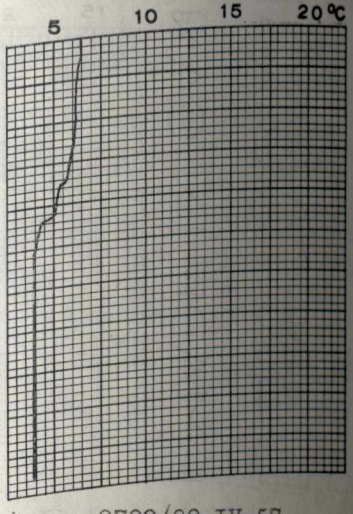

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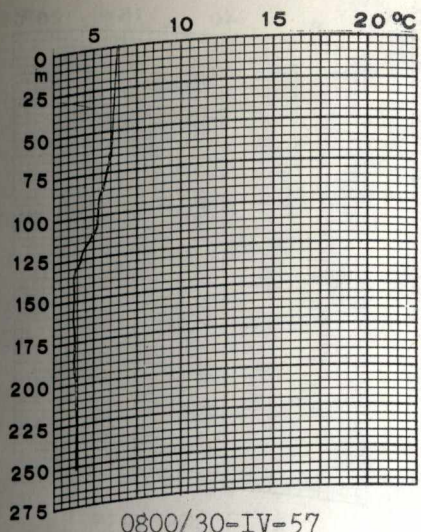
C.G.S. "St. Catharines"



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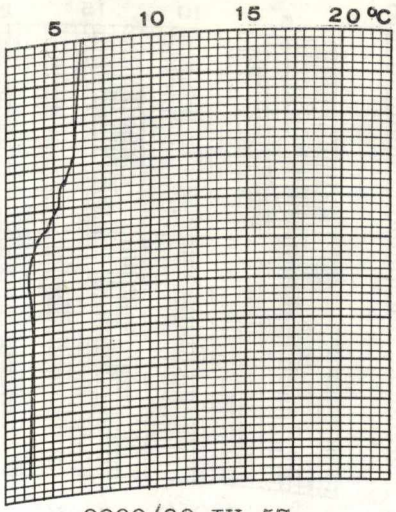

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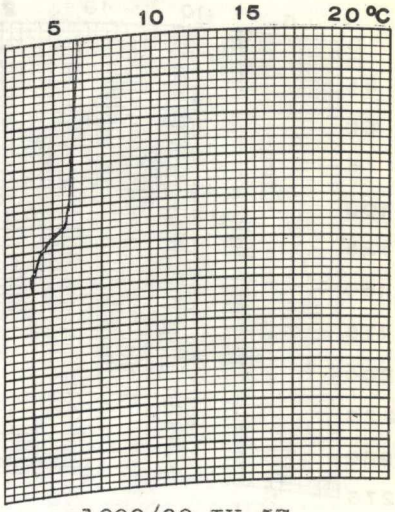

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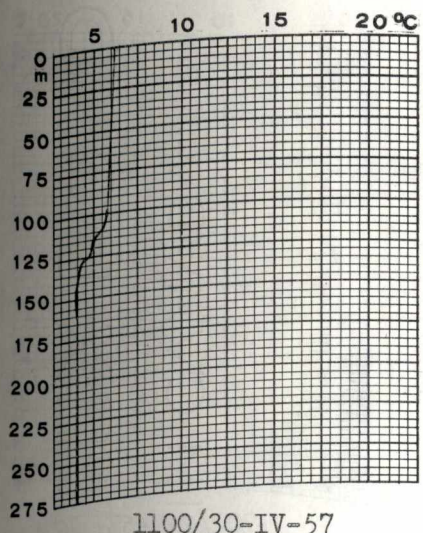

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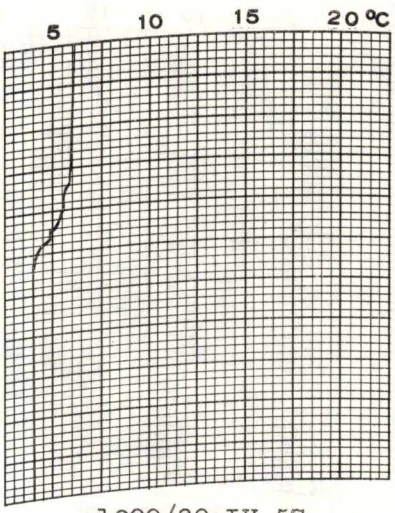

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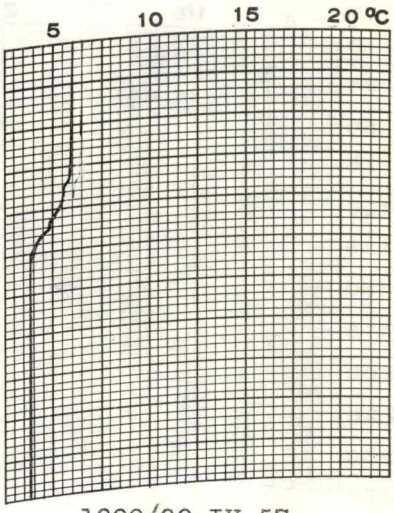

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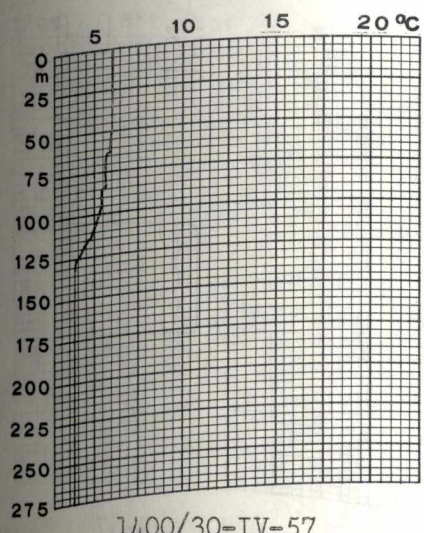
Grid OS



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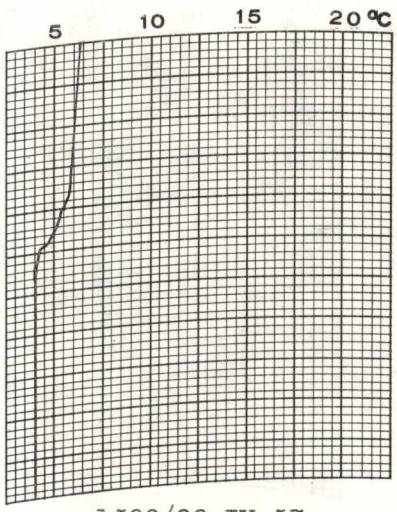

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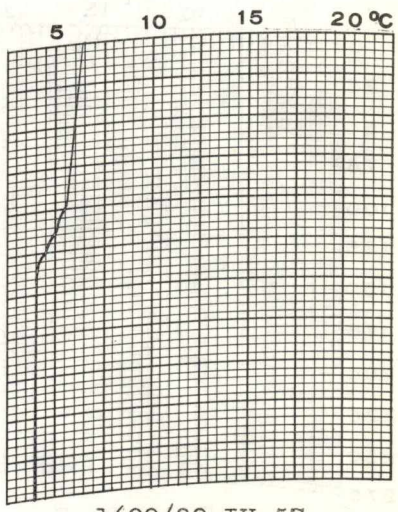

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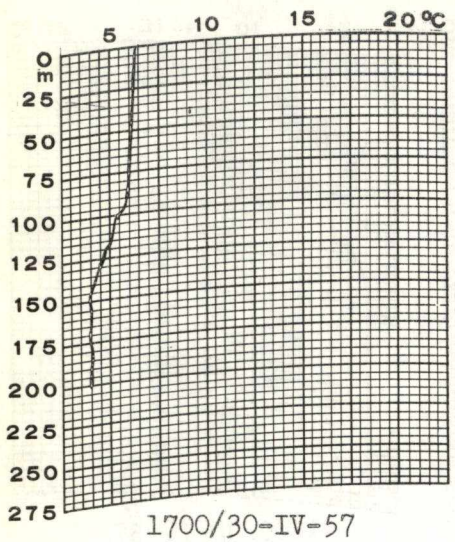
Grid OS

C.G.S. "St. Catharines"



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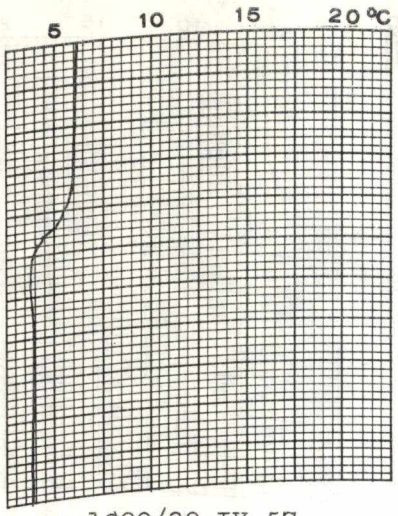

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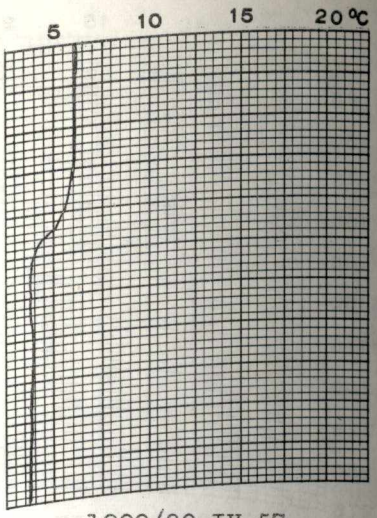

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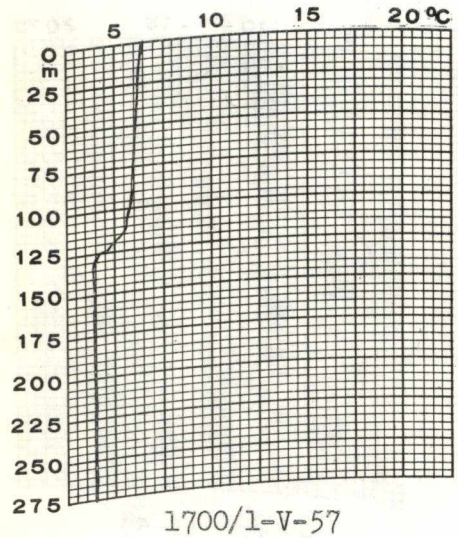

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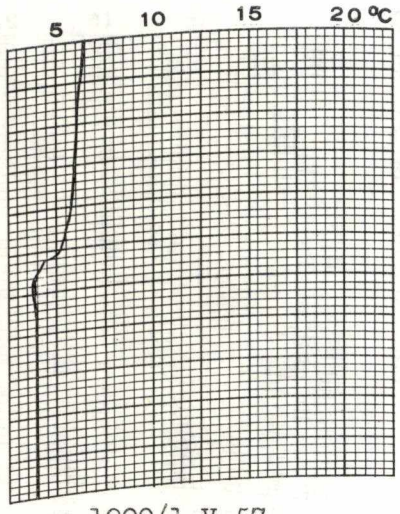
Grid OS



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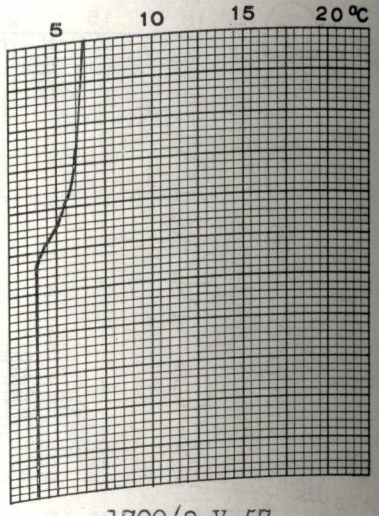

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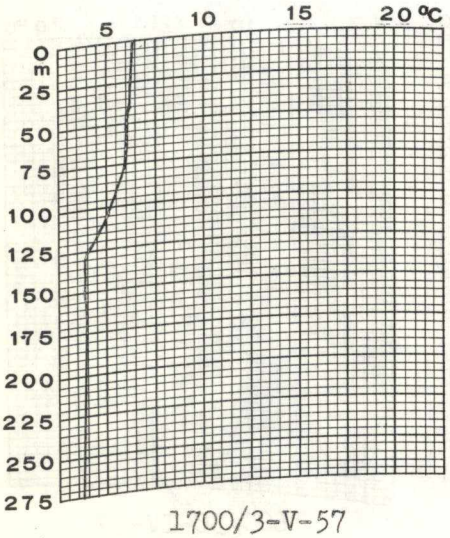

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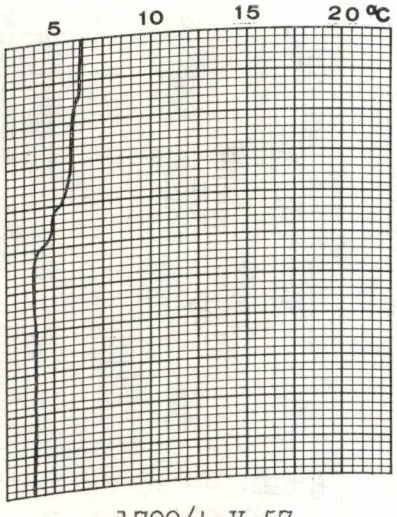

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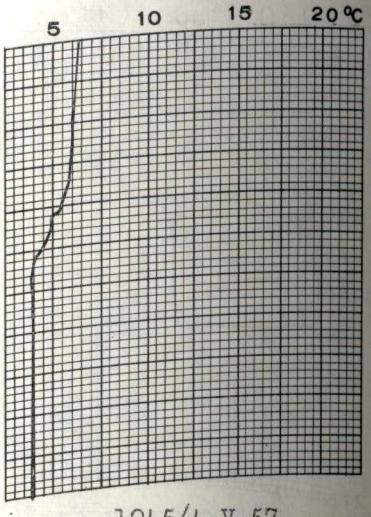

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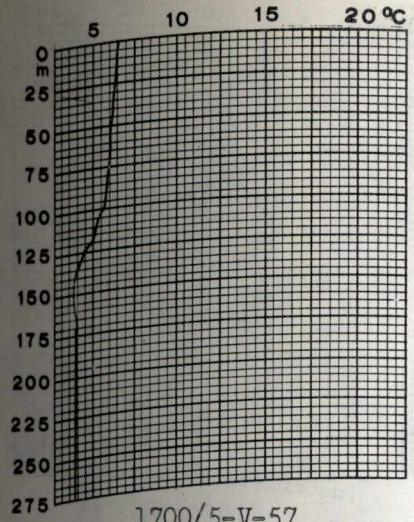
C.G.S. "St. Catharines"



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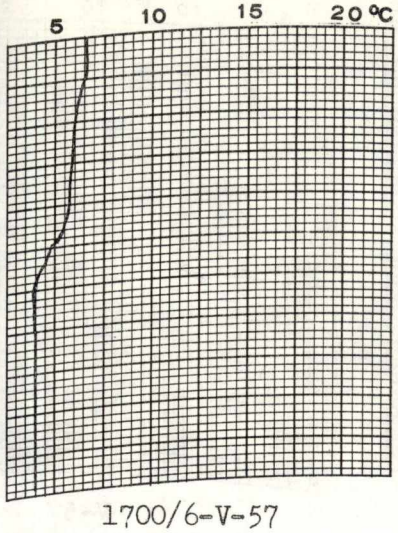

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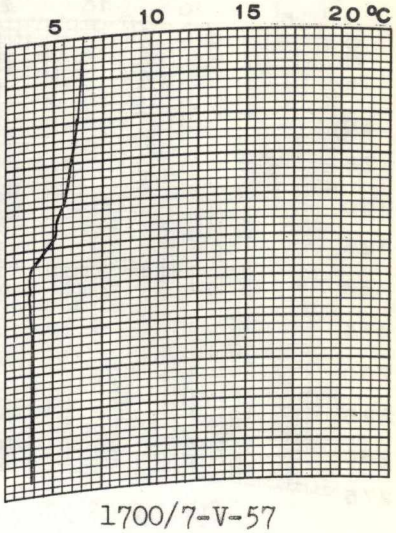

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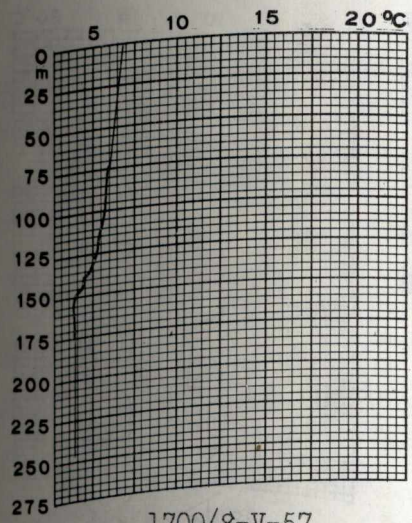

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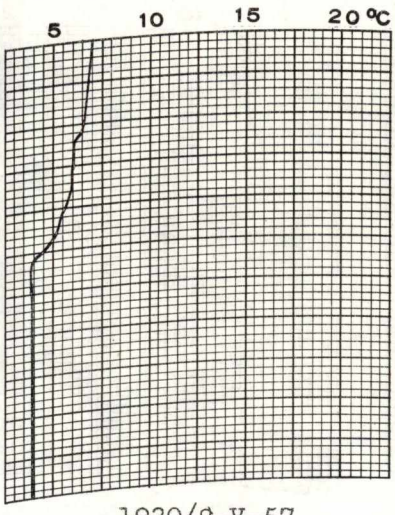

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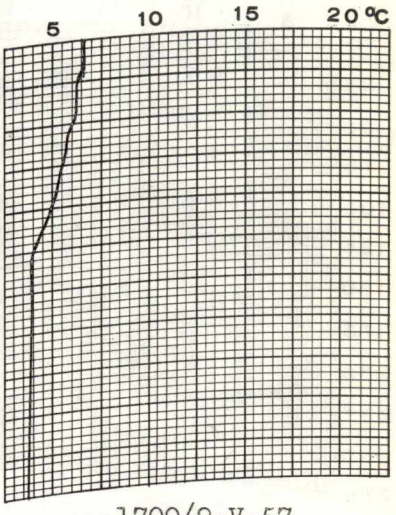
Grid OS



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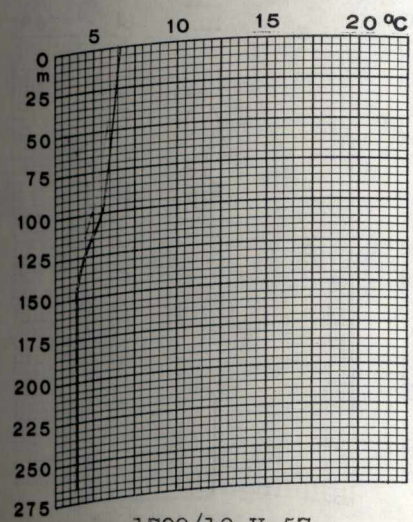
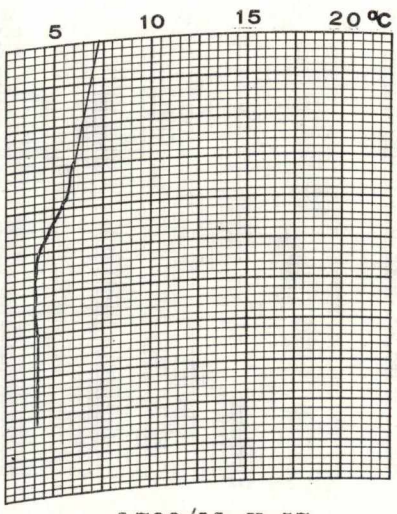


1700/10-V-57
Grid JS



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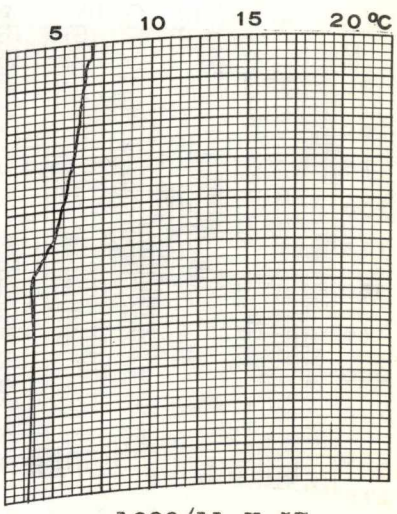

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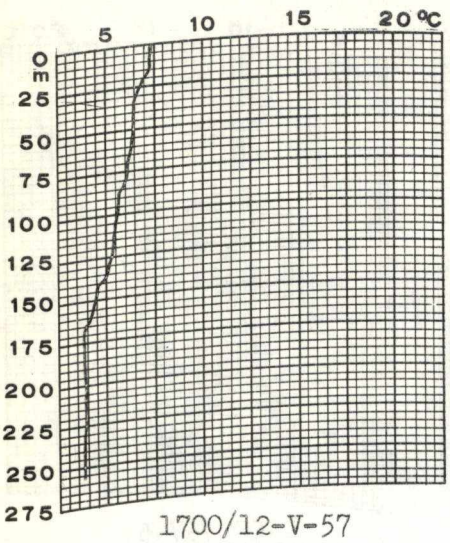
C.G.S. "St. Catharines"



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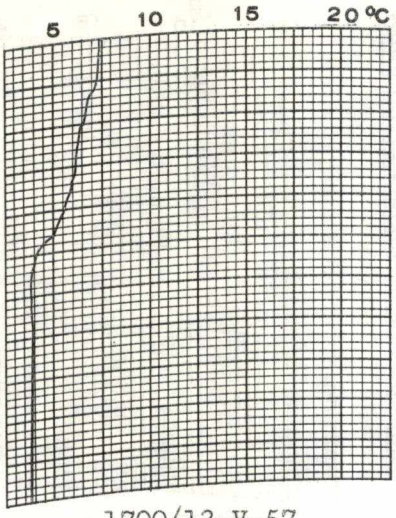

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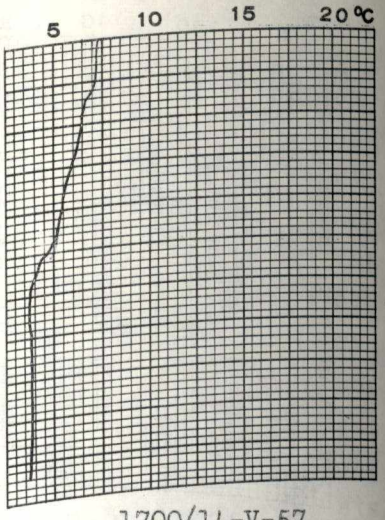

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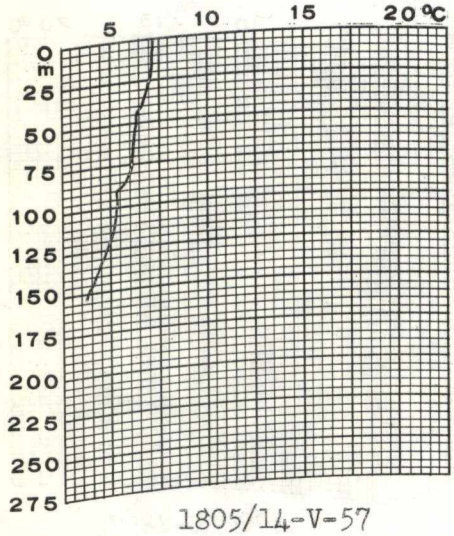

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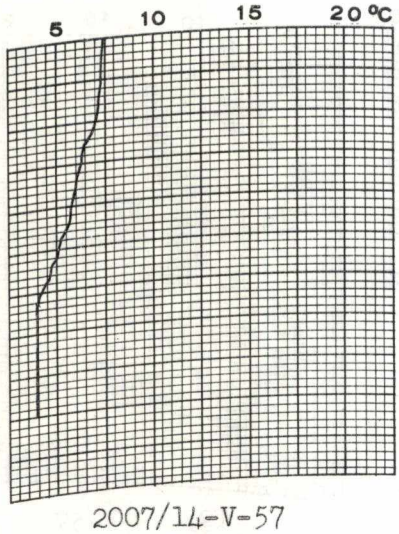

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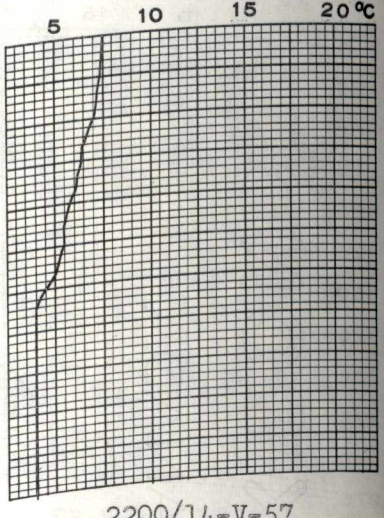

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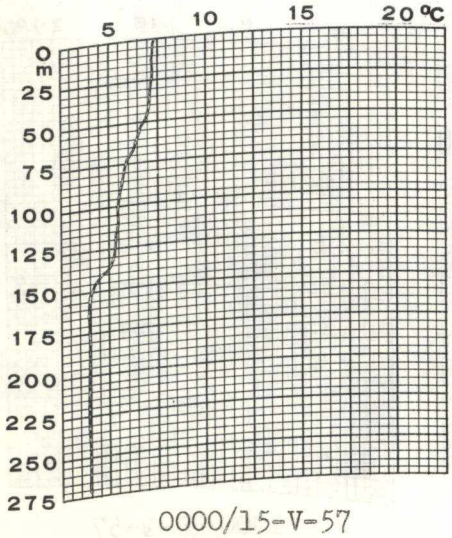

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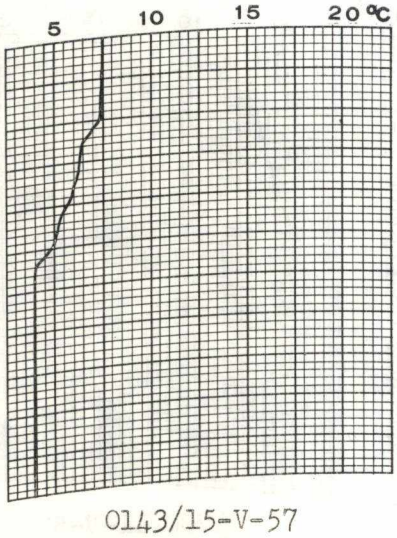

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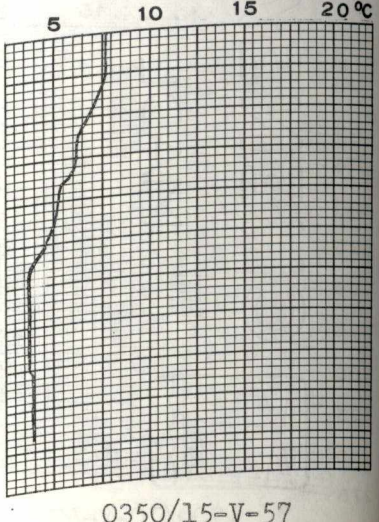

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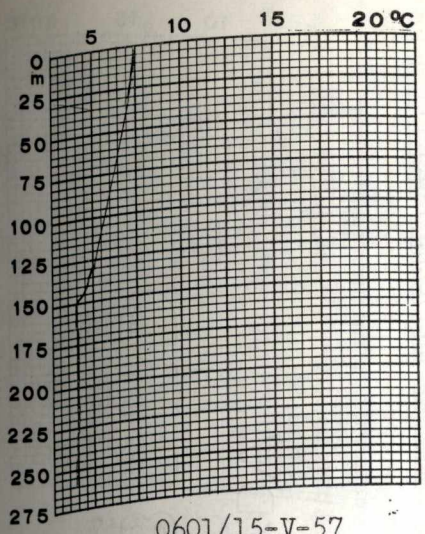
C.G.S. "St. Catharines"



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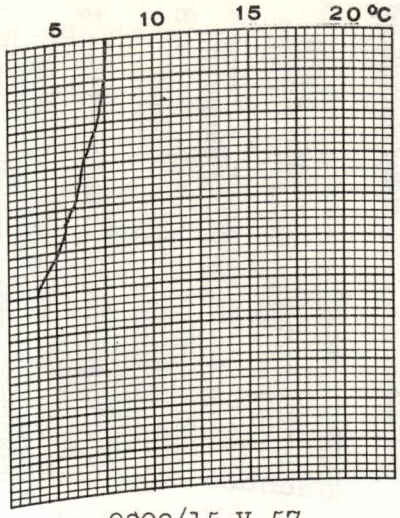
Grid KS



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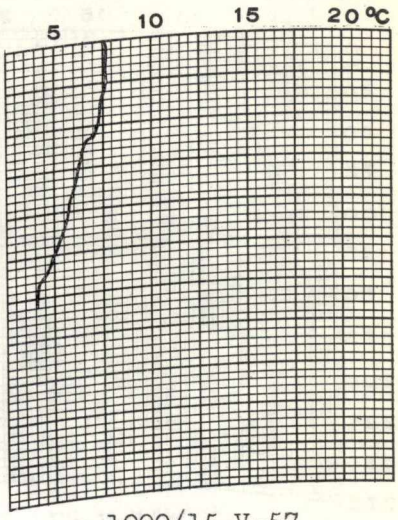

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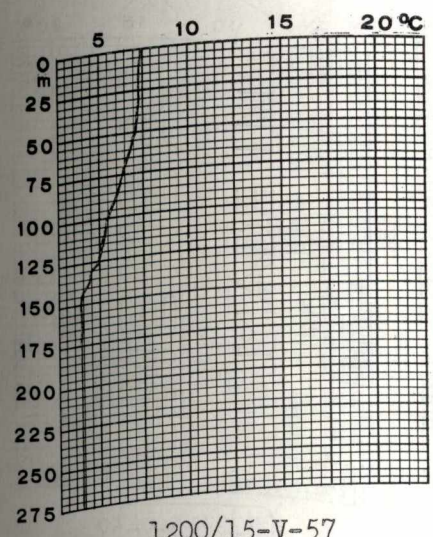

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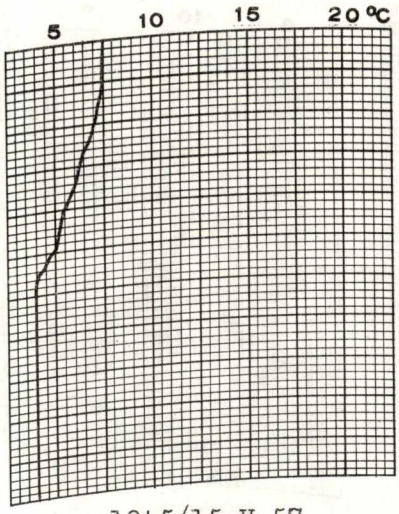

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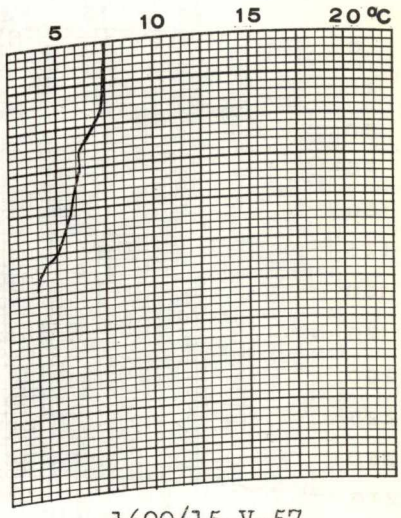

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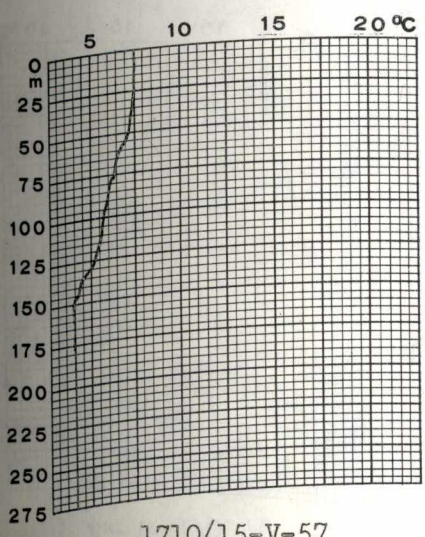

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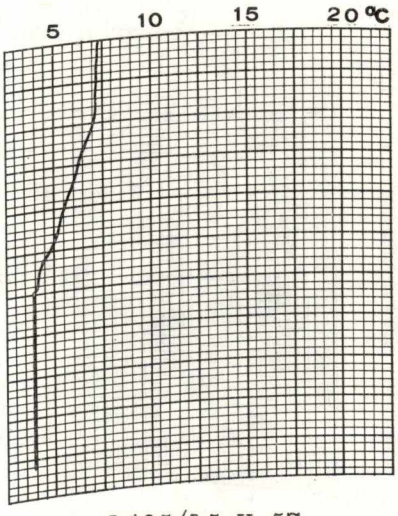

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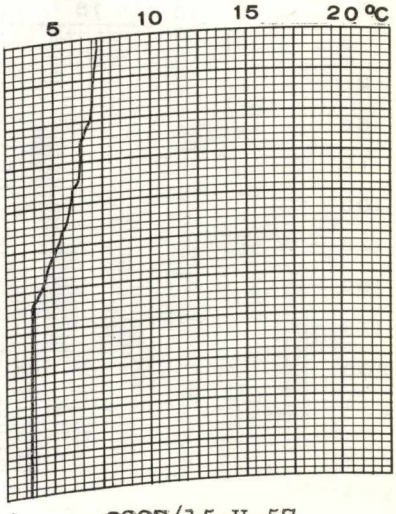

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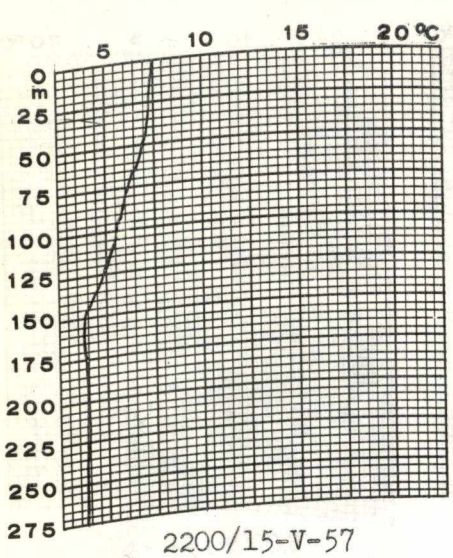
C.G.S. "St. Catharines"



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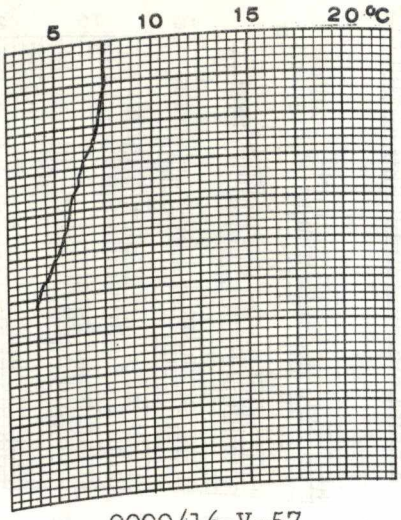

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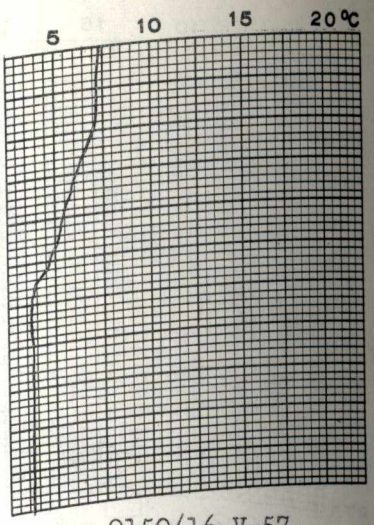

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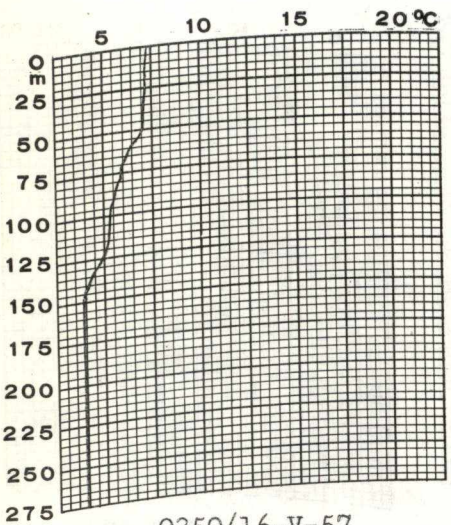

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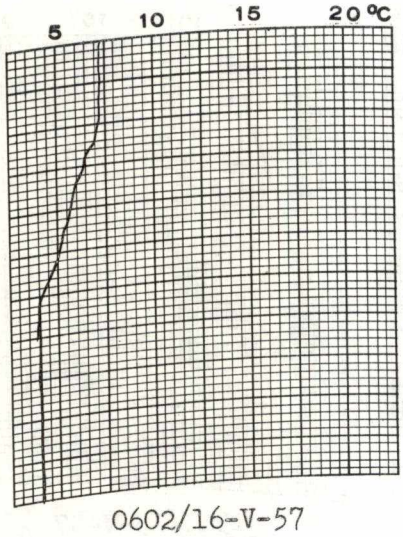

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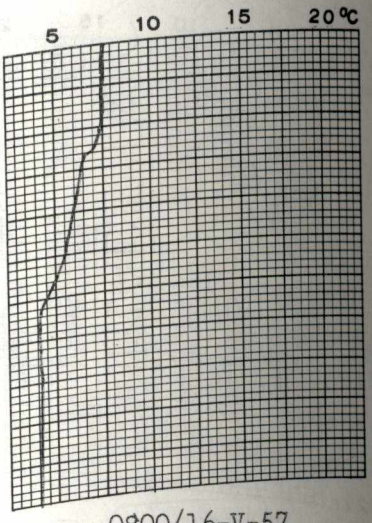

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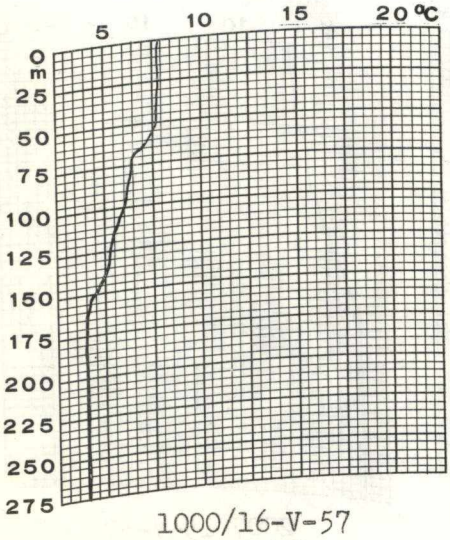

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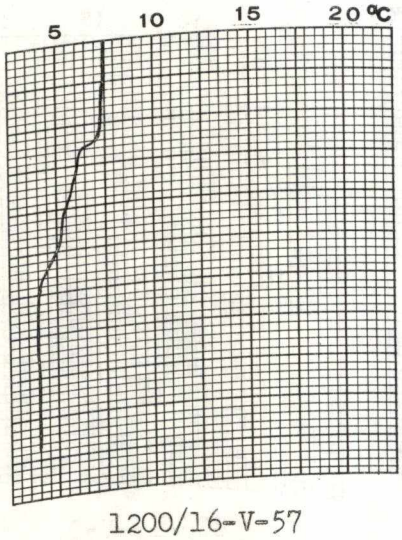

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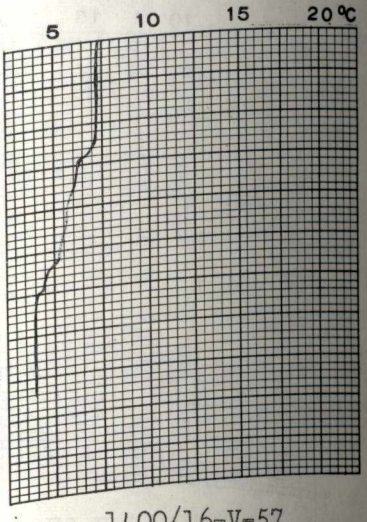

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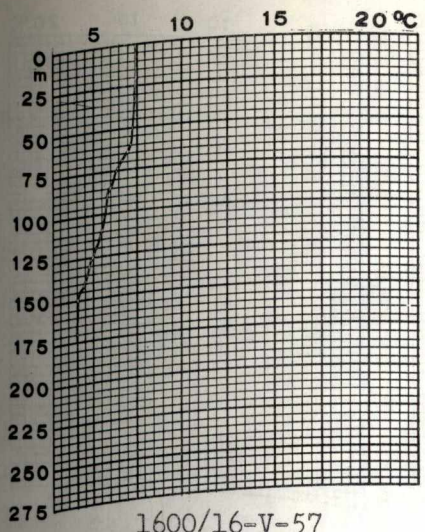
C.G.S. "St. Catharines"



1600/16-V-57
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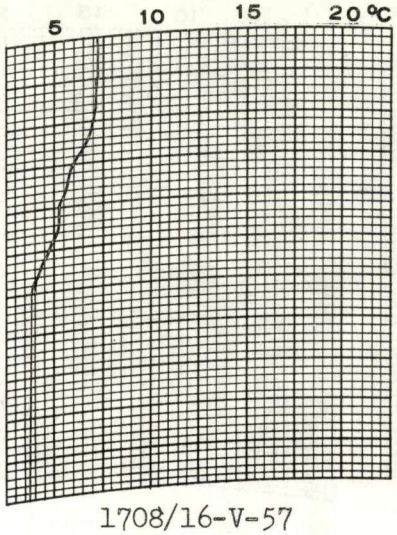

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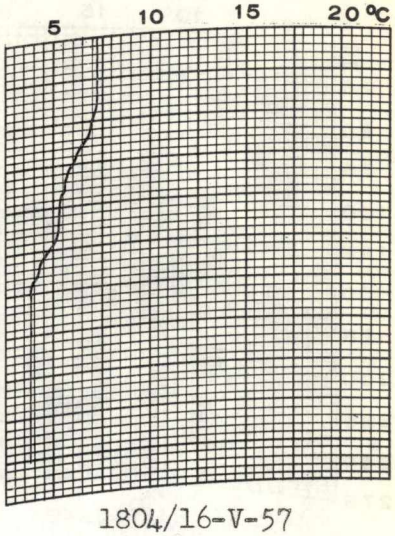

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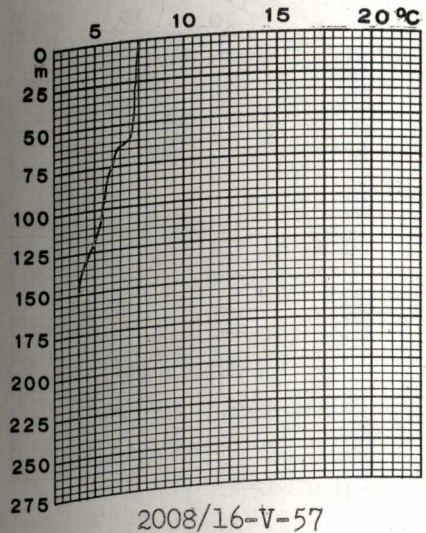

2008/16-V-57
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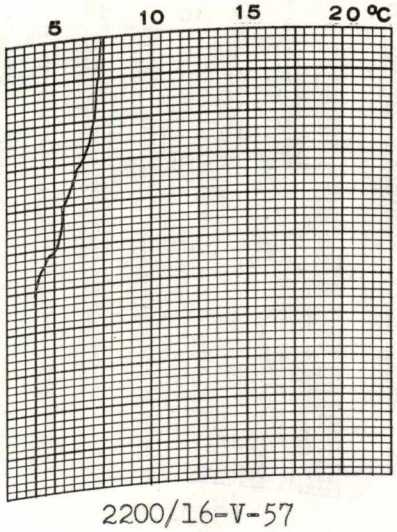

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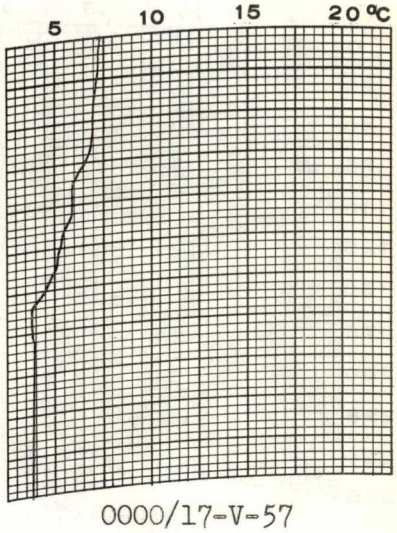
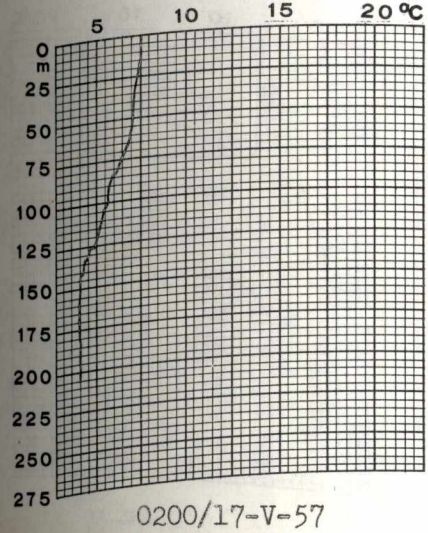


0000/17-V-57
Grid JS



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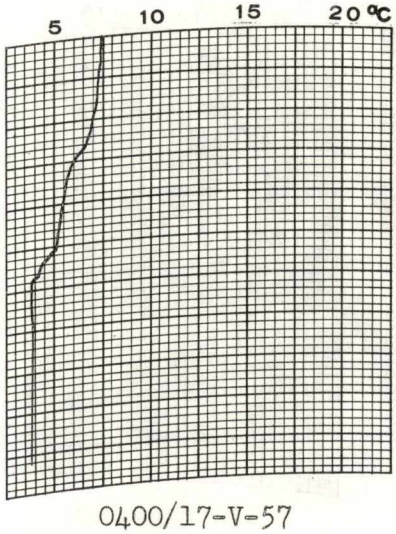

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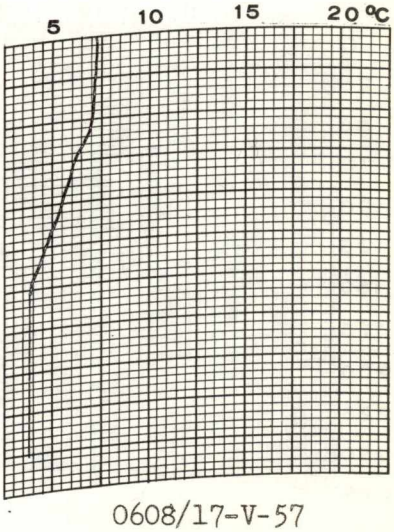

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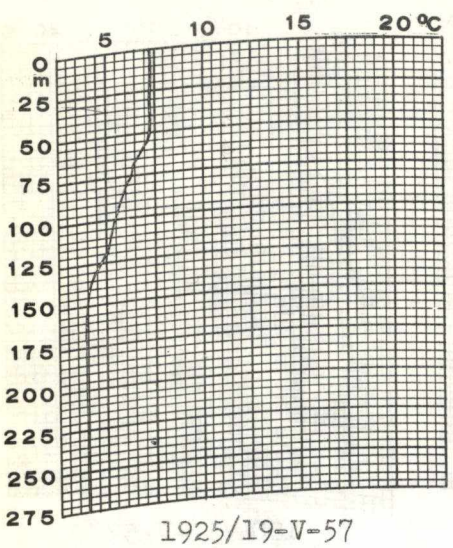
Grid OS

C.G.S. "St. Catharines"



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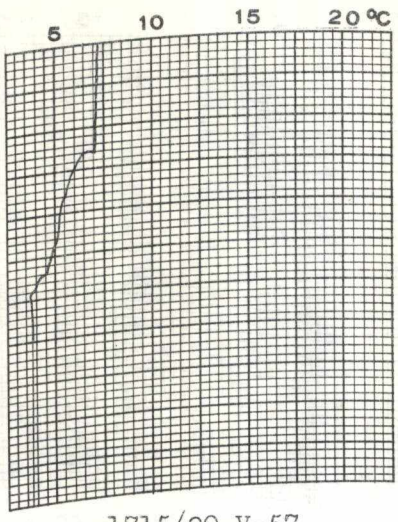
Grid OS



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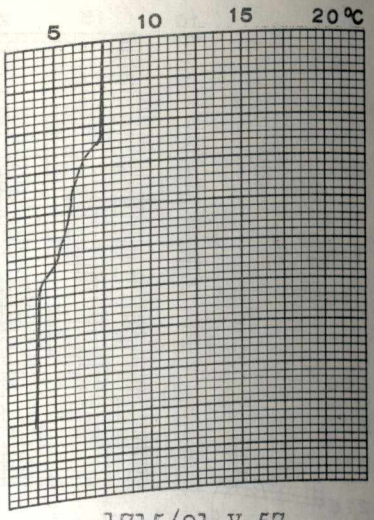
Grid OS



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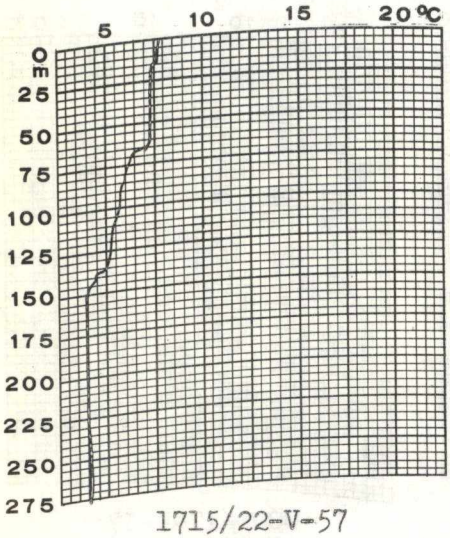

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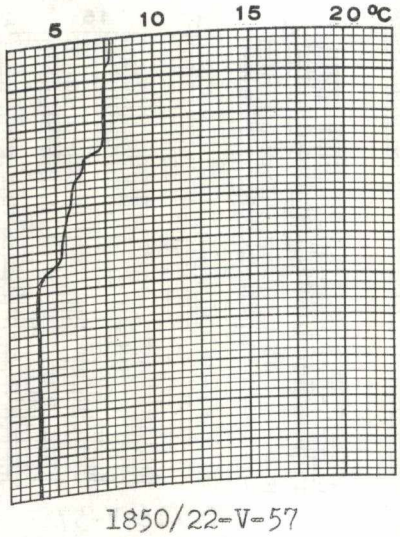

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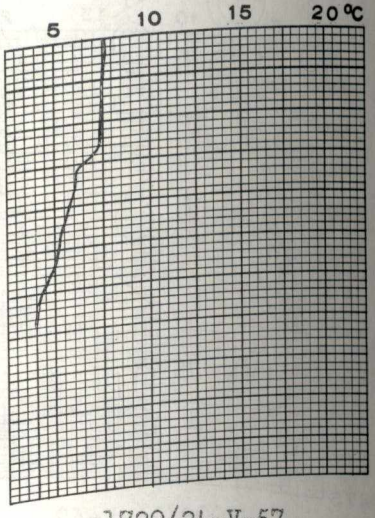

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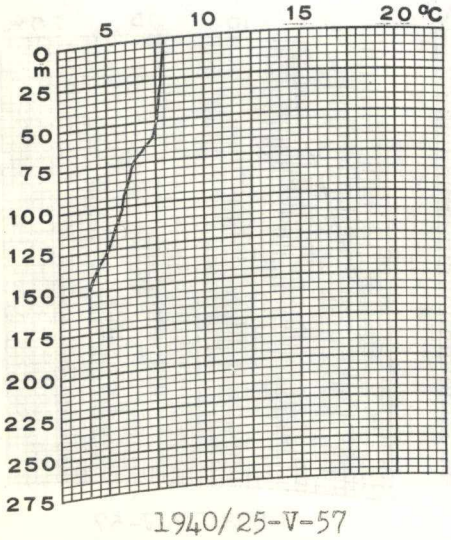

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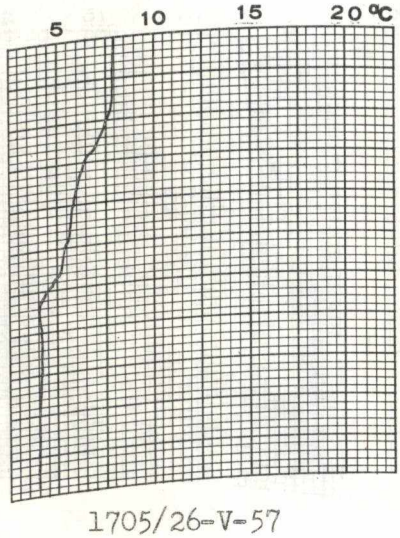

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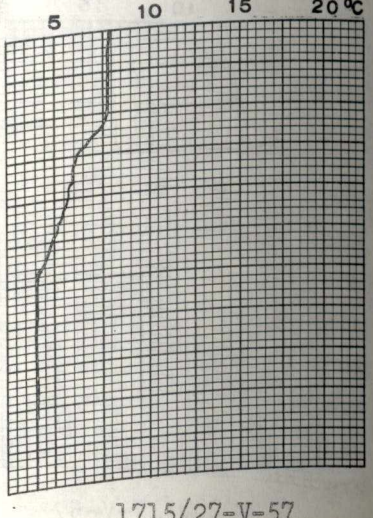

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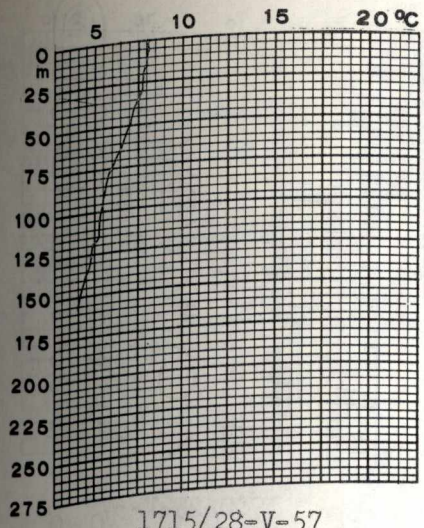
C.G.S. "St. Catharines"



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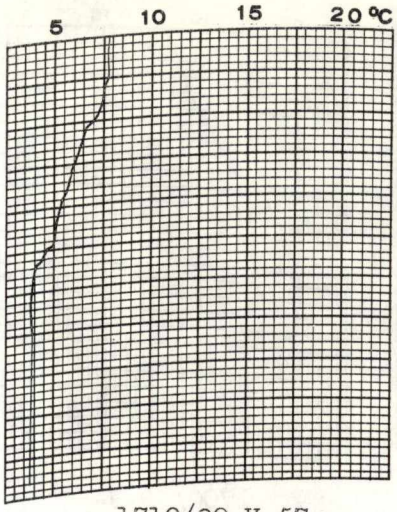

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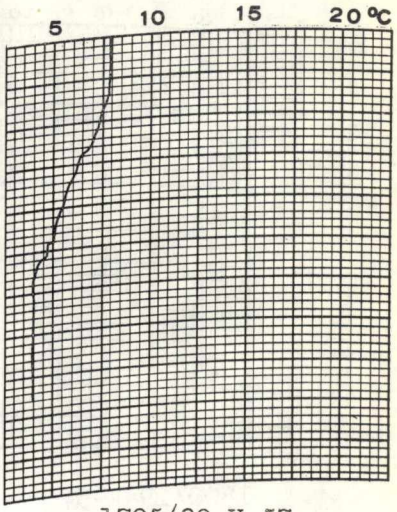

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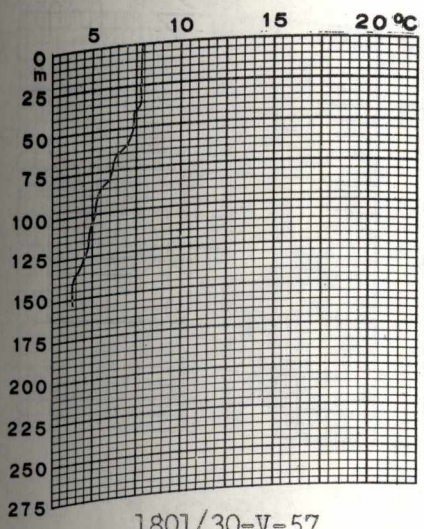

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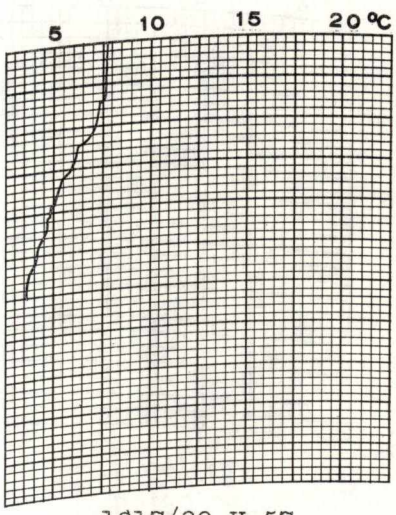

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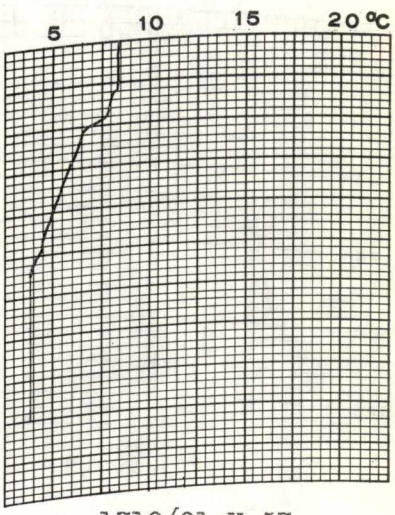

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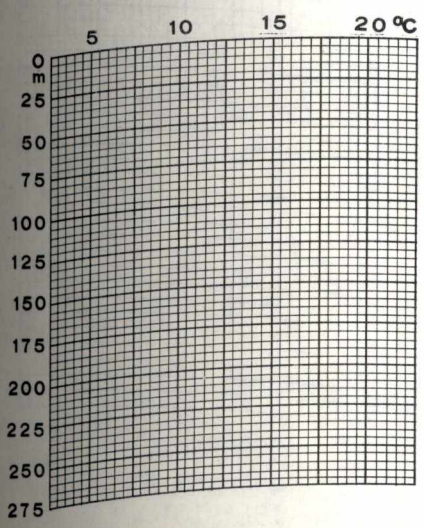
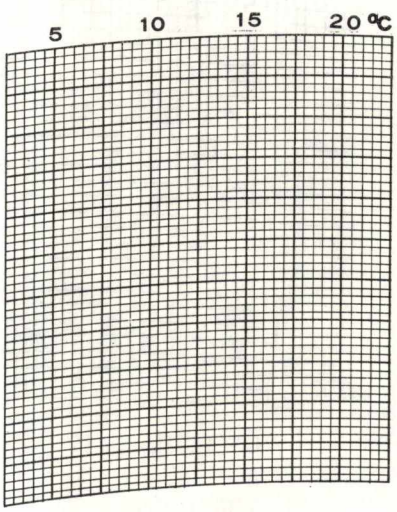
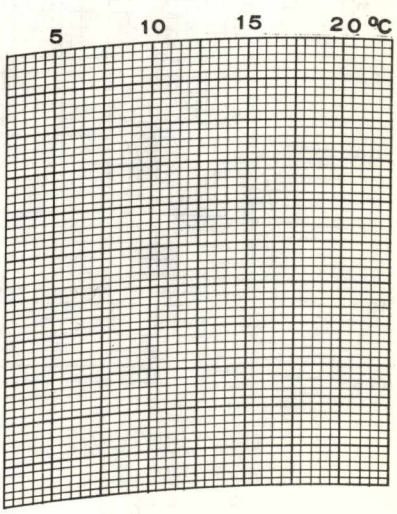
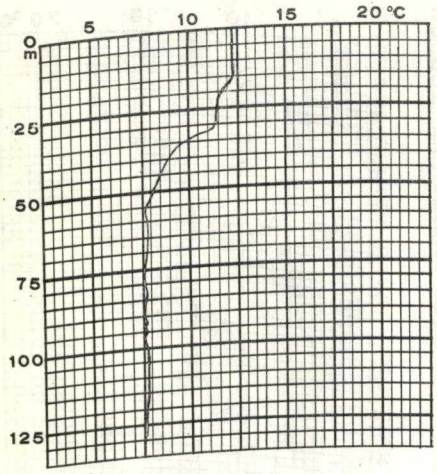


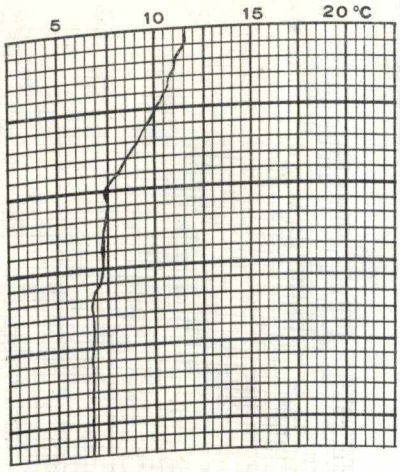




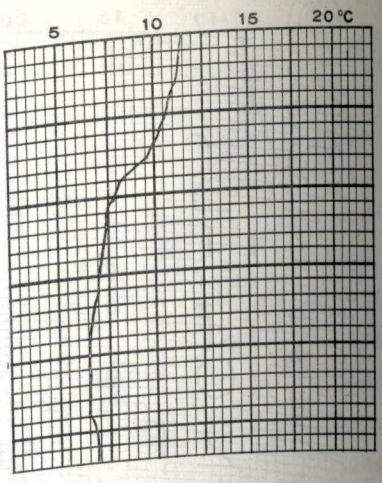
C.G.S. "Stonetown"



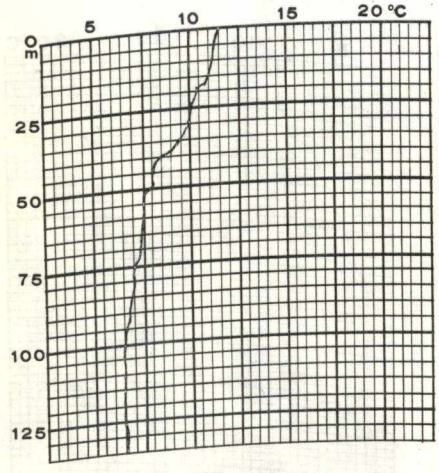
1500/29-V-57
48° 56' N
129° 20' W



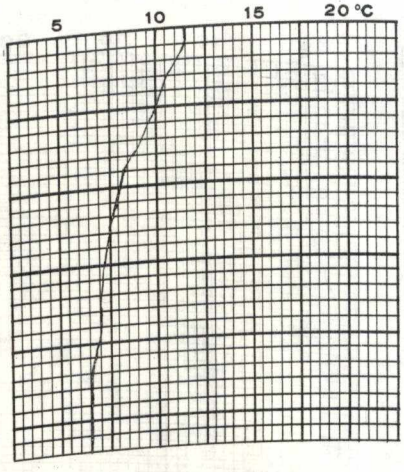
1700/29-V-57
48° 55' N
130/ 12' W



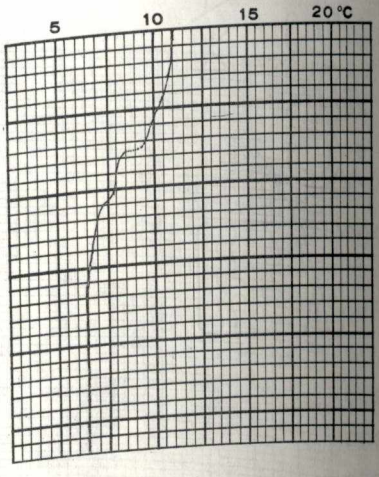
1900/29-V-57
49° 04' N
130° 53' W



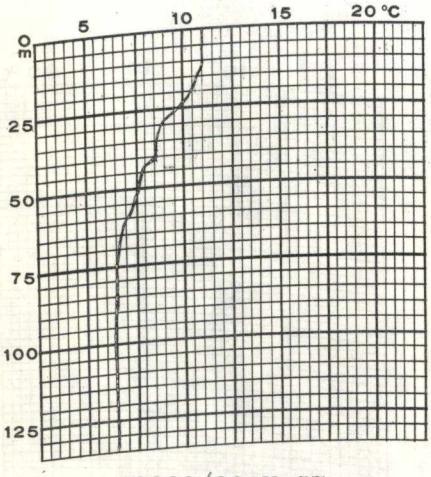
2100/29-V-57
49° 06' N
131° 30' W



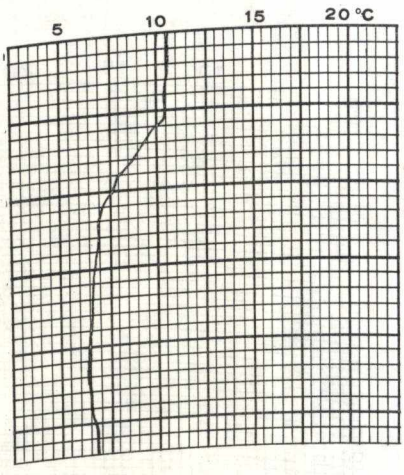
2300/29-V-57
49° 08' N
132° 15' W



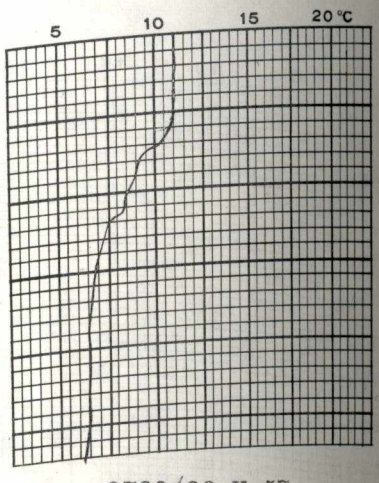
0100/30-V-57
49° 08' N
133° 17' W



0300/30-V-57
49° 13' N
133° 53' W

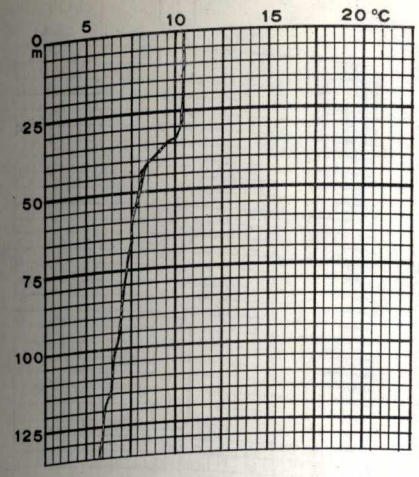


0500/30-V-57
49° 15' N
134° 37' W

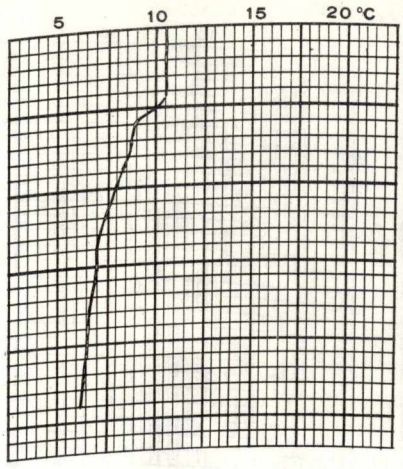


0700/30-V-57
49° 16' N
134° 10' W

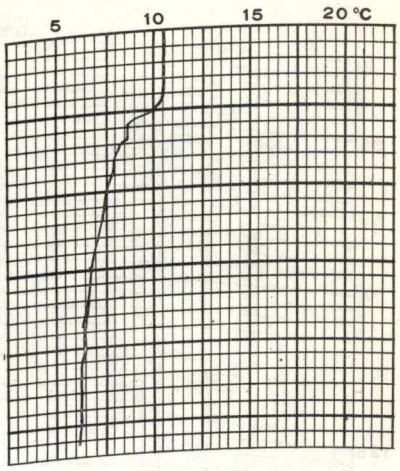
C.G.S. "Stonetown"



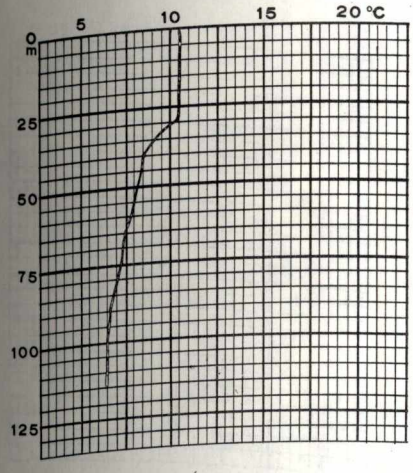
1100/30-V-57
49° 18' N
136° 30' W



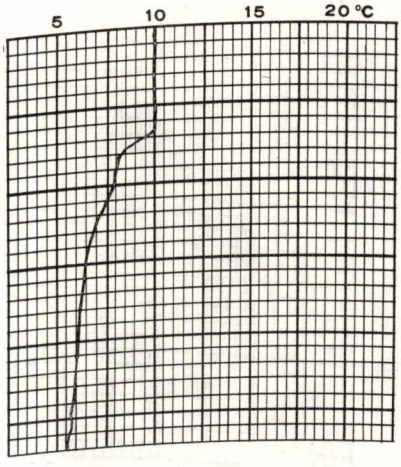
1300/30-V-57
49° 20' N
137° 00' W



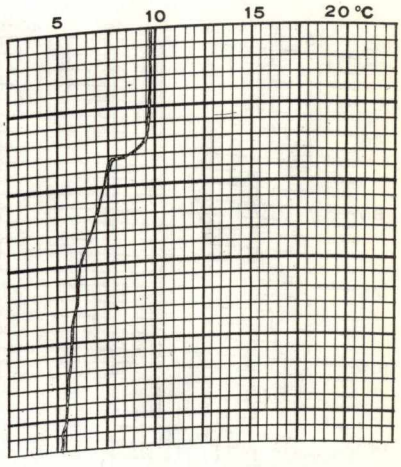
1500/30-V-57
49° 23' N
137° 30' W



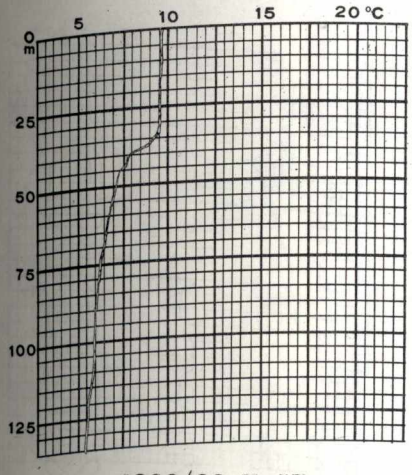
1700/30-V-57
49° 24' N
138° 00' W



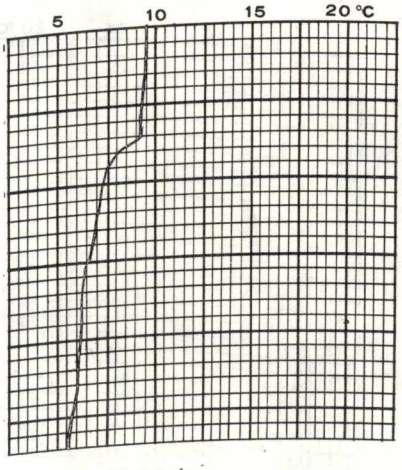
1900/30-V-57
49° 25' N
137° 42' W



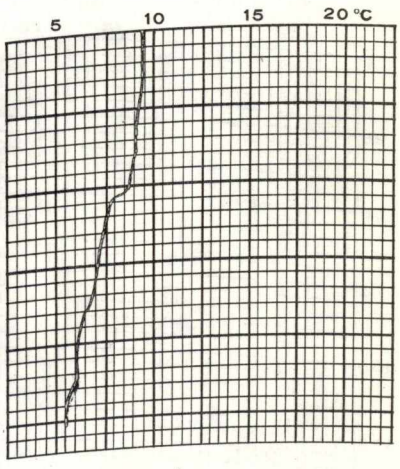
2100/30-V-57
49° 25' N
138° 10' W



2300/30-V-57
49° 27' N
139° 25' W

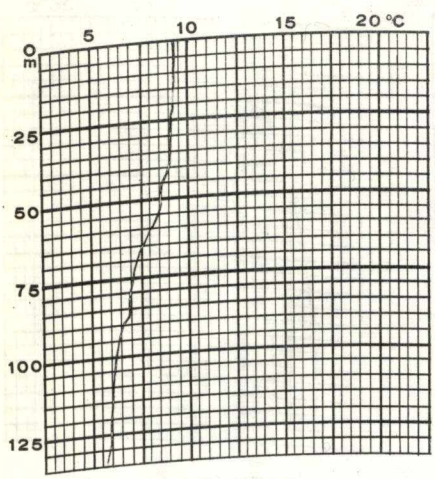


0100/31-V-57
49° 28' N
139° 40' W

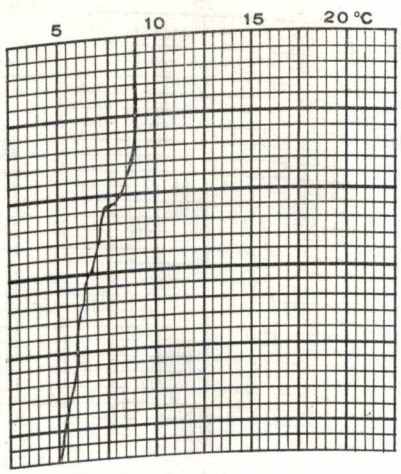


0300/31-V-57
49° 30' N
139° 50' W

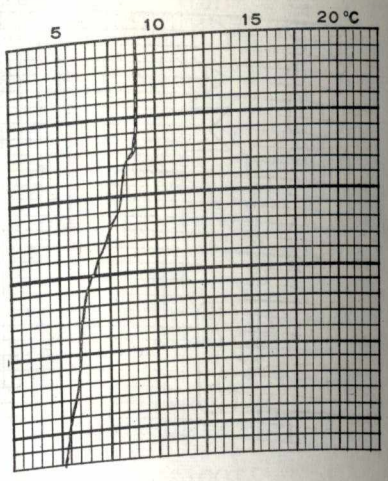
C.G.S. "Stonetown"



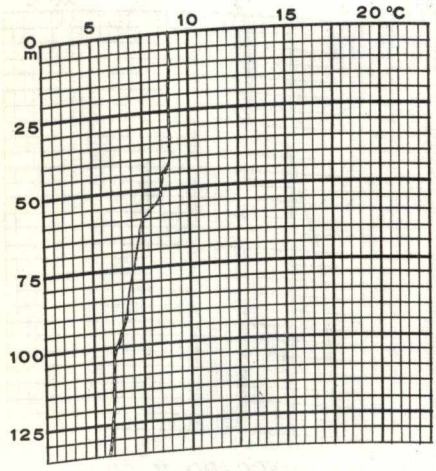
0500/31-V-57
49° 37' N
140° 30' W



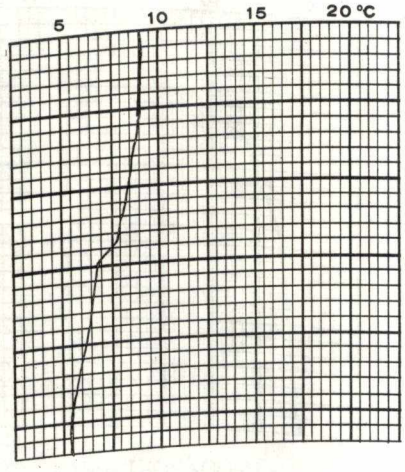
0700/31-V-57
49° 37' N
141° 04' W



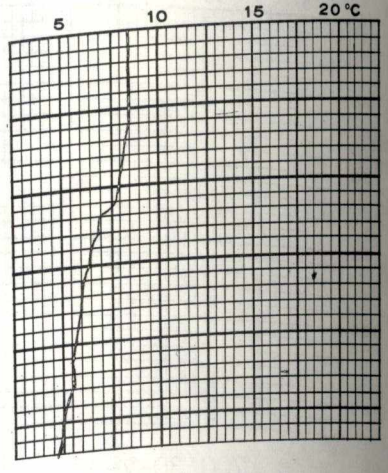
0900/31-V-57
49° 40' N
141° 22' W



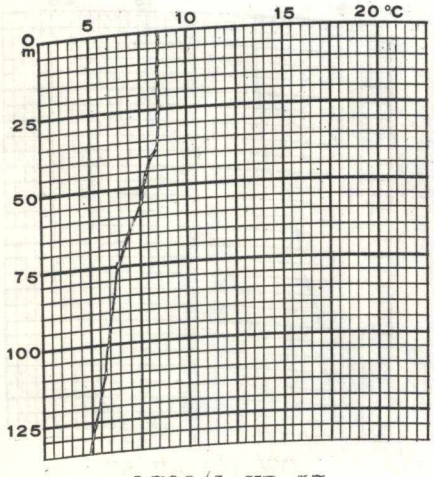
1100/31-V-57
49° 45' N
141° 52' W



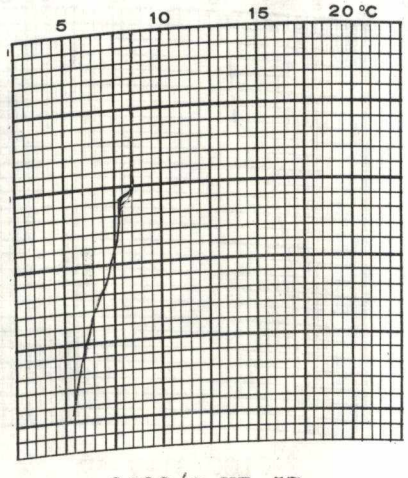
1300/31-V-57
49° 48' N
142° 26' W



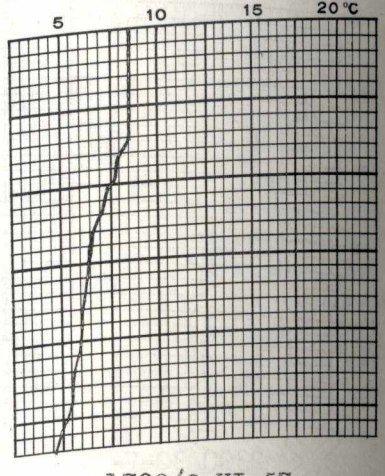
1800/31-V-57
50°00' N
143° 50' W



1700/1-VI-57
Grid OS



0200/2-VI-57
Grid OK



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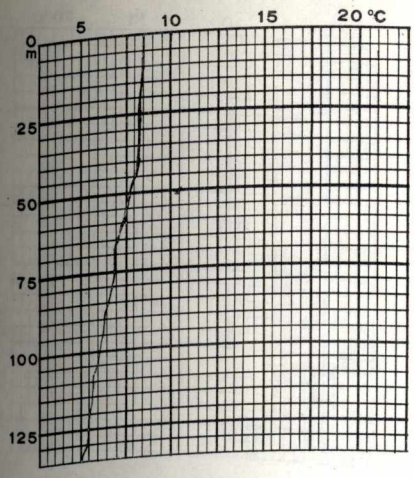
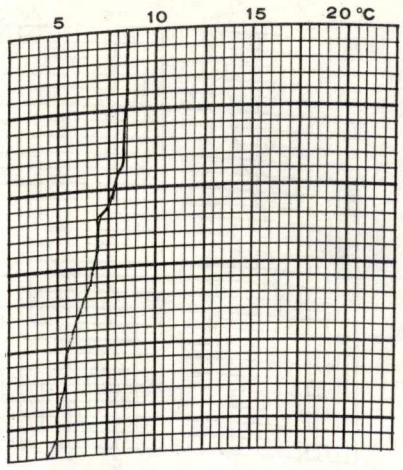
Grid OS

C.G.S. "Stonetown"



0200/3-VI-57
Grid OS



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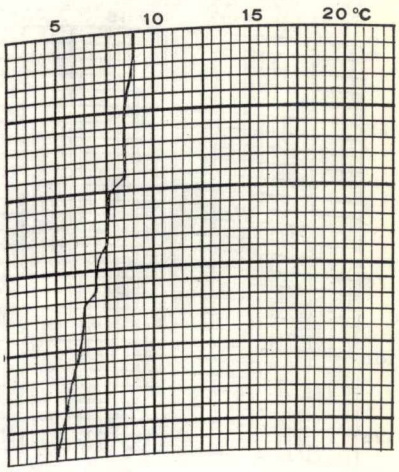
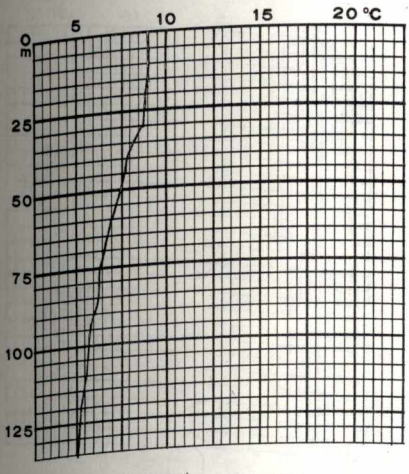
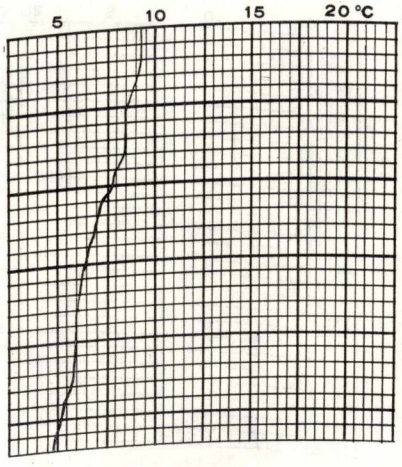
Grid OS



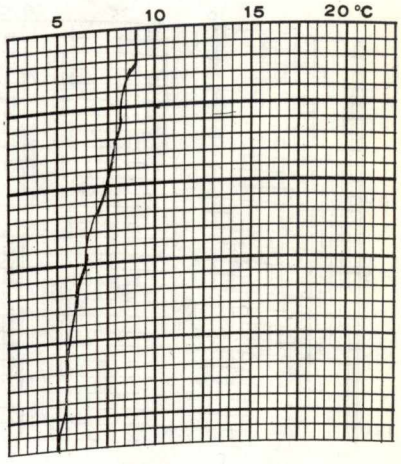
0200/4-VI-57
Grid OS



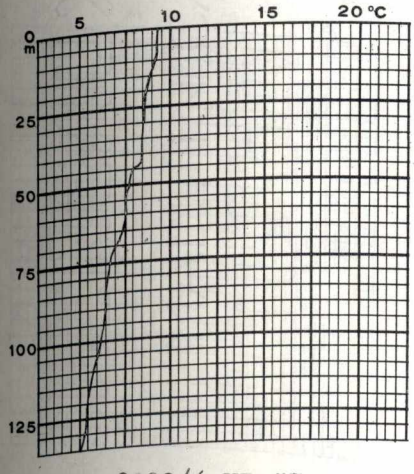
1700/4-VI-57
Grid OS



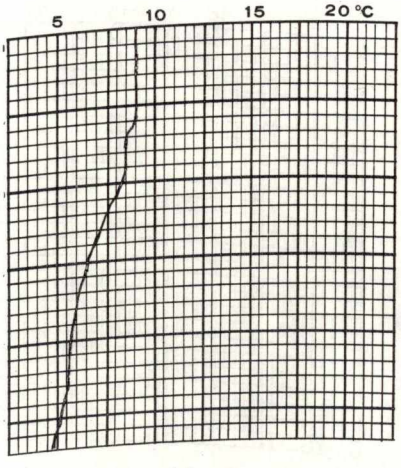
0200/5-VI-57
Grid OK



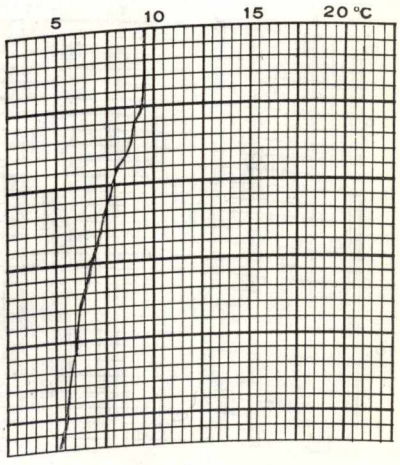
1700/5-VI-57
Grid OS



0200/6-VI-57
Grid OS

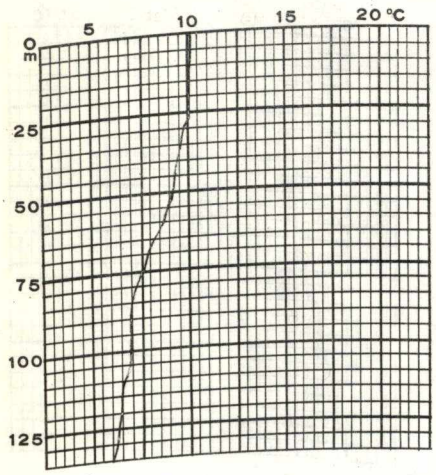


1700/6-VI-57
Grid OS

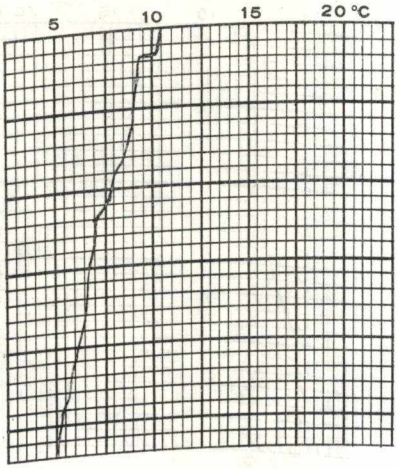


0200/7-VI-57
Grid OJ

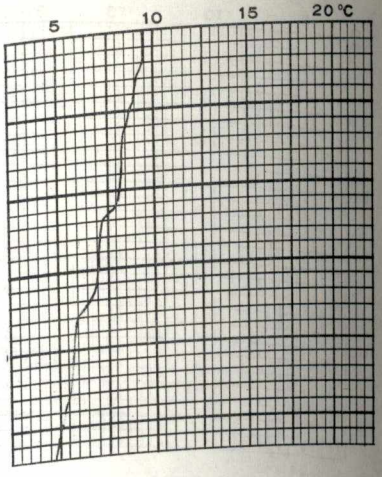
C.G.S. "Stonetown"



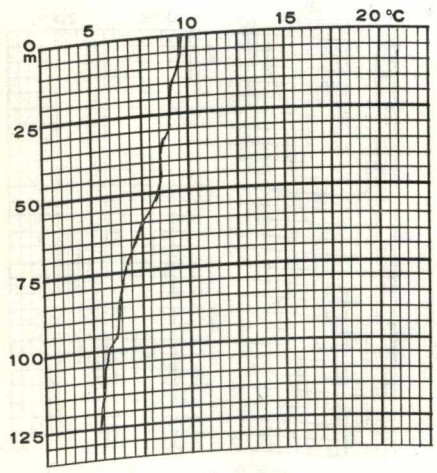
1700/7-VI-57
Grid OS



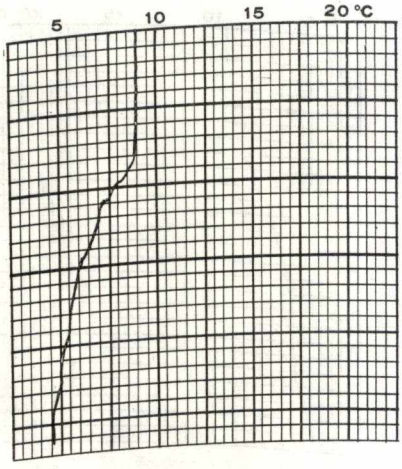
0200/8-VI-57
Grid OS



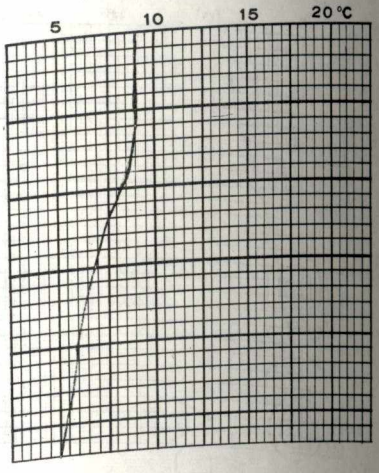
1700/8-VI-57
Grid OS



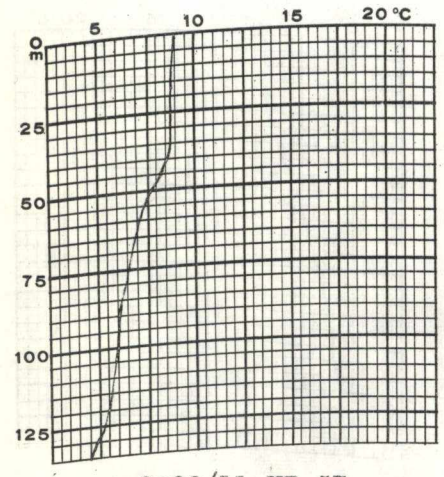
0200/9-VI-57
Grid OS



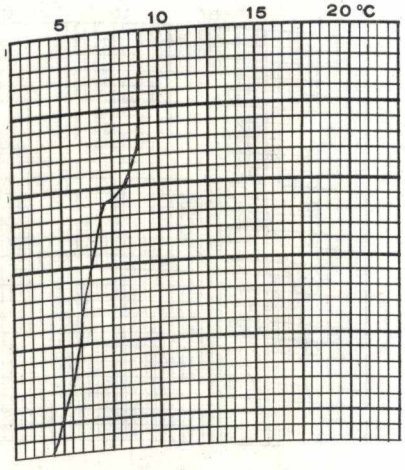
0200/10-VI-57
Grid OK



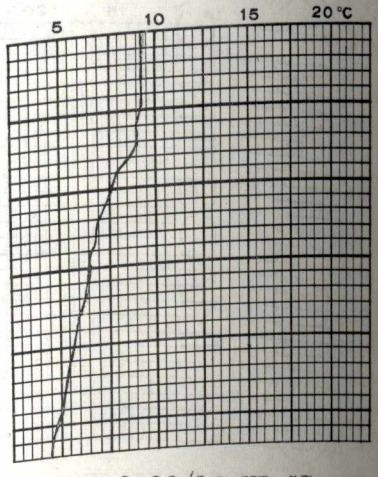
1700/10-VI-57
Grid OS



0200/11-VI-57
Grid OS

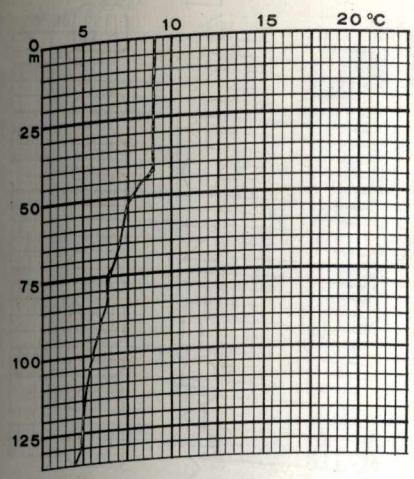


1700/11-VI-57
Grid OS

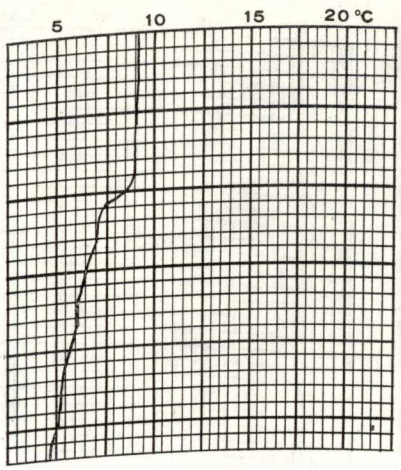


0200/12-VI-57

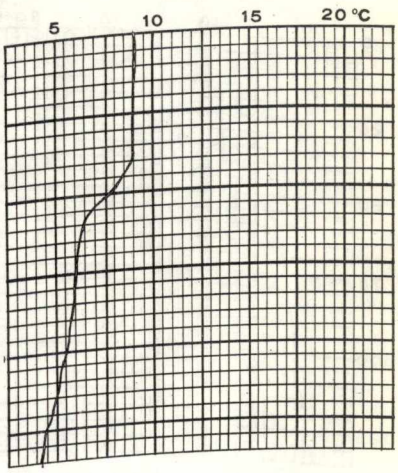
C.G.S. "Stonetown"



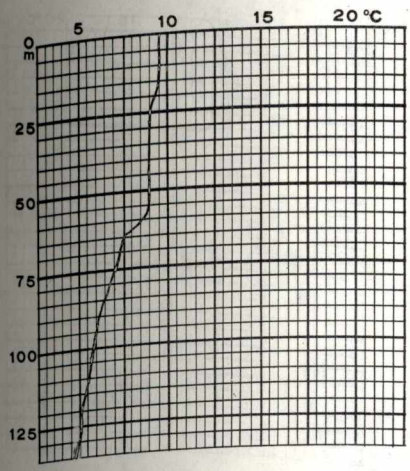
1700/13-VI-57
Grid KJ



0200/14-VI-57
Grid OK



1700/14-VI-57
Grid OK



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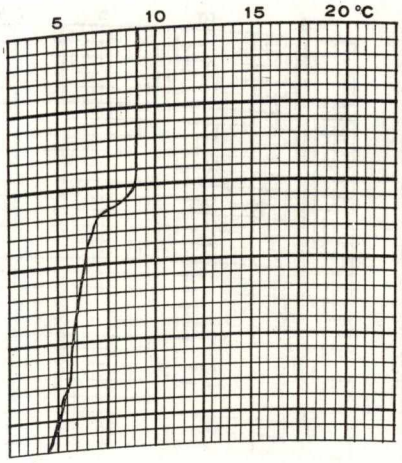
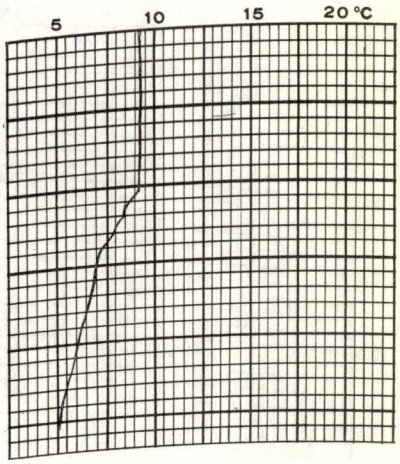
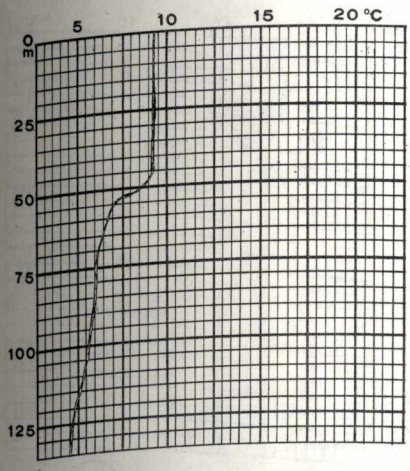
Grid OS



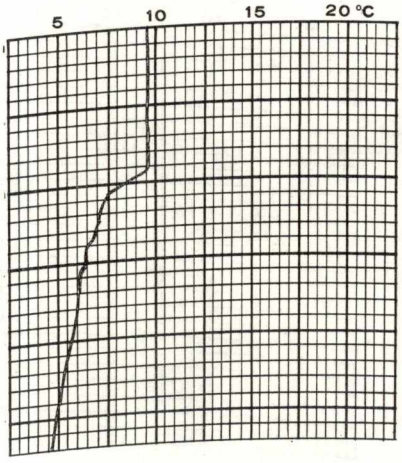
0200/16-VI-57
Grid OS



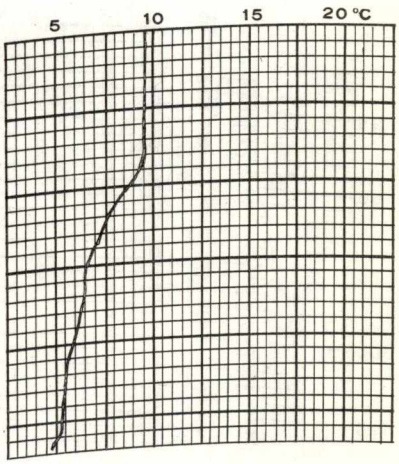
0200/17-VI-57
Grid OS



1700/17-VI-57
Grid OS

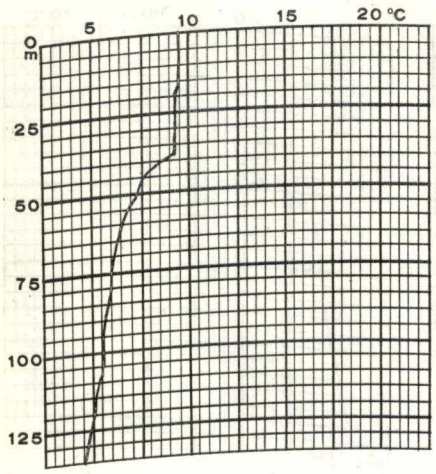


1700/18-VI-57
Grid OS

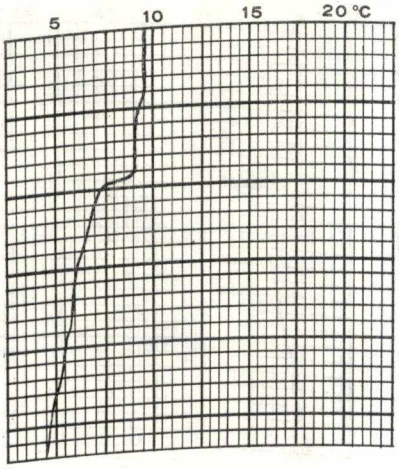


0200/19-VI-57
Grid OJ

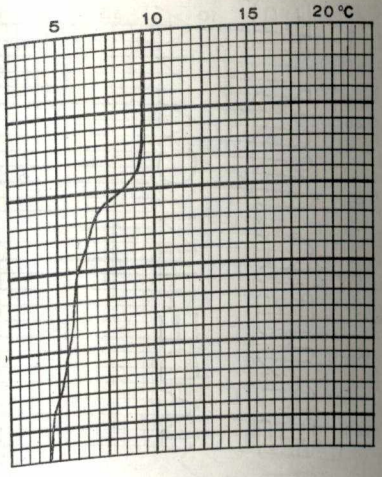
C.G.S. "Stonetown"



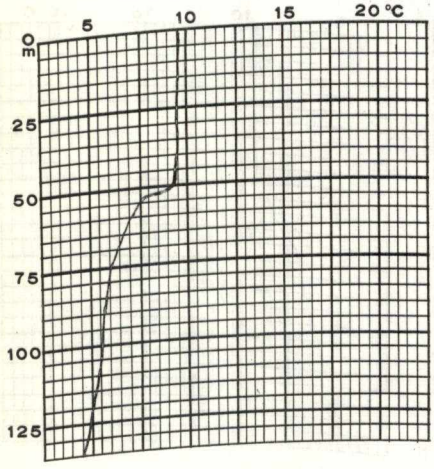
1700/19-VI-57
Grid OS



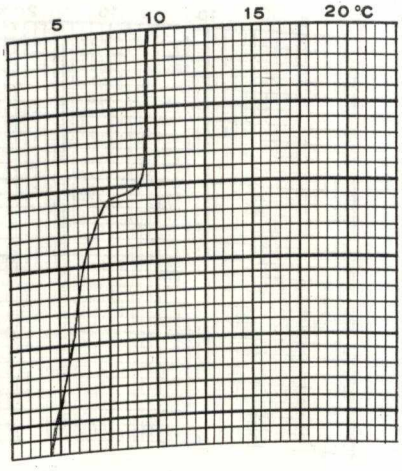
0200/20-VI-57
Grid OS



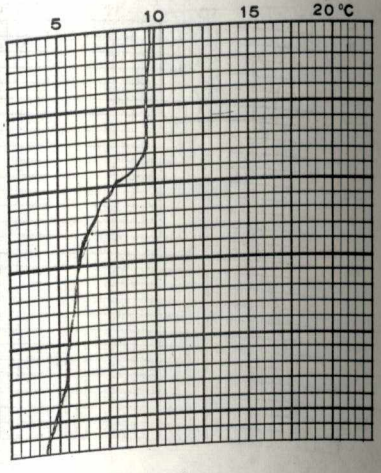
1700/20-VI-57
Grid OS



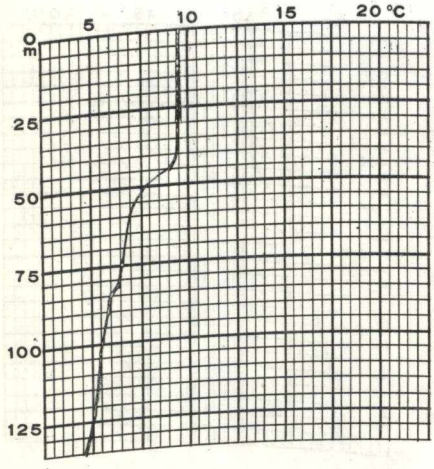
0200/21-VI-57
Grid OS



1700/21-VI-57
Grid OS



0200/22-VI-57
Grid OS



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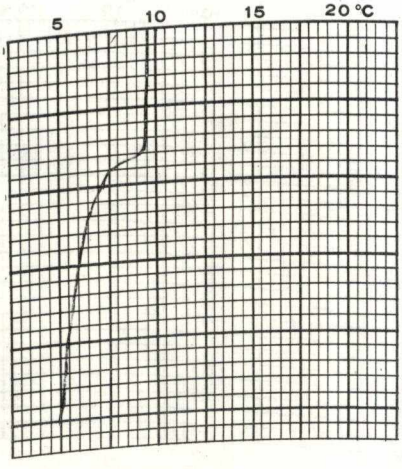
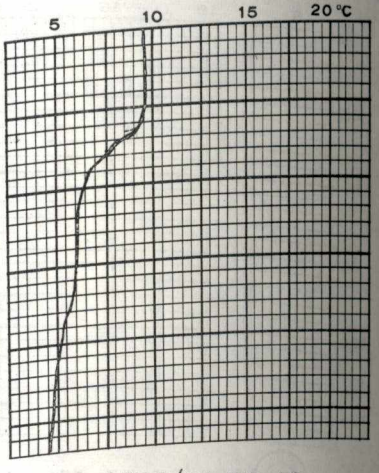
Grid OJ

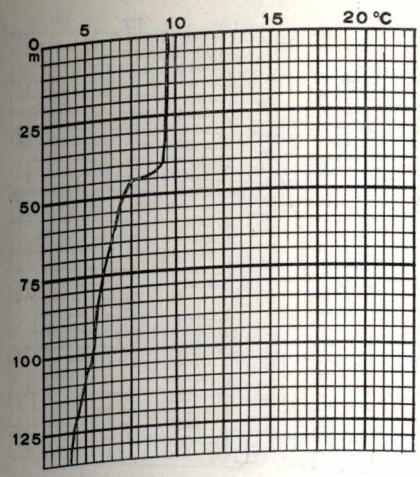


0200/23-VI-57
Grid OJ

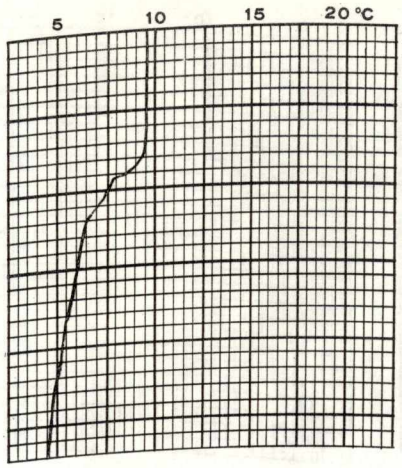


1700/23-VI-57
Grid OS

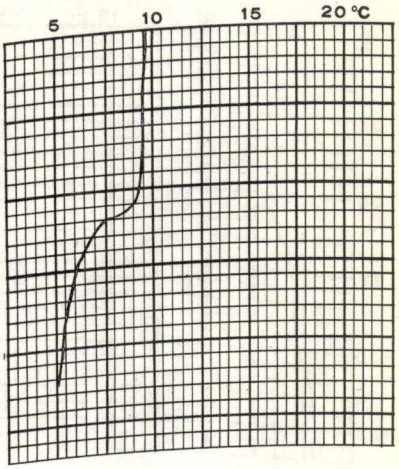
C.G.S. "Stonetown"



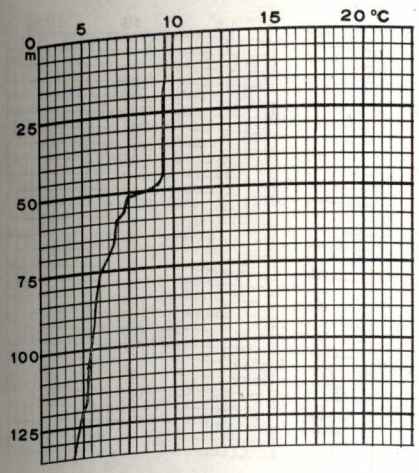
0200/24-VI-57
Grid OS



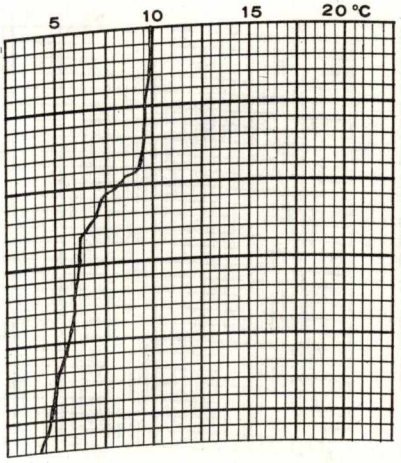
1700/24-VI-57
Grid OS



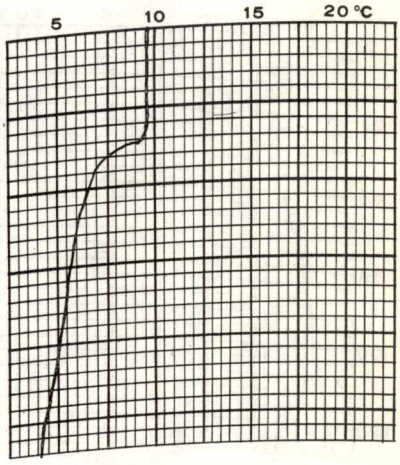
0200/25-VI-57
Grid KS



1700/25-VI-57
Grid OS



0200/26-VI-57
Grid KJ



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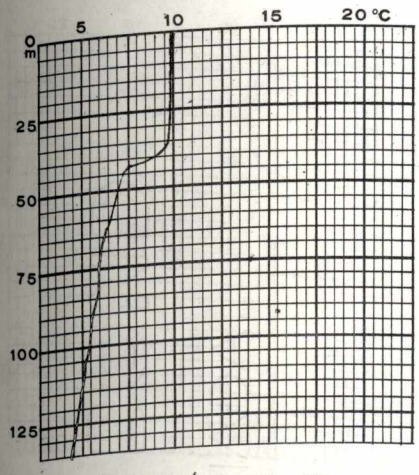
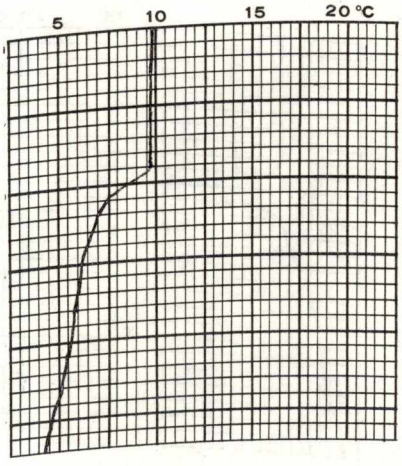
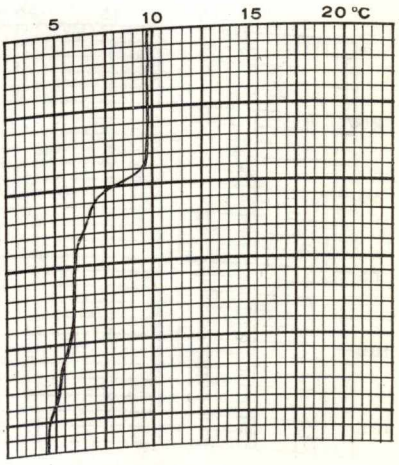
Grid OS



0200/27-VI-57
Grid JS

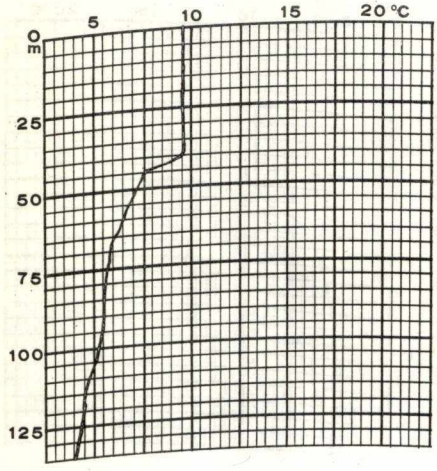


1700/29-VI-57
Grid OS



0200/30-VI-57
Grid OS

C.G.S. "Stonetown"



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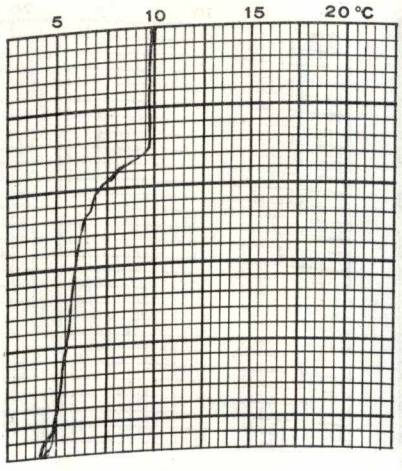
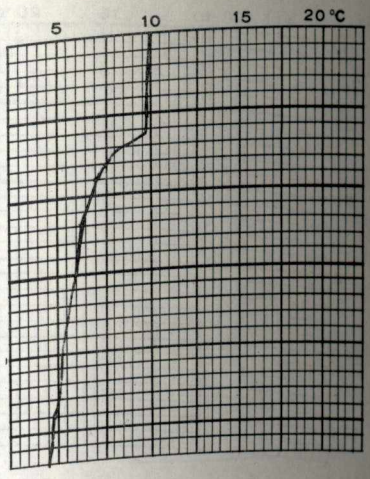
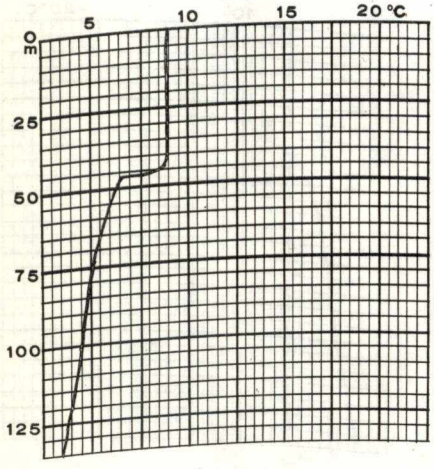
Grid OS



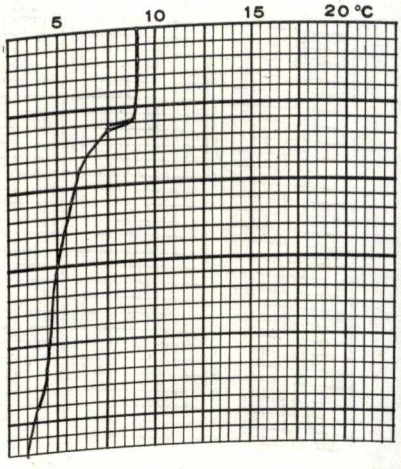
0200/1-VII-57
Grid OK



1700/1-VII-57
Grid OS



0200/2-VII-57
Grid OS



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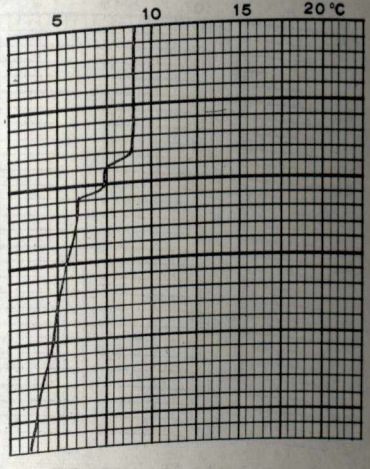
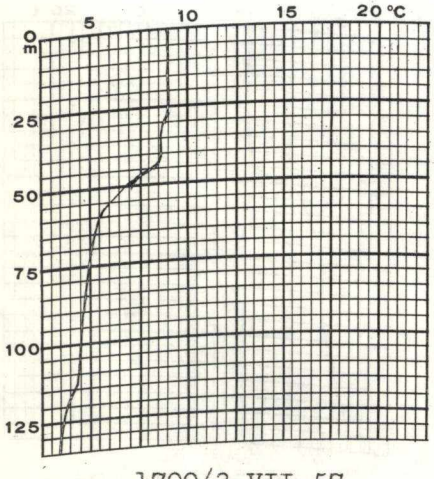
Grid OS



0200/3-VII-57
Grid JS



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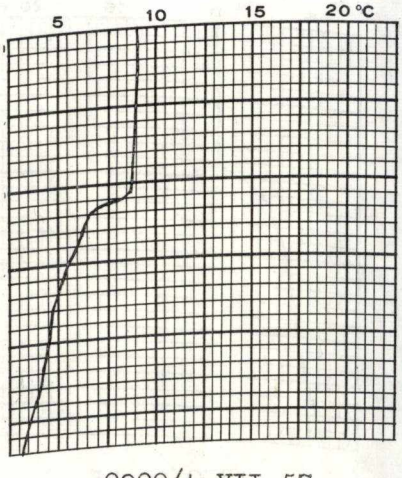
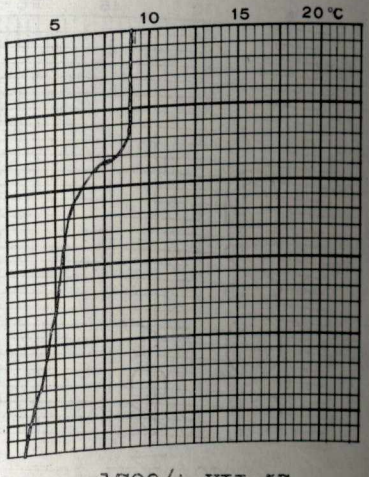


0200/4-VII-57
Grid OS



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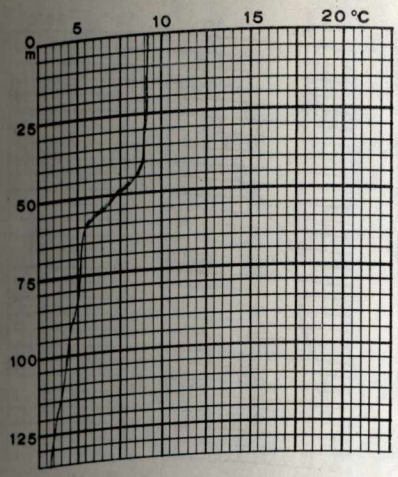
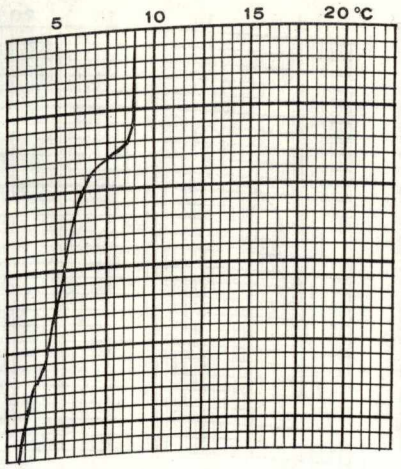
Grid OS

C.G.S. "Stonetown"



0200/5-VII-57
Grid OS



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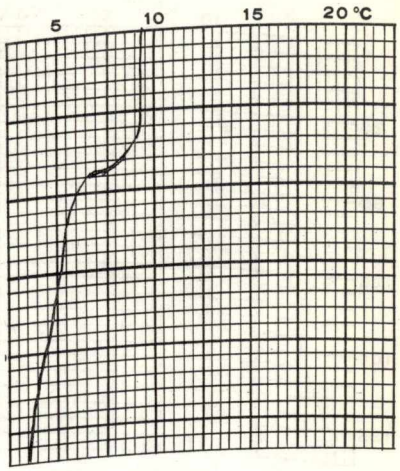
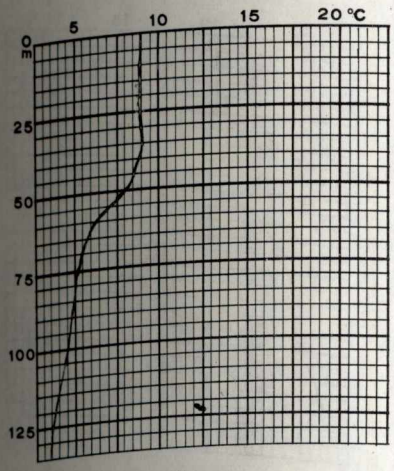
Grid OS



0200/6-VII-57
Grid OJ



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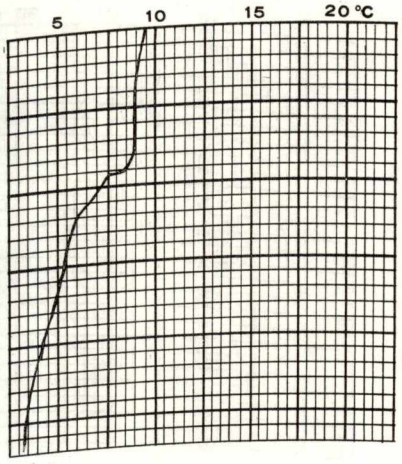
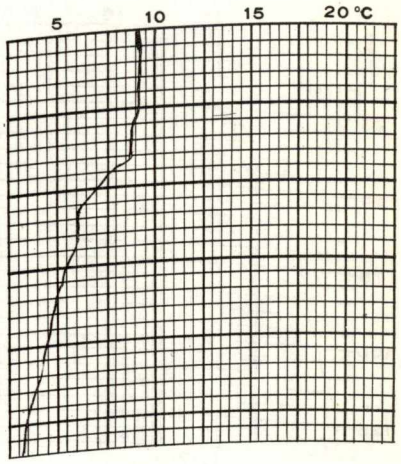
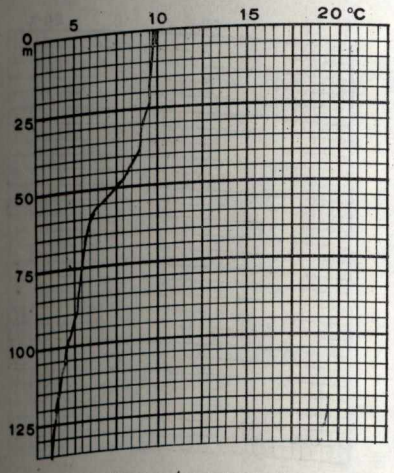
Grid OS



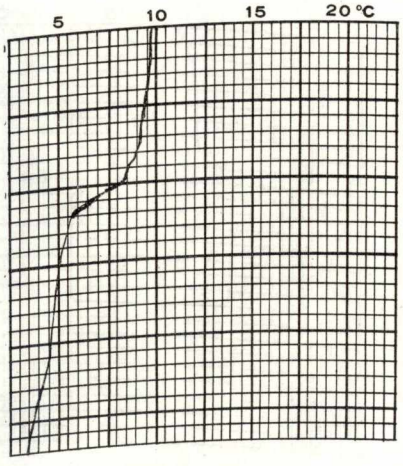
0200/7-V-57
Grid OK



1700/7-V-57
Grid OS



0200/8-VII-57
Grid KS



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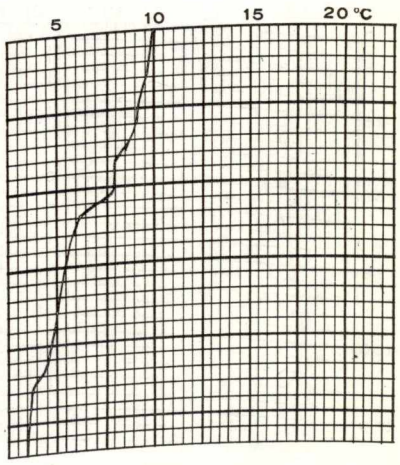
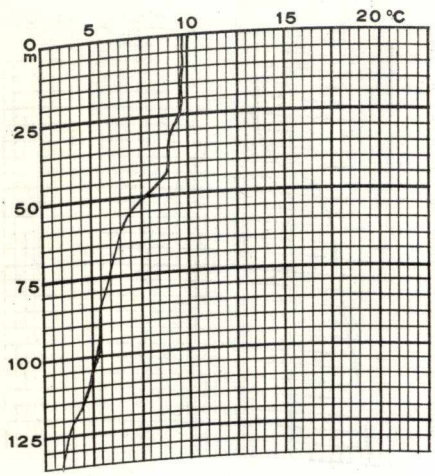
Grid OS



0200/9-VII-57
Grid OS

C.G.S. "Stonetown"



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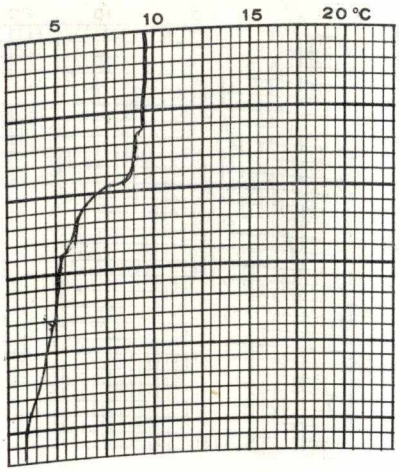
Grid OS



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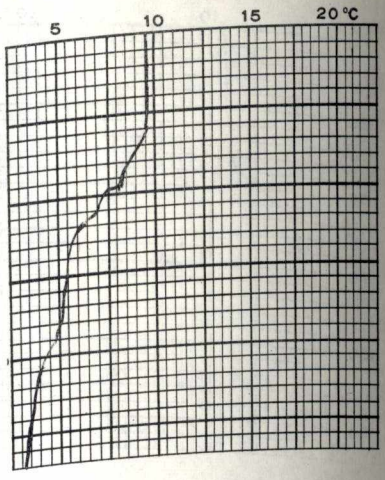
Grid OS



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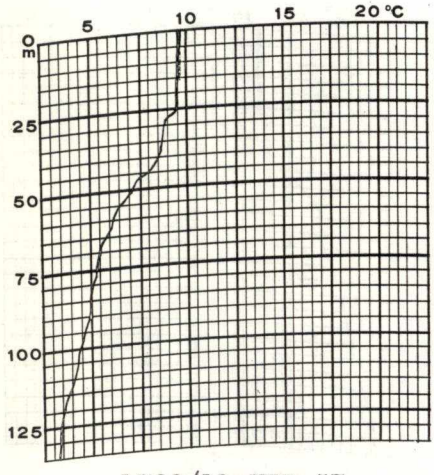
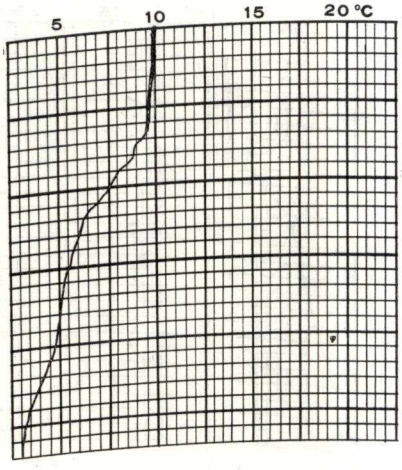
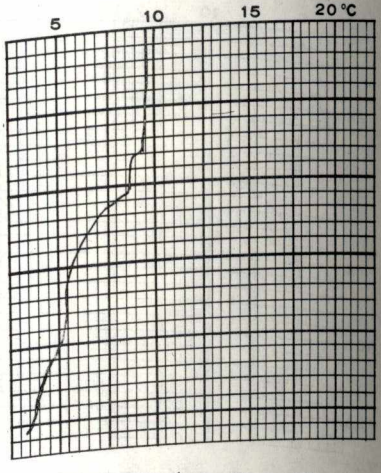
Grid OS



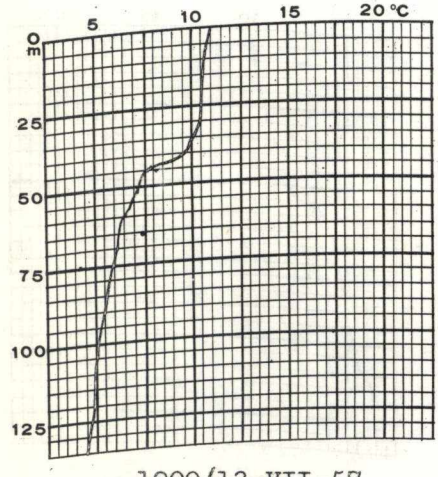
1700/11-VII-57
Grid OS



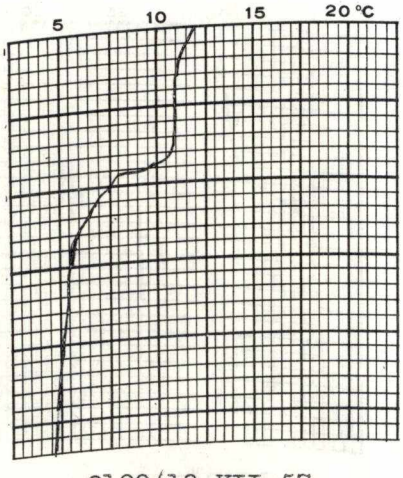
0200/12-VII-57
Grid JS



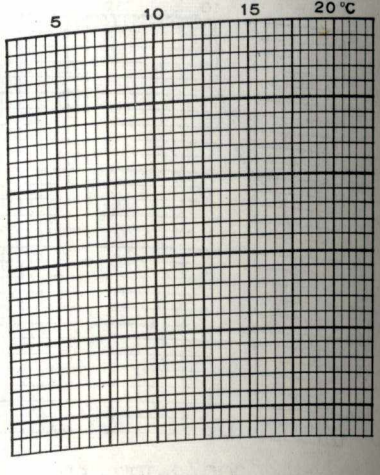
1700/12-VII-57
50° 03' N
144° 53' W



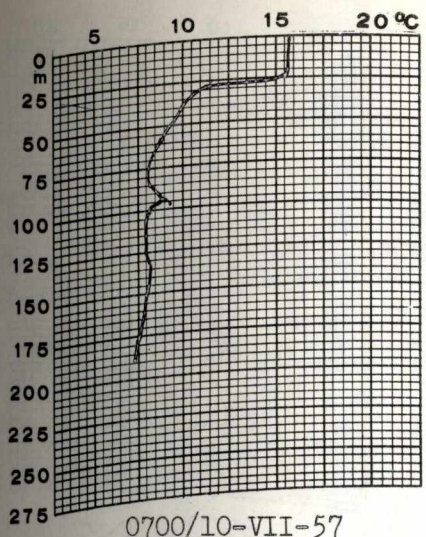
1900/13-VII-57
49° 32' N
137° 08' W



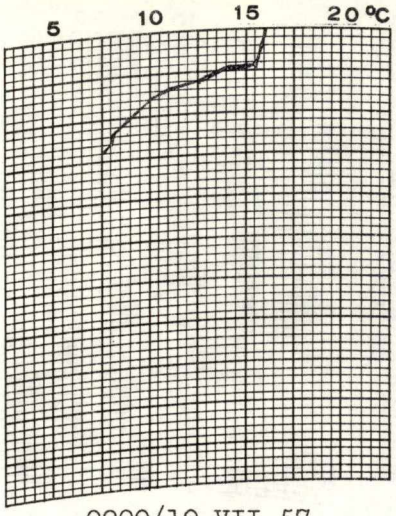
2100/13-VII-57
49° 27' N
136° 34' W



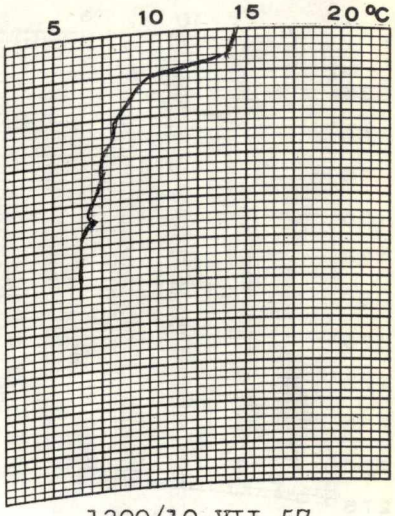
C.G.S. "St. Catharines"



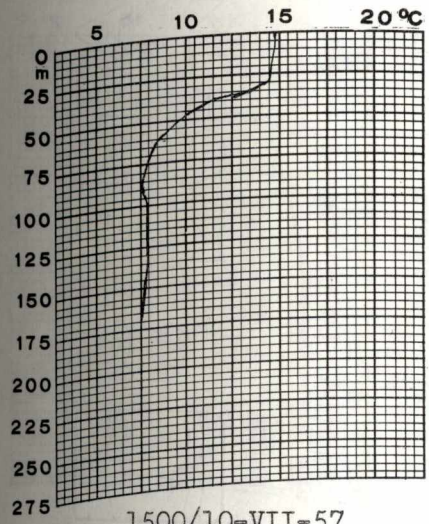
0700/10-VII-57
48° 41' N
127° 19' W



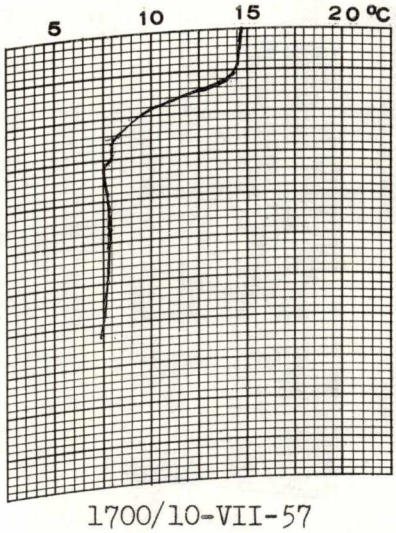
0900/10-VII-57
48° 46' N
127° 53' W



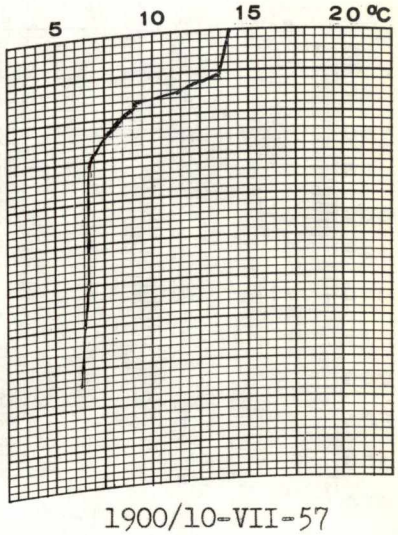
1300/10-VII-57
48° 50' N
128° 50' W



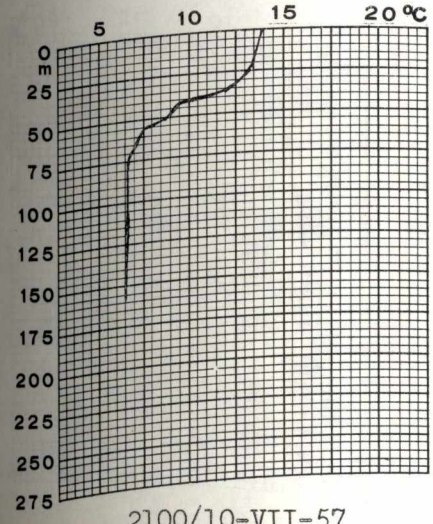
1500/10-VII-57
48° 55' N
129° 30' W



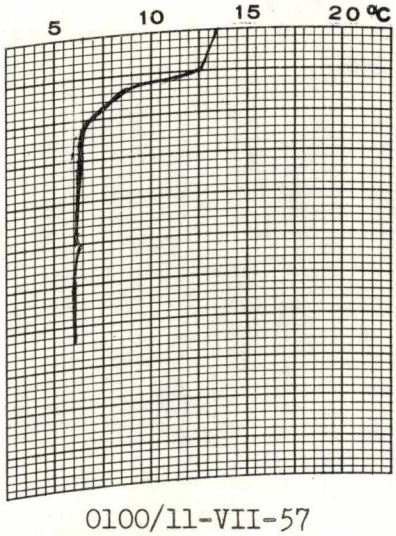
1700/10-VII-57
48° 59' N
130° 01' W



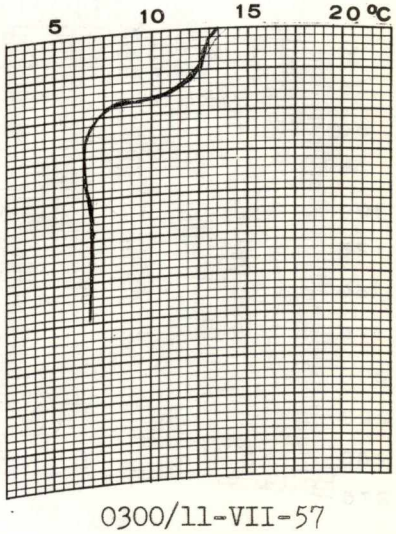
1900/10-VII-57
49° 04' N
130° 32' W



2100/10-VII-57
49° 03' N
131° 05' W

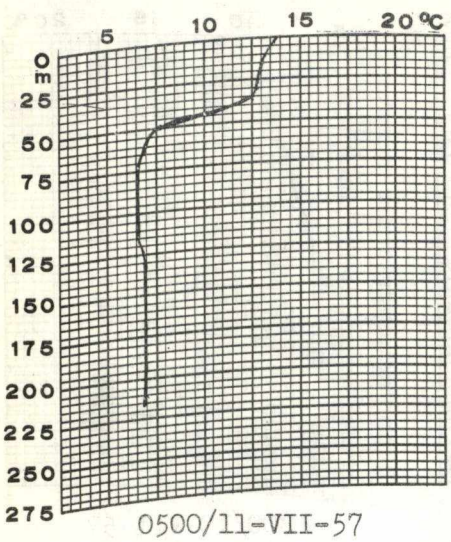


0100/11-VII-57
49° 15' N
132° 33' W



0300/11-VII-57
49° 17' N
133° 03' W

C.G.S. "St. Catharines"



0500/11-VII-57
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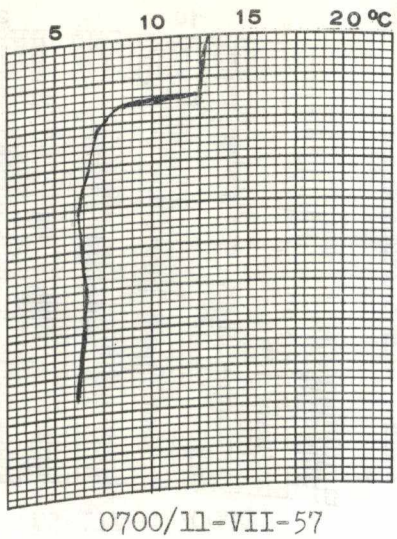
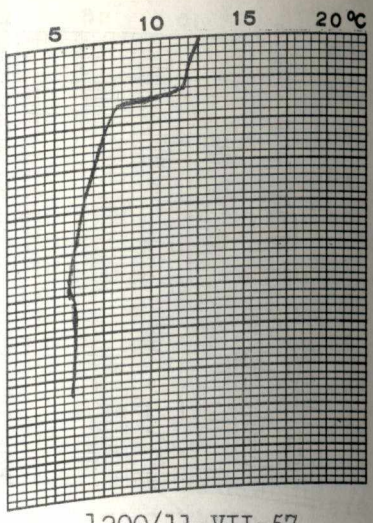
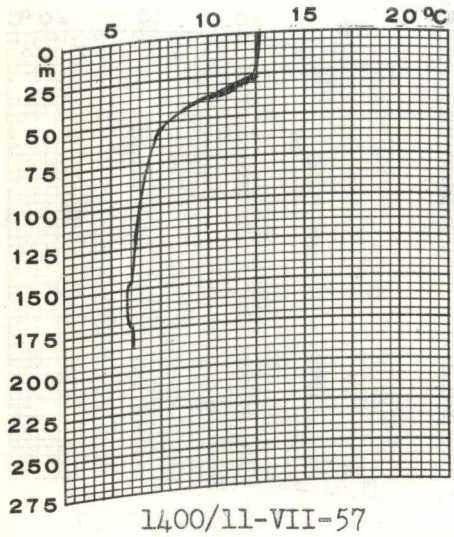
133° 30' W



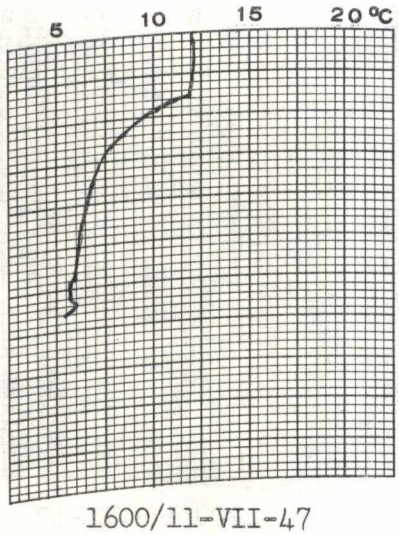
0700/11-VII-57
49° 17' N
134° 05' W



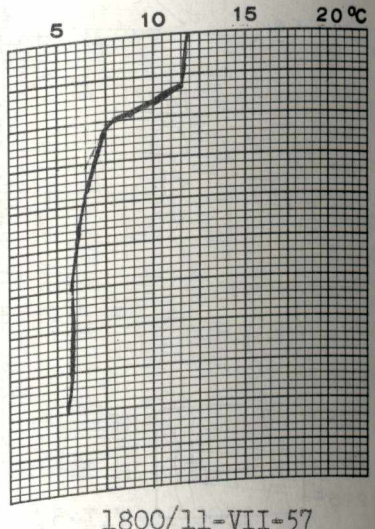
1200/11-VII-57
49° 17' N
135° 19' W



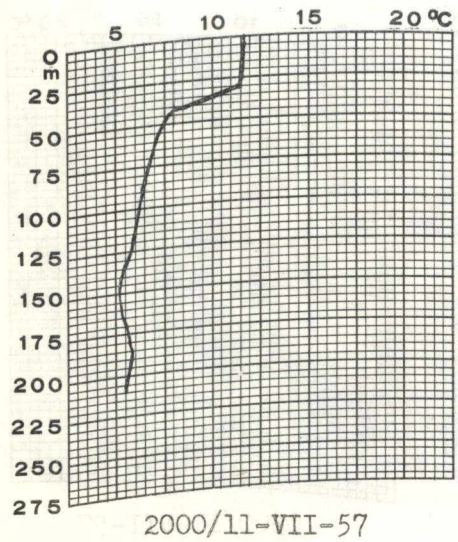
1400/11-VII-57
49° 23' N
136/ 11' W



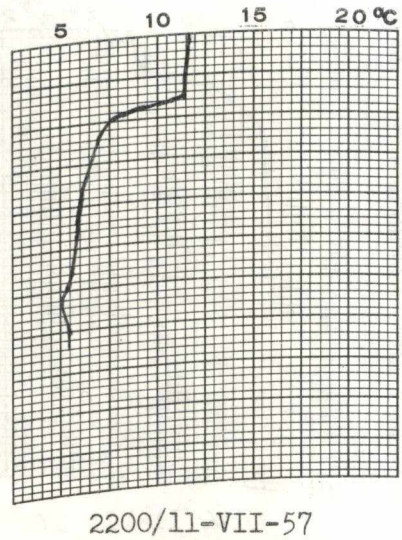
1600/11-VII-47
49° 30' N
136° 47' W



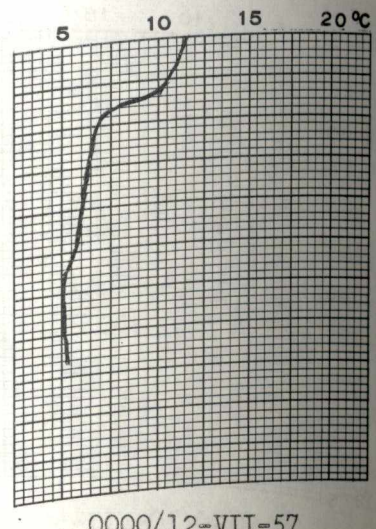
1800/11-VII-57
49° 30' N
137° 26' W



2000/11-VII-57
49° 32' N
137° 58' W

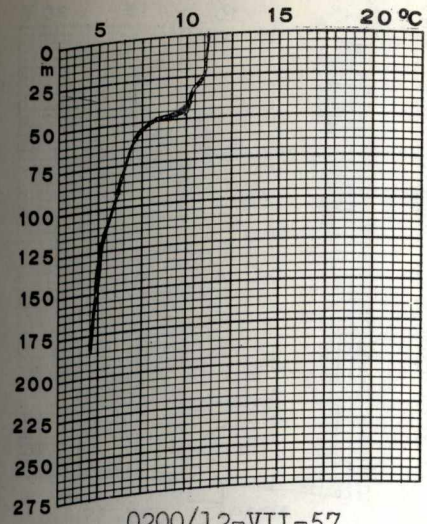


2200/11-VII-57
49° 34' N
138° 15' W

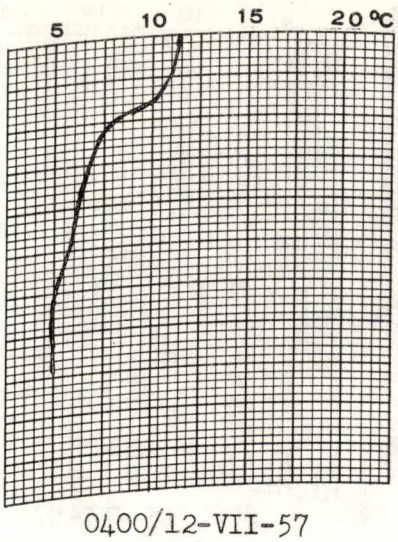


0000/12-VII-57
49° 35' N
138° 53' W

C.G.S. "St. Catharines"



0200/12-VII-57
49° 37' N
139° 44' W



0400/12-VII-57
49° 39' N
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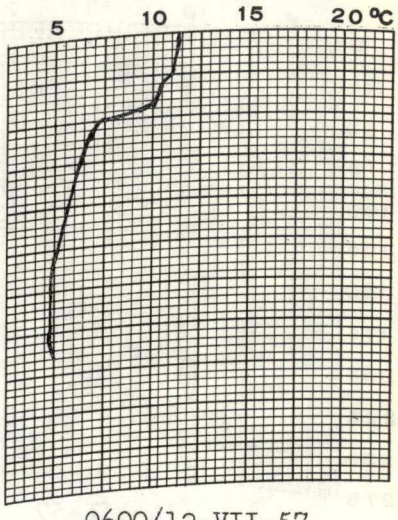
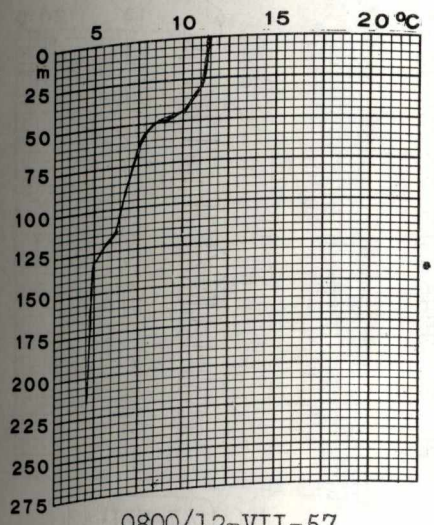
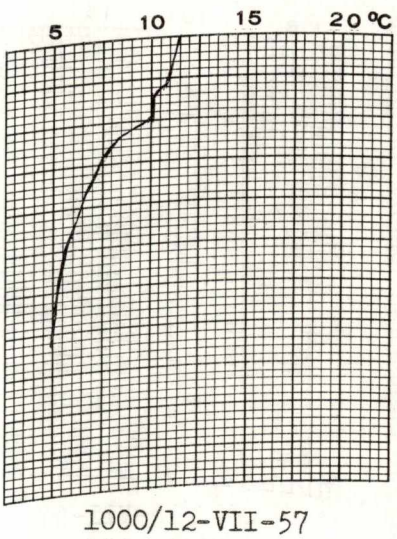


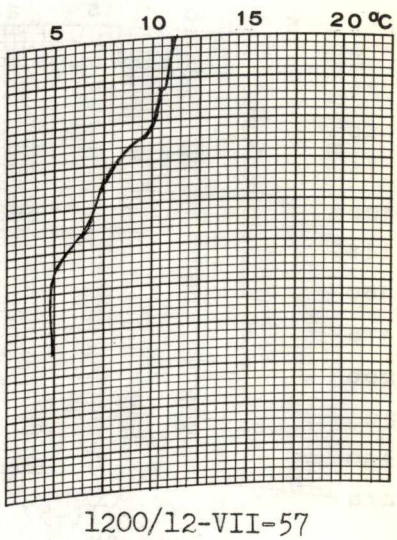
0600/12-VII-57
49° 41' N
140° 48' W



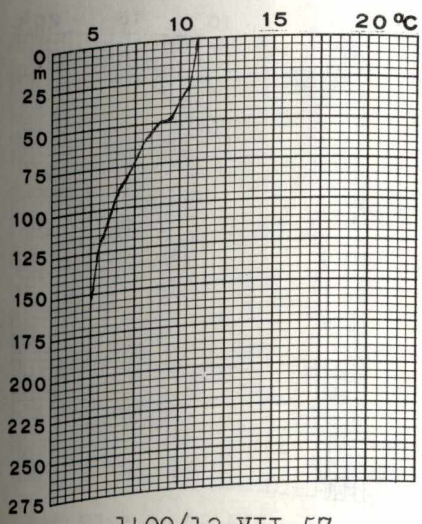
0800/12-VII-57
49° 41' N
141° 23' W



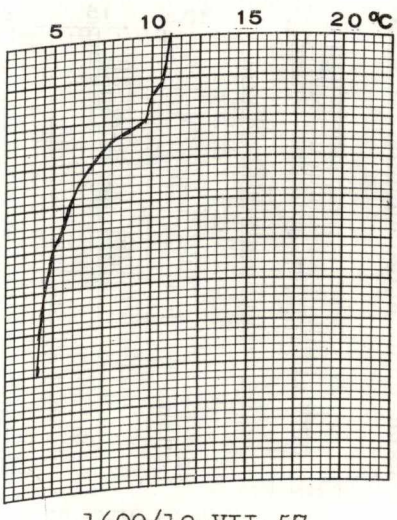
1000/12-VII-57
49° 46' N
142° 00' W



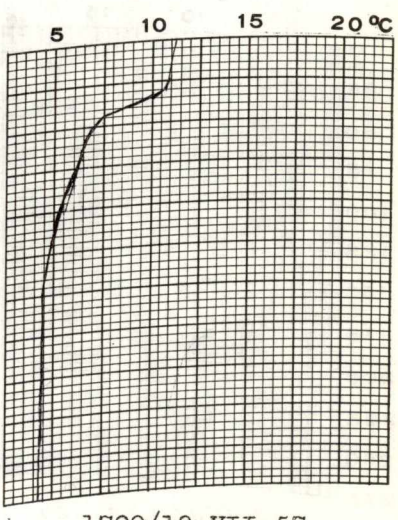
1200/12-VII-57
49° 48' N
142° 24' W



1400/12-VII-57
49° 52' N
143° 18' W

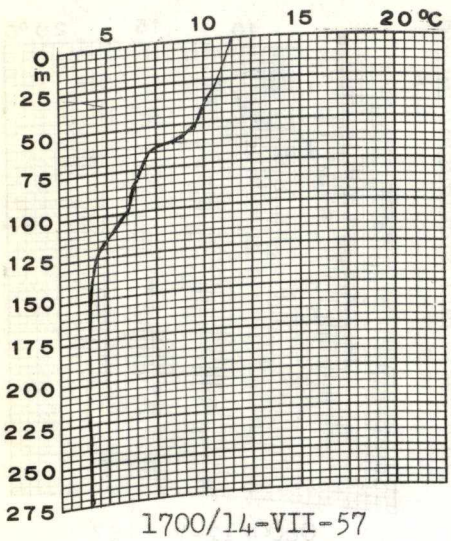


1600/12-VII-57
49° 54' N
143° 53' W



1700/13-VII-57
Grid JS

C.G.S. "St. Catharines"



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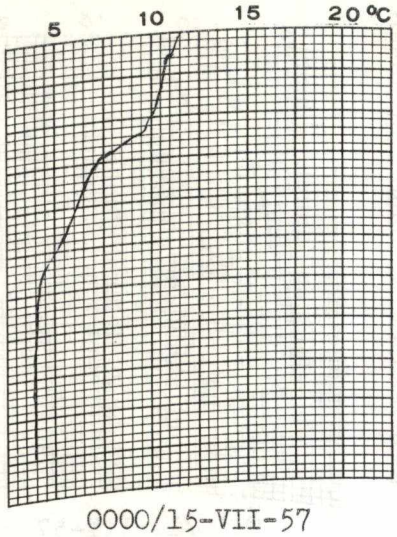
Grid JS



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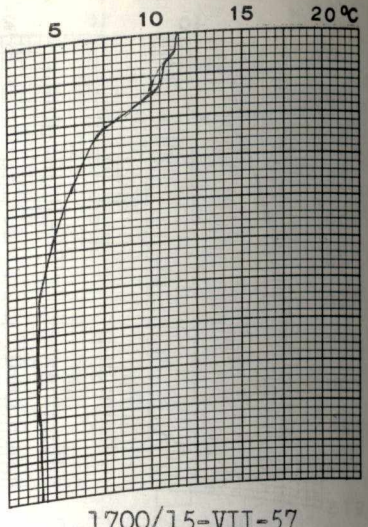
Grid JS



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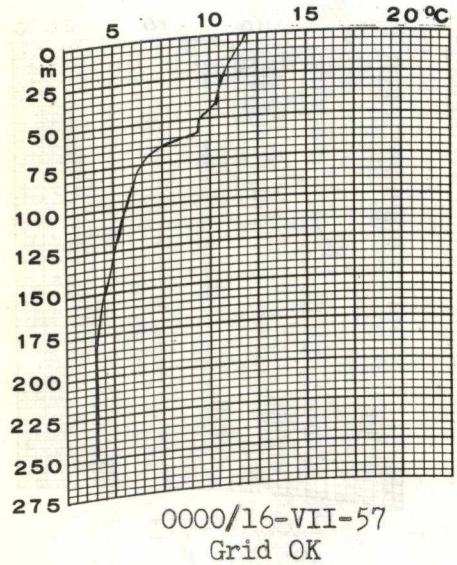

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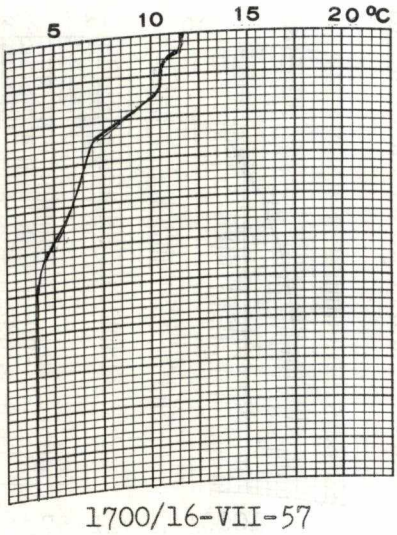
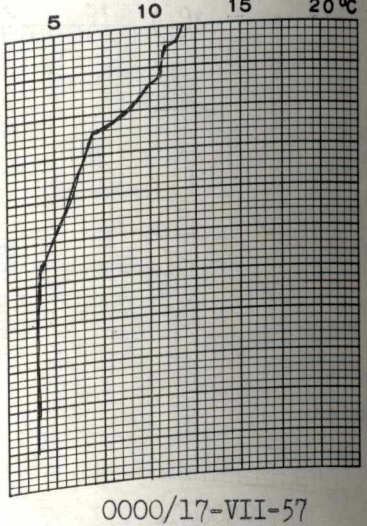


1700/16-VII-57
Grid OS



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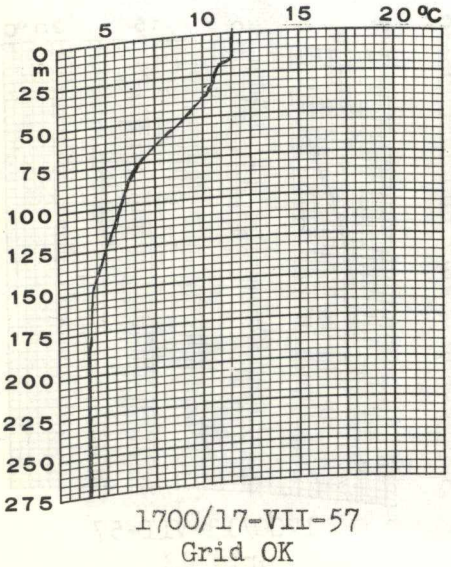
Grid JK



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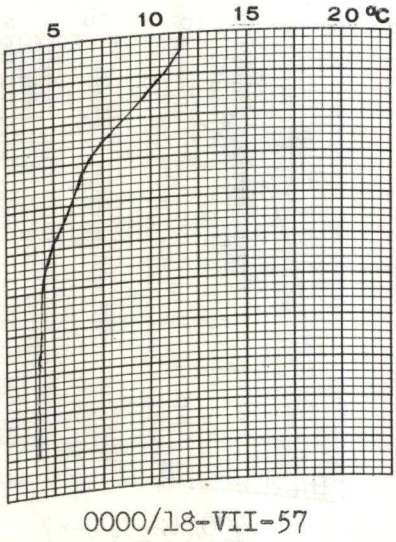

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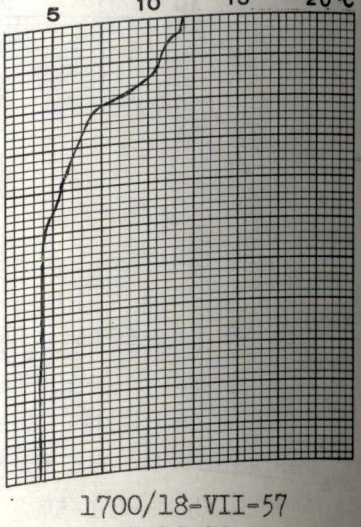

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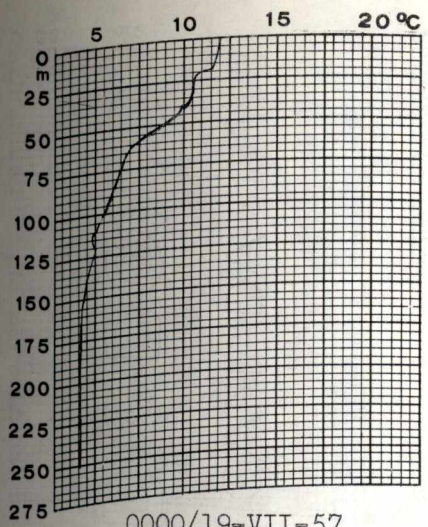
Grid OS

C.G.S. "St. Catharines"



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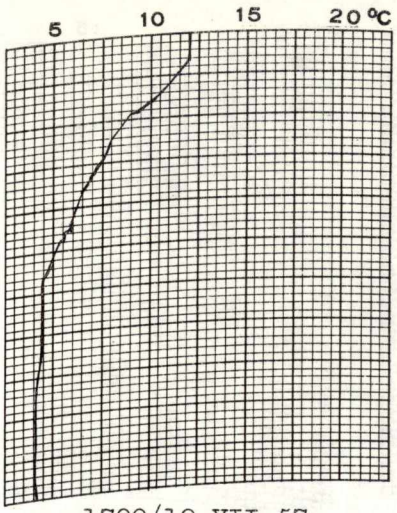

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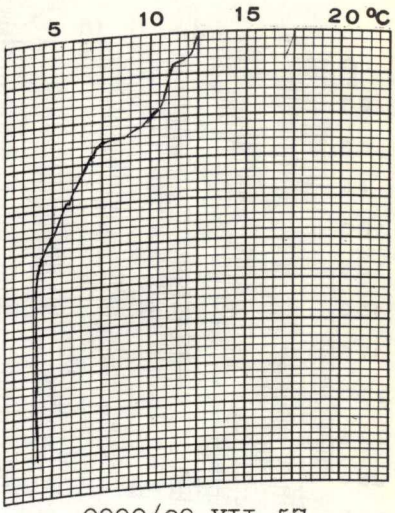

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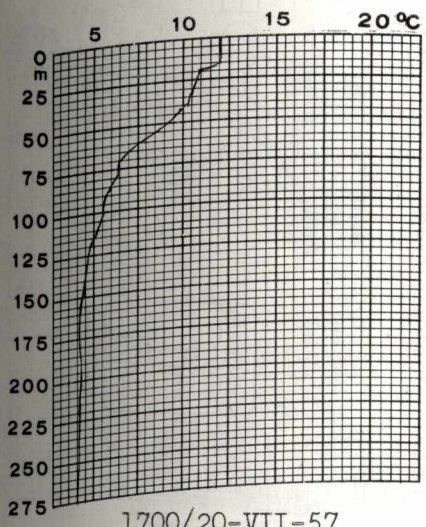

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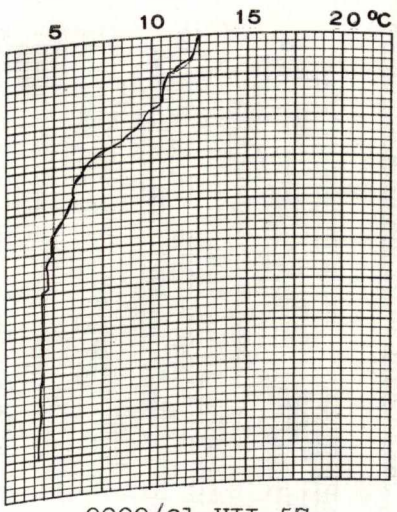

0000/21-VII-57
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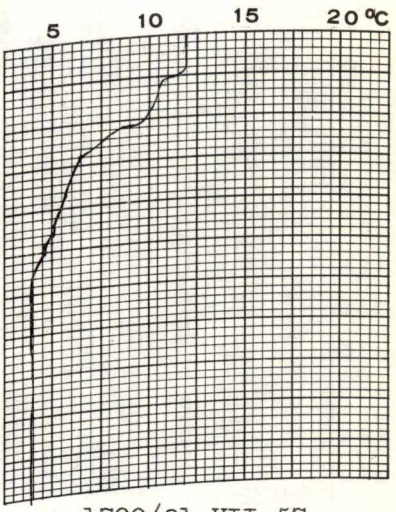

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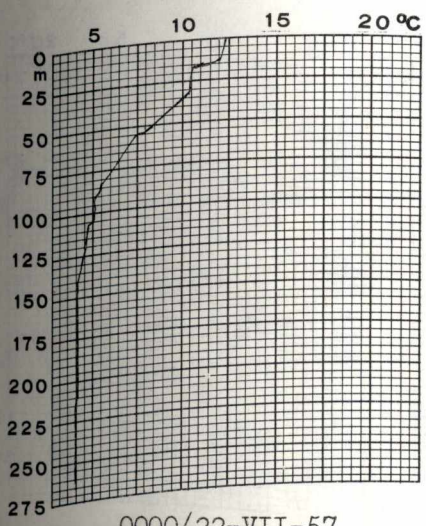
Grid OK



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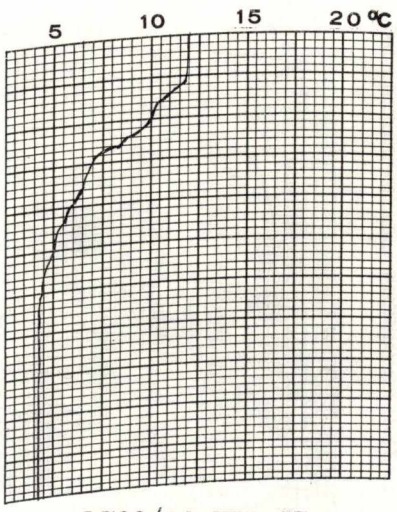

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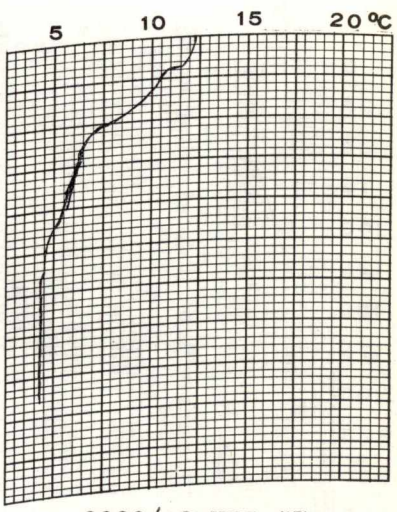
Grid OI



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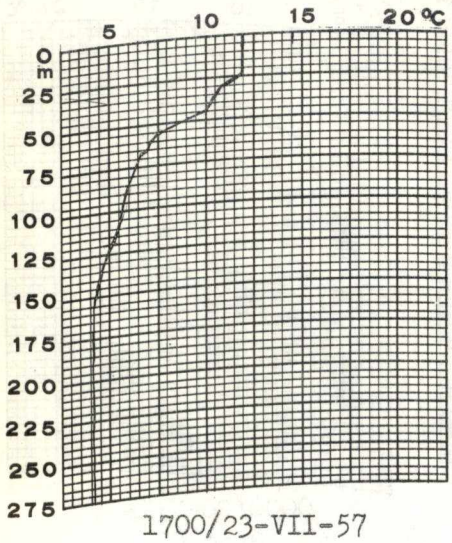
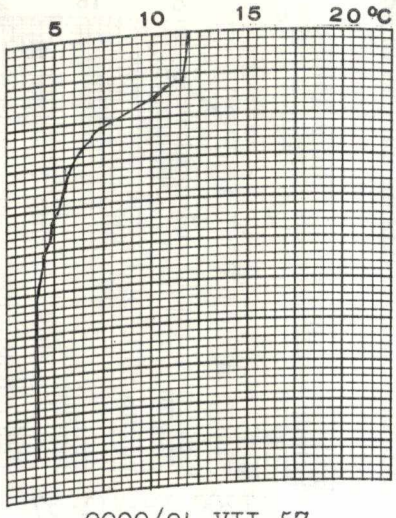
C.G.S. "St. Catharines"



1700/23-VII-57
Grid OS



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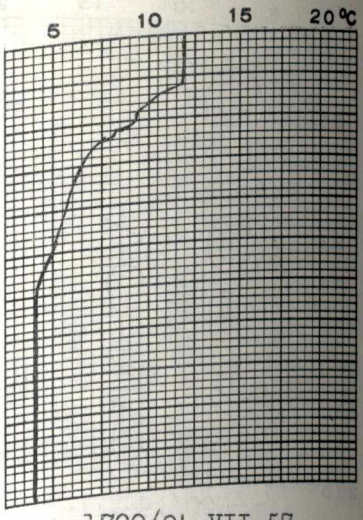
Grid JS



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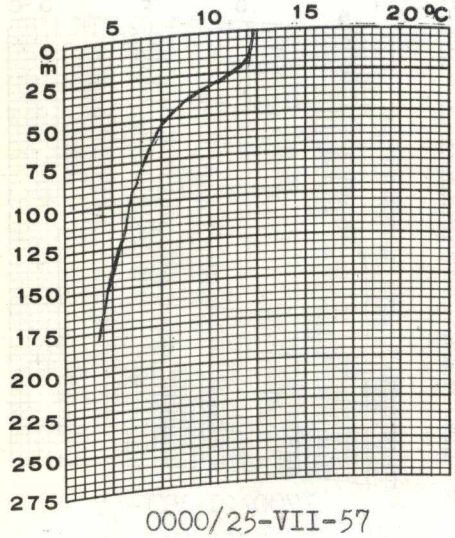

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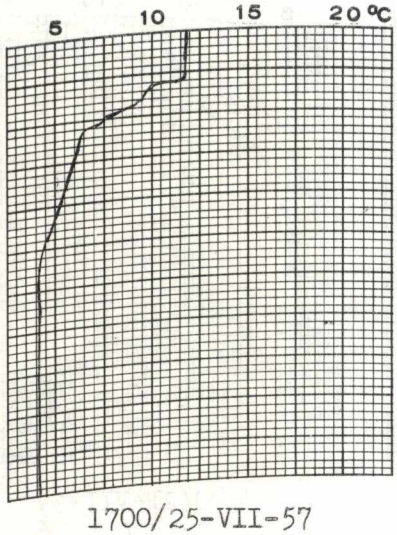

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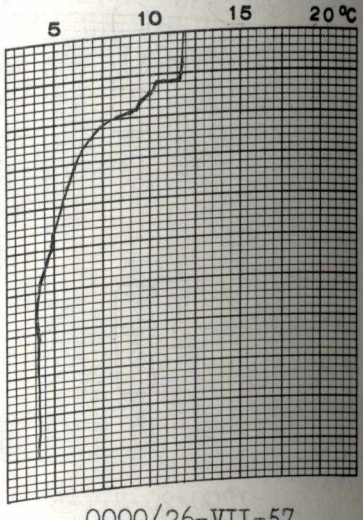
Grid JS



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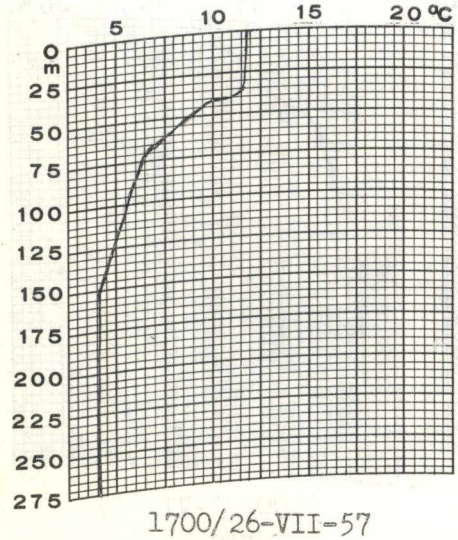

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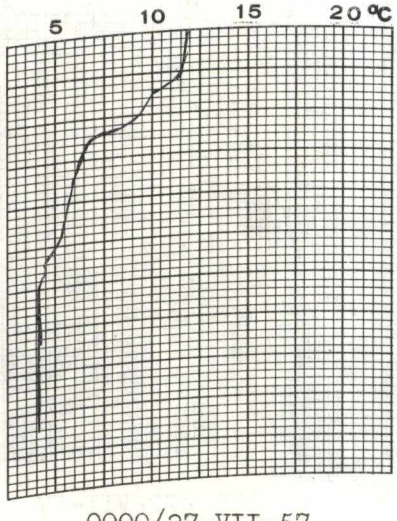

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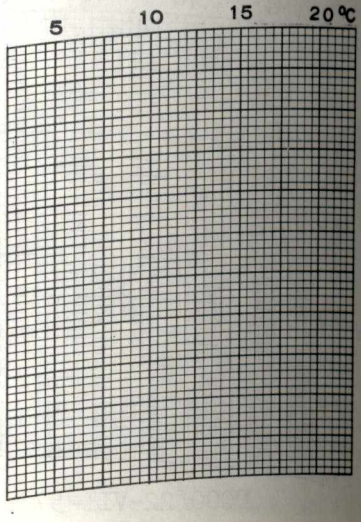
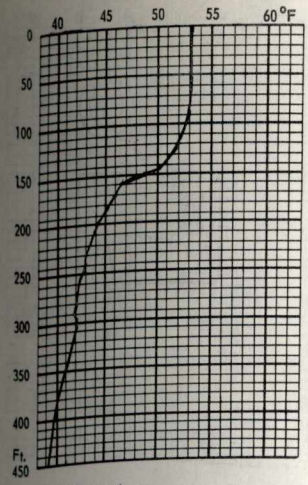
Grid OS



C.G.S. "St. Catharines"



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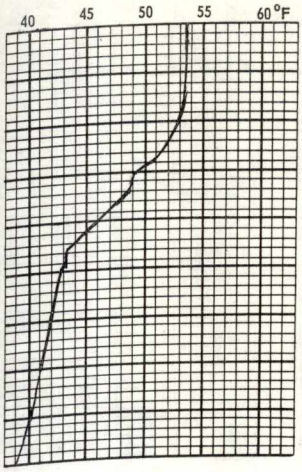
Grid OJ



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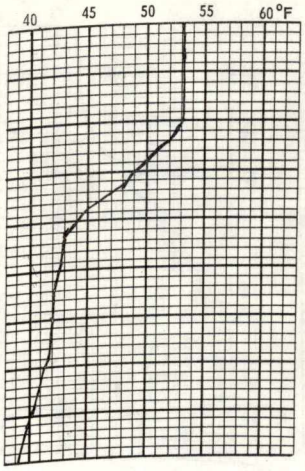

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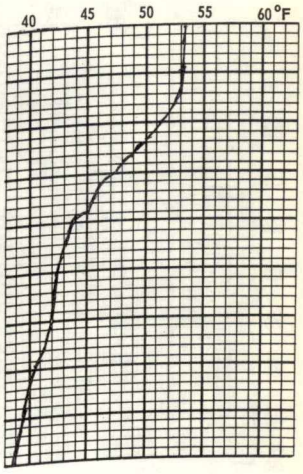

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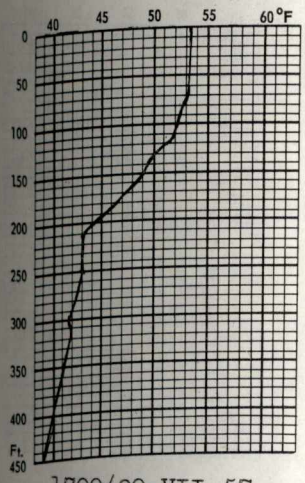

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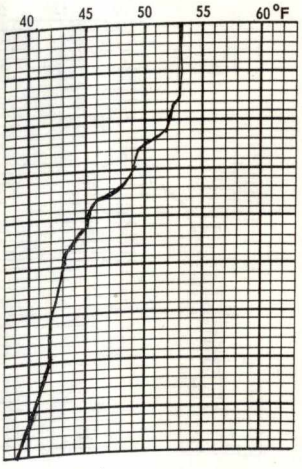
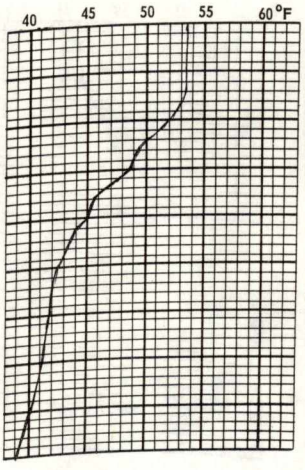


1800/29-VII-57
Grid OS



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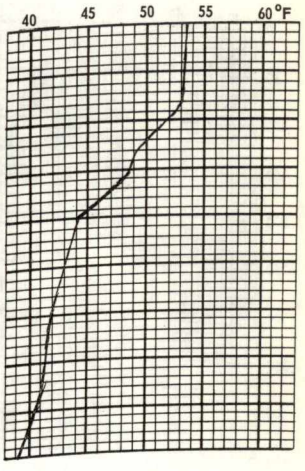
Grid OS



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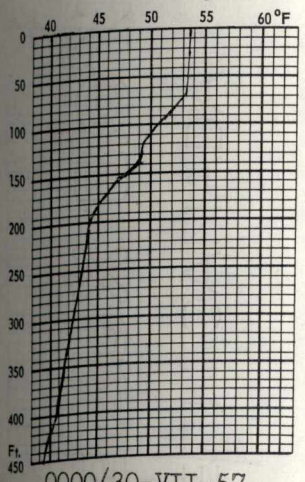

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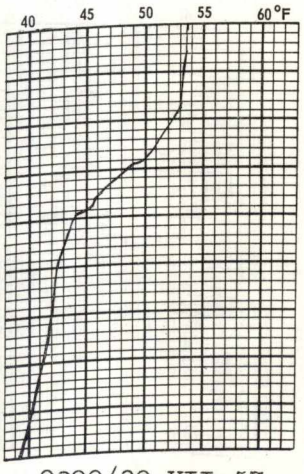

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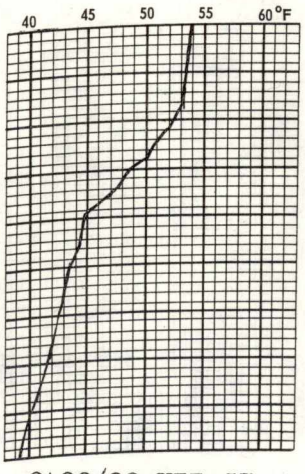

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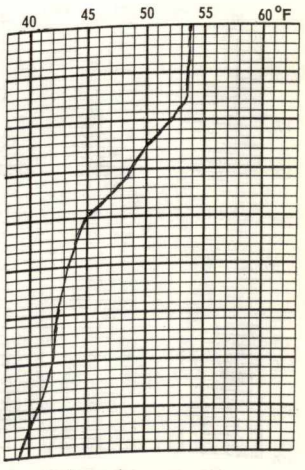

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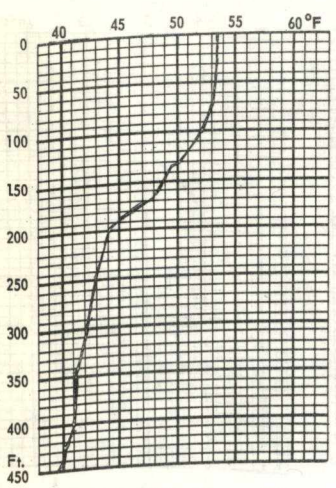
C.G.S. "St. Catharines"



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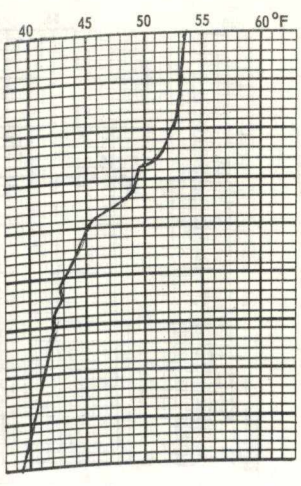

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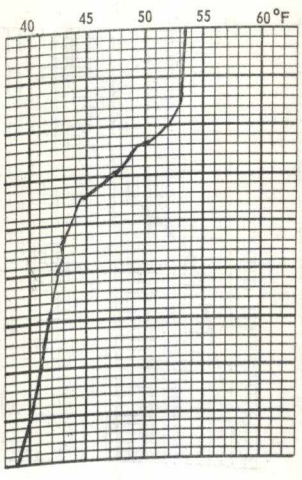

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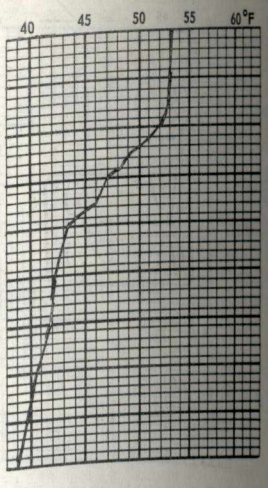

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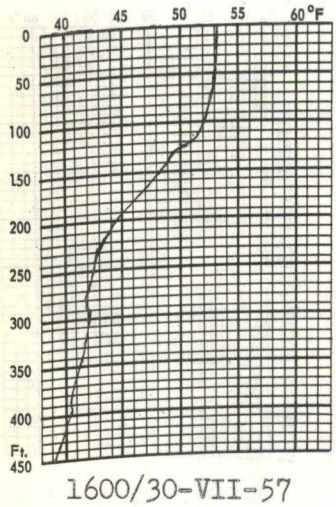

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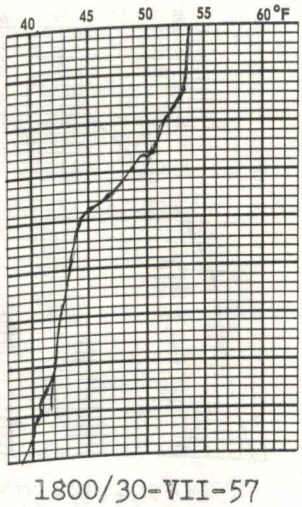

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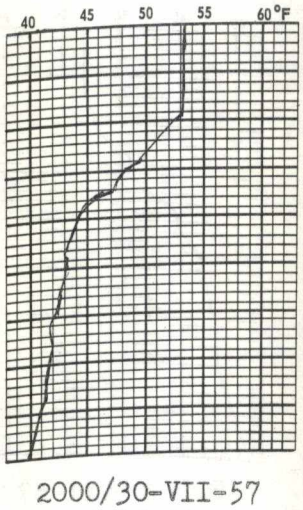

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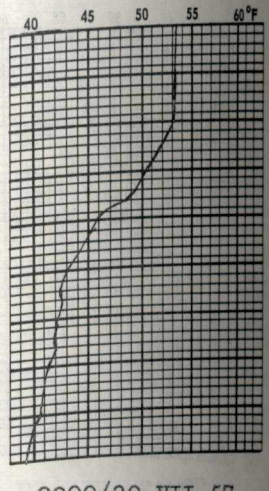

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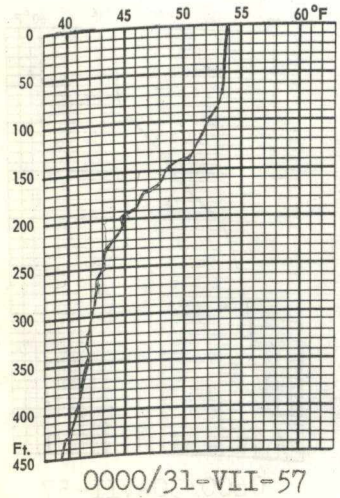

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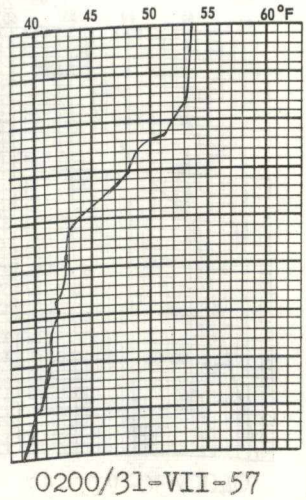

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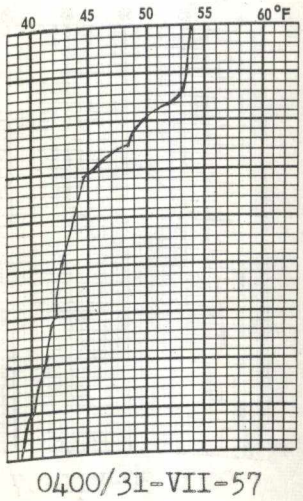

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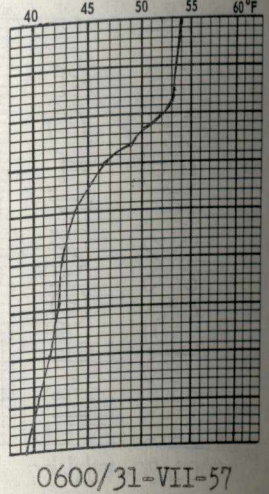

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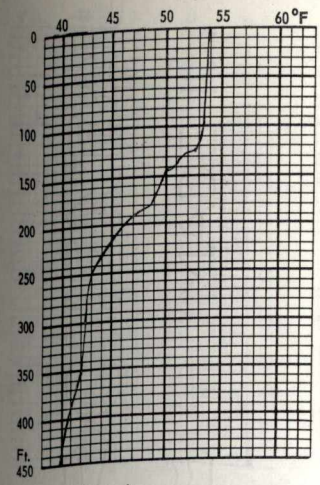
C.G.S. "St. Catharines"



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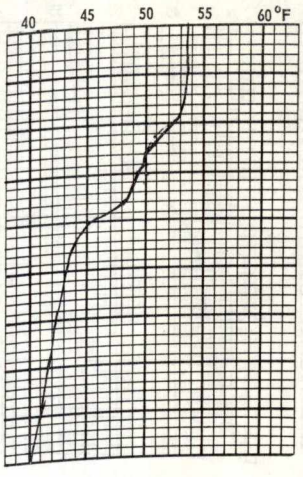

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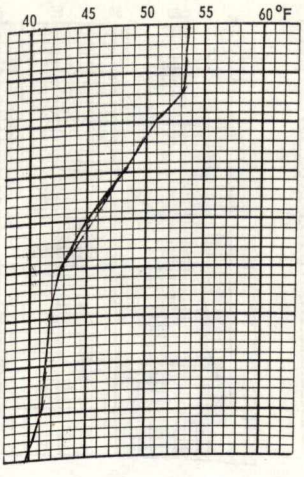

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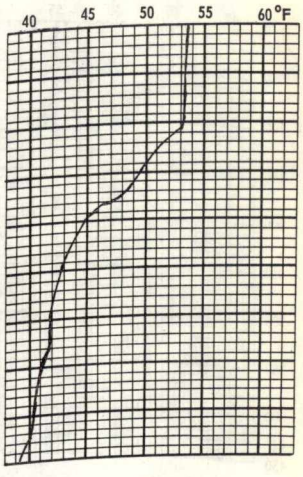

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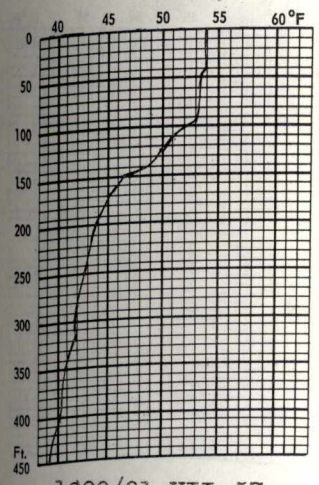

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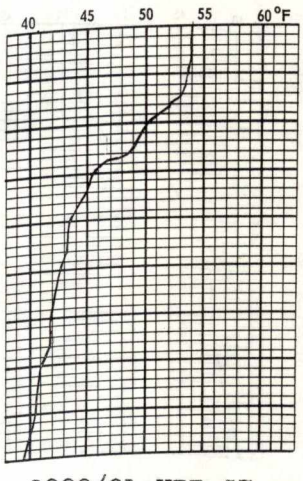

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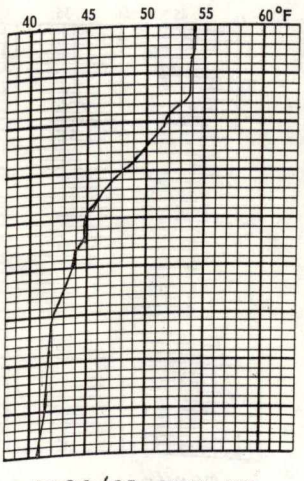

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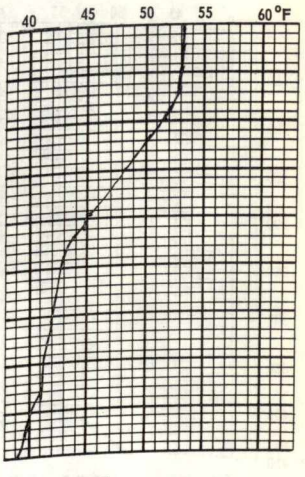

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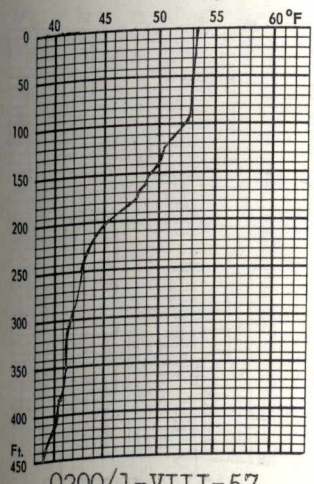

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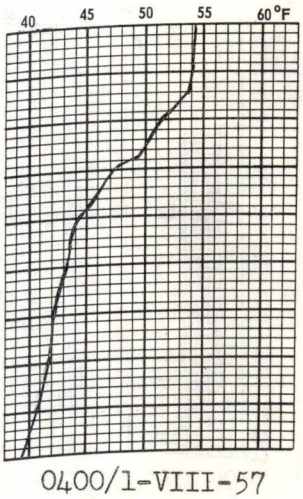

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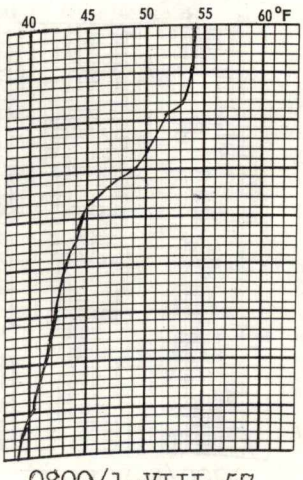

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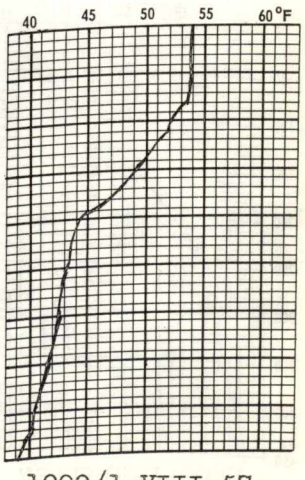

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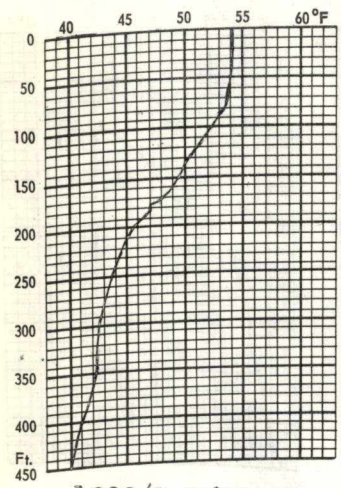
C.G.S. "St. Catharines"



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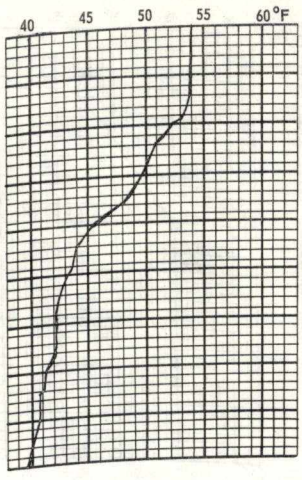

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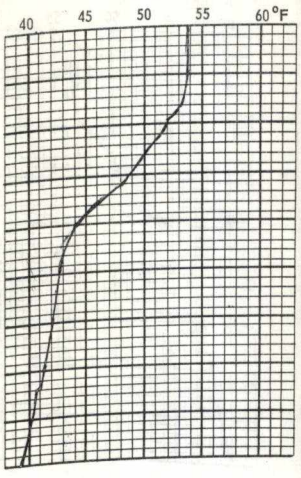

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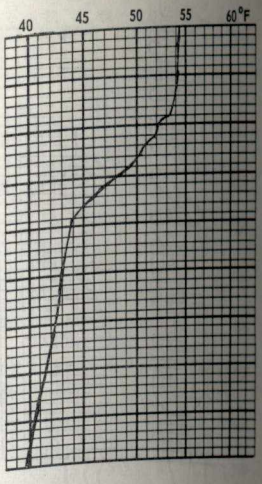

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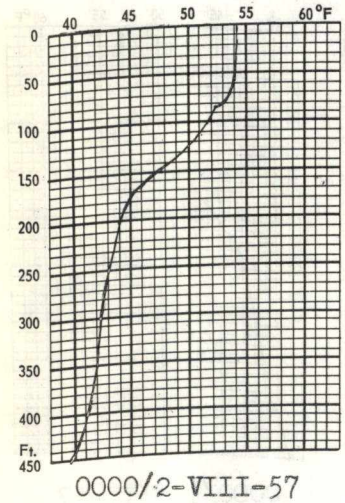

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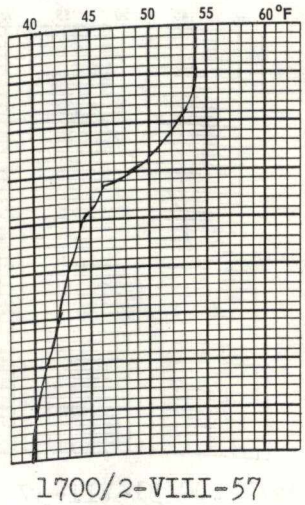
Grid OL



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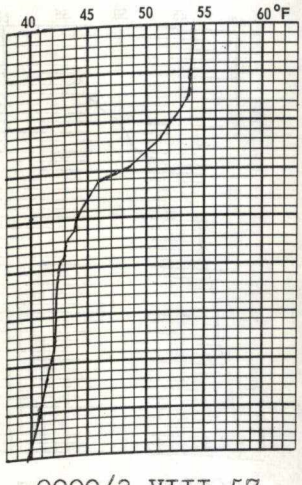

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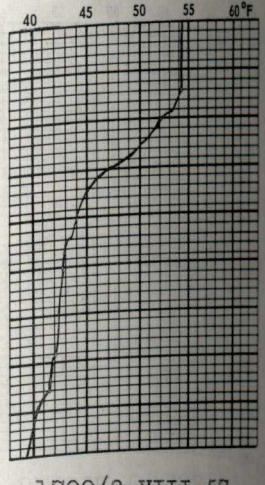

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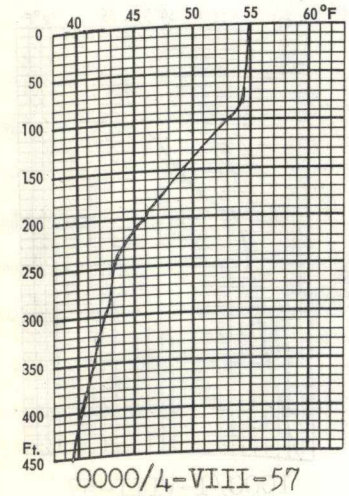

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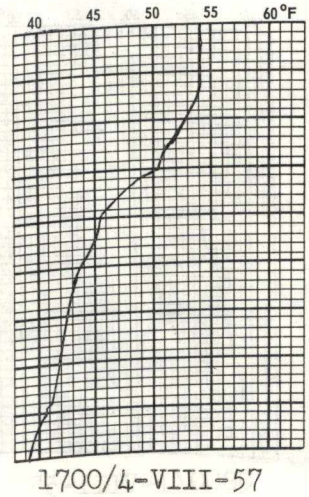

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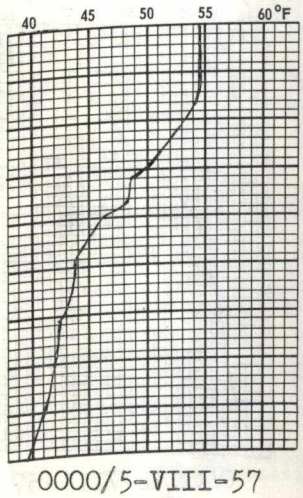

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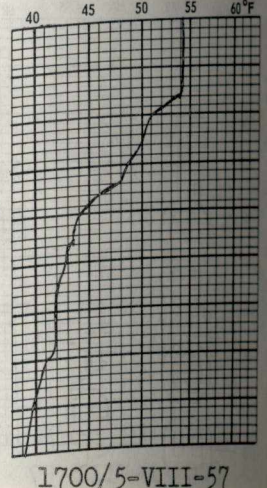

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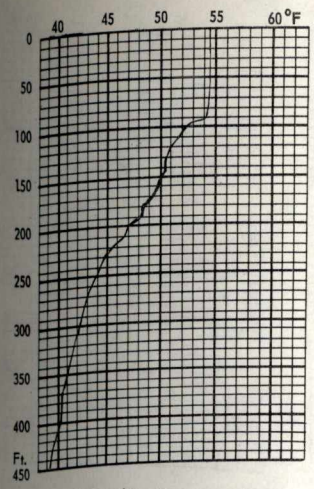
C.G.S. "St. Catharines"



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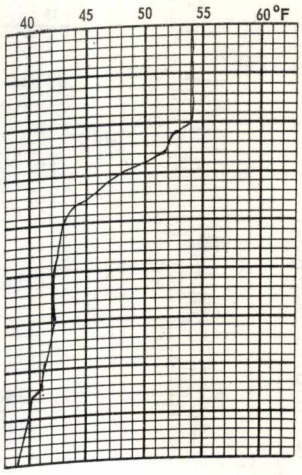

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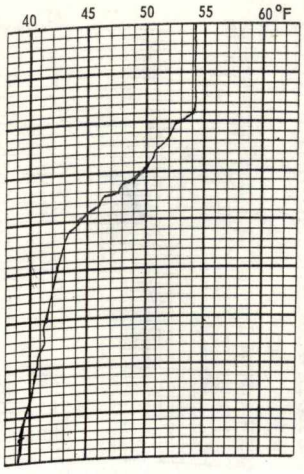

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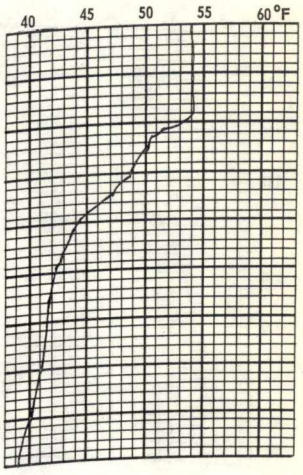

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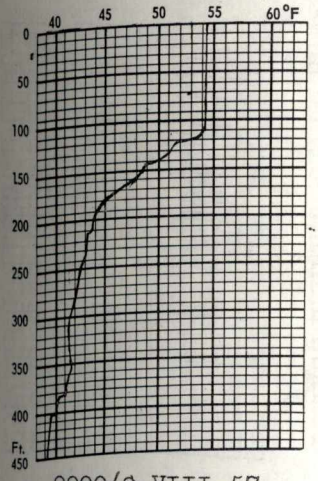

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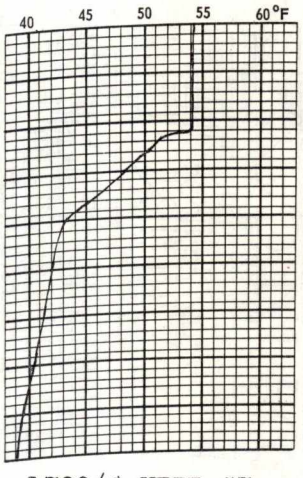

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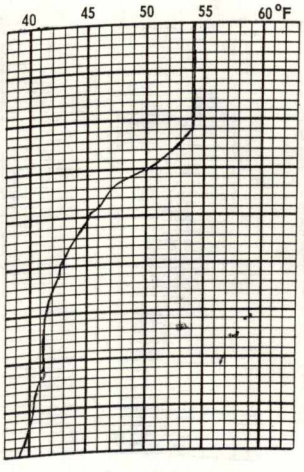

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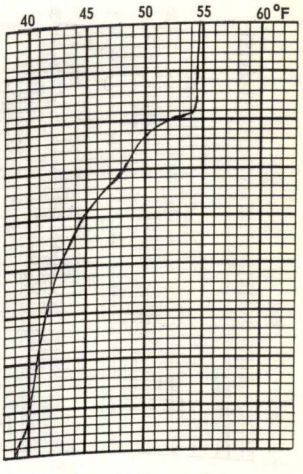

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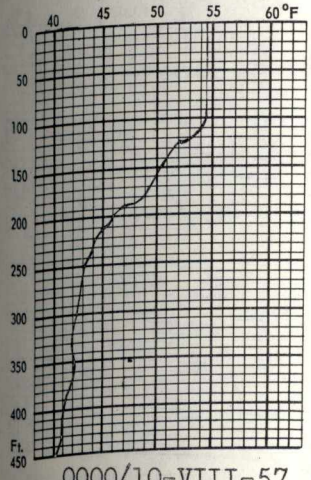

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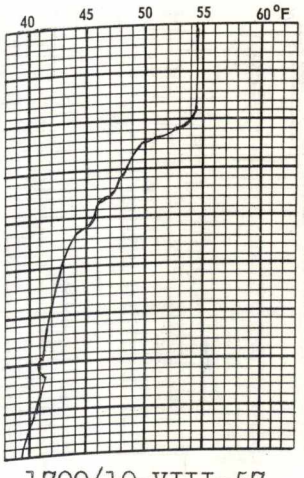

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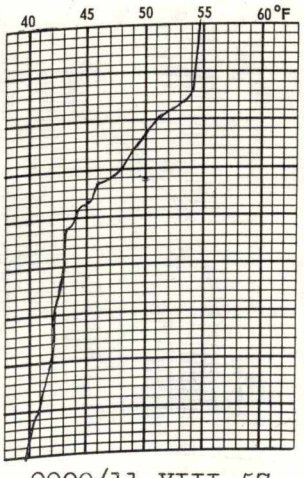

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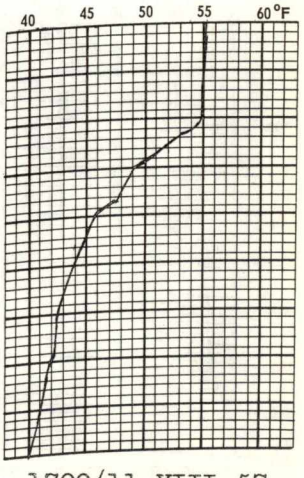

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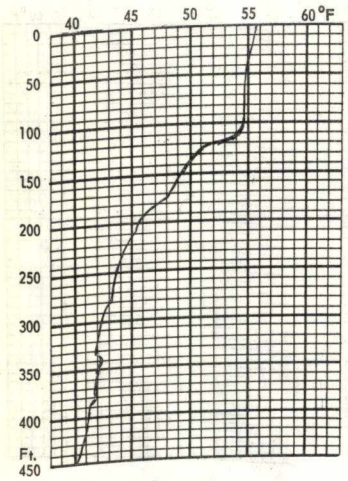
C.G.S. "St. Catharines"



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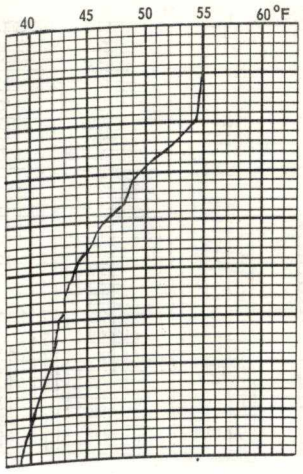

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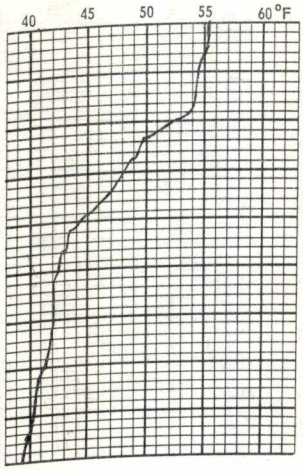

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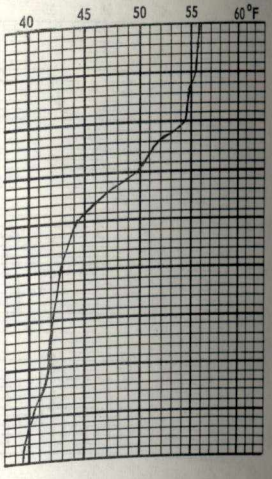

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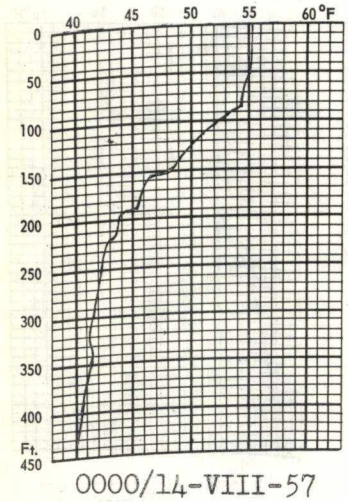

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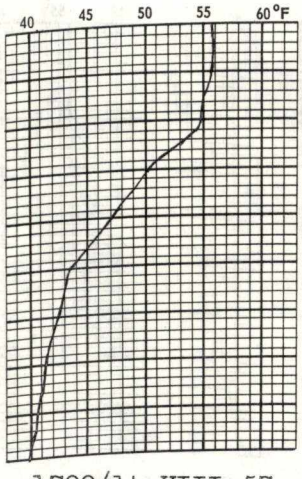

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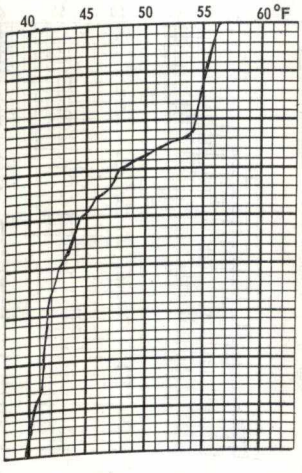

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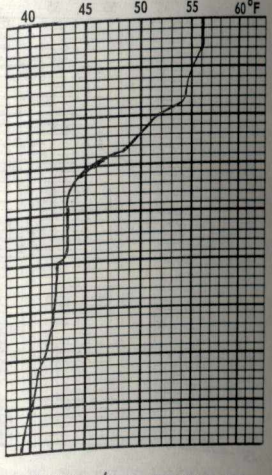

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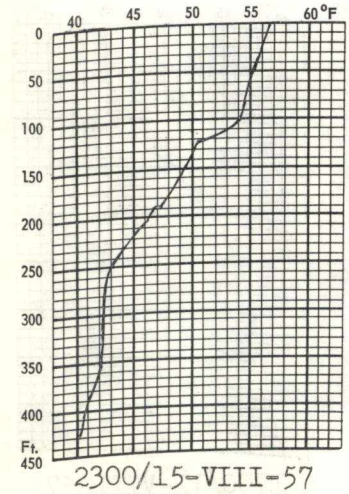

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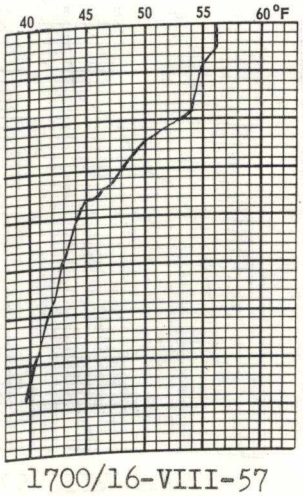

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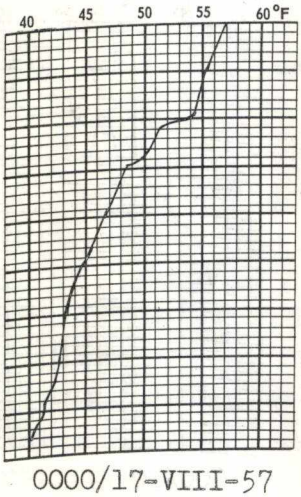

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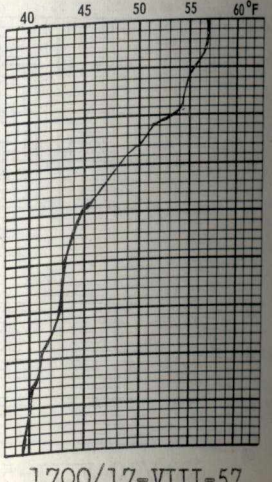

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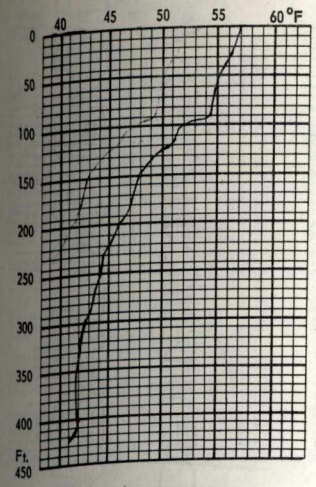

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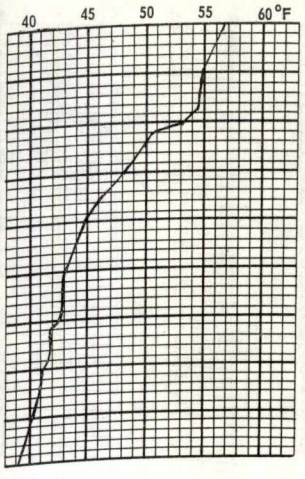

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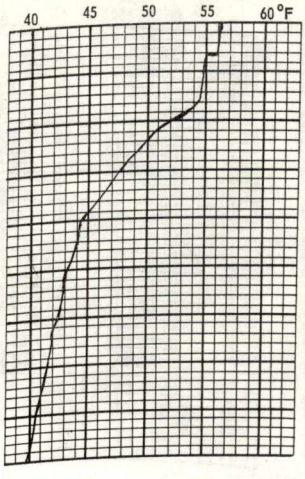

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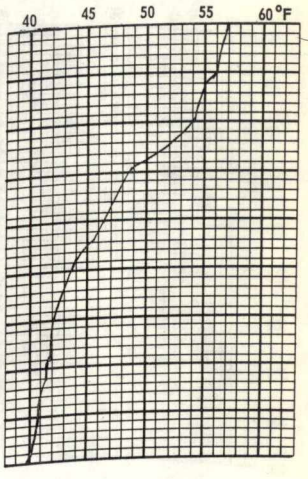

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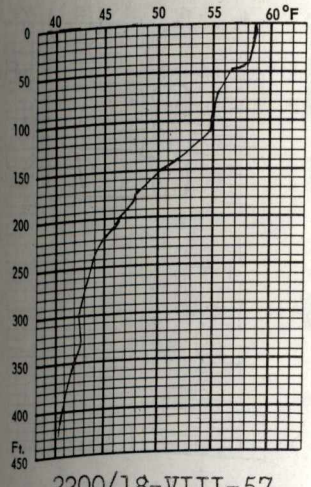

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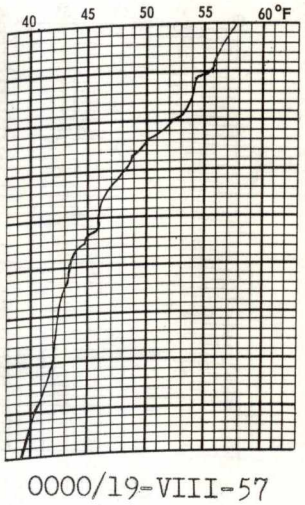

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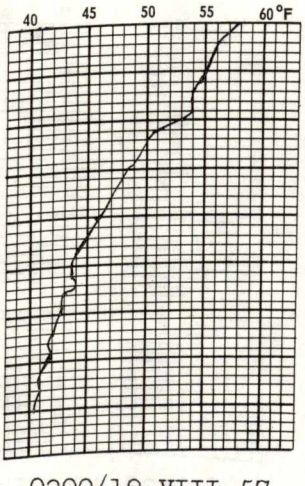

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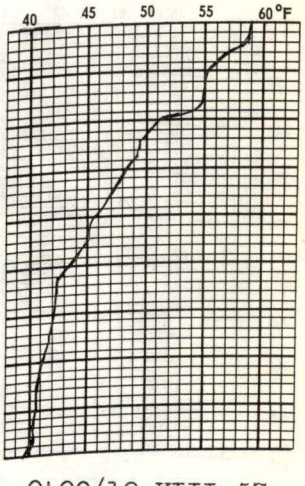

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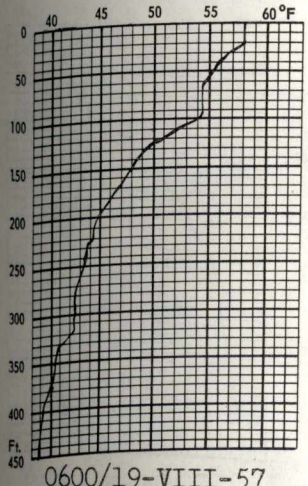

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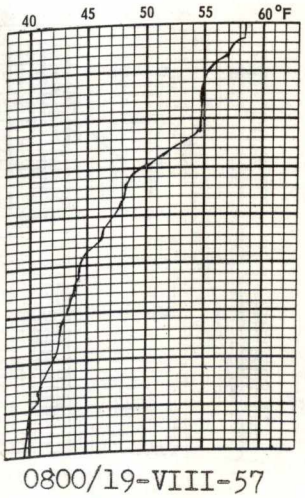

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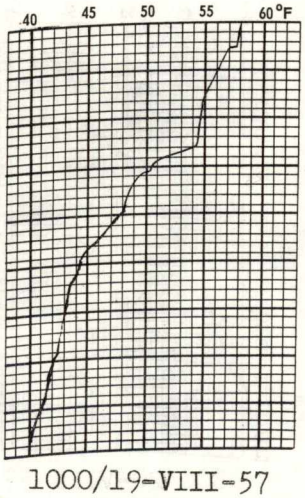

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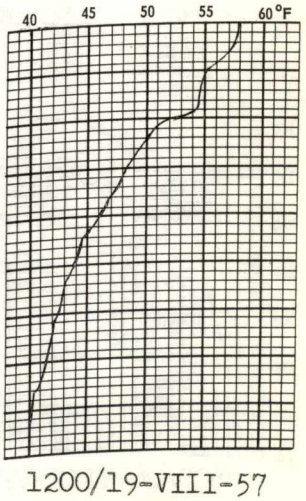

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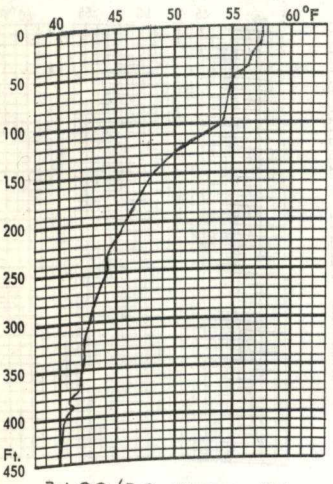
C.G.S. "St. Catharines"



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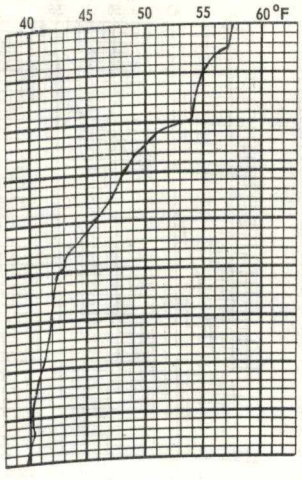

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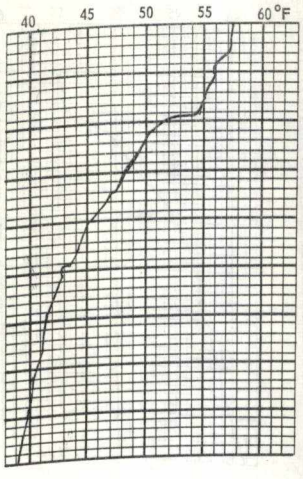

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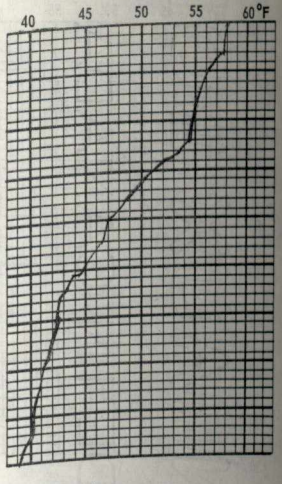

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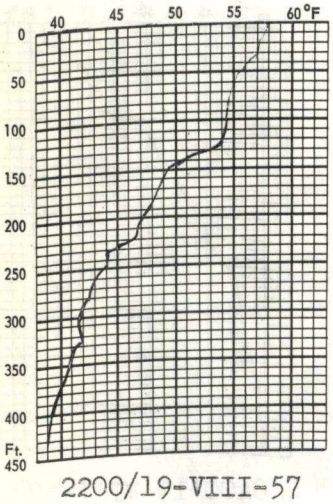

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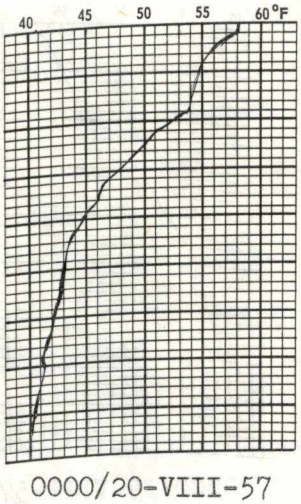

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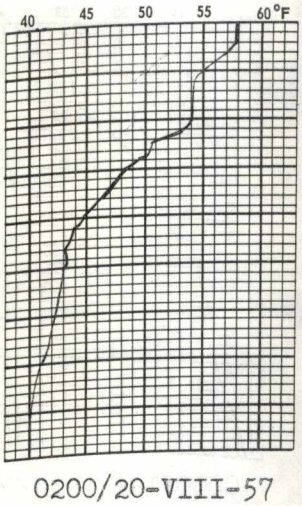

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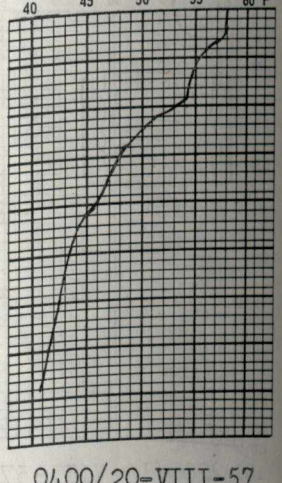

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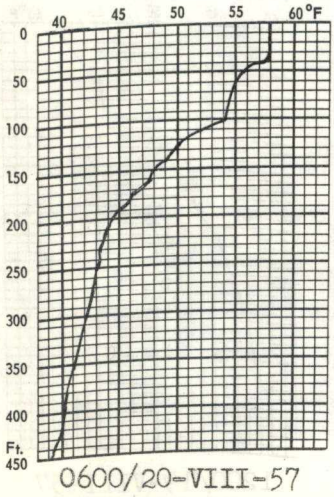

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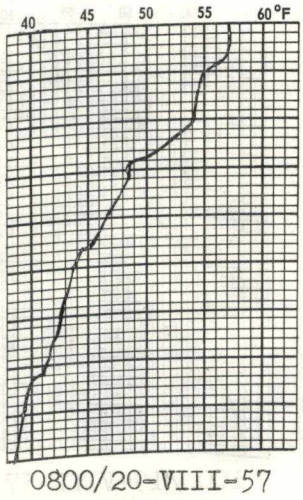

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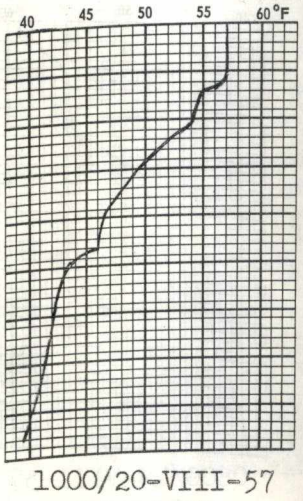

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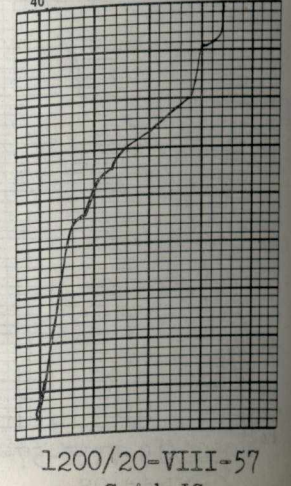

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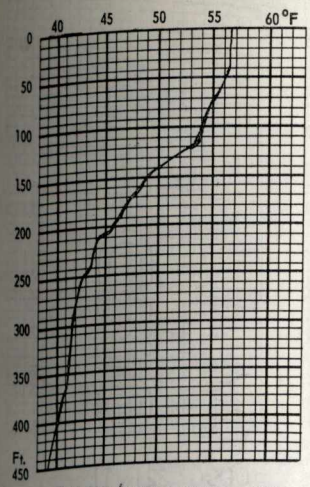
C.G.S. "St. Catharines"



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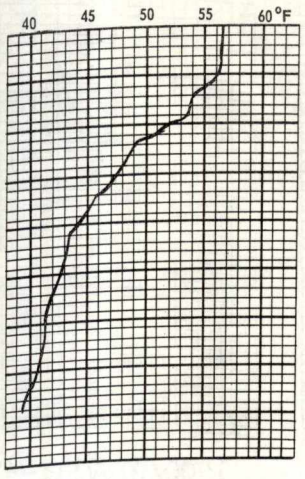

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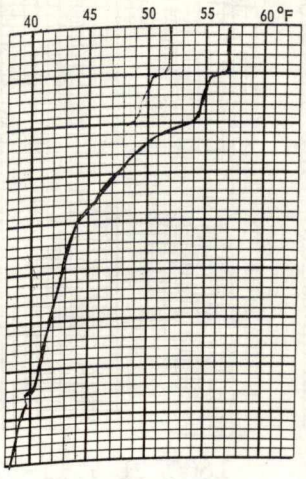

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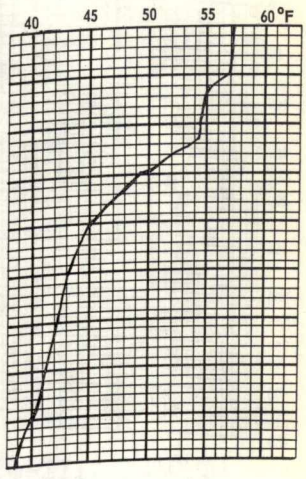

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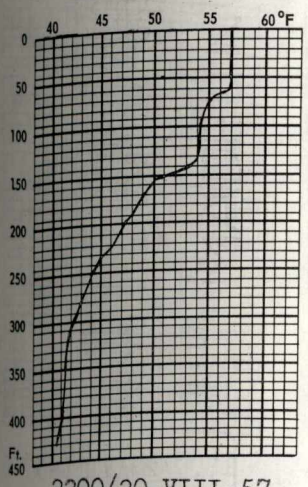

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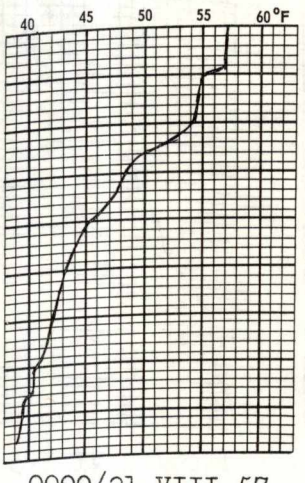

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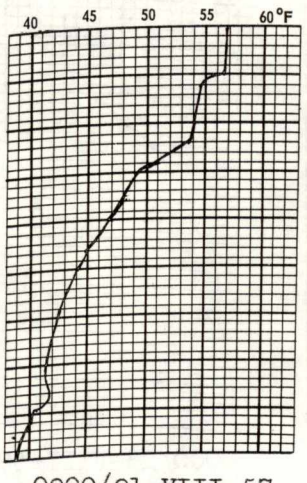

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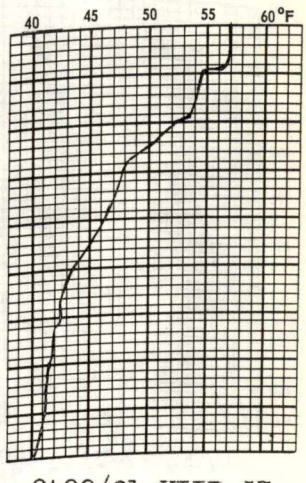

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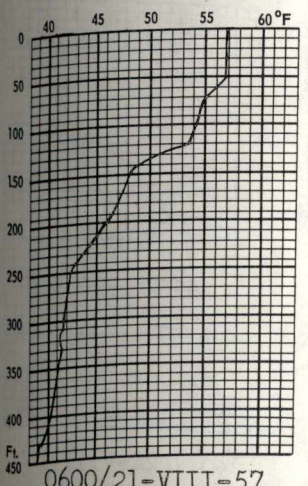

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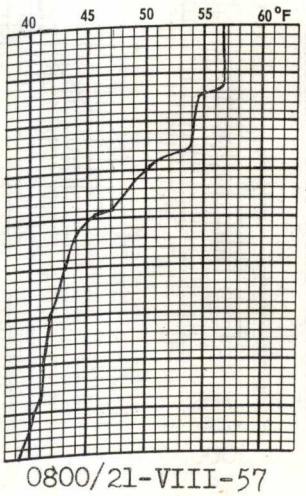

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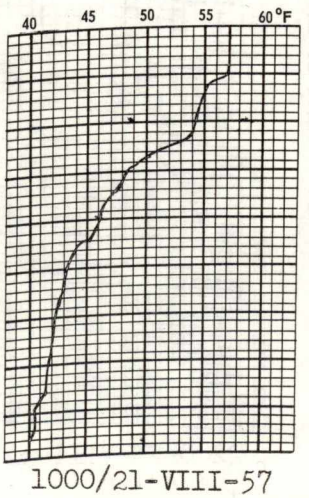

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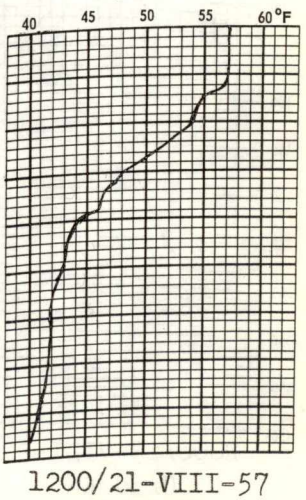

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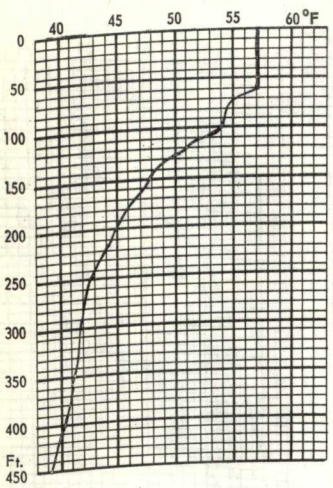

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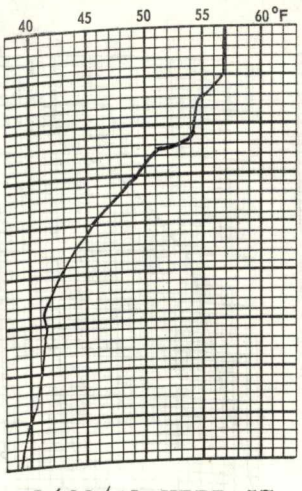

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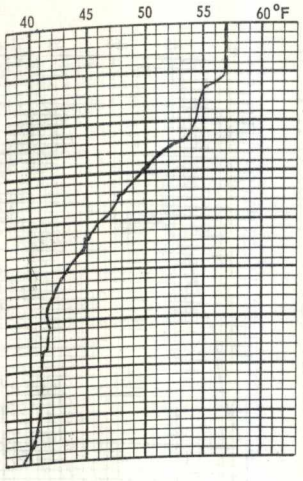

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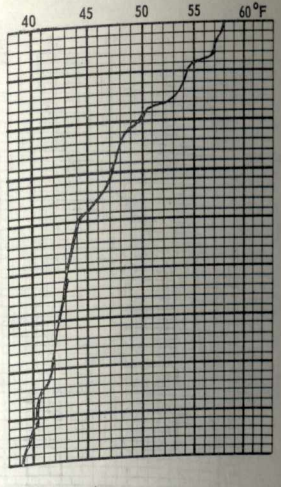
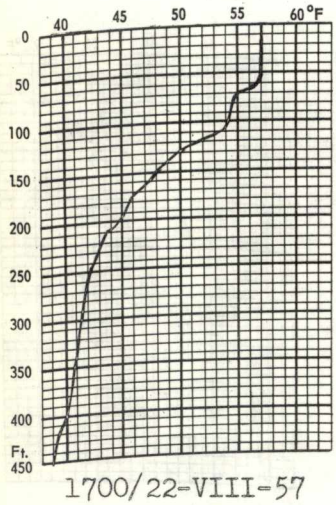
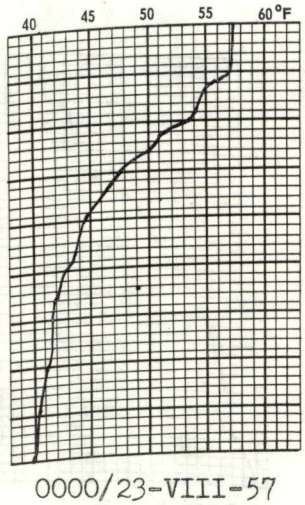
Grid OK



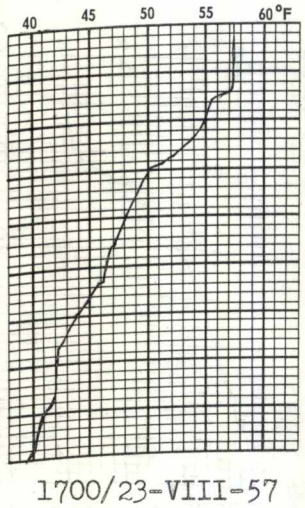
0000/22-VIII-57
Grid OL



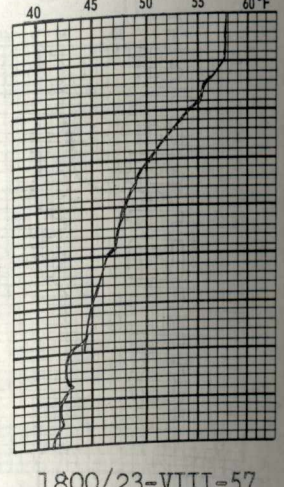
1700/22-VIII-57
Grid OS



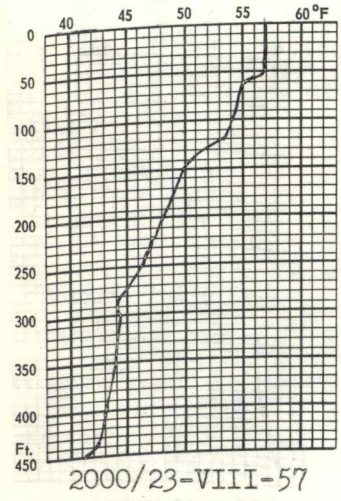
0000/23-VIII-57
Grid OK



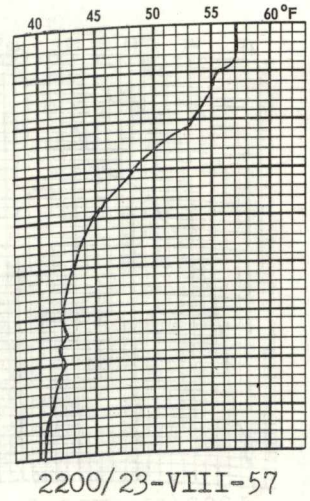
1700/23-VIII-57
Grid KS



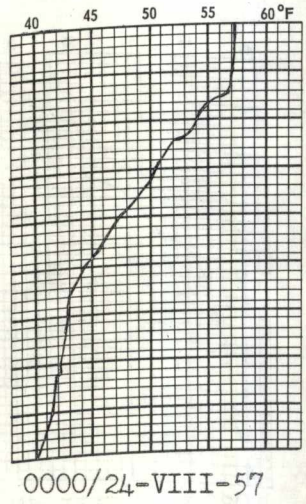
1800/23-VIII-57
Grid KL



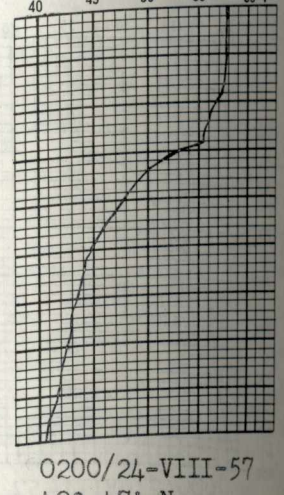
2000/23-VIII-57
Grid KM



2200/23-VIII-57
49° 52' N
142° 57' W

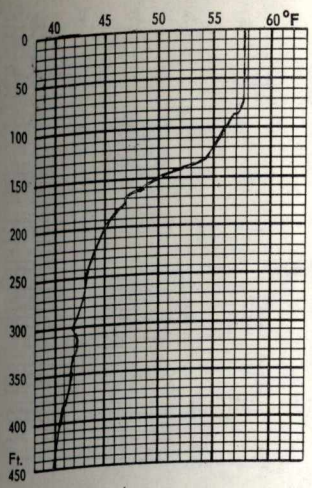


0000/24-VIII-57
49° 48' N
142° 23' W

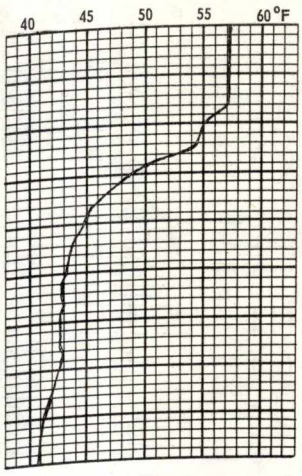


0200/24-VIII-57
49° 47' N
141° 40' W

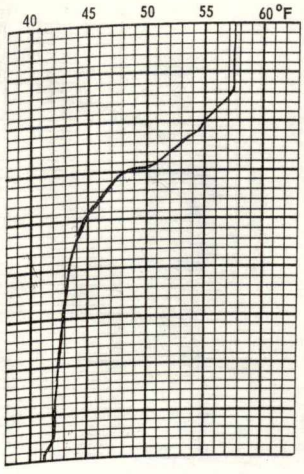
C.G.S. "St. Catharines"



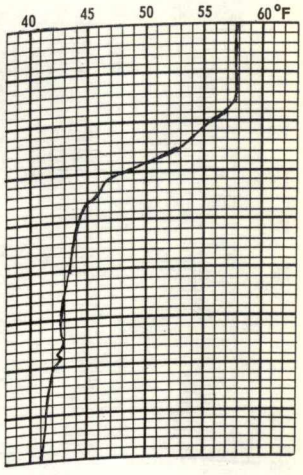
0400/24-VIII-57
49° 44.5' N
141° 00' W



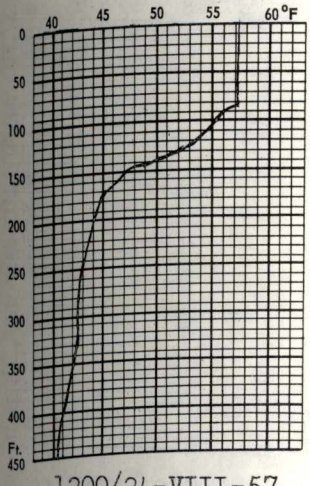
0600/24-VIII-57
49° 38' N
140° 18' W



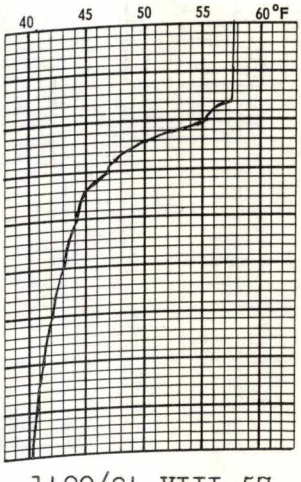
0800/24-VIII-57
49° 40' N
139° 47' W



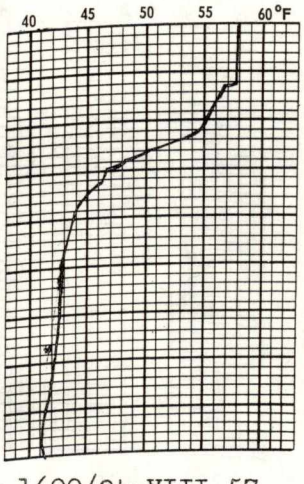
1000/24-VIII-57
49° 38' N
138° 58' W



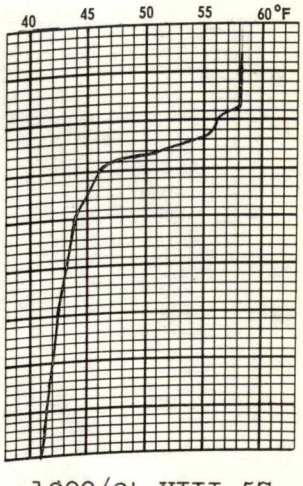
1200/24-VIII-57
49° 36' N
138° 26' W



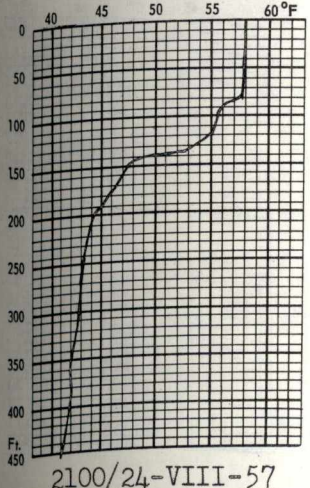
1400/24-VIII-57
49° 36' N
137° 54' W



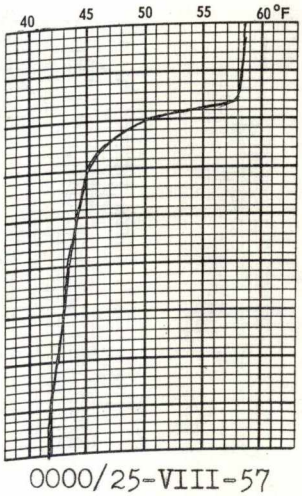
1600/24-VIII-57
49° 31' N
137° 15' W



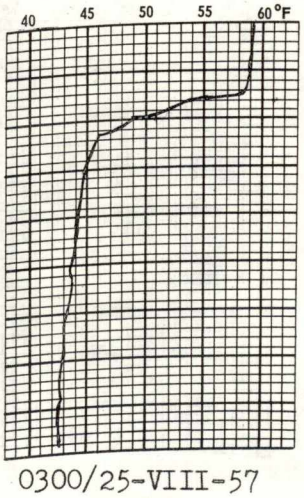
1800/24-VIII-57
49° 27' N
136° 36' W



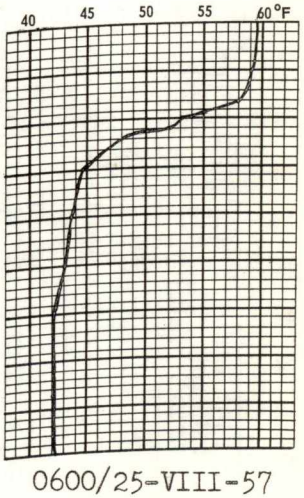
2100/24-VIII-57
49° 23' N
135° 37' W



0000/25-VIII-57
49° 20' N
134° 40' W

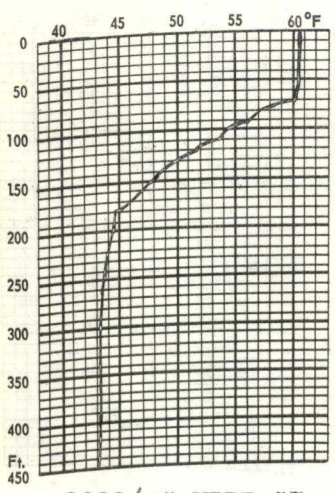


0300/25-VIII-57
49° 25' N
133° 48' W

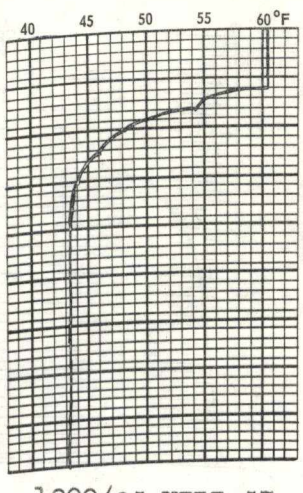


0600/25-VIII-57
49° 17' N
132° 52' W

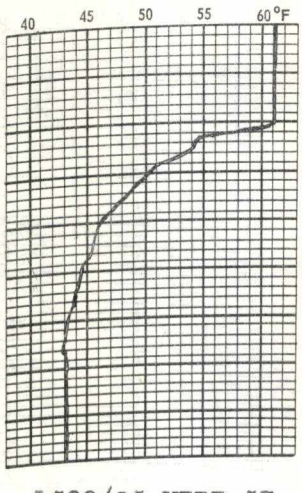
C.G.S. "St. Catharines"



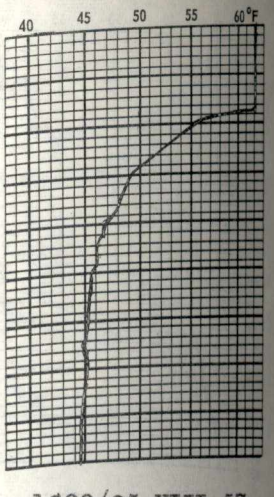
0900/25-VIII-57
49° 10' N
132° 12' W



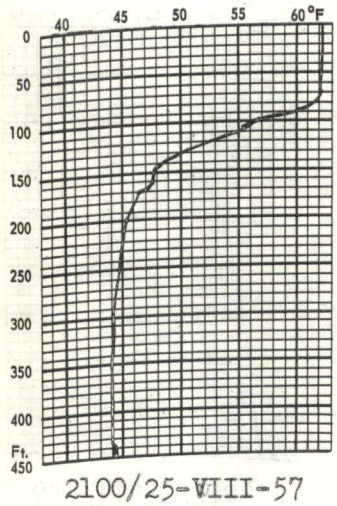
1200/25-VIII-57
49° 04' N
131° 07' W



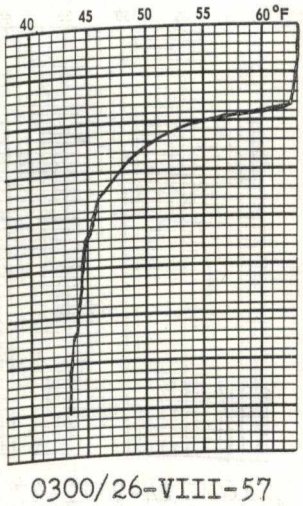
1530/25-VIII-57
48° 59' N
130° 07' W



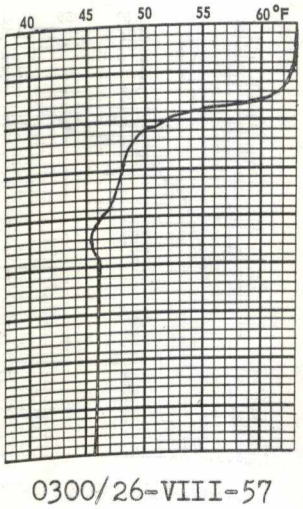
1800/25-VIII-57
48° 57' N
129° 27' W



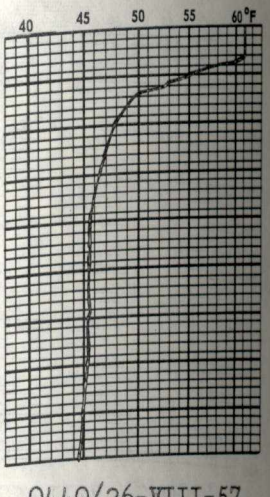
2100/25-VIII-57
48° 51' N
128° 34' W



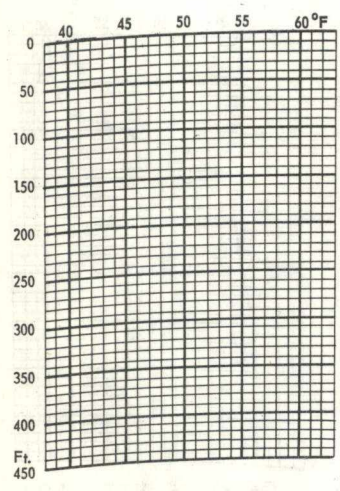
0300/26-VIII-57
48° 45' N
127° 32' W

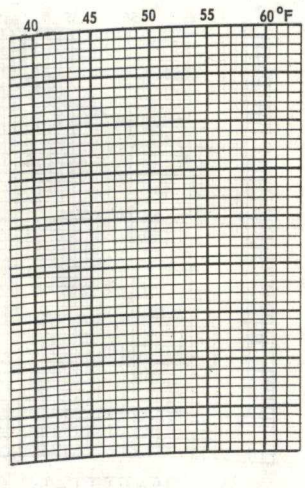


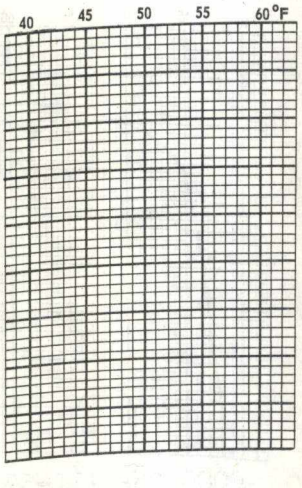
0300/26-VIII-57
48° 42' N
126° 46' W

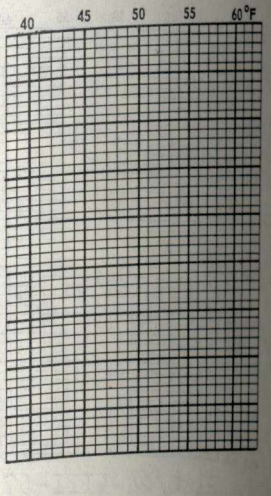


0440/26-VIII-57
48° 40' N
126° 17' W

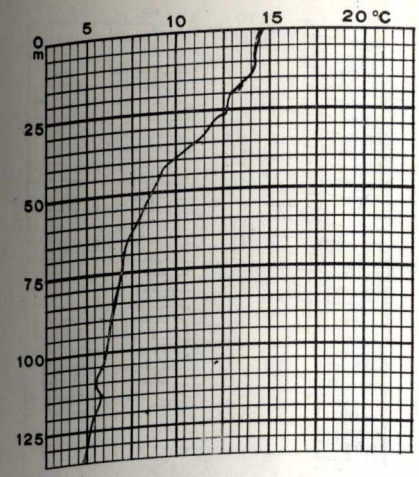




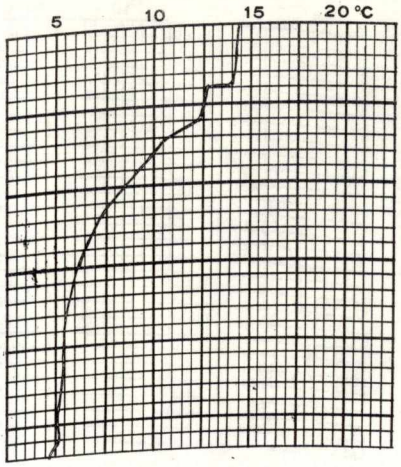




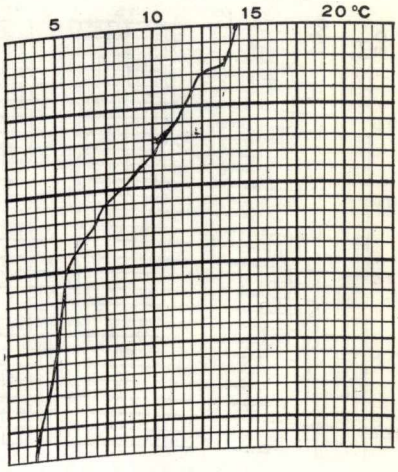
C.G.S. "Stonetown"



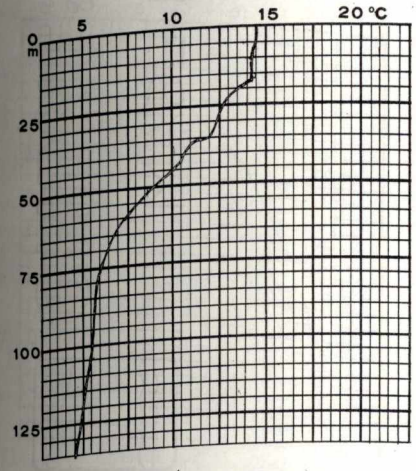
0200/24-VIII-57
Grid OL



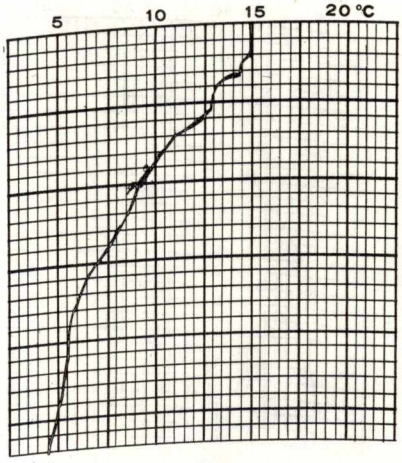
1700/24-VIII-57
Grid OS



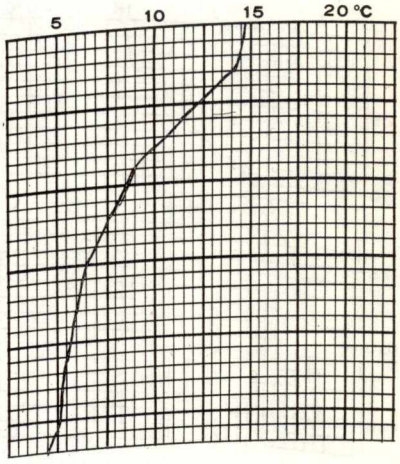
0200/25-VIII-57
Grid OS



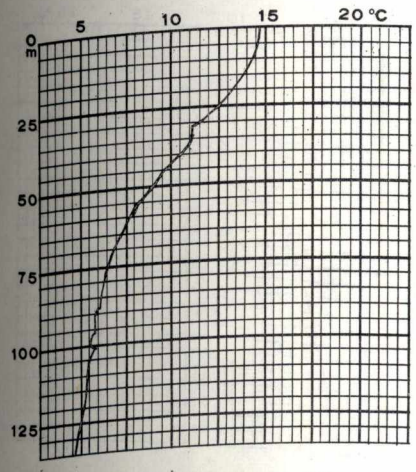
1700/25-VIII-57
Grid OS



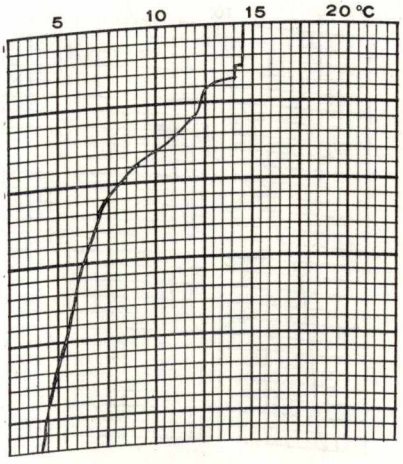
0200/26-VIII-57
Grid OS



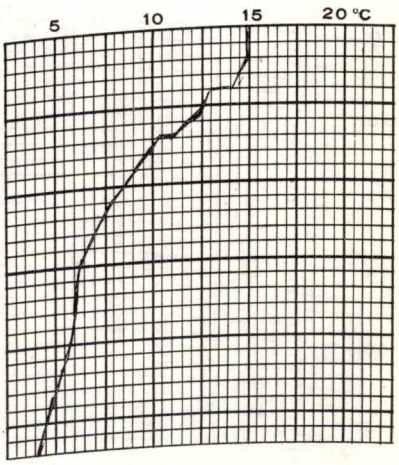
1700/26-VIII-57
Grid OS



0200/27-VIII-57
Grid OK

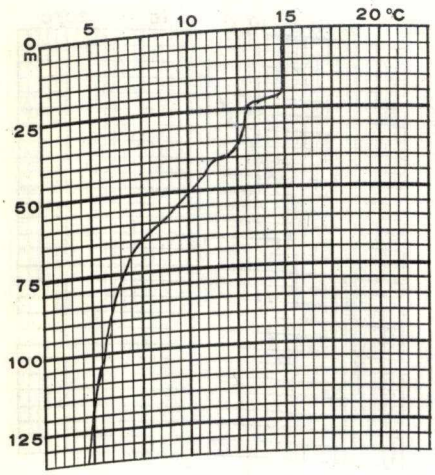


1700/27-VIII-57
Grid OS



0200/28-VIII-57
Grid OS

C.G.S. "Stonetown"



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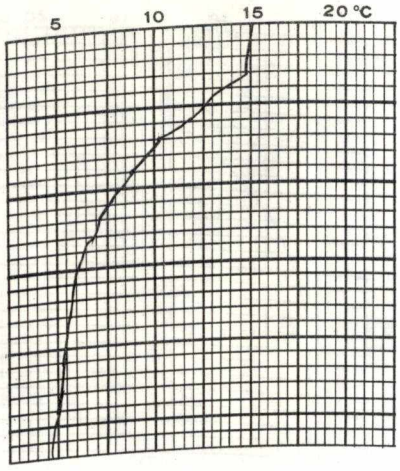
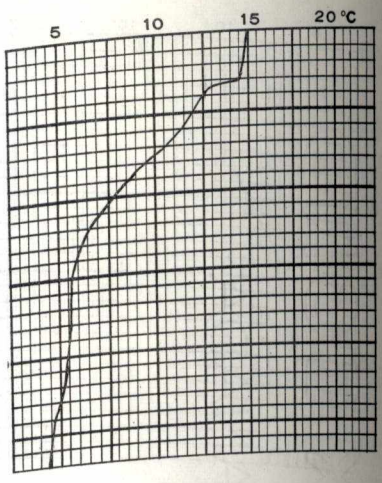
Grid OS



0200/29-VIII-57
Grid OS



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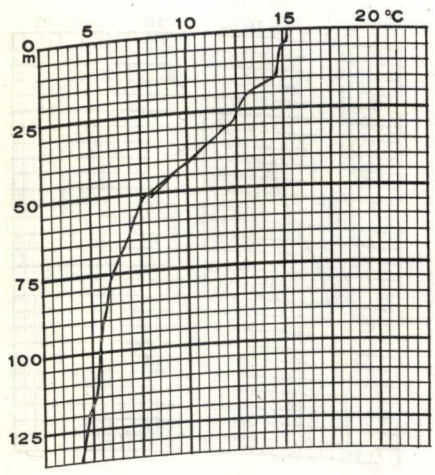
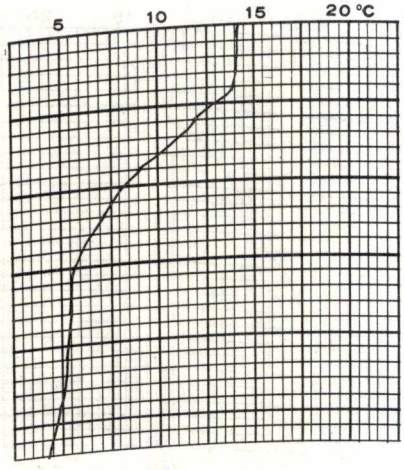
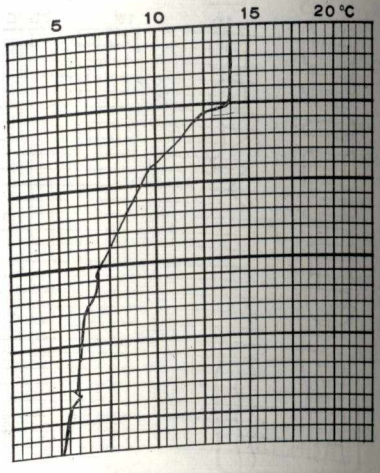
Grid OS



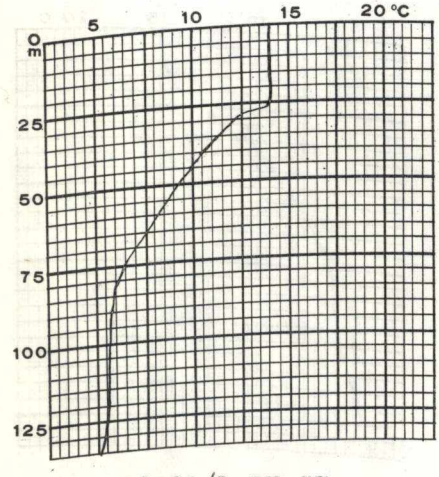
0200/30-VIII-57
Grid OS



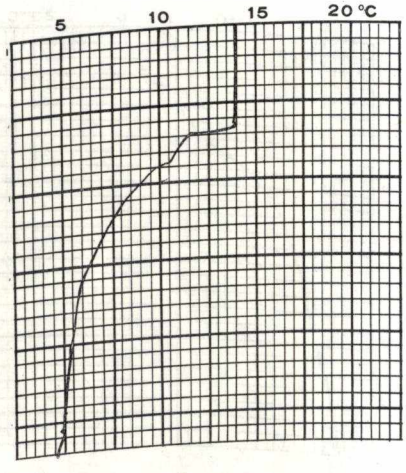
1700/30-VIII-57
Grid OS



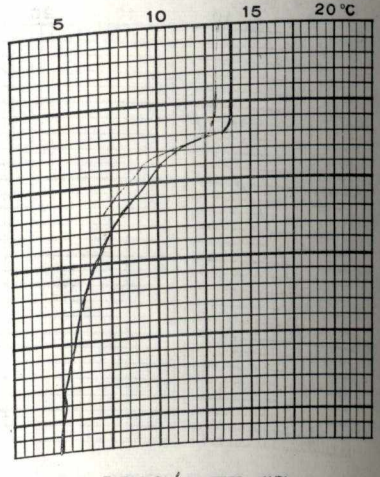
1700/31-VIII-57
Grid OK



0200/1-IX-57
Grid OS

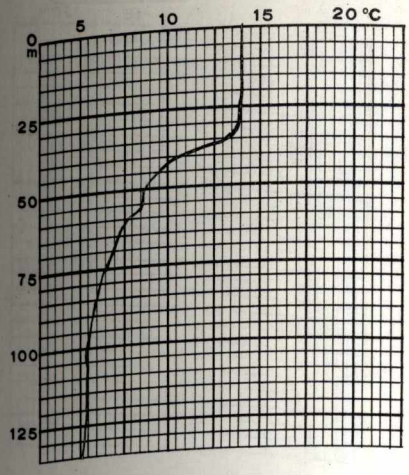


1700/1-IX-57
Grid OS

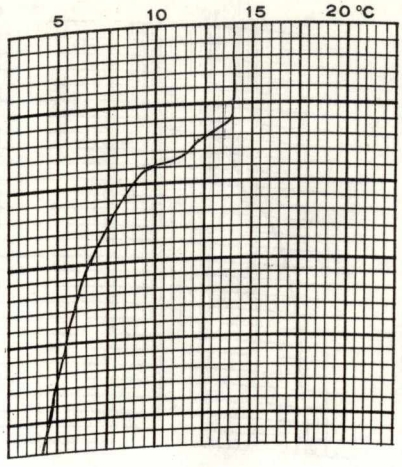


1700/2-IX-57
Grid OS

C.G.S. "Stonetown"



0200/3-IX-57
Grid OS



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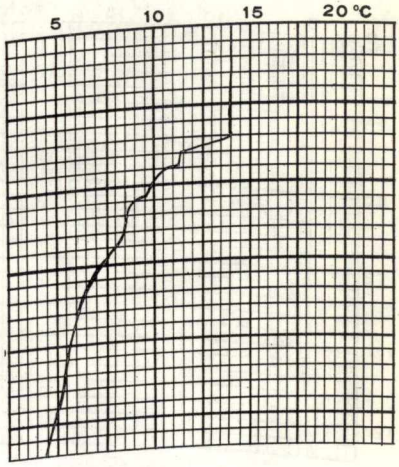

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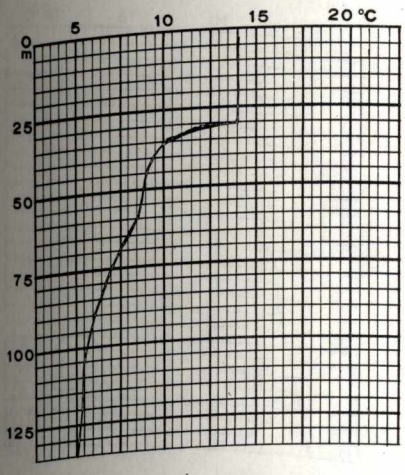

1700/4-IX-57
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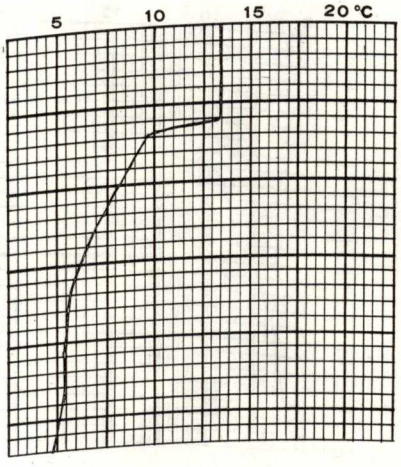

1700/6-IX-57
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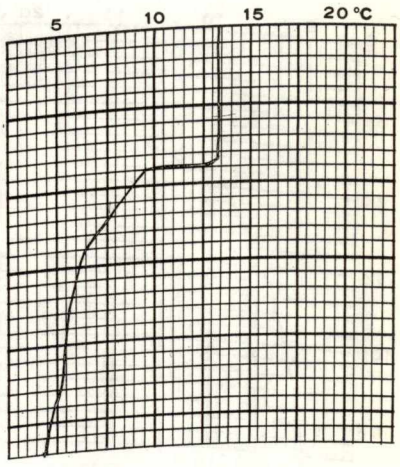

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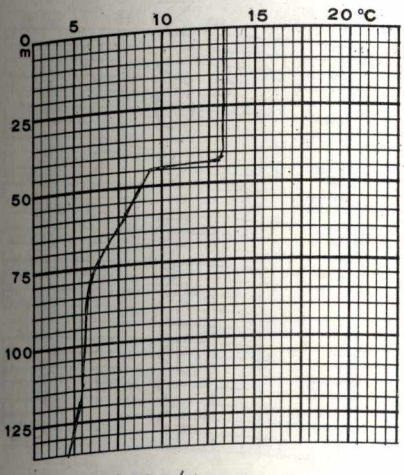
Grid OJ



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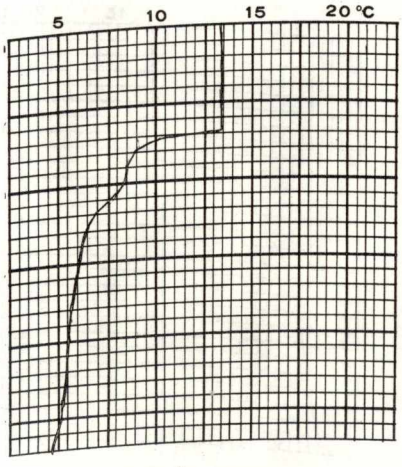

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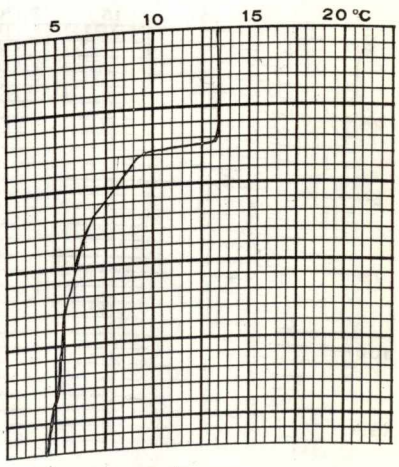

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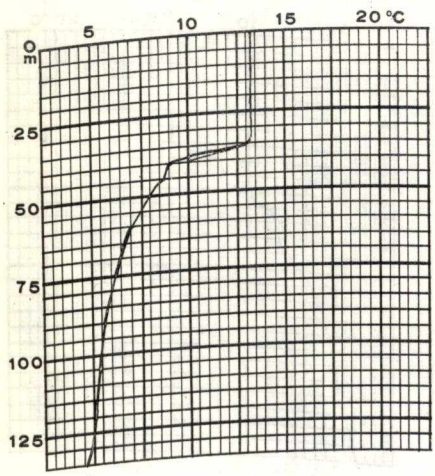
C.G.S. "Stonetown"



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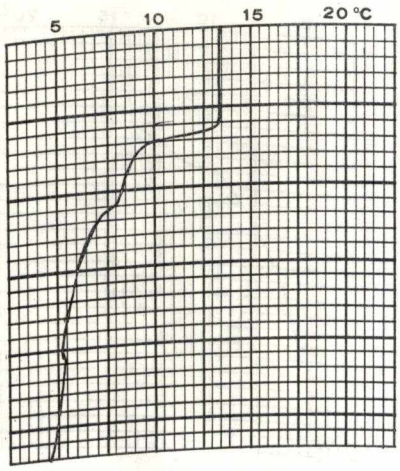

1700/10-IX-57
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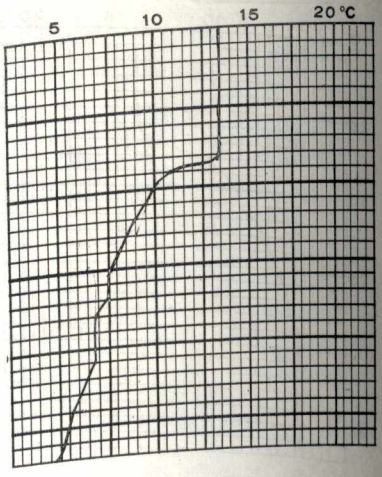

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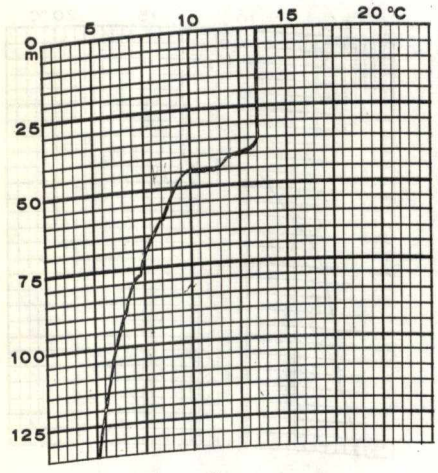

1700/11-IX-57
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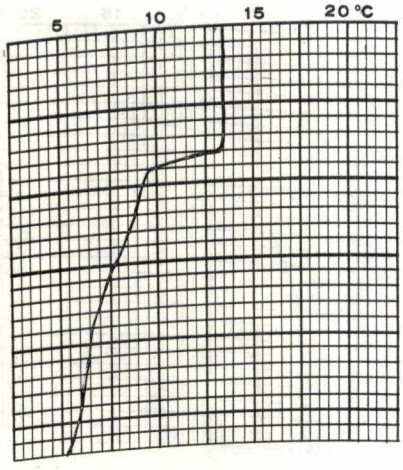

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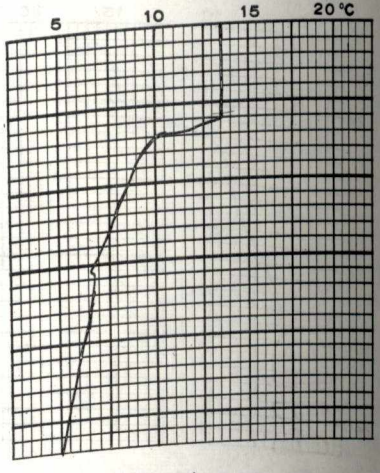

1700/12-IX-57
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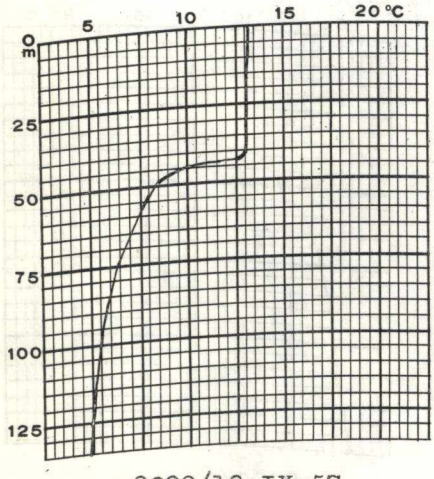

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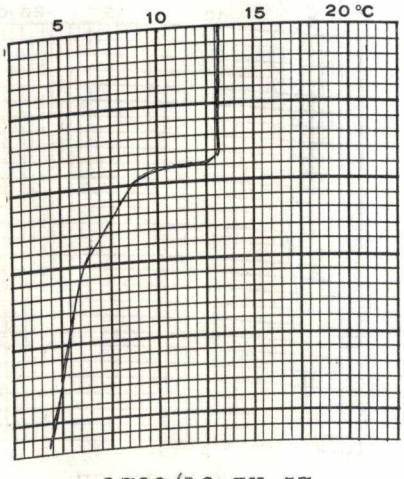

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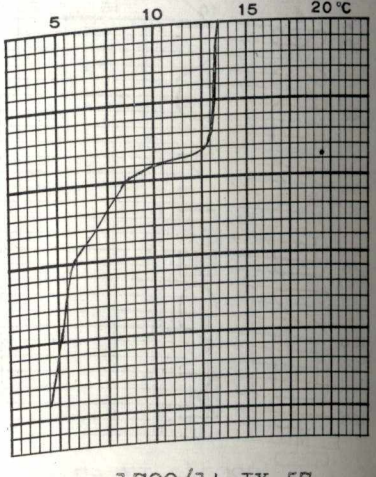

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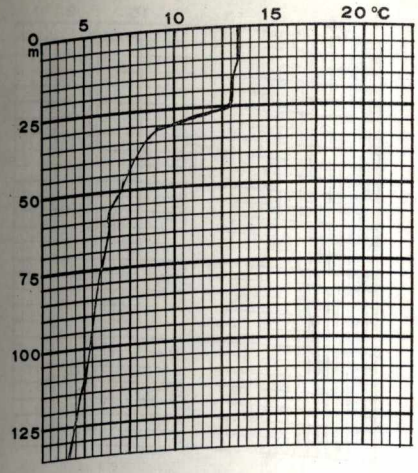
C.G.S. "Stonetown"



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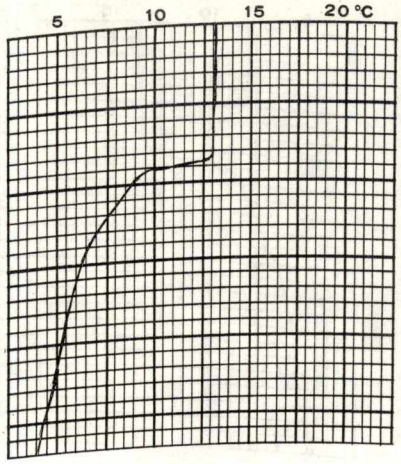
Grid OS



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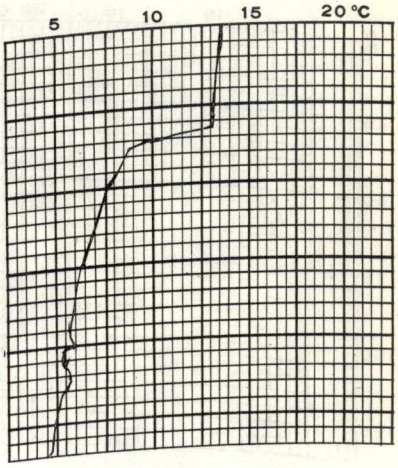

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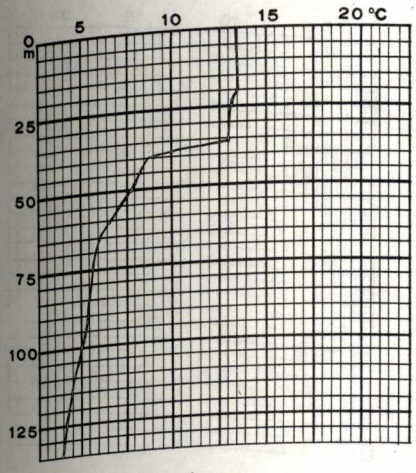

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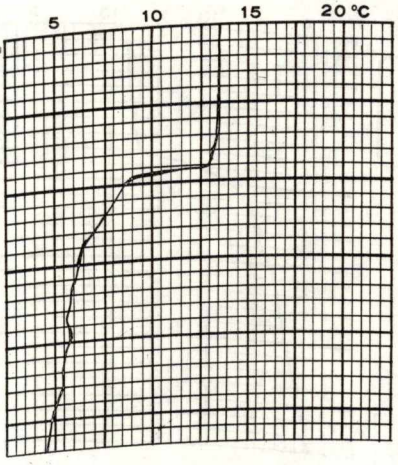

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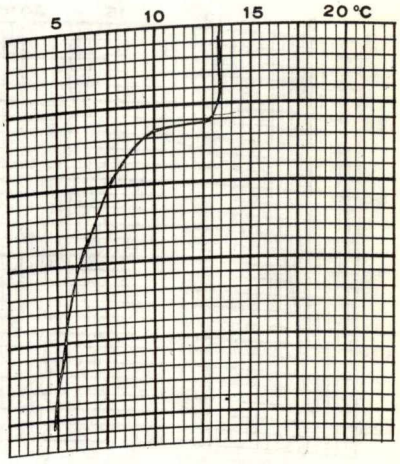

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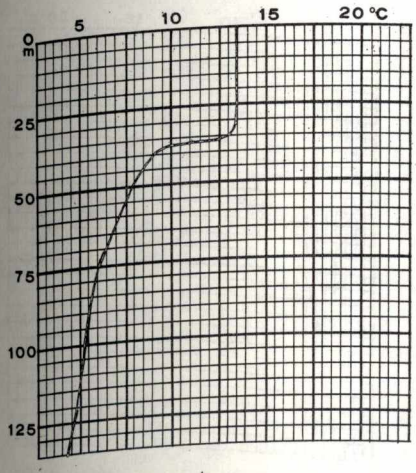

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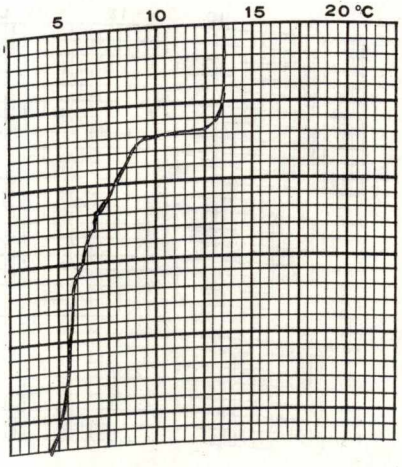

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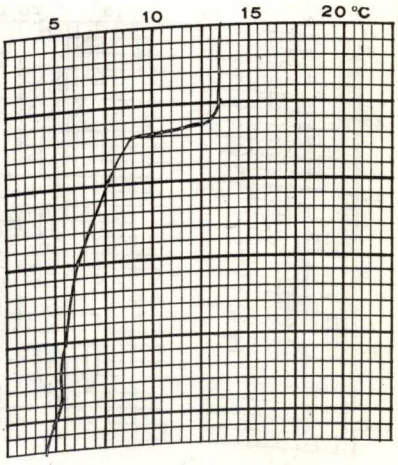

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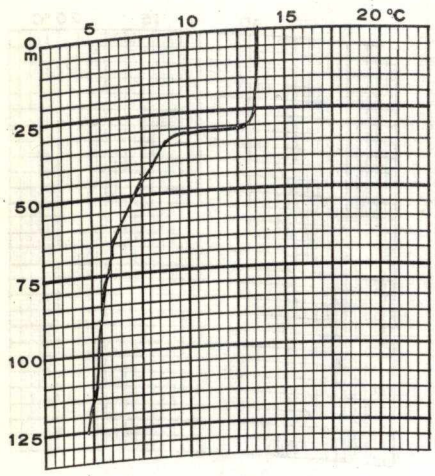
C.G.S. "Stonetown"



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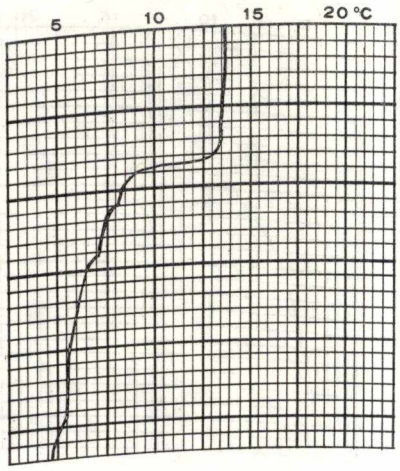

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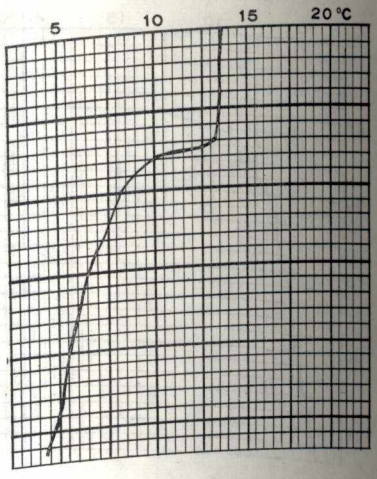

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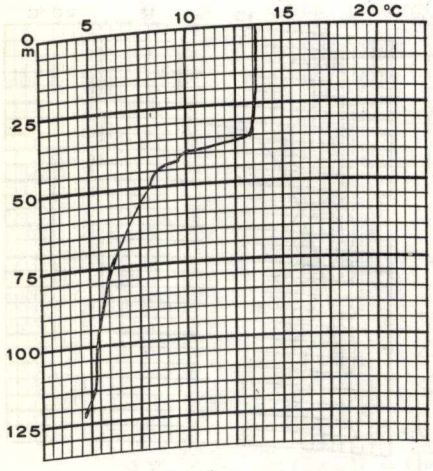

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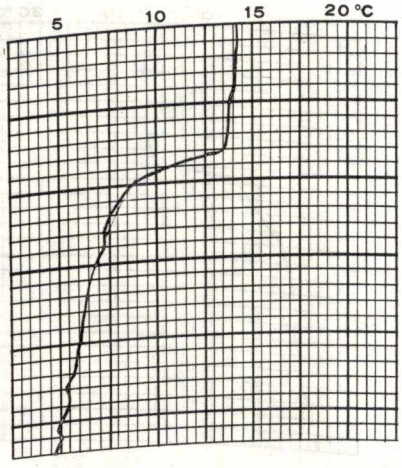

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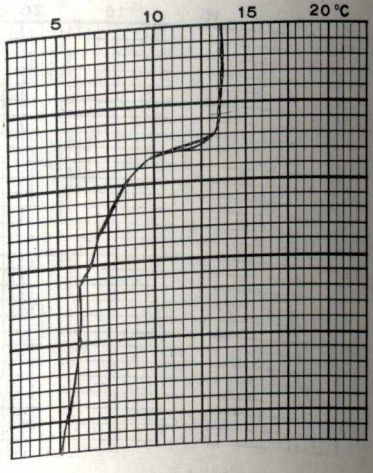

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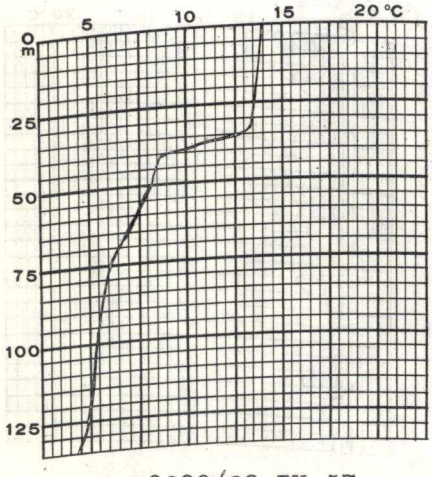

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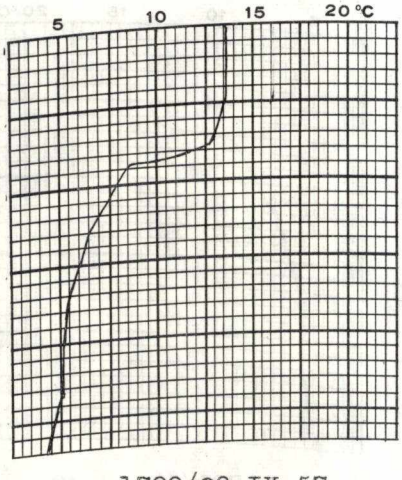

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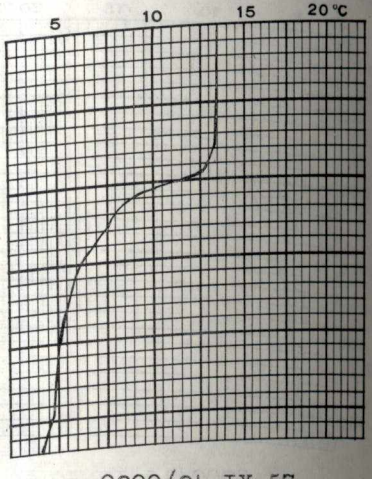

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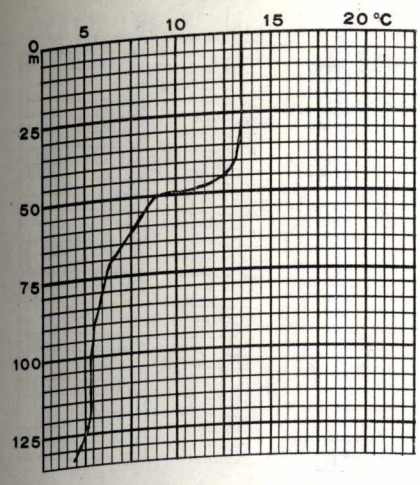
C.G.S. "Stonetown"



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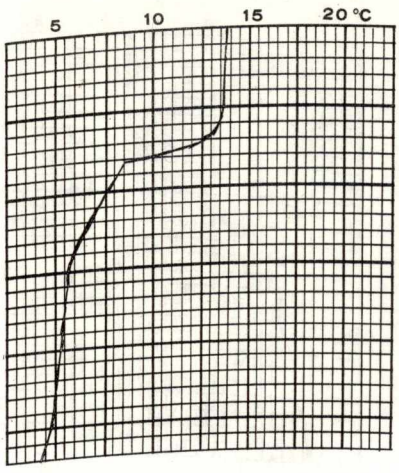

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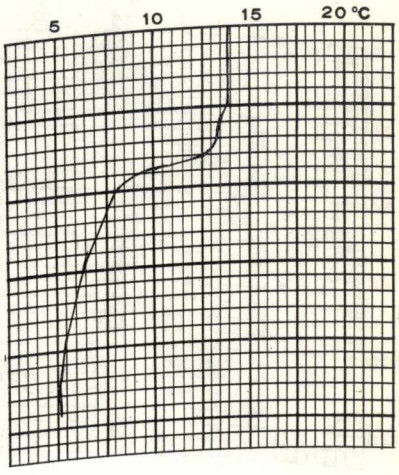

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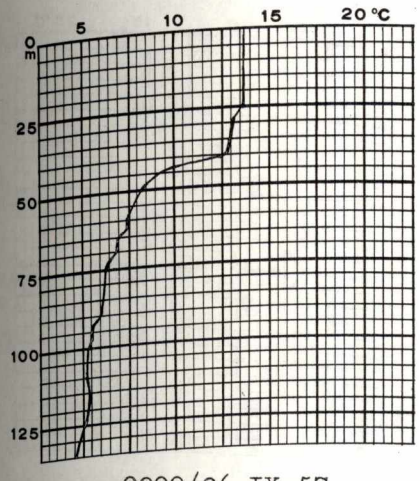

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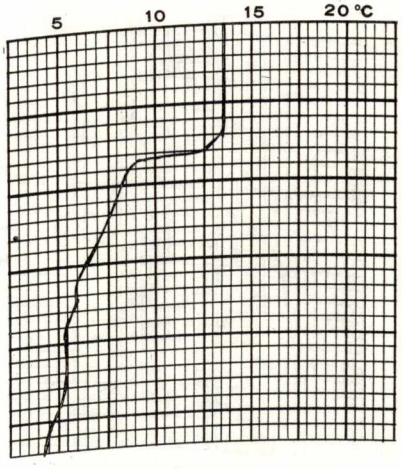

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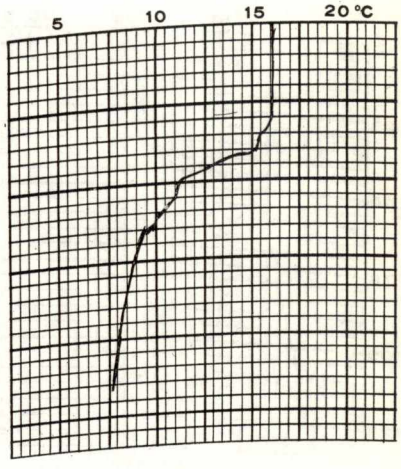

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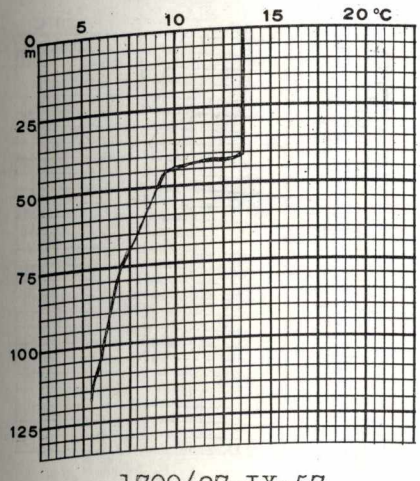

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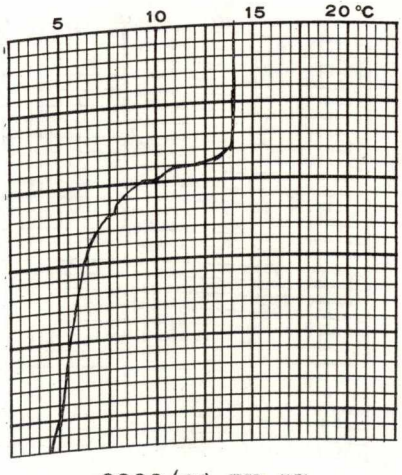
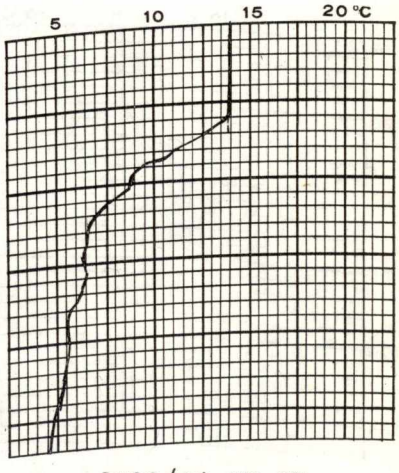
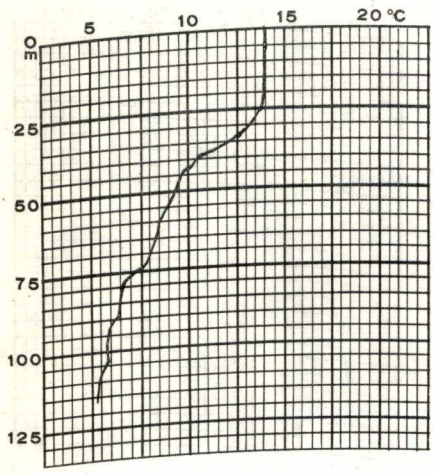


0000/28-IX-57
49° 46' N
142° 34' W

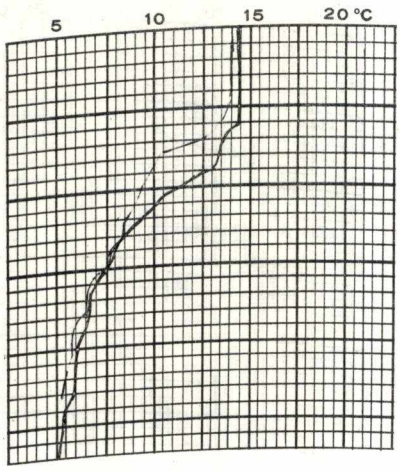


0200/28-IX-57
49° 42' N
142° 00' W

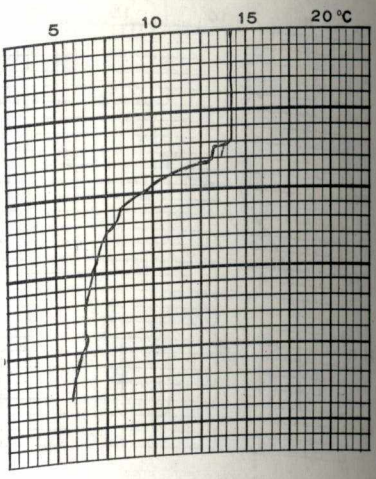
C.G.S. "Stonetown"



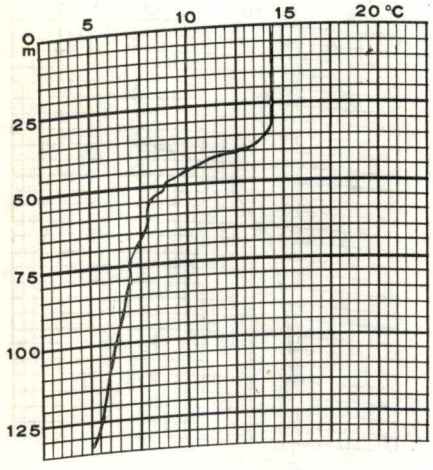
0400/28-IX-57
49° 43' N
141° 20' W



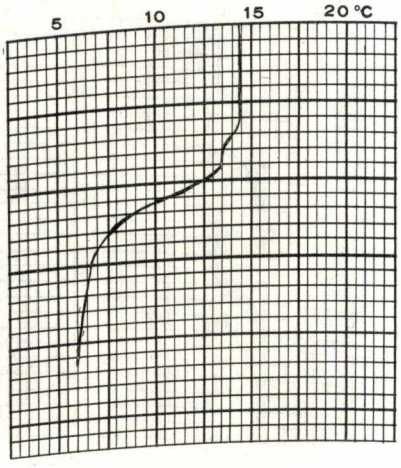
0600/28-IX-57
49° 41' N
140° 38' W



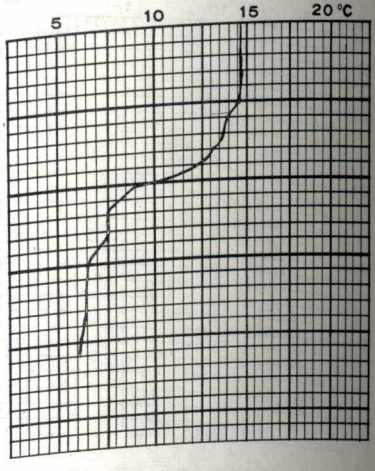
0800/28-IX-57
49° 39' N
140° 14' W



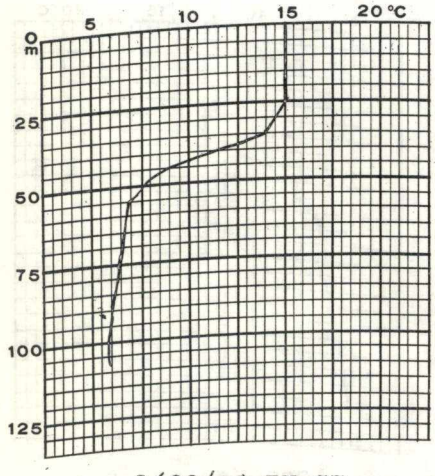
1000/28-IX-57
49° 37' N
139° 30' W



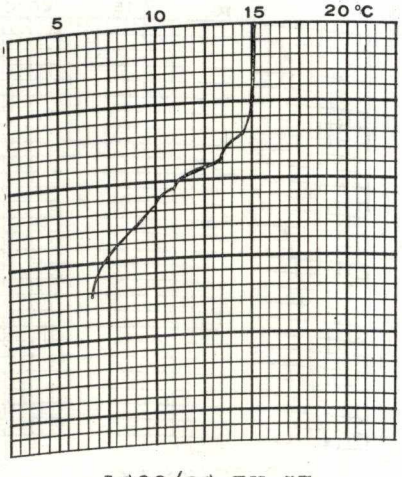
1200/28-IX-57
49° 34' N
139° 00' W



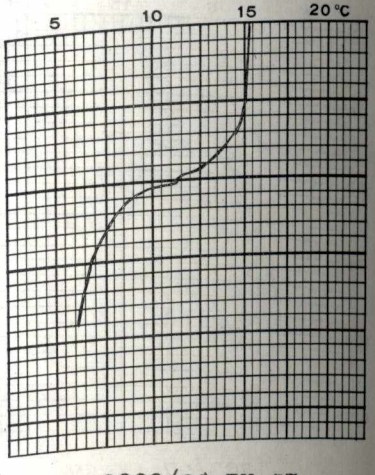
1400/28-IX-57
49° 30' N
138° 15' W



1600/28-IX-57
49° 27' N
137° 40' W

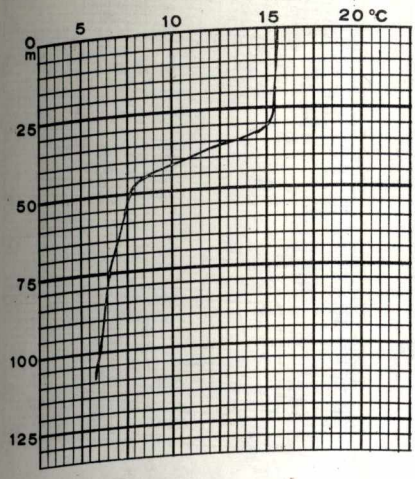


1800/28-IX-57
49° 24' N
137° 04' W

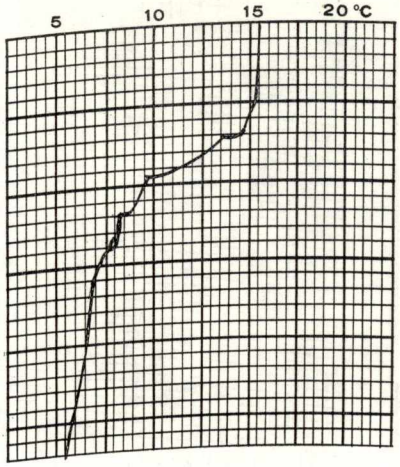


2000/28-IX-57
49° 22' N
136° 30' W

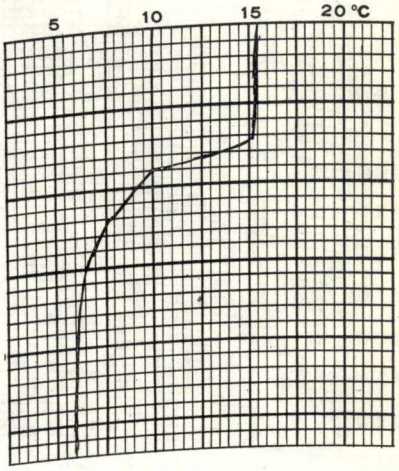
C.G.S. "Stonetown"



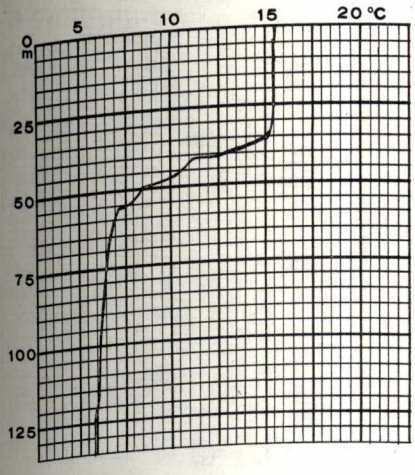
2200/28-IX-57
49° 20' N
135° 45' W



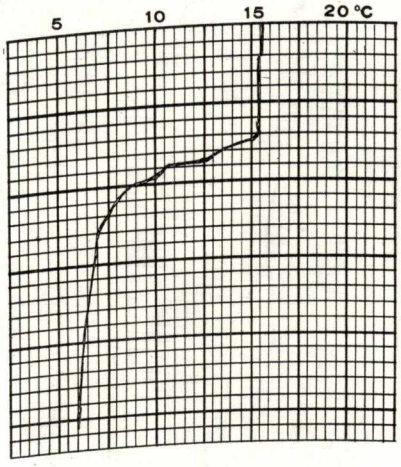
0000/29-IX-57
49° 18' N
135° 05' W



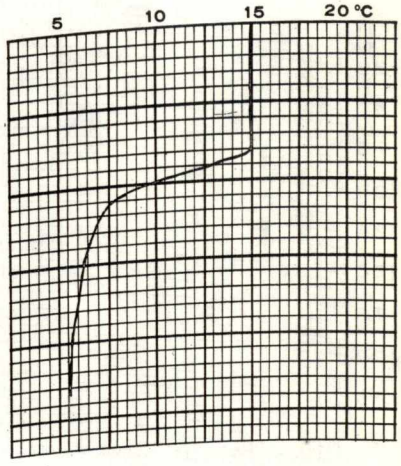
0200/29-IX-57
49° 13' N
134° 30' W



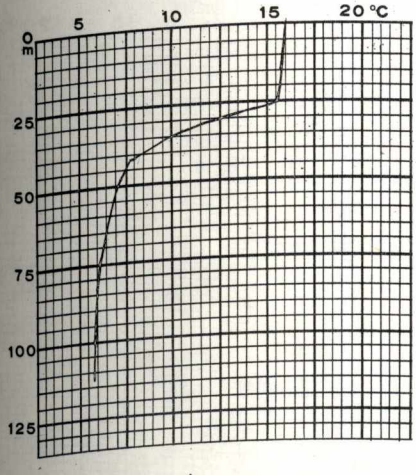
0400/29-IX-57
49° 10' N
133° 50' W



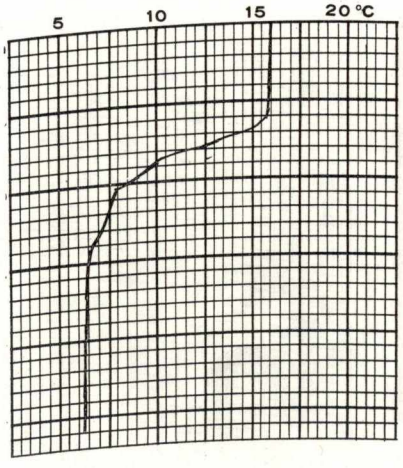
0600/29-IX-57
49° 08' N
133° 10' W



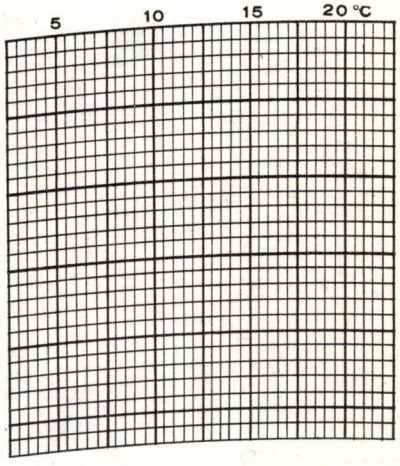
0800/29-IX-57
49° 05' N
132° 32' W



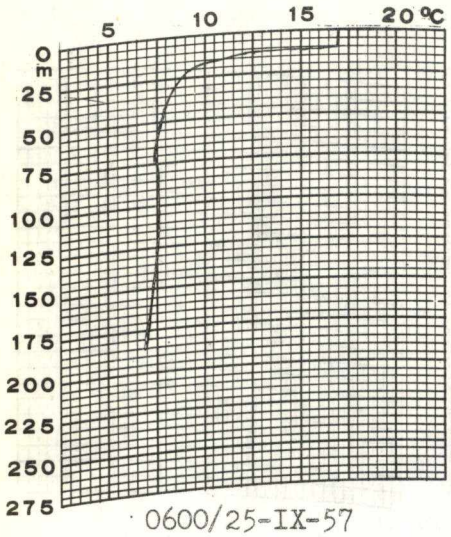
1000/29-IX-57
49° 03' N
131° 57' W



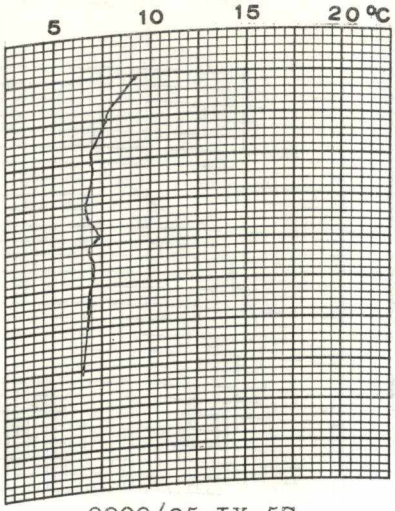
1200/29-IX-57
49° 02' N
131° 22' W



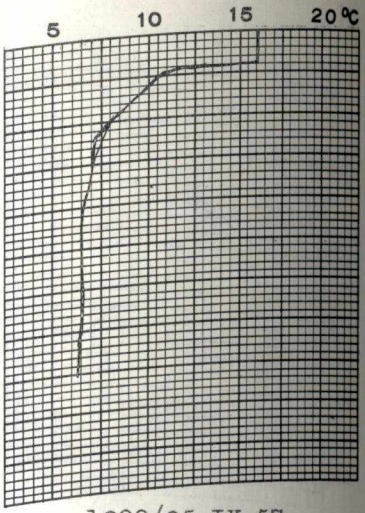
C.G.S. "St. Catharines"



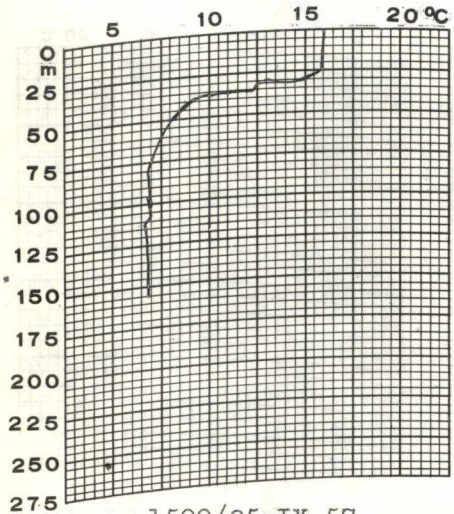
0600/25-IX-57
48°35' N
126° 44' W



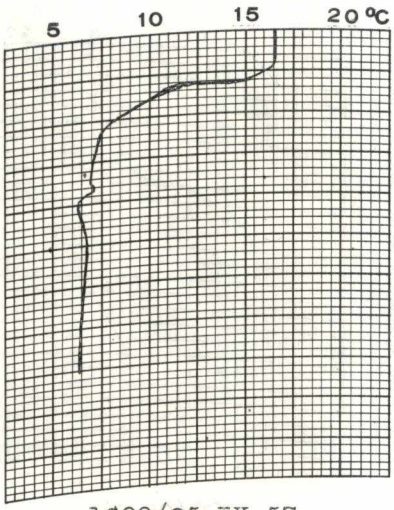
0900/25-IX-57
48° 40' N
127° 35' W



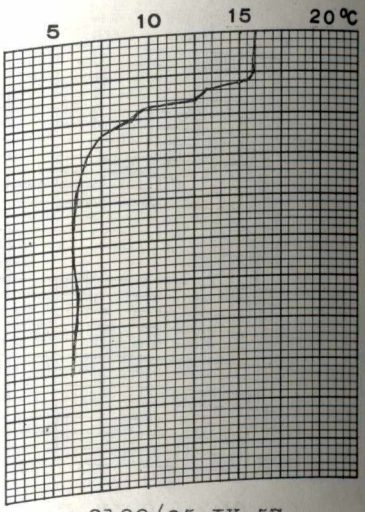
1200/25-IX-57
48° 44' N
128° 25' W



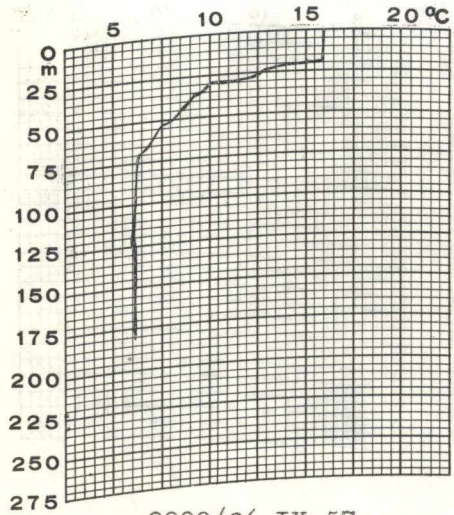
1500/25-IX-57
48° 34' N
128° 52' W



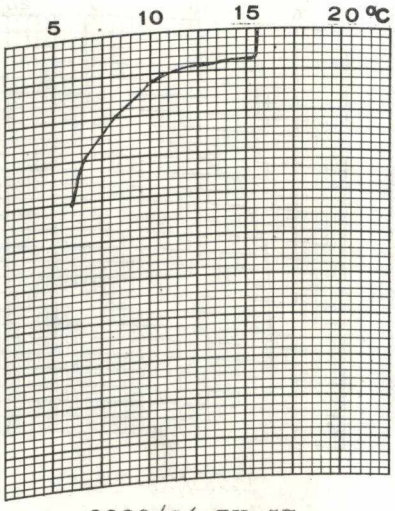
1800/25-IX-57
48° 51' N
130° 00' W



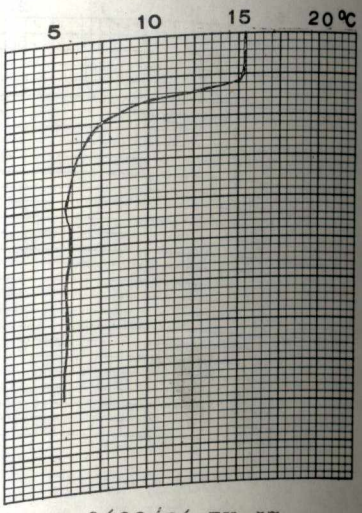
2100/25-IX-57
48° 56' N
130° 41' W



0000/26-IX-57
49° 00' N
131° 30' W

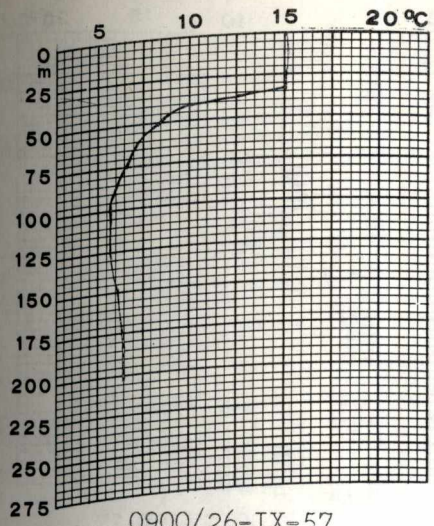


0300/26-IX-57
49° 04' N
132° 20' W

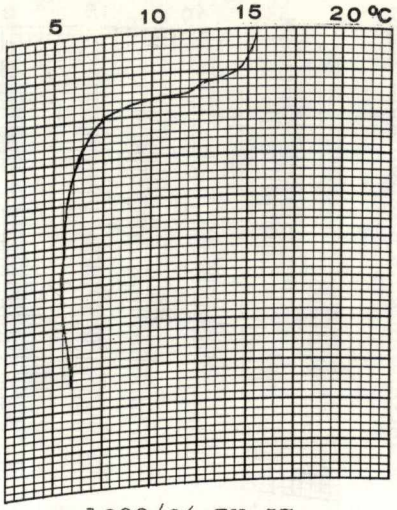


0600/26-IX-57
49° 13' N
133° 10' W

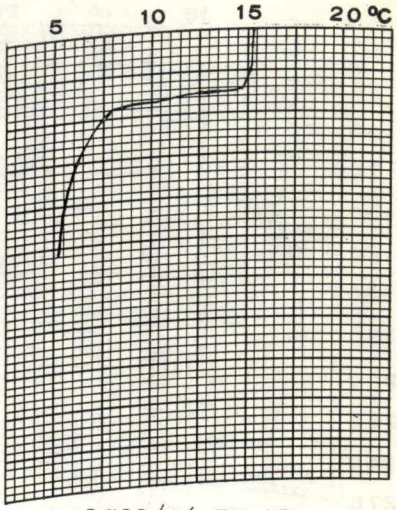
C.G.S. "St. Catharines"



0900/26-IX-57
50° 13' N
133° 58' W

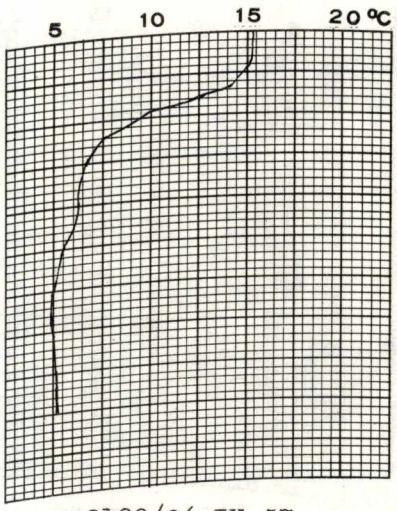


1200/26-IX-57
49° 22' N
134° 50' W

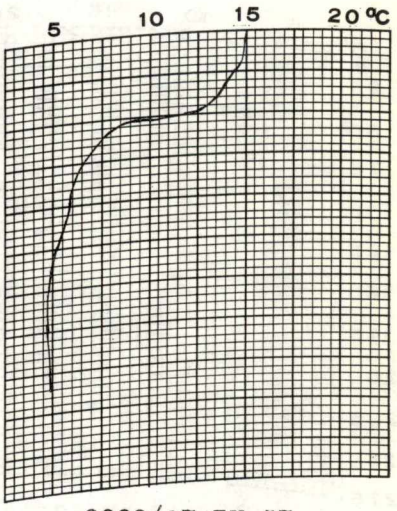


1500/26-IX-57
49° 31' N
136° 00' W

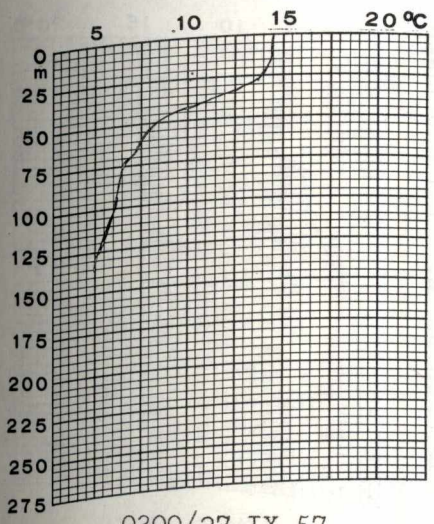
1800/26-IX-57
49° 33' N
136° 47' W



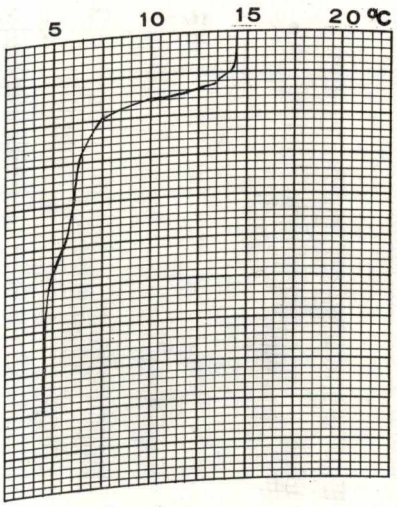
2100/26-IX-57
49° 32' N
137° 37' W



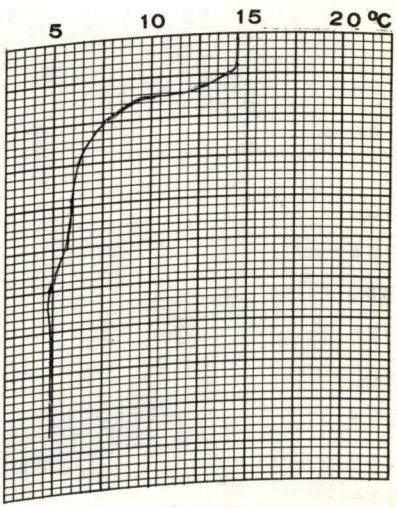
0000/27-IX-57
49° 38' N
138° 27' W



0300/27-IX-57
49° 42' N
139° 05' W

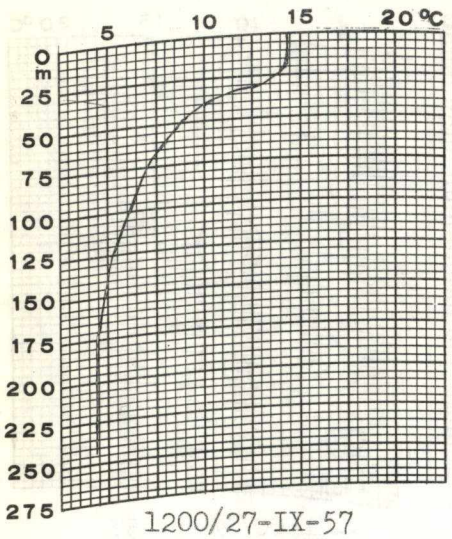


0600/27-IX-57
49° 43' N
139° 50' W

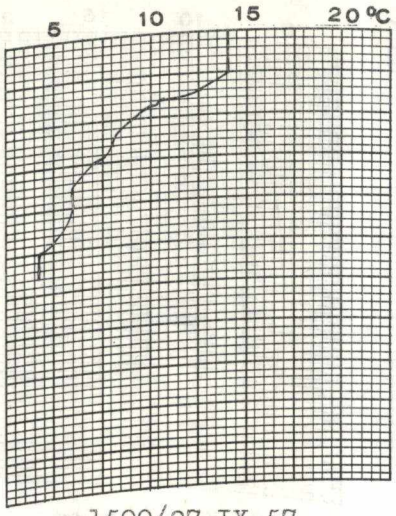


0900/27-IX-57
49° 43' N
140° 37' W

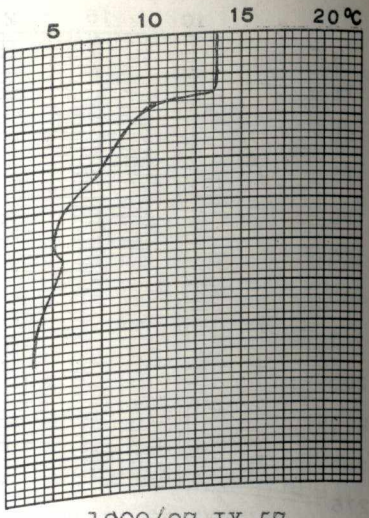
C.G.S. "St. Catharines"



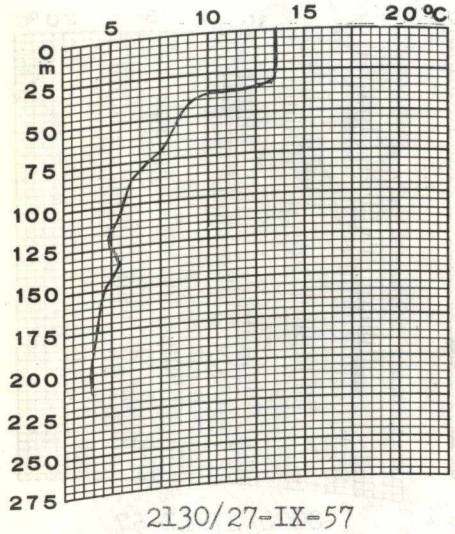
1200/27-IX-57
49° 46' N
141° 19' W



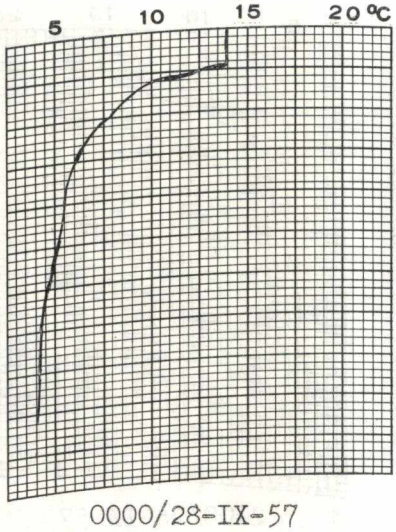
1500/27-IX-57
49° 45' N
142° 01' W



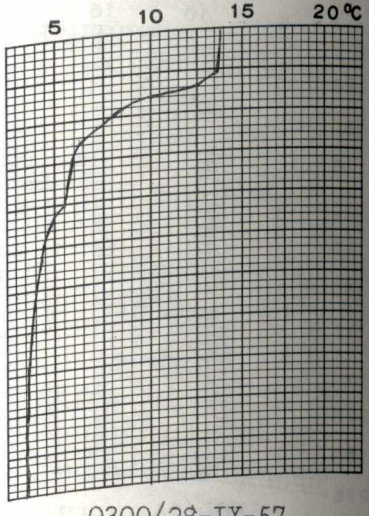
1800/27-IX-57
49° 48.5' N
142° 43' W



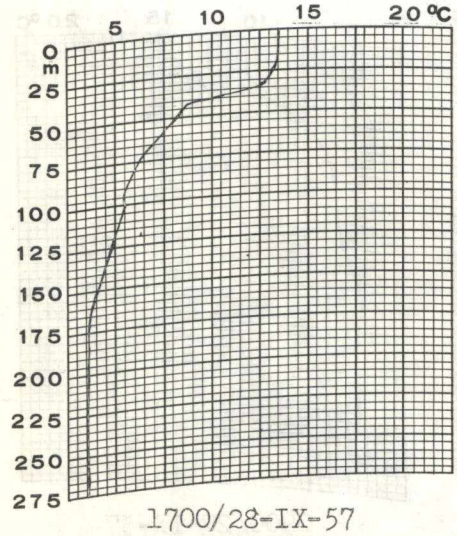
2130/27-IX-57
50° 00' N
143° 30' W



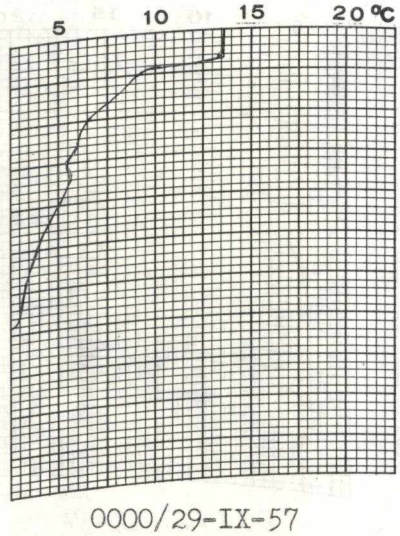
0000/28-IX-57
50° 00' N
144° 09' W



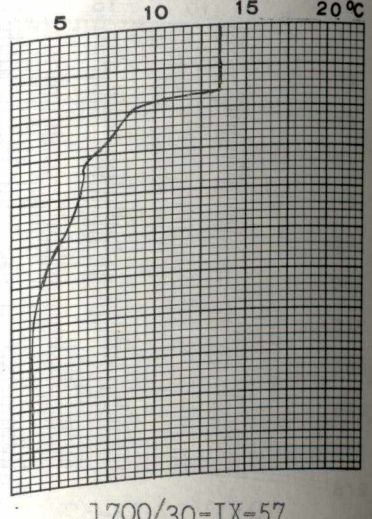
0300/28-IX-57
50° 00' N
144° 26' W



1700/28-IX-57
Grid OK

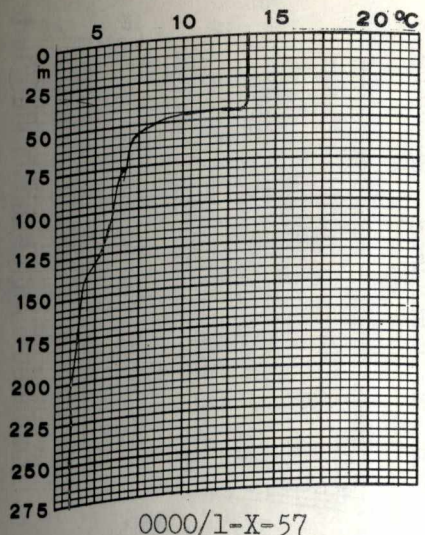


0000/29-IX-57
Grid OK

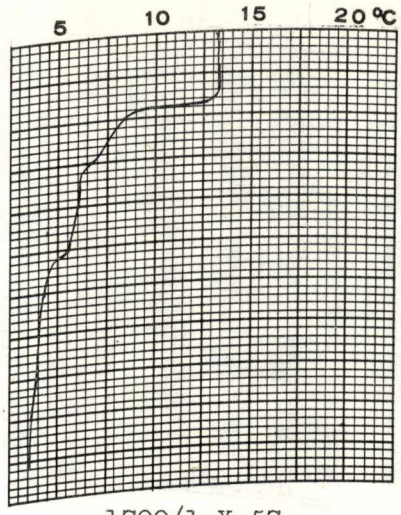


1700/30-IX-57
Grid OS

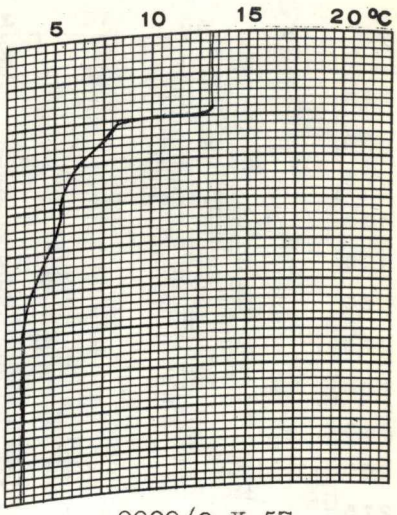
C.G.S. "St. Catharines"



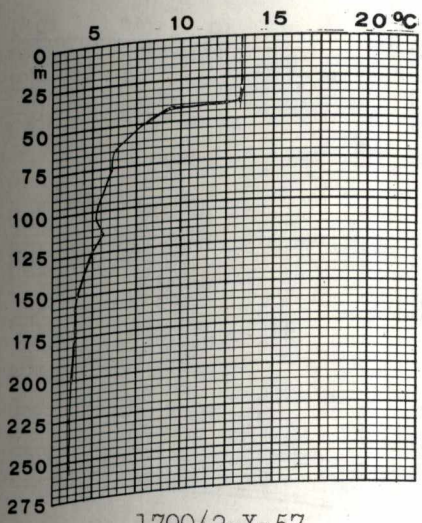
0000/1-X-57
Grid KJ



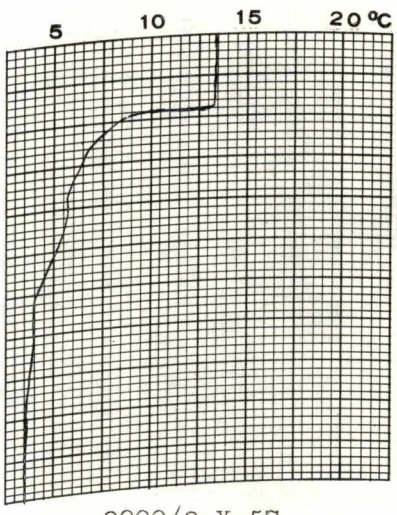
1700/1-X-57
Grid OK



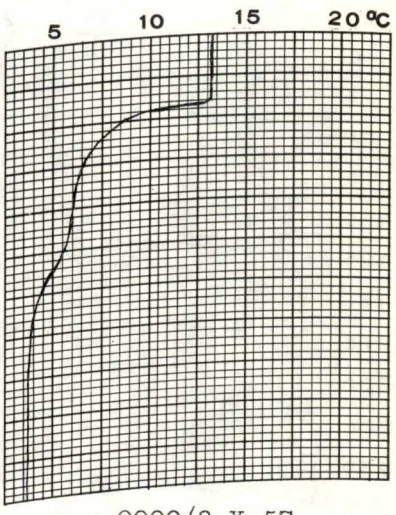
0000/2-X-57
Grid OS



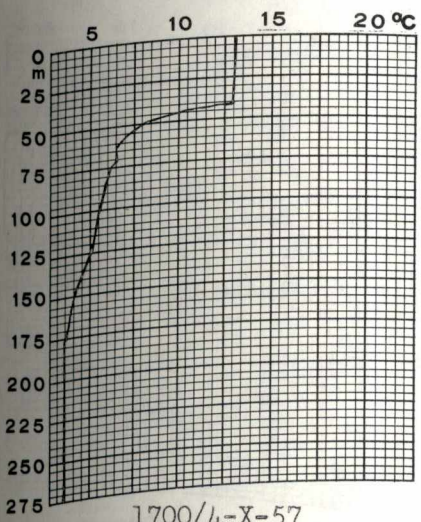
1700/2-X-57
Grid OS



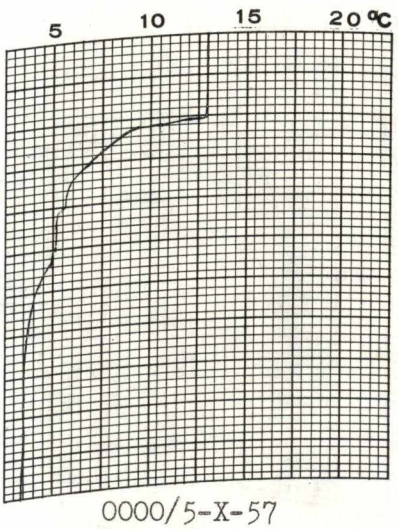
2000/2-X-57
Grid KS



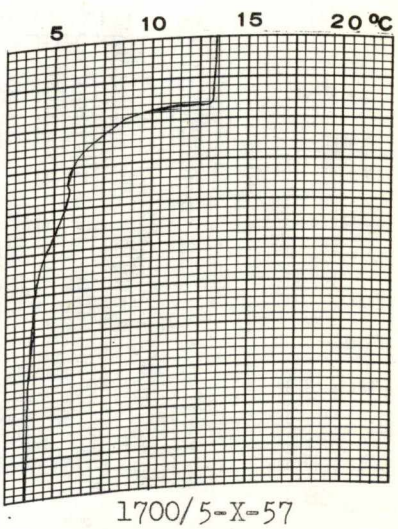
0000/3-X-57
Grid OS



1700/4-X-57
Grid OS



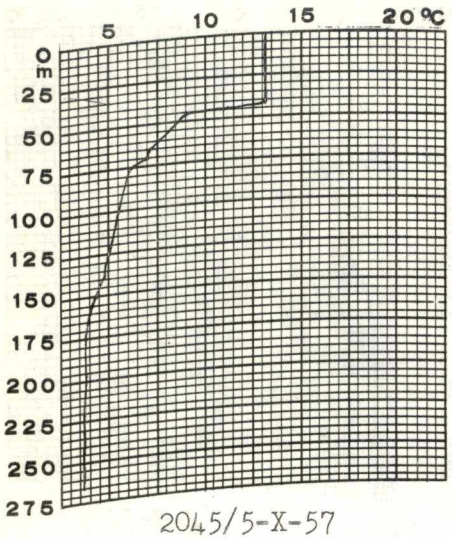
0000/5-X-57
Grid OS



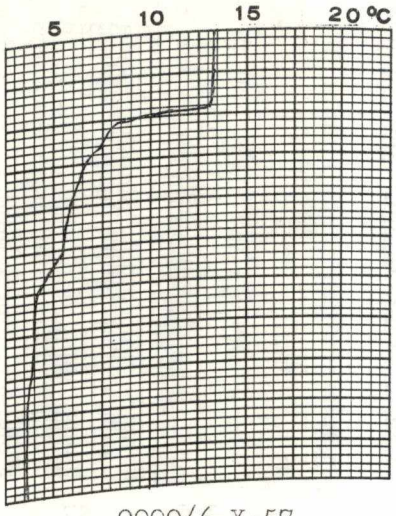
1700/5-X-57
Grid OJ

N.B. 0000/4-X-57 bathythermogram on page

C.G.S. "St. Catharines"



2045/5-X-57
Grid OS



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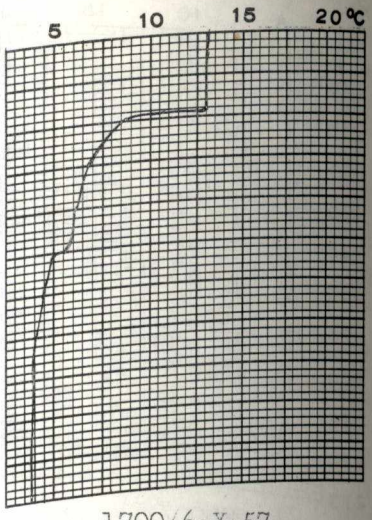
Grid OS



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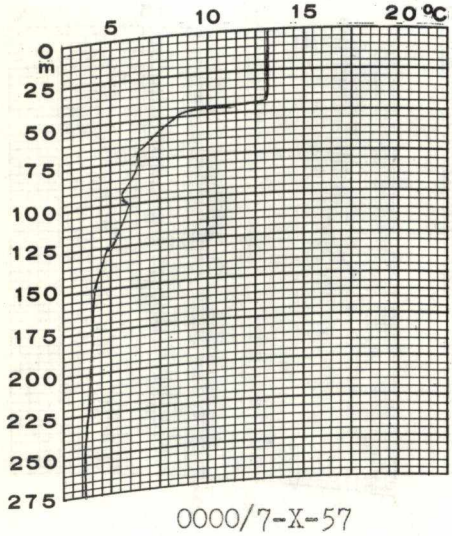

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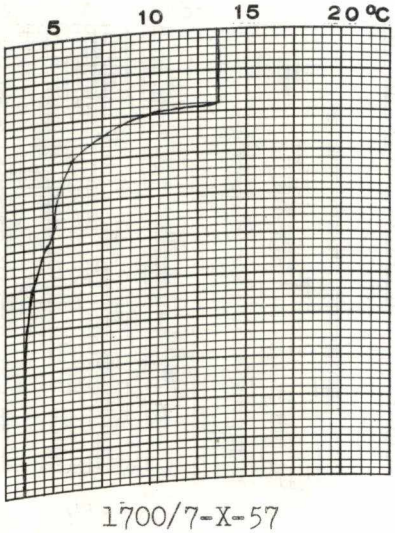

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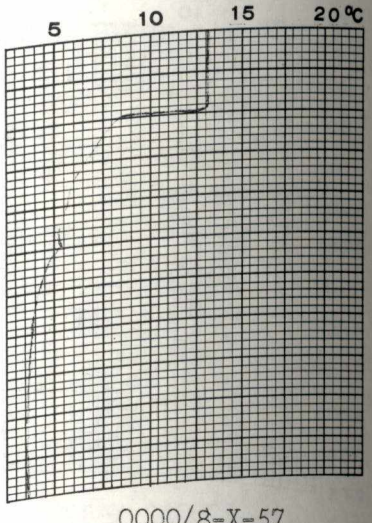

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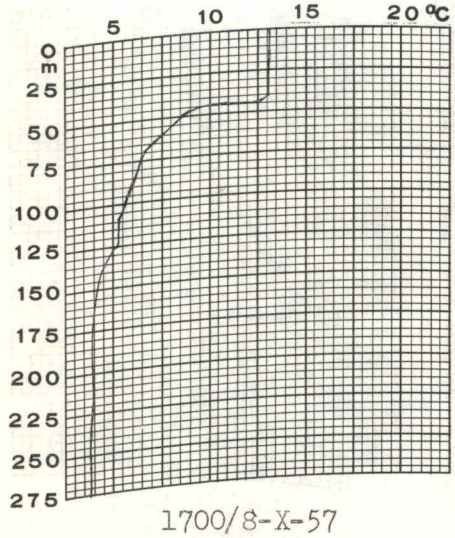

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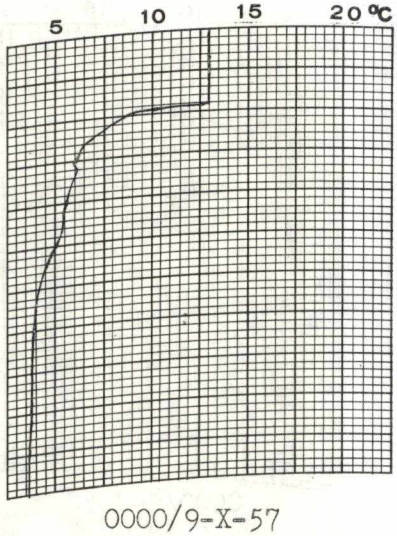

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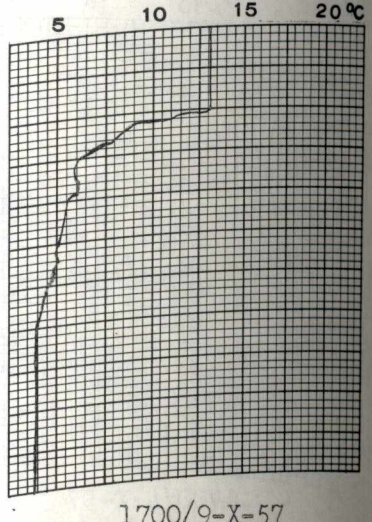

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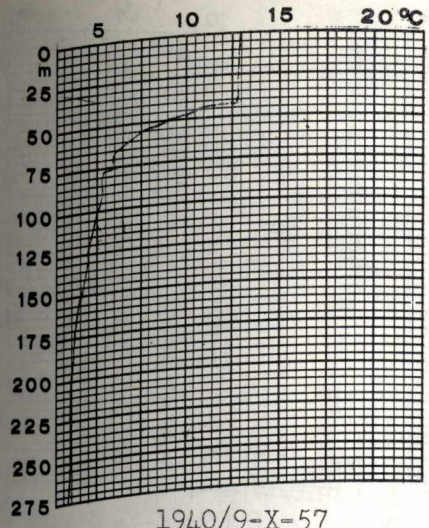
C.G.S. "St. Catharines"



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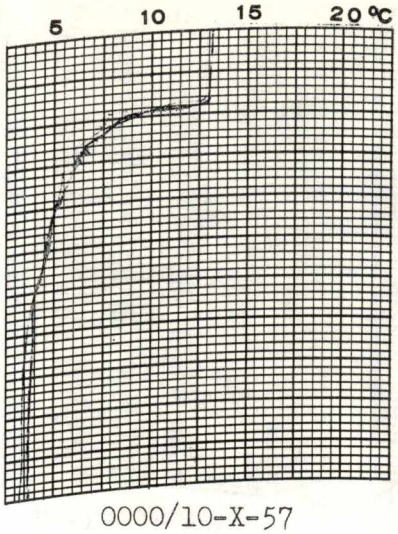

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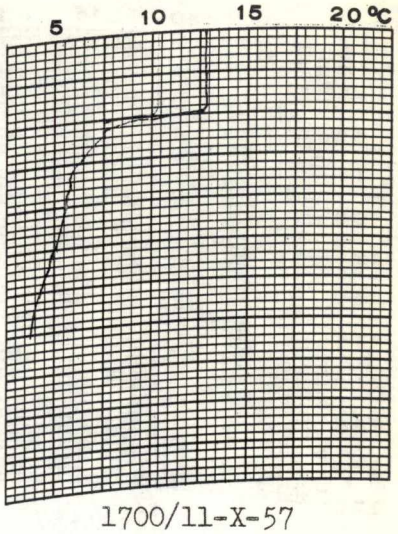

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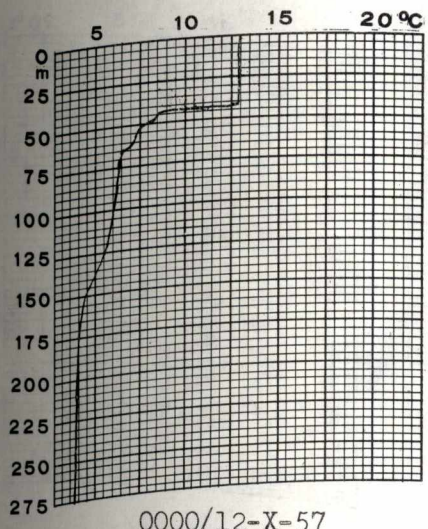

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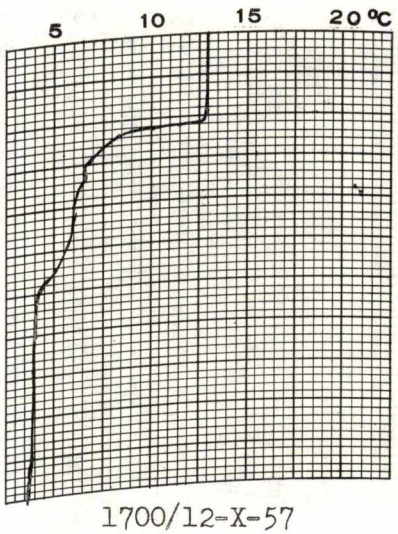

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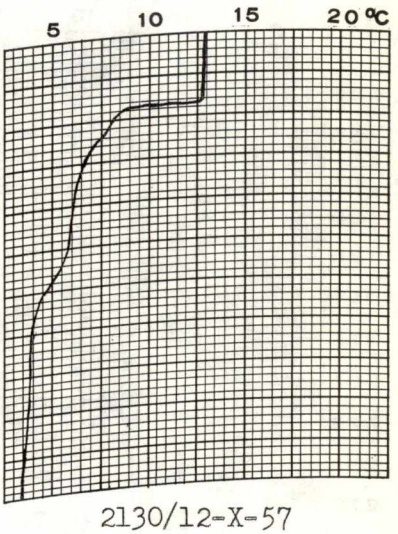

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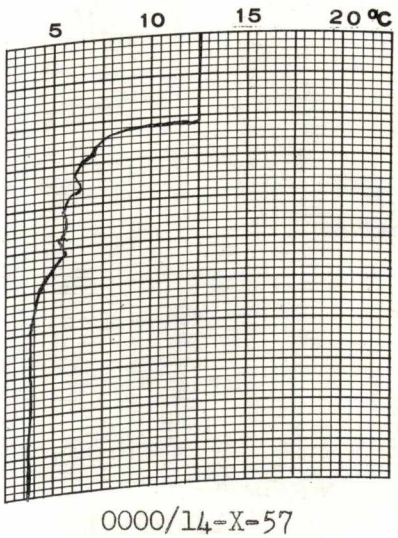

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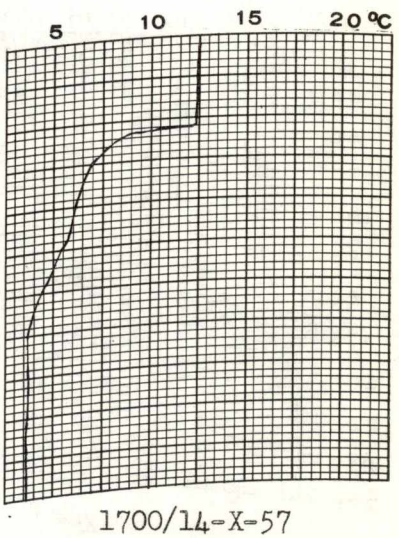

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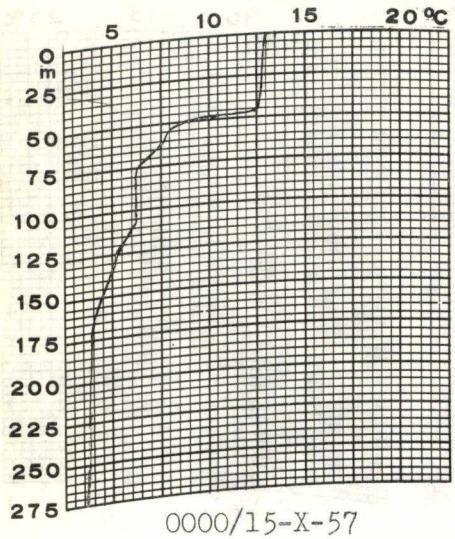

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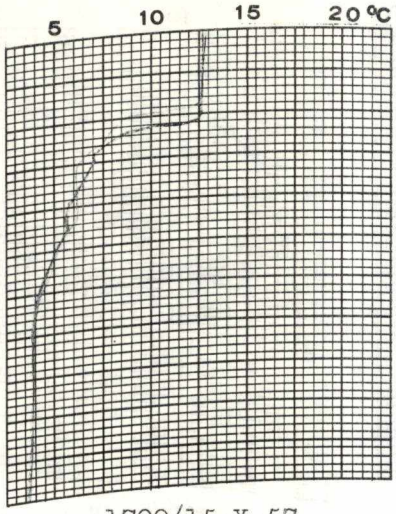

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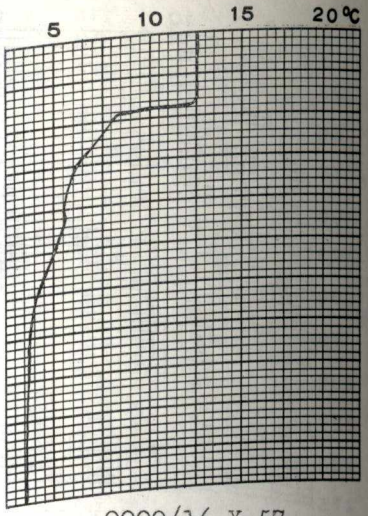

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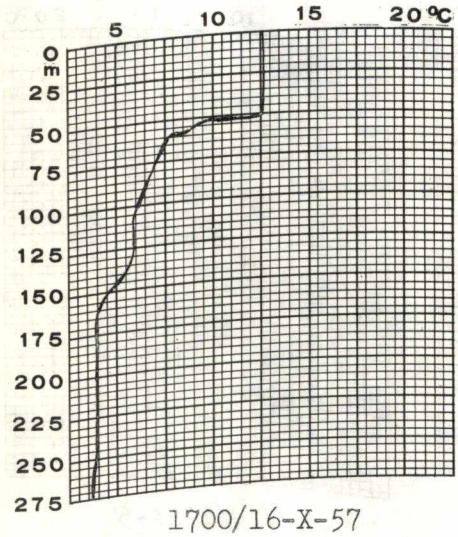

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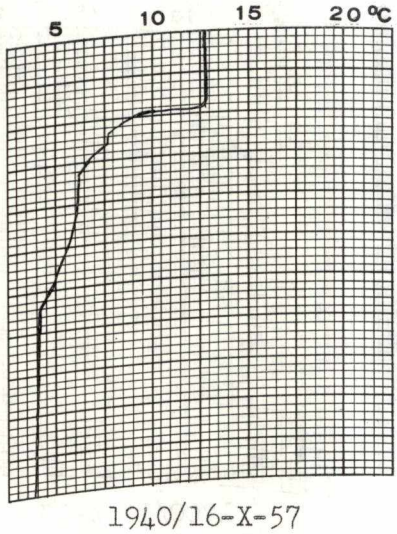

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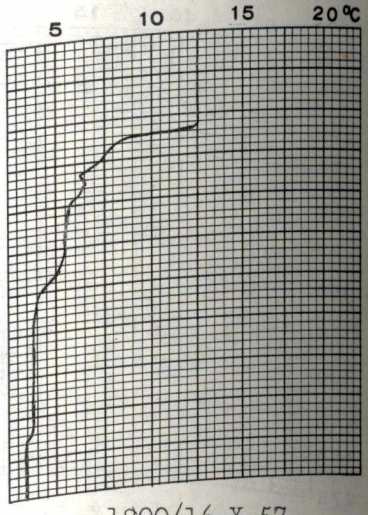

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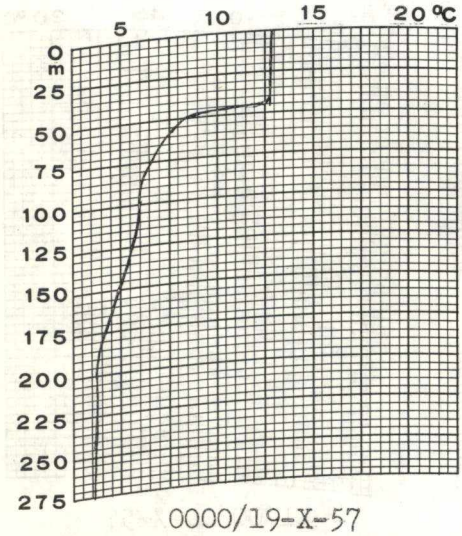

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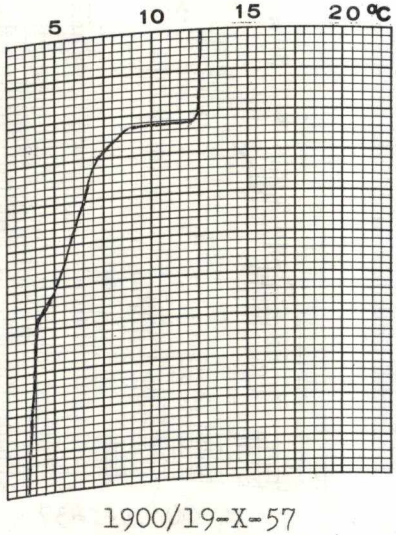

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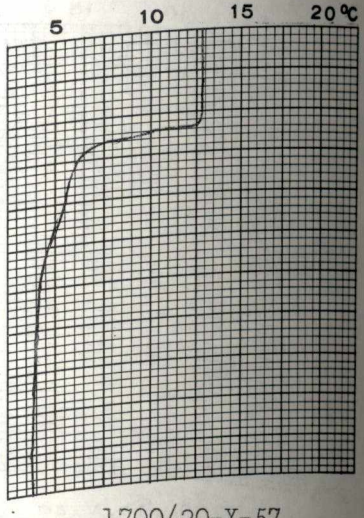

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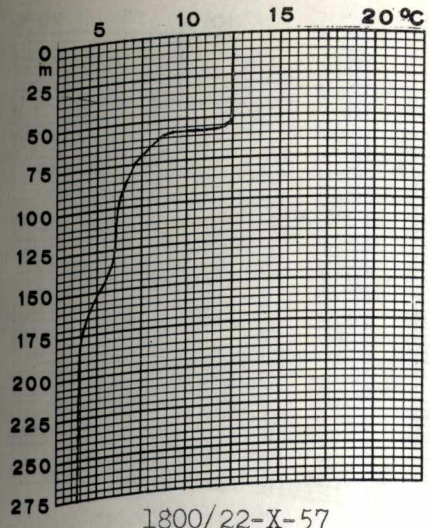
C.G.S. "St. Catharines"



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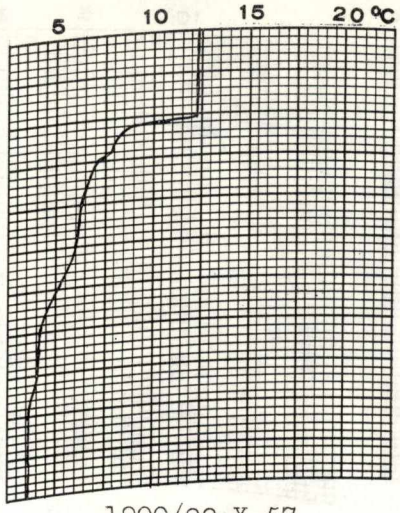

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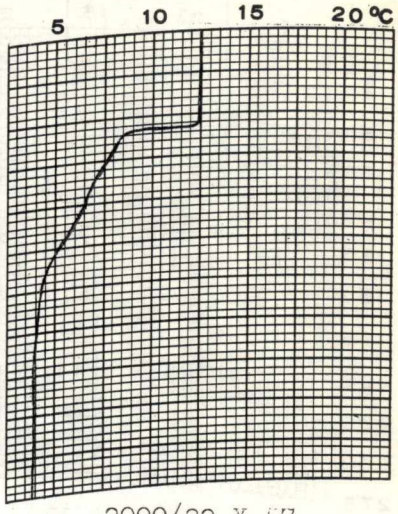

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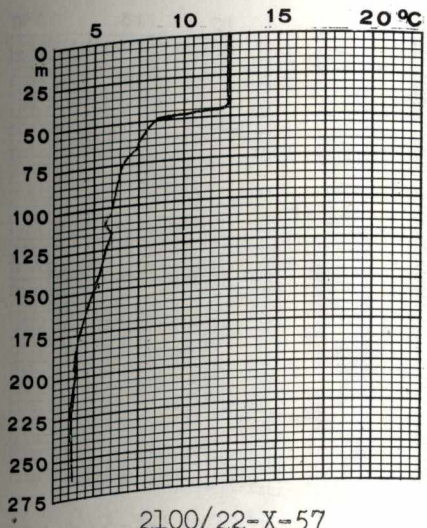

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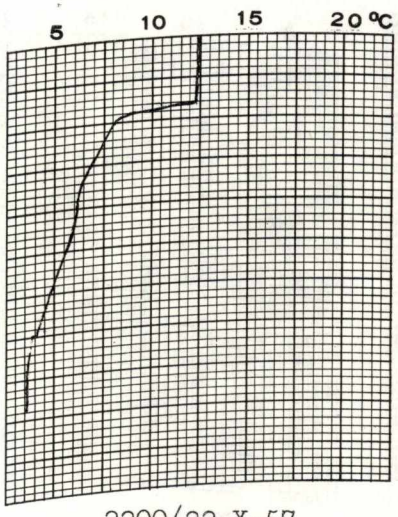

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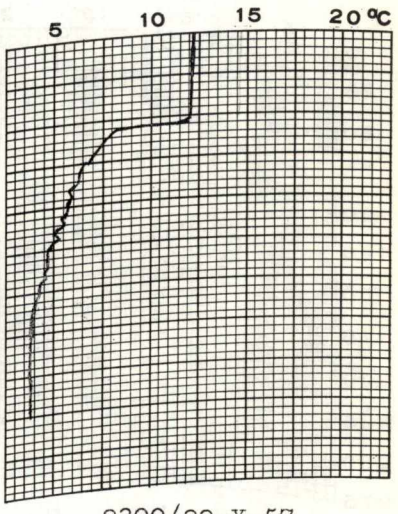

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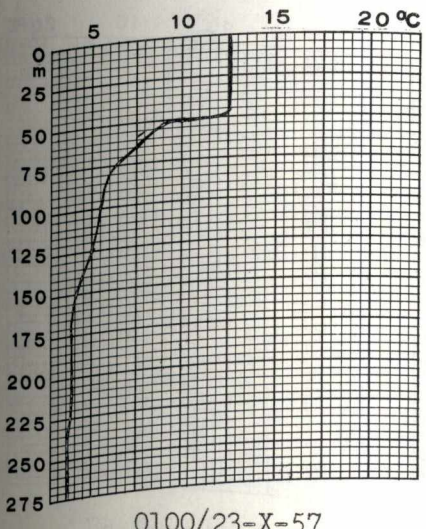

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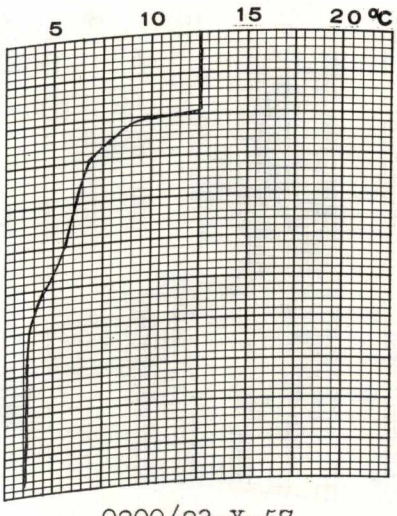

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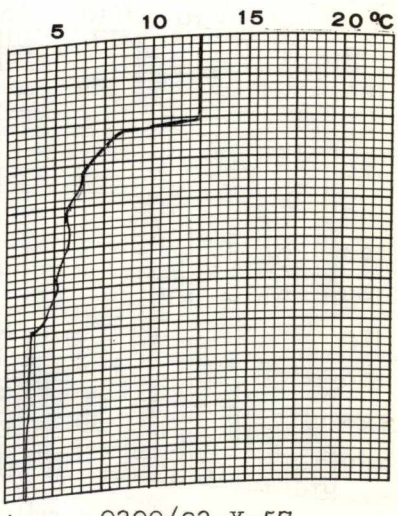

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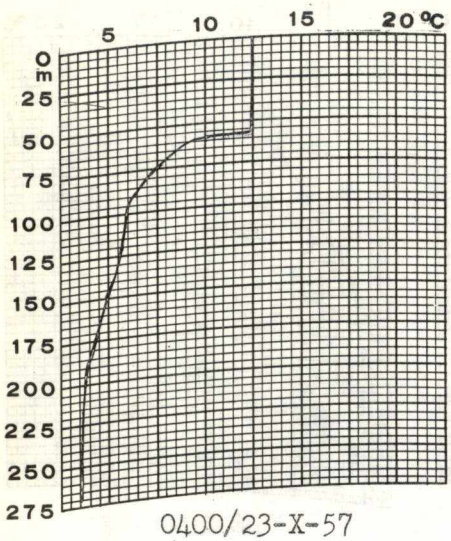
C.G.S. "St. Catharines"



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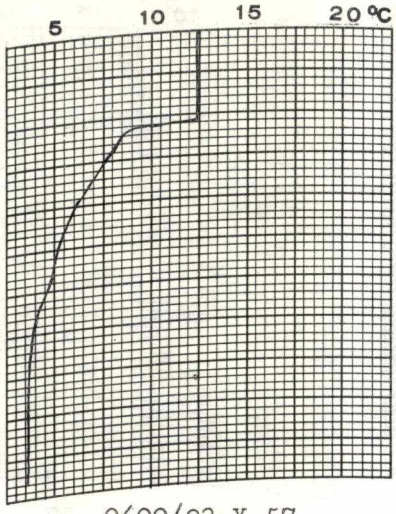

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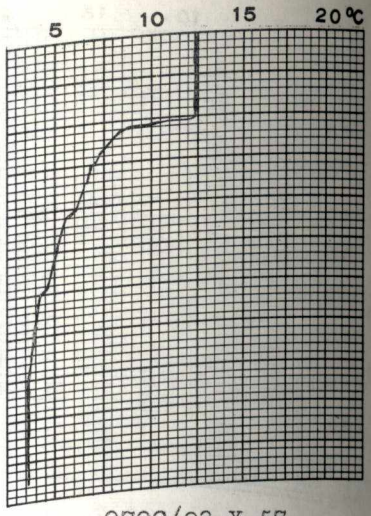

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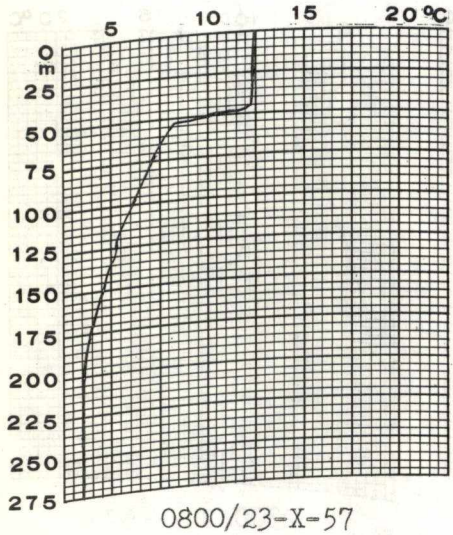

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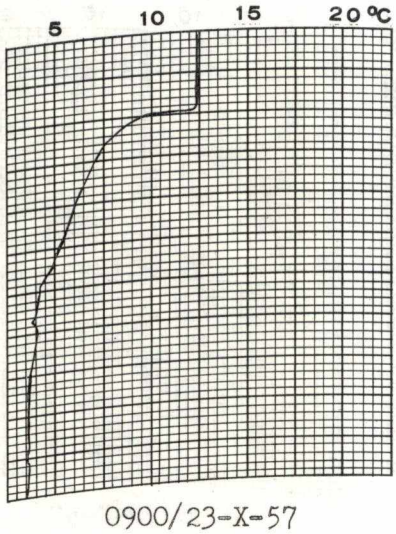

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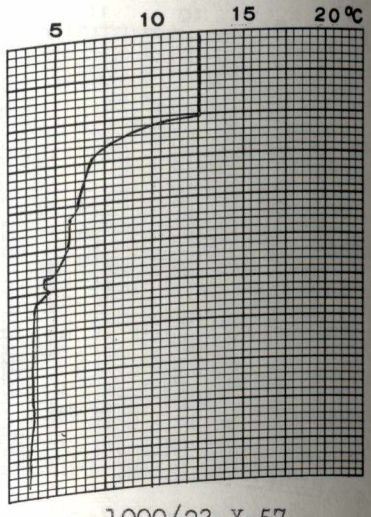

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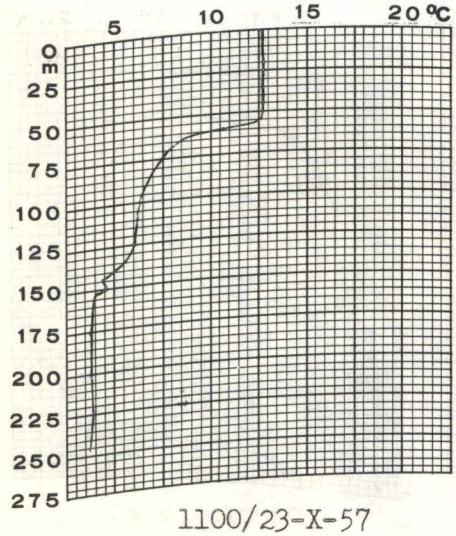

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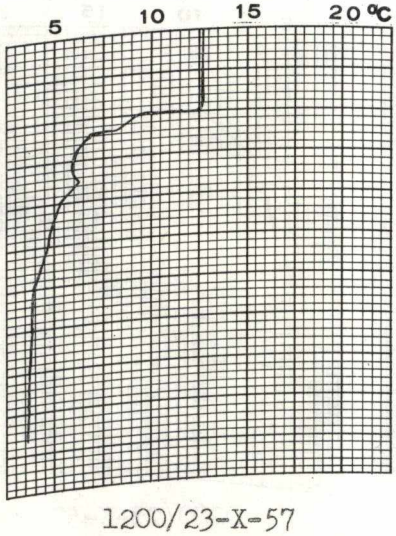

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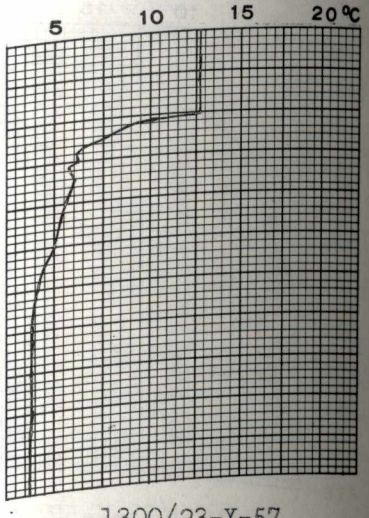

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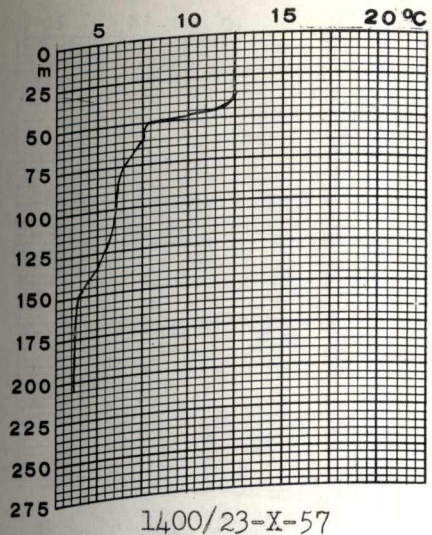
C.G.S. "St. Catharines"



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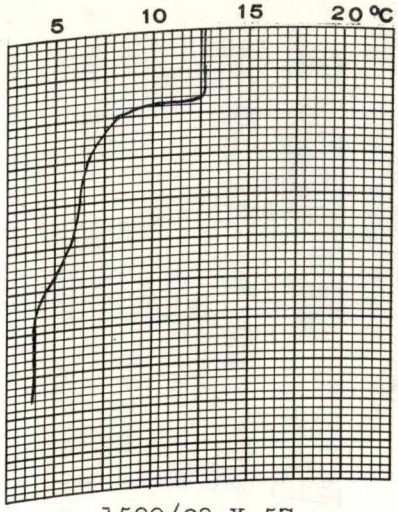

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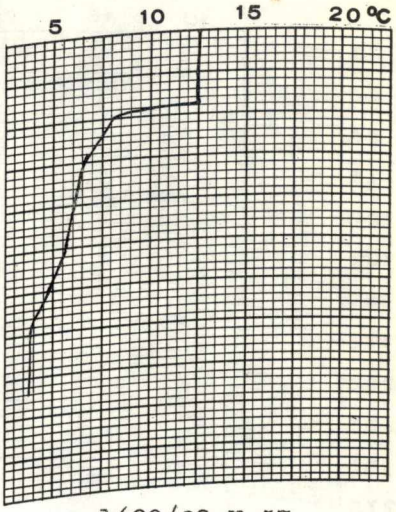

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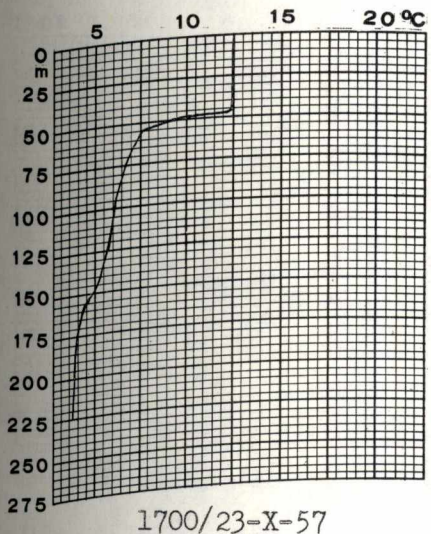

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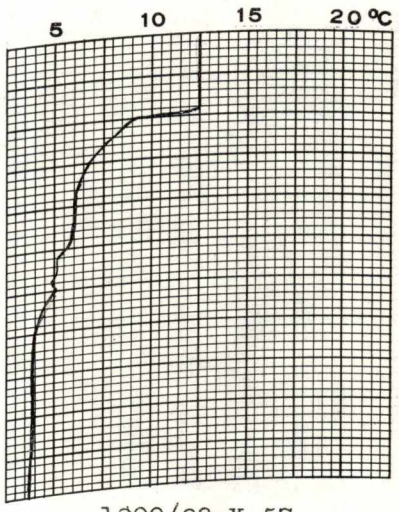

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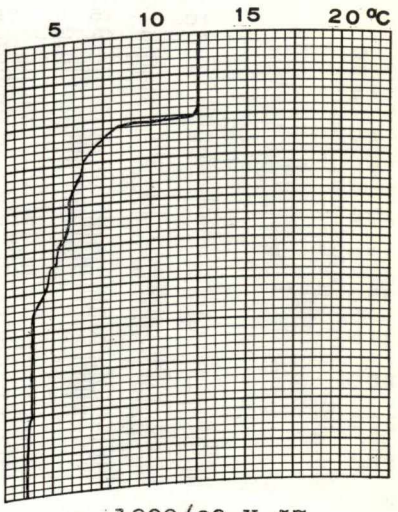

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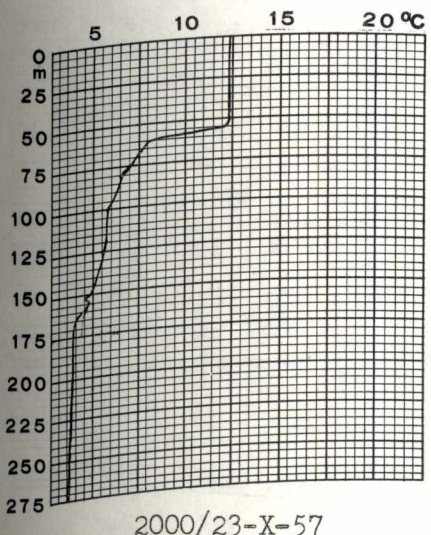

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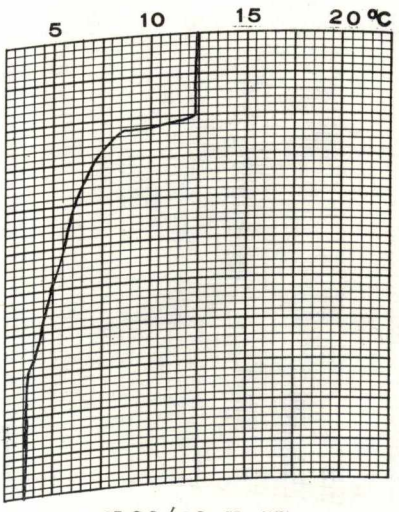

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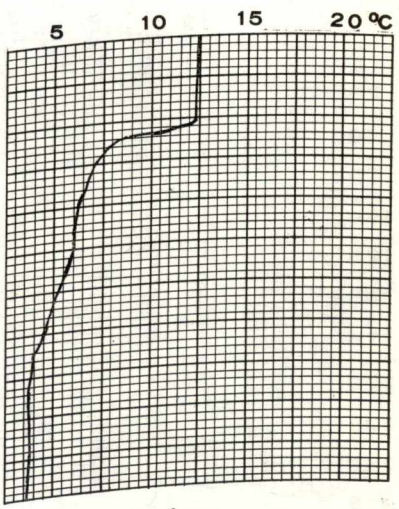

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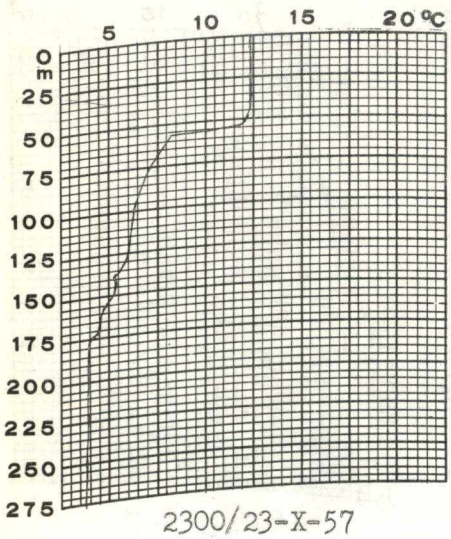
C.G.S. "St. Catharines"



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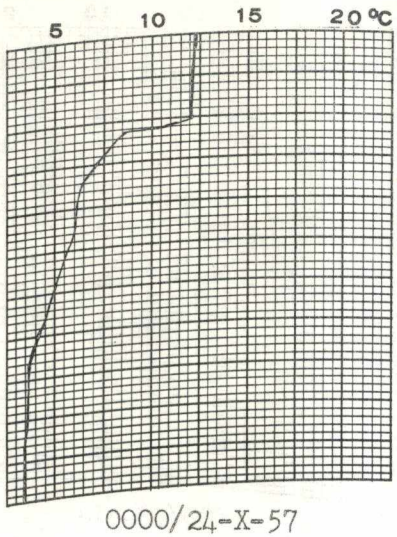

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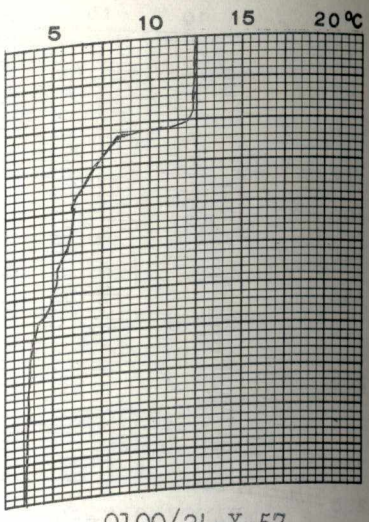

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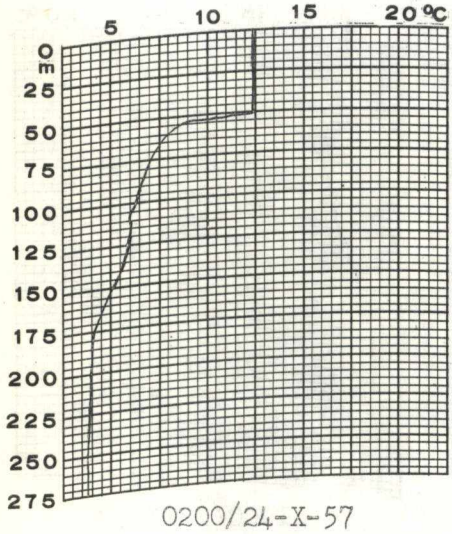

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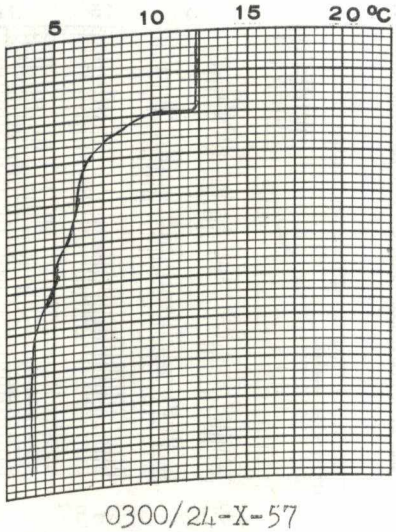

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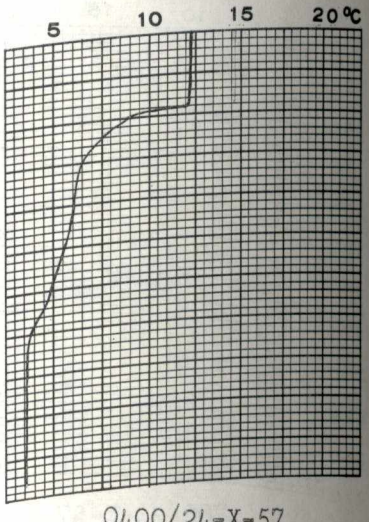

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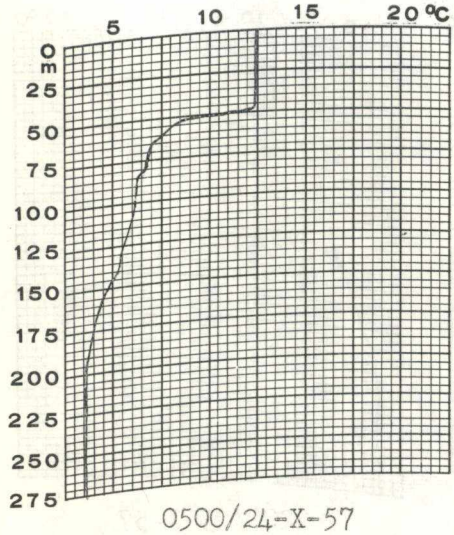

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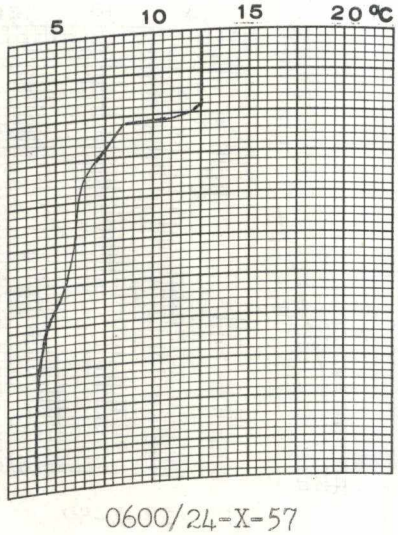

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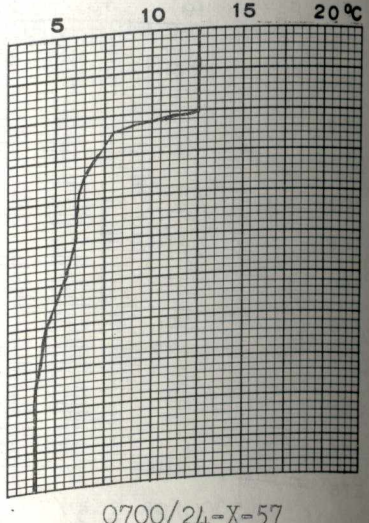

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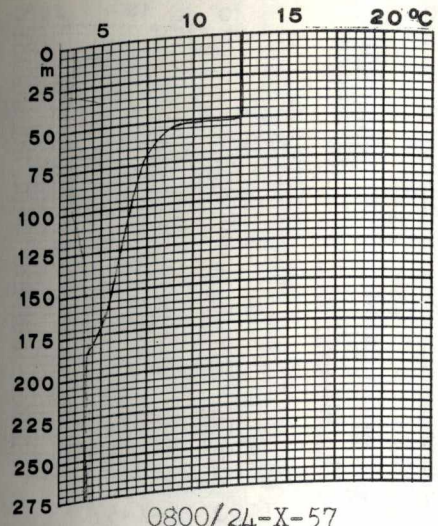
C.G.S. "St. Catharines"



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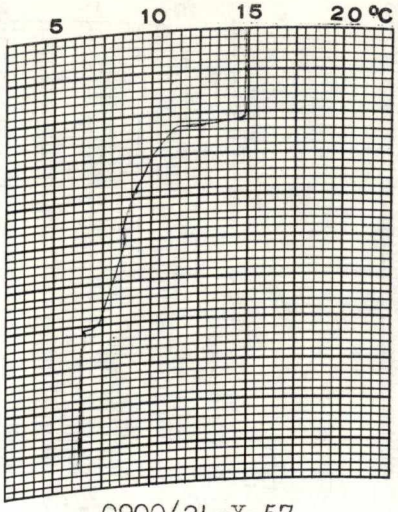

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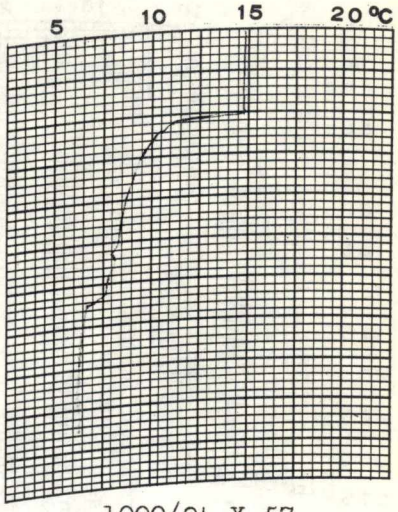

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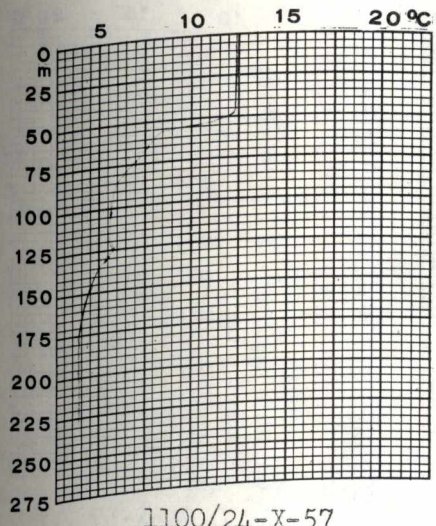

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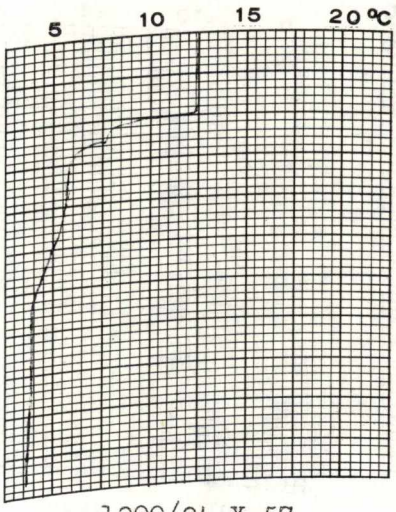

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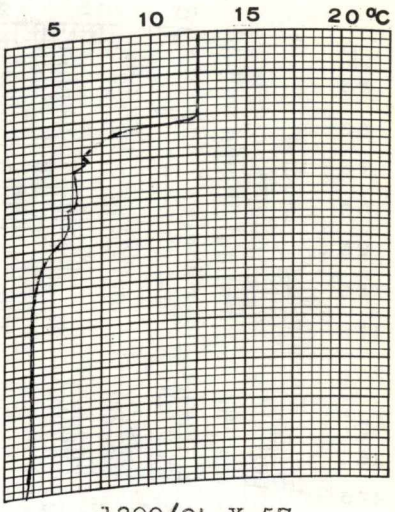

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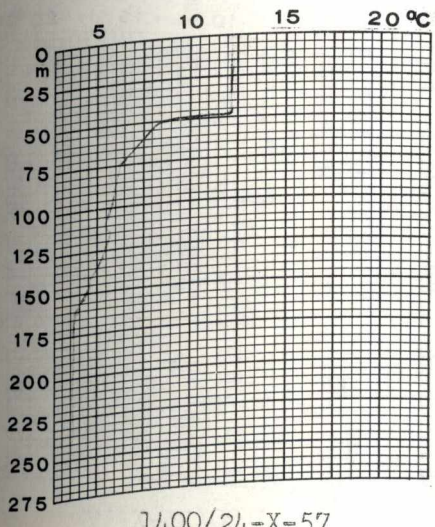

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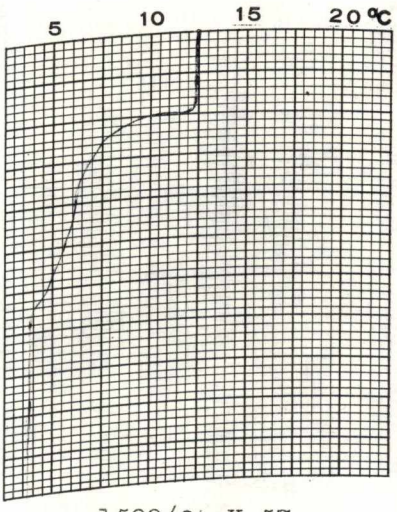

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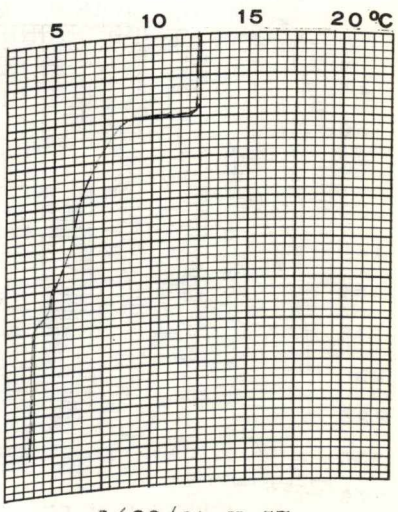

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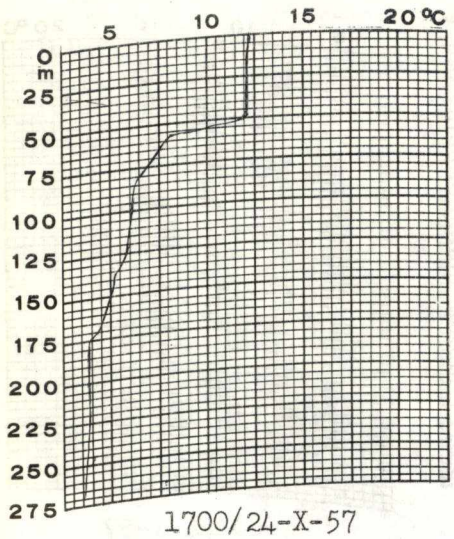
C.G.S. "St. Catharines"



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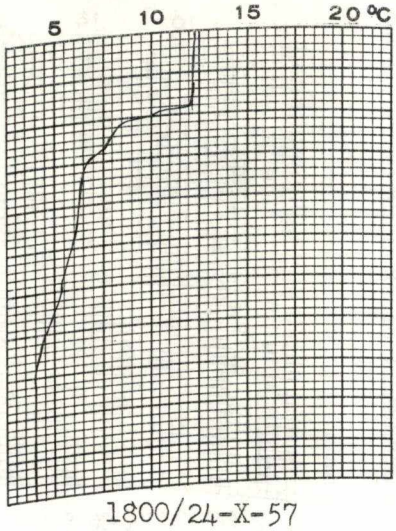

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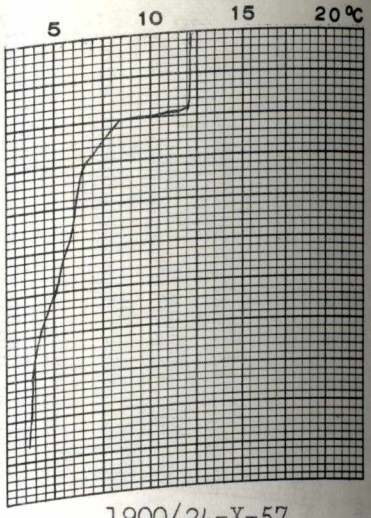

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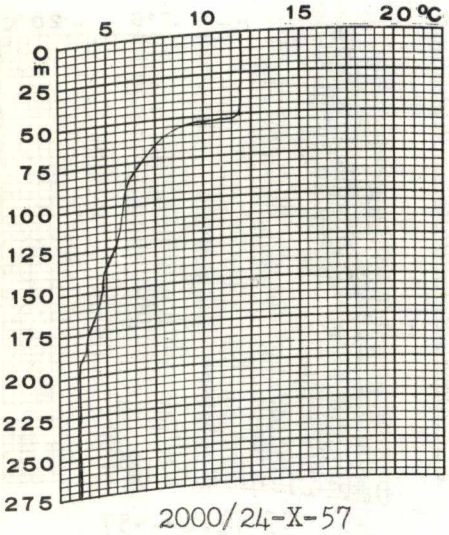

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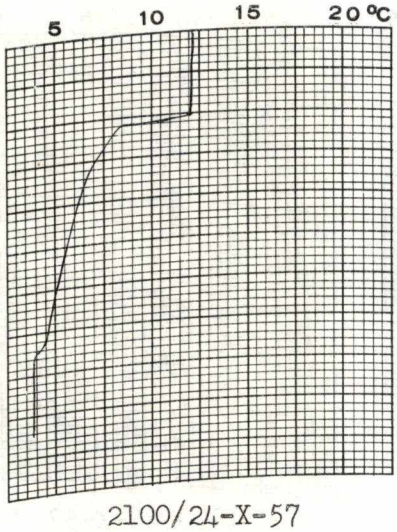

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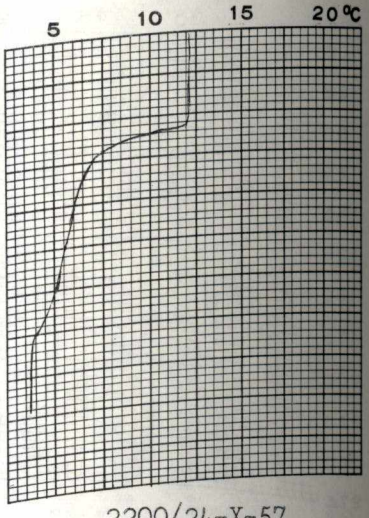

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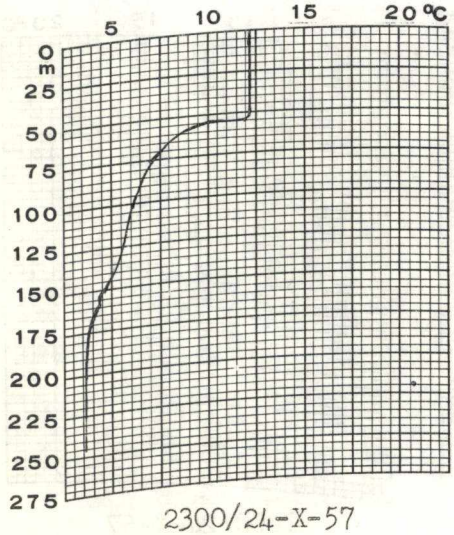

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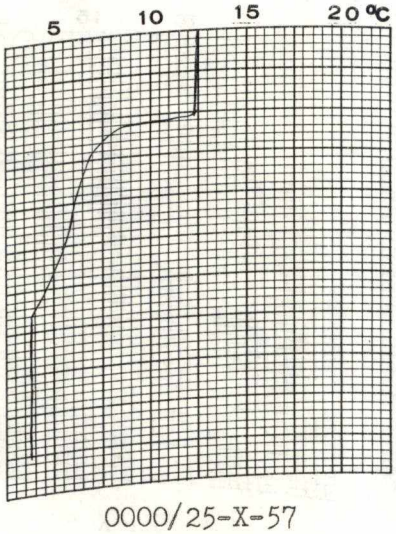

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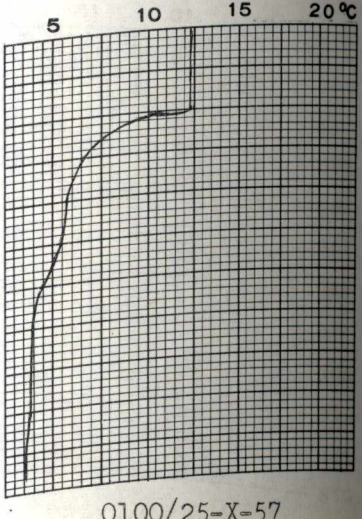

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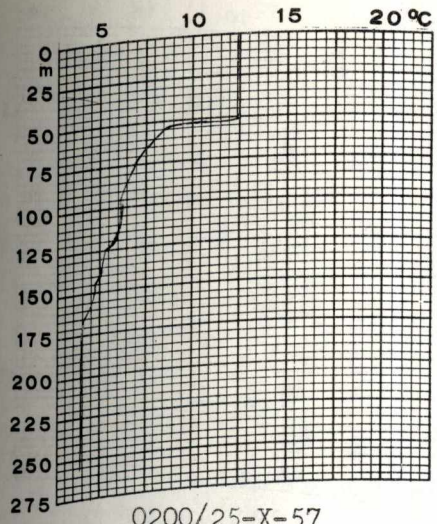
C.G.S. "St. Catharines"



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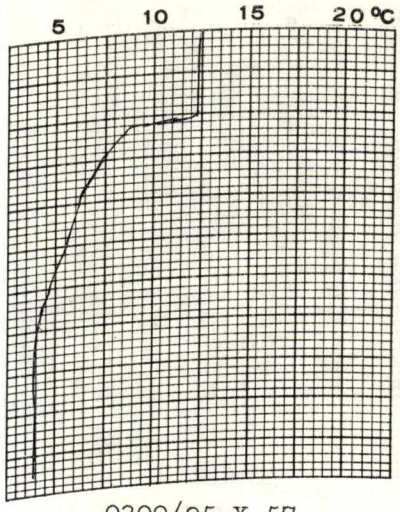

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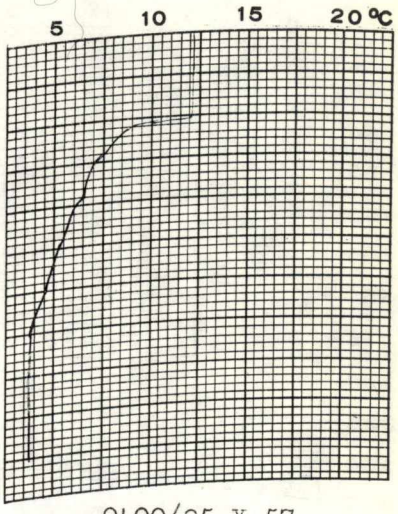

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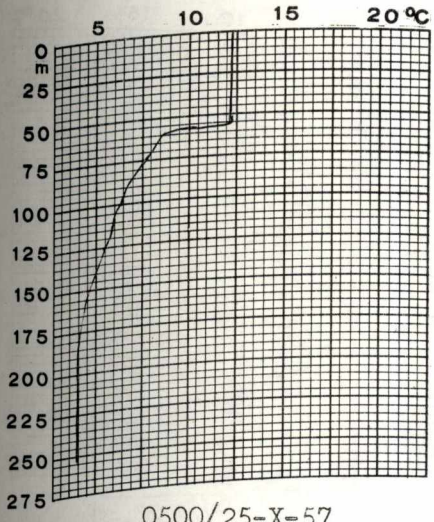

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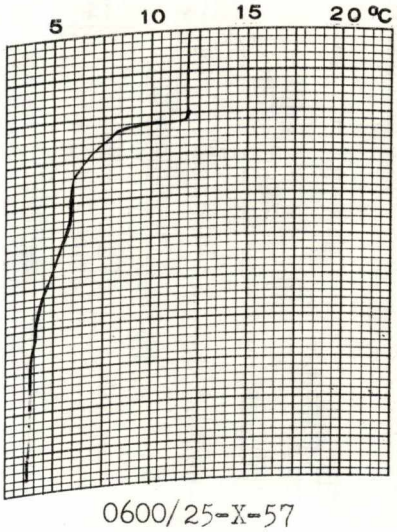

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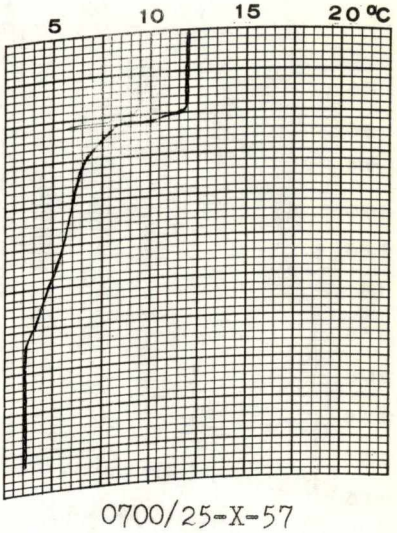

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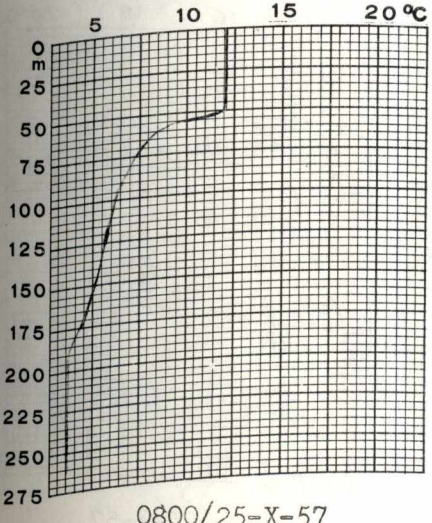

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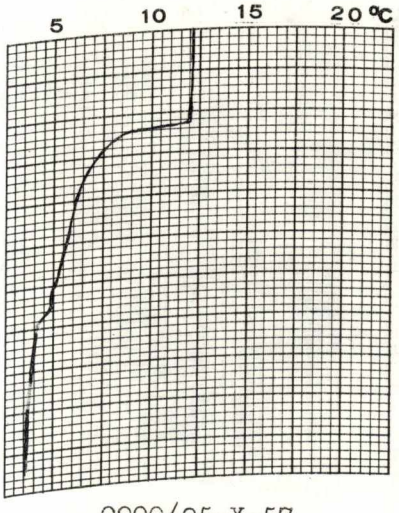

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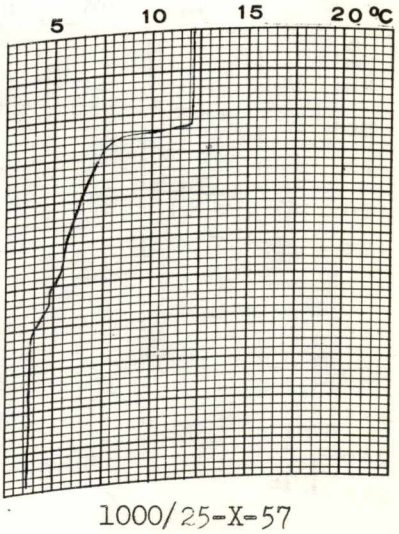

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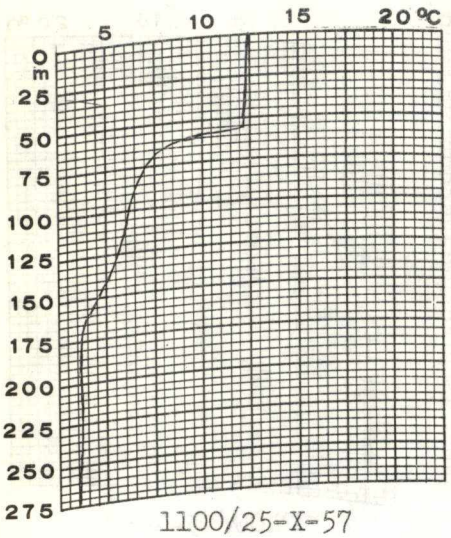

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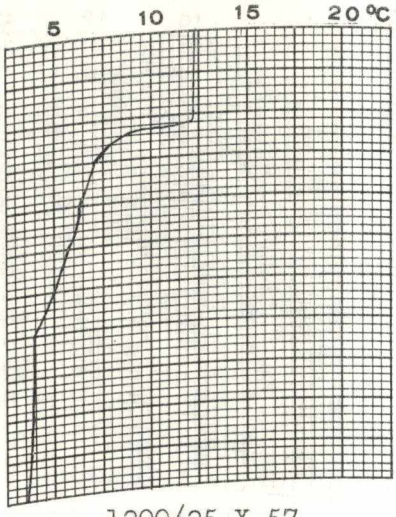

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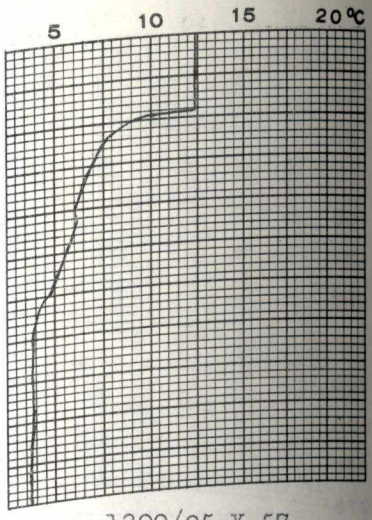

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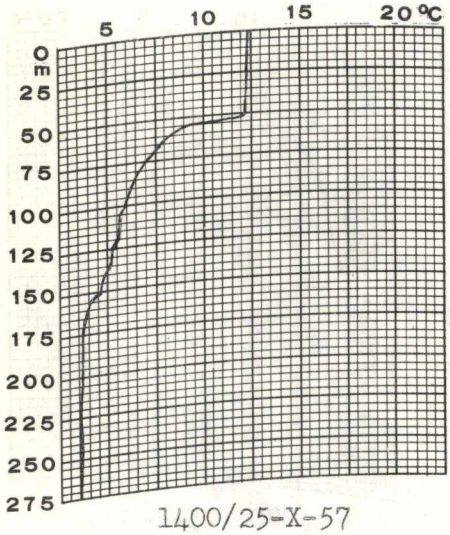

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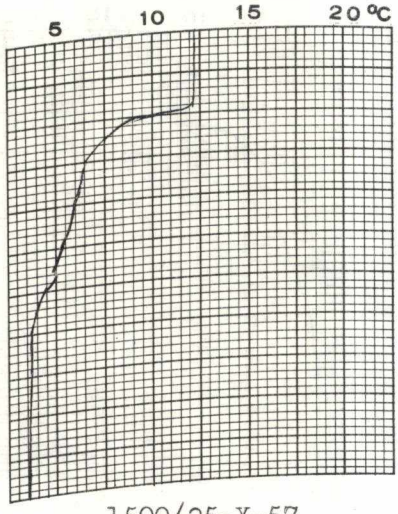

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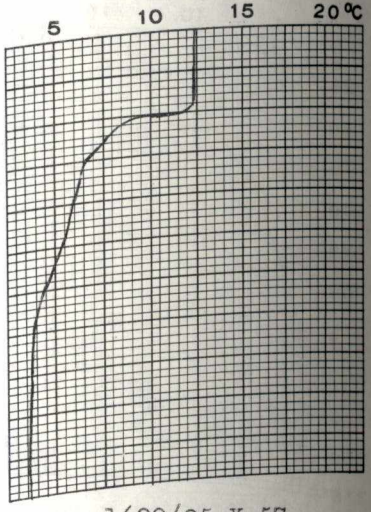

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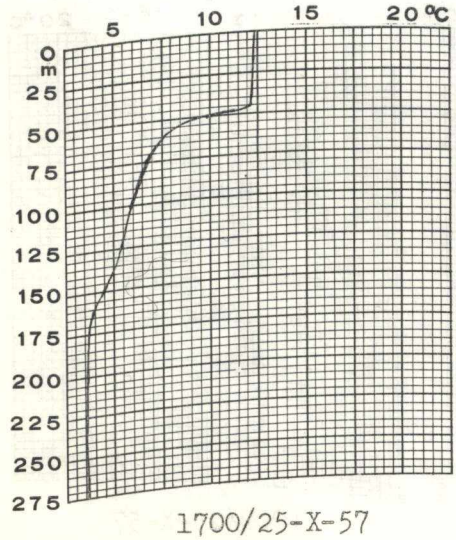

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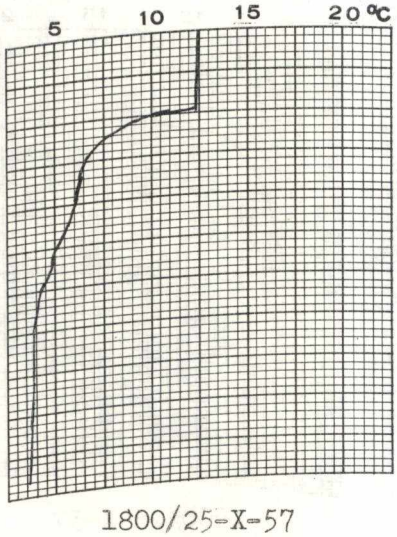

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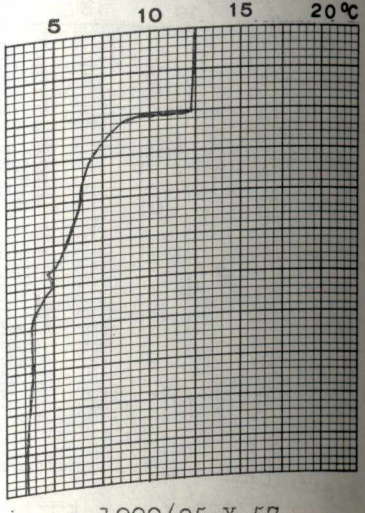

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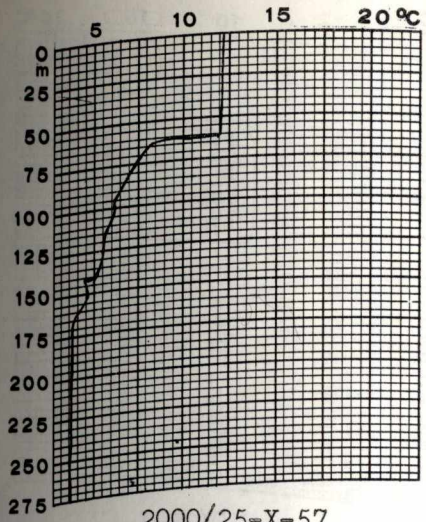

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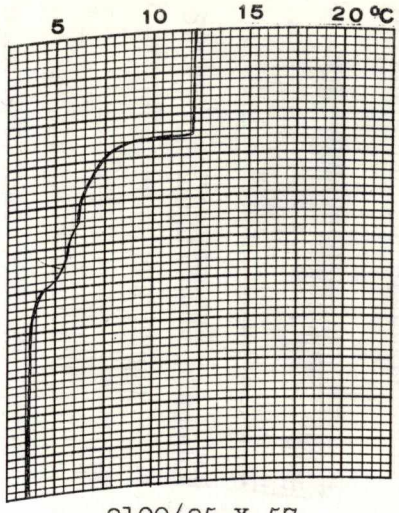

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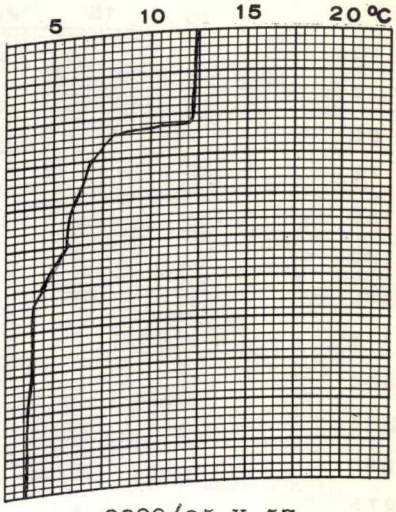

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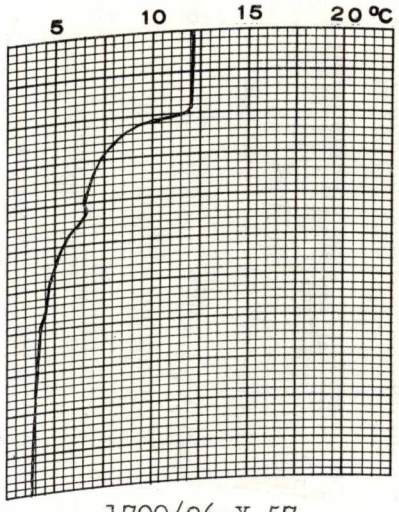

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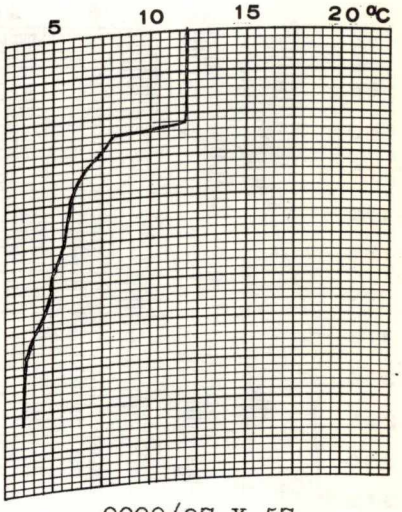

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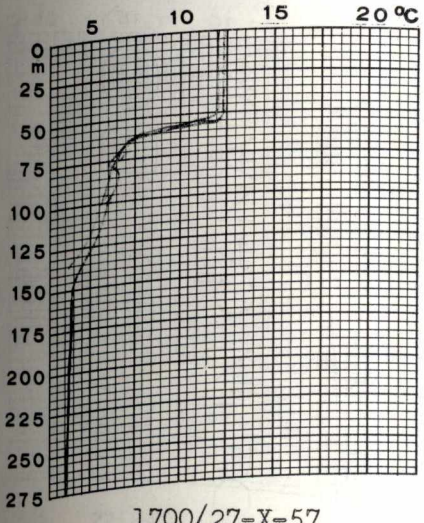

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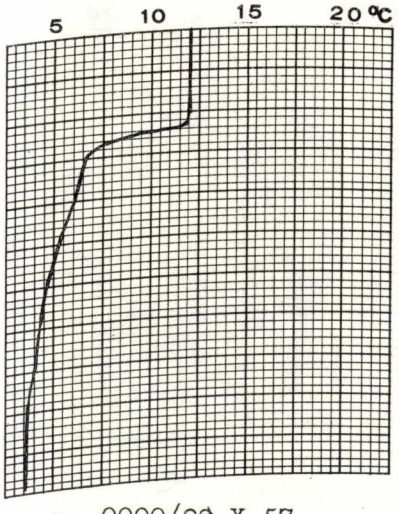

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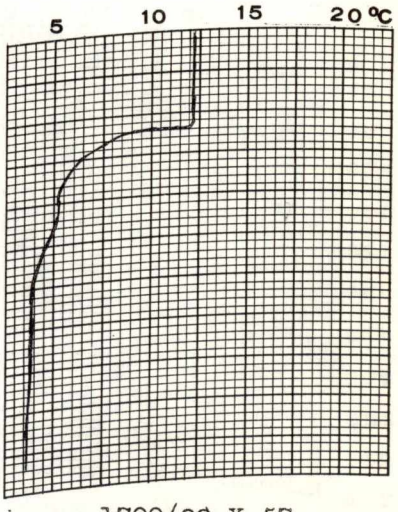

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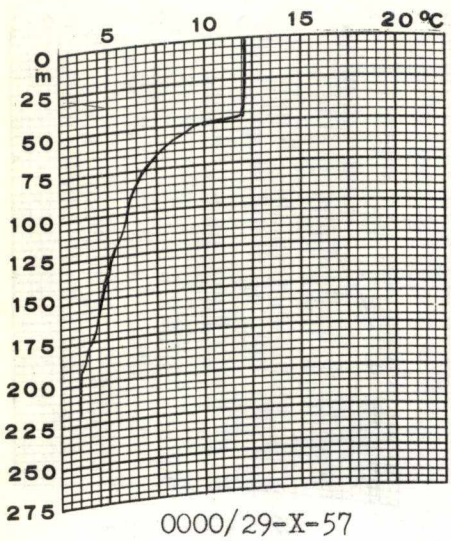

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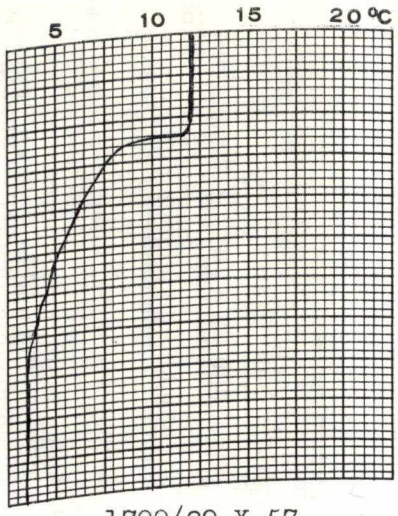

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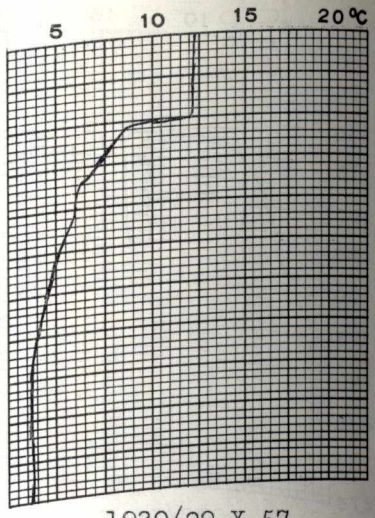
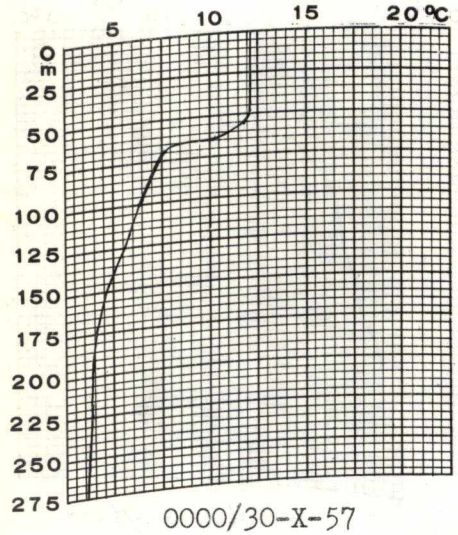
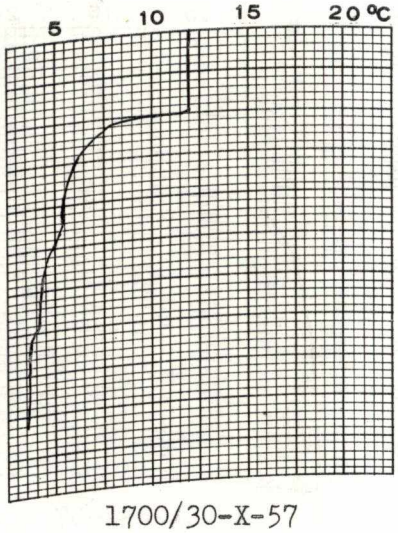


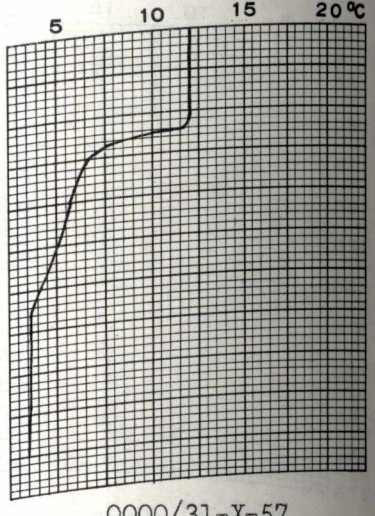
1930/29-X-57
Grid OS



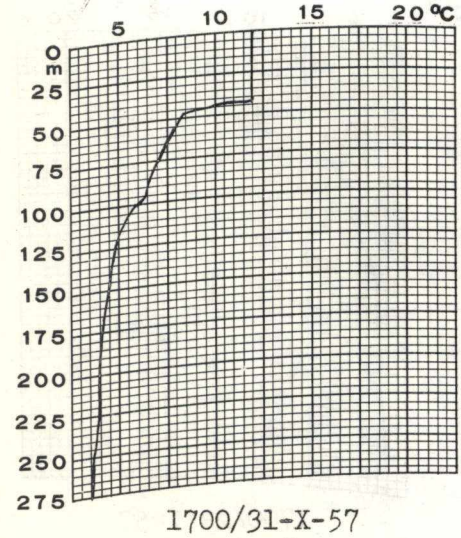
0000/30-X-57
Grid OS



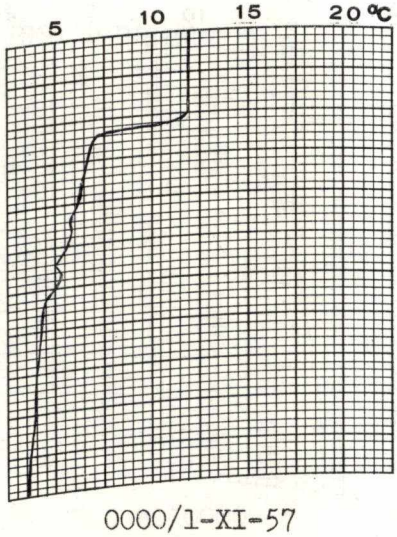
1700/30-X-57
Grid OJ



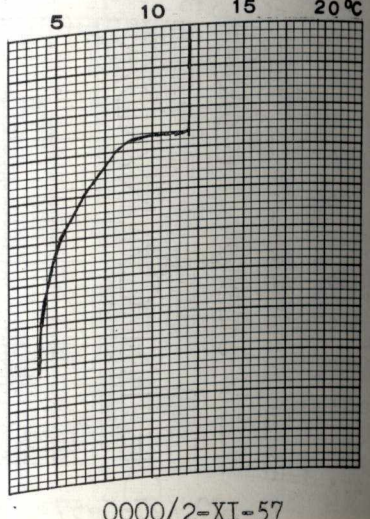
0000/31-X-57
Grid OJ



1700/31-X-57
Grid OS

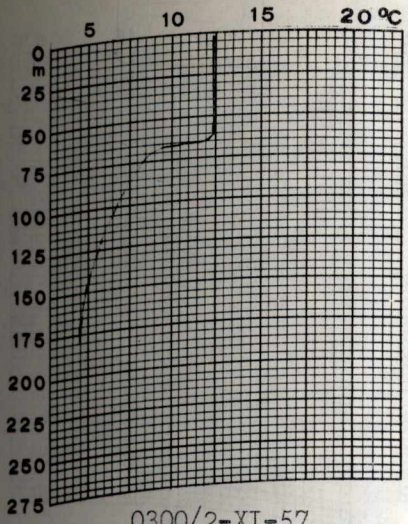


0000/1-XI-57
Grid KS

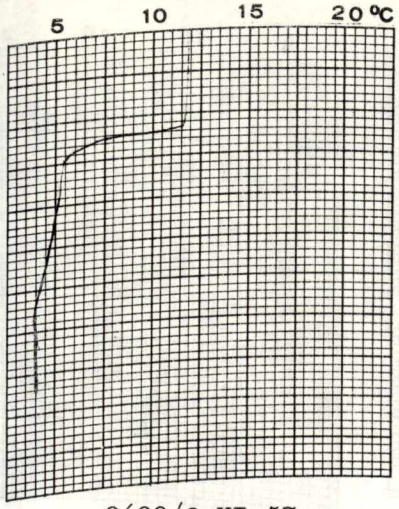


0000/2-XI-57
Grid KV

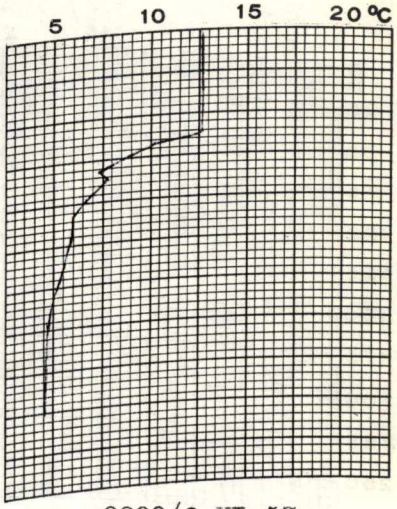
C.G.S. "St. Catharines"



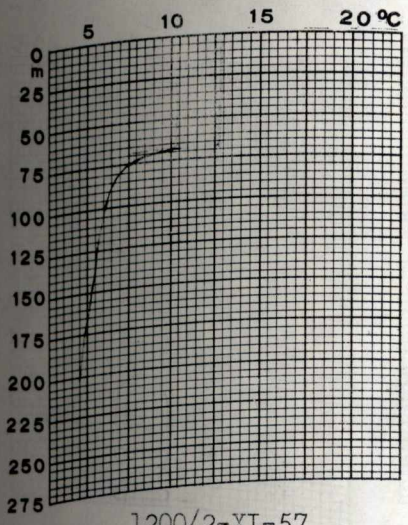
0300/2-XI-57
49° 46' N
140° 52' W



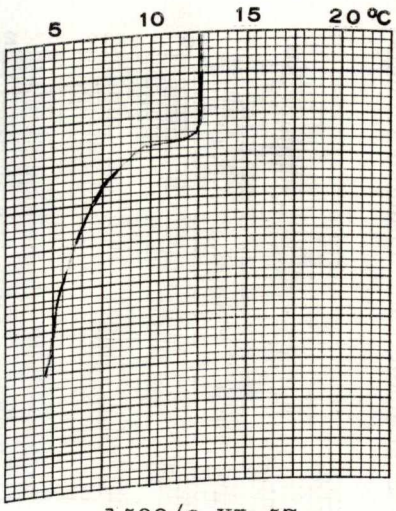
0600/2-XI-57
49° 39' N
139° 57' W



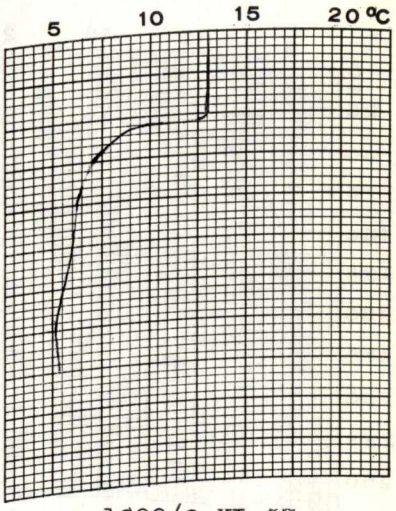
0900/2-XI-57
49° 38' N
139° 08' W



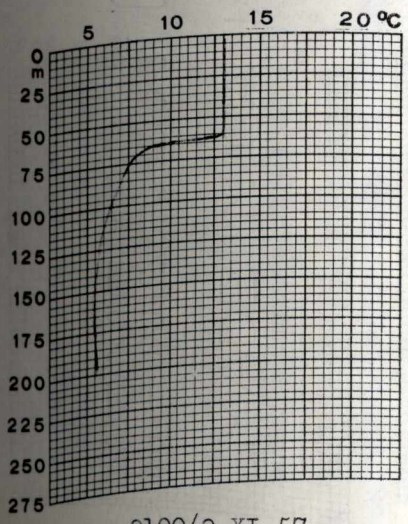
1200/2-XI-57
49° 32' N
138° 29' W



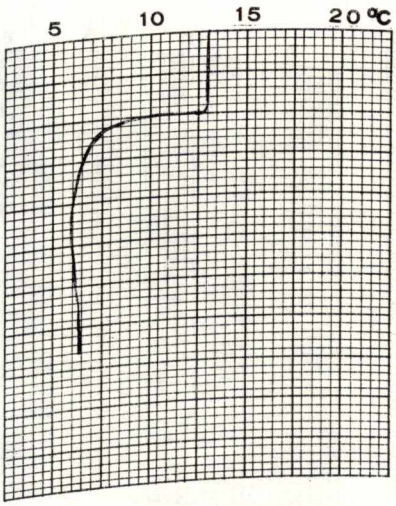
1500/2-XI-57
49° 31' N
137/ 22' W



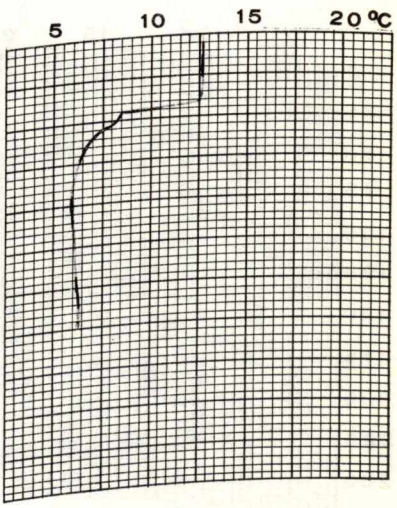
1800/2-XI-57
49° 26.5' N
136° 38' W



2100/2-XI-57
49° 23' N
135° 50' W

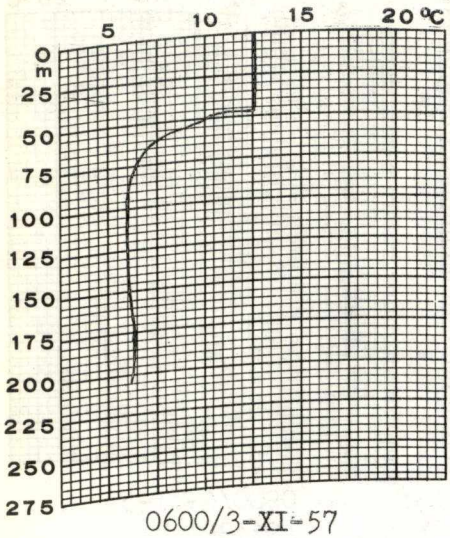


0000/3-XI-57
49° 13' N
135° 00' W

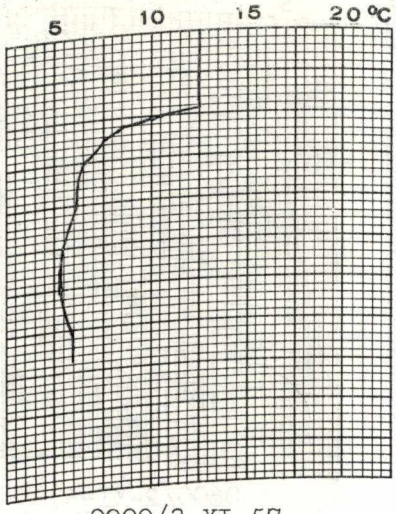


0300/3-XI-57
49° 04' N
134° 05' W

C.G.S. "St. Catharines"



0600/3-XI-57
49° 01' N
133° 15' W



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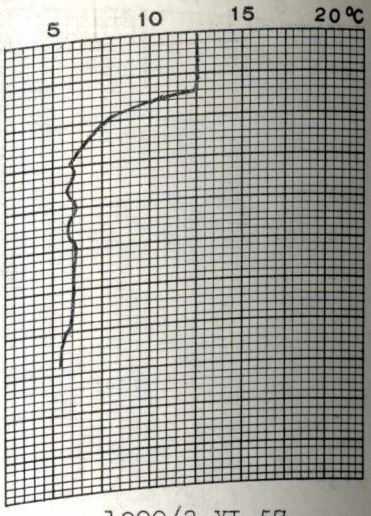
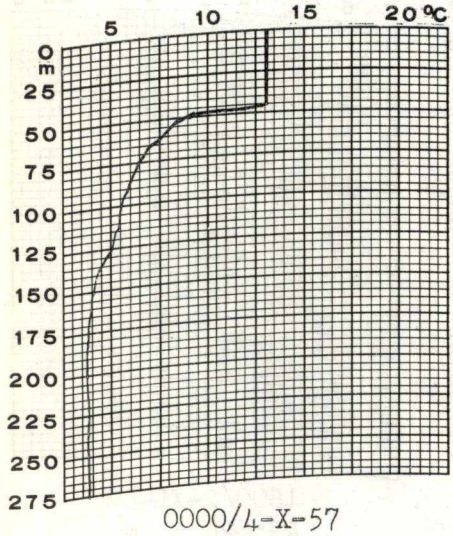
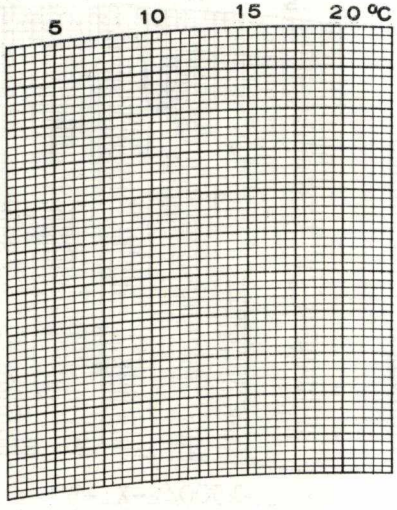
48° 57' N
132° 14' W

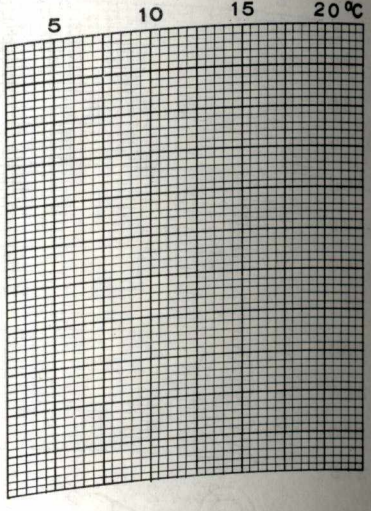


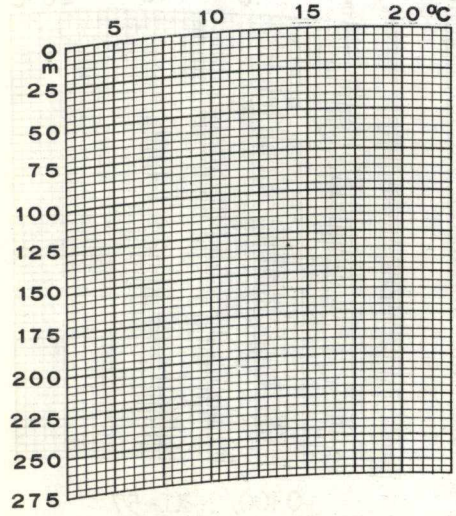
1200/3-XI-57
48° 55' N
131° 25' W

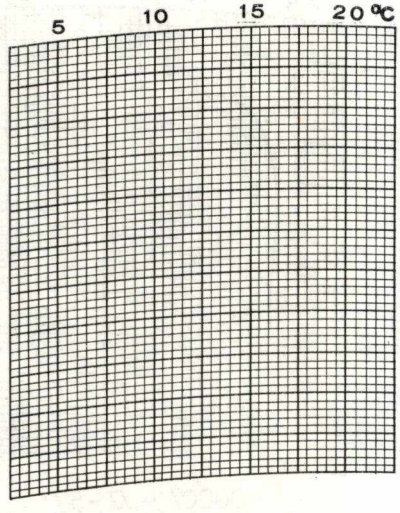


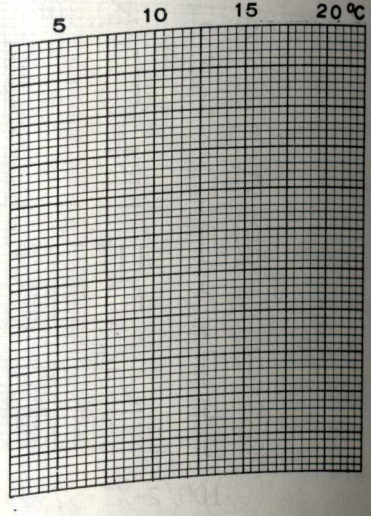
0000/4-X-57
Grid OS



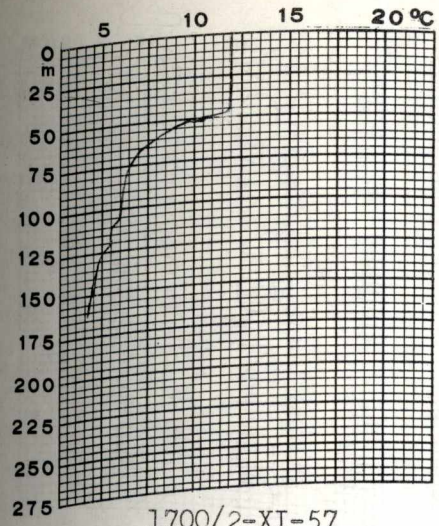




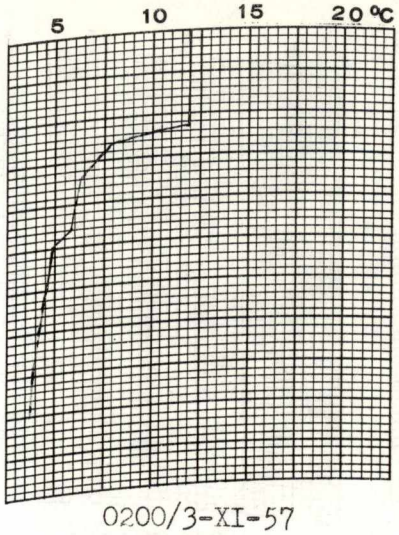




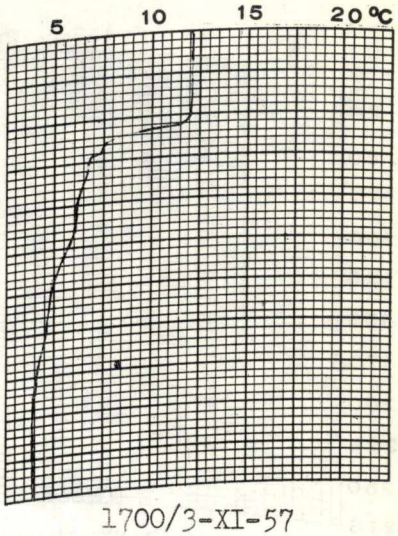
C.G.S. "Stonetown"



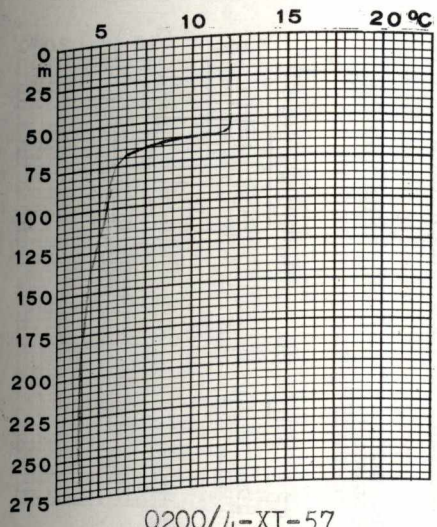
1700/2-XI-57
Grid OS



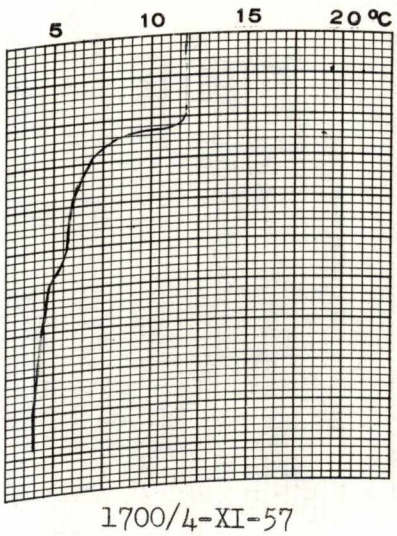
0200/3-XI-57
Grid OS



1700/3-XI-57
Grid OS



0200/4-XI-57
Grid OJ



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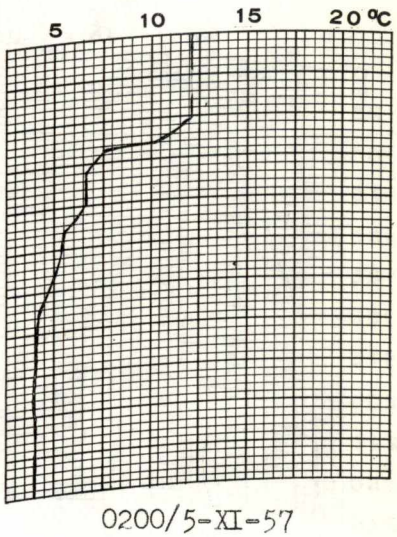
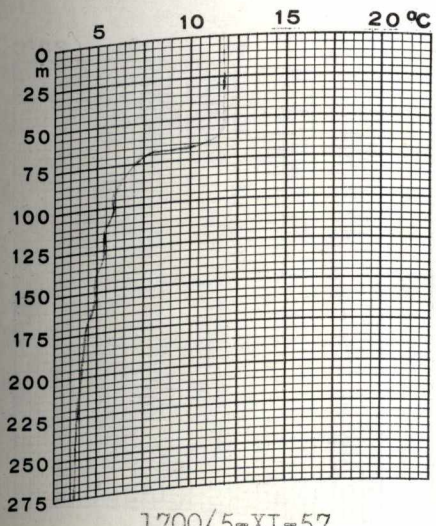
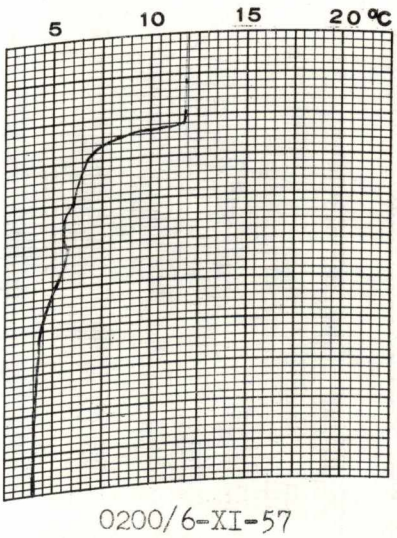
Grid OS



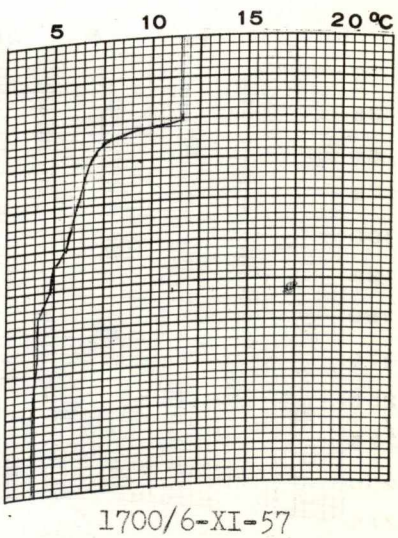
0200/5-XI-57
Grid OJ



1700/5-XI-57
Grid OK



0200/6-XI-57
Grid OK



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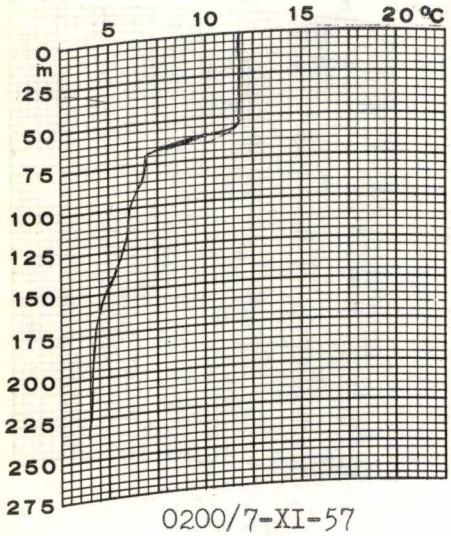
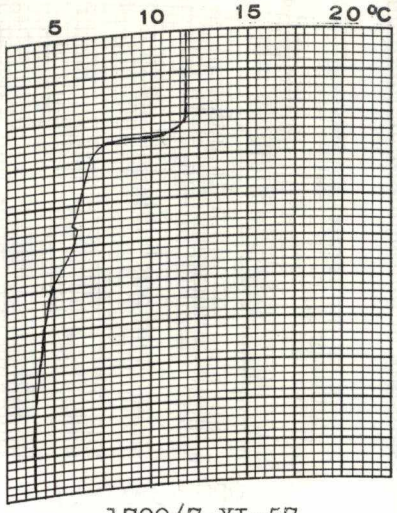
Grid OS

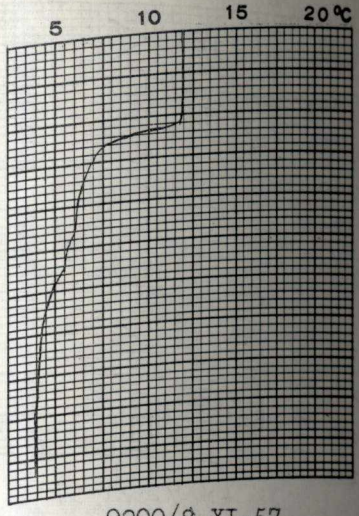
C.G.S. "Stonetown"



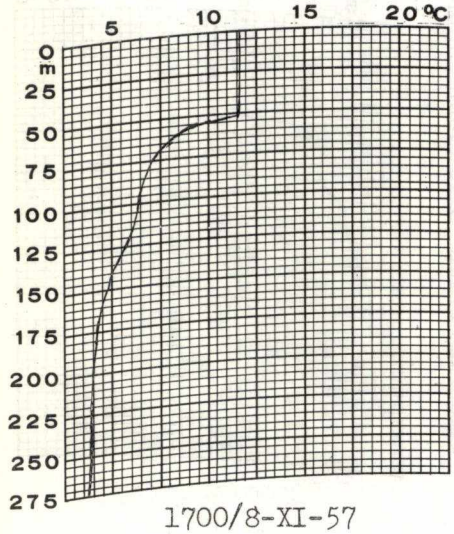
0200/7-XI-57
Grid OK



1700/7-XI-57
Grid OS



0200/8-XI-57
Grid OS



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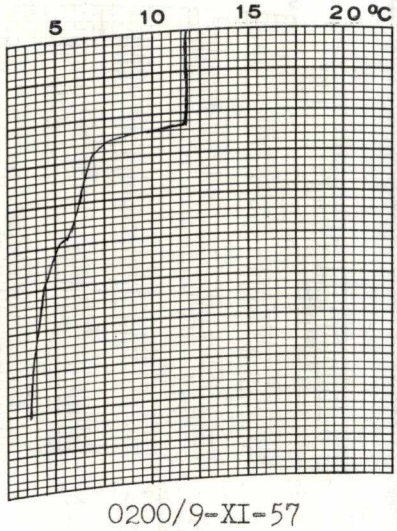
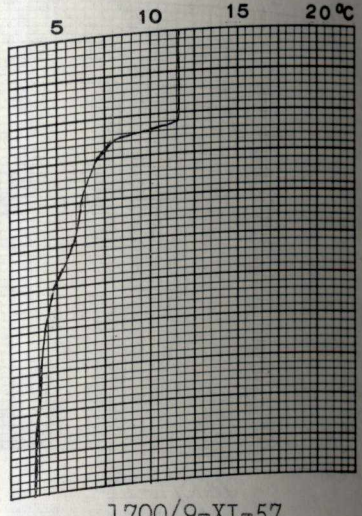
Grid OS



0200/9-XI-57
Grid OJ



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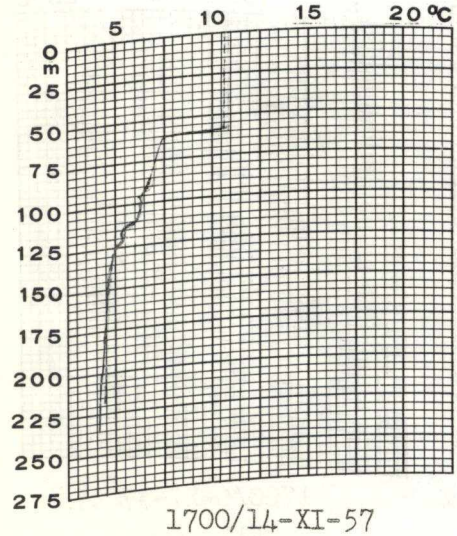
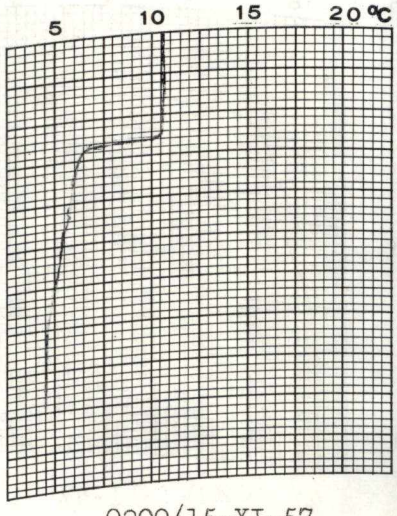


1700/14-XI-57
Grid KS



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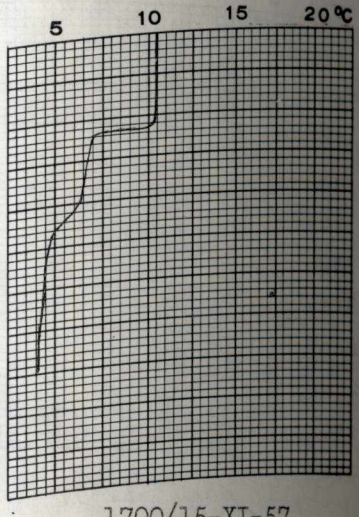
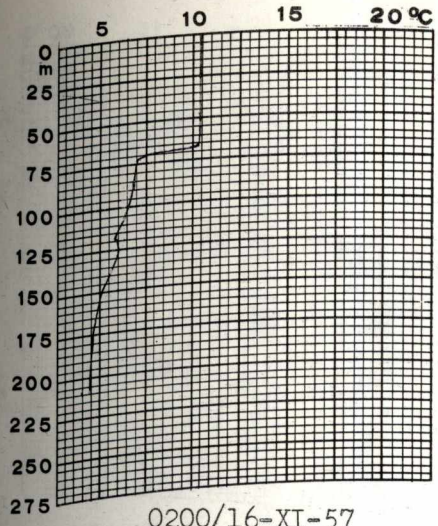
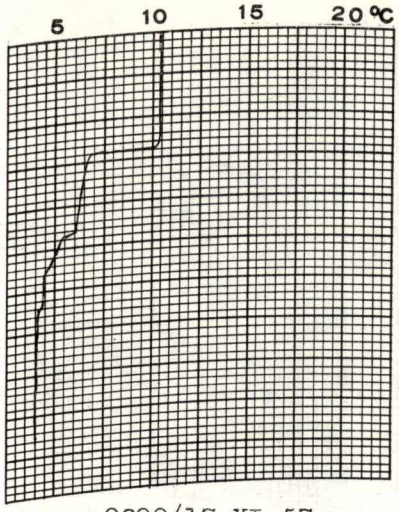


1700/15-XI-57
Grid OJ

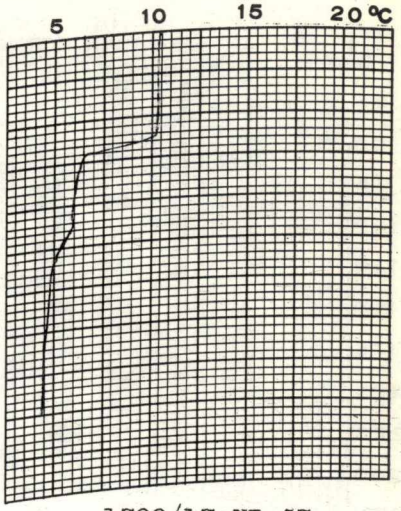
C.G.S. "Stonetown"



0200/16-XI-57
Grid OS



0200/17-XI-57
Grid KJ



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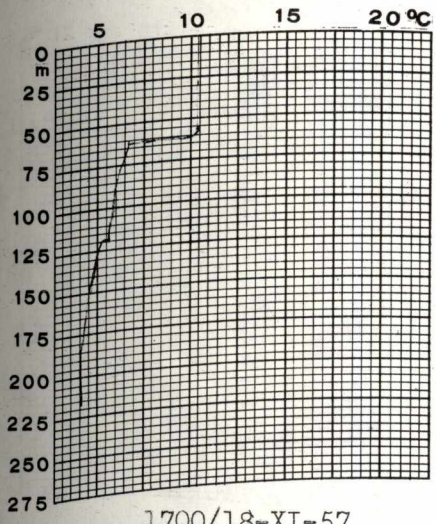
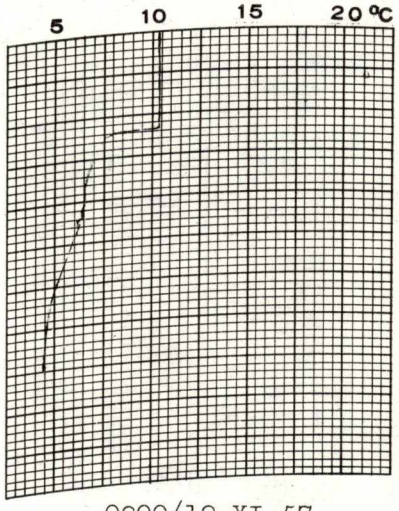
Grid OS



1700/18-XI-57
Grid KS



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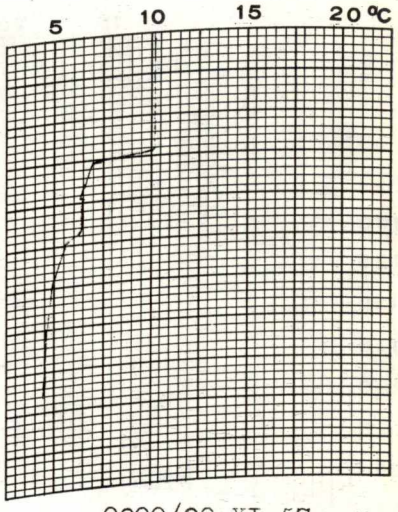

0200/20-XI-57
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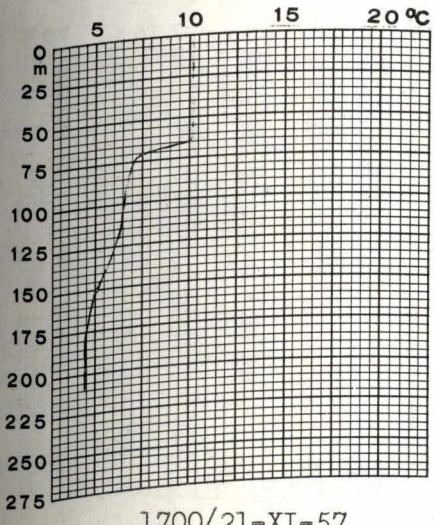
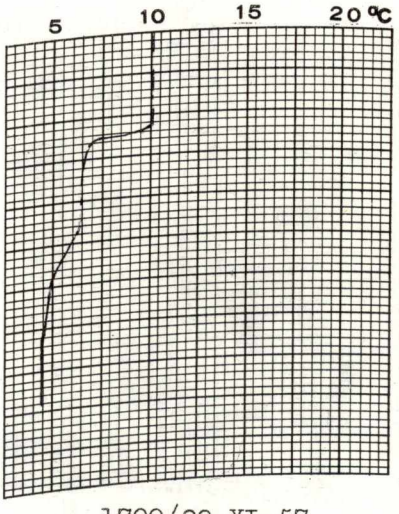


1700/21-XI-57
Grid KK



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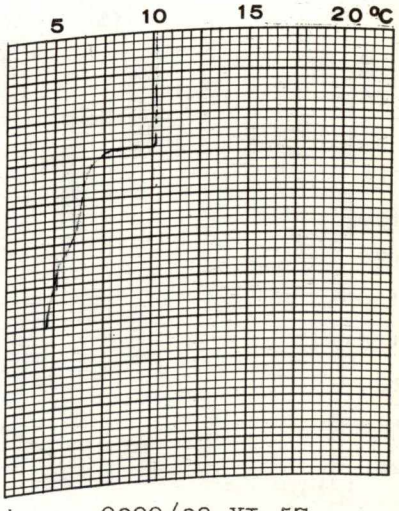
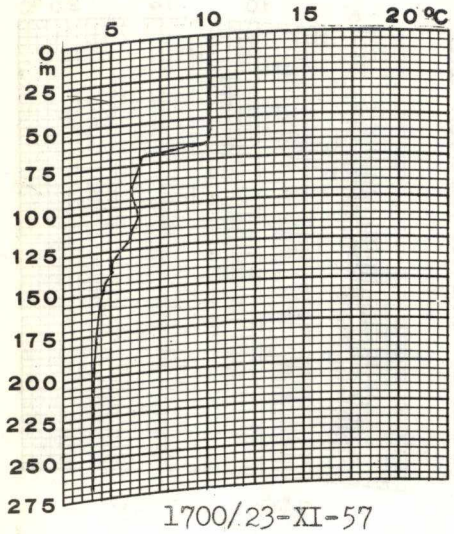
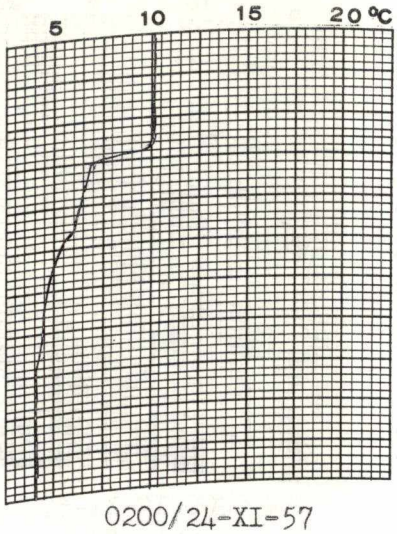


0200/23-XI-57
Grid KK

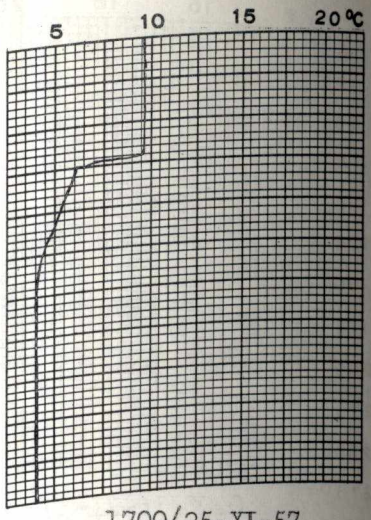
C.G.S. "Stonetown"



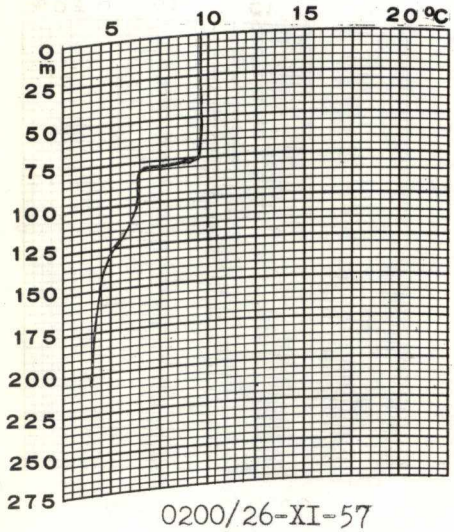
1700/23-XI-57
Grid OS



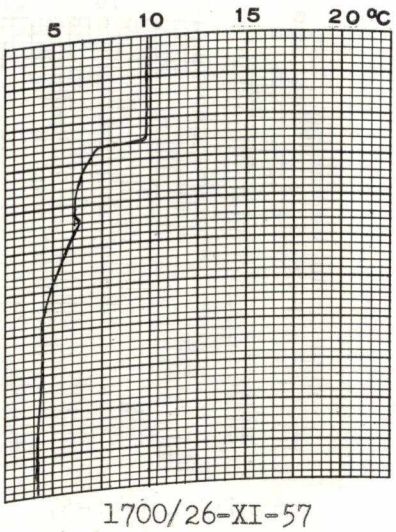
0200/24-XI-57
Grid KJ



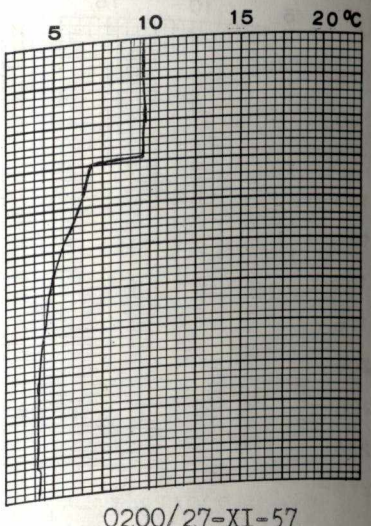
1700/25-XI-57
Grid MH



0200/26-XI-57
Grid KJ



1700/26-XI-57
Grid KK



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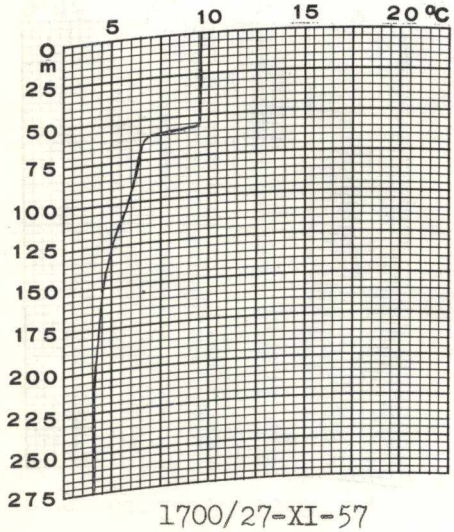
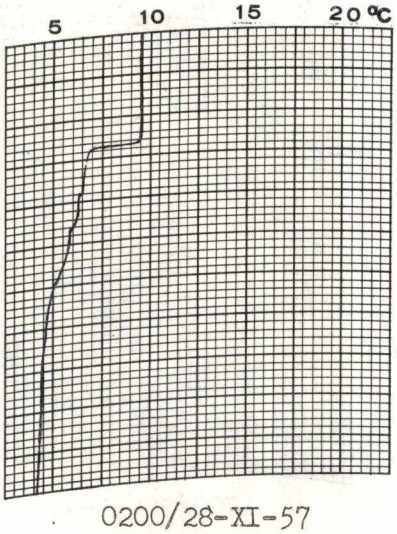
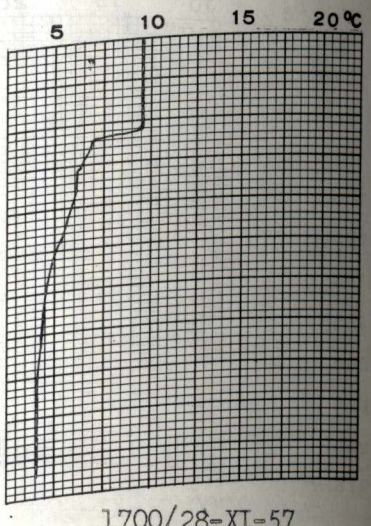
Grid KS



1700/27-XI-57
Grid OS

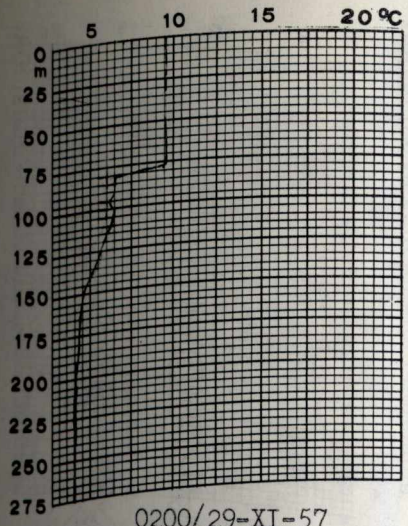


0200/28-XI-57
Grid OK

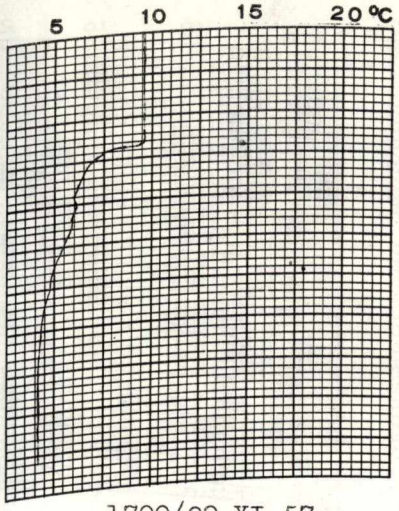


1700/28-XI-57
Grid JS

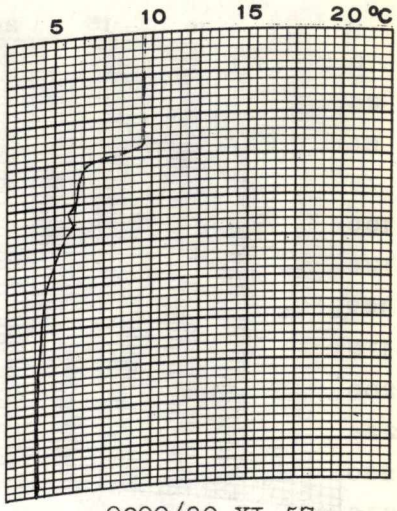
C.G.S. "Stonetown"



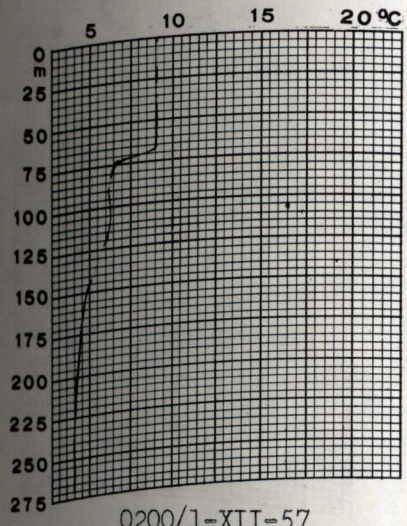
0200/29-XI-57
Grid JS



1700/29-XI-57
Grid OS



0200/30-XI-57
Grid KJ



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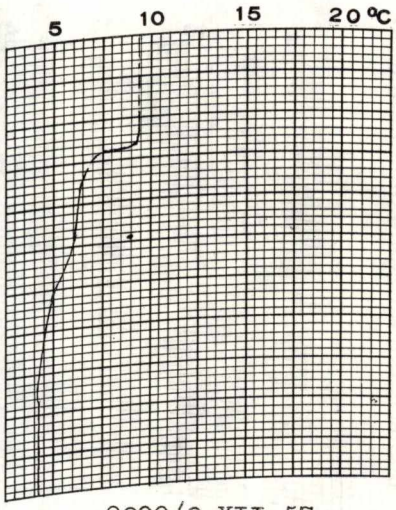
Grid JS



0200/2-XII-57
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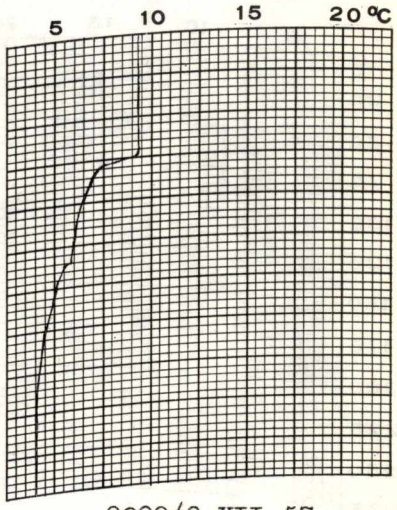

0200/3-XII-57
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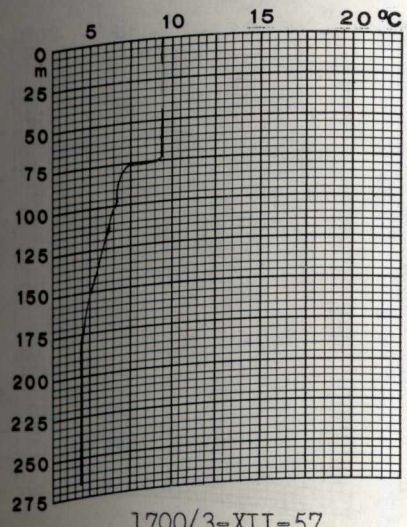

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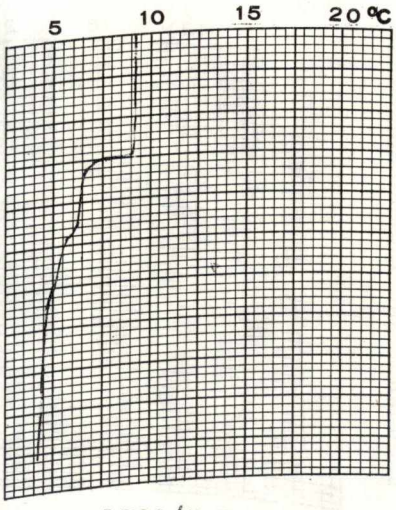
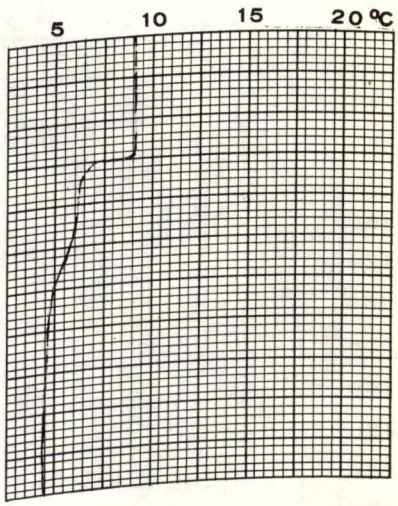
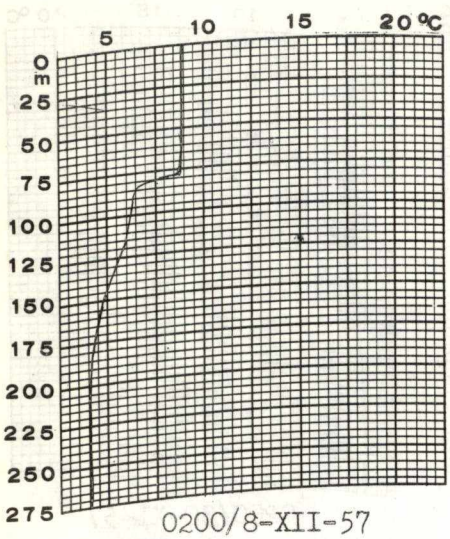


1700/5-XII-57
Grid JS



0200/7-XII-57
Grid OK

C.G.S. "Stonetown"



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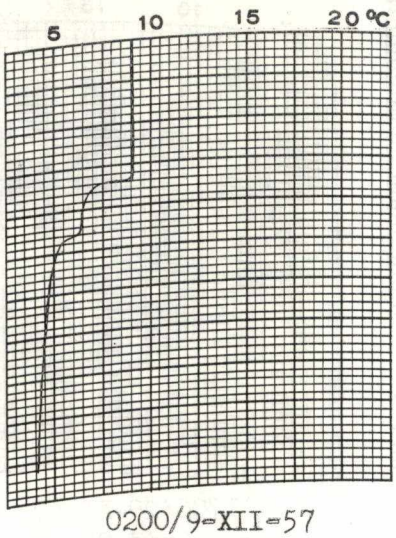

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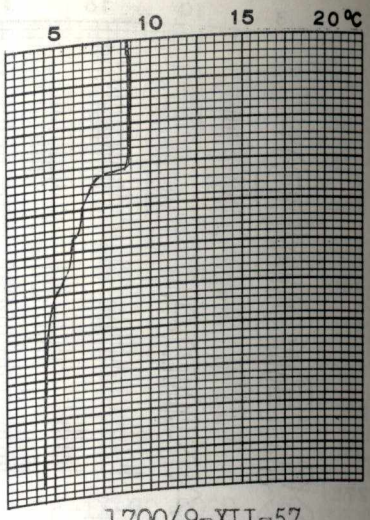

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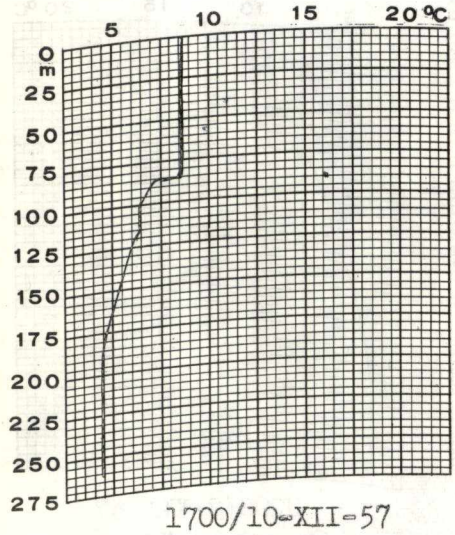
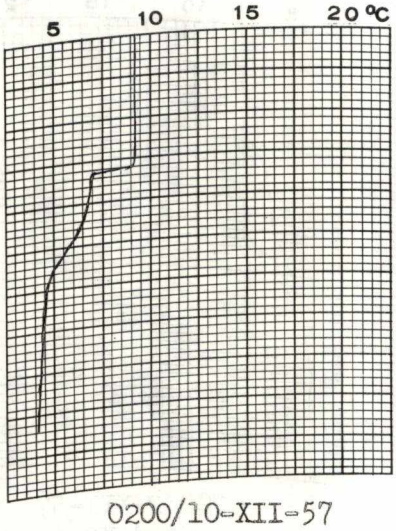
Grid OS



1700/10-XII-57
Grid JK



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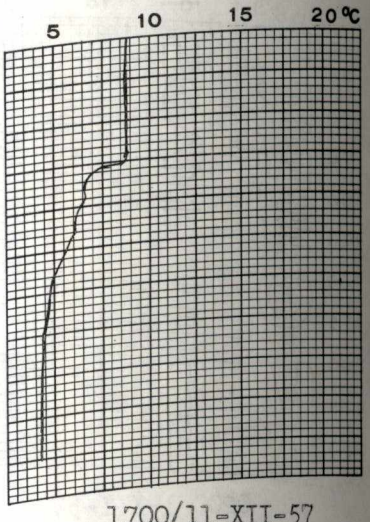

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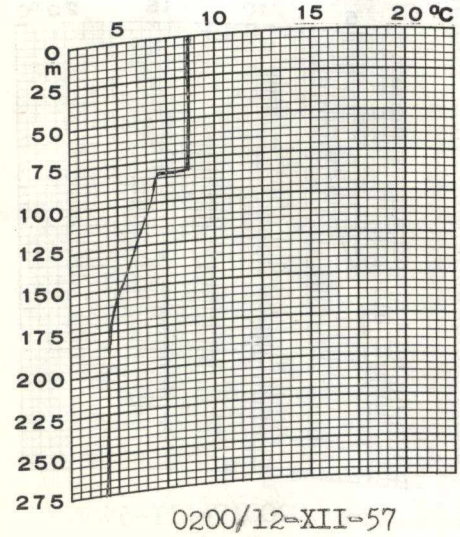
Grid KS



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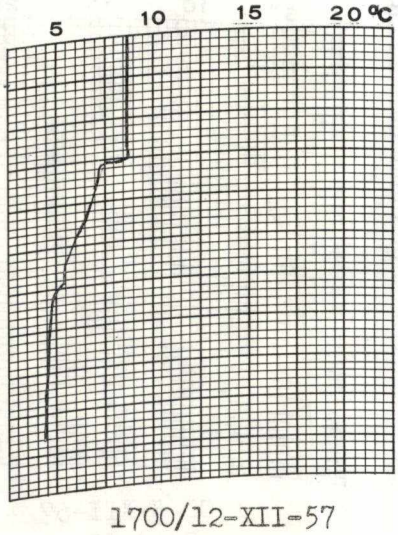
Grid OS



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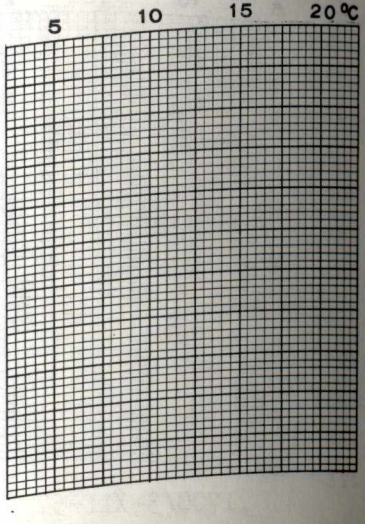
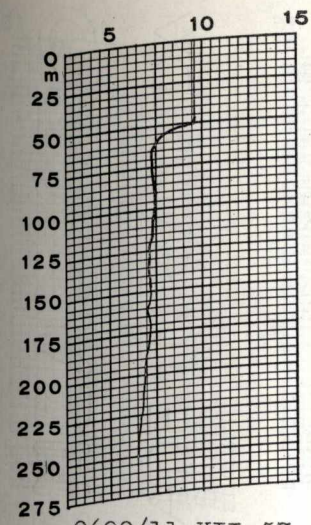
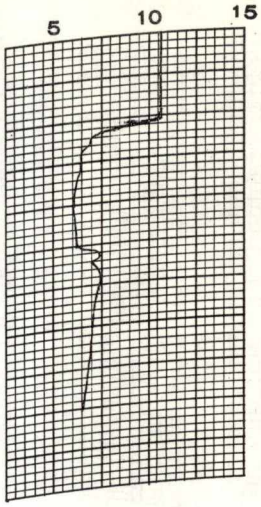


C.G.S. "St. Catharines"



0600/11-XII-57
48° 41' N
126/ 34' W



0900/11-XII-57
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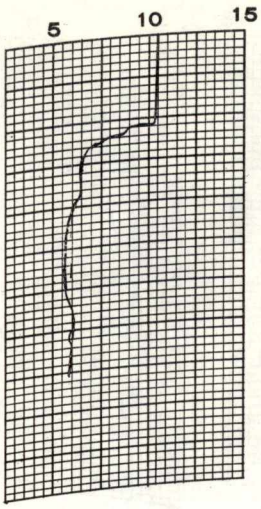
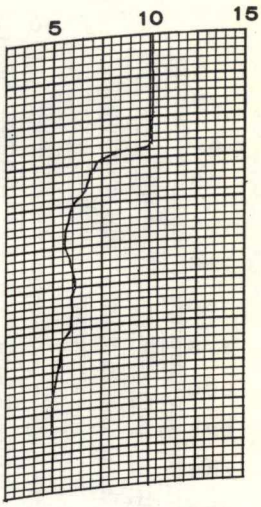
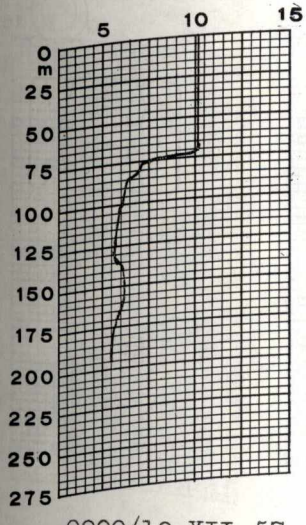
127° 12' W



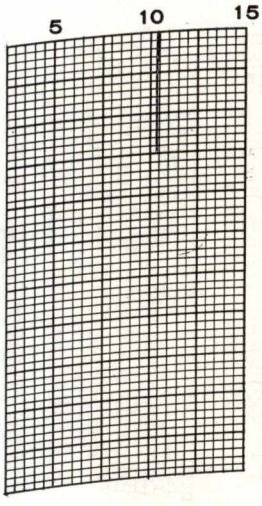
0300/12-XII-57
48° 55' N
131° 30' W



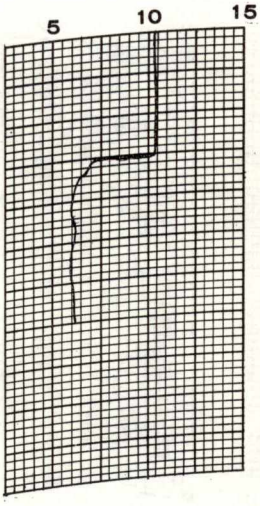
0600/12-XII-57
48° 58' N
132° 17' W



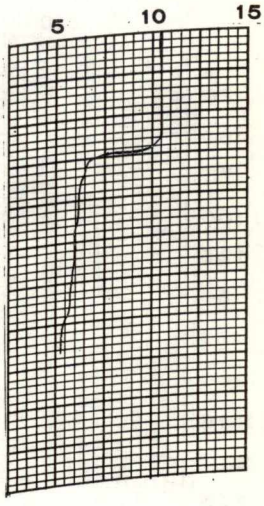
0900/12-XII-57
49° 00' N
133° 05' W



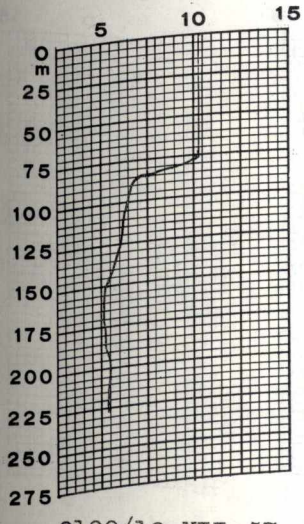
1200/12-XII-57
49° 02' N
133° 38' W



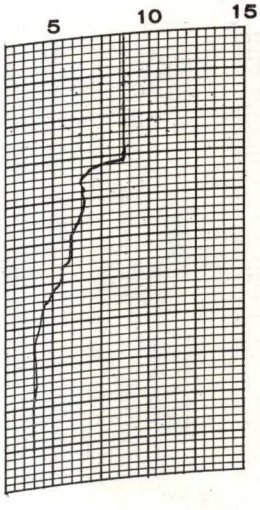
1500/12-XII-57
49° 04' N
134° 22' W



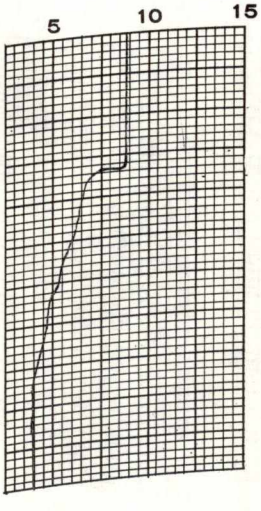
1800/12-XII-57
49° 13' N
135° 20' W



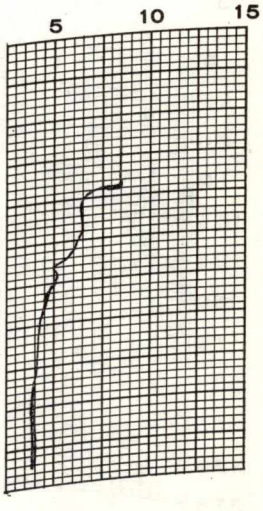
2100/12-XII-57
49° 18' N
136° 11' W



1700/14-XII-57
Grid OS

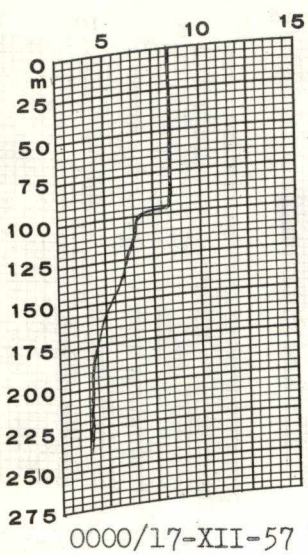


2045/14-XII-57
Grid KS



1700/16-XII-57
Grid JS

C.G.S. "St. Catharines"



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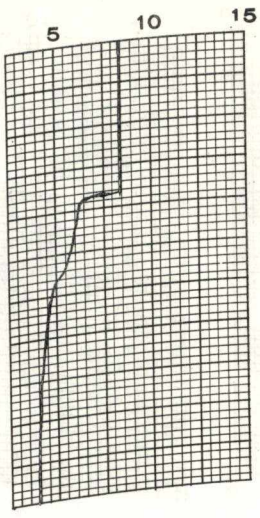
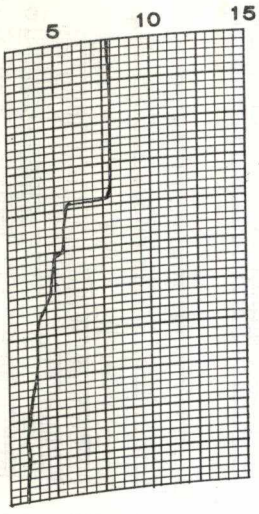
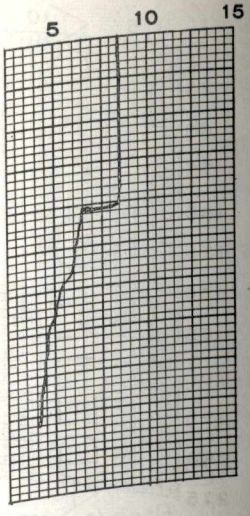
Grid OK



0700/18-XII-57
Grid OJ



1700/18-XII-57
Grid KJ



1700/19-XII-57
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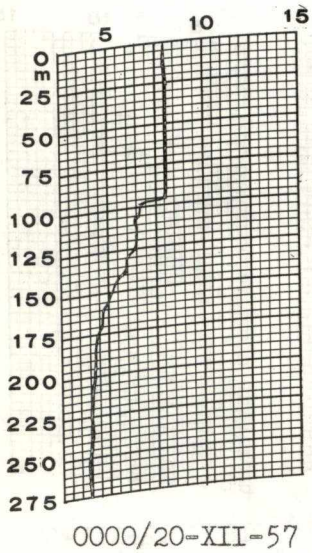

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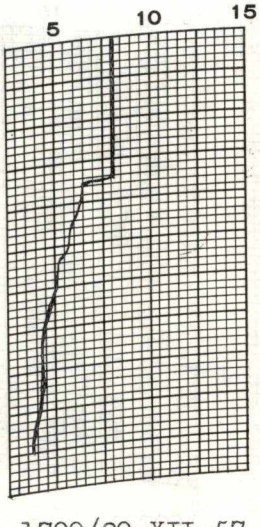
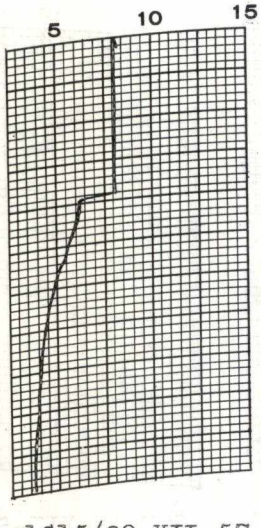
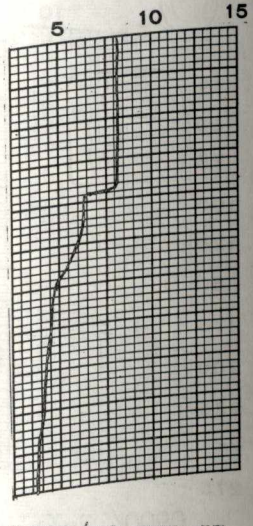
Grid JK



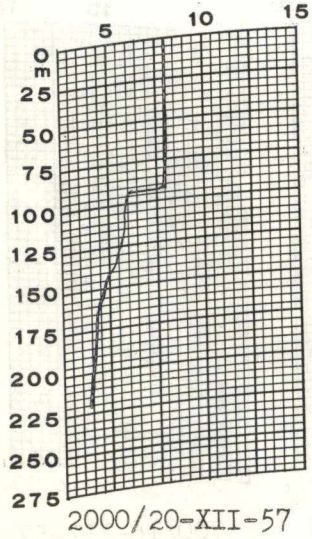
1700/20-XII-57
Grid JJ



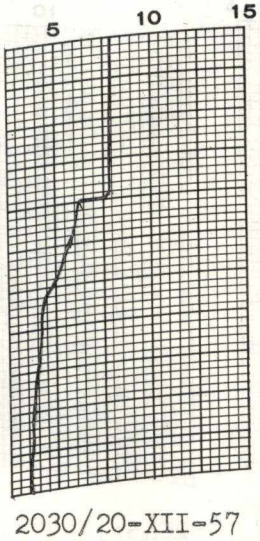
1815/20-XII-57
Grid JJ



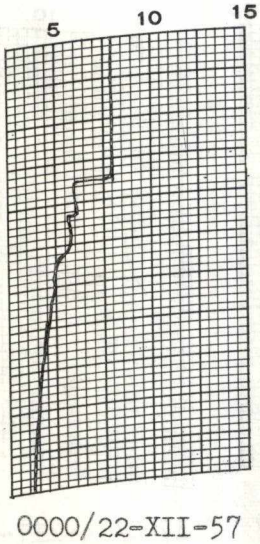
1900/20-XII-57
Grid JJ



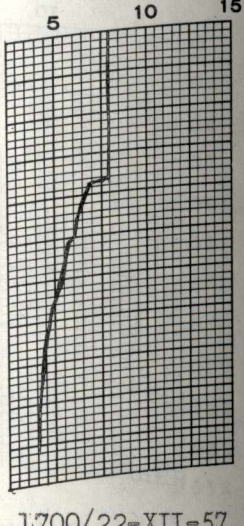
2000/20-XII-57
Grid JJ



2030/20-XII-57
Grid JJ

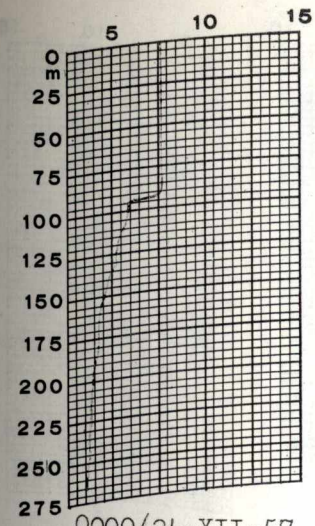


0000/22-XII-57
Grid JS

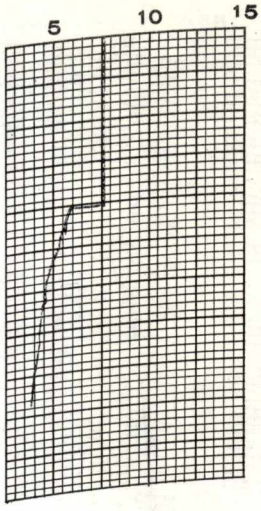


1700/22-XII-57
Grid JS

C.G.S. "St. Catharines"



0000/24-XII-57
Grid OJ



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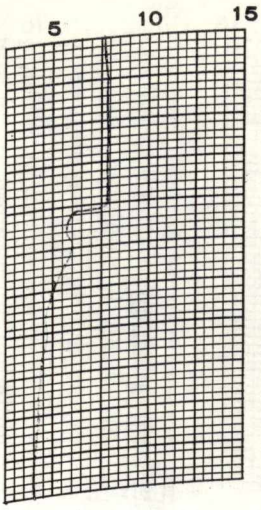
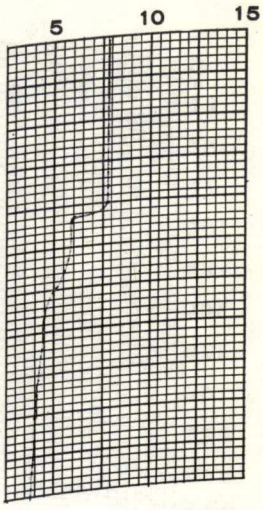
Grid OJ



1900/24-XII-57
Grid OS



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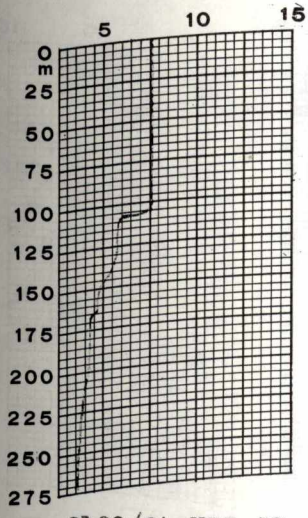
Grid OS



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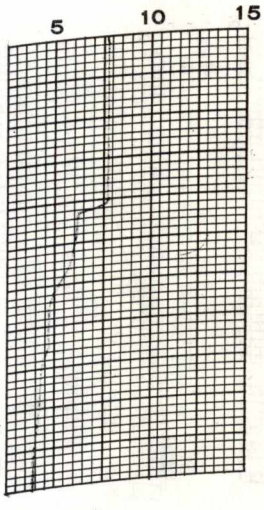
Grid OS



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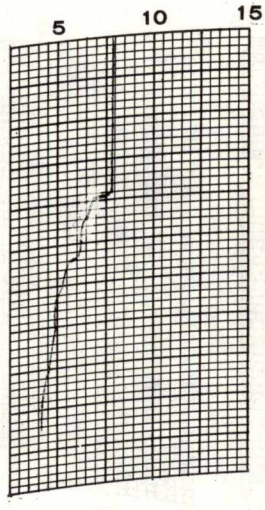
Grid OS



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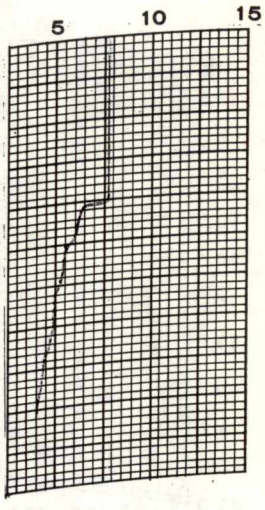

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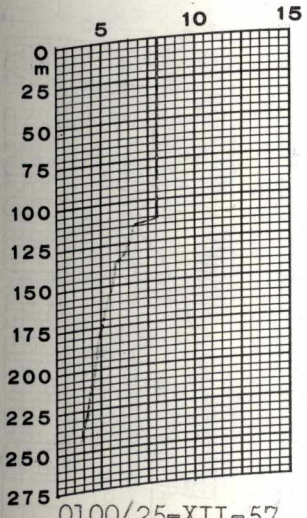

0100/25-XII-57
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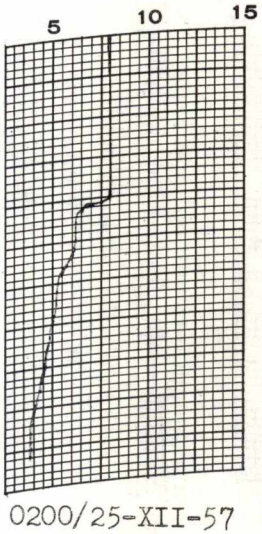

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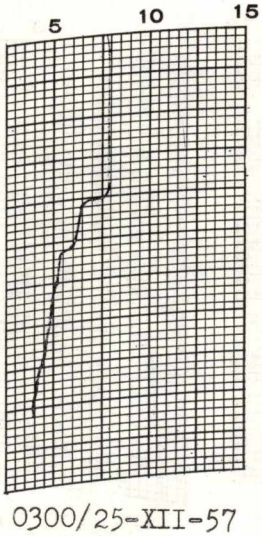

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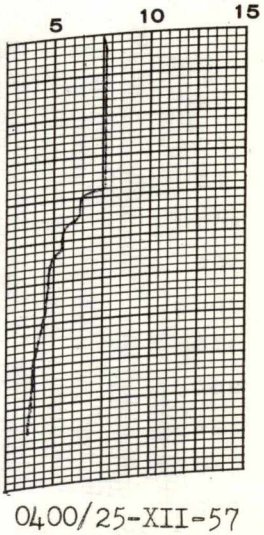

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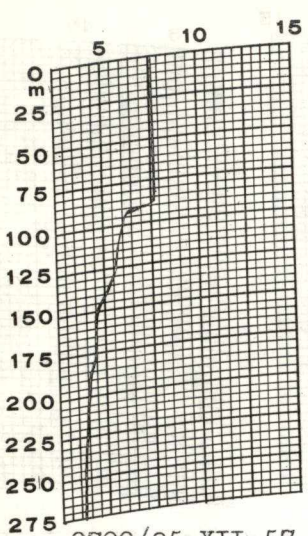
C.G.S. "St. Catharines"



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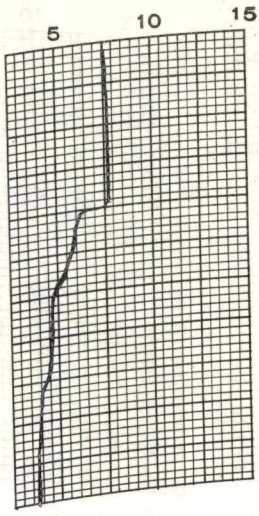

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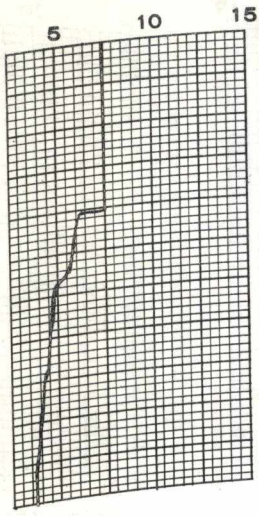

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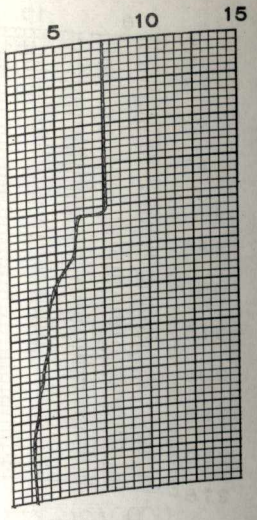

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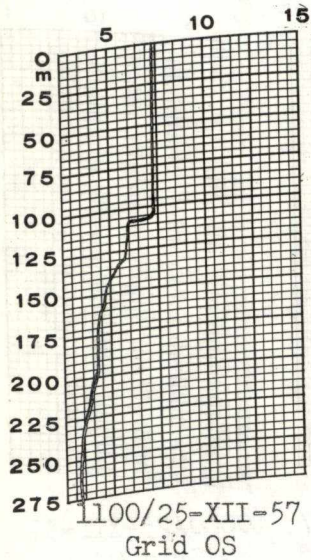

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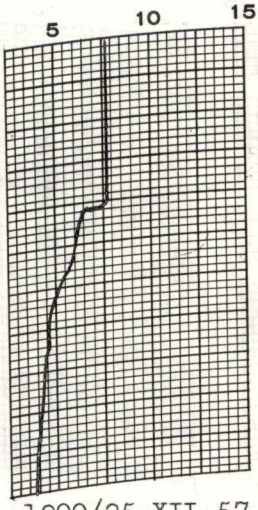

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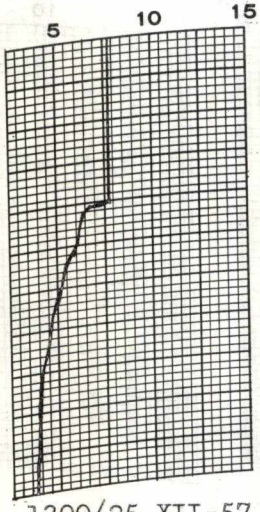

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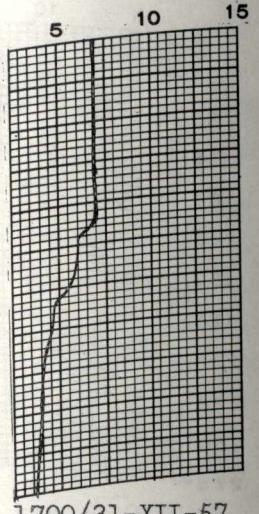

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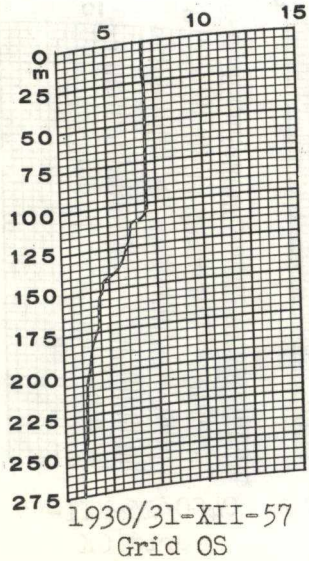

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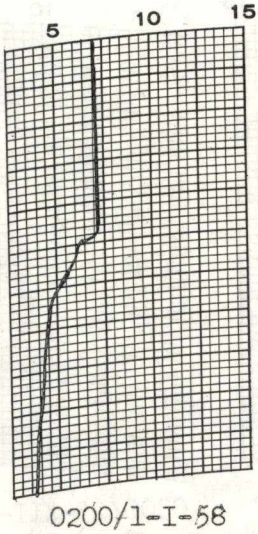
Grid OS



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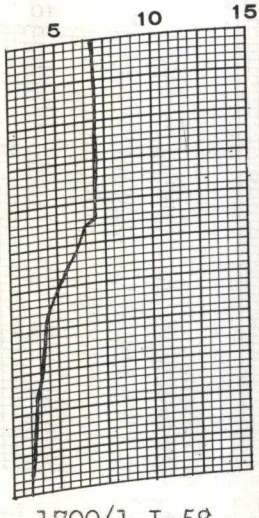

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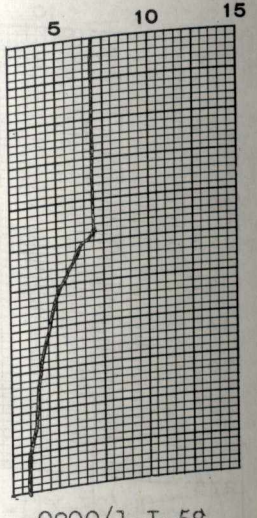

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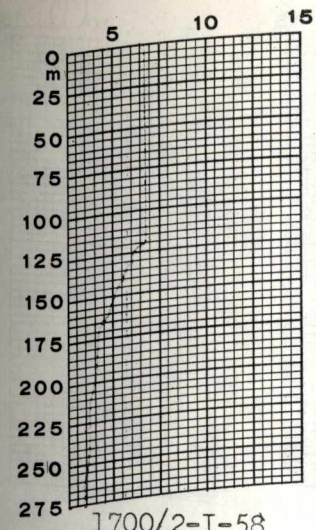
Grid KS

C.G.S. "St. Catharines"



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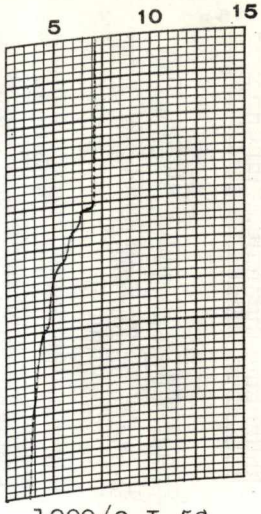
Grid KS



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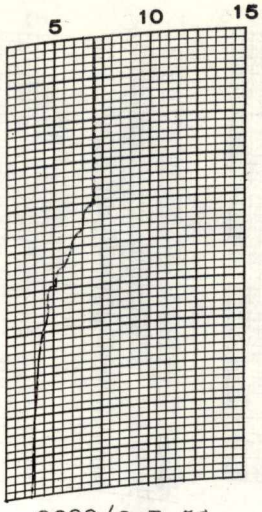

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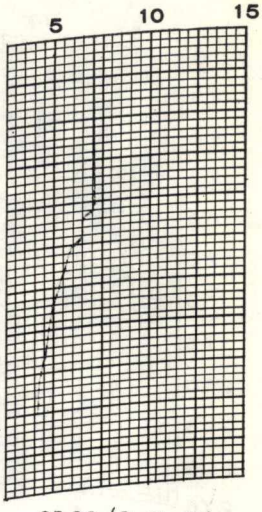

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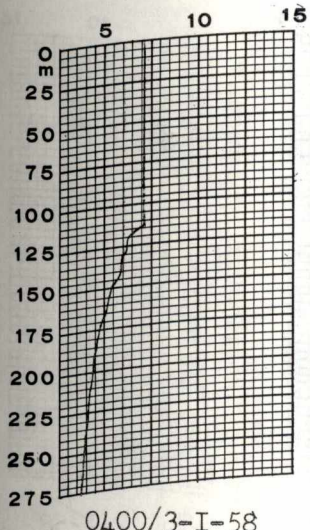
Grid LS



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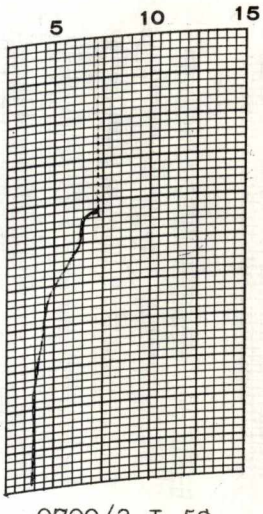

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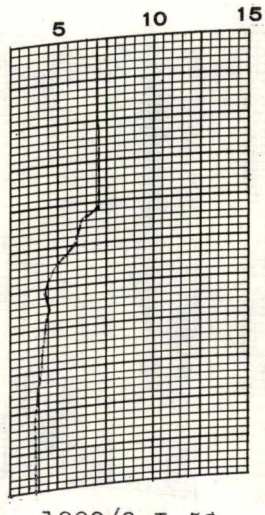
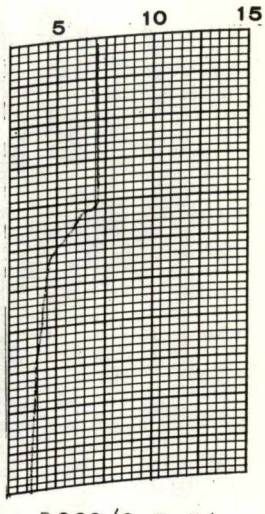


1000/3-I-58
Grid JS



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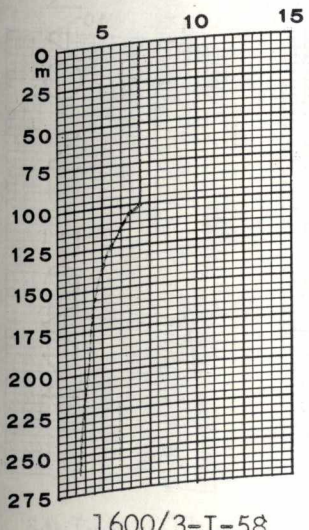

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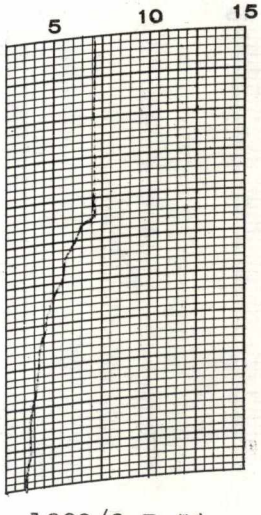
Grid OS



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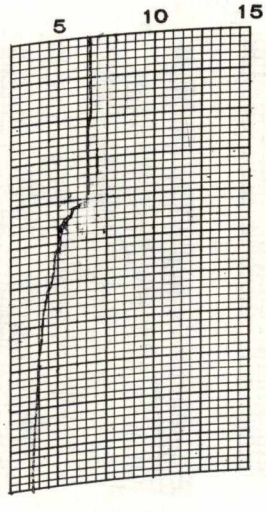
Grid OS



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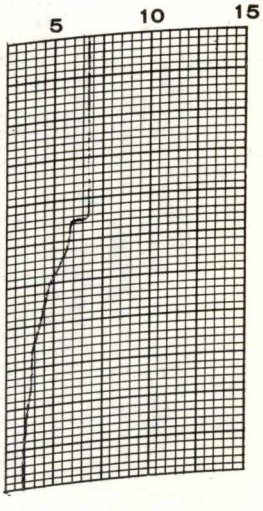

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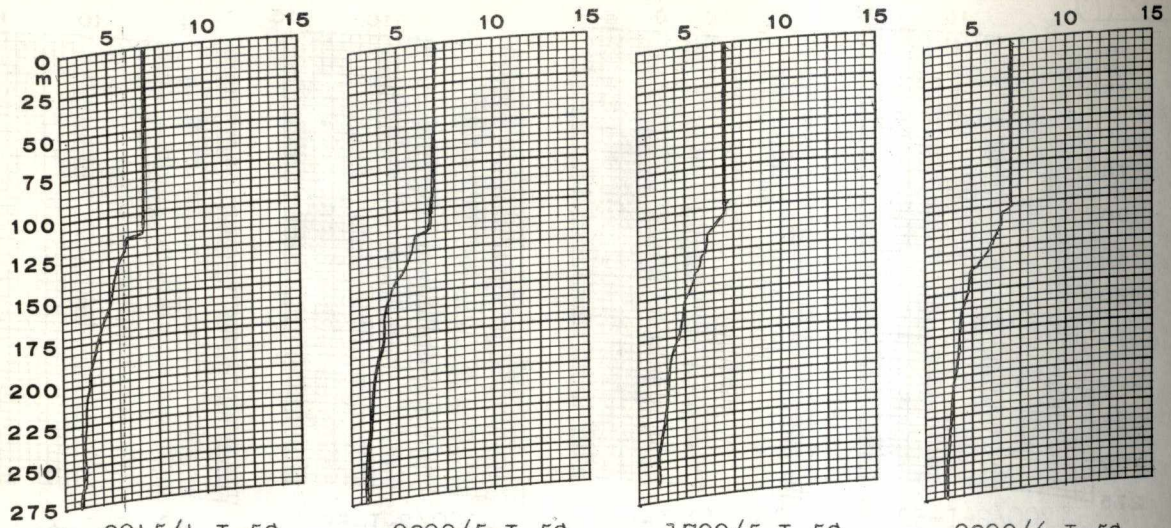
Grid OJ

C.G.S. "St. Catharines"



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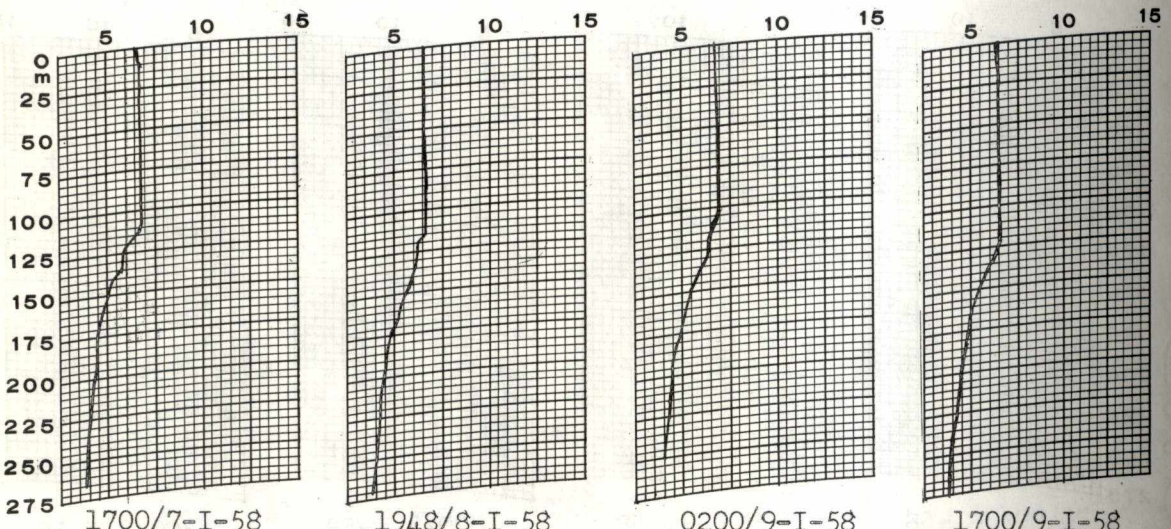
Grid OJ

0200/5-I-58
Grid JS

1700/5-I-58
Grid OK

0200/6-I-58
Grid OJ



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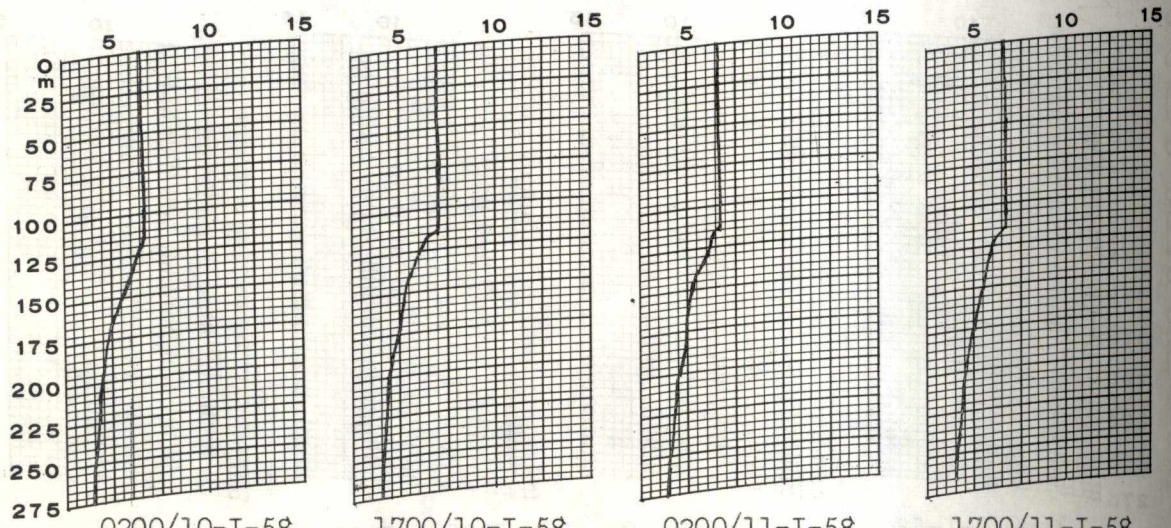
Grid IK

1948/8-I-58
Grid OS

0200/9-I-58
Grid OK

1700/9-I-58
Grid OS



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1700/10-I-58
Grid OS

0200/11-I-58
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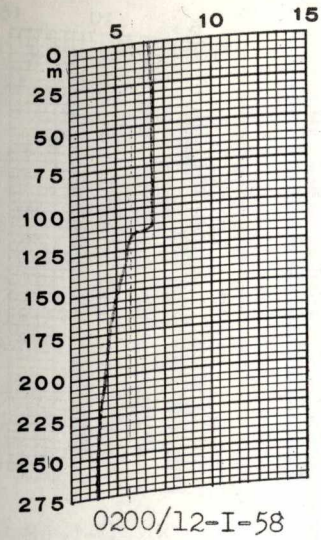
1700/11-I-58
Grid OL

C.G.S. "St. Catharines"



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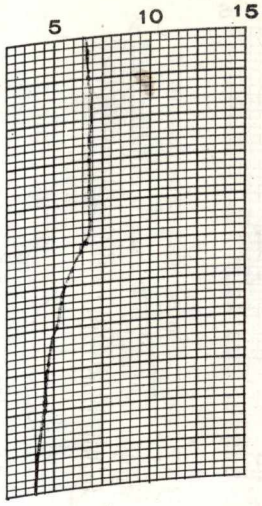

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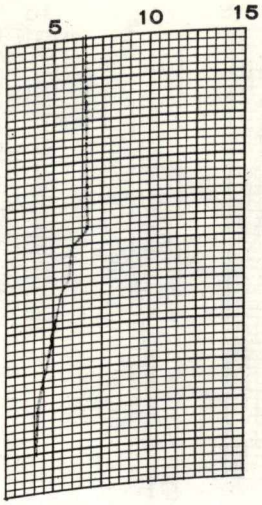

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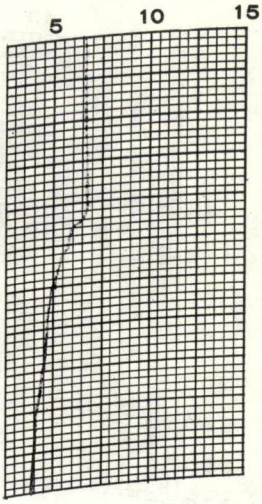

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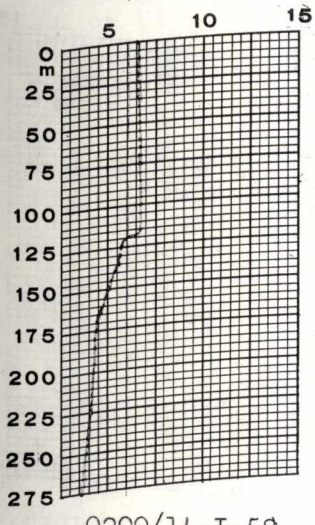

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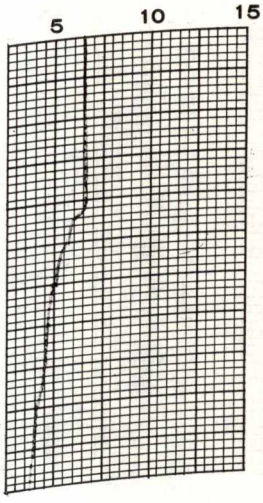

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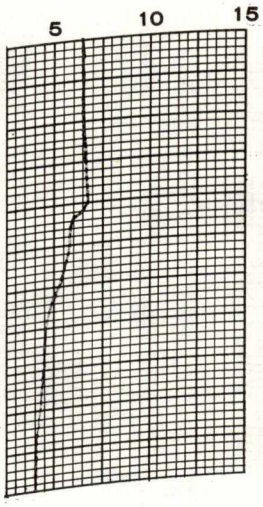

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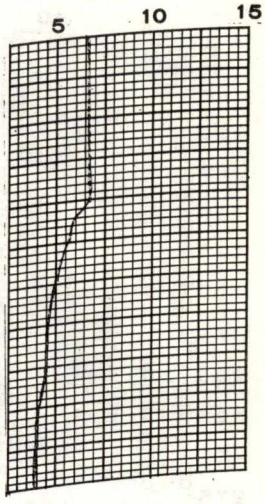

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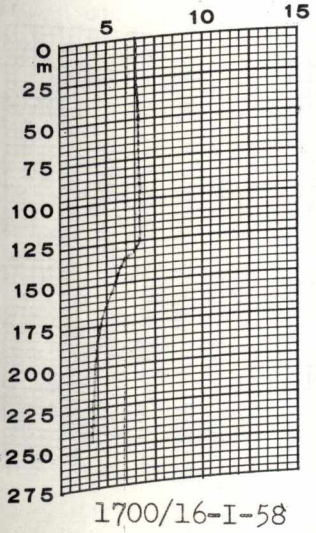
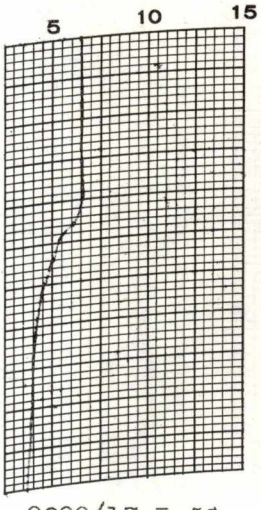
Grid JS



1700/16-I-58
Grid KS



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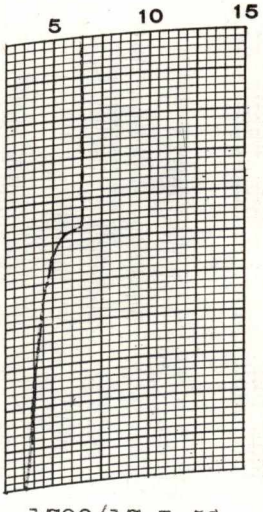

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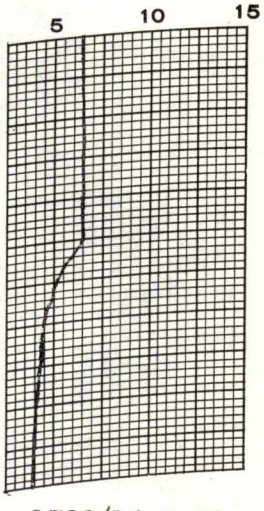

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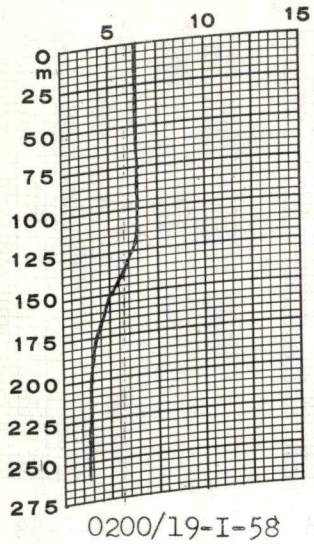
C.G.S. "St. Catharines"



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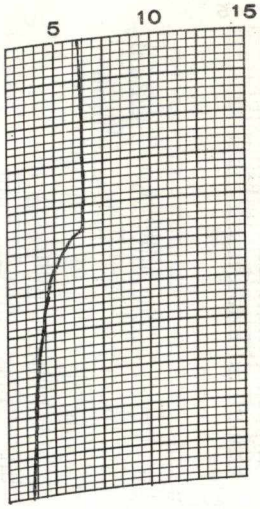

1700/19-I-58
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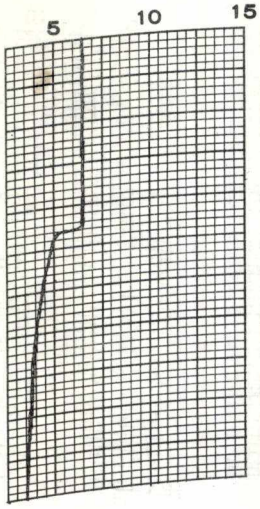

0200/20-I-58
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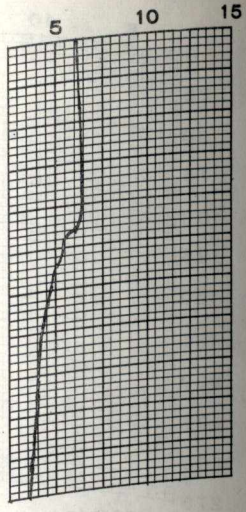
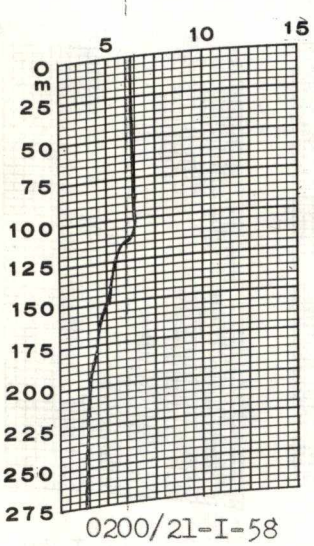


1700/20-I-58
Grid OS



0200/21-I-58
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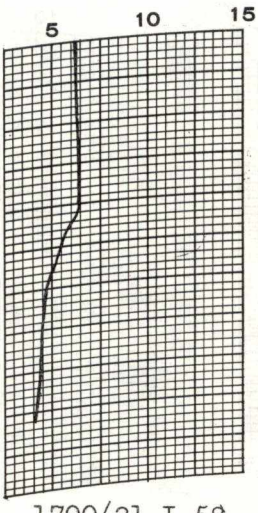

1700/21-I-58
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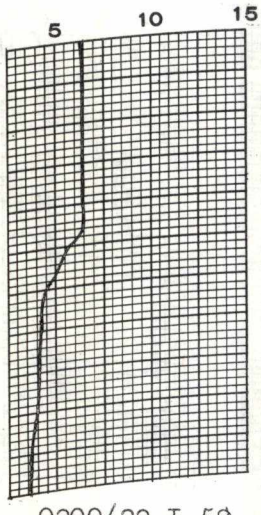
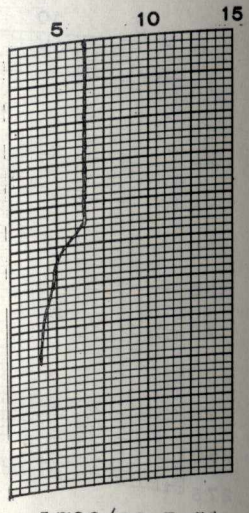


0200/22-I-58
Grid OS



1700/22-I-58
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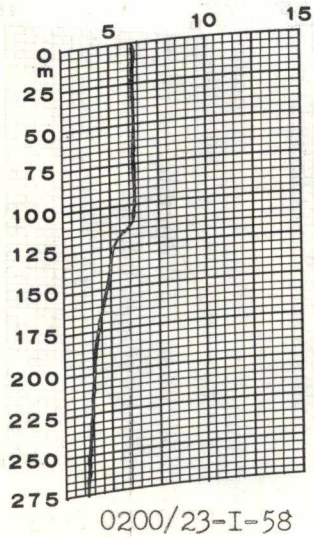
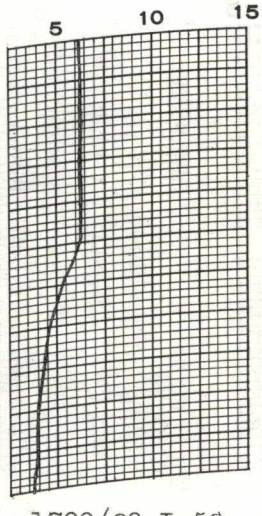
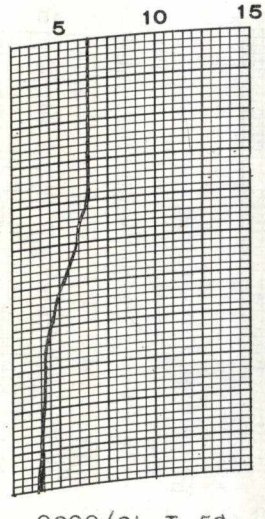


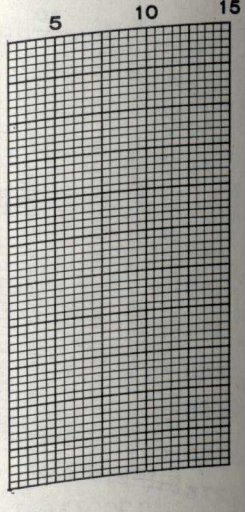
0200/23-I-58
Grid OS



1700/23-I-58
Grid OS



0200/24-I-58
Grid OS



Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. Stonetown					
January 1957									
1	0200	220	4	41	42.5	02	6	Ac	3
1	1700	180	5	45.5	47	02	10	St	4
2	0200	220	4	45	45	47	10	St	4
2	1700	240	4	43	44	01	3	As	4
3	0200	240	4	42.5	44.5	02	4	As	4
3	1700	280	5	42	43	03	8	As	3
4	0200	300	4	41	42	02	7	As	3
4	1700	210	4	42	43.5	03	6	As	3
5	0200	215	5	43	45	03	10	St	4
5	1700	180	6	45.5	45.5	63	10	Ns	5
6	0200	250	6	43	44	03	8	As/Cu	5
6	1700	300	8	41	41	18	10	Ns/St	9
7	0200	310	8	39	41	18	4	As	9
7	1700	330	5	40.5	41.5	01	8	As	4
8	0200	280	3	43	44.5	03	8	St/As	3
8	1700	290	7	42	42	18	10	Ns/St	5
9	0200	280	8	38	42.5	18	10	St	8
9	1700	040	4	40	42	01	3	Ac	4
10	0200	025	5	36	40	03	9	Cu	4
10	1700	340	5	38	39	03	8	Ac	4
11	0200	020	4	37	41	03	6	Cu	3
11	1700	030	4	36	39	02	9	St	3
12	0200	030	5	35	39	02	9	Sc	4
12	1700	020	4	34	38	03	10	Sc	3
13	0200	040	4	34	38	02	7	Sc	3
13	1700	030	4	34	37.5	02	10	Sc	3
14	0200	020	4	35	38	02	8	Sc	3
14	1700	000	5	40	42	03	9	Sc	4
15	0200	000	6	40	44	02	10	St	5
15	1700	060	7	38	41	18	10	Sc	6
16	0200	070	9	41	42		10	St	50
16	1700	090	8	45	45	63	10	Ns	50
17	0200	100	7	45	45	41	10	St	9
17	1700	120	5	44	44	63	10	Ns	5
18	0200	160	5	43	44	50	10	St	4
18	1700	300	6	42	42	11	10	St	4
19	0200	340	5	43	43	11	10	St	4
19	1700	020	5	42	42	11	10	St	4
20	0200	340	4	38	41	18	8	Ns/Sc	4
20	1700	340	2	34	37	02	10	St	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. Stonetown					
January 1957									
21	0200	290	3	36	39	02	10	As	2
21	1700	290	4	37	39	02	9	As/St	3
22	0200	330	4	36	39	02	10	St	3
22	1700	Var.	0-1	37	39	02	10	St	2
23	0200	350	2	35	38	02	10	St	2
23	1700	060	5	36	40	02	10	As	3
24	0200	115	7	38	42	02	10	St	5
24	1700	120	7	37	39	03	8	As	5
				C.G.S. St. Catharines					
23	0500	300	6	34	40	00	0		4
23	1930	320	5	31	34	03	10	Sc	4
23	2100	330	5	33	35	03	8	Cu	4
23	2300	330	5	34	35	03	8	Fs	4
24	0100	000	6	34	35	03	8	Sc	5
24	0300	000	4	35	41	03	9	Cu	5
24	0500	000	6	31	36	03	9	Cu	5
24	0700	000	6	33	37	03	9	Cu	5
24	0900	320	6	35	39	03	9	Cu	5
24	1100	320	6	36	39	02	10	St	5
24	1300	310	5-6	37	40	02	10	St	5
24	1500	000	6	33	37	02	10	Sc	5
24	1700	000	6	34	38	02	10	Sc	5
24	1900	000	6	35	39	02	10	Sc	5
24	2100	000	6	37	41	01	9	Sc	5
24	2300	350	4-5	34	37	02	8	As/Sc	4
25	0100	000	5	37	39	02	7	Sc	4
25	0300	000	5	36	40	01	4	Ac	4
25	0500	020	4	36	40	01	3	Ac	4
25	0700	020	3	35	40	01	2	Ac	4
25	0900	045	3	34	38	01	2	Ac	4
25	1100	045	3-4	36	39	02	2	Ac	4
25	1300	150	4	37	39	03	4	Ac	4
25	1500	150	5	36	40	00	1	Ci	4
25	1700	150	5	36	39	00	1	Ci	4
25	1900	150	4	37	41	03	4	Sc	4
25	2100	130	6	38	42	03	4	Sc	5

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
January 1957				C.G.S. St. Catharines					
26	1700	150	6	38	42	03	10	Sc	5
27	0200	160	6	40	43	03	9	Cu	5
27	1700	160	5	43	45	03	10	Sc	4
28	0200	180	4	44	45	11	10	St	4
28	1700	220	4	43	45	03	5	Sc	3
29	0200	220	4	44	45	11	10	St	3
29	1700	220	4	43	45	03	9	Sc	3
30	0200	220	4	44	45	03	9	Sc	4
30	1700	250	6	43	43	03	10	Sc	5
31	0200	250	6	45	45	50	10	St	5
31	1700	270	5	43	44	50	10	St	5
February 1957									
1	0200	340	4	43	45	01	6	Cu	4
1	1700	300	2	40	40	41	10	As	1
2	0200	300	4	42	44	11	8	St	3
2	1700	300	4	38	41	01	5	St	3
3	0200	300	4	42	42	02	5	St	3
3	1700	300	4	39	40	03	10	St	3
4	0200	300	4	46	48	01	5	Cs	3
4	1700	300	4	41	43	03	5	Cs	3
4	1900	300	4	43	45	03	6	Cs	3
4	2000	300	6	42	44	01	3	Cs	4
4	2100	320	5	46	48	00	00	Cs	4
4	2200	320	5	46	48	00	00	Cs	4
4	2300	340	6	46	48	03	03	Cs	4
5	0100	340	6	42	44	03	7	Cu	5
5	0200	340	6	41	43	02	7	Cu	5
5	0300	360	6	40	43	02	7	Cu	5
5	0400	360	6	41	43	01	4	Cu	5
5	0500	360	6	40	42	01	3	Cu	5
5	0700	360	6	38	42	01	3	Cu	5
5	0800	360	6	36	40	01	3	Cu	5
5	0900	010	6	36	40	00	3	Cu	5
5	1000	020	6	38	40	00	0		5
5	1100	040	6	40	44	00	0		5
5	1300	040	5-6	39	43	00	0		4
5	1400	040	4	36	40	00	0		4
5	1500	040	4	37	42	00	0		4
5	1600	040	4	37	41	00	0		4
5	1700	040	4	37	40	00	0		4
5	1900	040	2	37	41	00	0		3
5	2000	040	2	37	40	00	0		2
5	2200	000	3	37	39	03	3	Sc	2
5	2300	340	3	40	43	02	6	As	2
5	2400	290	3	43	47	02	6	As	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
February 1957				C.G.S. St. Catharines					
6	0100	290	3	40	43	02	8	As	2
6	0200	270	6	39	41	03	10	Sc	4
6	0300	270	6	39	41	02	10	Sc	4
6	0400	270	6	40	43	02	10	Sc	4
6	0500	270	5	40	43	02	10	Cu	4
6	0700	270	5	39	41	11	10	Sc	4
6	0800	270	5	40	41	03	10	Sc	4
6	0900	270	5	39	40	03	10	Sc	4
6	1000	280	4	40	42	02	10	St	4
6	1100	280	4	40	41	03	10	St	4
6	1200	280	3	41	43	41	10	St	3
6	1300	280	3-4	42	43	47	10	St	3
6	1400	280	6	41	43	45	10	St	4
6	1500	280	6	42	44	43	10	St	4
6	1600	290	6	42	44	41	10	St	4
6	1700	290	6	41	43	41	10	St	4
7	0200	320	6	39	42	11	10	St	5
7	1700	320	6	41	43	01	10	As	5
8	0200	290	8	42	43	03	10	St	6
8	1700	300	8	37	40	03	10	St	6
9	0200	290	5	40	42	01	8	Sc	5
14	0200	250	4	37	41	01	7	Cu	5
16	0200	180	4	45	45	50	10	St	4
16	1700	180	6	44	45	50	10	St	4
17	0200	180	5	44	45	11	10	St	4
17	1700	180	4	42	42	11	8	Cs	4
18	0200	160	4	43	45	11	10	St	3
18	1700	110	5	43	45	03	8	Cs	3
18	1900	120	6	43	43	41	10	St	4
18	2000	120	6	43	44	41	10	St	4
18	2100	120	6	43	43	41	10	St	4
18	2200	110	6	43	43	45	10	St	4
18	2300	110	6	43	43	45	10	St	4
19	0000	100	6	43	43	45	10	St	4
19	0100	100	6	43	43	45	10	St	4
19	0200	100	6	42	42	43	10	St	4
19	0300	090	6	41	42	45	10	St	5
19	0400	090	6	41	42	45	10	St	5
19	0500	090	6	41	41	43	10	St	3
19	0700	090	6	41	41	11	10	St	5
19	0800	090	6	40	41	11	10	St	5
19	0900	080	6	40	41	11	10	St	5
19	1000	080	6	43	43	02	10	St	4
19	1100	080	6	42.5	42.5	02	10	St	4
19	1200	090	5	42.5	43	01	9	Ac	4
19	1300	090	5	43	43	01	8	Sc	4

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
February 1957				C.G.S. St. Catharines					
19	1400	090	5	41	43	01	3	As	4
19	1500	090	5	41	43	00	3	Ac	4
19	1600	090	5	41	43	00	3	Ac	4
19	1700	090	5	40	42	03	7	Cu	5
19	1900	090	5	40	41	03	10	Sc	5
19	2000	090	5	41	42	03	10	Sc	5
19	2100	090	6	40.5	43	02	8	Sc	5
19	2200	090	7	42.5	45.5	02	8	Sc	5
19	2300	090	7	42.2	45.5	02	3	Sc	5
19	2400	100	7	43.2	46.5	01	01	Ci	6
20	0100	100	7	42.2	45.5	01	00	Ci	6
20	0200	100	7	40	43	00	01	Ac	6
20	0300	100	7	40	43	03	03	Cu	6
20	0400	100	7	40	43	03	03	Cu	6
20	0500	100	7	41	43	01	4	Cu	6
20	1700	090	7	42	43	03	7	Sc	6
21	0200	090	4	43	45	00	0	Sc	4
21	1700	090	4	39	41	03	2	Sc	3
22	0200	080	6	40	43	03	6	Cu	4
24	0200	050	6	37	41	01	5	Cu	6
25	0200	220	7	39	42	03	7	Cu	6
25	1700	230	6	38	40	03	8	Ns	5
26	0200	280	4	38	42	03	10	Sc	4
26	1700	270	5	39	40	03	10	Sc	4
27	0200	180	5	42	44	01	03	Cu	4
27	1700	200	7	44	44	03	7	St	5
28	1700	200	5	45	45	03	10	As	5
March 1957									
1	0200	320	4	42	43	01	8	Sc	4
2	0200	170	6	45	45	50	10	Sc	6
2	1700	130	4	43	44	11	5	Cs	3
3	1700	160	6	42	44	03	10	Sc	4
4	1700	140	4	44	44	11	3	Cs	4
5	0200	180	3	43	43	50	10	Sc	4
5	1700	160	4	42	42	03	8	Sc	3
6	0200	190	6	43	45	03	10	Sc	6
6	1700	220	4	42	43	03	7	Sc	3
7	0200	220	5	42	44	01	3	Cu	4
7	1700	270	3	41	42	03	7	Ns	3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
March 1957				C.G.S. St. Catharines					
9	0400	290	3	40	42	01	4	Cu	4
9	0700	290	3	42	42	01	4	Cu	4
9	0900	270	4	42	44	02	3	Sc	4
9	1100	250	4	42	44	01	4	Sc	4
9	1200	240	3	41	44	00	0		4
9	1300	240	4	42	44	03	7	Sc	4
9	1500	240	4	41	44	02	8	Sc	4
9	1700	200	6	41	43	03	10	St	5
9	1900	200	7	44	43	03	10	St	5
9	2100	280	7-8	44	46	00	10	St	6
9	2300	280	8	44	46	01	9	Cu	6
10	0100	280	6	41	46	01	5	Cu	6
10	0300	280	6	40	43	02	5	Cu	6
10	0500	280	6	43	46	02	5	Cu	6
10	0900	270	7	42	44	81	8	Cu	5
10	1100	270	6	42.5	44	01	6	Cu	5
10	1300	270	6	42	44	03	8	Cu	5
10	1500	250	4	41	44	02	8	Cu	5
10	1700	180	5	45	46	03	10	St	5
10	1900	180	4	45	46	02	8	As	5
10	2100	180	6	45	48	03	8	As	5
10	2300	140	7	45	48	03	10	Ns	6
				C.G.S. Stonetown					
10	1700	230	6	41	43	18	7	Ns	4
11	0200	260	5	40	43	02	5	Sc	5
11	1700	290	8	36	39	18	8	Ns/Cu	9
12	1700	290	7	35	39	18	10	Cu	5
13	0200	270	2	39	41	02	7	Sc/Cu	3
13	1700	020	6	36	41	03	8	Sc	4
14	0200	350	5	37	41	03	9	Sc	4
14	1700	320	4	36	41	02	10	St	3
15	0200	190	4	39	41	02	10	St	3
15	1700	210	4	45	45	62	10	NS/St	4
16	0200	230	3	45	45	41	10	St	3
16	1700	330	4	41	41	41	10	St	3
17	0200	170	2	41	41	41	9	St	3
17	1700	210	6	45	45	63	10	Ns/St	5
18	0200	260	5	45	45	50	10	St	4
18	1700	240	3	42	43	03	8	St/Cu	3
19	0200	320	4	41	43	02	8	Sc/Cu	4
19	1700	320	6	37	42	02	10	Sc/Cu	4
20	0200	330	7	39	41	18	10	Ns/St	6
20	1700	310	8	42	43	18	10	St	8

Meteorological Observations

C.G.S. Stonetown

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
March 1957									
21	0200	270	7	42	42	50	10	St	8
21	1700	290	4	37	41	03	9	St/Cu	4
22	0200	300	4	37	39	03	8	Sc/Cu	3
22	1700	210	4	36	37	18	9	Ns/St	4
23	0200	320	6	36	38	18	7	Ns/Cu	5
23	1700	290	4	39	39	03	6	Ns/Cu	4
24	0200	270	6	37	40	02	6	Sc/Cu	5
24	1700	280	6	36	39	10	7	Ns/Sc	6
25	0200	260	5	38	42	03	9	Sc	4
25	1700	220	6	42	44	03	7	Sc	4
26	0200	240	5	45	45	03	9	St/Sc	4
26	1700	180	3	39	45	02	9	Sc	3
27	0200	200	3	43	45	01	3	Sc	3
27	1700	070	2	40	43	03	9	Sc/Cu	2
28	0200	050	4	42	43	02	10	St	3
28	1700	070	2	44	44	50	10	St	2
29	0200	250	3	43	43	41	10	St	3
29	1700	140	5	42	42	62	10	Ns/St	4
30	0200	230	8	43	43	62	10	Ns/St	8
30	1700	210	4	44	45	01	3	Sc	3
31	0200	210	2	46	47	02	2	Sc	3
31	1700	200	4	42	43	02	10	St	3
April 1957									
1	0200	160	5	45	45	50	10	St	5
1	1700	210	5	45	46	42	9	Sc/St	4
2	0200	210	7	47	48	02	7	Sc/St	7
2	1700	230	6	44	45	02	6	Sc/St	7
3	0200	230	5	45	46	03	8	As/St	5
3	1700	Calm	0	44	45	02	10	St	2
4	0200	270	2	42	44	03	10	St	3
4	1700	330	4	39	41	02	10	St	3
5	0200	280	3	41	42	01	5	As	3
5	1700	290	4	31	40	02	10	St	3
6	0200	240	3	39	42	02	10	St	3
6	1700	200	4	42	44	01	8	Sc/St	4
7	0200	200	4	42	44	02	10	St	4
7	1700	050	5	43	43	63	10	Ns/St	4
8	0200	060	5	44	44	63	10	Ns/St	5
8	1700	070	6	45	45	63	10	Ns/Sc	5
9	0200	070	5	45	45	02	10	St	4
9	1700	070	5	44	45	02	9	Sc/St	4
10	0200	070	5	43	45	02	10	St	4
10	1700	060	6	42	44	02	10	St/As	4

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. Stonetown					
April 1957									
11	0200	030	6	40	42	01	8	St/Cu	5
11	1700	030	7	40	43	01	5	Sc/Cu	5
12	0200	340	6	42	43	18	10	Ac/Ns	5
12	1700	010	6	41	43	01	2	As	5
13	0200	340	7	39	41	03	8	As/Cu	5
13	1700	340	4	37	41	02	10	Sc	4
14	0200	340	4	38	42	03	6	Sc	4
14	1700	350	1	39	40	57	10	St	1
15	0200	270	3	40	43	03	8	Sc	2
15	1700	240	3	39	42	03	10	Sc/St	2
16	0200	310	1	41	44	02	8	Sc	1
16	1700	330	2	42	43	01	4	Sc	2
17	0200	300	3	42	45	02	4	Sc	2
17	1700	270	2	42	45	01	2	Sc	2
18	0200	200	5	43	46	03	7	Cu/Sc	4
18	1700	260	5	41	44	03	6	St/Sc	4
19	0200	370	3	42	46	02	5	St/As	4
19	1700	280	4	39	42	03	8	St/Sc	4
19	1900	280	4	42	44	02	7	St/Sc	4
19	2100	280	5	42	47	01	4	Sc	4
19	2300	285	5	42	44	02	4	Sc/Cu	4
20	0100	285	5	42	44	02	4	Sc/Cu	4
20	0300	285	5	44	41	03	6	Ci/Sc	2
20	0500	300	2	42.	43	03	7	Ci/Sc	2
20	0700	310	3	42	44	03	8	Sc/Cu	3
20	0900	110	2	41	43	02	8	Cu	3
20	1100	110	2	42	44	02	7	Cu	2
20	1500	120	2	42	43	02	8	Ac/Cu	2
20	1700	190	4	42	44	03	9	Ac/Cu	3
20	1900	190	4	42	45	02	8	Ci/Sc	3
20	2100	190	4	43	45	02	10	Sc/St	3
20	2300	200	5	44	47	02	10	Sc/St	3
21	0100	210	5	43	46	03	10	Ac/St	3
21	0500	210	6	44	46	50	10	As	4
21	1700	250	4	49	50	01	8	Ci/Sc	5

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
April, 1957									
17	0900	270	5	47	48	02	8	Cu	3
17	1200	270	5	46	46	02	8	Cu	3
17	1400	270	3	47	48	01	5	Sc	2
17	1600	320	5-6	48	49	03	7	Sc	3-4
17	1800	350	4	47	48	02	8	Sc	3
17	2000	000	5	44	46	02	8	Sc	4
17	2200	345	5	46	49	02	6	Cu	3
18	0000	350	5	46	48	02	1	Cu	3
18	0200	350	5	46	48	02	1	Ac	4
18	0400	350	5	45	47	03	6	Cu	4
18	0600	340	5-4	44	45	01	1	Cu	3
18	0800	340	5	43	44.5	02	1	Cu	3
18	1000	340	5	43	45	02	6	Cu	3
18	1200	350	4	43	46	02	6	Cu	3
18	1400	280	4	43	44	02	7	Cu	3
18	1600	280	4	42	45	03	7-8	Sc	3
18	1800	240	3	43	45	03	7	As	3
18	2000	210	5	45	46.5	03	8	As	3-4
18	2200	220	5	45	45	03	8-9	As	3
19	0000	220	5	44	44	03	8	As	3
19	0200	220	4	44	44	41	9	Cb	3
19	0400	260	4	44	46	43	10	Cb	3
19	0600	310	4-5	41.5	44.5	01	4	Ac	3-4
19	0800	310	4	40.5	43.5	01	0		4-5
19	1000	310	5	41	43	02	6	Ac	5
19	1200	310	5	41	43	02	4	Ac	5
19	1400	310	4-5	42	44	03	7	Ac	4
19	1600	310	5	43	45	01	5	Cu	5
19	1800	300	5	41	43	02	7	Cu	5
19	2000	290	5	41	45	01	3	Cu	5
19	2200	290	5	42	46	01	3	Cu	5
20	0000	190	4	43	46	01	3	Cu	4-5
20	1700	270	7	46.5	46.5	63	10	St	5
22	1700	250	6-7	40	43	01	3	Cu	7
23	0000	270	4	42	44	03	8	St	3
23	1700	245	2-3	44.5	44.5	45			2-3
24	0000	260	5	46	46	49	8	St	3
24	1700	260	4	42.5	44.5	02	10	St	3
25	0000	245	3	47	48	03	10	St	
25	1700	180	5-6	45.5	45.5	50	10	St	4-5

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
April, 1957									
26	0000	180	5	47	47	50	10	St	4-5
26	1700	210	5	47	47	41	10	St	4-5
27	0000	330	5	46	47	14	10	St	6
27	1700	200	2-3	42	44.5	01	3	Ac	2
27	2000	220	2	43	44	02	3	Ac	2
28	0000	180	2	47	48	50	10	St	2
28	1700	240	2-3	40.5	43.5	02	6	Cu	2-3
28	1900	240	4	42	45	01	5	Cu	2-3
28	2000	240	4	42.5	46	01	3	Cb	2-3
28	2100	250	3-4	42	46	02	4	Cb	2-3
28	2200	250	2	44	47	02	3	Cu	2
28	2300	250	2	43.5	45	02	3	Cu	2
29	0000	250	2	43	45	02	3	Cu	2
29	0100	250	2	40	43	13	6	Sc	2
29	0200	250	3	42	44	03	4	Sc	2
29	0300	250	3	42	44	03	4	Sc	3
29	0400	250	3	42	44	03	4	Sc	3
29	0500	250	4	42	44	03	4	Cb	4
29	0600	250	3	39	41.5	02	4	Cb	3
29	0700	250	3	39	42	02	4	Cb	2
29	0800	250	3	39	42	02	4	Cb	2
29	0900	240	3	39	41.5	02	4	Cb	2
29	1000	240	2	37	41	02	5	Sc	2
29	1100	240	2	38	40	02	6	Sc	2
29	1200	180	2	38	40	02	6	Sc	3
29	1300	180	2	38	40	02	6	Sc	3
29	1400	240	2	40	43	00	3	Ac	3
29	1500	240	2	40	43	00	3	Ac	3
29	1600	240	2	40	43	00	3	Ac	3
29	1700	240	3	40	42	00	3	Cu	3
29	1800	220	3	43	45.5	02	3	Cb	3
29	1900	220	3-4	42.5	45	02	3	Cb	3
29	2000	210	3-4	41.2	43	03	5	Cb	3
29	2100	180	3	41	44	03	6	Cu	3
29	2200	180	4	42	44	02	6	Cu	3
29	2300	180	4	41	43	02	6	Cu	3
30	0000	180	4	42	44	14	7	Sc	3
30	0100	180	4	42	44	14	7	Sc	3
30	0130	180	3	41	44	03	7	Sc	3
30	0300	150	2	41	44	02	7	Sc	2
30	0400	150	2	41	44	02	7	Sc	2
30	0500	140	2	41	44	02	7	Sc	2
30	0600	140	2	43	43	81	7	Sc	2
30	0700	140	2	38	39.5	81	7	Sc	2

Meteorological Observations

C.G.S. St. Catharines

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
April, 1957									
30	0800	140	2	38	40	81	7	Sc	2
30	0900	140	2	37.5	39.5	81	6	Sc	2
30	1000	140	2	39	41	13	6	Sc	2
30	1100	Airs.	1	38	39	13	6	Sc	2
30	1200	260	2	37	39	13	6	Sc	2
30	1300	260	2	38	38	13	6	Sc	2
30	1400	Var.	0-1	39	42	13	7	Sc	1-2
30	1500	Var.	0-1	39	42	13	6	Sc	1
30	1600	Var.	0-1	40	43	13	6	Sc	1
30	1700	Var.	0-1	40	43	13	6	Sc	1
30	1800	Airs.	1	41	43	01	8	Sc	1
30	1900	Airs.	1	42	45	02	7	Sc	1
May, 1957									
1	0000	Airs.	1	49	52	01	2	Cu	1
1	1700	Airs.	1	40.5	43	03	6	Sc	1
1	1900	Airs.	1	43	45.5	01	3	Cu	1
2	0000	240	2	45	47	02	6	Cu	2
2	1700	110	7	41	41	62	10	St	4
3	1700	280	6-7	39	42	02	3	Cu	5
4	0000	300	6	44	45	02	4	Cu	5
4	1700	270	4	40	44	01	3	Cu	3
4	1945	270	3	42	46	02	4	Cu	3
5	0000	270	2	49	52	02	2	Cu	2
5	1700	calm	0	43	46	02	4	Cu	0
6	0000	Var.	1	45	49	02	3	Cu	0
6	1700	090	6-7	42	46.5	02	10	St	4-5
7	1700	090	5	43	45	02	10	As	4
8	0000	065	3	44	47	02	8	Cu	3
8	1700	Airs.	1	44	47	02	10	St	1
8	1930	Airs.	1	43.5	45.5	01	4	As	1
9	0000	180	3	46	47	02	8	Cu	1
9	1700	140	4	46	46	47			2
10	0000	180	5	47	48	02	4	Cu	4
10	1700	150	3	45	45	02	10	As	2
11	0000	120	3	46	46	02	10	As	2
11	1700	Airs.	1	44	45	02	10	As	1
11	1900	calm	0	46	48	02	10	As	1
12	0000	Airs.		48	49	02	10	Sc	1
12	1700	340	5	44	46	02	10	Sc	2-3
13	0000	350	6	46	48	02	8	Sc	4
13	1700	Var.	1	42	44	02	10	St	1

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
May, 1957									
14	0000	180	3	44	48	02	10	St	1
14	1700	210	8	46	47	01	4	Ac	5-6
14	1805	230	8	47	48	03	6	Cu	5-6
14	2007	230	7	45.5	47	03	10	St	5-6
14	2200	180	7	46	48	03	10	Sc	5-6
15	0000	220	7	46	48	03	9	Sc	6
15	0143	220	7	47	49	00	5	Ac	6
15	0350	220	5	47	49	00	6	Sc	6
15	0601	200	4-5	44	45	02	10	St	4
15	0802	200	3-4			02	10	St	4
15	1000	195	4	46	46	50	10	St	4
15	1200	195	4	46	46	01	2	Cu	3-4
15	1345	190	3-4	44	44.5	01	2	Cu	3
15	1600	190	3	45	47	03	8	Sc	3
15	1710	180	4	45	46	02	10	Sc	2-3
15	1805	180	3-4	46	47.5	02	10	St	3
15	2007	170	4	46.5	47.5	02	9	Sc	3
15	2200	160	4	47	48	62	10	St	3
16	0000	160	7	47	47	50	10	St	6
16	0150	160	7	48	49	50	9-10	Ns	6
16	0350	155	8	47	48	50	9-10	Ns	6-7
16	0602	150	8	47	47	63	9-10	St	7
16	0800	150	7	47	47	02	9-10	St	7
16	1000	210	7	47	47	02	9-10	St	6
16	1200	210	6-7	47	48	03	6	Ac	6
16	1400	200	4	47	48	11	8	St	5
16	1600	200	3-4	47	48	03	9	St	5
16	1708	190	4	48	49	01	6	Ac	5
16	1804	200	5	46	47	03	10	Ac	4-5
16	2008	200	5-6	47	48	02	10	Sc	4-5
16	2200	210	5	48	49	02	9	Sc	4
17	0000	210	5	47	48	02	6	Ac	4
17	0200	200	4	48	49	01	7	As	4
17	0400	200	3	48	49	03	8	St	3-4
17	0608	200	3	46.5	47	02	8	Sc	3-4
18	0000	000	3	47	47	03	10	Sc	3
19	1925	270	5	44.5	45.5	02	10	St	5
20	1715	270	3-4	42	44.5	01	9	Sc	3
21	0000	270	3	47	47	02	8	Sc	3
21	1715	Airs.		41.5	42.5	01	2	Cu	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
May, 1957									
22	0000	260	2	47	50	02	4	Cu	2
22	1715	140	3	41.5	45	02	9	As	2
22	1850	120	2	43	45	02	9	As	2
23	0000	100	2	47	49	02	8	Sc	2
24	1720	Airs.		47	48	01	7	Sc	1
25	1940	270	7	45	47	01	6	Cu	4
26	1705	240	6	46	46.5	02	10	Sc	4
27	1715	250	4	44	46	01	8	Cu	3
28	0000	220	2	52	54	01	6	Cu	1
28	1715	070	3	46	46	02	10	St	2
29	1710	110	6	48	48	02	10	St	3-4
30	1705	090	5	47	47	02	10	St	4
30	1801	090	5	47	47	02	10	St	4
30	1817	090	5	47	47	02	10	St	4
31	1710	070	5	47.5	49	02	4	Cc	4-5
				C.G.S. Stonetown					
29	1500	290	5	50	51	11	8	St	5
29	1700	320	4	56	56	11	8	St	4
29	1900	320	4	50	50	11	10	St	4
29	2100	360	4	50	51	11	10	St	4
29	2300	030	3	51	51	41	10	St	3
30	0100	030	3	50	50	41	10	St	3
30	0300	360	3	49	49	41	10	St	3
30	0500	360	3	50	50	41	10	St	3
30	0700	030	4	51	51	41	10	St	4
30	1100	040	3	50	50	01	3	As	3
30	1300	050	4	49	49	11	10	St	4
30	1500	050	4	49	49	11	10	St	4
30	1700	030	4	49	49	11	9	St	4
30	1900	045	4	52	54	03	8	As/Cu	4
30	2100	045	4	51	53	03	8	As/Cu	4
30	2300	050	4	51	53	03	8	As/Cu	4
31	0100	040	4	49	52	03	7	As/St	4
31	0300	040	4	49	50	03	7	As/St	4
31	0500	000	4	49	50	02	7	Sc	4
31	0700	000	4	50	50	02	7	Sc	4
31	0900	030	4	48	49	02	6	Sc	4
31	1100	030	4	47	48	03	7	Ac	4
31	1300	020	4	47	48	03	7	Ac	4
31	1800	020	4	50	52	03	7	Ac	4

Meteorological Observations

C.G.S. Stonetown

June, 1957

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
1	1700	030	3	46	48	03	10	St	3
2	0200	040	4	46	47	02	10	St	3
2	1700	040	3	51	50	01	3	St	3
3	0200	040	3	47	48	03	10	St	3
3	1700	040	3	49	49	02	10	St	2
4	0200	030	3	49	49	02	10	St	2
4	1700	070	4	50	50	41	10	St	2
5	0200	080	3	51	50	41	10	St	2
5	1700	090	3	50	50	41	10	St	2
6	0200	090	3	50	50	45	10	St	2
6	1700	090	4	50	50	45	10	St	3
7	0200	110	6	51	51	45	10	St	5
7	1700	045	2	48	50	41	8	Sc	3
8	0200	150	2	50	50	01	1	Cu	3
8	1700	230	3	51	51	47	10	St	3
9	0200	150	3	50	51	11	10	Cs	3
10	0200	180	4	50	50	11	10	Cu	8
10	1700	180	3	49	49	11	10	St	7
11	0200	190	3	51	52	01	4	Cs	7
11	1700	190	4	49	50	01	9	Ac	7
12	0200	210	6	49	50	02	9	Ac	8
13	1700	270	5	53	54	03	10	St	8
14	0200	300	3	49	50	02	10	St/Cu	3
14	1700	120	2	48	49	02	8	Ac	2
15	0200	120	5	48	50	03	9	Ac/Cu	3
16	0200	200	5	49	50	02	10	St	5
17	0200	200	6	47	48	50	10	Cu	7
17	1700	270	4	48	49	02	10	Cu	4
18	1700	260	2	49	50	03	9	Sc	4
19	0200	250	4	48	50	03	8	Sc/Cu	4
19	1700	270	4	48	49	01	8	Ac	4
20	0200	270	5	49	50	02	10	St	4
20	1700	270	4	49	51	01	10	Sc	4
21	0200	220	3	47	47	62	10	Sc	3
21	1700	100	3	50	50	01	9	Sc	3
22	0200	120	4	48	49	41	10	St	3
22	1700	230	4	50	51	01	9	St	4
23	0200	280	6	49	51	02	8	St/Sc	5
23	1700	240	3	46	50	03	10	Sc	3
24	0200	200	4	48	49	02	10	Sc	4
24	1700	200	4	51	51	50	10	Sc	4

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. Stonetown					
June, 1957									
25	0200	190	4	51	50	43	9	St	4
25	1700	250	4	49	50	03	10	St	5
26	0200	220	5	50	51	02	10	St	5
26	1700	220	5	50	50	02	10	St	5
27	0200	250	7	49	52	01	6	Cu	6
29	1700	290	5	49	50	04	10	St	6
30	0200	290	4	49	49	11	10	St	4
30	1700	290	4	48	49	01	10	St	3
July, 1957									
1	0200	280	3	48	49	02	10	St	3
1	1700	250	3	45	46	02	10	St	3
2	0200	200	4	49	50	01	9	St	3
2	1700	250	3	50	50	45	10	St	3
3	0200	180	4	51	51	42	10	St	3
3	1700	250	5	50	51	03	10	Cu	4
4	0200	240	5	51	51	01	6	Cu	5
4	1700	240	4	50	51	03	9	Cu	4
5	0200	260	5	50	51	03	8	St/Cu	4
5	1700	260	5	49	49	02	10	Sc	4
6	0200	260	5	48	51	03	10	St/Cu	4
6	1700	270	3	49	50	02	9	St/Cu	4
7	0200	270	3	49	51	02	9	Sc/Cu	3
7	1700	300	4	50	52	01	9	Cu/Fc	5
8	0200	340	4	51	52	01	7	Sc/Cu	4
8	1700	340	4	51	53	03	9	Sc/Cu	5
9	0200	320	4	52	54	03	9	St/Sc	4
9	1700	300	5	49	50	03	9	St/Cu	5
10	1700	310	4	50	51	02	10	St	5
11	0200	300	5	50	51	02	10	St	4
11	1700	340	3	50	52	02	10	St	3
12	0200	120	3	51	53	01	7	Ci/As	3
12	1700	100	3	51	52	01	9	Ci/As	3
13	1900	080	4	54	54	02	6	Ci/As	3
13	2100	080	4	56	57	03	7	Ci/As	3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
July, 1957									
10	0500	270	2-3	53	58	02	9	Cs	2
10	0700	270	3	52	57	02	9	Cc	2
10	0900	315	3	52	58	02	8	Ac	2
10	1300	350	2	52	57	02	9	As	2
10	1500	015	2-3	52	57	02	9	As	2
10	1700	000	3-4	52	55	02	10	Ac	3
10	1900	000	4	51.5	55	02	10	Ac	3
10	2100	000	4	54	57	02	9	Ac	2
11	0100	010	4	53	57	02	8	As	3
11	0300	270	4	52	57	02	7	As	3
11	0500	Airs.		47	53	02	9	As	2
11	0700	Airs.		48	50	62	10	As	2
11	0900	Airs.		51	53	02	10	As	2
11	1200	295	2	52	54	02	10	As	2
11	1400	280	1-2	52	54	02	10	St	1-2
11	1600	280	1	52	54	02	10	St	0-1
11	1800	Calm	0	50	51	02	10	St	0
11	2000	Calm	0	50	52	02	10	Sc	1
11	2200	Calm	0	53	55	02	10	Sc	1
12	0000	290	1-2	54	56	02	10	Sc	1
12	0200	Calm	0	52	54	03	9	Cb	0
12	0400	276	2	52	54	03	10	Fc	1
12	0600	Calm	0	48	50	01	8	Ac	1
12	0800	Airs.		48	50	03	8	Ac	1
12	1000	Airs.		50	52	02	8	Ac	1
12	1200	Airs.		50	51	02	10	Ac	1
12	1400	Airs.		50	52	02	10	Ac	1
12	1600	Airs.		50	52	02	10	Ac	1
13	1700	180	1-2	51	52	02	10	Ac	1
14	1700	Airs.		49	51	02	10	Ac	1
15	0000	Airs.		53	54	02	9	Ac	1
15	1700	250	2-3	49	52	02	10	Ac	1
16	0000	200	2	53	54	02	10	St	1
16	1700	200	3	53	54	02	10	As	1
17	0000	200	3	53	56	43	10	As	1
17	1700	260	3	51	51	45	10	As	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
July, 1957									
18	0000	295	3	54	55	11	10	As	2
18	1700	Airs.		50	53	02	9	Ac	0
19	0000	160	3	53	53	45	10	As	1
19	1700	240	3	54	54	43	10	St	1
20	0000	235	2	55	56	11	10	As	2
20	1700	270	2	52	52.5	02	10	St	1
21	0000	250	1	54	56	02	10	St	1
21	1700	260	2	53	53	02	10	St	1
22	0000	300	5	52	54	01	4	Cu	4
22	1700	280	4	49	51	01	10	Sc	3
23	0000	270	5	53	54	01	10	St	4
23	1700	260	4	51	51	01	10	St	3
24	0000	260	5	53	54	01	10	St	3
24	1700	250	4	48	50.5	01	10	Sc	3
25	0000	300	4	52	54	01	7	Sc	4
25	1700	270	4	49	51	01	10	St	4
26	0000	230	5	51	52	01	10	St	4
26	1700	240	6-7	53	54	01	10	St	7-8
27	0000	270	6-7	52	53	01	10	St	7-8
27	1700	300	5	52.5	54	01	10	St	6-7
28	0000	300	4	55	56	01	10	As	4
28	1700	310	3	50.5	53	02	10	Sc	2
29	0000	325	3	53	54	02	8	Sc	2
29	1700	310	1-2	52.5	54.5	02	10	Sc	1
29	1800	310	1-2	51	54	02	10	Sc	1
29	2000	310	1-2	53	56	02	10	As	1
29	2200	Var.	0-1	53	55	02	10	As	1
30	0000	Var.	0-1	53	56	02	10	As	1
30	0200	Var.	0-1	53	55.5	02	10	St	1
30	0400	Var.	0-1	53	55.5	02	10	St	1
30	0600	Var.	0-1	52.5	56	02	10	As	1
30	0800	Var.	0-1	51	55	02	10	As	1
30	1000	Var.	0-1	52.5	55	02	10	As	1
30	1200	Var.	0-1	52	53.5	02	10	As	1
30	1400	Var.	0-1	52	54	02	10	Sc	1
30	1600	Var.	0-1	52	54	02	10	Sc	1
30	1800	320	1-2	50	53	02	10	Sc	1
30	2000	300	2	51	53	02	10	Sc	1
30	2200	300	2	53.5	55	02	10	Sc	1

Meteorological Observations

Day	Time G.M.T	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
July, 1957									
31	0000	300	2	53	54.5	02	10	Sc	1
31	0200	300	1	52	54	02	10	Sc	1
31	0400	300	1	52	54	02	10	Sc	1
31	0600	300	1	52.5	55	02	10	Sc	1
31	0800	290	1	50	53	02	10	Sc	1
31	1000	290	1	53	55	02	10	As	1
31	1200	290	1	52	53.5	02	10	As	1
31	1400	290	1	52	54	02	10	As	1
31	1600	290	1	52	54	02	10	As	1
31	1800	290	1	51	54	02	10	As	1
31	2000	290	1	50	53	02	10	As	1
31	2200	290	1	52.5	54.5	02	10	As	1
August, 1957									
1	0000	290	1	53	55	02	10	As	1
1	0200	160	1-2	53	55	02	10	As	1
1	0400	160	1-2	51	54	02	10	As	1
1	0600	145	1-2	51	52.5	02	10	As	1
1	0800	145	1-2	50.5	53	02	10	As	1
1	1000	145	1-2	52.5	54	02	10	As	1
1	1200	145	1-2	52.5	54	02	10	As	1
1	1400	100	1-2	51	54	02	10	As	1
1	1600	100	1-2	52	54	02	10	As	1
1	1700	100	2	50.5	52.5	02	10	As	1
2	0000	100	2	52.5	53	02	10	As	1
2	1700	070	2	52	53	02	10	As	1-2
3	0000	340	2	55.5	57	01	3	Ac	1-2
3	1700	350	4	53	55	02	9	Ac	2
4	0000	330	3	52	55	02	9	Ac	2
4	1700	320	3	53	53	02	10	St	2
5	0000	250	3	55.5	56	45	10	St	3
5	1700	280	4	54	54	50	10	St	3
6	0000	275	4	56.5	57	50	10	St	3
6	1700	290	6	52	53.5	02	10	Sc	3
7	0000	290	7	53.5	54	02	10	Sc	3
7	1700	290	5	52.5	54.5	02	10	Sc	3
8	0000	305	5	53	54.5	02	10	Sc	4
8	1700	340	3	54	55	02	10	Sc	2
9	0000	350	2	55.5	56	02	10	Sc	2
9	1700	320	4	52	53	02	10	Sc	2
10	1700	300	2-3	54	54	49	10	St	2
11	0000	280	2	55.5	56	41	10	St	2
11	1700	300	1-2	52	55	03	10	Sc	1

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
August, 1957									
12	0000	290	1	55.5	57	02	10	Sc	1
12	1700	310	2	54.5	56	02	10	As	1
13	0000	270	2	54.5	56	02	10	As	1
13	1700	310	1-2	52.5	54	02	10	St	1
14	0000	230	1	55	56.5	02	10	St	1
14	1700	310	1-2	55	55	40			0-1
15	0000	020	1	57.5	58	41			0-1
15	1700	100	1-2	54	56	02	7	Ac	1
15	2300	100	1-2	54	56.5	02	7	Ac	1
16	1700	050	1-2	55	56.5	02	10	As	1
17	0000	050	1-2	56.5	57	02	10	As	1
17	1700	Calm	0	57	59	02	10	Ac	0
18	0000	Calm	0	57	59.5	02	10	Ac	0
18	1700	Calm	0	57	59	02	10	Ac	0
18	1800	Calm	0	56	58	02	10	Ac	0
18	2000	Calm	0	58	61	02	10		0
18	2200	Calm	0	57.5	60	02	9	Ac	0
19	0000	Calm	0	58.5	60	02	9	Ac	0
19	0200	Calm	0	58.5	62	02	8	Ac	0
19	0400	Calm	0	57	62	02	8	Ac	0
19	0600	Calm	0	55.5	58	01	6	Cu	0
19	0800	Calm	0	55.5	58	01	3	Cu	0
19	1000	Calm	0	55.5	57	01	3	Cu	0
19	1200	Calm	0	54.5	56	02	8	Cu	0
19	1400	Calm	0	54	58	01	3	Cs	0
19	1600	250	1-2	55	60	03	5	Cc	0
19	1800	Calm	0	54.5	58.5	02	7	Ac	0
19	2000	170	2	54	57	02	3	Ci	1
19	2200	170	2	55.5	59	02	3	Ci	1
20	0000	170	2	56.5	59	02	3	Ci	1
20	0200	180	3-4	55	58	03	10	Ac	1
20	0400	180	4	55	58	03	8	As	2
20	0600	180	4	55	58	02	8	Ac	2
20	0800	180	5	55	58	02	10	As	3
20	1000	180	5	55.5	56	02	10	As	3
20	1200	170	6	56.5	57	02	10	As	4
20	1400	170	4	58	60	02	10	Sc	3
20	1600	170	5	57	59	03	10	St	4
20	1800	180	4	57	57	02	10	St	3
20	2000	180	3	58	58	60	10	St	3
20	2200	220	2-3	58.5	60	60	10	St	3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
August, 1957									
21	0000	300	2-3	58.5	60	11	10	St	3
21	0200	270	2-3	58	60	02	10	St	3
21	0400	270	2	57	60	41	10	St	2
21	0600	270	2	55	56	50	10	St	2
21	0800	280	2	56	57.5	50	10	St	2
21	1000	280	2	55.5	57	43	10	St	2
21	1200	280	2	55.5	56.5	11	10	St	2
21	1400	300	3	55	58	02	10	St	2
21	1600	300	2	55	58	00	10	Sc	2
21	1700	300	2	55	57	02	10	Sc	2
22	0000	300	2	56	58.5	02	10	Sc	2
22	1700	290	3	53	56	02	8	Cu	2
23	0000	290	3	56.5	58	02	8	Cu	2
23	1700	280	4	54	57	02	6	Cu	4
23	1800	280	3	53.5	57	01	5	Cs	3
23	2000	280	3	53	57	03	7	Cu	3
23	2200	280	3	56.5	60	02	7	Cu	3
24	0000	280	3	55.5	60	02	7	Cu	3
24	0200	290	3	56	60	03	7	Sc	3
24	0400	290	3	54	58	02	7	Sc	3
24	0600	290	3-4	54	57	02	7	Cu	3
24	0800	310	3-4	53	56.5	01	2	Cu	3
24	1000	300	3	52.5	55	02	8	Ac	2
24	1200	300	3	53.5	56	02	8	Ac	2
24	1400	300	3	54	57	02	8	Ac	2
24	1600	300	3	53	57	02	8	Ac	2
24	1800	310	3	55.5	58	02	6	Ac	2
24	2100	310	3	55.5	58	02	6	Ac	2
25	0000	320	3	55.5	58	02	4	Ac	3
25	0300	320	3	56	60	02	5	Ac	3
25	0600	320	3	55	57	01	3	Cu	3
25	0900	320	3	54.5	58	02	3	Cu	3
25	1200	280	2-3	55	59	00	1	St	3
25	1530	340	4-5	55.5	59.5	03	3	Cu	4
25	1800	340	4-5	56	61	02	3	Cu	4
25	2100	280	4-5	56.5	60	02	3	Cu	4
26	0030	280	4	58	62	02	3	Cu	3
26	0300	300	4	58	61	02	3	Cu	4-3
26	0440	300	3-4	57	60	01	0		3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. Stonetown					
August, 1957									
24	0200	280	2	56	59	02	3	Ci	2
24	1700	100	1	59	59	50	10	St	0
25	0200	180	2	59	59	42	10	St	2
25	1700	105	2	58	59	45	10	St	2
26	0200	160	4	58	58	45	10	St	3
26	1700	110	2	56	57	02	10	St	2
27	0200	220	2	60	61	41	10	St	2
27	1700	180	3	60	60	45	10	Ac	2
28	0200	210	4	60	60	50	10	St	2
28	1700	310	4	55	59	03	3	Cu	3
29	0200	290	4	57	59	03	10	Ci/Cu	3
29	1700	280	2	56.5	57	03	10	As	2
30	0200	130	3	56	59	03	10	St	2
30	1700	225	5	56	59	02	10	St	6
31	1700	250	4	54	59.5	03	4	Ac	4
September, 1957									
1	0200	240	4	55	59	01	3	Ci/Ac	4
1	1700	160	5	57	59	03	8	St	5
2	1700	250	3	57	57	02	9	St	6
3	0200	180	4	58	60	02	5	Ci	4
3	1700	130	3	57	59	03	9	St	4
4	0200	140	5	57	59	03	9	As	4
4	1700	180	5	54	59	01	4	Ac	7
6	1700	260	5	55	57	01	7	Fc	6
7	1700	220	4	56.5	57	03	9	St	4
8	0200	210	6	57	58	02	10	St	5
8	1700	210	4	56.5	57	41	10	St	4
9	0200	190	6	57	59	41	10	St	5
9	1700	180	6	58	58	41	10	St	6
10	1700	180	4	56.5	57	45	10	St	4
11	0200	170	4	56	58	02	10	St	3
11	1700	160	4	56.5	59.5	02	10	St	4
12	0200	160	5	56	61	01	4	Ci	5
12	1700	180	4	58	57		45	St	10
13	0200	220	1	57	57	50	10	St	3
13	1700	060	1	55	55	47	10	St	3
14	1700	120	2	55	56	41	8	St	3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. Stonetown					
September, 1957									
15	0200	120	4	55	55	45	10	St	3
15	1700	135	3	54	56	03	7	As	3
16	0200	120	4	56	58	00	4	Ci	4
16	1700	130	5	56.5	58.5	00	10		5
17	0200	130	5	56	58	03	10	As/Cu	4
17	1700	150	3	55	57	02	10	St	3
18	0200	150	3	56	57	02	10	St	3
18	1700	200	2	56	56	41	10	St	3
19	0200	190	3	57	59	01	3	Ci/Ac	3
19	1700	220	3	57	58	03	8	Sc	3
20	0200	210	3	57	58	03	10	Sc	3
20	1700	190	3	53	56	03	8	Ac	3
21	1700	200	3	54	58	02	10	Ac	3
22	0200	180	4	56	58	03	9	Ac	3
22	1700	190	3	58	60	01	8	Ac	3
23	0200	140	4	57	59	03	10	St	3
23	1700	150	5	57	57	03	10	St	4
24	0200	130	4	59	59	41	10	St	4
24	1700	180	3	57	57	41	7	Cu	3
25	0200	340	3	57	57	41	10	St	3
25	1700	340	4	53	54.5	03	8	Cu/St	4
26	0200	300	4	52.5	56	03	8	Cu/Sc	4
26	1700	315	6	58	58	03	6	Cb/Cu/Ac	6
27	0200	330	7	57	58	02	8	Ac	6
27	1700	315	5	53	56.5	03	10	St	5
28	0000	320	4	56	57	02	9	Ac/Cu	4
28	0200	340	3	57	57	01	6	Ac	3
28	0400	340	3	56	58	03	8	Ac	3
28	0600	290	3	54	56	03	9	As	3
28	0800	290	3	54	56	03	10	As	3
28	1000	280	3	55	57	02	8	As	3
28	1200	190	2	55	57	01	5	As	3
28	1400	190	2	56	58	03	9	Ac/Sc	3
28	1600	210	2	55	58	03	8	Ac/Sc	3
28	1800	160	3	56.5	59	03	8	Sc	3
28	2000	160	3	56.5	59.5	01	7	Sc/Ac	3
28	2200	250	2	60	63	02	5	As/Sc	3
29	0000	250	3	60	62	03	9	Sc	3
29	0200	250	2	58	61	01	6	Sc/Cu	3
29	0400	240	2	57.5	60.5	02	6	Sc	3
29	0600	Var.	1	58	59.5	01	2	Sc	2
29	0800	Var.	1	57.5	59	03	9	Sc	2
29	1000	135	1-2	59	60	02	10	St	3
29	1200	Calm	0	59	60	01	4	As	1

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
September, 1957									
25	0600	130	4-5	61	63	03	10	Sc	3
25	0900	140	4-5	61	62.5	03	10	Sc	3
25	1200	150	3-4	61	62	03	9	Sc	2
25	1500	160	4	61	62	02	10	Sc	4
25	1800	180	4-5	62	63	02	10	St	4
25	2100	160	5	62	63	03	9	St	4
25	2400	140	5	62	63	03	10	St	4
26	0300	140	4	61	62	03	10	St	4
26	0600	140	4	60	61	02	10	St	4
26	0900	140	3-4	59.5	60	02	10	St	3
26	1200	140	4	59.5	60	02	10	St	4
26	1500	260	5	60	61	03	10	St	4
26	1800	010	4-5	58	59.5	02	10	St	4
26	2100	010	7	57.5	59	02	10	St	5
26	2400	010	7	56	59	02	10	St	6
27	0300	320	6-7	58	59	13	10	St	6
27	0600	000	7	57	57.5	02	10	St	6-7
27	0900	340	7	57	57.5	02	10	St	6-7
27	1200	340	7	55.5	56	01	8	St	6
27	1500	330	5-6	57	59	03	10	Sc	6
27	1800	330	5	58	60	14	8-9	Sc	4-5
27	2130	310	3-2	54	56.5	03	10	Sc	3-4
27	2400	280	3	53.5	55.5	02	9	Sc	3
28	0300	240	3	56	58	02	8	As	2
28	1700	220	4	58.5	59	52	10	St	2
29	0000	220	6	59	60	50	10	St	5
29	1700	200	7	60	62	14	10	St	5
30	1700	250	5	57	59	01	6	Cu	4
October, 1957									
1	0000	310	5-6	52.5	55	01	4	Cu	4
1	1700	310	5	53	55	01	5	Cu	4
2	0000	320	5	48.5	55	01	6	Cu	4
2	1700	320	4	49	55	02	6	Sc	3-4
2	2000	330	2	47.5	52.5	02	10	As	3
3	0000	330	2	47.5	51.5	02	9	Sc	2
4	0000	095	2	48.5	50.5	02	4	Ci/St/Cu	2
4	1700	060	2	50	51	02	8	Sc	2
5	0000	Airs.	1	48.5	51.5	02	8	Cu	2
5	1700	045	2	50	55	02	9	Sc	2
5	2045	050	2	47	53	02	9	Ac	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
October, 1957									
6	0000	010	2	48.5	51.5	02	9	Sc	2
6	1700	060	2	50	55	02	9	Sc	2
7	0000	070	2	49.5	52	02	9	Cu	2
7	1700	030	3-4	51	57	02	9	Cu	2
8	0000	050	3	49.5	54.5	02	4	Cu	2
8	1700	060	3	52	57	02	9	Sc	2
9	0000	060	2	49.5	53	02	9	Sc	2
9	1700	Calm	0	53	57	02	9	Sc	2
9	1940	160	1-2	51	56	01	9	Ac	2
10	0000	160	3	51.5	54.5	02	9	Sc	2
11	1700	Airs.		55	57	02	10	St	2
12	0000	340	1	51.5	52	81	9	St	1
12	1700	350	7	48	53	14	8	Sc	4
12	2130	320	8	45	50	18	8	Ns	4-5
13	1700	210	4	52	54	02	9	As	3-4
14	0000	210	5	53.5	55	02	9	Cu	4
14	1700	230	1-2	55	56	02	8	Ac	1
15	0000	260	3	52.5	54.5	01	4	Cu	2
15	1700	260	4	52	56	02	8	Cu	3
16	0000	250	3	53.5	54	02	8	Cu	3
16	1700	180	6	57	60	01	7	Sc	4
16	1940	180	7	56	57.5	02	8	Cs	4
18	1800	170	3	56	57	01	1	Cu	3-4
19	0000	170	3	55.5	56	02	3	Cu	4
19	1900	150	6	57.5	57.5	02	10	St	3-4
20	1700	140	5	59	60	02	9-10	St	4
22	1800	140	1-2	55	55	47		Fog	2
22	2000	140	3	55	55	53		Fog	3
22	2200	140	3	54.5	55	47		Fog	3
23	0200	140	4	53	55	14	10	St	3
23	0400	140	4	53	56	14	9	Sc	3
23	0500	140	4	53	56.5	14	9	Sc	3
23	0700	120	3-4	52.5	53	02	10	St	3
23	0900	120	4-5	52.5	54	51	10	St	3
23	1100	100	4	53	54.5	50	10	St	3
23	1300	100	4	51.5	53	50	10	St	3
23	1500	100	4	53	53.5	03	10	St	3
23	1700	100	5	53	54	03	10	St	3-4
23	1900	100	7	49	52.5	02	10	St	4-5
23	2100	110	7	47	52	02	10	St	4-5
23	2300	100	7	48.5	52.5	02	10	St	5

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
October, 1957									
24	0000	100	7	48.5	51.5	02	10	St/Sc	6
24	0200	100	6-7	49	54	14	10	St	5-6
24	0400	100	7	49	54.5	14	10	St	6
24	0500	100	5-6	49	52	14	10	St	6
24	0700	090	6	45	50.5	02	10	St	5
24	0900	090	6-7	45	50	02	10	St	5
24	1100	090	6	48.5	50	02	6	Sc	5
24	1300	085	6	45.5	47.5	81	8	Sc/St	5
24	1500	080	4	46.5	48.5	02	9	Sc/St	5
24	1700	060	4	45	48.5	02	9	Sc	4
24	1900	050	4-5	46	51	01	8	Sc	4
24	2100	040	4-5	47.5	53	02	8	Cu/Fc/Sc	4
24	2300	040	3	47	52.5	01	6	Cu	3
25	0100	040	4	47.5	50	01	5	Cu	3
25	0300	040	4	47.5	50	01	6	Ac	3
25	0500	340	2	47.5	51	02	7	Cu	2
25	0700	000	2	43	49	02	6	Cu	2
25	0900	010	2	44.5	50	01	3	Cu	2
25	1100	340	2	46.5	50	00	0		1
25	1300	340	2	48	51.5	01	5	Cu	1
25	1500	340	2	47	50.5	01	5	Cu	1
25	1700	160	1-2	46.5	50.5	01	4	Sc	1
25	1900	130	2	47.5	51.5	03	8	Ci/St/Cu	2
25	2100	130	3	48	52	03	10	As	2
26	0000	130	5-6	52.5	53	14	10	As	3
26	1700	230	6	54	56	01	7	Cu	4
27	0000	260	3-4	55	56	00	0		4
27	1700	160	6	55	56		10	St	5
28	0000	230	3-4	55	55.5	02	8	Ac/As/St	5
28	1700	260	4	54.5	55	01	6	Cs	4-5
29	0000	230	3	54.5	55	01	2	Ci	4
29	1700	260	4	49	53	01	5	Cu	4
29	1930	260	4-5	49	54	02	3	Cu	5
30	0000	260	6	50	52.5	02	4	Cu	6
30	1700	280	6	47	51.5	01	3	Cb	6
31	0000	270	5	50.5	52.5		8	St/Cu/St	5
31	1700	220	4	55	56	03	10	St	5

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
November, 1957									
1	0000	210	6	55	56	02	9	St/Cu/St	5
2	0000	170	7-8	56	56.5	60	10	St/Fs	6
2	0300	180	7	56	57	21	10	St	4
2	0600	150	7	56	57	02	10	St	4
2	0900	150	7-8	55	56	02	10	St	4-5
2	1200	160	7	56	56.5	02	10	St	4
2	1500	150	7	55	56	03	10	St	4
2	1800	160	7-8	54	56	03	8	Ac	4
2	2100	170	7	53.5	56	03	9	Ac	4
3	0000	150	5-6	54.5	55	02	8	Ac	4
3	0300	150	4-5	54	56	03	9	St	3
3	0600	160	4	51	54	02	9	Ac	3
3	0900	170	4	52	53.5	03	10	As	3
3	1200	170	4	50	52.5	01	3	Cu	3
				C.G.S. Stonetown					
2	1700	145	2	53.5	54.5	03	7	St/Ac	3
3	0200	180	3	54	54	03	9	St/Ac	3
3	1700	260	4	50.5	54.5	03	5	Cu/Ac	4
4	0200	250	6	49	54	02	5	Ac/Cu	6
4	1700	270	3	48.5	53.5	02	5	Cu/Ac	3
5	0200	260	2	49	54	01	3	Ac	3
5	1700	075	2	47.5	52.5	03	4	Cu	3
6	0200	075	4	49	52	03	5	Ac/Cu	3
6	1700	090	5	48.0	53.5	03	5	Sc/Cc	4
7	0200	100	6	51	51	62	10	Ns	5
7	1700	225	2	52.5	53.5	50	10	St	3
8	0200	220	4	51	53	01	2	Ac	3
8	1700	200	5	50	54.5	03	3	Cb/Ac	5
9	0200	200	4	50.5	53	03	7	Ac/Cu	4
9	1700	210	5	48.5	52	03	4	Cb	5
14	1700	260	5	45.5	49.5	03	7	Cu/Ac	5
15	0200	270	6	44.5	50.5	18	6	Ac	6
15	1700	270	3	45.5	49.5	03	9	Sc/Ci	4

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
November, 1957				C.G.S. Stonetown					
16	0200	170	4	48	50	18	8	Ns/Cu	4
17	0200	280	4	45.5	50	03	6	Ac	4
17	1700	250	4	46.5	49.5	18	8	Cb/Ac	4
18	1700	160	3	45.5	49.5	01	4	Sc/Ci	3
19	0200	110	5	46.5	50	03	5	Ac	5
20	0200	230	3	47.5	51.5	02	3	Ac	4
21	1700	150	3	54	54	50	10	Ns	4
22	1700	180	5	51.5	53	03	10	Sc	4
23	0200	190	3	51.5	52.5	11	10	St	4
23	1700	230	6	46.5	50.5	03	9	Cu/As	5
24	0200	210	6	50	50.5	02	4	Ac	5
25	1700	260	4	44.7	48.5	01	3	Sc/Ci	5
26	0200	170	7	48.5	50.0	50	10	St	6
26	1700	250	3	42.5	48.0	01	2	Cu	4
27	0200	260	7	44.5	48.5	18	7	Ns/Cu	5
27	1700	270	3	42.5	47.5	03	4	Cu	4
28	0200	200	5	43.5	48	03	6	Ac/Cu	4
28	1700	200	4	44.5	46.5	03	6	Ac/Sc	4
29	0200	230	3	44.5	49.5	02	5	Ci/As	3
29	1700	260	4	42	46.5	03	6	Cu	4
30	0200	250	5	44	46.5	62	10	Ns/St	5
December, 1957									
1	0200	320	4	43	48	03	6	Ns/Cu	4
2	0200	200	4	51	52.5	50	10	St	4
3	0200	270	5	43	47.5	18	8	Ns/Ac	5
3	1700	270	4	41.5	46	03	3	Cu	4
4	0200	290	5			18	7	Cu/Cb	5
5	1700	170	5	44.5	45	18	10	Sc	5
7	0200	270	3	41.5	46	03	8	St/Ac	4
8	0200	290	4	41	44.5	18	10	St/Ns	4
8	1700	270	4	39	44	03	6	Cb/Cu	4
9	0200	350	3	38	43	02	5	Ac	4
9	1700	080	4	41	44	62	10	St	4
10	1700	315	5	41.5	44.5	03	6	Cb/Ac	6
11	0200	280	3	42	46.5	02	5	Ac	4
11	1700	260	4	40.5	43.5	03	7	Cb/Cu	4
12	0200	240	4	40.5	44.5	03	9	St/Ac	4
12	1700	250	4	47	47.5	50	10	Ns/St	4

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
December, 1957									
11	0600	140	4	51	51.5	02	10	Sc	3
11	0900	170	5	51	51.5	63	10	St	3
12	0300	270	6	46	50	14	10	St	5
12	0600	280	4	43	48	02	10	St	3
12	0900	280	4	43	48	01	4	Cu	3
12	1200	280	4	41.5	45	01	4	Cu	3
12	1500	280	3-4	44	47	02	4	Cu	3
12	1800	260	4	45	48	03	10	As/Fc	3
12	2100	240	4-5	44	48.5	02	9	Ac/Fc	
14	1700	060	2	42	44	03	10	Sc	2
14	2045	040	6	40	41	02	10	St	3
16	1700	300	4	43	45	13	9	Nb/Fc	2
17	0000	300	4	40.5	42.5	88	9	Sc/St	3
17	1700	300	7-8	39	42	14	9	Fc/St	5
18	0700	240	2-3	38.5	41.5	02	10	St	2
18	1700	250	5-6	45	47	02	9	Sc	3
19	1700	290	7-8	36	37	02	8	Cu	5
20	0000	270	6	37.5	38	88	7	Sc/Cu	4
20	1700	290	6	42	43	83/88	8	Cb	4
20	1815	320	6-7	35	38	90	10	Sc	4
20	1900	310	9	35	36	86	10	Sc	5
20	2000	310	11	35	35	75	10	Sc	6
21	2030	240	5	36	36.5	72	10	St	4
22	0000	240	4	40	41	50	10	St	4
22	1700	270	3	35	37	88	9	Ac	2-3
24	0000	270	4	37	38.5	02	9	As/St	3
24	1700	280	3-4	42	43	03	9	St	3
24	1900	280	3	37	40	02	10	Sc	2-3
24	2000	280	3	36.5	41	02	9	Sc	2-3
24	2100	250	2	36	41	02	9	Sc	2-3
24	2200	250	2	36	41	02	10	Cu/As	2-3
24	2300	Lt. airs		40	41.5	02	9	Cu	2-3
25	0000	Lt. airs		40.5	42	02	9	Cu	2-3
25	0100	Lt. airs		38.5	40	02	9	Sc/Cu	2-3
25	0200	Lt. airs		40	41.5	02	9	Sc/Cu	2-3
25	0300	Lt. airs		39	43	02	8	Sc	2-3
25	0400	Lt. airs		39.5	43	02	8	Sc	2-3
25	0700	Lt. airs		38	42	02	8	Sc	2-3
25	0800	Lt. airs		36.5	40.5	02	8	Sc	2-3
25	0900	300	2	37	40.5	02	8	Cu	2

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Force	Air Temp. Wet	Dry	Weather	Cloud Cover	Type	Wave Height
				C.G.S. St. Catharines					
December, 1957									
25	1000	300	2-3	37	40.5	02	8	Cu	2
25	1100	240	5-6	38.5	39	69	5	Cu	3
25	1200	300	6-7	38	38.5	69	6	Sc/Cu	4
25	1300	310	7-8	39.5	40	69	5	Cu	4
29	1700	220	6-7	42	43	03	10	St/Sc	4
30	0100	220	8	44.5	45	50	10	St/Cu	5
30	1700	200	4-5	43	44	02	9	As	4
31	0000	Lt. airs		42	42.5	02	4	Cu	3
31	1700	080	1-2	40	42	03	10	Fs/St	3
31	1930	010	2-3	40.5	43.5	02	10	Sc	3
January, 1958									
1	0200	010	3-4	40	43	03	10	St/Fc	3-4
1	1700	280	4	37	40	02	9	Ac	3
2	0200	060	3-4	39.5	42	02	9	St/Sc	2-3
2	1700	350	4	38	40	02	8	Sc	3-4
2	1900	360	4	38.5	41	02	7	Cu	3
2	2200	020	4	39	41	02	7	Sc	3-4
3	0100	020	5	40	40.5	60	9	Sc/St	4
3	0400	010	5	40	41	13	9	Cb	4-5
3	0700	020	6	39	40.5	02	10	St	4-5
3	1000	010	6-7	39	40.5	02	10	Sc	4-5
3	1300	010	7-8	40	40.5	02	9	Cu/St	5
3	1600	000	6	40	41	02	10	St	5-6
3	1900	000	8	39	40.5	02	10	St	6
4	0200	000	4	36	40	03	9	Sc	3-4
4	1700	180	2	41	41	03	10	St	2
4	2045	180	4	42.5	45	02	7	Cu	3
5	0200	140	6	45	46	50	10	Sc	5
5	1700	160	4	45	45	50	10	Sc	4
6	0200	Var.	0-1	41	45	03	10	St	3
7	1700	260	3-4	38	41	01	6	Ac	4
8	1945	Lt. airs		37	40.5	02	8	Cu/As	3
9	0200	Lt. airs		37	43	03	9	Ac/As	2
9	1700	050	4	38	43	02	9	Sc	3
10	0200	070	3-4	38	42	02	9	Sc	3
10	1700	080	3	39	40	03	9	Cu/Sc	3

Meteorological Observations

Day	Time G.M.T.	Wind Dir.	Wind Force	Air Temp. Wet	Air Temp. Dry	Weather	Cloud Cover	Cloud Type	Wave Height
				C.G.S. St. Catharines					
January, 1958									
11	0200	100	4	39	40	03	9	Cu/Sc	5
11	1700	300	2-3	42	43	01	7	Ac	2-3
12	0200	300	3-4	40	42	01	8	Cb/Sc	3
12	1700	180	2	39	41	02	8	Sc	2
13	0200	180	6	45	46	14	7	Fc/Fs	3-4
13	1700	180	2	45	46	03	9	St	2
14	0200	180	2	44	45	03	10	St	2
14	1700	120	3-4	42	46	03	10	St	3
15	0200	230	7	44	45	03	10	St	4
15	1700	180	3	43	44	01	4	Ac	2
16	0200	350	2-3	43	44	02	8	Sc	2
16	1700	240	3	43	45	01	2	Sc	2
17	0200	240	3	43	44	01	3	As	3
17	1700	160	4-5	46	46	60	10	St	4
18	1700	230	4	41	43	01	6	As	3-4
19	0200	230	2-3	43	44	01	7	Ac/As	3
19	1700	270	3-4	39	41	02	8	Ac/Cb	2
20	0200	270	4-5	34	35	14	7	Ac/Fc	3
20	1700	270	3	35	38	03	8	Cc/Ac	3
21	0200	160	6	41	42	14	10	Sc/Ns	4
21	1700	140	4-5	46	46	49	10	St	4
22	0200	210	3-4	45	46	40	10	St	3
22	1700	240	3-4	45	46	01	6	As	3
23	0200	180	2-3	46	46	02	8	As	3
23	1700	200	2-3	44	45	49	10	St	2
24	0200	200	3	43	44	01	7	Fs/Ac	3

Sea Sampler Observations - Station PAPA

C.G.S. St. Catharines

Meters	0	26	31	51	78	103	126
	1730/26-I-57		Grid OS				
S ‰	32.67	32.52	32.57	32.62	32.59	32.85	
PO_4 (µg.at./L)	1.70	1.65	1.51	0.98	1.62	2.00	2.31
	1815/28-I-57		Grid OS				
S ‰	32.64	32.65	32.64	32.62	32.62	32.64	
PO_4 (µg.at./L)	1.83	1.59	1.51		1.55	1.53	1.93
	1826/29-I-57		Grid OS				
S ‰	32.65	32.65	32.66	32.65	32.67	32.80	33.11
PO_4 (µg.at./L)	1.68	1.54	1.44	1.49	1.53	1.63	1.96
	1805/30-I-57		Grid KJ				
S ‰	32.66	32.62	32.62	32.64	32.65	32.64	32.98
PO_4 (µg.at./L)							
	1753/31-I-57		Grid OJ				
S ‰	32.66	32.66	32.64	32.66	32.66	32.66	33.12
PO_4 (µg.at./L)	1.77	1.55	1.54	1.48	1.49	1.50	1.91
	1815/1-II-57		Grid OS				
S ‰	32.67	32.68	32.67	32.68	32.68	32.74	33.13
PO_4 (µg.at./L)	1.69	1.57	1.61	1.58	1.65	1.66	2.04
	1805/3-II-57		Grid OS				
S ‰	32.72	32.65	32.64	32.65	32.65	32.83	33.36
PO_4 (µg.at./L)	1.62	1.54	1.46	1.46	1.46	1.66	2.10
	1755/4-II-57		Grid OS				
S ‰	32.66	32.58	32.61	32.63	32.63	32.74	33.29
PO_4 (µg.at./L)	1.53	1.42	1.39	1.42	1.44	1.62	1.87
	0005/5-II-57		Grid OS				
S ‰	32.63	32.62	32.62	32.63	32.63	32.63	
PO_4 (µg.at./L)	1.59	1.52	1.51	1.46	1.43	1.46	1.84
	0605/5-II-57		Grid OS				
S ‰	32.60	32.62	32.64	32.66	32.64	32.91	33.33
PO_4 (µg.at./L)	1.65	1.48	1.49	1.49	1.51	1.75	2.11
	1200/5-II-57		Grid OS				
S ‰	32.67	32.66	32.64	32.64	32.65	32.68	33.17
PO_4 (µg.at./L)							

Sea Sampler Observations - Station PAPA

C.G.S. St. Catharines

Meters	0	26	31	51	78	103	126
	1800/5-II-57		Grid OS				
S ‰	32.63	32.56	32.61	32.61	32.63	32.69	33.23
PO_4 (µg.at./L)							
	1820/6-II-57		Grid OS				
S ‰	32.67	32.63	32.63	32.63	32.66	32.68	33.19
PO_4 (µg.at./L)							
	1805/7-II-57		Grid JS				
S ‰	32.64	32.62	32.63	32.64	32.65	32.68	33.26
PO_4 (µg.at./L)	1.99	1.55	1.53	1.53	1.54	1.68	2.16
	1805/9-II-57		Grid OJ				
S ‰	32.79	32.64	32.66	32.66	32.66	32.75	33.29
PO_4 (µg.at./L)	1.95	1.60	1.52	1.53	1.58	1.67	2.14
	1800/11-II-57		Grid OJ				
S ‰	32.63	32.62	32.63	32.63	32.63	32.63	32.97
PO_4 (µg.at./L)	1.90	1.62	1.56	1.63	1.52	1.55	1.91
	1805/12-II-57		Grid KJ				
S ‰	32.64	32.62	32.62	32.63	32.63	32.64	32.98
PO_4 (µg.at./L)	2.16	1.77	1.77	1.77	1.75	1.76	2.18
	1800/13-II-57		Grid OS				
S ‰	32.66	32.64	32.64	32.64	32.64	32.64	32.81
PO_4 (µg.at./L)	1.90	1.67	1.59	1.60	1.58	1.58	1.88
	1805/14-II-57		Grid OS				
S ‰	32.64	32.62	32.62	32.62	32.62	32.64	
PO_4 (µg.at./L)	1.49	1.34	1.31	1.31	1.29	1.29	
	1800/17-II-57		Grid OS				
S ‰	32.69	32.62	32.62	32.59	32.60	32.60	32.93
PO_4 (µg.at./L)	2.04	1.74	1.74	1.72	1.69	1.70	2.00
	1800/18-II-57		Grid OS				
S ‰	32.60	32.61	32.62	32.62	32.63	32.62	33.00
PO_4 (µg.at./L)							
	1800/19-II-57		Grid OS				
S ‰	32.72	32.62	32.63	32.63	32.64	32.64	32.98
PO_4 (µg.at./L)	1.48	1.58	1.51	1.56	1.54	1.54	

Sea Sampler Observations - Station PAPA

C.G.S. St. Catharines

Meters	0	26	31	51	78	103	126
	1800/21-II-57		Grid OS				
S ‰	32.62	32.62	32.62	32.62	32.63	32.64	32.93
PO_4 (µg.at./L)	1.95	1.77	1.71	1.76	1.69	1.69	1.97
	1800/28-II-57		Grid OS				
S ‰	32.59	32.63	32.63	32.63	32.63	32.63	32.64
PO_4 (µg.at./L)		1.53	1.53	1.57	1.48	1.50	1.48
	1800/4-III-57		Grid OS				
S ‰	32.62	32.62	32.62	32.62	32.62	32.62	
PO_4 (µg.at./L)	1.96	1.50	1.51	1.48	1.47	1.49	
	1800/7-III-57		Grid OS				
S ‰	32.60	32.61	32.60	32.58	32.62	32.63	33.20
PO_4 (µg.at./L)	1.80	1.57	1.58	1.60	1.53	1.51	2.07

INTERPOLATED DATA

STATION 1

TIME: 1920 G.M.T. DATE: 25-VIII-56 POSITION: Grid 0S

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5 \delta$	ΔD
0.	13.30	32.71	24.58	24.58	0.0	336.4	0.000
10.	13.29	32.70	24.58	24.62	10.1	337.2	.034
20.	11.26	32.70	24.96	25.05	20.1	300.7	.066
30.	9.48	32.70	25.27	25.41	30.2	271.7	.095
50.	6.65	32.72	25.70	25.93	50.3	231.2	.145
75.	4.51	32.77	25.98	26.34	75.5	203.9	.200
100.	3.90	32.83	26.10	26.57	100.6	193.2	.250
125.	4.28	32.98	26.18	26.76	125.8	185.9	.298
150.	4.41	33.36	26.46	27.17	151.0	158.8	.341
200.	4.21	33.87	26.89	27.83	201.4	119.3	.411

STATION 2

TIME: 1856 G.M.T. DATE: 1-IX-56 POSITION: Grid 0S

0.	12.70	32.77	24.75	24.75	0.0	320.8	0.000
10.	12.63	32.64	24.66	24.71	10.1	329.3	.033
20.	12.20	32.66	24.75	24.85	20.1	320.5	.065
30.	10.29	32.68	25.12	25.25	30.2	286.2	.096
50.	5.70	32.74	25.82	26.06	50.3	218.8	.147
75.	4.00	32.77	26.04	26.39	75.5	198.7	.199
100.	4.13	32.82	26.06	26.53	100.6	196.5	.249
125.	4.29	33.20	26.35	26.93	125.8	169.8	.295
150.	4.44	33.63	26.67	27.38	151.0	139.0	.334
200.	4.27	33.94	26.93	27.87	201.4	114.7	.398
250.	4.05	33.97	26.98	28.16	251.8	110.5	.455
300.	3.90	33.98	27.01	28.42	302.3	108.5	.510
400.	3.81	34.08	27.10	28.98	403.2	100.7	.615
500.	3.65	34.16	27.17	29.53	504.2	94.2	.714
600.	3.48	34.23	27.25	30.07	605.2	87.8	.806
700.	3.30	34.30	27.32	30.61	706.3	81.3	.891
800.	3.14	34.34	27.37	31.13	807.4	77.2	.971
1000.	2.82	34.38	27.43	32.14	1009.8	72.0	1.122

INTERPOLATED DATA

STATION 3

TIME: 1914 * 1945 G.M.T. DATE: 8-IX-56 POSITION: Grid OS

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	14.40	32.74	24.38	24.38	0.0	355.7	0.000
10.	12.98	32.65	24.60	24.64	10.1	335.4	.035
20.	12.96	32.67	24.62	24.71	20.1	333.4	.068
30.	12.69	32.65	24.66	24.79	30.2	330.1	.102
50.	6.86	32.73	25.67	25.90	50.3	233.4	.158
75.	4.09	32.76	26.02	26.38	75.4	199.9	.213
100.	4.03	32.81	26.06	26.54	100.6	196.1	.263
125.	4.27	33.19	26.34	26.93	125.8	170.1	.309
150.	4.39	33.75	26.78	27.48	151.0	129.3	.347
200.	4.12	33.88	26.90	27.84	201.4	117.7	.409
250.	3.99	33.97	26.99	28.17	251.8	109.4	.466
300.	3.92	34.00	27.02	28.43	302.3	107.4	.521
*400.	3.80	34.07	27.09	28.97	403.2	101.5	.626
500.	3.65	34.16	27.18	29.53	504.1	93.8	.725
600.	3.49	34.26	27.27	30.10	605.2	85.5	.815
700.	3.28	34.33	27.34	30.64	706.2	79.1	.898
800.	3.08	34.38	27.40	31.17	807.4	74.0	.976
1000.	2.84	34.44	27.47	32.17	1009.8	68.2	1.120
1200.	2.48	34.43	27.50	33.15	1212.4	65.6	1.255

STATION 4

TIME: 1852 G.M.T. DATE: 15-IX-56 POSITION: Grid OS

0.	14.80	32.65	24.23	24.23	0.0	370.4	0.000
10.	13.92	32.64	24.40	24.45	10.0	353.8	.036
20.	12.95	32.64	24.60	24.69	20.1	335.5	.071
30.	9.64	32.69	25.23	25.37	30.2	275.2	.102
50.	6.78	32.72	25.68	25.91	50.3	233.0	.153
75.	4.49	32.79	26.00	26.36	75.4	201.8	.208
100.	4.19	32.79	26.04	26.51	100.6	198.8	.258
125.	4.23	33.00	26.19	26.78	125.8	184.1	.306
150.	4.42	33.67	26.71	27.41	151.0	135.8	.346
200.	4.17	33.87	26.89	27.83	201.4	118.9	.411
250.	4.01	33.96	26.98	28.16	251.8	110.4	.468
300.	3.92	33.94	26.98	28.39	302.3	111.4	.524
400.	3.77	34.06	27.09	28.97	403.2	101.6	.632
500.	3.62	34.16	27.18	29.54	504.1	93.3	.730
600.	3.46	34.24	27.26	30.08	605.2	86.5	.821
700.	3.29	34.29	27.32	30.61	706.2	81.6	.906
800.	3.10	34.32	27.36	31.12	807.4	78.2	.987
1000.	2.79	34.41	27.46	32.16	1009.8	69.5	1.136
1200.	2.53	34.41	27.48	33.12	1212.4	68.1	1.276

INTERPOLATED DATA

STATION 5

TIME: 1917 G.M.T. DATE: 22-IX-56 POSITION: Grid 0J

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.90	32.64	24.61	24.61	0.0	334.0	0.000
10.	12.83	32.66	24.64	24.69	10.1	331.2	.033
20.	12.81	32.64	24.62	24.71	20.1	333.0	.067
30.	12.12	32.66	24.77	24.91	30.2	319.1	.100
50.	5.83	32.73	25.80	26.04	50.3	220.7	.154
75.	3.91	32.78	26.05	26.41	75.4	197.1	.206
100.	3.81	32.85	26.12	26.59	100.6	191.0	.255
125.	4.01	33.28	26.44	27.03	125.8	160.4	.300
150.	4.27	33.71	26.76	27.46	151.0	131.2	.336
200.	4.35	33.96	26.94	27.88	201.4	114.1	.398
250.	4.09	33.94	26.96	28.13	251.8	113.0	.455
300.	3.93	33.97	26.99	28.41	302.3	109.7	.512
400.	3.77	34.08	27.10	28.99	403.2	100.2	.617
500.	3.49	34.12	27.16	29.51	504.1	95.3	.716
600.	3.35	34.18	27.22	30.05	605.2	89.7	.810
700.	3.28	34.26	27.29	30.58	706.2	84.4	.898
800.	3.09	34.32	27.36	31.12	807.4	78.4	.980
1000.	2.74	34.41	27.46	32.17	1009.8	68.8	1.129

STATION 6

TIME: 1812 G.M.T. DATE: 25-IX-56 POSITION: Grid 0S

Interpolation computations not done because of large depth intervals.

INTERPOLATED DATA

STATION 7

TIME: 1838 G.M.T. DATE: 26-IX-56 POSITION: Grid OS

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.60	32.74	24.74	24.74	0.0	321.1	0.000
10.	12.50	32.65	24.69	24.74	10.1	326.2	.033
20.	12.49	32.64	24.69	24.78	20.1	327.0	.065
30.	11.56	32.67	24.88	25.02	30.2	308.7	.097
50.	6.26	32.75	25.77	26.00	50.3	224.3	.151
75.	4.11	32.77	26.03	26.38	75.4	199.4	.204
100.	3.92	32.83	26.09	26.56	100.6	193.5	.254
125.	4.21	33.18	26.34	26.93	125.8	170.4	.300
150.	4.30	33.63	26.69	27.39	151.0	137.5	.338
200.	4.19	33.86	26.88	27.82	201.4	119.5	.403
250.	4.04	33.96	26.97	28.15	251.8	111.3	.461
300.	3.94	33.98	27.00	28.41	302.3	109.2	.517
400.	3.81	34.09	27.10	28.98	403.2	100.3	.623
500.	3.62	34.18	27.20	29.55	504.1	92.0	.720
600.	3.41	34.25	27.27	30.09	605.2	85.6	.809
700.	3.24	34.29	27.32	30.61	706.2	81.8	.894
800.	3.07	34.32	27.36	31.13	807.4	77.8	.975
1000.	2.78	34.44	27.48	32.19	1009.8	67.2	1.121

STATION 8

TIME: 1830 G.M.T. DATE: 10-XI-56 POSITION: Grid OS

0.	7.70	32.71	25.54	25.54	0.0	245.1	0.000
10.	7.57	32.63	25.49	25.54	10.1	249.7	.025
20.	7.58	32.65	25.51	25.60	20.1	248.6	.050
30.	7.58	32.66	25.52	25.66	30.2	247.8	.075
50.	7.57	32.67	25.53	25.76	50.3	246.9	.125
75.	6.75	32.70	25.66	26.01	75.5	234.4	.185
100.	4.08	32.84	26.08	26.55	100.6	194.6	.239
125.	4.04	33.18	26.36	26.95	125.8	168.2	.285

INTERPOLATED DATA

STATION 9

TIME: 1815 G.M.T. DATE: 17-XI-56 POSITION: Grid OS

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.60	32.79	25.75	25.75	0.0	224.9	0.000
10.	6.59	32.68	25.67	25.71	10.1	233.3	.023
20.	6.58	32.61	25.62	25.71	20.1	238.3	.047
30.	6.58	32.59	25.60	25.74	30.2	239.9	.071
50.	6.60	32.65	25.65	25.88	50.3	235.8	.119
75.	5.69	32.69	25.79	26.14	75.5	222.3	.176
100.	3.88	32.94	26.18	26.65	100.6	185.0	.228
125.	4.07	33.37	26.51	27.09	125.8	154.6	.270
150.	4.18	33.65	26.72	27.43	151.0	134.6	.307
200.	4.09	33.84	26.88	27.82	201.4	119.7	.371

STATION 10

TIME: 1835 G.M.T. DATE: 25-XI-56 POSITION: Grid OS

0.	6.70	32.69	25.66	25.66	0.0	233.6	0.000
10.	6.64	32.71	25.68	25.73	10.1	231.7	.023
20.	6.60	32.72	25.70	25.79	20.1	230.4	.047
30.	6.58	32.73	25.71	25.85	30.2	229.5	.070
50.	6.59	32.74	25.72	25.95	50.3	229.1	.116
75.	6.24	32.74	25.76	26.11	75.5	224.9	.173
100.	4.16	32.97	26.18	26.65	100.7	185.0	.225
125.	4.38	33.41	26.51	27.10	125.8	154.4	.267
150.	4.18	33.54	26.63	27.34	151.0	142.9	.305
200.	4.11	33.88	26.91	27.85	201.4	117.0	.370
250.	4.02	33.94	26.96	28.14	251.9	112.3	.428
300.	3.92	33.98	27.01	28.42	302.3	108.4	.484
400.	3.73	34.08	27.10	28.99	403.2	100.0	.589
500.	3.54	34.19	27.21	29.56	504.2	90.9	.685
600.	3.37	34.25	27.27	30.10	605.2	85.3	.774
700.	3.22	34.28	27.31	30.61	706.3	81.8	.859
800.	3.08	34.32	27.36	31.12	807.4	78.4	.940
1000.	2.80	34.41	27.46	32.16	1009.8	69.6	1.089
1200.	2.57	34.44	27.50	33.14	1212.4	66.2	1.227

INTERPOLATED DATA

STATION 11

TIME: 1838 G.M.T. DATE: 7-XII-56 POSITION: Grid OS

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5 \delta$	ΔD
0.	6.20	32.72	25.75	25.75	0.0	225.3	0.000
10.	6.35	32.67	25.69	25.74	10.1	230.9	.023
20.	6.35	32.67	25.69	25.79	20.1	231.0	.046
30.	6.35	32.67	25.69	25.83	30.2	231.2	.069
50.	6.35	32.66	25.69	25.92	50.3	232.0	.116
75.	5.59	32.70	25.81	26.16	75.5	220.8	.173
100.	4.13	33.75	26.81	27.28	100.7	126.0	.217
125.	4.16	33.80	26.84	27.43	125.9	123.2	.248
150.	4.21	33.72	26.77	27.48	151.1	129.6	.280
200.	4.07	33.86	26.90	27.84	201.5	118.1	.342

STATION 1-01

TIME: 1829 *1900 G.M.T. DATE: 27-I-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. 170° Force 5 AIR TEMP: Dry 45.6° Wet 42.6° BARO: 1041.2 mb.
CLOUD: Type St Amt 8 SEA: 150° - 5 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.70	32.81	25.88	4825.	0.654	2.24	0.35
19.	5.64	32.62	25.74	4825.	.639	1.62	.24
45.	5.68	32.64	25.75	4827.	.633	1.57	.25
69.	5.61	32.64	25.76	4827.	.634	1.55	.23
82.	5.56	32.65	25.77	4827.	.636	1.58	.23
95.	4.95	32.79	25.95	4821.	.602	1.78	.11
109.	4.12	33.10	26.29	4811.	.556	1.94	.04
123.	4.05	33.22	26.39	4812.	.501	1.97	.03
136.	4.11	33.41	26.53	4814.	.431	2.13	.05
182.	4.14	33.77	26.82	4818.	.263	2.48	.03
*230.	4.05	33.86	26.90	4820.	.184	2.89	.03
390.	3.82	34.03	27.06	4827.	.074	3.14	.05
598.	3.47	34.15	27.19	4835.	.046	3.06	.09
820.	3.09	34.25	27.30	4844.	.041	3.10	.09
1001.	2.79	34.34	27.40	4850.	.037	3.07	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.70	32.81	25.88	25.88	0.0	212.7	0.000
10.	5.60	32.61	25.74	25.78	10.1	226.8	.022
20.	5.64	32.62	25.74	25.83	20.1	226.4	.045
30.	5.67	32.63	25.75	25.89	30.2	226.1	.068
50.	5.67	32.64	25.75	25.99	50.3	225.6	.113
75.	5.59	32.64	25.76	26.12	75.5	224.7	.170
100.	4.67	32.88	26.06	26.53	100.7	197.1	.223
125.	4.05	33.24	26.41	27.00	125.8	163.8	.268
150.	4.15	33.57	26.66	27.36	151.0	140.4	.307
200.	4.12	33.84	26.87	27.81	201.4	120.5	.372
250.	4.02	33.89	26.93	28.10	251.9	115.8	.432
300.	3.94	33.96	26.99	28.40	302.3	110.4	.489
400.	3.80	34.04	27.06	28.95	403.2	103.9	.597
500.	3.64	34.11	27.13	29.49	504.2	97.8	.699
600.	3.47	34.15	27.19	30.01	605.2	93.5	.796
700.	3.30	34.20	27.24	30.54	706.3	88.8	.888
800.	3.12	34.24	27.29	31.06	807.4	84.4	.975
1000.	2.79	34.34	27.40	32.10	1009.8	74.9	1.136

STATION 1-02

TIME: 1809 *1821 G.M.T. DATE: 30-I-57 POSITION: Grid KJ
WEATHER: 03 WIND: Dir. 220° Force 5 AIR TEMP: Dry 44.5° Wet 43.0° BARO: 1036 mb.
CLOUD: Type St/Cu Amt 7 SEA: 210° - 6 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.70	32.71	25.80	4825.	0.646	2.04	
19.	5.51	32.62	25.76	4823.	.636	1.43	
47.	5.53	32.65	25.78	4825.	.629	1.48	
70.	5.43+	32.64	25.78	4825.	.635	1.48	
85.	5.37	32.67	25.81	4825.	.633	1.51	
99.	5.32	32.64	25.79	4825.	.630	1.53	
113.	5.06	32.72	25.89	4823.	.609	1.62	
*122.	4.55	32.84	26.04	4817.	.572	1.72	
136.	4.14	33.20	26.36	4813.	.493	2.01	
181.	4.22	33.75	26.79	4819.	.281	2.43	
226.	4.09	33.82	26.86	4821.	.193	2.73	
272.	3.99	33.91	26.94	4822.	.150	2.90	
300.	3.95*	33.97*	27.00	4824.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.70	32.71	25.80	25.80	0.0	220.2	0.000
10.	5.47	32.60	25.74	25.79	10.1	225.9	.022
20.	5.51	32.62	25.76	25.85	20.1	224.9	.045
30.	5.54	32.64	25.77	25.91	30.2	224.1	.068
50.	5.52	32.65	25.78	26.01	50.3	223.2	.113
75.	5.41	32.65	25.79	26.14	75.5	222.4	.169
100.	5.31	32.64	25.80	26.27	100.7	221.9	.225
125.	4.42	32.90	26.10	26.69	125.8	193.4	.277
150.	3.94	33.47	26.60	27.31	151.0	145.8	.320
200.	4.19	33.84	26.87	27.81	201.4	121.2	.387
250.	4.03	33.86	26.90	28.08	251.8	118.0	.447
300.	3.95	33.97	27.00	28.41	302.3	109.4	.505

STATION 1-03

TIME: 1800 *1900 G.M.T. DATE: 2-II-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. 320° Force 6 AIR TEMP: Dry 39.7° Wet 37.6° BARO: 1028.0 mb.
CLOUD: Type St/Cu Amt 7 SEA: 300° - 3 SWELL: 300° - 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.70	32.69	25.79	4825.	0.643	1.95	0.34
20.	5.68	32.65	25.76	4825.	.631	1.57	.25
49.	5.64	32.67	25.78	4827.	.622	1.44	.25
74.	5.51	32.67	25.79	4826.	.643	1.64	.27
89.	5.42	32.69	25.82	4826.	.623	1.62	.26
103.	5.16	32.71	25.87	4824.	.610	1.72	.18
118.	4.03	33.05	26.26	4810.		2.00	.03
134.	4.10	33.32	26.46	4813.	.587	2.18	.03
149.	4.21	33.58	26.66	4817.	.365	2.27	.03
199.	4.12	33.81	26.85	4819.	.313	2.63	.03
250.	4.04	33.87	26.91	4822.	.158	2.88	.03
*296.	3.97	33.96	26.98	4824.	.101	3.15	.03
495.	3.64*	34.17	27.18	4832.	.055	3..8	.06
744.	3.17	34.30	27.33	4840.	.059	3.11	.09
993.	2.77	34.36	27.42	4850.	.038	3.00	.05
1500.	2.25	34.51	27.58	4873.	.098	2.88	.07
2000.	1.85	34.58	27.67	4897.	.116	2.95	.03

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.70	32.69	25.79	25.79	0.0	221.7	0.000
10.	5.67	32.64	25.75	25.80	10.1	225.3	.022
20.	5.68	32.65	25.76	25.85	20.1	224.7	.045
30.	5.68	32.66	25.77	25.91	30.2	224.1	.068
50.	5.64	32.67	25.78	26.01	50.3	223.0	.113
75.	5.50	32.67	25.80	26.15	75.5	221.7	.169
100.	5.23	32.71	25.86	26.32	100.7	216.3	.224
125.	3.90	33.18	26.37	26.96	125.8	167.1	.272
150.	4.22	33.59	26.67	27.38	151.0	139.3	.311
200.	4.12	33.81	26.85	27.79	201.4	122.4	.377
250.	4.04	33.87	26.91	28.08	251.8	117.7	.437
300.	3.96	33.97	26.99	28.40	302.3	110.1	.495
400.	3.80	34.11	27.12	29.00	403.2	98.8	.600
500.	3.63	34.17	27.19	29.54	504.2	92.7	.697
600.	3.45	34.24	27.26	30.08	605.2	86.5	.787
700.	3.26	34.29	27.32	30.61	706.3	81.8	.872
800.	3.07	34.32	27.36	31.12	807.4	78.2	.953
1000.	2.76	34.36	27.42	32.13	1009.8	72.9	1.106
1200.	2.51	34.42	27.48	33.13	1212.4	67.2	1.248
1500.	2.25	34.51	27.58	34.63	1516.7	59.0	1.440
2000.	1.85	34.58	27.67	37.04	2024.7	51.2	1.720

STATION 1-04

TIME: 1820 G.M.T. DATE: 6-II-57 POSITION: Grid OS
WEATHER: 41 WIND: Dir. 290° Force 6 AIR TEMP: Dry 42.3° Wet 41.3° BARO: 1027.1 mb.
CLOUD: Type St/Cu Amt 8 SEA: 300°- 3 SWELL: 300°- 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.80	32.65	25.74	4826.	0.636	1.86	
20.	5.71	32.64	25.75	4826.	.603	1.51	
50.	5.66	32.64	25.75	4827.	.582	1.53	
75.	5.59	32.67	25.79	4828.	.642	1.63	
90.	5.56	32.65	25.77	4828.	.586	1.61	
105.	5.41	32.71	25.84	4827.	.581	1.68	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.80	32.65	25.74	25.74	0.0	225.8	0.000
10.	5.72	32.65	25.75	25.80	10.1	225.1	.023
20.	5.71	32.64	25.75	25.84	20.1	225.8	.045
30.	5.70	32.64	25.75	25.89	30.2	226.1	.068
50.	5.66	32.64	25.75	25.99	50.3	225.5	.114
75.	5.59	32.67	25.79	26.14	75.5	222.7	.170
100.	5.47	32.68	25.81	26.28	100.7	220.8	.226

STATION 1-05

TIME: 1845 *1858 G.M.T. DATE: 15-II-57 POSITION: Grid 0S
WEATHER: 61 WIND: Dir. 200° Force 6 AIR TEMP: Dry 45.7° Wet 45.4° BARO: 1016.2 mb.
CLOUD: Type St Amt 8 SEA: 190°- 5 SWELL: 190°- 6 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	5.70	32.71	25.80	4825.	0.637	2.44	
19.	5.59	32.67	25.79	4824.	.626	1.79	
46.	5.59	32.67	25.79	4826.	.632	1.76	
69.	5.54	32.67	25.79	4827.	.626	1.76	
83.	5.55	32.69	25.81	4828.	.624	1.81	
97.	5.56	32.69	25.80	4829.	.624	1.79	
111.	5.23	32.72	25.87	4825.	.601	1.97	
125.	4.41	32.96	26.15	4816.	.557	2.16	
*141.	4.15	33.05	26.24	4813.	.539	2.33	
184.	4.23	33.74	26.78	4820.	.291	3.07	
200.	4.55*	34.16*	27.08	4827.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.70	32.71	25.80	25.80	0.0	220.2	0.000
10.	5.58	32.67	25.79	25.83	10.1	221.9	.022
20.	5.59	32.67	25.79	25.88	20.1	222.2	.045
30.	5.60	32.67	25.78	25.93	30.2	222.4	.067
50.	5.58	32.67	25.79	26.02	50.3	222.4	.112
75.	5.54	32.68	25.80	26.15	75.5	221.7	.168
100.	5.52	32.69	25.81	26.28	100.7	220.4	.223
125.	4.41	32.96	26.15	26.73	125.8	188.7	.275
150.	4.07	33.14	26.32	27.03	151.0	172.0	.320
200.	4.55	34.16	27.08	28.02	201.4	100.6	.389

STATION 1-06

TIME: 1920 G.M.T. DATE: 16-II-57 POSITION: Grid OS
WEATHER: 51 WIND: Dir. 180° Force 6 AIR TEMP: Dry 45.6° Wet 45.2° BARO: 1020.7 mb.
CLOUD: Type St Amt 8 SEA: 160°- 4 SWELL: 160°- 5 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.80	32.64	25.74	4826.	0.628	1.57	0.31
28.	5.50	32.64	25.77	4823.	.612	1.43	.22
64.	5.35	32.67	25.81	4824.	.604	1.49	.21
92.	5.30	32.69	25.83	4825.	.625	1.57	.23
119.	5.18	32.71	25.86	4825.	.601	1.59	.18
147.	4.11	33.38	26.51	4814.	.431	2.27	.04
184.	4.25	33.74	26.78	4820.	.279	2.56	.04
296.	3.93	33.98	27.00	4823.		3.03	.06
445.	3.75	34.13	27.14	4830.	.065	3.14	.10
600.	3.49	34.20	27.22	4836.	.045	3.26	.09
921.	2.90	34.32	27.37	4847.	.034	3.20	.09
1300.	2.37	34.43	27.51	4863.	.044	3.20	.06

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.80	32.64	25.74	25.74	0.0	226.6	0.000
10.	5.61	32.62	25.75	25.79	10.1	225.8	.023
20.	5.55	32.63	25.76	25.85	20.1	224.5	.045
30.	5.49	32.64	25.78	25.92	30.2	223.3	.068
50.	5.40	32.66	25.80	26.03	50.3	221.1	.113
75.	5.32	32.68	25.82	26.17	75.5	219.1	.168
100.	5.27	32.70	25.84	26.31	100.7	217.5	.223
125.	5.03	32.80	25.95	26.54	125.8	207.4	.277
150.	4.06	33.43	26.56	27.26	151.0	149.9	.322
200.	4.27	33.85	26.87	27.81	201.4	121.0	.390
250.	4.20	34.04	27.02	28.20	251.8	106.9	.447
300.	3.92	33.99	27.01	28.42	302.3	108.2	.501
400.	3.77	34.11	27.12	29.00	403.2	98.6	.606
500.	3.67	34.16	27.18	29.53	504.2	93.8	.703
600.	3.49	34.20	27.22	30.05	605.2	90.1	.796
700.	3.31	34.24	27.27	30.57	706.3	85.9	.885
800.	3.13	34.28	27.32	31.08	807.4	81.8	.969
1000.	2.77	34.35	27.41	32.11	1009.8	74.3	1.127
1200.	2.49	34.40	27.48	33.12	1212.4	68.0	1.271

STATION 1-07

TIME: 1830 G.M.T. DATE: 20-II-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. 100° Force 7 AIR TEMP: Dry 43.3° Wet 40.5° BARO: 1022.0 mb.
CLOUD: Type Sc Amt 5 SEA: 090°- 5 SWELL: 090°- 6 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	5.60	32.69	25.80	4823.	0.628	2.12	
19.	5.61	32.64	25.76	4824.	.626	1.59	
48.	5.63	32.64	25.76	4826.	.632	1.73	
73.	5.63	32.65	25.76	4828.	.631	1.73	
98.	5.06	32.77	25.93	4822.	.598	1.89	
118.	4.13	33.08	26.27	4812.	.538	2.31	
133.	4.07	33.26	26.42	4813.	.476	2.54	
148.	4.11	33.50	26.61	4815.	.402	2.66	
173.	4.23	33.74	26.78	4819.	.285	2.94	
199.	4.21	33.79	26.83	4821.	.252	3.15	
249.	3.97	33.89	26.93	4821.	.164	3.35	
289.	3.91	34.05	27.06	4823.	.124	3.47	
300.	3.91*	34.11*	27.11	4824.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.60	32.69	25.80	25.80	0.0	220.6	0.000
10.	5.60	32.64	25.76	25.81	10.1	224.2	.022
20.	5.61	32.64	25.76	25.85	20.1	224.7	.045
30.	5.62	32.64	25.76	25.90	30.2	225.0	.068
50.	5.63	32.64	25.76	25.99	50.3	225.2	.113
75.	5.61	32.66	25.77	26.12	75.5	224.0	.169
100.	4.99	32.79	25.95	26.42	100.7	207.1	.224
125.	4.03	33.17	26.35	26.94	125.8	169.2	.271
150.	4.12	33.53	26.63	27.33	151.0	143.4	.310
200.	4.21	33.79	26.83	27.77	201.4	124.9	.378
250.	3.97	33.89	26.93	28.11	251.8	115.2	.439
300.	3.91	34.11	27.11	28.52	302.3	99.1	.493

STATION 1-08

TIME: 1819 *1905 G.M.T. DATE: 25-II-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 230° Force 6 AIR TEMP: Dry 40.7° Wet 37.8° BARO: 994.1 mb.
CLOUD: Type Sc Amt 7 SEA: 260°- 2 SWELL: 260°- 8 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	5.50	32.76	25.87	4822.	0.625	1.07	0.37
20.	5.49	32.67	25.80	4823.	.628	0.87	.25
49.	5.51	32.69	25.81	4825.	.630	1.30	.25
73.	5.53	32.65	25.78	4827.	.631	1.40	.24
88.	5.51	32.65	25.78	4827.	.628	1.24	.23
103.	5.52	32.67	25.79	4828.	.626	2.26	.26
117.	5.17	32.76	25.91	4825.	.605	2.44	.17
132.	4.01	33.17	26.35	4811.	.518	2.50	.03
147.	4.01	33.38	26.52	4813.	.441	2.42	.04
195.	4.09	33.82	26.86	4819.	.251	2.38	.04
244.	3.96	33.89	26.93	4820.	.180	2.35	.05
294.	3.89	33.96	26.99	4822.	.121	3.05	.03
*468.	3.68	34.13	27.15	4830.	.063	2.94	.04
690.	3.27	34.27	27.30	4838.	.047	2.93	.09
948.	2.88	34.34	27.39	4849.	.044	2.89	.08
1438.	2.31	34.48	27.55	4870.	.063	2.76	.09
1943.	1.91	34.58	27.66	4895.	.110	3.95	.04
2000.	1.88*	34.59*	27.67	4898.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.50	32.76	25.87	25.87	0.0	214.2	0.000
10.	5.48	32.65	25.78	25.83	10.1	222.7	.022
20.	5.49	32.67	25.80	25.89	20.1	221.1	.044
30.	5.50	32.69	25.81	25.95	30.2	220.1	.067
50.	5.51	32.69	25.81	26.04	50.3	220.1	.111
75.	5.53	32.65	25.78	26.13	75.5	223.6	.167
100.	5.52	32.66	25.79	26.26	100.7	222.6	.223
125.	4.65	32.94	26.10	26.69	125.8	192.9	.275
150.	4.01	33.42	26.55	27.26	151.0	150.5	.318
200.	4.09	33.84	26.88	27.82	201.4	119.7	.386
250.	3.95	33.90	26.94	28.12	251.8	114.6	.445
300.	3.88	33.97	27.00	28.41	302.3	109.2	.502
400.	3.76	34.08	27.10	28.98	403.2	100.5	.608
500.	3.63	34.16	27.17	29.53	504.2	94.1	.706
600.	3.46	34.22	27.25	30.07	605.2	87.9	.798
700.	3.25	34.27	27.31	30.60	706.3	82.7	.884
800.	3.09	34.31	27.35	31.11	807.4	78.9	.966
1000.	2.81	34.35	27.41	32.11	1009.8	74.0	1.121
1200.	2.56	34.41	27.48	33.12	1212.4	68.2	1.265
1500.	2.25	34.49	27.57	34.61	1516.7	60.1	1.460
2000.	1.88	34.59	27.67	37.04	2024.7	50.9	1.742

STATION 1-09

TIME: 1820 *1851 G.M.T. DATE: 2-III-57 POSITION: Grid OS
WEATHER: 10 WIND: Dir. 130° Force 5 AIR TEMP: Dry 45.1° Wet 43.1° BARO: 1005.6 mb.
CLOUD: Type Sc Amt 4 SEA: 140°- 5 SWELL: 140°- 8 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	5.40	32.65	25.79	4820.	0.622	2.03	0.26
19.	5.38	32.65	25.79	4821.	.626	1.69	.25
47.	5.41	32.65	25.79	4823.	.626	1.67	.23
71.	5.43	32.64	25.78	4825.	.631	1.64	.23
85.	5.41	32.64	25.78	4826.	.627	1.64	.23
99.	5.43	32.69	25.82	4827.	.623	1.72	.23
114.	5.25	32.71	25.86	4825.	.611	1.66	.21
129.	4.23	33.05	26.24	4814.	.539	2.07	.02
144.	4.01	33.29	26.45	4813.	.460	2.21	.03
194.	4.18	33.74	26.79	4820.	.281	2.62	.01
244.	4.03	33.87	26.91	4821.	.187	2.88	.02
294.	3.89	33.94	26.98	4822.	.136	3.12	.00
*455.	3.76	34.18	27.18	4831.	.064	3.41	.01
687.	3.34	34.29	27.31	4839.	.047	3.35	.03
923.	2.92	34.38*	27.42	4848.			
1397.	2.35	34.48	27.55	4868.	.054	3.44	.03
1888.	1.94	34.56	27.65	4892.	.131	3.18	.00
2000.	1.87*	34.57*	27.66	4897.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.40	32.65	25.79	25.79	0.0	221.4	0.000
10.	5.37	32.65	25.79	25.84	10.1	221.3	.022
20.	5.38	32.65	25.79	25.89	20.1	221.3	.045
30.	5.39	32.65	25.79	25.93	30.2	221.5	.067
50.	5.41	32.65	25.79	26.02	50.3	222.0	.111
75.	5.43	32.64	25.78	26.13	75.5	223.2	.167
100.	5.42	32.69	25.82	26.29	100.7	219.4	.223
125.	4.58	32.93	26.10	26.69	125.8	192.9	.275
150.	3.96	33.37	26.52	27.23	151.0	153.4	.319
200.	4.18	33.77	26.81	27.76	201.4	126.0	.389
250.	4.01	33.88	26.92	28.10	251.8	116.6	.450
300.	3.88	33.95	26.99	28.40	302.3	110.5	.508
400.	3.75	34.10	27.11	29.00	403.2	99.0	.613
500.	3.70	34.22	27.22	29.57	504.2	89.8	.709
600.	3.53	34.28	27.28	30.11	605.2	84.4	.797
700.	3.32	34.30	27.32	30.61	706.3	81.8	.881
800.	3.14	34.34	27.36	31.13	807.4	77.7	.961
1000.	2.80	34.40	27.45	32.15	1009.8	70.5	1.111
1200.	2.54	34.45	27.51	33.15	1212.4	65.2	1.249
1500.	2.25	34.50	27.57	34.62	1516.7	59.7	1.439
2000.	1.87	34.57	27.66	37.03	2024.7	51.9	1.722

STATION 1-10

TIME: 1820 *1851 G.M.T. **1848 G.M.T. DATE: **2-III-57 5-III-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 180° Force 4 AIR TEMP: Dry 43.8° Wet 42.0° BARO: 990.5 mb.
CLOUD: Type St Amt 6 SEA: 180°- 4 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	5.40	32.65	25.79	4820.			
19.	5.38	32.65	25.79	4821.			
47.	5.41	32.65	25.79	4823.			
71.	5.43	32.64	25.78	4825.			
85.	5.41	32.64	25.78	4826.			
99.	5.43	32.69	25.82	4827.			
114.	5.25	32.71	25.86	4825.			
129.	4.23	33.05	26.24	4814.			
144.	4.01	33.29	26.45	4813.			
194.	4.18	33.74	26.79	4820.			
244.	4.03	33.87	26.91	4821.			
294.	3.89	33.94	26.98	4822.			
*455.	3.76	34.18	27.18	4831.			
687.	3.34	34.29	27.31	4839.			
**996.	2.74	34.39	27.44	4850.	0.041	3.28	0.19
1195.	2.58	34.43	27.49	4859.	.031	3.05	.11
1395.	2.35	34.48	27.55	4868.	.105	3.18	.03
1595.	2.17	34.51	27.59	4877.	.044	3.03	.11
1794.	1.98	34.56	27.64	4887.	.062	3.07	.08
1994.	1.89	34.53	27.63	4897.	.070	3.08	.06
2194.	1.79	34.60	27.69	4908.	.170	3.18	.02
2394.	1.71*	34.61	27.70	4919.	.065	2.92	.08
2593.	1.65	34.63	27.72	4930.	.089	2.87	.05
2793.	1.61	34.63	27.73	4941.	.091	2.87	.05
2993.	1.56	34.65	27.75	4952.	.168	2.95	.03
3000.	1.56*	34.65*	27.75	4952.			

STATION 1-10

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	5.40	32.65	25.79	25.79	0.0	221.4	0.000
10.	5.37	32.65	25.79	25.84	10.1	221.3	.022
20.	5.38	32.65	25.79	25.89	20.1	221.3	.045
30.	5.39	32.65	25.79	25.93	30.2	221.5	.067
50.	5.41	32.65	25.79	26.02	50.3	222.0	.111
75.	5.43	32.64	25.78	26.13	75.5	223.2	.167
100.	5.42	32.69	25.82	26.29	100.7	219.4	.223
125.	4.58	32.93	26.10	26.69	125.8	192.9	.275
150.	3.96	33.37	26.52	27.23	151.0	153.4	.319
200.	4.18	33.77	26.81	27.76	201.4	126.0	.389
250.	4.01	33.88	26.92	28.10	251.8	116.6	.450
300.	3.88	33.95	26.99	28.40	302.3	110.5	.508
400.	3.75	34.10	27.11	29.00	403.2	99.0	.613
500.	3.70	34.22	27.22	29.57	504.2	89.8	.709
600.	3.53	34.28	27.28	30.11	605.2	84.4	.797
700.	3.32	34.30	27.32	30.61	706.3	81.8	.881
800.	3.13	34.33	27.36	31.13	807.4	77.7	.961
1000.	2.74	34.39	27.44	32.15	1009.8	70.5	1.111
1200.	2.58	34.43	27.49	33.13	1212.4	66.9	1.251
1500.	2.25	34.50	27.57	34.62	1516.7	59.8	1.443
2000.	1.89	34.53	27.63	36.99	2024.7	55.3	1.736
2500.	1.68	34.62	27.71	39.38	2534.0	47.9	1.998
3000.	1.56	34.65	27.75	41.69	3044.3	45.7	2.237

STATION 2-01

TIME: 1856 *1938 G.M.T. DATE: 20-IV-57 POSITION: Grid OK
WEATHER: 63 WIND: Dir. 270° Force 7 AIR TEMP: Dry 46.5 Wet 46.5 BARO: 1007 mb.
CLOUD: Type Cu Amt 10 SEA: 160°- 7 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	6.67	32.52	25.54		0.634		
9.	6.25	32.64	25.68		.634		
19.		32.60	25.65		.637		
28.	6.27	32.62	25.67		.631		
47.	6.20	32.62	25.67		.647		
71.	5.70	32.65	25.76		.629		
*266.	3.94	33.89	26.93		.138		
470.	3.65	34.06	27.09		.060		
711.	3.14	34.24	27.28		.044		

Computations not carried out.

STATION 2-02

TIME: 1832 G.M.T. DATE: 24-VI-57 POSITION: Grid OJ
WEATHER: 02 WIND: Dir. 260 Force 4 AIR TEMP: Dry 44.5° Wet 42.5° BARO: 1021 mb.
CLOUD: Type St Amt 10 SEA: 210°- 3 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	6.02	32.72	25.77	4829.		1.53	
29.	6.00	32.62	25.70	4830.	0.638	1.40	
58.	5.87	32.64	25.73	4830.	.628	1.46	
72.	5.83	32.64	25.73	4830.	.632	1.46	
87.	5.39	32.64	25.79	4825.	.629	1.54	
101.	5.09	32.74	25.90	4823.	.600	1.73	
116.	4.66	32.95	26.11	4818.	.558	1.87	
130.	4.23	33.15	26.32	4814.	.499	2.11	
145.	4.11	33.39	26.52	4814.	.440	2.27	
193.	4.18	33.75	26.80	4820.	.278	2.66	
289.	3.96	33.93	26.96	4823.	.117	3.10	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.02	32.72	25.77	25.77	0.0	223.1	0.000
10.	6.03	32.67	25.73	25.78	10.1	226.9	.023
20.	6.02	32.64	25.71	25.80	20.1	229.5	.046
30.	6.00	32.62	25.70	25.84	30.2	230.8	.069
50.	5.92	32.62	25.71	25.94	50.3	229.8	.115
75.	5.77	32.64	25.74	26.09	75.5	227.1	.173
100.	5.11	32.73	25.89	26.36	100.6	213.1	.228
125.	4.39	33.08	26.24	26.83	125.8	179.6	.277
150.	4.09	33.46	26.57	27.28	151.0	148.4	.319
200.	4.18	33.79	26.83	27.77	201.4	124.9	.388
250.	4.11	33.94	26.96	28.13	251.8	112.9	.448

STATION 2-03

TIME: 1931 *1828 G.M.T. DATE: 27-IV-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 220° Force 2 AIR TEMP: Dry 44.0° Wet 43.0° BARO: 1013.0 mb.
CLOUD: Type Ac Amt 3 SEA: 170°- 2 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	6.44	32.60	25.63	4834.		1.48	0.13
10.	6.30	32.60	25.64	4833.	0.634	1.27	.08
20.	6.23	32.62	25.67	4833.	.642	1.30	.06
30.	6.21	32.62	25.67	4833.	.638	1.30	.07
50.	6.21	32.60	25.65	4834.	.641	1.30	.07
75.	6.03	32.60	25.68	4833.	.631	1.25	.07
100.	5.43	32.64	25.78	4827.	.627	1.47	.15
125.	4.18	33.20	26.36	4813.	.511	1.94	tr.
150.	4.07	33.44	26.56	4814.	.410	2.20	tr.
200.	4.18	33.77	26.81	4820.	.261	2.46	tr.
*270.	3.99	33.89	26.93	4822.	.151	2.83	tr.
472.	3.68	34.05	27.09	4830.	.210	3.07	tr.
725.	3.30	34.17	27.22	4841.	.047	2.83	tr.
979.	2.82	34.34	27.40	4850.	.039	3.12	tr.
1170.	2.54	34.41	27.48	4857.	.049	3.16	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.44	32.60	25.63	25.63	0.0	237.1	0.000
10.	6.30	32.60	25.64	25.69	10.1	235.6	.024
20.	6.23	32.62	25.67	25.76	20.1	233.3	.047
30.	6.21	32.62	25.67	25.81	30.2	233.2	.071
50.	6.21	32.60	25.65	25.89	50.3	234.9	.118
75.	6.03	32.60	25.68	26.03	75.5	233.1	.177
100.	5.43	32.64	25.78	26.25	100.6	223.4	.234
125.	4.18	33.20	26.36	26.95	125.8	168.4	.284
150.	4.07	33.44	26.56	27.27	151.0	149.4	.324
200.	4.18	33.77	26.81	27.75	201.4	126.2	.393
250.	4.09	33.90	26.92	28.10	251.8	116.2	.454
300.	3.92	33.93	26.97	28.38	302.3	112.3	.512
400.	3.75	34.02	27.06	28.94	403.2	104.3	.621
500.	3.64	34.07	27.10	29.46	504.1	100.7	.725
600.	3.49	34.12	27.16	29.98	605.2	95.9	.824
700.	3.34	34.16	27.21	30.50	706.2	92.0	.919
800.	3.17	34.22	27.27	31.03	807.3	86.9	1.009
1000.	2.79	34.35	27.41	32.11	1009.7	74.1	1.172

STATION 2-04

TIME: 1837 G.M.T. DATE: 1-V-57 POSITION: Grid OS
WEATHER: 01 WIND: Dir. Var. Force 0 AIR TEMP: Dry 45.5° Wet 43.0° BARO: 1007 mb.
CLOUD: Type Cu Amt 3 SEA: x SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	6.94	32.65	25.60	4841.		1.52	
30.	6.20	32.60	25.66	4833.	0.629	1.48	
59.	6.02	32.64	25.71	4832.	.628	1.49	
74.	5.96	32.60	25.69	4832.		1.50	
89.	5.90	32.62	25.71	4832.	.642	1.49	
103.	5.77	32.62	25.72	4831.	.635	1.55	
118.	5.43	32.71	25.84	4828.	.614	1.55	
133.	4.33	33.07	26.24	4815.	.522	2.02	
148.	4.09	33.48	26.59	4815.	.392	2.48	
195.	4.16	33.79	26.83	4820.	.244	2.63	
294.	3.94	33.87	26.92	4823.	.126	2.95	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.94	32.65	25.60	25.60	0.0	239.6	0.000
10.	6.63	32.62	25.62	25.67	10.1	237.9	.024
20.	6.38	32.61	25.64	25.73	20.1	236.2	.048
30.	6.20	32.60	25.66	25.80	30.2	234.6	.072
50.	6.02	32.62	25.69	25.93	50.3	231.3	.118
75.	5.96	32.60	25.69	26.04	75.5	232.3	.177
100.	5.80	32.62	25.72	26.19	100.6	229.1	.235
125.	5.01	32.84	25.99	26.58	125.8	203.7	.289
150.	4.07	33.52	26.63	27.33	151.0	143.2	.333
200.	4.16	33.81	26.85	27.79	201.4	122.8	.400
250.	4.10	33.93	26.95	28.12	251.8	113.8	.460

STATION 2-05

TIME: *1832 1931 DATE: 4-V-57 POSITION: Grid OS
WEATHER: 01 WIND: Dir. 270° Force 3 AIR TEMP: Dry 46.0° Wet 42.2° BARO: 1020.0 mb.
CLOUD: Type Cu Amt 4 SEA: x SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	6.83	32.74	25.69	4840.		1.47	0.13
10.	6.36	32.64	25.67	4834.	0.639	1.39	.10
20.	6.32	32.62	25.66	4834.	.660	1.34	
30.	6.28	32.64	25.68	4834.	.648	1.39	.12
50.	6.18	32.62	25.67	4834.	.697	1.46	.11
75.	5.98	32.65	25.72	4833.	.666	1.52	.13
100.	5.65	32.65	25.76	4830.	.630	1.56	.16
125.	4.71	32.89	26.06	4819.	.679	1.79	tr.
150.	4.06	33.44	26.56	4814.	.424	2.40	tr.
200.	4.19	33.75	26.80	4820.	.284	2.70	tr.
*295.	3.81	33.96	27.00	4821.	.118	2.92	tr.
495.	3.63	34.12	27.15	4831.	.050	3.08	tr.
745.	3.18	34.27	27.31	4840.	.041	3.24	tr.
995.	2.78	34.37	27.42	4850.	.041	3.09	tr.
1190.	2.49	34.43	27.50	4858.	.056	3.22	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.83	32.74	25.69	25.69	0.0	231.5	0.000
10.	6.36	32.64	25.67	25.71	10.1	233.3	.023
20.	6.32	32.62	25.66	25.75	20.1	234.4	.047
30.	6.28	32.64	25.68	25.82	30.2	232.6	.070
50.	6.18	32.62	25.67	25.91	50.3	233.1	.117
75.	5.98	32.65	25.72	26.07	75.5	228.8	.175
100.	5.65	32.65	25.76	26.23	100.6	225.2	.232
125.	4.71	32.89	26.06	26.65	125.8	197.1	.286
150.	4.06	33.44	26.56	27.27	151.0	149.3	.329
200.	4.19	33.75	26.80	27.74	201.4	127.8	.399
250.	4.09	33.92	26.94	28.12	251.8	114.3	.460
300.	3.80	33.97	27.01	28.42	302.3	108.2	.516
400.	3.61	34.09	27.13	29.01	403.2	97.9	.620
500.	3.62	34.12	27.15	29.50	504.1	96.4	.718
600.	3.47	34.19	27.22	30.04	605.2	90.6	.813
700.	3.28	34.25	27.28	30.57	706.2	85.1	.902
800.	3.09	34.30	27.34	31.10	807.4	80.0	.985
1000.	2.77	34.37	27.43	32.13	1009.8	72.3	1.139

STATION 2-06

TIME: 1817 G.M.T. DATE: 8-V-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. Var. Force 0 AIR TEMP: Dry 47.0° Wet 43.8° BARO: 1019.0 mb.
CLOUD: Type St Amt 10 SEA: x SWELL: x SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.06	32.65	25.58	4842.		1.48	
25.	6.85	32.62	25.59	4841.	0.634	1.43	
50.	6.73	32.65	25.63	4841.	.631	1.45	
75.	6.08	32.64	25.70	4834.	.625	1.49	
90.	5.96	32.60	25.69	4833.	.634	1.52	
105.	5.64	32.65	25.76	4830.	.638	1.61	
120.	5.07	32.79	25.94	4824.	.608	1.73	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.06	32.65	25.58	25.58	0.0	241.1	0.000
10.	6.67	32.58	25.58	25.63	10.1	241.3	.024
20.	6.81	32.61	25.59	25.68	20.1	241.3	.049
30.	6.87	32.63	25.59	25.73	30.2	240.6	.073
50.	6.73	32.65	25.63	25.86	50.3	237.6	.121
75.	6.08	32.64	25.70	26.05	75.5	230.7	.180
100.	5.77	32.62	25.73	26.20	100.6	228.5	.238

STATION 2-07

TIME: 1816 G.M.T. DATE: 9-V-57 POSITION: Grid OS
WEATHER: 47 WIND: Dir. 140° Force 4 AIR TEMP: Dry 46.0° Wet 46.0° BARO: 1016.0 mb.
CLOUD: Type Amt SEA: 120°- 2 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.00	32.67	25.61	4842.		1.48	
25.	6.69	32.69	25.66	4839.	0.637	1.41	
48.	6.45	32.64	25.66	4837.	.637	1.47	
72.	5.74	32.65	25.75	4829.	.629	1.52	
87.	5.42	32.69	25.82	4826.	.618	1.57	
101.	5.08	32.84	25.98	4823.	.604	1.74	
115.	4.66	32.95	26.11	4818.	.569	1.84	
130.	4.16	33.26	26.41	4814.	.492	2.07	
144.	4.09	33.50	26.61	4814.	.411	2.23	
197.	4.14	33.81	26.85	4820.	.254	2.57	
296.	3.91	33.93	26.97	4823.	.126	3.04	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.00	32.67	25.61	25.61	0.0	238.9	0.000
10.	6.61	32.75	25.72	25.77	10.1	227.9	.023
20.	6.69	32.71	25.68	25.77	20.1	232.3	.047
30.	6.67	32.67	25.65	25.79	30.2	234.8	.070
50.	6.41	32.64	25.66	25.89	50.3	234.5	.117
75.	5.67	32.66	25.77	26.12	75.5	224.7	.175
100.	5.11	32.83	25.96	26.43	100.6	205.9	.229
125.	4.33	33.13	26.29	26.88	125.8	174.8	.277
150.	4.07	33.58	26.67	27.38	151.0	138.7	.317
200.	4.14	33.82	26.86	27.80	201.4	121.9	.382
250.	4.07	33.95	26.97	28.14	251.8	112.1	.441

STATION 2-08

TIME: *1810 1845 **1915 G.M.T. DATE: 11-V-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. Force AIR TEMP: Dry 45.0° Wet 44.0° BARO: 1009.0 mb.
CLOUD: Type As Amt 10 SEA: x SWELL: 1 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.33	32.69	25.58	4846.		1.54	0.09
10.	6.94	32.62	25.58	4841.	0.648	1.46	.06
20.	6.72	32.60	25.59	4839.	.644	1.41	.06
30.	6.70	32.62	25.61	4839.	.644	1.43	.07
50.	6.43	32.64	25.66	4837.	.644	1.51	.07
75.	6.04	32.62	25.69	4833.	.639	1.56	.10
100.	5.50	32.67	25.80	4828.	.643	1.55	.17
**125.	4.69	32.83	26.01	4819.	.572	1.89	tr.
150.	4.04	33.44	26.56	4814.	.415	2.37	tr.
200.	4.15	33.81	26.85	4820.	.254	2.73	tr.
*275.	3.93	33.93	26.96	4822.	.131	2.97	tr.
458.	3.69	34.08	27.11	4830.	.055	3.25	tr.
680.	3.27	34.24	27.28	4838.	.046	3.17	tr.
914.	2.96	34.32	27.37	4848.	.046	3.19	tr.
1068.	2.70	34.39	27.45	4853.	.048	3.19	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.33	32.69	25.58	25.58	0.0	241.6	0.000
10.	6.94	32.62	25.58	25.62	10.1	242.0	.024
20.	6.72	32.60	25.59	25.68	20.1	240.8	.049
30.	6.70	32.62	25.61	25.75	30.2	239.2	.073
50.	6.43	32.64	25.66	25.89	50.3	234.6	.120
75.	6.04	32.62	25.69	26.04	75.5	231.7	.179
100.	5.50	32.67	25.80	26.26	100.6	222.0	.236
125.	4.69	32.83	26.01	26.60	125.8	201.4	.289
150.	4.04	33.44	26.56	27.27	151.0	149.1	.334
200.	4.15	33.81	26.85	27.79	201.4	122.9	.402
250.	4.05	33.95	26.97	28.14	251.8	112.0	.461
300.	3.87	33.96	27.00	28.41	302.3	109.5	.517
400.	3.72	34.05	27.08	28.97	403.2	101.8	.624
500.	3.62	34.11	27.14	29.49	504.1	97.3	.724
600.	3.44	34.19	27.22	30.04	605.2	90.6	.819
700.	3.24	34.25	27.29	30.58	706.2	84.4	.908
800.	3.09	34.29	27.33	31.10	807.4	80.4	.991
1000.	2.82	34.36	27.41	32.11	1009.8	73.9	1.147

STATION 2-09

TIME: 1836 G.M.T. DATE: 15-V-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 180° Force3-4 AIR TEMP: Dry 47.5° Wet 46.0° BARO: 1010.0 mb.
CLOUD: Type St Amt 10 SEA: 200°- 3 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.67	32.71	25.55	4850.		1.47	
25.	7.25	32.65	25.56	4846.	0.624	1.35	
50.	7.10	32.65	25.58	4846.	.626	1.45	
75.	6.56	32.65	25.65	4840.	.627	1.50	
90.	6.09	32.69	25.74	4835.	.626	1.57	
105.	5.46	32.71	25.83	4828.	.622	1.70	
120.	5.07	32.79	25.94	4824.	.597	1.68	
135.	4.58	33.01	26.17	4819.	.576	1.84	
150.	4.05	33.32	26.47	4814.	.453	2.29	
199.	4.14	33.72	26.78	4819.	.282	2.63	
298.	3.95	33.94	26.97	4823.		2.96	

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.67	32.71	25.55	25.55	0.0	244.7	0.000
10.	7.15	32.65	25.57	25.62	10.1	242.5	.025
20.	7.23	32.65	25.56	25.65	20.1	243.6	.049
30.	7.25	32.65	25.56	25.70	30.2	244.0	.073
50.	7.10	32.65	25.58	25.81	50.3	242.3	.122
75.	6.56	32.65	25.65	26.00	75.5	235.8	.183
100.	5.69	32.71	25.80	26.27	100.6	221.5	.240
125.	4.92	32.85	26.00	26.59	125.8	202.5	.293
150.	4.05	33.32	26.47	27.18	151.0	158.2	.339
200.	4.14	33.73	26.78	27.72	201.4	129.1	.411
250.	4.10	33.93	26.95	28.12	251.8	113.7	.473

STATION 2-10

TIME: *1825 1911 G.M.T. DATE: 19-V-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 270° Force 5 AIR TEMP: Dry 45.5° Wet 44.5° BARO: 1004.0 mb.
CLOUD: Type St Amt 10 SEA: 280°- 5 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.50	32.86	25.69	4849.		1.53	0.16
10.	7.34	32.62	25.52	4846.	0.616	1.74	.14
20.	7.33	32.62	25.52	4847.	.618	1.56	.13
30.	7.34	32.64	25.54	4848.	.618	1.51	.14
50.	7.32	32.65	25.55	4849.	.618	1.52	.13
75.	6.46	32.67	25.68	4839.		1.61	.17
100.	5.51	32.67	25.79	4828.	.622	1.62	.34
125.	4.83	32.88	26.04	4821.	.574	1.89	tr.
150.	4.09	33.38	26.51	4814.	.428	2.42	tr.
200.	4.11	33.77	26.82	4819.	.264	2.80	tr.
*300.	4.06*	33.91	26.94	4825.	.132	3.09	tr.
499.	3.62	34.12	27.15	4831.	.059	3.28	tr.
748.	3.16	34.29	27.33	4840.	.040	3.30	tr.
995.	2.78	34.39	27.44	4850.	.045	3.35	tr.
1188.	2.51	34.41	27.48	4858.	.056	3.25	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.50	32.86	25.69	25.69	0.0	231.2	0.000
10.	7.34	32.62	25.52	25.57	10.1	247.1	.024
20.	7.33	32.62	25.52	25.62	20.1	247.1	.049
30.	7.34	32.64	25.54	25.68	30.2	245.9	.074
50.	7.32	32.65	25.55	25.78	50.3	245.2	.123
75.	6.46	32.67	25.68	26.03	75.5	233.0	.183
100.	5.51	32.67	25.79	26.26	100.6	222.1	.241
125.	4.83	32.88	26.04	26.63	125.8	199.1	.294
150.	4.09	33.38	26.51	27.22	151.0	154.1	.338
200.	4.11	33.77	26.82	27.76	201.4	125.5	.409
250.	4.10	33.95	26.96	28.14	251.8	112.6	.469
300.	4.06	33.91	26.94	28.35	302.2	115.4	.526
400.	3.90	34.03	27.05	28.93	403.2	105.7	.638
500.	3.62	34.12	27.15	29.50	504.1	96.6	.740
600.	3.42	34.20	27.23	30.05	605.1	89.2	.834
700.	3.24	34.27	27.30	30.59	706.2	83.3	.921
800.	3.07	34.32	27.36	31.12	807.3	78.4	1.002
1000.	2.77	34.39	27.44	32.15	1009.8	70.9	1.154

STATION 2-11

TIME: 1757 * 1827 G.M.T. DATE: 22-V-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 120° Force 2 AIR TEMP: Dry 45.1° Wet 42.6° BARO: 1031 mb.
CLOUD: Type As Amt 9 SEA: 140°- 2 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.75	32.64	25.48	4851.		1.55	0.19
25.	7.33	32.62	25.52	4847.	0.618	1.56	.13
50.	7.30	32.65	25.55	4848.	.618	1.65	.13
75.	6.34	32.64	25.67	4837.	.633	1.56	.17
*90.	5.74	32.65	25.75	4830.	.634	1.64	.27
100.	5.56	32.64	25.77	4828.	.632	1.66	.33
110.	5.41	32.65	25.79	4827.	.621	1.63	.36
120.	5.24	32.72	25.87	4826.	.606	1.67	.19
130.	4.54	33.03	26.19	4818.	.586	1.93	tr.
150.	4.10	33.41	26.53	4815.	.418	2.28	tr.
200.	4.10	33.81	26.85	4819.	.241	2.71	tr.
300.	3.96	33.93	26.96	4824.	.123	3.01	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.75	32.64	25.48	25.48	0.0	251.0	0.000
10.	7.54	32.63	25.50	25.55	10.1	249.3	.025
20.	7.38	32.62	25.52	25.61	20.1	247.8	.050
30.	7.29	32.62	25.53	25.67	30.2	246.6	.075
50.	7.30	32.65	25.55	25.78	50.3	244.9	.125
75.	6.34	32.64	25.67	26.02	75.5	233.8	.185
100.	5.56	32.64	25.77	26.23	100.6	224.9	.242
125.	4.96	32.84	26.00	26.58	125.8	203.1	.296
150.	4.10	33.41	26.53	27.24	151.0	152.0	.341
200.	4.10	33.81	26.85	27.79	201.4	122.4	.410
250.	4.05	33.98	26.99	28.17	251.8	109.4	.469
300.	3.96	33.93	26.96	28.37	302.3	112.8	.525

STATION 2-12

TIME: *1830 1918 G.M.T. DATE: 25-V-57 POSITION: Grid OS
WEATHER: 01 WIND: Dir. 270° Force 7 AIR TEMP: Dry 47.0° Wet 45.0° BARO: 1006.0 mb.
CLOUD: Type Cu Amt 6 SEA: 260°- 4 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	7.86	32.60	25.43	4852.		1.70	0.17
10.	7.69	32.60	25.46	4851.	0.618	1.62	.13
20.	7.66	32.62	25.48	4851.	.621	1.61	.15
30.	7.59	32.60	25.47	4851.	.621	1.67	.14
50.	7.41	32.64	25.53	4850.	.618	1.68	.15
75.	6.82	32.72	25.67	4844.	.625	1.80	.18
99.	5.76	32.71	25.80	4831.	.620	1.90	.32
124.	5.35	32.72	25.85	4827.	.619	1.88	.41
148.	4.22	33.20	26.36	4815.	.489	2.39	tr.
198.	4.16	33.77	26.81	4820.	.258	3.03	tr.
*295.	3.94	33.91	26.95	4823.	.122	3.35	tr.
467.	3.67	34.06	27.09	4830.	.092	3.55	tr.
717.	3.25	34.27	27.30	4840.	.050	3.66	tr.
965.	2.83	34.37	27.42	4849.	.059	3.53	tr.
1165.	2.58	34.44	27.50	4858.	.051	3.48	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.86	32.60	25.43	25.43	0.0	255.4	0.000
10.	7.69	32.60	25.46	25.50	10.1	253.3	.026
20.	7.66	32.62	25.48	25.57	20.1	251.5	.051
30.	7.59	32.60	25.47	25.61	30.2	252.2	.076
50.	7.41	32.64	25.53	25.76	50.3	247.1	.127
75.	6.82	32.72	25.67	26.02	75.5	233.8	.187
100.	5.73	32.71	25.80	26.27	100.6	221.6	.244
125.	5.32	32.73	25.87	26.45	125.8	215.6	.299
150.	4.16	33.23	26.39	27.10	151.0	165.8	.347
200.	4.16	33.79	26.83	27.77	201.4	124.8	.421
250.	4.06	34.00	27.01	28.19	251.8	107.9	.479
300.	3.93	33.92	26.95	28.37	302.2	113.5	.535
400.	3.76	34.02	27.05	28.93	403.1	105.0	.645
500.	3.62	34.09	27.12	29.48	504.1	99.0	.748
600.	3.45	34.17	27.21	30.03	605.1	91.7	.845
700.	3.28	34.26	27.29	30.58	706.2	84.4	.934
800.	3.11	34.32	27.35	31.12	807.3	78.8	1.016
1000.	2.78	34.38	27.43	32.14	1009.7	71.6	1.168

STATION 2-13

TIME: 1803 G.M.T. DATE: 29-V-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 110° Force 6 AIR TEMP: Dry 48.0° Wet 48.0° BARO: 1011 mb.
CLOUD: Type St Amt 10 SEA: 080°- 3 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O mg.at/L	PO μg.at/L	NO μg.at/L
0.	8.06	32.55	25.37	4855.		1.45	0.17
10.	+8.00	+32.60	25.41	4855.			
25.	7.81	32.60	25.44	4853.	0.613	1.45	.15
50.	7.82	32.62	25.45	4855.	.624	1.58	.19
75.	6.93	32.64	25.59	4845.	.625	1.59	.22
90.	6.17	32.65	25.70	4836.	.624	1.64	.35
100.	5.66	32.71	25.81	4830.	.611	1.68	.26
110.	5.38	32.72	25.85	4827.	.616	1.62	.27
120.	5.31	32.96	26.05	4828.	.552	1.94	.01
130.	5.07*	33.14	26.22	4826.	.503	2.18	tr.
150.	4.08	33.46	26.58	4815.	.411	2.41	tr.
200.	4.09	33.77	26.82	4819.	.254	2.74	tr.
300.	3.92	33.93	26.97	4823.	.131	3.09	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	8.06	32.55	25.37	25.37	0.0	261.9	0.000
10.	8.00	32.60	25.41	25.46	10.1	257.5	.026
20.	7.89	32.61	25.44	25.53	20.1	255.4	.052
30.	7.78	32.60	25.45	25.59	30.2	254.6	.078
50.	7.82	32.62	25.45	25.69	50.3	254.1	.129
75.	6.93	32.64	25.59	25.94	75.5	241.2	.191
100.	5.66	32.71	25.81	26.28	100.6	220.8	.249
125.	5.21	33.06	26.14	26.72	125.8	190.0	.301
150.	4.08	33.46	26.58	27.28	151.0	148.0	.343
200.	4.09	33.77	26.82	27.76	201.4	125.3	.412
250.	4.04	33.93	26.95	28.13	251.8	113.4	.473
300.	3.92	33.93	26.97	28.38	302.2	112.4	.529

STATION 3-01

TIME: 1823 *1911 G.M.T. DATE: 13-VII-57 POSITION: Grid JK
WEATHER: 03 WIND: Dir. 180° Force 2 AIR TEMP: Dry 56.1° Wet 53.9° BARO: 1011.2 mb.
CLOUD: Type Ac Amt 10 SEA: 140°- 2 SWELL: 2 SECCHI DISC: 13 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	10.90	32.68	25.01	4890.	0.606	1.62	0.16
10.	10.75	32.60	24.97	4888.	.611	1.25	.11
19.	10.54	32.63	25.03	4887.	.631	1.13	.14
28.	10.40	32.60	25.03	4885.	.615	1.15	.15
48.	6.85	32.69	25.64	4843.	.661	1.36	.22
72.	5.66	32.71	25.81	4828.	.632	1.44	.43
97.	5.03	32.87	26.01	4822.	.591		.05
121.	4.37	33.19	26.33	4816.	.497	1.91	.04
145.	4.07	33.49	26.60	4814.	.410	2.10	.03
194.	4.03	33.81	26.86	4818.	.243	2.10	.03
242.	3.97	33.89	26.93	4820.	.183	2.81	.04
*289.	3.92	33.94	26.97	4822.	.121	2.90	.03
486.	3.71	34.16	27.17	4832.	.068	3.08	.05
727.	3.22	34.30	27.33	4840.	.052	2.99	tr.
971.	2.87	34.39	27.43	4850.	.060	3.05	.06
1456.	2.27	34.52	27.59	4871.	.087	3.06	.06
1500.	2.22*	34.53*	27.60	4873.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	10.90	32.68	25.01	25.01	0.0	295.7	0.000
10.	10.75	32.60	24.97	25.02	10.1	299.4	.030
20.	10.52	32.63	25.04	25.13	20.1	293.6	.060
30.	10.25	32.60	25.06	25.20	30.2	291.6	.089
50.	6.62	32.70	25.68	25.91	50.3	232.9	.142
75.	5.55	32.72	25.83	26.18	75.5	218.4	.199
100.	4.95	32.90	26.04	26.51	100.6	198.6	.251
125.	4.29	33.24	26.38	26.97	125.8	166.4	.297
150.	4.03	33.54	26.65	27.35	151.0	141.5	.336
200.	4.02	33.83	26.88	27.82	201.4	119.9	.402
250.	3.96	33.90	26.94	28.12	251.8	114.6	.461
300.	3.91	33.95	26.98	28.40	302.3	110.6	.518
400.	3.80	34.06	27.08	28.97	403.2	102.1	.625
500.	3.69	34.17	27.18	29.53	504.1	93.5	.724
600.	3.51	34.24	27.26	30.08	605.2	87.0	.815
700.	3.29	34.29	27.32	30.61	706.2	81.8	.900
800.	3.10	34.33	27.37	31.13	807.4	77.5	.981
1000.	2.83	34.40	27.44	32.15	1009.8	70.9	1.131
1200.	2.57	34.46	27.51	33.16	1212.4	64.7	1.268
1500.	2.22	34.53	27.60	34.64	1516.7	57.3	1.454

STATION 3-02

TIME: 1803 DATE: 17-VII-57 POSITION: Grid OK
WEATHER: 49 WIND: Dir. 260° Force 3 AIR TEMP: Dry 51.0° Wet 51.0° BARO: 1029.9 mg.
CLOUD: Type As Amt 10 SEA: 250°- 2 SWELL: 2 SECCHI DISC: 12 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	11.30	32.70	24.95	4895.	0.629	1.21	0.14
10.	11.00+	32.70+	25.01	4892.			
25.	10.27	32.66	25.10	4884.	.641	1.13	.10
50.	8.39	32.70	25.43	4862.	.620	1.31	.15
75.	6.02	32.79	25.83	4834.	.630	1.51	.52
90.	5.61	32.91	25.97	4830.	.614	1.66	.05
100.	5.19	33.07	26.15	4825.	.585	1.77	.02
110.	4.76	33.17	26.27	4820.	.560	1.89	.04
120.	4.55	33.31	26.41	4819.	.527	1.98	.02
130.	4.31	33.40	26.51	4816.	.512	2.15	.02
150.	4.05	33.56	26.66	4814.	.436	2.30	.02
201.	3.91	33.79	26.86	4816.	.280	2.66	.02
252.	3.86	33.91	26.96	4819.	.147	2.92	.02
305.	3.93	33.97	27.00	4824.	.127	2.97	.01

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.30	32.70	24.95	24.95	0.0	301.0	0.000
10.	11.00	32.70	25.01	25.05	10.1	296.1	.030
20.	10.55	32.67	25.06	25.15	20.1	291.2	.060
30.	9.96	32.66	25.15	25.29	30.2	282.7	.088
50.	8.39	32.70	25.43	25.66	50.3	256.2	.143
75.	6.02	32.79	25.83	26.18	75.4	218.8	.202
100.	5.19	33.07	26.15	26.62	100.6	188.5	.254
125.	4.43	33.36	26.46	27.05	125.8	158.8	.297
150.	4.05	33.56	26.66	27.37	151.0	140.2	.335
200.	3.91	33.79	26.85	27.80	201.4	122.1	.401
250.	3.86	33.91	26.95	28.13	251.8	113.1	.460
300.	3.92	33.97	27.00	28.41	302.3	109.6	.517

STATION 3-03

TIME: 1803 G.M.T. *1856 G.M.T. DATE: 17-VII-57 *20-VII-57 POSITION: Grid OK
WEATHER: 51 WIND: Dir. Force 0 AIR TEMP: Dry 56.5° Wet 53.8° BARO: 1031.0 mb.
CLOUD: Type St Amt 10 SEA: x SWELL: x SECCHI DISC: 13 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
.	11.30	32.70	24.95	4895.			
25.	10.27	32.66	25.10	4884.			
50.	8.39	32.70	25.43	4862.			
75.	6.02	32.79	25.83	4834.			
90.	5.61	32.91	25.97	4830.			
100.	5.19	33.07	26.15	4825.			
110.	4.76	33.17	26.27	4820.			
120.	4.55	33.31	26.41	4819.			
130.	4.31	33.40	26.51	4816.			
150.	4.05	33.56	26.66	4814.			
201.	3.91	33.79	26.86	4816.			
252.	3.86	33.91	26.96	4819.			
305.	3.93	33.97	27.00	4824.			
*487.	3.69	34.16	27.17	4832.	0.066	2.73	0.02
733.	3.23	34.29	27.32	4841.	.059	3.10	.05
977.	2.88	34.40	27.44	4851.	.044	3.00	.04
1471.	2.34	34.50	27.57	4873.	.064	3.10	.03
1500.	2.32*	34.50*	27.57	4874.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.30	32.70	24.95	24.95	0.0	301.0	0.000
10.	11.16	32.66	24.95	24.99	10.1	301.8	.030
20.	10.59	32.66	25.05	25.14	20.1	292.6	.060
30.	9.93	32.66	25.16	25.30	30.2	281.8	.089
50.	8.39	32.70	25.43	25.66	50.3	256.2	.143
75.	6.02	32.79	25.83	26.18	75.4	218.8	.203
100.	5.19	33.07	26.15	26.62	100.6	188.5	.254
125.	4.43	33.36	26.46	27.05	125.8	158.8	.298
150.	4.05	33.56	26.66	27.37	151.0	140.2	.336
200.	3.91	33.79	26.85	27.80	201.4	122.1	.402
250.	3.86	33.91	26.95	28.13	251.8	113.1	.461
300.	3.92	33.97	27.00	28.41	302.3	109.6	.517
400.	3.90	34.07	27.08	28.96	403.2	102.3	.624
500.	3.67	34.17	27.18	29.53	504.1	93.4	.723
600.	3.50	34.24	27.25	30.08	605.2	87.3	.814
700.	3.30	34.28	27.31	30.60	706.2	82.8	.900
800.	3.12	34.32	27.35	31.12	807.4	78.5	.982
1000.	2.85	34.41	27.45	32.15	1009.8	70.4	1.132
1200.	2.61	34.47	27.52	33.16	1212.4	64.7	1.269
1500.	2.32	34.50	27.57	34.61	1516.7	60.4	1.460

STATION 3-04

TIME: 1746 G.M.T. DATE: 24-VII-57 POSITION: Grid OS
WEATHER: 03 WIND: Dir. 250° Force 4 AIR TEMP: Dry 50.5° Wet 48.0° BARO: 1016 mb.
CLOUD: Type Sc Amt 10 SEA 240°- 3 SWELL: 3 SECCHI DISC: 12 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	11.20	32.74	25.00	4894.	0.595	1.06	0.14
10.	+11.36	+32.70	24.94	4896.			
24.	11.36	32.61	24.87	4896.	.604	0.92	.11
49.	8.13	32.73	25.50	4859.	.620	1.30	.16
73.	5.64	32.78	25.87	4829.	.639	1.50	.72
87.	5.41	32.79	25.90	4826.	.635	1.54	.69
97.	5.20	32.80	25.93	4824.	.640	1.56	.29
107.	4.98	32.82	25.97	4822.	.636	1.58	.08
116.	4.69	32.87	26.05	4819.	.595	1.60	.03
126.	4.31	32.94	26.14	4814.	.606	1.68	.04
146.	3.96	33.25	26.42	4812.	.504	2.15	.02
194.	3.87	33.70	26.79	4815.	.333	2.59	.02
242.	3.92	33.84	26.89	4819.	.217	2.88	.02
291.	3.92	33.90	26.94	4822.	.185	2.68	.02

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.20	32.74	25.00	25.00	0.0	296.4	0.000
10.	11.36	32.70	24.94	24.99	10.1	302.3	.030
20.	11.39	32.64	24.89	24.98	20.1	307.4	.061
30.	10.96	32.61	24.94	25.08	30.2	302.9	.091
50.	8.01	32.73	25.52	25.75	50.3	248.4	.147
75.	5.55	32.78	25.88	26.23	75.4	213.9	.205
100.	5.14	32.80	25.94	26.41	100.6	207.8	.258
125.	4.35	32.93	26.13	26.72	125.8	190.2	.308
150.	3.91	33.30	26.47	27.18	151.0	158.1	.352
200.	3.87	33.73	26.82	27.76	201.4	125.7	.424
250.	3.92	33.86	26.91	28.08	251.8	117.6	.485

STATION 3-05.

TIME: 1814 *1911 DATE: 28-VII-57 POSITION: Grid OK
WEATHER: 03 WIND: Dir. 310° Force 3 AIR TEMP: Dry 53.0° Wet 50.5° BARO: 1025.0 mb.
CLOUD: Type Sc Amt 10 SEA: 320°- 2 SWELL: 340°- 3 SECCHI DISC: 12 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	11.20	32.65	24.93	4893.	0.641	1.16	0.14
10.	11.38	32.61	24.87	4896.	.596	1.11	.13
19.	11.33	32.58	24.86	4896.	.592	1.16	.14
29.	10.93	32.59	24.93	4892.	.601	1.16	.13
48.	7.93	32.72	25.52	4857.	.632	1.38	.22
73.	5.76	32.79	25.86	4830.	.644	1.54	.76
97.	5.24	32.81	25.94	4825.	.630	1.61	.11
122.	4.61	33.09	26.23	4819.	.554	1.80	.04
146.	3.95	33.49	26.61	4813.	.415	2.61	.04
196.	3.93	33.80	26.86	4817.	.284	2.66	.03
246.	3.88	33.90	26.95	4819.	.188	2.69	.04
*296.	3.87	33.96	26.99	4822.	.108	3.01	
485.	3.61	34.17	27.19	4831.	.062	2.66	.04
729.	3.16	34.30	27.33	4839.			.05
974.	2.82	34.41	27.45	4850.	.051		.06
1470.	2.30	34.57*	27.62	4872.	.077		.04

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.20	32.65	24.93	24.93	0.0	303.0	0.000
10.	11.38	32.61	24.87	24.92	10.1	309.3	.031
20.	11.33	32.58	24.86	24.95	20.1	310.8	.062
30.	10.74	32.60	24.97	25.11	30.2	299.8	.093
50.	7.70	32.73	25.56	25.79	50.3	244.4	.147
75.	5.72	32.78	25.86	26.21	75.4	215.8	.205
100.	5.17	32.84	25.97	26.43	100.6	205.8	.258
150.	3.95	33.52	26.64	27.35	151.0	142.0	.346
200.	3.92	33.81	26.87	27.81	201.4	120.7	.412
250.	3.88	33.90	26.95	28.13	251.8	113.5	.471
300.	3.87	33.97	27.00	28.41	302.2	109.2	.527
400.	3.74	34.09	27.11	28.99	403.2	99.5	.633
500.	3.58	34.18	27.20	29.55	504.1	91.8	.729
600.	3.38	34.23	27.26	30.08	605.2	86.4	.819
700.	3.21	34.29	27.32	30.61	706.2	81.4	.904
800.	3.06	34.33	27.37	31.14	807.4	76.9	.984
1000.	2.79	34.42	27.46	32.17	1009.8	68.9	1.132
1200.	2.56	34.49	27.54	33.18	1212.4	62.1	1.264

STATION 3-06

TIME: 1819 *1827 **1852 G.M.T. DATE: 31-VII-57 POSITION: Grid OM
WEATHER: 03 WIND: Dir. 240° Force 2 AIR TEMP: Dry 50.9° Wet 54.1° BARO: 1030 mb.
CLOUD: Type As Amt 10 SEA: 240°- 1 SWELL: 0 SECCHI DISC: 12 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	11.50	32.66	24.89	4897.	0.593	1.08	0.15
*25.	11.37	32.62	24.88	4897.	.601	1.06	.13
50.	7.38	32.75	25.62	4850.	.625	1.37	.35
75.	+6.00	32.78	25.82	4833.	.642	1.53	.84
89.	5.36	32.82	25.93	4826.	.637	1.62	.23
99.	5.03	32.96	26.08	4823.	.594	1.71	.06
**109.	4.70	33.05	26.19	4819.	.572	1.76	.05
119.	4.56	33.26	26.37	4818.	.531	1.92	.05
129.	4.10	33.39	26.52	4813.	.483	2.12	.05
149.	3.93	33.55	26.66	4813.	.411	2.30	.07
199.	3.94	33.78	26.84	4817.	.295	2.62	.04
248.	3.86	33.89	26.94	4819.	.208	2.79	.04
298.	3.84	33.95	26.99	4822.	.143	2.92	.04
300.	3.84*	33.95*	26.99	4822.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.50	32.66	24.89	24.89	0.0	307.4	0.000
10.	11.91	32.62	24.78	24.83	10.1	317.5	.031
20.	11.70	32.61	24.81	24.91	20.1	314.8	.063
30.	10.88	32.63	24.98	25.11	30.2	299.5	.094
50.	7.38	32.75	25.62	25.85	50.3	238.5	.148
75.	6.00	32.78	25.82	26.17	75.4	219.3	.206
100.	5.00	32.97	26.09	26.56	100.6	193.8	.258
125.	4.32	33.35	26.46	27.05	125.8	158.7	.302
150.	3.92	33.56	26.67	27.38	151.0	139.2	.340
200.	3.94	33.78	26.85	27.79	201.4	122.8	.406
250.	3.86	33.89	26.94	28.12	251.8	114.1	.465
300.	3.84	33.95	26.99	28.40	302.3	110.0	.522

STATION 3-07

TIME: *1819 1912 **1925 G.M.T. DATE: 3-VIII-57 POSITION: Grid OS
WEATHER: 03 WIND: Dir. 350° Force 5 AIR TEMP: Dry 54.8° Wet 53.0° BARO: 1031 mb.
CLOUD: Type Ac Amt 10 SEA: 350°- 3 SWELL: 350°- 3 SECCHI DISC: 14 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	11.70	32.62	24.82	4899.	0.590	1.14	0.13
10.	11.77	32.60	24.79	4900.	.594	1.09	.15
20.	11.75	32.59	24.79	4901.	.596	1.11	.14
30.	10.55	32.62	25.02	4887.	.609	1.16	.14
50.	7.27	32.70	25.59	4848.	.626	1.39	.24
75.	5.82	32.80	25.86	4831.	.628	1.54	.67
**99.	5.29	32.83	25.95	4826.	.628	1.67	.08
124.	4.37	33.20	26.34	4816.	.521	2.04	.06
149.	3.93	33.49	26.62	4812.	.404	2.36	.05
199.	3.87	33.79	26.86	4816.	.284	2.69	.04
250.	3.85	33.90	26.95	4819.	.203	2.84	.05
300.	3.84	33.97	27.01	4822.	.118	3.08	.05
*493.	3.60	34.18	27.20	4831.	.062	3.06	.06
742.	3.13	34.32	27.35	4840.	.059	3.02	.06
990.	2.79	34.41	27.46	4850.	.048	3.16	.06
1488.	2.30	34.51	27.58	4873.	.069	3.11	.05
1500.	2.29*	34.51*	27.58	4874.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.70	32.62	24.82	24.82	0.0	313.8	0.000
10.	11.77	32.60	24.79	24.84	10.1	316.8	.032
20.	11.75	32.59	24.79	24.88	20.1	317.4	.064
30.	10.55	32.62	25.02	25.16	30.2	295.0	.094
50.	7.27	32.70	25.59	25.83	50.3	240.8	.148
75.	5.82	32.80	25.86	26.21	75.4	215.7	.206
100.	5.26	32.84	25.96	26.43	100.6	206.7	.259
125.	4.34	33.21	26.35	26.94	125.8	169.0	.306
150.	3.92	33.50	26.62	27.33	151.0	143.4	.346
200.	3.87	33.79	26.86	27.81	201.4	121.3	.412
250.	3.85	33.90	26.95	28.13	251.8	113.5	.471
300.	3.84	33.97	27.01	28.42	302.2	108.6	.527
400.	3.76	34.09	27.11	28.99	403.2	99.5	.632
500.	3.59	34.19	27.20	29.56	504.1	91.4	.729
600.	3.42	34.26	27.28	30.10	605.2	85.0	.818
700.	3.22	34.31	27.33	30.63	706.2	80.0	.901
800.	3.04	34.35	27.38	31.15	807.4	75.9	.980
1000.	2.78	34.41	27.46	32.16	1009.8	69.3	1.127
1200.	2.55	34.47	27.52	33.16	1212.4	64.1	1.262
1500.	2.29	34.51	27.58	34.62	1516.7	59.3	1.450

STATION 3-08

TIME: 1736 G.M.T. DATE: 8-VIII-57 POSITION: Grid OJ
WEATHER: 03 WIND: Dir. 340° Force 2 AIR TEMP: Dry 55.0° Wet 54.0° BARO: 1028 mb.
CLOUD: Type St Amt 10 SEA: 340°- 2 SWELL: 340°- 3 SECCHI DISC: 13 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	11.80	32.63	24.81	4900.	0.596	1.23	0.12
10.	+11.80	+32.59	24.78	4901.			
24.	11.80	32.59	24.78	4901.	.600	1.07	.10
49.	8.88	32.65	25.32	4868.	.624	1.34	.13
73.	5.80	32.74	25.82	4830.	.639	1.59	.34
88.	5.39	32.78	25.90	4826.	.643	1.63	.14
98.	5.08	32.83	25.97	4823.	.633	1.71	.02
108.	4.88	32.90	26.05	4821.	.606	1.75	.02
117.	4.52	33.12	26.26	4817.	.539	2.04	.02
127.	4.19	33.23	26.38	4814.	.506	2.17	.02
147.	3.96	33.53	26.64	4813.	.422	2.40	.02
150.	3.97*	33.58*	26.69	4814.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	11.80	32.63	24.81	24.81	0.0	314.9	0.000
10.	11.80	32.59	24.78	24.82	10.1	318.0	.032
20.	11.80	32.58	24.77	24.86	20.1	318.7	.064
30.	11.44	32.60	24.85	24.99	30.2	311.7	.096
50.	8.76	32.65	25.34	25.57	50.3	265.0	.154
75.	5.68	32.75	25.84	26.19	75.4	218.1	.214
100.	5.03	32.84	25.99	26.46	100.6	203.9	.267
125.	4.25	33.22	26.37	26.96	125.8	167.6	.314
150.	3.97	33.58	26.69	27.39	151.0	137.7	.353

STATION 3-09

TIME: *1800 1851 G.M.T. DATE: 10-VIII-57 POSITION: Grid KK
WEATHER: 49 WIND: Dir. 290° Force 2 AIR TEMP: Dry 54.2° Wet 54.2° BARO: 1027 mb.
CLOUD: Type St Amt 10 SEA: 290°- 2 SWELL: 290°- 2 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.00	32.62	24.76	4902.	0.594	1.03	0.14
10.	*12.20	32.62	24.73	4905.		1.05	.11
20.	12.19	32.59	24.71	4906.	.601	1.04	.10
30.	12.07	32.59	24.73	4905.	.598	1.04	.10
50.	8.77	32.72	25.39	4867.	.624	1.20	.14
75.	6.03	32.78	25.82	4834.	.636	1.53	.65
100.	5.09	32.82	25.96	4823.	.637	1.61	.03
125.	4.55	33.24	26.35	4819.	.543	1.91	.02
150.	4.03	33.50	26.61	4814.	.451	2.13	.02
200.	3.82	33.76	26.84	4815.	.305	2.52	.01
249.	3.90	33.86	26.91	4818.			
299.	3.85	33.95	26.99	4822.			
*498.	3.71	34.15	27.16	4833.	.062	3.04	.02
750.	3.35*	34.31	27.32	4843.	.046	3.04	.05
1002.	2.80	34.41	27.45	4851.	.049	3.12	.03
1500.	2.32	34.51	27.58	4874.	.070	3.08	.01

249 and 299 meter values taken next day; cf. Station 3-10.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.00	32.62	24.76	24.76	0.0	319.1	0.000
10.	12.20	32.62	24.73	24.77	10.1	322.9	.032
20.	12.19	32.59	24.71	24.80	20.1	325.2	.065
30.	12.07	32.59	24.73	24.86	30.2	323.3	.097
50.	8.77	32.72	25.39	25.62	50.3	260.2	.156
75.	6.03	32.78	25.82	26.17	75.4	219.6	.216
100.	5.09	32.82	25.96	26.43	100.6	206.2	.270
125.	4.55	33.24	26.35	26.94	125.8	169.1	.317
150.	4.03	33.50	26.61	27.32	151.0	144.5	.357
200.	3.82	33.76	26.84	27.78	201.4	123.3	.424
250.	3.92	33.91	26.95	28.13	251.8	113.5	.484
300.	3.85	33.95	26.99	28.40	302.2	110.1	.540
400.	3.78	34.06	27.08	28.97	403.1	101.9	.647
500.	3.71	34.15	27.16	29.52	504.1	95.2	.747
600.	3.59	34.23	27.24	30.06	605.1	89.1	.840
700.	3.44	34.29	27.30	30.59	706.2	83.8	.927
800.	3.26	34.33	27.35	31.11	807.3	79.0	1.010
1000.	2.81	34.41	27.45	32.16	1009.7	69.9	1.160
1200.	2.51	34.47	27.52	33.17	1212.4	63.7	1.296
1500.	2.32	34.51	27.58	34.62	1516.6	59.7	1.483

STATION 3-10

TIME: DATE: POSITION: Grid
WEATHER: WIND: Dir. Force AIR TEMP: Dry Wet BARO:
CLOUD: Type Amt SEA: SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
10.	12.19	32.59	24.70		0.591	1.04	0.09
200.	3.96	33.71	26.79		.348	2.39	.01
249.	3.90	33.86	26.92		.240	2.58	.01
299.	3.85	33.95	26.98		.163	2.80	.01

Computed data included in Station 3-09 interpolated data section.

STATION 3-11

TIME: 1743 G.M.T. DATE: 14-VIII-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. 310° Force 2 AIR TEMP: Dry 55.0° Wet 55.0° BARO:
CLOUD: Type St Amt 10 SEA: x SWELL: x SECCHI DISC: 13 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	12.30	32.48	24.60	4905.	0.600	1.06	0.10
10.	+12.20	+32.59	24.70	4905.			
25.	12.06	32.59	24.73	4904.	.610	1.08	.11
50.	8.90	32.70	25.36	4869.	.613	1.32	.09
75.	5.93	32.75	25.81	4832.	.629	1.52	.52
90.	5.33	32.79	25.91	4825.	.649	1.61	.05
100.	4.94	32.90	26.04	4821.	.646	1.72	.02
110.	4.91	33.12	26.22	4822.	.579	1.82	.02
120.	4.41	33.32	26.43	4817.	.521	2.01	.02
130.	4.07	33.48	26.59	4813.	.467	2.22	.02
150.	3.93	33.60	26.70	4813.	.404	2.43	.02
200.	3.84	33.78	26.85	4815.	.287	2.66	.01
250.	3.85	33.89	26.94	4819.	.247	2.80	.02
300.	3.88	33.98	27.01	4823.	.161	2.92	.02

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.30	32.48	24.60	24.60	0.0	334.8	0.000
10.	12.20	32.59	24.70	24.75	10.1	325.1	.033
20.	12.25	32.58	24.69	24.78	20.1	326.7	.066
30.	11.72	32.60	24.80	24.94	30.2	316.3	.098
50.	8.90	32.70	25.36	25.59	50.3	263.6	.157
75.	5.93	32.75	25.81	26.16	75.4	220.7	.218
100.	4.94	32.90	26.04	26.51	100.6	198.6	.270
125.	4.22	33.40	26.52	27.11	125.8	153.4	.315
150.	3.93	33.60	26.70	27.41	151.0	136.0	.351
200.	3.84	33.78	26.85	27.80	201.4	122.0	.416
250.	3.85	33.89	26.94	28.12	251.8	114.3	.476
300.	3.88	33.98	27.01	28.42	302.2	108.2	.532

STATION 3-12

TIME: *1807 1858 **1917 G.M.T. DATE: 17-VIII-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. Force AIR TEMP: Dry 59.0° Wet 57.0° BARO: 1020.8 mb.
CLOUD: Type Ac Amt 9 SEA: 0 SWELL: x SECCHI DISC: 14.5 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O mg.at/L	PO μg.at/L	NO μg.at/L
.	13.30	32.55	24.46	4917.	0.620	1.05	0.11
10.	13.05	32.54	24.50	4915.	.611	1.08	.08
20.	12.30	32.59	24.68	4907.	.618	1.03	.09
30.	11.98	32.61	24.76	4904.	.616	1.09	.10
50.	8.73	32.71	25.39	4867.	.651	1.34	.12
75.	6.37	32.83	25.82	4838.	.645	1.41	.71
100.	5.25	32.95	26.05	4826.	.626	1.55	.04
125.	4.45	33.24	26.36	4817.	.536	1.97	.03
150.	3.93	33.53	26.65	4813.	.392	2.38	.02
200.	3.88	33.79	26.86	4816.	.278	2.65	.02
**230.	3.83	33.85	26.91	4817.	.218	2.83	.02
*496.	3.70	34.17	27.18	4833.	.063	3.01	.02
745.	3.15	34.33	27.36	4840.	.052	3.09	.03
1000.	2.80	34.42	27.46	4851.	.059	3.15	.03
1504.	2.27	34.53	27.60	4874.	.075	3.13	.02

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	13.30	32.55	24.46	24.46	0.0	348.2	0.000
10.	13.05	32.54	24.50	24.55	10.1	344.4	.035
20.	12.30	32.59	24.68	24.78	20.1	327.2	.069
30.	11.98	32.61	24.76	24.90	30.2	320.2	.101
50.	8.73	32.71	25.39	25.62	50.3	260.4	.159
75.	6.37	32.83	25.82	26.17	75.4	220.0	.220
100.	5.25	32.95	26.05	26.51	100.6	198.2	.273
125.	4.45	33.24	26.36	26.95	125.8	168.1	.319
150.	3.93	33.53	26.65	27.35	151.0	141.3	.358
200.	3.88	33.79	26.86	27.80	201.4	121.7	.424
250.	3.80	33.89	26.94	28.12	251.8	114.0	.483
300.	3.74	33.97	27.02	28.43	302.2	107.5	.539
400.	3.68	34.10	27.12	29.01	403.2	98.1	.643
500.	3.69	34.17	27.18	29.53	504.1	93.4	.740
600.	3.52	34.25	27.26	30.08	605.1	86.4	.830
700.	3.28	34.31	27.33	30.63	706.2	80.3	.915
800.	3.06	34.36	27.39	31.15	807.4	75.3	.993
1000.	2.80	34.42	27.46	32.17	1009.8	69.0	1.139
1200.	2.56	34.47	27.53	33.17	1212.4	63.6	1.274
1500.	2.27	34.53	27.59	34.64	1516.7	57.8	1.458

STATION 3-13

TIME: 1747 *1802 G.M.T. DATE: 21-VIII-57 POSITION: Grid OL
WEATHER: 03 WIND: Dir. 300° Force 6 AIR TEMP: Dry 58.1° Wet 55.4° BARO: 1017 mb.
CLOUD: Type Sc Amt 10 SEA: 300°- 2 SWELL: 300°- 2 SECCHI DISC: 14 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	13.80	32.64	24.43	4923.	0.598	0.92	0.14
10.	+12.50	+32.65	24.69	4909.			
25.	12.20	32.65	24.75	4906.	.625	1.00	.12
49.	8.90	32.70	25.36	4869.	.644	1.27	.14
74.	6.64	32.78	25.74	4842.	.657	1.50	.62
89.	5.50	32.83	25.92	4828.	.654	1.48	.06
99.	5.23	32.86	25.98	4825.	.640	1.71	.06
109.	5.16	32.98	26.08	4825.	.617	1.76	.05
119.	5.09	33.15	26.22	4825.	.596	1.80	.05
129.	4.80	33.28	26.36	4822.	.561	1.93	.05
148.	4.15	33.50	26.60	4816.	.478	2.29	.05
*173.	3.94	33.64	26.73	4815.	.400	2.42	.04
198.	3.93	33.77	26.84	4817.		2.58	.05
248.	3.84	33.87	26.93	4819.	.223	2.77	.04
298.	3.86	33.97	27.00	4822.	.148	2.95	.03

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	13.80	32.64	24.43	24.43	0.0	351.2	0.000
10.	12.50	32.65	24.69	24.74	10.1	326.2	.034
20.	12.45	32.65	24.70	24.79	20.1	325.7	.067
30.	11.80	32.66	24.83	24.97	30.2	313.6	.099
50.	8.79	32.70	25.38	25.61	50.3	261.7	.157
75.	6.56	32.78	25.75	26.10	75.4	225.8	.218
100.	5.21	32.87	25.99	26.45	100.6	203.9	.272
125.	4.94	33.23	26.30	26.89	125.8	173.9	.320
150.	4.11	33.52	26.62	27.33	151.0	144.0	.360
200.	3.93	33.78	26.84	27.79	201.4	123.0	.427
250.	3.84	33.87	26.93	28.11	251.8	115.3	.487

STATION 4-01

TIME: 2050 *2135 **2155 DATE: 28-IX-57 POSITION: Grid JS
WEATHER: 25 WIND: Dir. 210° Force 4 AIR TEMP: Dry 59.0° Wet 58.4° BARO: 1011 mb.
CLOUD: Type St Amt 10 SEA: 210°- 3 SWELL: 210°- 4 SECCHI DISC: 12.5 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	14.10	32.66	24.38	4926.		1.38	0.11
10.	13.74	32.62	24.42	4922.	0.561	1.30	.10
20.	13.72	32.61	24.42	4923.	.554	1.32	.09
30.	13.73	32.62	24.43	4924.	.552	1.32	.13
50.	8.54	32.78	25.47	4865.	.623	1.71	.16
75.	7.18	32.89	25.76	4849.	.609	1.75	1.14
100.	6.12	32.93	25.93	4837.	.619	1.89	tr.
125.	5.56	33.05	26.09	4832.	.588	2.14	.02
*150.	+4.62	+33.25	26.35	4821.			
175.	+4.00	33.42*	26.55	4815.			
200.	3.86	33.56	26.68	4815.	.384		.03
**300.	3.82	33.92	26.97	4822.	.184	3.29	tr.
500.	3.74	34.17	27.17	4833.	.083	3.50	tr.
751.	3.23	34.29	27.32	4842.	.070	3.64	.01
1002.	2.78	34.39	27.44	4851.	.067	3.71	tr.
1252.	2.48	34.47	27.53	4861.	.059	3.65	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	14.10	32.66	24.38	24.38	0.0	355.6	0.000
10.	13.74	32.62	24.42	24.47	10.0	351.7	.036
20.	13.72	32.61	24.42	24.51	20.1	352.3	.071
30.	13.73	32.62	24.43	24.56	30.2	352.0	.106
50.	8.54	32.78	25.47	25.70	50.3	252.4	.167
75.	7.18	32.89	25.76	26.10	75.4	225.8	.227
100.	6.12	32.93	25.93	26.39	100.6	209.8	.282
125.	5.56	33.05	26.09	26.67	125.8	194.5	.333
150.	4.62	33.25	26.35	27.06	151.0	169.4	.379
200.	3.86	33.56	26.68	27.62	201.3	138.7	.456
250.	3.74	33.78	26.87	28.04	251.8	121.4	.522
300.	3.82	33.92	26.97	28.38	302.2	112.1	.581
400.	3.78	34.12	27.13	29.02	403.1	97.3	.686
500.	3.74	34.17	27.17	29.53	504.1	94.2	.783
600.	3.59	34.24	27.25	30.07	605.1	87.9	.875
700.	3.37	34.28	27.30	30.59	706.2	83.3	.962
800.	3.14	34.31	27.34	31.11	807.3	79.5	1.044
1000.	2.78	34.39	27.44	32.14	1009.7	71.1	1.196
1200.	2.53	34.45	27.51	33.16	1212.3	64.6	1.334

STATION 4-02

TIME: 1919 *1931 **1941 G.M.T. DATE: 2-X-57 POSITION: Grid KS
WEATHER: 02 WIND: Dir. 330° Force 2 AIR TEMP: Dry 52.5° Wet 47.5° BARO: 1033 mb.
CLOUD: Type As Amt 10 SEA: 330°- 3 SWELL: 330°- 3 SECCHI DISC: 12.5 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	13.20	32.83	24.69	4917.		1.27	0.13
10.	+13.40	+32.62	24.49	4919.			
25.	13.40	32.62	24.49	4920.	0.557	1.21	.11
50.	7.68	32.88	25.68	4854.	.611	1.59	.27
*60.	6.68	32.93	25.85	4842.	.616	1.65	.92
70.	6.42	32.92	25.88	4839.	.614	1.67	.20
80.	6.05	32.91	25.92	4835.	.625	1.72	tr.
90.	5.64	32.90	25.96	4830.	.621	1.78	.01
100.	5.45	32.99	26.05	4828.	.622	1.74	tr.
125.	4.82	33.24	26.32	4822.	.549	2.05	tr.
150.	4.12	33.48	26.59	4815.	.465	2.39	tr.
175.	4.01	33.61	26.70	4816.	.418	2.38	tr.
**200.	3.88	33.90	26.95	4816.	.346	2.62	tr.
300.	3.86	33.95	26.99	4822.	.169	3.07	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	13.20	32.83	24.69	24.69	0.0	325.7	0.000
10.	13.40	32.62	24.49	24.54	10.1	345.2	.034
20.	13.69	32.61	24.43	24.52	20.1	351.9	.069
30.	12.83	32.65	24.63	24.76	30.2	333.0	.103
50.	7.68	32.88	25.68	25.91	50.3	232.9	.160
75.	6.25	32.91	25.90	26.25	75.4	212.2	.216
100.	5.45	32.99	26.05	26.52	100.6	197.4	.268
125.	4.82	33.24	26.32	26.91	125.8	172.0	.314
150.	4.12	33.48	26.59	27.29	151.0	146.9	.354
200.	3.88	33.90	26.95	27.89	201.4	113.4	.420
250.	3.77	34.15	27.15	28.33	251.8	94.2	.472
300.	3.86	33.95	26.99	28.40	302.3	110.3	.524

STATION 4-03

TIME: 1921 *1952 G.M.T. DATE: 5-X-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 050° Force 2 AIR TEMP: Dry 48.1° Wet 46.2° BARO: 1023 mb.
CLOUD: Type Ac Amt 9 SEA: 050°- 1 SWELL: 070°- 4 SECCHI DISC: 13 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	13.20	32.73	24.62	4916.		1.26	0.12
10.	13.18	32.61	24.53	4916.	0.560	1.20	.11
20.	13.20	32.61	24.53	4917.	.560	1.19	.11
30.	13.19	32.61	24.53	4918.	.560	1.17	.11
50.	8.53	32.77	25.47	4864.	.610	1.44	.13
75.	6.03	32.82	25.85	4834.	.623		.18
100.	5.53	32.95	26.01	4829.	.628	1.82	.01
125.	4.96	33.17	26.25	4824.	.564	2.03	tr.
150.	4.18	33.48	26.58	4816.	.471	2.39	tr.
175.	3.95	33.71	26.79	4815.	.416	2.55	tr.
200.	3.78	33.74	26.83	4814.	.306	2.80	tr.
*293.	3.77	33.93	26.98	4821.	.165	3.06	.01
494.	3.64	34.15	27.17	4832.	.078	3.34	tr.
744.	3.17	34.30	27.33	4840.	.057	3.31	.02
994.	2.75	34.41	27.46	4850.	.059	3.31	.03
1000.	2.74*	34.41*	27.46	4850.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	13.20	32.73	24.62	24.62	0.0	333.1	0.000
10.	13.18	32.61	24.53	24.57	10.1	341.7	.034
20.	13.20	32.61	24.53	24.62	20.1	342.4	.068
30.	13.19	32.61	24.53	24.66	30.2	342.4	.103
50.	8.53	32.77	25.47	25.70	50.3	253.0	.163
75.	6.03	32.82	25.85	26.20	75.4	216.6	.222
100.	5.53	32.95	26.01	26.48	100.6	201.4	.274
125.	4.96	33.17	26.25	26.84	125.8	178.8	.322
150.	4.18	33.48	26.58	27.29	151.0	147.5	.363
200.	3.78	33.74	26.83	27.77	201.4	124.4	.432
250.	3.65	33.83	26.91	28.09	251.8	117.0	.493
300.	3.77	33.94	26.99	28.40	302.2	109.9	.550
400.	3.72	34.08	27.10	28.99	403.1	99.9	.656
500.	3.63	34.16	27.17	29.53	504.1	94.2	.754
600.	3.48	34.23	27.25	30.07	605.1	87.7	.846
700.	3.28	34.28	27.31	30.60	706.2	82.3	.932
800.	3.07	34.33	27.36	31.13	807.3	77.5	1.012
1000.	2.74	34.41	27.46	32.17	1009.7	69.0	1.161

STATION 4-04

TIME: 1902 *1920 G.M.T. DATE: 9-X-57 POSITION: Grid JJ
WEATHER: 02 WIND: Dir. 160° Force 2 AIR TEMP: Dry 56.0° Wet 51.0° BARO: 1021 mb.
CLOUD: Type Ac Amt 9 SEA: 100°- 1 SWELL: 100°- 2 SECCHI DISC: 16 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	13.20	32.69	24.59	4916.		1.19	0.12
10.	+13.10	+32.60	24.54	4915.			
25.	13.09	32.60	24.54	4916.	0.558	1.16	.09
50.	7.86	32.74	25.54	4856.	.625	1.60	.31
60.	6.99	32.84	25.74	4846.	.616	1.65	.93
70.	5.89	32.79	25.84	4832.	.620	1.72	.11
80.	+5.80	32.81	25.87	4831.	.622	1.72	.04
100.	5.69	32.89	25.95	4831.	.600	1.76	.01
125.	4.95	33.06	26.17	4823.	.570	1.71	tr.
150.	4.30	33.35	26.47	4817.	.497	2.30	tr.
175.	3.93	33.57	26.68	4814.	.420	2.59	tr.
200.	3.81	33.79	26.87	4815.	.314	2.75	tr.
*300.	3.77	33.95	27.00	4821.	.149	3.21	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	13.20	32.69	24.59	24.59	0.0	336.0	0.000
10.	13.10	32.60	24.54	24.58	10.1	341.0	.034
20.	13.35	32.59	24.48	24.57	20.1	346.5	.069
30.	12.57	32.61	24.65	24.79	30.2	330.5	.103
50.	7.86	32.74	25.54	25.77	50.3	245.8	.161
75.	5.72	32.79	25.87	26.22	75.4	215.1	.219
100.	5.69	32.89	25.95	26.41	100.6	207.7	.272
125.	4.95	33.06	26.17	26.75	125.8	186.9	.321
150.	4.30	33.35	26.47	27.17	151.0	158.5	.365
200.	3.81	33.79	26.87	27.81	201.4	121.0	.435
250.	3.70	34.01	27.05	28.23	251.8	103.5	.492
300.	3.77	33.95	27.00	28.41	302.2	109.4	.546

STATION 4-05

TIME: 0926 *0953 G.M.T. DATE: 12-X057 POSITION: Grid JS
WEATHER: 14 WIND: Dir. 310° Force 8 AIR TEMP: Dry 50.0° Wet 45.0° BARO: 1000 mb.
CLOUD: Type Ns/Ac Amt 8 SEA: 310°- 4 SWELL: 310°- 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.70	32.74	24.72	4911.		1.37	0.13
10.	12.76	32.64	24.63	4912.	0.562	1.31	.11
20.	+12.75	+32.65	24.64	4912.			
30.	12.75	32.65	24.64	4913.	.559	1.29	.11
50.	8.42	32.87	25.56	4863.	.554	1.66	.17
74.	6.67	32.93	25.86	4843.	.557	1.77	.24
99.	6.13	32.95	25.94	4837.	.622	1.79	tr.
124.	5.73	33.08	26.09	4834.	.595	1.87	.01
149.	4.54	33.33	26.43	4820.	.517	2.36	tr.
174.	4.05	33.52	26.63	4816.	.451	2.57	tr.
198.	3.95	33.68	26.76	4816.	.379	2.62	tr.
298.	3.81	33.91	26.96	4821.	.182	3.17	tr.
*397.	3.78	34.04	27.07	4827.	.108	3.22	tr.
494.	3.67	34.15	27.17	4832.	.072	3.42	tr.
738.	3.25	34.29	27.32	4841.	.062	3.56	tr.
992.	2.81	34.39	27.44	4850.	.057	3.61	tr.
1247.	2.49	34.47	27.53	4861.	.059	3.43	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.70	32.74	24.72	24.72	0.0	323.0	0.000
10.	12.76	32.64	24.63	24.68	10.1	331.7	.033
20.	12.75	32.65	24.64	24.73	20.1	331.0	.066
30.	12.75	32.65	24.64	24.78	30.2	331.2	.099
50.	8.42	32.87	25.56	25.79	50.3	244.0	.157
75.	6.62	32.93	25.86	26.21	75.4	215.5	.215
100.	6.11	32.95	25.95	26.41	100.6	207.9	.268
125.	5.70	33.09	26.10	26.69	125.8	193.3	.319
150.	4.51	33.34	26.44	27.14	151.0	161.5	.364
200.	3.94	33.69	26.77	27.72	201.4	129.7	.437
250.	3.82	33.89	26.94	28.12	251.8	114.2	.498
300.	3.81	33.91	26.96	28.38	302.2	112.5	.556
400.	3.78	34.04	27.07	28.95	403.1	103.2	.664
500.	3.66	34.16	27.17	29.52	504.1	94.4	.764
600.	3.51	34.23	27.25	30.07	605.1	87.7	.856
700.	3.33	34.28	27.30	30.60	706.2	83.1	.943
800.	3.14	34.32	27.35	31.11	807.3	79.0	1.025
1000.	2.80	34.39	27.44	32.14	1009.7	71.1	1.176
1200.	2.54	34.46	27.51	33.16	1212.3	64.7	1.314

STATION 4-06

TIME: 1925 *1937 G.M.T. DATE: 16-X-57 POSITION: Grid 0S
WEATHER: 02 WIND: Dir. 180° Force 7 AIR TEMP: Dry 57.5° Wet 56.0° BARO: 1012 mb.
CLOUD: Type Cs Amt 8 SEA: 180°- 4 SWELL: 180°- 4 SECCHI DISC: 12.5 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.80	32.81	24.76	4912.	0.558	1.32	0.16
10.	+12.65	+32.64	24.66	4910.			
20.	+12.65	+32.64	24.66	4911.			
24.	12.65	32.64	24.66	4911.	.566	1.20	.10
47.	8.58	32.89	25.55	4865.	.572	1.08	.21
56.	7.50	32.89	25.71	4852.	.606	1.63	.76
66.	6.60	32.88	25.83	4841.	.611	1.71	.68
75.	6.30	32.91	25.89	4838.	.612	1.70	.02
94.	5.95	32.94	25.96	4834.	.614	1.70	.01
*118.	5.52	33.17	26.19	4831.	.601	1.84	tr.
141.	4.60	33.41	26.48	4821.	.513	2.12	tr.
155.	4.03	33.50	26.61	4814.	.451	2.47	tr.
177.	3.97	33.66	26.75	4815.	.395	2.62	tr.
266.	3.75	33.89	26.95	4819.	.200	3.13	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.80	32.81	24.76	24.76	0.0	319.7	0.000
10.	12.65	32.64	24.66	24.70	10.1	329.7	.033
20.	12.65	32.64	24.66	24.75	20.1	329.9	.066
30.	12.26	32.66	24.75	24.89	30.2	321.2	.099
50.	8.19	32.90	25.62	25.85	50.3	238.7	.155
75.	6.30	32.91	25.89	26.24	75.4	213.2	.212
100.	5.84	32.98	26.00	26.47	100.6	202.9	.264
125.	5.29	33.24	26.27	26.86	125.8	177.1	.312
150.	4.23	33.47	26.57	27.28	151.0	148.6	.353
200.	3.91	33.78	26.85	27.79	201.4	122.4	.421
250.	3.79	33.90	26.95	28.13	251.8	113.0	.481

STATION 4-07

TIME: 1926 *1959 G.M.T. DATE: 22-X-57 POSITION: Grid KK
WEATHER: 50 WIND: Dir. 140° Force 3 AIR TEMP: Dry 54.9° Wet 54.9° BARO: 1006 mb.
CLOUD: Type St Amt 10 SEA: 140°- 3 SWELL: 140°- 3 SECCHI DISC: 16 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.70	32.69	24.68	4911.		1.30	0.14
10.	12.43	32.67	24.72	4908.	0.563	1.23	.12
30.	12.43	32.68	24.73	4909.	.563	1.23	.12
49.	12.42	32.68	24.73	4910.	.561	1.20	.13
55.	+11.00	32.80	25.09	4895.	.582	1.40	.23
65.	8.10	32.90	25.63	4860.	.599	1.62	.59
75.	7.30	32.93	25.77	4851.	.605	1.60	
95.	6.60	32.94	25.87	4843.	.614	1.69	.02
110.	6.30	33.13	26.06	4841.	.603	1.69	.02
125.	6.00	33.20	26.15	4838.	.567	1.76	.01
200.	4.20	33.73	26.78	4820.	.339	2.75	.02
*387.	3.87	34.04	27.06	4828.	.131	3.02	.01
486.	3.69	34.12	27.14	4832.	.071	3.34	tr.
730.	3.25	34.27	27.30	4841.	.053	3.38	tr.
983.	2.82	34.39	27.44	4850.	.051	3.40	.01
1235.	2.54	34.46	27.52	4861.	.043	3.35	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.70	32.69	24.68	24.68	0.0	326.7	0.000
10.	12.43	32.67	24.72	24.77	10.1	323.4	.033
20.	12.43	32.68	24.73	24.82	20.1	323.2	.065
30.	12.43	32.68	24.73	24.87	30.2	323.1	.098
50.	12.23	32.70	24.78	25.01	50.3	318.8	.162
75.	7.30	32.93	25.77	26.12	75.4	224.4	.231
100.	6.48	32.99	25.92	26.39	100.6	210.0	.285
125.	6.00	33.20	26.15	26.74	125.8	188.5	.335
150.	5.46	33.34	26.33	27.03	151.0	171.6	.381
200.	4.20	33.73	26.78	27.72	201.3	129.4	.457
250.	3.53	33.95	27.02	28.20	251.8	106.3	.516
300.	3.29	34.08	27.14	28.56	302.2	95.2	.567
400.	3.85	34.05	27.07	28.95	403.1	103.2	.667
500.	3.66	34.13	27.15	29.50	504.1	96.3	.768
600.	3.48	34.20	27.22	30.05	605.1	90.1	.862
700.	3.30	34.26	27.28	30.58	706.2	84.7	.950
800.	3.13	34.31	27.34	31.11	807.3	79.7	1.033
1000.	2.80	34.40	27.44	32.15	1009.7	70.7	1.185
1200.	2.57	34.45	27.51	33.15	1212.3	65.2	1.323

STATION 4-08

TIME: 1916 G.M.T. DATE: 23-X-57 POSITION: Grid KS
WEATHER: 03 WIND: Dir. 100° Force 7 AIR TEMP: Dry 52.5° Wet 49.0° BARO: 1001 mb.
CLOUD: Type St Amt 10 SEA: 100°- 4 SWELL: 100°- 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
.	12.10	32.69	24.80	4904.	0.561	1.21	0.14
10.	+12.40	+32.66	24.72	4908.			
23.	12.41	32.66	24.72	4909.	.579	1.20	.10
47.	12.40	32.66	24.72	4910.	.568	1.21	.10
56.	7.93	32.88	25.64	4858.	.608	1.55	.55
61.	7.47	32.90	25.72	4852.	.600	1.55	.72
65.	7.12	32.91	25.78	4848.	.601	1.58	.71
75.	6.52	32.91	25.86	4841.	.608	1.64	.10
95.	5.88	32.98	26.00	4834.	.621	1.69	tr.
120.	5.32	33.17	26.21	4829.	.570	1.76	tr.
146.	4.42	33.43	26.52	4819.	.496	2.26	tr.
171.	3.87	33.61	26.72	4813.	.388	2.57	tr.
197.	3.79	33.80	26.88	4815.	.316	2.71	tr.
298.	3.71	33.95	27.00	4820.	.143	3.10	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.10	32.69	24.80	24.80	0.0	315.8	0.000
10.	12.40	32.66	24.72	24.76	10.1	323.6	.032
20.	12.45	32.66	24.71	24.80	20.1	325.0	.065
30.	12.41	32.66	24.72	24.85	30.2	324.3	.097
50.	11.18	32.72	24.99	25.22	50.3	298.6	.160
75.	6.52	32.91	25.86	26.21	75.4	215.9	.225
100.	5.75	33.01	26.03	26.50	100.6	199.5	.277
125.	5.17	33.22	26.26	26.85	125.8	177.7	.324
150.	4.31	33.46	26.56	27.26	151.0	150.1	.366
200.	3.78	33.82	26.89	27.83	201.4	118.6	.433
250.	3.70	34.00	27.04	28.22	251.8	104.9	.490

STATION 4-09

TIME: 1913 *1939 G.M.T. DATE: 25-X-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 130° Force 1 AIR TEMP: Dry 51.5° Wet 47.5° BARO: 1006 mb.
CLOUD: Type Ci Amt 8 SEA: SWELL: SECCHI DISC: 15.5 meters
St/Cu

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.10	32.69	24.80	4904.	0.584	1.47	0.15
10.	12.24	32.65	24.74	4906.	.575	1.20	.12
30.	12.23	32.65	24.74	4907.	.575	1.20	.13
50.	11.43	32.69	24.92	4899.	.585	1.27	.18
75.	6.80	32.92	25.83	4844.	.616	1.52	.20
100.	6.31	32.97	25.93	4840.	.619	1.67	.03
125.	5.55	33.16	26.18	4832.	.585	1.85	.02
150.	4.67	33.41	26.47	4822.	.531	2.21	.01
175.	3.86	33.56	26.68	4813.	.407	2.65	.01
200.	3.81	33.70	26.79	4815.	.333	2.75	.02
300.	3.76	33.93	26.98	4821.	.154	3.16	.02
*407.	3.75	34.08	27.10	4828.	.089	3.27	.01
504.	3.62	34.18*	27.20	4832.	.070	3.28	.02
753.	3.18	34.30	27.33	4841.	.060	3.29	.02
1004.	2.78	34.39	27.44	4851.	.053	3.45	tr.
1254.	2.50	34.46	27.52	4862.	.058	3.44	.01

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.10	32.69	24.80	24.80	0.0	315.8	0.000
10.	12.24	32.65	24.74	24.79	10.1	321.5	.032
20.	12.33	32.64	24.72	24.81	20.1	323.7	.064
30.	12.23	32.65	24.74	24.88	30.2	321.7	.097
50.	11.43	32.69	24.92	25.15	50.3	305.1	.160
75.	6.80	32.92	25.83	26.18	75.4	218.6	.226
100.	6.31	32.97	25.93	26.40	100.6	209.1	.280
125.	5.55	33.16	26.18	26.76	125.8	186.1	.329
150.	4.67	33.41	26.47	27.18	151.0	157.9	.373
200.	3.81	33.70	26.79	27.74	201.4	127.7	.445
250.	3.75	33.88	26.94	28.12	251.8	114.0	.506
300.	3.76	33.93	26.98	28.40	302.2	110.8	.562
400.	3.75	34.07	27.10	28.98	403.1	100.7	.669
500.	3.63	34.18	27.19	29.55	504.1	92.3	.766
600.	3.47	34.25	27.27	30.09	605.1	85.9	.856
700.	3.29	34.29	27.32	30.61	706.2	81.7	.941
800.	3.10	34.32	27.35	31.12	807.3	78.5	1.022
1000.	2.79	34.39	27.44	32.14	1009.7	71.2	1.174
1200.	2.55	34.45	27.51	33.15	1212.3	65.5	1.312

STATION 4-10

TIME: 1945 G.M.T. DATE: 29-X-57 POSITION: Grid OS
WEATHER: Ol WIND: Dir. 260° Force 5 AIR TEMP: Dry 54.0° Wet 49.0° BARO: 1007 mb.
CLOUD: Type Cu Amt 3 SEA: 260° SWELL: 260° SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	12.40	32.79	24.82	4908.	0.569	1.31	0.14
10.	+12.20	+32.70	24.79	4906.			
25.	12.20	32.68	24.77	4906.	.590	1.11	.10
49.	12.19	32.65	24.75	4908.	.578	1.17	.12
54.	11.23	32.69	24.96	4897.	.577	1.20	.15
59.	8.24	32.87	25.59	4862.	.608	1.46	.69
69.	7.40	32.91	25.74	4852.	.600	1.52	.51
79.	6.85	32.93	25.83	4845.	.605	1.58	.02
98.	6.10	32.97	25.96	4837.	.617	1.68	tr.
123.	5.31	33.33	26.34	4829.	.560	1.92	tr.
147.	4.56	33.52	26.57	4821.	.514	2.21	tr.
172.	4.00	33.61	26.70	4815.	.418	2.50	tr.
200.	3.83	33.73	26.82	4815.	.330	2.75	tr.
300.	3.73	33.92	26.98	4820.	.159	3.11	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	12.40	32.79	24.82	24.82	0.0	313.8	0.000
10.	12.20	32.70	24.79	24.83	10.1	317.0	.032
20.	12.20	32.69	24.78	24.87	20.1	318.3	.064
30.	12.20	32.67	24.77	24.90	30.2	319.4	.096
50.	12.02	32.66	24.79	25.02	50.3	318.0	.160
75.	7.04	32.92	25.80	26.15	75.4	221.3	.228
100.	6.03	32.99	25.98	26.45	100.6	204.5	.281
125.	5.25	33.35	26.36	26.95	125.8	168.3	.328
150.	4.48	33.54	26.60	27.30	151.0	146.4	.368
200.	3.83	33.73	26.82	27.76	201.4	125.7	.436
250.	3.68	33.87	26.94	28.12	251.8	114.0	.497
300.	3.73	33.92	26.98	28.39	302.2	111.2	.554

STATION 5-01

TIME: 2000 G.M.T. DATE: 14-XII-57 POSITION: Grid KS
WEATHER: 02 WIND: Dir. 040° Force 6 AIR TEMP: Dry 41.0° Wet 40.0° BARO: 966.0 mb.
CLOUD: Type St Amt 10 SEA: 040°- 3 SWELL: 330°- 3 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	8.50	32.76	25.47	4861.	0.626	1.19	0.34
8.	8.65	32.67	25.37	4863.	.594	1.52	.40
20.	8.65+	32.68+	25.38	4864.			
27.	8.64	32.69	25.39	4864.	.602	1.07	.28
46.	8.66	32.66	25.36	4865.	.605	1.31	.29
67.	8.65	32.66	25.36	4866.	.599	1.09	.31
91.	7.23	32.66+	25.57	4850.	.581		
113.	6.33	33.09	26.02	4841.	.589	1.60	.05
136.	5.65	33.49	26.43	4835.	.569	1.89	
159.	4.90	33.63	26.62	4827.	.501	1.92	
180.	4.45	33.67	26.71	4822.	.460	2.40	.07
272.	3.90	33.85	26.90	4821.	.273	2.40	.01
331.	3.86	33.95	26.99	4824.	.185	2.57	.03
420.	3.82	34.06	27.08	4829.	.111	2.70	.02
639.	3.45	34.24	27.26	4838.	.053	2.63	.04
874.	3.08	34.36	27.39	4847.		2.95	
1112.	2.72	34.44	27.49	4856.	.044	2.81	.05
1200.	2.59*	34.46*	27.52	4860.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	8.50	32.76	25.47	25.47	0.0	252.2	0.000
10.	8.67	32.66	25.36	25.41	10.1	262.5	.026
20.	8.65	32.68	25.38	25.47	20.1	260.9	.052
30.	8.64	32.70	25.39	25.53	30.2	259.7	.078
50.	8.66	32.66	25.36	25.59	50.3	263.1	.131
75.	8.34	32.66	25.41	25.75	75.5	259.2	.197
100.	6.82	32.79	25.72	26.19	100.6	229.2	.258
125.	5.94	33.30	26.24	26.83	125.8	179.9	.310
150.	5.20	33.61	26.57	27.27	151.0	148.9	.351
200.	4.13	33.71	26.77	27.71	201.4	130.0	.421
250.	3.82	33.81	26.88	28.06	251.8	120.0	.484
300.	3.85	33.90	26.95	28.36	302.2	114.0	.543
400.	3.83	34.04	27.06	28.94	403.1	104.1	.653
500.	3.73	34.14	27.15	29.50	504.1	96.6	.755
600.	3.54	34.21	27.23	30.05	605.1	89.6	.849
700.	3.35	34.28	27.30	30.59	706.2	83.6	.936
800.	3.19	34.33	27.35	31.12	807.3	78.7	1.018
1000.	2.89	34.41	27.45	32.15	1009.7	70.9	1.170
1200.	2.59	34.46	27.52	33.16	1212.3	64.6	1.307

STATION 5-02

TIME: 0640 G.M.T. DATE: 18-XII-57 POSITION: Grid KS
WEATHER: 86 WIND: Dir. 270° Force 8 AIR TEMP: Dry 41.5° Wet 38.5° BARO: 990.0 mb.
CLOUD: Type St Amt 10 SEA: 250°- 5 SWELL: 300°- 5 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	8.00	32.66*	25.46	4854.	0.617	1.25	0.29
10.	8.27*	32.69*	25.44	4859.			
18.	8.27	32.70	25.45	4859.			
28.	8.27	32.69	25.44	4860.	.604	1.35	.28
38.	8.27	32.67	25.43	4860.	.600	1.53	.29
48.	8.27	32.68	25.43	4861.	.614	1.29	.26
68.	8.27	32.69	25.45	4862.	.609	1.30	.30
87.	8.19	32.69	25.45	4862.	.614	1.25	.29
97.	6.26	32.96	25.93	4839.			
121.	5.20	33.28	26.31	4827.	.574	1.73	.03
146.	4.79	33.46	26.50	4824.	.517	2.01	.05
170.	4.47	33.60	26.64	4822.	.485	2.13	.08
195.	4.15	33.70	26.76	4819.	.407	2.36	
244.	3.97	33.80	26.86	4820.	.314	2.54	.03
293.	3.78	33.88	26.94	4820.	.227	2.84	.03
300.	3.75*	33.89*	26.95	4821.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	8.00	32.66	25.46	25.46	0.0	252.7	0.000
10.	8.27	32.69	25.44	25.49	10.1	254.6	.026
20.	8.27	32.70	25.45	25.54	20.1	254.1	.051
30.	8.27	32.69	25.44	25.58	30.2	255.1	.077
50.	8.27	32.68	25.44	25.67	50.3	256.0	.128
75.	8.25	32.70	25.45	25.80	75.5	254.9	.192
100.	5.85	33.03	26.04	26.50	100.6	199.3	.250
125.	5.09	33.32	26.35	26.94	125.8	169.3	.296
150.	4.73	33.49	26.53	27.23	151.0	152.8	.337
200.	4.10	33.71	26.77	27.72	201.4	129.8	.408
250.	3.95	33.81	26.87	28.04	251.8	121.4	.471
300.	3.75	33.89	26.95	28.36	302.2	114.0	.530

STATION 5-03

TIME: 1900 G.M.T. DATE: 21-XII-57 POSITION: Grid JJ
WEATHER: 70 WIND: Dir. 240° Force 6 AIR TEMP: Dry 36.3° Wet 36.0° BARO: 990.0 mb.
CLOUD: Type St Amt 10 SEA: 240°- 4 SWELL: 260°- 4 SECCHI DISC: 18 meters (blue)

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.40	32.73	25.60	4847.	0.607	1.44	0.35
10.	7.90	32.70	25.50	4854.	.629	1.42	.28
20.	7.90+	32.69+	25.50	4854.			
30.	7.89	32.68	25.49	4855.	.619	1.46	.28
50.	7.89	32.68	25.49	4856.	.617	1.31	.24
75.	7.91	32.68	25.49	4858.	.644	1.38	.27
100.	7.83	32.71	25.52	4858.	.665	1.39	.23
125.	5.91	33.13	26.11	4837.	.636	1.73	.02
150.	5.11	33.45	26.45	4829.	.566	1.81	.02
175.	4.46	33.51	26.57	4821.	.502	1.75	.05
200.	4.16	33.71	26.76	4820.	.419	2.32	.02
300.	3.78	33.90	26.95	4821.	.250		.01
368.	3.84	33.99	27.02	4826.	.164	2.98	.01
459.	3.83	34.11	27.12	4832.	.106	2.84	.01
695.	3.35	34.25	27.28	4840.	.064	3.13	.01
940.	2.97	34.37	27.41	4849.	.059	3.16	.01
1189.	2.57	34.45	27.50	4859.	.054	3.04	.03
1200.	2.55*	34.45*	27.51	4859.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.40	32.73	25.60	25.60	0.0	239.7	0.000
10.	7.90	32.70	25.50	25.55	10.1	248.8	.025
20.	7.90	32.69	25.50	25.59	20.1	249.6	.050
30.	7.89	32.68	25.49	25.63	30.2	250.6	.075
50.	7.89	32.68	25.49	25.72	50.3	250.9	.125
75.	7.91	32.68	25.49	25.84	75.5	251.4	.188
100.	7.83	32.71	25.52	25.98	100.6	248.6	.251
125.	5.91	33.13	26.11	26.69	125.8	192.7	.307
150.	5.11	33.45	26.45	27.16	151.0	159.9	.351
200.	4.16	33.71	26.76	27.71	201.4	130.7	.425
250.	3.81	33.92	26.97	28.15	251.8	111.3	.486
300.	3.78	33.90	26.95	28.37	302.2	113.4	.542
400.	3.85	34.03	27.05	28.94	403.1	104.8	.652
500.	3.79	34.15	27.16	29.51	504.1	96.1	.754
600.	3.62	34.22	27.23	30.05	605.1	89.7	.848
700.	3.34	34.25	27.28	30.57	706.2	85.2	.936
800.	3.17	34.31	27.34	31.10	807.3	80.2	1.020
1000.	2.87	34.40	27.44	32.14	1009.7	71.7	1.173
1200.	2.55	34.45	27.51	33.15	1212.3	65.3	1.312

STATION 5-04

TIME: 1830 G.M.T. DATE: 24-XII-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 280° Force 4 AIR TEMP: Dry 41.0° Wet 37.0° BARO: 1007.0 mb.
CLOUD: Type St/ Amt 9 SEA: 280°- 2 SWELL: 300°- 3 SECCHI DISC: 23 meters (blue)
Cu

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	7.40	32.69*	25.57	4847.	0.617	1.38	0.32
10.	7.68+	32.69+	25.53	4851.			
30.	7.68	32.69	25.53	4852.	.613	1.32	.27
59.	7.70	32.68	25.52	4854.	.629	1.19	.24
68.	7.65	32.68	25.52	4854.	.617	1.23	.26
72.	7.64	32.68	25.52	4854.	.613	1.33	.26
77.	7.66	32.68	25.52	4855.	.644	1.36	.28
82.	7.65	32.68	25.53	4855.	.581	1.23	.27
87.	7.66	32.68	25.53	4855.	.614	1.20	.26
96.	7.66	32.69	25.53	4856.	.562	1.42	.25
121.	5.93	33.13	26.11	4837.	.581	1.63	.01
145.	5.00	33.31	26.36	4826.	.545	1.52	
169.	4.53	33.53	26.58	4822.	.514	1.89	tr.
194.	4.29	33.66	26.71	4821.	.552	2.08	.01
239.	3.89	33.81	26.87	4819.	.413	2.52	tr.
250.	3.80*	33.83*	26.90	4818.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.40	32.69	25.57	25.57	0.0	242.3	0.000
10.	7.68	32.69	25.53	25.58	10.1	246.4	.025
20.	7.77	32.69	25.51	25.61	20.1	248.0	.049
30.	7.68	32.69	25.53	25.66	30.2	247.1	.074
50.	7.69	32.68	25.52	25.75	50.3	247.9	.124
75.	7.65	32.68	25.52	25.87	75.5	247.9	.187
100.	7.55	32.71	25.57	26.03	100.6	244.3	.248
125.	5.73	33.18	26.17	26.76	125.8	186.7	.303
150.	4.86	33.35	26.41	27.11	151.0	164.5	.347
200.	4.23	33.68	26.74	27.68	201.4	133.3	.422
250.	3.80	33.83	26.90	28.08	251.8	118.1	.485

STATION 5-05

TIME: 1830 G.M.T. DATE: 29-XII-57 POSITION: Grid 0J
WEATHER: 14 WIND: Dir. 220° Force 7 AIR TEMP: Dry 43.0° Wet 42.0° BARO: 996.0 mb.
CLOUD: Type St Amt 10 SEA: 220°- 4 SWELL: 400°- 4 SECCHI DISC: 5 meters

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	8.00	32.81	25.57	4855.	0.628	1.62	0.28
10.	7.23+	32.72+	25.62	4845.			
20.	7.23+	32.72+	25.62	4846.			
26.	7.23	32.72	25.62	4846.	.624	1.61	.25
42.	7.22	32.73	25.62	4847.	.615	1.57	.24
63.	7.22	32.83	25.70	4849.	.620	1.59	.25
85.	7.22	32.71	25.61	4850.	.622	1.59	.24
101.	6.18	33.17	26.11	4839.	.551	1.88	.03
126.	5.23	33.36	26.37	4828.	.556	2.14	.03
170.	4.37	33.64	26.69	4820.	.453	2.38	.02
258.	3.86	33.85	26.91	4819.	.260	3.10	.02
322.	3.85	33.94	26.98	4823.	.224	2.91	.02
405.	3.81	34.00	27.03	4828.	.144	2.96	.01
630.	3.65	34.18	27.19	4840.	.069	3.32	.01

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{\ell s,t,p}$	P	$10^5\delta$	ΔD
0.	8.00	32.81	25.57	25.57	0.0	242.0	0.000
10.	7.23	32.72	25.62	25.66	10.1	238.2	.024
20.	7.23	32.72	25.62	25.71	20.1	238.4	.048
30.	7.23	32.72	25.62	25.76	30.2	238.1	.072
50.	7.22	32.75	25.64	25.88	50.3	236.2	.120
75.	7.22	32.79	25.67	26.02	75.5	233.7	.179
100.	6.27	33.13	26.06	26.53	100.6	196.7	.233
125.	5.25	33.37	26.38	26.96	125.8	167.3	.279
150.	4.63	33.52	26.57	27.27	151.0	149.0	.319
200.	4.01	33.77	26.83	27.77	201.4	124.7	.388
250.	3.84	33.85	26.91	28.09	251.8	116.9	.449
300.	3.82	33.92	26.97	28.38	302.3	112.3	.506
400.	3.81	33.99	27.03	28.91	403.2	107.3	.617
500.	3.75	34.07	27.09	29.44	504.1	101.9	.723
600.	3.68	34.16	27.17	29.99	605.2	95.4	.823

STATION 5-06

TIME: 1850 G.M.T. DATE: 31-XII-57 POSITION: Grid OS
WEATHER: 02 WIND: Dir. 010° Force 4 AIR TEMP: Dry 43.5° Wet 40.5° BARO: 1003.0 mb.
CLOUD: Type St/ Cu Amt 10 SEA: 060°- 3 SWELL: 300°- 3 SECCHI DISC: 23 meters (blue)

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	6.90	32.84	25.75	4841.	0.631	1.29	0.29
10.	7.17+	32.73+	25.63	4845.			
30.	7.17	32.73	25.63	4846.	.640	1.33	.29
49.	7.15	32.72	25.63	4847.	.626	1.45	.27
69.	7.16	32.72	25.62	4848.	.625	1.40	.27
74.	7.15	32.72	25.63	4848.	.619	1.27	.33
78.	7.16	32.72	25.63	4849.	.633	1.29	.27
83.	7.16	32.72	25.63	4849.	.651	1.44	.27
88.	7.15	32.72	25.63	4849.	.625	1.39	.27
98.	7.11	32.77	25.67	4849.	.630	1.42	.23
123.	5.79	33.33	26.28	4836.	.572	1.64	.04
148.	4.83	33.48	26.51	4825.	.545	1.74	.07
198.	4.17	33.74	26.79	4820.	.402		.01
248.	3.89	33.83	26.89	4819.	.291	2.43	.05
297.	3.85	33.91	26.95	4822.	.208	2.94	.06
300.	3.86*	33.91*	26.96	4822.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.90	32.84	25.75	25.75	0.0	225.1	0.000
10.	7.17	32.73	25.63	25.68	10.1	236.6	.023
20.	7.26	32.70	25.59	25.69	20.1	240.6	.047
30.	7.17	32.73	25.63	25.77	30.2	237.1	.071
50.	7.15	32.72	25.63	25.86	50.3	237.8	.119
75.	7.15	32.72	25.63	25.98	75.5	237.9	.179
100.	7.07	32.80	25.70	26.16	100.6	231.7	.238
125.	5.70	33.36	26.32	26.90	125.8	173.1	.289
150.	4.77	33.49	26.53	27.23	151.0	153.0	.330
200.	4.15	33.74	26.80	27.74	201.4	127.8	.401
250.	3.88	33.83	26.89	28.07	251.8	119.0	.463
300.	3.86	33.91	26.96	28.37	302.3	113.1	.521

STATION 5-07

TIME: 1830 G.M.T. DATE: 4-I-58 POSITION: Grid OJ
WEATHER: 02 WIND: Dir. 180° Force 4 AIR TEMP: Dry 45.0° Wet 42.5° BARO: 1010.0 mb.
CLOUD: Type Cu Amt 8 SEA: 160°- 3 SWELL: 140°- 3 SECCHI DISC: 23 meters (blue)

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	7.10	32.76	25.67	4843.	0.640	1.51	0.29
9.	7.07	32.74	25.66	4843.	.637	1.47	.29
27.	7.07	32.75	25.66	4844.	.622	1.44	.26
45.	7.07	32.73	25.65	4845.	.634	1.45	.28
67.	7.07	32.73	25.65	4847.	.630	1.41	.25
90.	7.11	32.74	25.65	4849.	.630	1.33	.30
112.	6.29	33.13	26.06	4841.	.610		.04
134.	5.41	33.39	26.38	4831.	.551	1.88	.02
157.	4.87	33.59	26.59	4826.	.514	1.66	.03
180.	4.42	33.65	26.69	4822.	.456	2.32	tr.
271.	3.90	33.86	26.91	4821.	.257	2.76	tr.
393.	3.86	34.03	27.05	4828.	.151	2.99	tr.
492.	3.73	34.11	27.13	4833.	.099	3.09	tr.
740.	3.48	34.24	27.25	4844.	.105	2.64	.03
986.	2.90	34.41	27.45	4851.	.073	2.94	tr.
1234.	2.55	34.47	27.52	4861.	.069	3.23	tr.

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	7.10	32.76	25.67	25.67	0.0	233.3	0.000
10.	7.07	32.74	25.65	25.70	10.1	234.5	.024
20.	7.06	32.74	25.65	25.75	20.1	234.8	.047
30.	7.07	32.74	25.66	25.80	30.2	234.6	.071
50.	7.07	32.73	25.65	25.88	50.3	235.7	.118
75.	7.08	32.74	25.65	26.00	75.5	236.0	.177
100.	6.84	32.87	25.78	26.25	100.6	223.4	.235
125.	5.78	33.30	26.26	26.84	125.8	178.3	.286
150.	4.99	33.54	26.54	27.24	151.0	151.9	.327
200.	4.13	33.70	26.76	27.71	201.4	130.7	.399
250.	3.84	33.82	26.88	28.06	251.8	119.7	.462
300.	3.82	33.91	26.96	28.37	302.3	113.0	.520
400.	3.85	34.04	27.06	28.94	403.2	104.4	.630
500.	3.72	34.12	27.14	29.49	504.1	97.9	.732
600.	3.61	34.18	27.20	30.02	605.2	92.8	.829
700.	3.51	34.22	27.24	30.53	706.2	89.3	.921
800.	3.37	34.27	27.29	31.05	807.3	84.8	1.009
1000.	2.87	34.42	27.45	32.16	1009.7	70.1	1.165
1200.	2.58	34.47	27.52	33.16	1212.3	64.4	1.302

STATION 5-08

TIME: 1900 G.M.T. DATE: 7-I-58 POSITION: Grid JK
WEATHER: 02 WIND: Dir. 280° Force 5 AIR TEMP: Dry Wet BARO: 1002.0 mb.
CLOUD: Type Cu Amt SEA: 280°- 4 SWELL: 278°- 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
.	6.70	32.82	25.77	4838.	0.625	1.53	0.28
10.	6.87+	32.82+	25.74	4841.			
30.	6.87	32.82	25.74	4842.	.624	1.45	.26
50.	6.87	32.72	25.67	4843.	.638	1.25	
75.	6.90	32.73	25.67	4845.	.635	1.69	.24
80.	6.95	32.72	25.65	4846.	.623	1.57	.25
84.	6.95	32.72	25.66	4846.	.629	1.45	.28
88.	6.89	32.72	25.66	4846.	.619	1.44	.26
93.	6.89	32.73	25.67	4846.	.624	1.45	.24
98.	6.89	32.72	25.67	4846.	.621	1.43	.24
123.	5.83	33.32	26.27	4836.	.566	1.86	.03
148.	4.80	33.52	26.55	4825.	.511	2.11	.01
198.	4.37	33.69	26.73	4822.	.429	2.41	.01
248.	3.92	33.81	26.87	4820.	.309	2.78	.02
298.	3.85	33.89	26.94	4822.	.234	2.98	.02
300.	3.86*	33.89*	26.94	4822.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5 \delta$	ΔD
0.	6.70	32.82	25.77	25.77	0.0	223.8	0.000
10.	6.87	32.82	25.74	25.79	10.1	226.1	.023
20.	6.93	32.82	25.73	25.83	20.1	227.1	.045
30.	6.87	32.82	25.74	25.88	30.2	226.6	.068
50.	6.87	32.72	25.67	25.90	50.3	234.0	.115
75.	6.90	32.73	25.67	26.02	75.5	234.2	.174
100.	6.87	32.74	25.68	26.14	100.6	233.6	.232
125.	5.75	33.35	26.30	26.88	125.8	174.5	.284
150.	4.74	33.53	26.56	27.27	151.0	149.7	.325
200.	4.35	33.69	26.73	27.67	201.4	133.7	.396
250.	3.91	33.81	26.88	28.05	251.8	120.5	.460
300.	3.86	33.89	26.94	28.35	302.3	114.8	.519

STATION 5-09

TIME: 1900 G.M.T. DATE: 10-I-58 POSITION: Grid OS
WEATHER: 81 WIND: Dir. 100° Force 3 AIR TEMP: Dry Wet BARO: 1004.0 mb.
CLOUD: Type St Amt 10 SEA: 100°- 4 SWELL: 110°- 4 SECCHI DISC: 23 meters (blue)

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	6.70	32.83	25.77	4838.	0.621		0.34
10.	6.86	32.75	25.69	4841.	.621		.29
29.	6.85	32.74	25.68	4842.	.630		.27
48.	6.86	32.74	25.68	4843.	.624		.27
73.	6.94	32.74	25.67	4845.	.633		.28
98.	6.87	32.74	25.68	4846.	.630		.30
122.	6.35	33.21	26.12	4842.	.616		.06
146.	5.53	33.46	26.42	4834.	.555		.05
171.	4.66	33.63	26.65	4824.	.501		.04
194.	4.41	33.76	26.78	4823.	.453		.01
291.	3.84	33.88	26.93	4821.	.252		.02
380.	3.91	34.02	27.04	4828.	.178		tr.
476.	3.75	34.10	27.12	4832.	.110		.01
715.	3.31	34.28	27.31	4841.	.068		.02
958.	2.93	34.38	27.42	4850.	.092		tr.
1206.	2.57	34.45	27.51	4860.	.073		.01

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.70	32.83	25.77	25.77	0.0	223.1	0.000
10.	6.86	32.75	25.69	25.73	10.1	231.4	.023
20.	6.91	32.72	25.66	25.75	20.1	234.3	.046
30.	6.85	32.74	25.68	25.82	30.2	232.2	.070
50.	6.86	32.74	25.68	25.91	50.3	232.5	.117
75.	6.94	32.74	25.67	26.02	75.5	233.9	.175
100.	6.84	32.76	25.70	26.17	100.6	231.2	.234
125.	6.26	33.25	26.16	26.74	125.8	187.9	.286
150.	5.39	33.49	26.46	27.16	151.0	159.7	.330
200.	4.35	33.79	26.81	27.75	201.4	126.6	.402
250.	3.99	33.92	26.95	28.12	251.8	113.8	.463
300.	3.82	33.89	26.94	28.36	302.3	114.5	.521
400.	3.90	34.04	27.06	28.94	403.2	104.7	.631
500.	3.71	34.12	27.14	29.49	504.1	97.5	.733
600.	3.53	34.20	27.22	30.04	605.2	90.4	.828
700.	3.34	34.27	27.30	30.59	706.2	83.7	.916
800.	3.17	34.33	27.36	31.12	807.4	78.5	.998
1000.	2.87	34.40	27.44	32.14	1009.8	71.5	1.150
1200.	2.58	34.45	27.50	33.14	1212.4	65.7	1.289

STATION 5-10

TIME: 1845 G.M.T. DATE: 15-I-58 POSITION: Grid OS
WEATHER: 03 WIND: Dir. 160° Force 3 AIR TEMP: Dry 44.0° Wet 44.0° BARO: 987.0 mb.
CLOUD: Type St Amt 9 SEA: 160°- 3 SWELL: SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	6.60	32.74	25.72	4837.	0.629	1.58	0.24
29.	6.65	32.69	25.67	4839.	.622	1.37	.24
48.	6.66	32.69	25.67	4840.	.669	0.94	.19
72.	6.68	32.69	25.67	4842.	.681	1.24	.23
97.	6.63	32.70	25.68	4843.	.640	1.36	.20
102.	6.23	32.95	25.93	4839.	.614	1.39	.19
106.	5.70	33.16	26.16	4833.	.567	1.71	.02
111.	5.69	33.25	26.23	4833.	.594	1.72	.01
116.	5.51	33.31	26.30	4831.	.569	1.75	tr.
121.	5.30	33.37	26.37	4829.	.545	1.84	.02
145.	4.63	33.51	26.56	4822.	.519	1.72	.01
170.	4.34	33.57	26.64	4820.	.504	1.99	tr.
243.	3.87	33.81	26.87	4818.	.315	2.40	.01
292.	3.84	33.87	26.93	4821.	.246	2.74	tr.
300.	3.86*	33.87*	26.93	4822.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.60	32.74	25.72	25.72	0.0	228.4	0.000
10.	6.62	32.72	25.70	25.74	10.1	230.6	.023
20.	6.64	32.70	25.68	25.77	20.1	232.2	.046
30.	6.65	32.69	25.67	25.81	30.2	233.2	.070
50.	6.66	32.69	25.67	25.91	50.3	233.4	.117
75.	6.68	32.69	25.67	26.02	75.5	234.2	.176
100.	6.41	32.84	25.82	26.29	100.6	220.0	.233
125.	5.15	33.41	26.42	27.01	125.8	162.9	.281
150.	4.54	33.53	26.59	27.29	151.0	147.3	.320
200.	4.08	33.66	26.73	27.68	201.4	133.5	.391
250.	3.85	33.82	26.88	28.06	251.8	119.6	.455
300.	3.86	33.87	26.93	28.34	302.3	116.0	.514

STATION 5-11

TIME: 1845 G.M.T. DATE: 15-I-58 POSITION: Grid OS
WEATHER: 03 WIND: Dir. 160° Force 3 AIR TEMP: Dry 44.0° Wet 44.0° BARO: 987.0 mb.
CLOUD: Type St Amt 9 SEA: 160°- 3 SWELL: 170°- 3 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 μg.at/L	NO_2 μg.at/L
0.	6.60	32.84	25.79	4837.	0.627	1.46	0.27
10.	6.66	32.71	25.68	4838.	.629	1.38	.25
30.	6.65	32.69	25.67	4839.	.635	1.44	.24
50.	6.62	32.69	25.67	4840.	.659	1.48	
75.	6.66	32.69	25.67	4842.	.619	1.43	.23
99.	6.57	32.72	25.71	4842.	.629	2.18	.25
124.	5.26	33.35	26.36	4829.	.589	1.74	.02
149.	4.79	33.51	26.54	4824.	.516	2.03	.02
174.	4.45	33.62	26.66	4822.	.470	2.37	tr.
199.	4.19	33.71	26.76	4820.	.399	2.40	tr.
298.	3.83	33.88	26.93	4821.	.237	2.82	.01
363.	3.78	33.97	27.01	4825.	.178	3.06	tr.
456.	3.82	34.09	27.10	4832.	.126	2.91	tr.
682.	3.41	34.26	27.28	4840.	.100	3.10	.01
920.	3.00	34.35	27.39	4849.	.089	3.15	tr.
981.	2.87	34.38	27.42	4851.	.073	2.98	tr.
1000.	2.83*	34.39*	27.44	4851.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.60	32.84	25.79	25.79	0.0	221.2	0.000
10.	6.66	32.71	25.68	25.73	10.1	231.9	.023
20.	6.68	32.66	25.64	25.73	20.1	235.9	.046
30.	6.65	32.69	25.67	25.81	30.2	233.1	.070
50.	6.62	32.69	25.67	25.90	50.3	233.5	.117
75.	6.66	32.69	25.67	26.02	75.5	234.1	.176
100.	6.54	32.74	25.72	26.19	100.6	229.3	.234
125.	5.23	33.37	26.38	26.96	125.8	167.0	.284
150.	4.77	33.52	26.55	27.25	151.0	151.0	.324
200.	4.18	33.71	26.77	27.71	201.4	130.6	.395
250.	3.87	33.83	26.89	28.07	251.8	118.9	.458
300.	3.83	33.88	26.93	28.35	302.3	115.3	.517
400.	3.78	34.02	27.05	28.93	403.2	105.4	.628
500.	3.80	34.14	27.14	29.50	504.1	97.1	.730
600.	3.64	34.22	27.22	30.05	605.2	90.2	.825
700.	3.38	34.27	27.29	30.58	706.2	84.5	.913
800.	3.20	34.31	27.34	31.10	807.4	79.9	.996
1000.	2.83	34.39	27.44	32.14	1009.8	71.5	1.150

STATION 5-12

TIME: 2130 G.M.T. DATE: 22-I-58 POSITION: Grid 0J
WEATHER: 03 WIND: Dir. 210° Force 6 AIR TEMP: Dry 44.0° Wet 44.0° BARO: 987.0 mb.
CLOUD: Type St Amt 9 SEA: 210°- 4 SWELL: 200°- 4 SECCHI DISC:

Depth m.	Temp. °C	S ‰	σ_t	S/V ft/sec	O_2 mg.at/L	PO_4 µg.at/L	NO_2 µg.at/L
0.	6.60	32.70	25.69	4837.	0.634	1.62	0.31
29.	6.64	32.68	25.66	4839.	.630	1.46	.28
48.	6.65	32.68	25.66	4840.	.626	1.50	.25
73.	6.65	32.68	25.66	4841.	.656	1.48	.27
98.	6.55	32.68*	25.67	4842.	.622		
122.	5.53	33.26	26.26	4832.	.559	1.98	.06
147.	4.85	33.45	26.48	4825.	.551	1.73	.04
171.	4.43	33.60	26.65	4821.	.475	2.25	.01
196.	4.14	33.70	26.76	4819.	.419	2.49	.04
245.	3.90	33.82	26.88	4819.	.299	2.86	.02
294.	3.84	33.90	26.95	4821.	.210	2.72	.03
300.	3.85*	33.91*	26.96	4822.			

INTERPOLATED DATA

Depth m.	Temp. °C	S ‰	σ_t	$\sigma_{s,t,p}$	P	$10^5\delta$	ΔD
0.	6.60	32.70	25.69	25.69	0.0	231.4	0.000
10.	6.62	32.69	25.67	25.72	10.1	232.7	.023
20.	6.63	32.68	25.67	25.76	20.1	233.6	.047
30.	6.64	32.68	25.66	25.80	30.2	234.2	.070
50.	6.65	32.68	25.66	25.89	50.3	234.3	.118
75.	6.65	32.68	25.66	26.01	75.5	234.5	.176
100.	6.50	32.71	25.70	26.17	100.6	231.1	.235
125.	5.43	33.30	26.31	26.89	125.8	174.0	.286
150.	4.79	33.47	26.51	27.21	151.0	154.8	.327
200.	4.10	33.71	26.77	27.72	201.4	129.7	.399
250.	3.89	33.83	26.89	28.07	251.8	119.0	.462
300.	3.85	33.91	26.96	28.37	302.3	113.1	.520

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
January, 1957				Cruise P-1-57						
1800/27	V	6.7		6.7	3.3	1.7		1.6	tr.	Pt, Ost, Ann
1815/28	V	5.0		5.0	2.7	1.9	0.2	0.2	tr.	Ost, Egg, Ann
1815/29	V	4.2		4.2	2.8	1.0		0.1		Pt 0.1, Ost 0.1
0000/31	H	1.7		1.7	0.2	1.3	0.1		tr.	Egg 0.1, Det
1800/31	V	0.4		0.4	0.2	tr.			tr.	Ann 0.2, Ost, Det
February, 1957										
2305/1	H	0.0		0.0						
1800/2	V	5.8		5.8	5.3	0.5	tr.		tr.	Pt, Ost
0005/3	H	0.0		0.0	tr.	tr.				Egg, Det
1740/4	V	5.4		5.4	4.7	0.3		tr		Ann 0.2, Ost 0.2 Pt, Egg
0020/5	H	0.0		0.0						
1738/6	V	4.2		4.2	2.5	1.7	tr.		tr.	Ost, Egg, Det
1900/7	H	2.9		2.9	0.5	2.3	tr.		tr.	Det
2100/7	H	1.9		1.9	0.1		tr.		tr.	Pt 1.7, Egg 0.1 Ann
2300/7	H	0.8		0.8	0.7	0.1			tr.	Pt, Egg, Det
0100/8	H	0.5.		0.5	0.3	0.2	tr.		tr.	Egg
0300/8	H	2.6		2.6	tr.	tr.	0.1	0.1	tr.	Ann 2.3, Det
0500/8	H	17.9		17.9	13.9	tr.	0.4	3.6	tr.	Pt, Ann
0700/8	H	22.1		22.1	16.3	tr.	tr.	5.7	tr.	Egg

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
February, 1957					Cruise P-1-57					
0900/8	H	24.8		24.8	2.6	0.3		20.7	tr.	Fish Larv 1.2 Ann
1100/8	H	47.6		47.6	11.9	tr.	tr.	35.3	tr.	Fish Larv 5.2 Pt
1300/8	H	30.4		30.4	5.8	tr.	tr.	24.3	tr.	Ann, Pt
1700/8	H	2.2		2.2	0.1	1.5	0.6		tr.	Pt, Egg
0030/14	H	5.5		5.5	tr.	0.1	4.6		tr.	Fish Larv 0.8 Egg
0020/15	H	1.2		1.2		0.7	0.5		tr	Vell 9, Egg, Det
0110/17	H	2.4		2.4	tr.	2.2				Pt 0.2, Det, Vell 43, Egg
0100/18	H	1.5		1.5	tr.	1.4	tr.		tr.	Pt 0.1, Ost, Egg, Vell 6
1815/20	V	0.8		0.8	0.3	0.3	tr.		tr.	Ann 0.1, Pt 0.1, Ost, Egg
1755/25	V	0.4		0.4	0.4	tr.			tr.	Ann, Pt, Ost
1730/26	H	0.0		0.0	tr.	tr.			tr.	Det
1910/26	H	0.0		0.0	tr.	tr.	tr.	tr.		Squid frag, Egg, Det, Vell 26
2105/26	H	0.0		0.0	tr.	tr.	tr.	tr.	tr.	Pt, Det, Vell 19
2305/27	H	0.0		0.0	tr.	tr.		tr.		Egg, Det, Vell 78
0105/27	H	0.7		0.7	tr.	tr.	0.7		tr.	Det, Ann, Gast

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
February, 1957					Cruise P-1-57					
0305/27	H	53.1		53.1				52.8	tr.	
0505/27	H	55.1		55.1	2.2	tr.	tr.	52.9	tr.	Pt, Vell 38 Lantern fish
0705/27	H	60.8		60.8	1.3	tr.	tr.	59.5	tr.	Vell 8, Det Fish Larv 1
0905/27	H	65.5		65.5	0.6	tr.	tr.	62.9		Fish Larv 2.0 Squid, Det, Vell 496
1100/27	H	61.5		61.5	0.6	tr.	tr.	57.7	tr.	Fish Larv 3.1 Squid, Det, Vell 385
1500/27	H	14.3		14.3	0.2	tr.	tr.	14.0	tr.	Ann, Pt, Vell
1725/27	H	16.1		16.1	tr.	tr.	16.1	tr.	tr.	Det, Vell 136
March, 1957										
1800/2	V	4.6		4.6	2.1	0.8	tr.	tr.	tr.	Ost 1.6, Pt, Ann, Det
1815/4	50 mv	11.3		11.3	9.9	tr.		0.1	tr.	Pt 1.2, Det, Ann, Pt
1825/4	100 mv	6.9		6.9	6.3	tr.	tr.	0.6	tr.	Ann, Pt, Ost
1837/4	150 mv	4.1		4.1	4.1	tr.	tr.		tr.	Ann, Pt, Ost
1850/4	200 mv	3.1		3.1	2.5	0.6	tr.		tr.	Ann, Pt, Ost
1930/4	300 mv	7.8		7.8	7.8	tr.	tr.	tr.	tr.	Ann, Pt, Ost
1955/4	500 mv	26.4		26.4	20.9	4.1	tr.	1.4	tr.	Pt, Ann, Ost

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
April, 1957					Cruise P-2-57					
	Vertical hauls to surface from depth indicated in column.									
1830/20	150 m	45.6		36.5	27.4	6.9	tr.	tr.	9.1	Det, Ost, Pt Egg, Radio
1830/22	150 m	37.4		26.2	20.6	5.6			11.2	Ost, Pt, Tom
1800/23	500 m	36.2		29.0	15.6	5.4	tr.	3.6	7.2	Ost 0.3, Pt, Egg Radio, Tom 0.3 Shrimp 3.6
1835/23	300 m	31.2	0.3	21.6	14.0	6.2	tr.		9.3	Ost 0.3, Pt 0.3, Egg, Radio
1905/23	200 m	28.1	1.4	19.7	10.1	5.6	tr.		7.0	Pt 0.3, Det 1.4, Egg, Tom
1917/23	150 m	12.5	tr.		tr.	tr.	tr.		tr.	Det
1930/23	100 m	25.0	1.3	13.7	8.7	5.0			10.0	Ost, Pt, Radio
1940/23	50 m	50.0	1.0	38.0	25.0	10.0			10.0	Pt 2.0, Det 1.0, Radio 1.0
1800/25	150 m	25.0	tr.	14.3	7.5	5.0	tr.	tr.	10.0	Pt, Ost, Egg Det 0.7, Glob
1800/27	150 m	70.5	3.9	41.1	25.9	14.0		tr.	24.5	Pt 2.1, Radio Egg, Ost, Glob
1800/29	150 m	33.2	0.3	22.6	14.7	6.8		tr.	10.3	Pt 1.7, Tom 0.3 Ost, Egg, Radio
1810/30	500 m	28.2	0.7	25.4	14.4	5.7	tr.	1.4	2.9	Det 0.7, Pt, Ost Egg, Radio
1830/30	300 m	35.4	0.1	29.8	19.5	7.1	tr.		5.3	Det 0.2, Ost Squid, Tom
1845/30	200 m	31.2	0.1	18.4	13.1	4.7	tr.		12.5	Det 0.2, Ost Squid, Tom, Pt

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
April, 1957					Cruise P-2-57					
1855/30	150 m	37.5	1.9	28.2	20.6	7.5	tr.	tr.	5.6	Det 1.8, Ost, Pt Tom, Egg, Glob
1930/30	100 m	37.5	1.9	22.6	18.0	3.7	tr.	tr.	11.2	Det 1.8, Glob
1935/30	50 m	25.0	7.5	16.8	8.7	6.3			tr.	Det 0.7, Pt 1.3, Radio 0.6
May, 1957										
1820/1	150 m	158	7.9	71.1	63.2	3.2			79.0	
1800/4	150 m	54.1	5.4	27.1	22.3	2.7	tr.	tr.	21.6	Ost, Pt, Radio Tom
1800/7	500 m	47.4	tr.	37.9	23.7	9.5	1.4	2.4	9.5	Ost, Pt, Radio
1815/7	300 m	58.3	0.6	34.3	26.2	5.8	0.6	tr.	23.4	Ost, Pt, Ann Radio
1830/7	200 m	40.5	tr.	33.8	32.4	2.0			6.7	Pt, Ann, Radio
1840/7	150 m	62.5	1.3	38.7	46.9	3.1	tr.	tr.	12.5	Pt, Ost, Ann Radio
1856/7	100 m	87.3	1.7	76.9	70.0	4.4			8.7	Pt 2.6, Ost
1900/7	50 m	25.0	1.3	23.7	22.5	0.6				Pt 0.6
1800/8	150 m	41.5	2.1	36.5	35.2	1.2		tr.	2.4	Tom, Egg, Naup
1830/9	1190 m	27.9	5.6	16.7	13.9	5.6	0.8	1.4	5.6	Ost, Pt, Radio
1730/11	150 m	58.3	2.3	26.7	23.3	2.9	tr.	tr.	29.2	Pt, Ost, Ann, Larv
1815/15	150 m	171		145.4	137	8.5	tr.		25.6	Pt, Ost, Ann Larv
1815/16	500 m	68.7		58.4	51.5	4.7	tr.	2.1	10.3	Pt, Ost, Radio Naup

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
May, 1957					Cruise P-2-57					
1840/16	300 m	117	tr.	117	58.5	58.5	tr.		tr.	Pt, Ost
1900/16	200 m	100	tr.	100	85.0	15.0	tr.	tr.	tr.	Pt, Ost, Ann Larv
1920/16	150 m	70.9		70.9	56.6	7.1	tr.	3.5	tr.	Pt, Ost, Radio
1955/16	100 m	37.5		37.5	29.6	1.8	0.4		tr.	Pt 1.1, Ost
2005/16	50 m	25.0		15.1	12.5	1.3	1.3			Det 9.9
1800/19	150 m	79.2	tr.	55.4	39.6	11.9	tr.		23.8	Pt 0.8, Ost 1.2 Det, Radio
1750/21	500 m	33.8		33.8	27.0	1.7	0.7	3.4		Ost, Egg, Radio, Pt
1810/21	300 m	56.1		39.3	27.0	11.2	tr.	1.1	16.8	Pt, Ost, Egg Radio
1820/21	200 m	96.7		77.4	66.8	4.7	0.9	tr.	14.3	Pt, Ost, Egg Radio, Tom
1840/21	150 m	183		146.4	119	27.4	tr.		36.6	Pt, Ost
1850/21	100 m	113		98.4	79.0	16.9			11.3	Pt 2.3, Det 3.3 Radio
1900/21	50 m	337		327.3	303	23.6		tr.	6.7	Pt 6.7, Det 3
1800/22	150 m	54.0		36.4	18.9	10.8	tr.	tr.	16.2	Pt 0.5, Det 1.4
1800/25	150 m	137		129.5	117	6.9	2.7		6.4	Pt 2.7, Det 0.6 Ost, Egg, Radio
1800/27	1200 m	62.5		59.4	50.0	6.3	0.6	1.9	3.1	Pt, Ost, Egg Radio
1745/28	500 m	131		117.9	85.1	19.7	tr.	13.1	13.1	Pt, Ost, Radio Egg

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
May, 1957					Cruise P-2-57					
1805/28	300 m	104		81.6	62.4	15.6		2.1	20.8	Pt, Ost, Det 1.6 Radio 1.5
1825/28	200 m	46.8		46.8	39.4	6.6	tr.	tr.	tr.	Pt 0.5, Ost 0.5 Egg, Radio, Tom Squid
1835/28	150 m	250		200	163	37.5		tr.	50.0	Pt, Ost, Radio Tom
1845/28	100 m	238		202.3	191	11.9	tr.		35.7	Pt, Ost, Egg Radio
1850/28	50 m	325		276.3	237	32.5	tr.		32.5	Pt 6.2, Det 16.2
1800/29	150 m	66.5		36.6	30.0	6.7		tr.	23.2	Pt, Tom, Det 6.7
April, 1957										
0040/23	H	15.2	2.0	15.2	11.4	2.3				Pt 0.3, Radio Det
2205/23	H	15.9	1.2	14.7	11.9	1.5			tr.	Pt, Egg Radio 1.2
0605/24	H	62.1		37.3	12.4	12.4	tr.	12.4	24.8	Pt
1720/25	H	14.5		10.2	5.8	4.3				Pt, Egg, Det 4.3
1930/25	H	6.9	0.1	6.8	4.1	2.1				Pt, Radio 0.2 Egg, Glob 0.7
2130/25	H	6.9	0.4	6.5	4.1	1.4	0.1			Pt 0.1, Radio 0.3 Vell, Glob 0.3
2330/25	H	6.2	0.6	5.6	3.7	0.6				Pt, Radio 0.9 Egg, Glob 0.3
0130/26	H	11.7	0.1	11.0	6.1	4.7	0.3			Pt 0.1, Radio 0.1 Egg, Fish (12)

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
April, 1957					Cruise P-2-57					
0330/26	H	20.7	0.2	20.5	10.4	8.7	1.0			Pt 0.1, Radio 0.2 Egg, Glob
0530/26	H	49.7		42.5	24.8	7.5	7.5	tr.	7.5	Pt, Squid 2.5 Egg
0730/26	H	51.0		40.8	17.8	12.7	7.7	2.5	10.2	Pt, Egg Fish (45)
0930/26	H	39.4		27.6	7.9	3.9	15.8			Det 11.8, Fish(7)
1130/26	H	101		40.5	20.2	10.1	10.1		60.5	Lantern fish (130) Other fish (19)
1330/26	H	158		110.6	67.1	27.6	7.9	tr.	47.4	Pt, Egg, Det Tom, Squid 1.5
1530/26	H	29.0		27.5	18.3	3.5	2.9			Det 1.5, Egg Radio 1.4, Glob
1730/26	H	53.1	2.6	48.8	30.8	10.6				Det 1.7, Pt 1.0
2200/30	H	5.5	0.1	5.4	0.3	1.7				"Black eggs" 0.8 Egg 0.8, Vell 0.3 Radio 0.1
0630/31	H	27.0		18.9	10.8	4.1	4.1		8.1	Pt, Squid, Vell
May, 1957										
1800/2	H	40.0		40.0	38.0	1.6				Pt 0.4
2000/2	H	15.2		15.2	14.6	0.6				Pt, Vell
2200/2	H	26.2	tr.	26.2	23.6	2.1	tr.			Pt
0000/3	H	7.6		7.6	6.7	0.8	tr.			Pt
0200/3	H	34.5		34.5	29.4	4.5	0.7			Pt, Vell

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
May, 1957				Cruise P-2-57						
0400/3	H	60.7		60.7	45.5	7.9	7.3			Pt, Vell, Fish
0600/3	H	117		93.6	58.5	tr.	23.4	11.7	23.4	Pt, Fish (6)
0800/3	H	142		49.6	21.3	14.2	tr.	14.2	92.4	Pt, Fish (25)
1000/3	H	109		87.2	49.1	16.3	tr.	21.8	21.8	Pt
1200/3	H	128		115.2	76.9	6.4	2.6	29.4	12.8	Pt, Ost
1500/3	H	37.2	tr.	37.2	33.5	2.6	tr.	0.7		Pt 0.3
1700/3	H	67.6		67.6	57.5	10.1				Pt, Radio
0000/8	H	< 0.5		< 0.5	tr.		tr.			Det
0630/8	H	60.0		60.0	45.0	12.0	3.0			Pt Lantern fish(25)
2255/16	H	13.1		13.1	11.8	1.3	tr.			Pt, Det
0630/17	H	244		244	183	24.4	36.6	tr.		Squid, Tom
0730/17	H	72.5		72.5	41.3	7.3	21.8			Pt, Lantern fish(12)
2300/21	H	1.4		1.4	0.1		0.1			Radio 1.2
0640/22	H	63.5		63.5	25.4	6.3	31.8			Pt, Lantern fish(19)
1730/23	H	70.5		70.5	63.5	6.3	0.7			Pt, Egg, Vell Radio
1930/23	H	12.4		11.2	9.9	1.2				Pt, Egg, Vell Det 1.2
2130/23	H	4.8		4.8	1.9	1.5				"Black eggs" Vell, Radio

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
May, 1957					Cruise P-2-57					
2330/23	H	2.1		2.1	tr.	1.1	tr.			"Black eggs" 0.6 Pt 0.2, Radio 0.2
0130/24	H	7.6		7.6	0.4	5.3	0.4			"Black Eggs" 1.4 Pt, Radio
0330/24	H	67.4		66.9	27.0	27.0	13.5			"Black eggs" Pt, Vell 0.5
0530/24	H	850		850	467	42.5	340			"Black eggs", Det Lantern fish (19)
0730/24	H	373								
0930/24	H	282		268	155	14.1	98.6	tr.	7.0	Pt, Vell 7.0 Egg, Fish (56)
1130/24	H	129		129	51.6	25.8	51.6	tr.		Pt, Amph eggs Lantern fish (19)
1400/24	H	77.4		73.5	31.0	38.6	3.9			Pt, Vell 3.9
1530/24	H	137		137	89.0	48.0	tr.			Pt, Egg
2300/28	H	6.6		6.6	5.6		tr.	0.7		"Black eggs"
0630/29	H	153		153	130	7.7	7.7			
0615/30	H	407		407	183	12.2	204	tr.		Amph eggs Squid 8.0, Vell
0645/30	H	6.2		6.2	2.5	2.5	0.9			Squid, Det Squid 12.4
0730/30	H	66.2		59.5	46.1	20.0	1.3		6.7	Vell 6.7
1530/31	H	160								
1530/29	H	24.2								
1852/28	50 mv	<0.5								

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
July, 1957				Cruise P-3-57						
	Vertical hauls to surface from depth indicated in column.									
1730/13	150 m	44.9		35.1	24.5	7.3	0.5		9.8	Pt 1.0, Det 5.0
1900/15	H	6.9		6.9						"Black eggs"
2100/15	H	4.8		4.8						" "
2300/15	H	6.9		6.9						" "
0100/16	H	80.8		80.8	tr.	4.0	72.7			"Black eggs" 3.2 Pt
0300/16	H	215		215	172	21.5	12.9			Pt 4.3, Ost 4.3
0500/16	H	262		262	39.3	13.1	196			Pt 2.1, Ost Squid 10.5
0700/16	H	46.2		46.2	32.3	5.5	6.9			Pt, Ost "Black eggs" 1.4
0900/16	H	27.6		27.6	9.7	6.9	5.5			Pt, Egg, Squid 5.5 Goose barnacles
1100/16	H	61.4		61.4	24.6	3.1	27.6			Pt
1300/16	H	413		413	20.6	tr.	372			Amph eggs Squid 20.6
1500/16	H	265		265	tr.		265			Squid
1700/16	H	436		436			436			
1900/16	H	3.5		3.5						"Black eggs"
1730/18	50 m	362		181	145				181	Pt 36.0
	100 m	294		294	250	29.4			tr.	Pt 14.7

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
July, 1957					Cruise P-3-57					
1730/18	150 m	208		199.7	167	27.0	2.1		8.3	Pt 4.2
	200 m	215		215	174	10.7			tr.	Pt 10.7 Ost, Tom
	300 m	141		136.9	120	9.9	tr.		7.1	Pt 4.2, Ost Radio
	500 m	105		84.0	42.0	36.8	tr.		5.3	Pt 5.3, Radio Det 15.7
1940/18	1000 m	51.2		44.6	17.9	17.9	tr.	1.0	2.6	Det 4.0, Shrimp Radio 3.7, Tom Naup
0030/21	H	1.4		1.4			tr.			"Black eggs" 1.4
0700/21	H	75.1		75.1	46.4	7.7	1.5	tr.		Squid 19.4
1730/20	150 m									
1730/25	50 m	162		162	130	24.3	8.1			
	100 m	181		181	145	32.6	3.6			
	150 m	70.6		67.6	53.1	15.2	0.7		3.0	
	200 m	197		187.1	158	29.6	tr.		9.9	Pt, Ost, Tom
	300 m	85.4		53.9	29.9	213	1.7	tr.	8.5	Det 23.0 (Medusae frag, Radio, Sipho), Ost, Tom
1940/25	500 m	70.1		59.6	28.0	17.5	2.1	3.5	7.0	Ost 2.5, Det 3.5
1730/27	150 m	46.6	tr.	24.3	23.3	1.9	tr.		18.6	Pt, Ost, Det 3.7
0450/28	H	199		199			199			

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
July, 1957					Cruise P-3-57					
0700/28	H									
0630/30	50 m	125	tr.	119.3	113	20.4	6.3			Ost, Det 5.7
	100 m	81.3	2.1	73.0	44.8	20.4	tr.	8.1	4.1	Det 2.0, Pt Ost
	150 m	66.5	tr.	53.1	39.9	6.7	tr.	6.7	6.7	Det 6.7, Ost
	200 m	87.4	tr.	78.6	39.3	8.7	tr.	26.2	4.4	Ost, Det 4.4 Radio, Tom 4.4
	300 m	85.3	1.7	79.3	34.2	29.9	1.7	12.8	4.3	Radio, Tom Fish (1)
August, 1957										
1730/1	50 m	138	tr.	116.9	110		tr.		13.8	Pt 5.5, Det 8.3 Ost, Amph eggs
	100 m	56.3	tr.	39.4	22.5	16.9			16.9	Pt, Det, Radio
	150 m	45.8	tr.	26.5	13.7	13.7			13.7	Pt, Ost, Radio Det 4.6
	200 m	46.8	tr.	38.4	18.8	14.1			4.7	Pt 0.9, Ost Det 3.7
	300 m	41.6	tr.	24.9	12.5	12.5	tr.		4.2	Ost, Det 12.5 Egg, Radio
1840/1	500 m	48.8	1.0	41.5	24.4	14.6	tr.	2.4	4.3	Pt, Ost, Egg Det 2.0, Radio Tom, Naup
0030/2	H	<0.5		<0.5			tr.			Det
0730/2	H	22.1		13.2	8.9	3.3	1.1			Pt, Egg Fish scales 8.9 Lantern fish 240

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
August, 1957					Cruise P-3-57					
1700/3	150 m	45.7		26.4	11.4	11.4	2.3	2.3	11.4	Det 6.9, Egg Radio
1800/9	500 m	86.3		82.0	43.1	32.8	1.7	4.3	2.3	Pt, Ost, Egg Det 2.0, Radio
	300 m	93.6		74.9	37.4	32.8	4.7	tr.	8.7	Pt, Ost, Egg Det 10.0, Radio Sipho
	100 m	43.7		35.0	17.5	13.1	tr.	tr.	4.3	Det 4.4, Egg 4.4
	200 m	103	tr.	97.9	61.9	30.9	3.1		3.1	Ost, Radio Egg 2.1, Det 2.0
	150 m	63.6	tr.	56.5	31.8	21.1	3.5		4.1	Ost, Egg, Radio Det 3.0, Squid
1930/9	50 m	62.5		6.4			3.2		31.2	Eggs 3.2, Det 25.0
1700/12	H	0.7		0.7	tr.	tr.	tr.			
1900/12	H	<0.5		<0.5						Det
2100/12	H	<0.5		<0.5						Det
2300/12	H	0.7		0.7						"Black eggs" Det
0100/13	H	0.7		0.7						"Black eggs" Det
0300/13	H	0.7		0.7						"Black eggs" Det
0500/13	H	629		629			440			Squid 189
0700/13	H	68.1		67.7	7.2	2.1	53.7		1.4	Squid 3.6 Lantern fish 280

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
August, 1957					Cruise P-3-57					
0900/13	H	18.7		16.4	4.7	1.2	9.4		tr.	Pt, Det 2.3 Amph eggs Squid 1.2 Lantern fish 170
1100/13	H	58.3		58.3	9.2	3.1	43.0			Pt, Amph eggs Squid 6.1 Lantern fish 210
1300/13	H	82.8		82.8	4.1	3.3	33.1			Squid 41.5
1600/13	H	33.1		33.1	3.3		29.9			Egg
1750/15	500 m	28.3		21.7	9.9	1.4	2.8	2.8	3.3	Ost 1.4, Egg Det 3.3, Radio 3.3 Protozoa
	300 m	15.2		10.7	4.5	2.3	0.5		2.3	Det 2.2, Ost 0.3 Tom 3.0, Egg Protozoa
	200 m	12.4		9.3	4.3	4.3	0.6		2.1	Det 1.0, Pt, Egg Protozoa
	150 m	29.1	tr.	21.8	8.5	11.5	0.6		3.6	Det 3.6, Egg Protozoa
	100 m	18.7	0.9	12.2	5.6		5.6			Det 5.6, Pt Radio 0.9
	50 m	<10	2.0	8	2		2			Det 2, Pt 0.5
1930/15	1200 m	24.7	tr.	19.8	8.7	7.4	1.0		2.9	Det 2.0, Shrimp 2.5 Protozoa 0.3
0640/16	500 m	56.3		49.3	16.9	22.6	2.8	2.8	4.0	Det & Sipho 7.3 Fish 1, Shrimp 1
	300 m	43.6		32.7	17.4	13.1	0.9	1.3	5.9	Det 5.0, Protozoa

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
August, 1957					Cruise P-3-57					
0640/16	200 m	36.2		25.3	7.2	7.2	3.6	7.2	4.0	Det 6.9, Ost Radio, Squid
	150 m	37.4		26.2	5.6	13.1	1.8	5.6		Det 11.2, Pt, Ost
	100 m	43.7	tr.	28.4	10.9	10.9	3.1	3.5	8.0	Det 7.3, Pt Ost, Egg
0800/16	50 m	87.5	tr.	64.7	30.6	13.1	17.5	4.4	11.1	Det 10.7, Pt, Ost
0700/17	H				tr.	tr.	tr.		20#	Lantern fish 321
1745/17	150 m	29.2	tr.	21.9	7.3	14.6	tr.		4.1	Det 3.2, Radio
0530/21	H	110.5		91.0	13.0	1.3	32.5	13.0	10.2	Det 9.3, Pt Egg, Squid 52.0 Lantern fish 258
0700/22	H	37.9		26.5	11.4	1.5	3.8	7.6		Det 11.4, Pt 2.3
1740/22	500 m	43.1		43.1	19.4	19.4	3.1	tr.		Pt, Ost 1.2, Egg Shrimp, Radio Polychaete
	300 m	31.2		31.2	14.5	14.5	2.3	tr.		Pt, Ost 0.9, Egg Radio
	200 m	12.7	tr.	12.7	5.3	7.0	0.4	tr.		Pt, Ost, Egg
	150 m	20.0	tr.	20.0	8.3	11.7	tr.	tr.		Pt, Ost, Egg Sipho
	100 m	31.2		15.6	7.8		1.5	3.1	7.8	Pt 3.1, Det 7.8 Ost, Annelid
1930/22	50 m	12.5		8.1	4.4	2.5	0.9	0.1		Pt, Det 4.4 Egg 0.2
0110/23	H									
0510/23	H	117		105.3	11.7		40.9	tr.		Det 11.7, Egg Radio, Squid 52.6

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
September, 1957					Cruise P-4-57					
	Vertical hauls to surface from depth indicated in column									
2030/28	150 m	33.2	0.3	26.0	10.9	13.3	tr.	1.7	0.3	Det 6.6, Pt, Egg Radio, Tom
October, 1957										
1900/1	500 m	38.8	0.4	30.2	15.5	13.6	tr.	1.2	0.4	Det 7.8, Pt, Ost Radio
1920/1	300 m	70.6	0.7	62.2	35.3	24.7	0.7	1.4	0.7	Det 7.0, Pt, Ost Radio
1940/1	200 m	37.4	0.7	32.6	18.7	13.1	0.4	0.4	0.4	Det 3.7, Pt, Ost Radio, Amph eggs
1954/1	150 m	45.7	0.9	42.0	22.8	16.0	0.9	4.6	0.5	Det 2.3, Radio Pt
2005/1	100 m	75.0	1.5	54.7	48.7	2.2	1.5	2.2	7.5	Det 11.3, Pt Radio
2010/1	50 m	87.5	4.4	70.0	68.2			1.7		Det 13.1
1855/2	150 m	54.0	1.1	42.1	20.5	10.8	1.1	9.7	2.7	Det 8.1, Pt Radio
1855/5	150 m	33.2	0.6	21.0	8.3	11.6	1.0	tr.	6.6	Det 5.0, Pt
1848/8	500 m	46.3	1.4	36.0	13.9	20.8	0.9	2.3	tr.	Det 6.9, Pt, Ost Radio
1910/8	300 m	33.3	1.0	25.6	10.0	15.0	tr.	0.7	tr.	Det 6.7, Pt, Ost Radio, Tom
1925/8	200 m	40.5	2.1	32.2	14.2	18.2	2.1		2.1	Det 4.1, Ost Radio
1933/8	150 m	54.0	2.7	45.9	21.6	18.9	2.7			Det 5.4, Pt Radio, Glob

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957					Cruise P-4-57					
1943/8	100 m	25.0	5.0	18.7	13.8	2.5	2.5	tr.	1.3	Pt, Radio, Oik
1949/8	50 m	87.5	17.5	56.9	35.0	26.2		tr.	tr.	Det 13.1, Pt Radio
0634/9	500 m	28.8		5.7	2.9	1.4		1.4	20.2	Det 2.9, Pt, Ost Polychaete
0650/9	300 m	52.0	tr.	10.4	5.2	5.2		tr.	41.6	
0703/9	200 m	93.6	tr.	14.1	4.7	9.4	tr.	tr.	79.5	
0714/9	150 m	45.7	tr.	8.2	tr.	tr.	tr.	tr.	37.5	
0721/9	100 m	50.0	tr.	10.0	tr.	tr.	tr.	tr.	40.0	
0728/9	50 m	100.0	tr.	20.0	tr.	tr.	tr.	tr.	80.0	
0745/9	1200 m	32.8	tr.	29.0	11.8	12.5	3.3	tr.	tr.	Det 3.8, Pt 0.3 Radio 1.0, Fish 1 6 Shrimps 3.7
1842/9	150 m	54.0	tr.	8.1	2.7	5.4			37.8	Det 8.1, Radio
1906/12	150 m	41.6	0.4	39.1	9.1	29.1	0.8			Det 2.1, Radio
1920/15	500 m	43.7	tr.	39.3	25.3	13.1	tr.	0.9	4.4	Ost, Radio, Shrimp Pt, Viper fish 0.3
1940/15	300 m	58.3	tr.	55.4	29.2	26.2	tr.	tr.	2.9	Det, Pt, Radio Amph eggs
1955/15	200 m	43.7	tr.	30.6	4.4	17.5	tr.	tr.	13.1	Det, Pt, Radio Undetermined animals 8.7
2007/15	150 m	29.1	1.5	22.2	8.7	10.2	1.5	tr.	4.5	Det 0.9, Pt, Radio Undetermined animals 1.4

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957					Cruise P-4-57					
2023/15	100 m	250	tr.	75.0	50.0	25.0	tr.		175	Pt, Glob
2030/15	50 m	37.5	1.9	14.2	13.1				18.7	Det 3.7, Pt Radio
1907/16	150 m	20.8	4.2	16.4	4.2	12.1	tr.			Pt, Ost, Radio 0.4
1910/22	150 m	83.1	4.2	74.7	41.6	33.1	tr.		tr.	Det 4.2, Radio Tom, Oik
1930/23	150 m	41.6	6.3	33.2	15.8	16.7	0.8	tr.	tr.	Det 2.1, Pt Radio
1930/24	500 m	50.0	1.0	46.5	25.0	19.0	tr.	2.5	2.5	Pt, Radio Small fish 1
1944/24	300 m	31.2	0.6	30.6	18.1	11.9	0.6	tr.	tr.	Pt, Ost, Oik
2000/24	200 m	28.1	0.8	27.3	14.1	12.6	1.1	tr.	tr.	Pt, Ost, Egg Radio, Oik
2006/24	150 m	37.4	1.1	32.6	16.8	15.0	0.4	tr.	tr.	Det 3.7, Pt Radio 0.4, Oik
2014/24	100 m	43.8	2.2	32.0	23.2	8.8	tr.	tr.	tr.	Det 8.8, Pt Radio 0.9
2024/24	50 m	62.5	6.3	43.7	43.7		tr.		9.4	Det 3.1, Pt Radio 0.6, Oik
1854/25	150 m	78.9	15.8	47.3	7.9	31.6			15.8	Pt, Radio, Glob Tom 7.9, Oik
1900/28	500 m	58.7	tr.	29.9	8.7	17.3		2.9	28.8	Pt, Ost, Radio
1920/28	300 m	46.8	0.9	22.5	11.7	8.4	0.9	1.4	23.4	Pt, Ost, Egg Radio
1934/28	200 m	22.3	0.7	10.4	5.6	4.9	tr.	tr.	11.2	Pt, Oik

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957					Cruise P-4-57					
1946/28	150 m	49.9	1.5	21.5	11.3	8.3	1.0	tr.	26.9	Pt, Oik
1954/28	100 m	37.5	13.1	13.1	13.1	tr.	tr.	tr.	11.2	Pt, Oik
2000/28	50 m	6.3	tr.	0.6	0.6				5.7	Pt, Radio, Oik
0655/29	500 m	42.5	6.4	36.1	14.9	19.1	0.9	1.3		Pt, Ost, Radio Tom
0707/29	300 m	89.5	2.7	42.0	17.9	13.4	tr.	1.8	44.8	Pt, Radio Squid 8.9
0717/29	200 m	21.8	tr.	4.4	2.2	1.1	tr.	0.9	17.4	Pt, Ost
0730/29	150 m	29.1	5.8	12.6	4.4	5.8	tr.	4.4	8.7	Pt, Radio, Oik
0736/29	100 m	18.7	4.7	9.5	3.7	2.8	0.9	1.9	4.7	Pt, Radio, Oik
0741/29	50 m	137.5	2.7	52.0	27.5	13.7	6.9	6.9	79.8	Pt, Oik
1912/29	150 m	24.9	7.4	12.5	5.0	5.0	1.2		5.0	Pt 1.2, Oik
2225/1	H	2.1	0.6	1.1	0.8		tr.		tr.	Det 0.4, Oik Vell 0.2, Fish 1
0700/2	H	38.0	tr.	36.1	13.3	3.8	tr.	19.0	tr.	Det 1.9, Vell Fish 1
1830/3	H	0.6	0.5	0.1	tr.					Radio, Oik
2030/3	H	0.6	0.6		tr.		tr.			Radio
2230/3	H	2.1	2.1		tr.		tr.			Radio
0030/4	H	6.2	5.6	0.6	0.6					Radio
0230/4	H	13.1	7.9	5.2	5.2					Oik

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957				Cruise P-4-57						
0430/4	H	30.4	3.0	22.8	10.3		tr.	0.3		Pt, Oik, Det 4.6 Squid 12.2 28 Lantern fish 10 gm
0630/4	H	69.7	13.9	35.0	27.2	tr.	tr.	0.7		Det 20.8, Pt, Oik Squid 7.0 7 Lantern fish 1.4 gm
0830/4	H	67.8	7.9	15.8	5.5		tr.	2.4		Det 51.1, Pt, Oik Squid 7.9 7 Lantern fish 54.2 gm
1030/4	H	4.1	tr.	0.8	0.4	0.2	0.2		tr.	Det 3.3, Vell 1 Lantern fish 7.7 7 Lantern fish 2.1
1230/4	H	32.4	3.2	21.1	11.3	6.5	1.0	0.6		Det 3.2, Pt Ctenophora 4.9 91 Lantern fish 63.0 gm
1430/4	H	28.3	1.4	24.1	11.3	1.4	2.8		1.4	Det 1.4, Pt, Oik Squid 8.5 7 Lantern fish 2.3 gm
1630/4	H	1.2	0.4	0.8	0.8					
0730/7	H	62.8	1.3	48.9	12.6	10.6	18.2	1.3	12.6	Radio, Vell Amph egg, Squid 12.6 7 Sauri 0.2 7 Lantern fish 2.8

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957					Cruise P-4-57					
1030/7	H	37.2	3.7	29.8	9.3	5.6	7.4	3.7	tr.	Det 3.7, Pt Amph eggs Squid 3.7 7 Sauri 8.4 21 Lantern fish 7.0 gm, 7 viper fish
0045/8	H	42.1	4.2	31.6	10.5	tr.	6.3	6.3	4.2	Pt, Radio, Det 2.1 Amph eggs, Glob Squid 8.4 42 Lantern fish 9.1
0515/9	H	13.1	2.6	7.0	6.3		tr.		2.0	Pt, Radio Det 1.3, Squid 0.6 Vell 0.2
0515/9	H	14.5	1.5	5.7	1.5	tr.	0.7	0.7	5.8	Det 1.5, Vell Squid 2.9, Pt 7 Lantern fish 8.4 gm
2300/15	H	6.2	1.5	0.4	0.3			tr.	4.3	Pt, Radio, Vell
1530/16	H	52.4	tr.	44.1	15.7	5.2	5.2	20.9	7.9	Pt, Amph eggs
1900/17	H	4.8	1.4	1.9	1.0	tr.	0.2		1.0	Det 0.5, Pt Small Vell 0.5 Protozoa 0.2
2100/17	H	6.2	0.3	3.4	1.9	tr.	0.3	tr.	tr.	Det 2.5, Pt Small Vell 0.6 Protozoa 0.6
2300/17	H	9.7	6.8	1.7	1.0		0.1		0.5	Pt 0.2, Radio 0.2 Small Vell 0.7 28 tiny fish

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957					Cruise P-4-57					
0300/18	H	248	2.5	240.5	7.4	tr.	34.7		5.0	Pt, Amph eggs Squid 198 7 Sauri 11.2 7 Lantern fish 16.1 gm
0500/18	H	73.1	3.7	47.5	11.0	tr.	14.6	21.9	21.9	Pt, Vell Amph eggs 203 small lantern fish 93.1 7 large lantern fish 28.0 gm
0700/18	H	69.0	48.3	13.8	3.5		3.5	10.3	6.9	Pt, Radio, Vell 84 small lantern fish 37.1
0900/18	H	36.6	3.7	25.6	10.9	1.8	7.2	5.4	7.3	Pt, 84 Lantern fish 22.4 gm
1100/18	H	26.2	5.2	10.8	2.6	2.6	2.6	2.6	7.9	Det 2.6, Vell Fish 66.5 49 Sauri 21 Lantern fish
1300/18	H	67.6	tr.	40.6	6.8	tr.	6.8	13.5	27.0	Pt, Squid 13.5 21 Lantern fish 1.4 gm
1500/18	H	55.9	tr.	22.4	2.8	2.8	11.2	tr.	33.5	Pt, Amph eggs Squid 5.6
1700/18	H	29.0	13.1	5.7	2.9	tr.	2.9		10.2	Pt, Egg, Radio Vell
2300/24	H	24.2	tr.	tr.						Jelly fish tr.

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
October, 1957				Cruise P-4-57						
0530/25	H	29.0	10.2	8.6	5.9	tr.	2.9	tr.	10.2	Pt, Radio, Vell
0010/29	H	5.5	3.9	1.1	1.1					Radio, Vell 0.5
0500/29	H	56.6	11.3	28.3	11.3		0.5	1.1	17.0	Vell 2.8, Pt 1.1 Squid 11.3 7 Sauri 5.6 14 Lantern fish 4.2 gm
December, 1957				Cruise P-5-57						
1900/16	1200 m	33.8	tr.	33.8	15.5	12.0	0.3	5.0		Gast, Dec, Ann Ost
	500 m	51.7	tr.	51.7	22.2	18.0	0.5	10.3		Gast, Dec, Ann Ost, 1 Myct, 1 Squid
	300 m	34.5	0.3	34.2	20.0	10.3	0.3	3.4		Gast, Dec, Ann Ost
	200 m	38.9	3.4	35.5	21.7	15.1	tr.	tr.		Gast, Ann, Ost 1 Squid Larv
	150 m	19.1	1.2	17.9	15.3	1.2	tr.	tr.		Gast, Dec, Ann Ost, Oik
	100 m	53.7	3.5	50.2	42.3	7.1	tr.	tr.		Gast, Dec, Ann Ost
	50 m	8.7	0.2	8.5	8.1	0.2	tr.	tr.		Gast, Ost
0730/18	150 m	80.1		80.1	55.7	12.6	1.6	8.4		Gast, Ann, Ost 1 Squid Larv

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
December, 1957				Cruise P-5-57						
2100/21	150 m	11.3		11.3	9.6	1.6	tr.	tr.		Gast, Ost
1900/23	1200 m	19.1		19.1	9.4	9.6	tr.	tr.		Gast, Dec, Ost Ann
1920/23	500 m	35.0		35.0	17.5	15.7	tr.	1.7		Gast, Dec, Ost
2000/23	300 m	38.8		38.8	23.9	13.9	tr.	0.7		Gast, Ost, Ann Oik
2020/23	200 m	15.5		15.5	13.9	1.5	tr.	tr.		Gast, Ost, Ann Oik
2030/23	150 m	12.3	tr.	12.3	10.4	1.9	tr.	tr.		Gast, Ost, Ann Oik
2100/23	100 m	18.7	tr.	18.7	17.7	0.9	tr.	tr.		Gast, Ost, Oik
	70 m	6.6	tr.	6.6	5.7	0.8	tr.	tr.		Gast, Ost, Oik
0800/24	1200 m	30.7		30.7	16.8	12.2	tr.	1.5		Dec, Ost, Ann Oik 1 Squid Larv
0830/24	500 m	45.1		45.1	20.2	18.0	tr.	6.7		Gast, Ost, Ann 1 juvenile Myct 1 unidentified Fish
0845/24	300 m	47.2		47.2	25.9	11.8	tr.	9.4		Gast, Ost, Ann 1 Squid Larv
0900/24	200 m	34.3		34.3	17.1	5.1	1.7	10.2		Gast, Dec, Ost
0910/24	100 m	62.5		62.5	28.1	12.5	tr.	21.8		Gast, Ost
0920/24	50 m	35.0		35.0	10.5	1.7	tr.	22.7		Gast, Ost

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
December, 1957				Cruise P-5-57						
2000/24	150 m	16.8		16.8	13.4	0.5	tr.	tr.		Gast 2.5, Ost Ann
2030/29	150 m	27.9		27.9	24.4	1.4	tr.	0.3		Gast 1.4, Ost Ann, Oik
2000/31	150 m	20.1		20.1	16.3	2.0	tr.	1.2		Gast, Ost, Ann Oik
January, 1958										
2010/4	150 m	25.2		25.2	12.8	7.5	tr.	3.7		Gast, Ost, Ann Oik
1930/7	150 m	7.9		7.9	6.4	0.7	tr.	tr.		Gast 0.2, Ost
2030/10	150 m	13.4		13.4	10.1	2.6	0.2	1.3		Gast 0.1, Ost Oik
1930/14	150 m	8.4		8.4	7.2	0.4	tr.	tr.		Gast 0.2 Ost 0.4
2000/15	1250 m	32.0		32.0	13.7	11.2	0.3	6.4		Gast, Dec, Ost Ann, 1 Myct
2020/15	500 m	41.7		41.7	17.9	14.5	0.8	8.3		Gast, Ost, Ann 1 Myct
2035/15	300 m	36.7		36.7	28.6	5.5	0.3	1.8		Gast, Ost, Ann
2045/15	200 m	19.2		19.2	14.9	3.8	tr.	tr.		Gast, Ost, Ann
2050/15	150 m	4.2		4.2	3.8	0.1	tr.			Gast 0.1 Ost 0.1, Oik
2055/15	100 m	12.1		12.1	10.2	1.5				Gast 0.1, Ann Ost 0.1, Oik

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m³	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
January, 1958				Cruise P-5-57						
2100/15	50 m	12.5		12.5	3.5	8.7		tr.		Gast, Ost, Oik
0330/16	1200 m	22.3		22.3	16.5	5.5	tr.	tr.		Gast, Dec, Ost Ann
0400/16	500 m	50.0		50.0	39.0	10.0	tr.	tr.		Gast, Ost, Trem
0415/16	300 m	43.8		43.8	25.4	4.6	tr.	6.9		Gast, Dec 6.9 Ost, Ann
0430/16	200 m	31.0		31.0	16.7	3.1	tr.	6.2		Gast, Dec 4.6 Ost, Ann 1 Fish Larv
0445/16	150 m	42.0		42.0	20.5	4.2	tr.	6.3		Gast 0.4, Ost Dec 10.9
0500/16	100 m	50.0		50.0	37.0	2.5	tr.	5.0		Gast, Dec 5.0 Ost, 1 Myct
0510/16	50 m	37.5		37.5	25.5	1.8	tr.	9.3		Gast, Ost
2100/18	150 m	10.9	tr.	10.9	10.5	0.2	tr.	tr.		Gast, Ost, Ann
2200/22	150 m	21.8		21.8	19.1	tr.	2.1	tr.		Gast 2.1, Ost Ann, Oik
December, 1957										
2100/16	H	124.8		124.8	tr.	tr.	124.8			1 juvenile Greenling
1900/19	H	146.8		146.8	tr.	tr.	146.8			Gast Squid Larv

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
December, 1957				Cruise P-5-57						
2100/19	H	9.3		9.3	tr.	tr.	9.3	tr.		
2300/19	H	159.8		159.8	tr.	tr.	159.8	tr.		1 Greenling
0100/20	H	46.5		46.5	tr.	tr.	46.5	tr.		
0300/20	H	8.3	tr.	8.2	1.4	0.1	4.1	2.5		Gast, Dec, Ost
0500/20	H	12.9		12.9	3.4	0.4	6.1	3.4		2 Myct
0700/20	H	14.2		14.2	2.1	tr.	12.0	tr.		4 Myct 2 Greenling
0900/20	H	2.6		2.6	1.3	0.1	0.9	0.2		Ost, 2 Myct 4 Greenling
1100/20	H	12.7		12.7	3.1	1.2	3.8	4.4		Gast
1300/20	H	17.3		17.3	3.4	0.8	6.9	6.0		Gast, Ost 2 Myct
1500/20	H	21.2		21.2	4.6	0.6	6.3	9.5		11 Myct 4 Greenling
1700/20	H	80.7		80.7	tr.	tr.	80.7	tr.		Gast, 1 Squid
1900/20	H	5.5		5.5	tr.	tr.	5.5			
2130/23	H	27.6		27.6	tr.	tr.	27.6	tr.		Gast, Ost
1000/24	H	44.7		44.7	11.1	tr.	15.6	17.8		Gast, Ost 45 Myct 4 Greenling
January, 1958										
0600/16	H	12.8		12.8	0.2	0.1	11.5	0.8		Gast, 1 Nem 22 Myct 5 Greenling

Plankton Data Record

Time/Date	Type of Haul	Total Wet Weight gm/1000 m^3	Phytoplankton	Zooplankton	Copepoda	Chaetognatha	Amphipoda	Euphasiacea	Medusae	Miscellaneous
January, 1958				Cruise P-5-57						
1900/20	H	1.2		1.2	tr.	tr.	1.2			Oik
2100/20	H	10.6		10.6	tr.	tr.	10.6			Gast 1 Greenling
2300/21	H	0.7		0.7	tr.	tr.	0.7			Gast, Oik
0100/22	H	0.7		0.7	tr.	tr.	tr.			
0300/22	H	0.7		0.7	tr.	tr.	tr.			2 Greenling
0500/22	H	3.5		3.5	2.6	0.1	tr.	0.8		Ann, 1 Myct
0700/22	H	0.5		0.5	tr.	tr.	tr.	tr.		1 Greenling
0900/22	H	32.4		32.4	12.3	0.6	14.5	6.4		2 Myct 2 Greenling
1100/22	H	24.4		24.4	6.8	0.2	8.7	8.5		5 Myct 1 Greenling 1 Fish Larv
1300/22	H	34.5		34.5	6.9	2.0	15.6	10.3		27 Myct 11 Greenling
1500/22	H	29.3		29.3	11.7	tr.	8.7	8.7		27 Myct 11 Greenling
1700/22	H	26.7		26.7	4.9	tr.	21.7			2 Greenling 6 Squid
1900/22	H	104.5		104.5	2.0	tr.	102.4			5 Greenling