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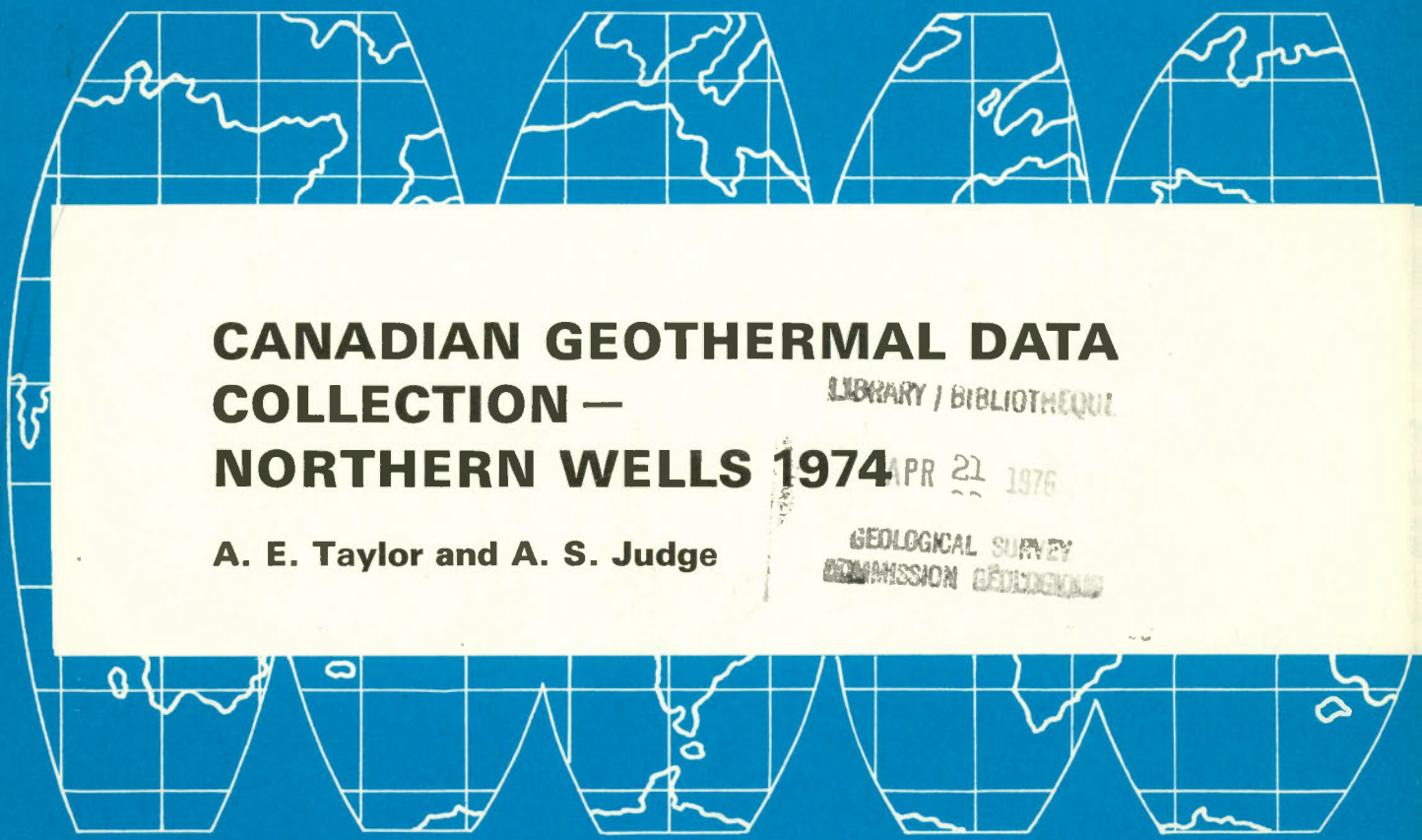

# CANADIAN GEOTHERMAL DATA COLLECTION — NORTHERN WELLS 1974



A. E. Taylor and A. S. Judge

Geothermal Series Number 3
Ottawa, Canada 1975

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## ABSTRACT

The assessment and solution of many problems which may occur in the development of northern regions require a knowledge of subsurface temperatures. This volume supplements the first in this series, and reports new measurements at 25 of the sites listed in the first volume and observations from nine new sites. A total of 59 determinations of permafrost thickness have been reported in the collection to date. Determined thicknesses in the Arctic Islands range from 140 m to 675 m, in the Mackenzie Delta from 50 m to 700 m and in the remainder of the Northern Mainland from 0 m to in excess of 500 m.



## RÉSUMÉ

L'étude et la solution des nombreaux problèmes qui peuvent surgir lors de la mise en valeur des régions septentrionales exige que l'on connaisse les températures du sous-sol. Le présent volume s'ajoute au premier de la même série et fait état des nouvelles mesures effectuées à 25 des emplacements énumérés dans le premier volume, et d'observations à 9 emplacements nouveaux. L'auteur rend compte, jusqu'à présent, de 59 déterminations de l'épaisseur du pergélisol. Les épaisseurs connues dans l'archipel Arctique varient entre 140 m et 675 m, dans le delta du Mackenzie entre 50 m et 700 m, et pour le reste du Nord continental, de 0 à plus de 500 m.

CONTENTS

# PREFACE

Subsurface temperature data collected between February 1974 and January 1975 from boreholes of total depth greater than 125 m are reported in this volume. The volume supplements Taylor and Judge (1974), reporting only new sites and old sites where new data are available. The two volumes, hereafter referred to as the collection, present measurements from 26 sites in the Arctic Islands, 13 in the Mackenzie Delta and another 20 sites on the Arctic Mainland.

The object of this series of reports is to make widely available some of the base data necessary in the assessment and solution of many of the problems which may occur in northern development. Most of the data presented are from wells not yet in thermal equilibrium; however, where sufficient data exist, equilibrium conditions have been estimated.

A brief introduction discusses data acquisition and accuracy, the disturbance to thermal equilibrium by drilling and the determination of equilibrium permafrost thickness. This is followed by a series of appendices which present tables of measured temperature variation with time, graphs of temperature variations with depth at selected time intervals, tables of the logarithmic temperature return to equilibrium from which equilibrium conditions can be inferred, and graphs showing the rate at which equilibrium temperature is restored as a function of the ratio of drilling time to time since completion of drilling.

# S E C T I O N 1

## INTRODUCTION

The underlying purpose, the history of measurement, the methods of preservation of wells and of data acquisition have all been described at some length, both in Taylor and Judge (1974) and elsewhere. This present volume, plus Taylor and Judge (1974), is believed to contain all available non-confidential subsurface temperature information from holes of depths greater than 125 m within the permafrost regions of Canada. The authors would greatly appreciate receiving any additional information regarding other data known or possessed by the users of this series. Figure 1 shows locations of all sites of subsurface temperatures available in the collection. The number or name shown against each site is the Earth Physics Branch (EPB) file identification. Table 1 lists the 34 sites of new data presented in this volume and gives the EPB file number, the coordinates, the elevation, the total depth logged and the measurement techniques used for each.

Section 1 describes the nature of the data included in this report, how to use the report, where to find specific information and how to interpret the results.

Section 2 deals specifically with the calculation of permafrost thickness using the measured data and the drilling history of the well. Table 2 presents the calculated thickness of permafrost, indicates how it was determined and how close the well is to thermal equilibrium. Because the presence of nearby water bodies may have a significant moderating influence on the permafrost, the information given is in the form of distance to the water body. The last column in Table 2 refers to the section in the collection where the most recent set of data can be found.

Section 3 consists of a series of appendices which present measured and interpreted data.

Appendix 3.1 presents tables of the measured temperature with time. At the top of each table is listed the EPB file number and the abbreviated well name. This is followed by well coordinates to the nearest .1 minute, and the elevation to the nearest metre. Below this is the available temperature information. In the summary of temperature:depth logs, each set of depth and temperature is headed by the date on which the measurements were made. Depths below the mean ground surface are given to the nearest 0.1 metre and recorded temperatures to 0.01°C. Data accuracy was discussed in Taylor and Judge (1974). Other information given for each well is the complete official name, the well status at present, the well history (in the form of spud dates, abandonment dates and total well depths) and a reference when data are taken from published papers or reports. The individual wells are listed in order of EPB file number.

Appendix 3.2 presents graphs of temperature versus depth for each well. Temperatures are given in °C and depths in metres. Not all individual logs are plotted because this would unnecessarily complicate some of the graphs; however, sufficient logs are plotted to demonstrate their main characteristics.

Appendix 3.3 presents tables derived on the assumption that the return of the well to thermal equilibrium can be expressed by a logarithmic relationship. The mathematics have been described in some detail in Taylor and Judge (1974, p. 8-10), and are not repeated here. Where a well is instrumented with a multi-thermistor cable, the depth of each calculation corresponds to sensor depth. Where logs have been made by a single thermistor probe, the exact depths of repeated measurements do not normally coincide and therefore, for the calculation of equilibrium temperatures, the temperatures have been interpolated linearly between depths at intervals of 25 m or 50 m. For each depth given in column 1 of the tables, columns 2 and 3 list the calculated equilibrium temperature in °C at that depth and the standard deviation, columns 4 and 5 list the magnitude of the heat source introduced by the drilling process and its standard deviation, and column 6 gives the time in years necessary for the temperature to return to within 0.1°C of the equilibrium temperature. Equilibrium temperatures are calculated only for wells on which two or more logs have been made. Standard deviations are given if three or more logs were made. The calculated equilibrium temperatures have been used to derive the permafrost thickness listed in Table 2.

Appendix 3.4 presents graphically the return of each well to thermal equilibrium. Each graph is plotted with a logarithmic time scale against temperature for each depth or, in the case of single thermistor logs, each depth of interpolation. The time scale is modified to be a function of the time taken to drill the well: $t_1$ is the drilling time and $t_2$ is the time elapsed between completion of the well and the time of the log.

Ideally, all of the points at each depth should be on a straight line and the intercept of this line with the vertical axis should give the equilibrium temperature. In practice, the thermal disturbance due to drilling is a very complex process and the theory is only an

approximation. Within the frozen section, the dissipation of latent heat during freezeback complicates the picture even more. To simplify reading the graphs shown in Appendix 3.4, successive points at a few depths have been joined by lines.

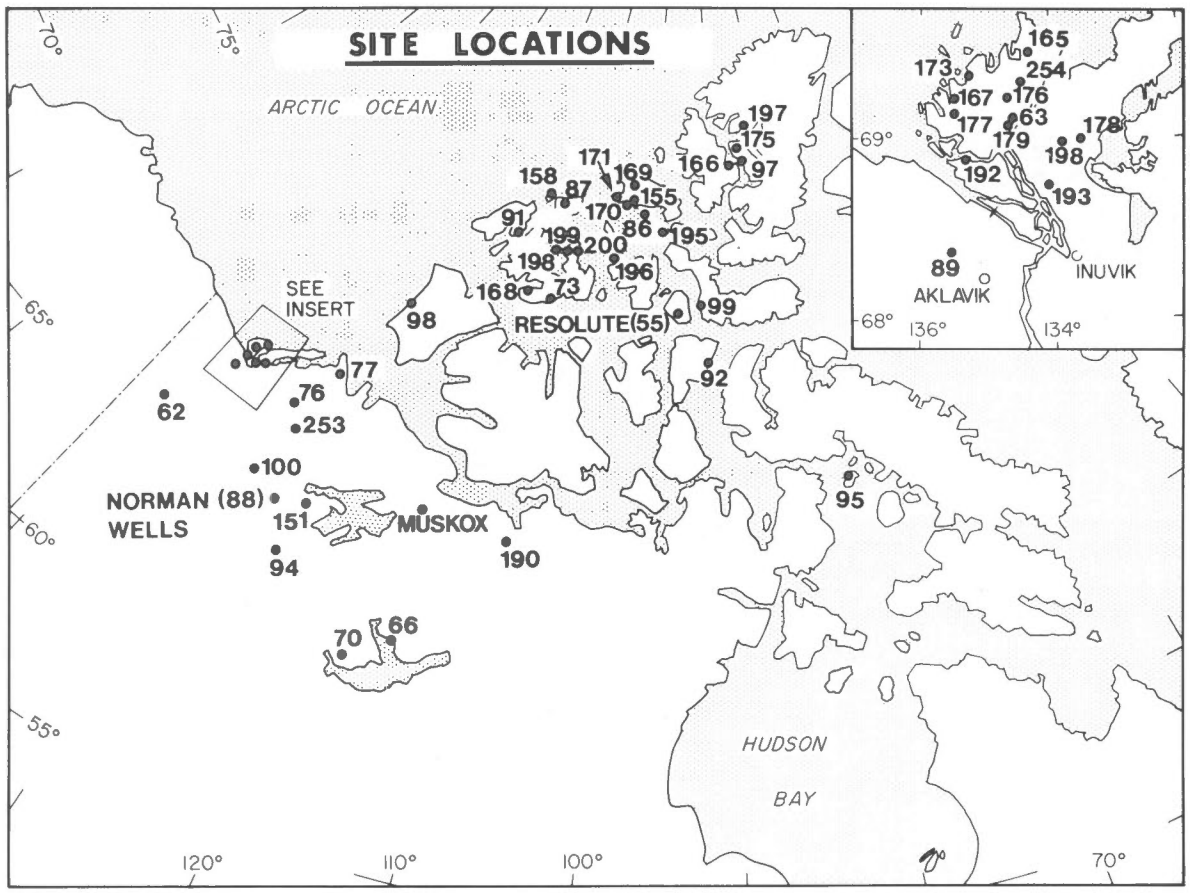


Figure 1. Site locations in the collection(Series Numbers 1 and 3).

TABLE 1 SITES INCLUDED IN REPORT

| EPB NO. | SITE NAME | LATITUDE N | LONGITUDE W | ELEV (M) | DEPTH LOGGED (M) | MEAS. TECH. |
|---|---|---|---|---|---|---|
| | ARCTIC ISLANDS | | | | | |
| 91 | JAMESON BAY C-31 | 76 40.2 | 116 43.7 | 58 | 732 | S |
| 95 | ROWLEY M-04 | 69 4.0 | 79 3.8 | 48 | 455 | S |
| 99 | DEVON E-45 | 75 4.3 | 91 48.3 | 244 | 107 | S |
| 155 | KRISTOFFER BAY B-06 | 78 15.3 | 102 32.0 | 15 | 837 | S |
| 158 | BROCK I-20 | 77 59.7 | 114 33.9 | 16 | 840 | S |
| 166 | MOKKA A-02 | 79 32.2 | 87 1.2 | 253 | 442 | M |
| 168 | DUNDAS C-80 | 74 39.0 | 113 23.0 | 240 | 660 | S |
| 169 | LOUISE BAY O-25 | 78 44.9 | 102 42.0 | 69 | 672 | S |
| 170 | THOR P-38 | 78 7.8 | 103 15.2 | 5 | 555 | S |
| 171 | DOME BAY P-36 | 78 25.9 | 103 15.8 | 154 | 570 | S |
| 172 | DRAKE B-44 | 76 23.1 | 108 16.1 | 4 | 346 | S |
| 175 | GEMINI E-10 | 79 59.4 | 84 4.2 | 126 | 872 | S |
| 195 | LINCKENS ISLAND P-46 | 77 45.8 | 97 45.4 | 1 | 518 | M |
| 196 | BENT HORN N-72 | 76 21.8 | 103 58.2 | 63 | 845 | S |
| 197 | NEIL O-15 | 80 44.6 | 83 4.8 | 497 | 807 | S |
| 198 | DRAKE D-68 | 76 30.0 | 108 30.0 | 37 | 781 | S |
| 199 | DRAKE E-78 | 76 27.3 | 108 29.4 | 2 | 274 | S |
| 200 | HECLA I-69 | 76 18.7 | 110 23.3 | 2 | 430 | S |
| | ARCTIC MAINLAND - MACKENZIE DELTA | | | | | |
| 63 | REINDEER D-27 | 69 6.1 | 134 36.9 | 29 | 597 | M |
| 89 | BEAVER HOUSE H-13 | 68 22.3 | 135 33.0 | 68 | 1305 | S |
| 165 | KILAGMIOTAK F-48 | 69 27.5 | 134 11.9 | 20 | 381 | S |
| 167 | UNIPKAT I-22 | 69 11.7 | 135 20.5 | 5 | 762 | S |
| 176 | YA YA P-53 | 69 12.8 | 134 42.7 | 36 | 567 | S |
| 178 | PARSONS N-10 | 68 59.8 | 133 31.8 | 68 | 653 | S |
| 179 | REINDEER F-36 | 69 5.3 | 134 39.0 | 10 | 348 | S |
| 192 | KUGPIK O-13 | 68 52.8 | 135 18.2 | 2 | 728 | S |
| 193 | IKHIL I-37 | 68 46.6 | 134 7.8 | 125 | 549 | S |
| 194 | ATIGI O-48 | 68 57.0 | 133 56.1 | 85 | 579 | S |
| 254 | YA YA A-28 | 69 17.2 | 134 35.5 | 40 | 534 | S |
| | ARCTIC MAINLAND - OTHER | | | | | |
| 94 | DAHADINNI M-43A | 63 53.0 | 124 39.3 | 248 | 233 | S |
| 151 | WEST WHITEFISH H-34 | 65 33.4 | 124 35.7 | 227 | 355 | S |
| 190 | HACKETT RIVER 190-1 | 65 55.0 | 108 28.2 | 425 | 198 | M |
| 190 | HACKETT RIVER 190-2 | 65 55.0 | 108 28.2 | 425 | 164 | M |
| 253 | TEOJI LAKE K-24 | 67 43.6 | 126 49.9 | 343 | 534 | S |

NOTES...
1) EPB NO. = EARTH PHYSICS BRANCH SITE NUMBER, BY WHICH DATA ARE ORDERED IN THIS REPORT.
2) DEPTH LOGGED IS DEPTH OF DEEPEST TEMP LOG IN METRES.
3) TEMPERATURE MEASURING TECHNIQUE,
S = SINGLE THERMISTOR PROBE LOG
M = MULTITHERMISTOR CABLE LOG

# S E C T I O N 2

# PERMAFROST DISTRIBUTION AND THICKNESS

One of the prime purposes of this collection is to determine the distribution and thickness of permafrost in northern Canada. Table 2 lists all the values determined from temperature data given in the collection. The information listed in the first four columns of the table is self-explanatory. Column 5 lists the "depth to the 0°C", the permafrost thickness. This depth has been determined in a variety of ways depending on the number of logs made and the total depth logged. Where three or more logs have been run, the depth has been determined from the tables of equilibrium temperature derived for Appendix 3.3 by assuming a logarithmic return to equilibrium. The value in the column is preceded by 'E'. In cases where a well did not completely penetrate the permafrost and temperatures have been extrapolated to greater depths, the value is preceded by 'X'. Many of the wells have been logged once or twice only and the listed value is derived by direct interpolation from the latest log. Such values, indicated by a plus (+) sign, probably underestimate the permafrost thickness. Some assessment of the degree of disturbance in the well may be gauged by reference to column 7, the time ratio which expresses the ratio of the time between well completion and the latest log to the drilling time. Generally, a number greater than 25 indicates measured temperatures are within 0.1°C of the final equilibrium values.

In wells drilled through permafrost with high ice content, most logs made within a few months of well completion have revealed a temperature jump of several degrees (for example, see Appendix 3.1, EPB file #178, Parsons N-10). On subsequent logs the depth of this jump has been found to coincide closely with the base of the permafrost, and has been interpreted as indicating the base of the frozen section. This value is given in Column 6 to a depth accuracy that is determined by the spacing of temperature observations.

Permafrost thickness may be considerably modified locally by the presence of nearby bodies of water. The distance to the nearest significant body is listed in column 8.

Finally, column 9 indicates in which volume the most recent set of temperature data for a particular site is to be found.

Detailed discussion and interpretation of the permafrost thickness will be published elsewhere.

TABLE 2 PERMAFROST THICKNESS

| EPB NO. | SITE NAME | LATITUDE N | LONGITUDE W | DEPTH TO 0 DEG C (M) | THICKNESS FROZEN (M) | TIME RATIO | DISTANCE TO WATER BODY (KM) | REF |
|---|---|---|---|---|---|---|---|---|
| | ARCTIC ISLANDS | | | | | | | |
| 197 | NEIL O-15 | 80 44.6 | 83 4.8 | 365+ | | .3 | 4.5 | 3 |
| 175 | GEMINI E-10 | 79 59.4 | 84 4.2 | E 498 | | 3 | 20 | 3 |
| 97 | FOSHEIM N-27 | 79 36.9 | 84 43.3 | 300+ | | .02 | 7 | 1 |
| 166 | MOKKA A-02 | 79 32.2 | 87 1.2 | X 470 | | 2.4 | 3 | 3 |
| 169 | LOUISE BAY O-25 | 78 44.9 | 102 42.0 | E 248 | | 7.4 | 13 | 3 |
| 171 | DOME BAY P-36 | 78 25.9 | 103 15.8 | X 660 | | 12 | 7 | 3 |
| 155 | KRISTOFFER BAY B-06 | 78 15.3 | 102 32.0 | E 443 | | 6.7 | .1 | 3 |
| 170 | THOR P-38 | 78 7.8 | 103 15.2 | E 334 | | 26 | .1 | 3 |
| 86 | HOODOO DOME H-37 | 78 6.5 | 99 45.6 | E 294 | | 4.2 | 13 | 1 |
| 158 | BROCK I-20 | 77 59.7 | 114 33.9 | E 428 | | 9.4 | 5 | 3 |
| 87 | WILKINS E-60 | 77 59.3 | 111 21.7 | 271+ | | 1.1 | 9 | 1 |
| 195 | LINCKENS ISLAND P-46 | 77 45.8 | 97 45.4 | 240+ | | 5.6 | .01 | 3 |
| 91 | JAMESON BAY C-31 | 76 40.2 | 116 43.7 | E 483 | | 13.5 | 12 | 3 |
| 198 | DRAKE O-68 | 76 27.1 | 108 55.7 | 210+ | | .5 | 12 | 3 |
| 199 | DRAKE E-78 | 76 27.3 | 108 29.4 | 165+ | | 5 | .1 | 3 |
| 172 | DRAKE B-44 | 76 23.1 | 109 16.1 | E 189 | | 20 | .05 | 3 |
| 196 | BENT HORN N-72 | 76 21.3 | 103 58.2 | 675+ | 680+-15 | .3 | 2 | 3 |
| 200 | HECLA I-69 | 76 18.7 | 110 23.3 | 140+ | | 6.9 | .3 | 3 |
| 99 | DEVON E-45 | 75 4.3 | 91 48.3 | X 600 | | 10.7 | 1.6 | 3 |
| 73 | WINTER HARBOUR | 74 48.1 | 110 30.6 | E 535 | | 19 | 1 | 1 |
| 0 | RESOLUTE 1 | 74 41.0 | 94 53.8 | X 380 | | | .1 | 1 |
| 55 | LOBITOS RESOLUTE L-41 | 74 40.7 | 94 44.6 | EX600 | | 34 | 1.3 | 1 |
| 168 | DUNDAS C-80 | 74 39.0 | 113 23.0 | E 572 | | 5 | 21 | 3 |
| 92 | GARNIER O-21 | 73 40.9 | 90 36.8 | 500+ | | .02 | 2 | 1 |
| 98 | STORKERSON BAY A-15 | 72 54.0 | 124 33.5 | X 500 | | 3.1 | 1.6 | 1 |
| 95 | ROWLEY M-04 | 69 4.0 | 79 3.8 | E 400 | | 47 | 3 | 3 |
| | ARCTIC MAINLAND - MACKENZIE DELTA | | | | | | | |
| 165 | KILAGMIOTAK F-48 | 69 27.5 | 134 11.9 | X 370 | | 2.5 | .2 | 3 |
| 173 | NIGLINTGAK H-30 | 69 19.4 | 135 20.1 | E 152 | | 1.8 | .2 | 1 |
| 254 | YA YA A-28 | 69 17.2 | 134 35.5 | X 700 | | .4 | .3 | 3 |
| 176 | YA YA P-53 | 69 12.8 | 134 42.7 | E 430 | 411+-15 | 5 | .3 | 3 |
| 167 | UNIPKAT I-22 | 69 11.7 | 135 20.5 | E 81 | | 3 | .1 | 3 |
| 63 | REINDEER O-27 | 69 6.1 | 134 36.9 | E 370 | 350+- 5 | 17 | .2 | 3 |
| 177 | TITALIK K-26 | 69 5.5 | 135 6.3 | 65+ | | 1.0 | .2 | 1 |
| 179 | REINDEER F-36 | 69 5.3 | 134 39.0 | 350+ | 338+- 8 | 8.4 | .2 | 3 |
| 178 | PARSONS N-10 | 68 59.8 | 133 31.8 | E 356 | 341+-15 | 4.7 | .3 | 3 |
| 194 | ATIGI B-48 | 68 57.0 | 133 56.1 | 560+ | 564+-15 | 3.4 | .1 | 3 |
| 192 | KUGPIK O-13 | 68 52.8 | 135 18.2 | 50+ | | 1.7 | .1 | 3 |
| 193 | IKHIL I-37 | 68 46.6 | 134 7.8 | E 342 | 341+- 8 | 1.1 | 1 | 3 |
| 89 | BEAVER HOUSE H-13 | 68 22.3 | 135 33.0 | E 197 | | 10 | 1.5 | 3 |

TABLE 2 PERMAFROST THICKNESS

| EPB NO. | SITE NAME | LATITUDE N | LONGITUDE W | DEPTH TO 0 DEG C (M) | THICKNESS FROZEN (M) | TIME RATIO | DISTANCE TO WATER BODY (KM) | REF |
|---|---|---|---|---|---|---|---|---|
| | ARCTIC MAINLAND - OTHER | | | | | | | |
| 77 | HORTON RIVER G-02 | 69 51.4 | 127 15.9 | E 141 | | 14 | 7 | 1 |
| 76 | KUGALUK N-02 | 68 32.0 | 131 31.3 | E 102 | | 4 | .5 | 1 |
| 253 | TEDJI LAKE K-24 | 67 43.6 | 126 49.9 | 415+ | | 3.0 | .2 | 3 |
| 0 | MUSKOX NORTH | 67 5.5 | 115 16.5 | 350+ | | .1 | 1 | 1 |
| 0 | MUSKOX SOUTH | 67 .5 | 115 13.0 | 160+ | | 7 | .05 | 1 |
| 62 | NORTH CATH B-62 | 66 11.2 | 138 41.6 | E 89 | | 25 | 6 | 1 |
| 190 | HACKETT RIVER 190-1 | 65 55.0 | 108 28.2 | 500+ | | | 2 | 3 |
| 190 | HACKETT RIVER 190-2 | 65 55.0 | 108 28.2 | 500+ | | | 2 | 3 |
| 100 | HUME RIVER D-53 | 65 52.0 | 129 11.0 | 35+ | | 23 | .2 | 1 |
| 151 | WEST WHITEFISH H-34 | 65 33.4 | 124 35.7 | E 112 | | 34 | 2 | 3 |
| 88 | NORMAN WELLS CANOL 30X | 65 17.2 | 126 51.9 | 143+ | | | .9 | 1 |
| 88 | NORMAN WELLS CANOL 19X | 65 17.1 | 126 52.8 | 58+ | | | .2 | 1 |
| 88 | NORMAN WELLS CANOL 18X | 65 17.1 | 126 52.0 | 76+ | | | .6 | 1 |
| 88 | NORMAN WELLS CANOL 7X | 65 17.0 | 126 50.8 | 128+ | | | .3 | 1 |
| 0 | NORMAN WELLS CANOL 33X | 65 16.9 | 126 50.5 | 62+ | | | .3 | 1 |
| 88 | NORMAN WELLS BEAR I 13 | 65 15.5 | 126 53.3 | 67+ | | | .4 | 1 |
| 88 | NORMAN WELLS BEAR I 7 | 65 15.4 | 126 52.9 | 52+ | | | .5 | 1 |
| 94 | DAHADINNI M-43A | 63 53.0 | 124 39.3 | E 51 | | 5 | 35 | 3 |
| 66 | YELLOWKNIFE | 62 30.5 | 114 25.3 | NIL | | 18 | .08 | 1 |
| 70 | PROVIDENCE A-47 | 61 26.2 | 117 22.5 | NIL | | 78 | 18 | 1 |

NOTES...

1) EPB NO. = EARTH PHYSICS BRANCH SITE NUMBER. EARLY SITES TAKEN FROM THE LITERATURE ARE REFERRED TO AS EPB NO. 0.
2) DEPTHS TO 0 DEGREES C ARE OBTAINED FROM
   - LOGARITHM RETURN TO EQUILIBRIUM TABLES (DEPTH PRECEDED BY "E"), (SEE TEXT).
   - AN EXTRAPOLATION TO GREATER DEPTH ("X")
   - DIRECT INTERPOLATION FROM LATEST LOG (FOLLOWED BY "+")
3) TIME RATIO IS RATIO OF "TIME SINCE DRILLING COMPLETION FOR LATEST LOG - TO DRILLING TIME". (SEE TEXT)
4) REF INDICATES WHERE DATA ON SITE IS PUBLISHED
   -1, CANADIAN GEOTHERMAL DATA COLLECTION, GEOTHERMAL SERIES OF THE E.P.S., NO. 1, (1974).
   -3, THIS VOLUME

ACKNOWLEDGEMENTS

The authors would like to acknowledge with grateful thanks the many individuals and organizations who have assisted in the data acquisition. New wells were made available this year through the courtesy of Panarctic Oils Ltd., Gulf Oil Canada Ltd., Sunoco E. & P. Ltd., and Ashland Oil Canada Ltd. Logistic support for the work in the Arctic Islands was provided by the Polar Continental Shelf Project and by Panarctic Oils Ltd., and for work in the western Arctic by the Environmental-Social Committee on Northern Pipelines, by the Earth Physics Branch and by Gulf Oil Canada Ltd. Assistance in equipment preparation and in field work was provided by V. Allen and L. Matthews. To all of these we offer our special thanks.

The results contained in this report are part of a continuing northern program of the Geothermal Service of the Earth Physics Branch, EMR.

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Canadian Geothermal Data Collection Northern Wells, 1955 to February 1974.
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# S E C T I O N 3

## APPENDICES

## 3.1 Tables of Temperature versus Depth

EARTH PHYSICS BRANCH HOLE NO. 63 REINDEER D-27

**********

LATITUDE 69 DEGREES 6.1 MINUTES NORTH LONGITUDE 134 DEGREES 36.9 MINUTES WEST

ELEVATION 29 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DEPTH (M) | DATE 9 7 66 TEMP (C) | DATE 2 7 67 TEMP (C) | DATE 2 7 68 TEMP (C) | DATE 14 7 69 TEMP (C) | DATE 29 7 70 TEMP (C) | DATE 12 8 71 TEMP (C) | DATE 19 7 72 TEMP (C) | DATE 15 8 74 TEMP (C) |
|---|---|---|---|---|---|---|---|---|
| 3.0 | | | | 8.95 | 19.00 | 6.91 | 23.00 | 13.25 |
| 18.3 | -.09 | | -5.66 | -5.77 | -5.92 | -6.36 | -6.42 | -6.54 |
| 48.8 | -.16 | | -4.84 | -5.10 | -5.23 | -5.32 | -5.39 | -5.50 |
| 79.2 | -.19 | -2.86 | -4.32 | -4.69 | -4.87 | -4.95 | -5.00 | -5.08 |
| 109.7 | -.17 | -.95 | -3.18 | -3.66 | -3.93 | -4.19 | -4.40 | -4.60 |
| 140.2 | -.25 | -1.13 | -2.44 | -3.29 | -3.61 | -3.79 | -3.93 | -4.16 |
| 170.7 | -.40 | -2.13 | -2.95 | -3.28 | -3.42 | -3.50 | -3.57 | -3.66 |
| 201.2 | -.41 | -1.76 | -2.41 | -2.68 | -2.82 | -2.91 | -2.97 | -3.04 |
| 231.6 | -.42 | -1.32 | -1.83 | -2.08 | -2.23 | -2.30 | -2.35 | -2.42 |
| 262.1 | -.26 | -.46 | -.78 | -1.48 | -1.66 | -1.71 | -1.77 | -1.83 |
| 292.6 | -.12 | -.37 | -.51 | -.71 | -.91 | -1.01 | -1.10 | -1.21 |
| 323.1 | -.22 | -.34 | -.38 | -.42 | -.50 | -.54 | -.59 | -.70 |
| 353.6 | .50 | -.05 | -.18 | -.20 | -.23 | -.24 | -.25 | -.27 |
| 384.0 | 2.53 | 1.27 | .90 | .73 | .66 | .58 | .53 | .50 |
| 414.5 | 3.28 | 2.05 | 1.71 | 1.55 | 1.45 | 1.40 | 1.36 | 1.30 |
| 445.0 | 3.95 | 2.76 | 2.43 | 2.27 | 2.17 | 2.12 | 2.09 | 2.05 |
| 475.5 | 4.75 | 3.55 | 3.23 | 3.07 | 2.96 | 2.91 | 2.88 | 2.83 |
| 506.0 | 5.42 | 4.24 | 3.92 | 3.78 | 3.69 | 3.63 | 3.60 | 3.54 |
| 536.4 | 6.14 | 4.98 | 4.65 | 4.51 | 4.44 | 4.36 | 4.33 | 4.29 |
| 566.9 | 6.89 | 5.72 | 5.43 | 5.26 | 5.17 | 5.13 | 5.09 | 5.04 |
| 597.4 | 7.74 | 6.66 | 6.36 | 6.23 | 6.14 | 6.11 | 6.07 | 6.02 |

TEMPERATURE RESULTS ARE OBTAINED FROM A MULTI-THERMISTOR CABLE
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

B.A., SHELL, I.O.E. REINDEER D-27
- -WELL SPUDDED 8 7 65
- -DRILLING FOR 181 DAYS TO A TOTAL DEPTH OF 3861 METERS
- -WELL ABANDONED 5 1 66

N.B. CABLE INSTALLED BY E.P.B. MEASUREMENTS BY E.P.B. AND U.B.C.

EARTH PHYSICS BRANCH HOLE NO. 89 BEAVER HOUSE CREEK H-13

**********

| DATE OF LOG 10 8 71 | | DATE OF LOG 26 7 72 | | DATE OF LOG 22 6 73 | | DATE OF LOG 19 8 74 | |
|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 16.0 | -2.72 | 15.2 | -5.21 | 14.9 | -5.72 | 13.4 | -6.31 |
| 46.8 | -2.69 | 25.3 | -4.86 | 29.8 | -5.26 | 28.3 | -5.59 |
| 93.0 | -2.01 | 40.2 | -4.70 | 44.7 | -5.06 | 58.2 | -5.10 |
| 108.1 | -1.42 | 55.8 | -4.56 | 59.5 | -4.87 | 88.1 | -4.48 |
| 123.1 | -.67 | 70.7 | -4.36 | 74.4 | -4.60 | 118.0 | -3.27 |
| 154.3 | .82 | 86.3 | -3.96 | 89.6 | -4.30 | 148.1 | -1.95 |
| 184.7 | 2.16 | 101.2 | -3.58 | 104.2 | -3.79 | 177.7 | -.39 |
| 200.4 | 2.86 | 116.7 | -2.95 | 119.1 | -3.22 | 207.6 | .88 |
| 231.2 | 4.25 | 131.4 | -2.20 | 134.0 | -2.39 | 237.1 | 2.29 |
| 260.7 | 5.75 | 147.2 | -1.39 | 149.1 | -1.67 | 267.8 | 3.85 |
| 291.0 | 6.86 | 161.8 | -.68 | 164.0 | -.96 | 296.9 | 5.18 |
| 306.3 | 7.43 | 177.7 | .13 | 178.6 | -.53 | 326.7 | 6.27 |
| 336.6 | 8.22 | 192.3 | .68 | 193.5 | .46 | 356.6 | 7.13 |
| 352.2 | 8.55 | 208.2 | 1.39 | 208.4 | 1.07 | 386.5 | 7.63 |
| 382.5 | 8.91 | 222.2 | 2.02 | 223.2 | 1.89 | 416.4 | 8.69 |
| 398.1 | 9.54 | 238.0 | 2.77 | 238.1 | 2.50 | 446.2 | 9.37 |
| 413.1 | 10.10 | 252.7 | 3.39 | 253.0 | 3.16 | 475.8 | 10.11 |
| 428.4 | 10.35 | 263.3 | 4.32 | 267.9 | 4.06 | 505.7 | 11.08 |
| 443.7 | 10.63 | 283.2 | 4.92 | 282.8 | 4.70 | 536.4 | 12.62 |
| 474.6 | 11.50 | 298.7 | 5.64 | 297.7 | 5.40 | | |
| 489.6 | 11.84 | 312.7 | 6.16 | 312.5 | 5.95 | | |
| 505.2 | 12.53 | 329.2 | 6.66 | 327.4 | 6.43 | | |
| 520.2 | 13.41 | 343.5 | 7.15 | 342.3 | 6.92 | | |
| 535.5 | 14.12 | 359.7 | 7.51 | 357.2 | 7.26 | | |
| 566.4 | 15.49 | 374.3 | 7.73 | 372.1 | 7.51 | | |
| 581.4 | 16.20 | 389.8 | 8.02 | 387.2 | 7.76 | | |
| 612.3 | 17.59 | 404.5 | 8.61 | 401.8 | 8.25 | | |
| 627.3 | 18.04 | 420.6 | 9.12 | 416.7 | 8.82 | | |
| 642.9 | 18.40 | 436.2 | 9.43 | 431.6 | 9.19 | | |
| 657.9 | 18.82 | 451.1 | 9.77 | 446.5 | 9.48 | | |
| 673.5 | 19.43 | 466.0 | 10.14 | 461.4 | 9.85 | | |
| 688.5 | 19.99 | 481.6 | 10.55 | 476.3 | 10.26 | | |
| 703.8 | 20.80 | 496.2 | 10.96 | 491.1 | 10.60 | | |
| 719.5 | 21.70 | 512.1 | 11.69 | 506.0 | 11.19 | | |
| 734.4 | 22.64 | 526.7 | 12.45 | 520.9 | 11.95 | | |
| 749.7 | 23.29 | 542.5 | 13.24 | 535.8 | 12.70 | | |
| 765.0 | 23.53 | 556.6 | 13.90 | 550.7 | 13.45 | | |
| 785.1 | 23.79 | 573.0 | 14.60 | 565.6 | 14.12 | | |
| 800.5 | 24.29 | 587.0 | 15.32 | 580.4 | 14.81 | | |
| 816.2 | 24.59 | 603.8 | 16.18 | 595.3 | 15.59 | | |
| 831.6 | 24.94 | 617.8 | 16.73 | 610.2 | 16.28 | | |
| 847.3 | 25.26 | 634.3 | 17.25 | 625.1 | 16.79 | | |
| 862.7 | 25.54 | 650.7 | 17.68 | 640.0 | 17.26 | | |
| 877.8 | 25.82 | 665.4 | 18.11 | 654.8 | 17.63 | | |
| 892.9 | 26.13 | 680.0 | 18.62 | 669.7 | 18.10 | | |
| 908.2 | 26.40 | 697.1 | 19.36 | 684.6 | 18.69 | | |
| 923.9 | 26.66 | 710.2 | 20.03 | 699.5 | 19.39 | | |
| 939.9 | 26.94 | 726.9 | 21.18 | 714.4 | 20.23 | | |
| 954.7 | 27.27 | 740.4 | 22.00 | 729.3 | 21.20 | | |
| 970.1 | 27.82 | 757.4 | 22.73 | 744.1 | 22.11 | | |
| 985.5 | 28.39 | 769.3 | 22.97 | 759.0 | 22.66 | | |
| 1000.9 | 28.90 | 788.2 | 23.34 | 774.2 | 22.96 | | |
| 1016.6 | 29.19 | 800.4 | 23.72 | 788.8 | 23.27 | | |
| 1031.4 | 29.47 | 818.7 | 24.08 | 803.7 | 23.69 | | |
| 1046.8 | 29.72 | 831.2 | 24.36 | 818.5 | 23.99 | | |
| 1062.5 | 30.08 | 849.2 | 24.74 | 833.4 | 24.32 | | |
| 1077.9 | 30.37 | 861.7 | 25.00 | 848.3 | 24.63 | | |
| 1093.6 | 30.72 | 879.7 | 25.34 | 863.2 | 24.95 | | |
| 1108.7 | 31.08 | 910.4 | 25.93 | 878.1 | 25.21 | | |
| 1123.8 | 31.50 | 940.9 | 26.48 | 893.0 | 25.55 | | |
| 1131.5 | 31.83 | 971.4 | 27.40 | 907.8 | 25.82 | | |
| 1139.5 | 32.19 | 1001.9 | 28.48 | 922.7 | 26.07 | | |
| 1154.9 | 32.51 | 1032.4 | 29.07 | | | | |
| 1169.9 | 32.81 | 1063.1 | 29.70 | | | | |
| 1185.6 | 33.40 | 1093.9 | 30.43 | | | | |
| 1200.7 | 34.06 | 1124.7 | 31.27 | | | | |
| 1216.1 | 34.59 | 1155.5 | 32.30 | | | | |
| 1231.8 | 35.13 | | | | | | |
| 1247.2 | 35.61 | | | | | | |
| 1262.3 | 36.02 | | | | | | |
| 1277.7 | 36.37 | | | | | | |
| 1293.1 | 36.76 | | | | | | |
| 1305.4 | 37.04 | | | | | | |

SUMMARY OF DEPTH-TEMPERATURE LOGS

LATITUDE 68 DEGREES 22.3 MINUTES NORTH

LONGITUDE 135 DEGREES 33.0 MINUTES WEST

ELEVATION 68 METERS

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

SHELL BEAVER HOUSE CREEK H-13
-WELL SPUDDED 23 11 70
-DRILLING FOR 124 DAYS TO A TOTAL DEPTH OF 3748 METERS
-WELL ABANDONED 27 3 71

EARTH PHYSICS BRANCH HOLE NO. 91 JAMESON BAY C-31

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LATITUDE 76 DEGREES 40.2 MINUTES NORTH LONGITUDE 116 DEGREES 43.7 MINUTES WEST

ELEVATION 58 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 10 5 72 | | DATE OF LOG 29 4 73 | | DATE OF LOG 17 5 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 34.4 | -15.11 | 15.2 | -14.51 | 15.3 | -12.53 |
| 64.9 | -14.34 | 30.8 | -14.54 | 30.5 | -12.89 |
| 95.7 | -13.61 | 46.0 | -15.14 | 44.9 | -15.22 |
| 126.5 | -12.31 | 61.3 | -14.79 | 59.9 | -14.91 |
| 157.0 | -10.55 | 76.5 | -14.41 | 75.2 | -14.57 |
| 187.5 | -8.43 | 91.7 | -14.04 | 90.1 | -14.19 |
| 217.6 | -6.11 | 107.0 | -13.56 | 104.8 | -13.83 |
| 248.1 | -4.03 | 122.2 | -12.96 | 120.1 | -13.20 |
| 278.3 | -3.23 | 137.5 | -12.13 | 134.7 | -12.49 |
| 308.8 | -2.65 | 152.7 | -11.14 | 150.0 | -11.57 |
| 339.2 | -2.00 | 167.6 | -10.14 | 164.7 | -10.68 |
| 369.7 | -1.33 | 183.2 | -9.02 | 180.0 | -9.42 |
| 399.9 | -.90 | 198.4 | -7.87 | 194.6 | -8.36 |
| 430.4 | -.76 | 213.7 | -6.63 | 209.6 | -7.10 |
| 460.6 | .11 | 228.6 | -5.74 | 224.5 | -6.11 |
| 490.7 | .71 | 243.8 | -4.63 | 239.5 | -5.10 |
| 521.2 | 1.21 | 259.4 | -3.94 | 254.5 | -4.15 |
| 551.4 | 1.78 | 274.3 | -3.48 | 269.8 | -3.69 |
| 581.6 | 2.59 | 290.2 | -3.27 | 284.7 | -3.38 |
| 612.0 | 3.39 | 305.1 | -3.02 | 299.7 | -3.14 |
| 642.2 | 4.24 | 320.3 | -2.77 | 314.4 | -2.94 |
| 672.7 | 6.11 | 335.6 | -2.47 | 329.4 | -2.68 |
| 676.0 | 6.35 | 350.8 | -2.26 | 344.3 | -2.44 |
| | | 366.1 | -1.99 | 359.6 | -2.17 |
| | | 381.3 | -1.76 | 374.3 | -1.98 |
| | | 396.2 | -1.46 | 389.2 | -1.70 |
| | | 411.8 | -1.31 | 404.2 | -1.47 |
| | | 427.9 | -1.18 | 419.2 | -1.26 |
| | | 442.3 | -.82 | 434.4 | -.89 |
| | | 457.8 | -.36 | 449.1 | -.48 |
| | | 472.7 | -.03 | 464.1 | -.13 |
| | | 487.7 | .46 | 479.4 | .15 |
| | | 502.9 | .72 | 494.3 | .42 |
| | | 518.5 | 1.00 | 509.0 | .69 |
| | | 533.7 | 1.27 | 524.0 | .94 |
| | | 548.9 | 1.53 | 538.9 | 1.25 |
| | | 563.9 | 1.89 | 553.9 | 1.55 |
| | | 579.4 | 2.32 | 568.9 | 1.91 |
| | | 594.7 | 2.71 | 583.8 | 2.28 |
| | | 609.9 | 3.13 | 598.8 | 2.65 |
| | | 625.1 | 3.63 | 613.8 | 3.16 |
| | | 640.7 | 4.16 | 629.1 | 3.61 |
| | | 655.6 | 4.58 | 643.4 | 4.12 |
| | | 670.9 | 5.72 | 659.0 | 4.80 |
| | | 686.1 | 6.39 | 675.8 | 5.55 |
| | | 701.7 | 6.89 | 688.9 | 6.35 |
| | | 716.6 | 7.88 | 704.5 | 6.86 |
| | | 731.8 | 8.19 | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

ELF JAMESON BAY C-31
-WELL SPUDDED 11 3 71
-DRILLING FOR 81 DAYS TO A TOTAL DEPTH OF 2538 METERS
-WELL ABANDONED 16 5 71

EARTH PHYSICS BRANCH HOLE NO. 94 DAHADINNI M-43A

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LATITUDE 63 DEGREES 53.0 MINUTES NORTH LONGITUDE 124 DEGREES 39.3 MINUTES WEST

ELEVATION 248 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 25 3 72 | | DATE OF LOG 28 7 72 | | DATE OF LOG 25 6 73 | | DATE OF LOG 11 8 74 | |
|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 32.9 | -.28 | 18.3 | -.47 | 14.9 | -1.01 | 12.5 | -1.20 |
| 63.4 | 1.44 | 33.5 | -.26 | 29.8 | -.40 | 27.4 | -.61 |
| 93.6 | 2.78 | 48.2 | .20 | 45.0 | -.04 | 42.4 | -.13 |
| 124.1 | 4.27 | 63.7 | 1.20 | 59.6 | .69 | 57.3 | .46 |
| 154.5 | 5.93 | 78.6 | 1.85 | 74.9 | 1.41 | 71.9 | 1.15 |
| 185.0 | 7.47 | 94.2 | 2.61 | 89.5 | 2.12 | 87.5 | 1.86 |
| 215.2 | 8.76 | 109.4 | 3.29 | 104.7 | 2.74 | 101.8 | 2.56 |
| 230.1 | 9.52 | 124.4 | 4.02 | 119.3 | 3.52 | 116.7 | 3.25 |
| | | 139.9 | 4.75 | 134.5 | 4.24 | 131.7 | 4.00 |
| | | 155.1 | 5.68 | 149.1 | 5.14 | 146.6 | 4.58 |
| | | 170.1 | 6.47 | 164.6 | 5.89 | 161.5 | 5.64 |
| | | 185.3 | 7.34 | 178.9 | 6.77 | 176.8 | 6.51 |
| | | 200.6 | 8.03 | 193.9 | 7.74 | 191.7 | 7.29 |
| | | 216.1 | 8.56 | 208.8 | 8.79 | 206.7 | 7.89 |
| | | 231.3 | 9.27 | 223.7 | 9.36 | 221.6 | 8.43 |
| | | | | 232.6 | 9.66 | 228.6 | 8.88 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

CANDEX ET AL DAHADINNI M-43A
-WELL SPUDDED 2 2 71
-DRILLING FOR 214 DAYS TO A TOTAL DEPTH OF 3131 METERS
-WELL ABANDONED 4 9 71

EARTH PHYSICS BRANCH HOLE NO. 95 ROWLEY M-04

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SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 20 5 72 | | DATE OF LOG 12 7 72 | | DATE OF LOG 2 5 73 | | DATE OF LOG 14 5 74 | |
|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 15.2 | -7.81 | 10.7 | -2.46 | 14.9 | -8.23 | 7.2 | -9.94 |
| 33.5 | -8.19 | 19.2 | -3.31 | 30.8 | -8.17 | 15.0 | -8.48 |
| 45.7 | -8.19 | 26.8 | -8.00 | 45.7 | -8.20 | 22.2 | -8.36 |
| 64.0 | -8.08 | 34.4 | -8.13 | 61.9 | -8.09 | 30.0 | -8.25 |
| 76.2 | -7.86 | 42.4 | -8.18 | 76.8 | -7.91 | 37.8 | -8.21 |
| 93.9 | -7.63 | 50.0 | -8.16 | 92.4 | -7.67 | 45.0 | -8.20 |
| 106.7 | -7.28 | 57.9 | -8.12 | 107.6 | -7.32 | 52.5 | -8.17 |
| 124.4 | -6.91 | 65.5 | -8.05 | 122.8 | -6.94 | 60.3 | -8.11 |
| 137.2 | -6.48 | 73.5 | -7.96 | 138.1 | -6.54 | 67.8 | -8.03 |
| 155.1 | -6.00 | 81.1 | -7.87 | 153.6 | -6.08 | 75.0 | -7.95 |
| 167.6 | -5.59 | 89.0 | -7.75 | 168.9 | -5.65 | 82.5 | -7.84 |
| 185.3 | -5.14 | 96.9 | -7.62 | 184.1 | -5.18 | 90.0 | -7.71 |
| 198.1 | -4.64 | 104.5 | -7.45 | 199.0 | -4.70 | 97.5 | -7.54 |
| 216.4 | -4.13 | 112.2 | -7.29 | 214.0 | -4.19 | 105.0 | -7.41 |
| 228.6 | -3.71 | 120.1 | -7.11 | 229.5 | -3.72 | 112.5 | -7.23 |
| 246.6 | -3.23 | 128.0 | -6.90 | 245.1 | -3.27 | 120.3 | -7.03 |
| 259.1 | -2.77 | 135.9 | -6.70 | 260.3 | -2.84 | 127.8 | -6.85 |
| 276.8 | -2.41 | 143.9 | -6.50 | 275.2 | -2.42 | 135.0 | -6.67 |
| 289.6 | -2.04 | 151.5 | -6.28 | 290.8 | -2.10 | 142.5 | -6.43 |
| 307.2 | -1.61 | 159.1 | -6.03 | 306.0 | -1.63 | 150.3 | -6.18 |
| 320.0 | -1.52 | 167.0 | -5.79 | 321.0 | -1.51 | 157.5 | -6.00 |
| 338.0 | -1.40 | 175.0 | -5.56 | 335.9 | -1.39 | 165.3 | -5.79 |
| 350.5 | -1.22 | 182.3 | -5.35 | 351.1 | -1.22 | 172.8 | -5.56 |
| 368.5 | -1.03 | 190.5 | -5.13 | 366.4 | -.97 | 180.3 | -5.34 |
| 381.0 | -.60 | 197.8 | -4.88 | 381.6 | -.67 | 187.8 | -5.10 |
| 399.3 | .35 | 205.7 | -4.64 | 396.9 | .21 | 195.0 | -4.90 |
| 411.5 | .78 | 213.7 | -4.35 | 412.4 | .77 | 202.8 | -4.63 |
| 429.5 | 1.03 | 221.3 | -4.14 | 427.6 | 1.02 | 210.0 | -4.35 |
| 435.9 | 1.12 | 228.9 | -3.90 | 437.1 | 1.16 | 217.8 | -4.12 |
| | | 237.1 | -3.67 | | | 224.7 | -3.90 |
| | | 244.8 | -3.45 | | | 232.5 | -3.69 |
| | | 252.4 | -3.23 | | | 240.0 | -3.48 |
| | | 260.3 | -3.01 | | | 247.5 | -3.25 |
| | | 268.2 | -2.79 | | | 255.0 | -3.04 |
| | | 275.8 | -2.58 | | | 262.5 | -2.84 |
| | | 283.8 | -2.38 | | | 270.0 | -2.62 |
| | | 291.4 | -2.20 | | | 277.5 | -2.39 |
| | | 299.6 | -2.02 | | | 285.0 | -2.22 |
| | | 307.2 | -1.79 | | | 292.2 | -2.05 |
| | | 314.9 | -1.59 | | | 300.0 | -1.87 |
| | | 322.8 | -1.52 | | | 307.8 | -1.67 |
| | | 330.7 | -1.49 | | | 315.0 | -1.56 |
| | | 338.3 | -1.44 | | | 322.8 | -1.52 |
| | | 345.9 | -1.37 | | | 330.3 | -1.47 |
| | | 353.6 | -1.27 | | | 337.5 | -1.41 |
| | | 361.5 | -1.20 | | | 345.0 | -1.32 |
| | | 369.4 | -1.09 | | | 353.1 | -1.24 |
| | | 377.3 | -1.03 | | | 360.0 | -1.15 |
| | | 385.0 | -.85 | | | 367.5 | -1.05 |
| | | 392.6 | -.65 | | | 375.3 | -.95 |
| | | 400.5 | -.43 | | | 382.5 | -.80 |
| | | 408.4 | .30 | | | 390.0 | -.63 |
| | | 419.1 | .61 | | | 397.5 | -.30 |
| | | 424.0 | .78 | | | 405.0 | .55 |
| | | 431.6 | .93 | | | 412.5 | .73 |
| | | 439.8 | 1.04 | | | 420.0 | .87 |
| | | 447.1 | 1.16 | | | 427.5 | 1.00 |
| | | 455.1 | 1.13 | | | 435.0 | 1.10 |
| | | | | | | 438.0 | 1.15 |

LATITUDE 69 DEGREES 4.0 MINUTES NORTH

LONGITUDE 79 DEGREES 3.8 MINUTES WEST

ELEVATION 48 METERS

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

AQUITAINE ET AL ROWLEY M-04
-WELL SPUDDED 5 8 71
-DRILLING FOR 21 DAYS TO A TOTAL DEPTH OF 535 METERS
-DRILLING STOPPED 26 8 71
-WELL ABANDONED 2 9 71

EARTH PHYSICS BRANCH HOLE NO. 99 DEVON E-45

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LATITUDE 75 DEGREES 4.30 MINUTES NORTH LONGITUDE 91 DEGREES 48.30 MINUTES WEST

ELEVATION 244 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 18 5 72 | | DATE OF LOG 6 5 73 | | DATE OF LOG 15 5 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 33.5 | -12.61 | 15.5 | -14.09 | 7.4 | -15.41 |
| 64.0 | -12.45 | 31.1 | -13.77 | 15.2 | -14.35 |
| 94.5 | -12.07 | 46.9 | -13.73 | 22.0 | -14.12 |
| | | 62.2 | -13.60 | 29.8 | -14.01 |
| | | 77.4 | -13.45 | 37.2 | -13.93 |
| | | 93.0 | -13.24 | 44.7 | -13.89 |
| | | 106.1 | -12.99 | 52.1 | -13.85 |
| | | | | 59.8 | -13.76 |
| | | | | 67.0 | -13.71 |
| | | | | 74.4 | -13.63 |
| | | | | 81.9 | -13.53 |
| | | | | 89.3 | -13.42 |
| | | | | 96.7 | -13.32 |
| | | | | 104.2 | -13.20 |
| | | | | 106.6 | -13.09 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

IOE PANARCTIC ET AL DEVON ISLAND E-45
-WELL SPUDDED 16 12 71
-DRILLING FOR 75 DAYS TO A TOTAL DEPTH OF 1838 METERS
-DRILLING STOPPED 29 2 72
-WELL ABANDONED 5 3 72

N.B. MULTITHERMISTOR CABLE INSTALLED ON OUTSIDE SURFACE CASING
BY I.O.E. FOR COMPARISON.

EARTH PHYSICS BRANCH HOLE NO. 151  WEST WHITEFISH RIVER H-34

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LATITUDE 65 DEGREES 33.4 MINUTES NORTH  LONGITUDE 124 DEGREES 35.7 MINUTES WEST

ELEVATION 227 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 29 7 72 | | DATE OF LOG 26 6 73 | | DATE OF LOG 11 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 18.3 | -1.29 | 14.8 | -2.70 | 14.3 | -2.92 |
| 34.1 | -.79 | 30.0 | -2.16 | 29.0 | -2.58 |
| 48.5 | -.48 | 44.6 | -1.36 | 43.9 | -2.18 |
| 63.7 | -.65 | 59.4 | -1.28 | 59.1 | -1.83 |
| 78.6 | -.29 | 74.6 | -.73 | 73.8 | -1.45 |
| 93.9 | -.23 | 89.1 | -.22 | 89.0 | -.95 |
| 109.4 | -.19 | 104.0 | .16 | 103.9 | -.49 |
| 124.7 | .69 | 119.1 | .58 | 118.6 | -.10 |
| 139.9 | 1.09 | 133.7 | 1.31 | 133.8 | .35 |
| 155.1 | 1.64 | 148.5 | 1.59 | 148.7 | .86 |
| 170.7 | 2.08 | 163.7 | 2.47 | 163.7 | 1.30 |
| 185.9 | 2.58 | 178.6 | 2.60 | 178.6 | 1.77 |
| 200.9 | 3.26 | 193.1 | 3.25 | 193.5 | 2.27 |
| 216.1 | 3.75 | 208.0 | 3.78 | 208.5 | 2.75 |
| 231.6 | 4.18 | 223.1 | 4.21 | 223.4 | 3.28 |
| 246.9 | 4.65 | 237.7 | 4.51 | 238.4 | 3.73 |
| 262.1 | 5.13 | 252.8 | 5.10 | 253.3 | 4.18 |
| 277.7 | 5.57 | 267.4 | 5.22 | 267.9 | 4.68 |
| 292.9 | 5.97 | 282.2 | 5.60 | 282.9 | 5.03 |
| 308.5 | 6.50 | 297.4 | 5.84 | 297.8 | 5.54 |
| 323.7 | 6.89 | 311.9 | 6.94 | 313.0 | 6.00 |
| 338.9 | 7.37 | 326.8 | 7.06 | 327.7 | 6.53 |
| 354.2 | 7.94 | 341.7 | 7.49 | 342.9 | 6.94 |
| | | | | 354.8 | 7.40 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

ARCO WEST WHITEFISH RIVER H-34
- -WELL SPUDDED 14 3 72
- -DRILLING FOR 25 DAYS TO A TOTAL DEPTH OF 1654 METERS
- -WELL ABANDONED 8 4 72

EARTH PHYSICS BRANCH HOLE NO. 155  KRISTOFFER BAY B-06

**********

LATITUDE 78 DEGREES 15.3 MINUTES NORTH  LONGTITUDE 102 DEGREES 32.0 MINUTES WEST

ELEVATION 15 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 11 5 72 | | DATE OF LOG 14 9 72 | | DATE OF LOG 13 5 73 | | DATE OF LOG 20 5 74 | |
|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 31.1 | -10.60 | 55.5 | -10.22 | 15.2 | -16.72 | 15.2 | -17.29 |
| 61.6 | -10.56 | 86.0 | -9.44 | 30.5 | -15.27 | 30.2 | -15.96 |
| 92.0 | -9.08 | 116.4 | -8.33 | 45.7 | -14.53 | 45.1 | -15.09 |
| 122.5 | -7.83 | 146.9 | -7.28 | 61.0 | -14.01 | 59.8 | -14.50 |
| 153.0 | -6.28 | 177.4 | -6.39 | 75.9 | -13.49 | 74.7 | -14.03 |
| 183.2 | -4.84 | 207.9 | -5.56 | 91.4 | -12.79 | 89.6 | -13.35 |
| 213.7 | -3.51 | 238.4 | -4.28 | 106.7 | -12.20 | 104.6 | -12.75 |
| 243.8 | -2.47 | 268.8 | -2.83 | 121.9 | -11.58 | 119.5 | -12.16 |
| 274.3 | -1.26 | 299.3 | -1.83 | 136.9 | -11.00 | 134.5 | -11.60 |
| 304.5 | -1.17 | 314.6 | -1.44 | 152.4 | -10.50 | 149.4 | -11.05 |
| 335.0 | -1.63 | 329.8 | -1.22 | 167.6 | -9.98 | 164.3 | -10.56 |
| 365.5 | .52 | 345.0 | -1.17 | 182.9 | -9.51 | 179.6 | -10.06 |
| 395.6 | 2.84 | 360.3 | -1.00 | 197.8 | -8.98 | 194.5 | -9.57 |
| 426.1 | 4.11 | 390.8 | .56 | 213.4 | -8.52 | 209.5 | -9.17 |
| 456.6 | 5.96 | 421.2 | 1.89 | 228.6 | -7.87 | 224.4 | -8.58 |
| | | 451.7 | 3.67 | 243.8 | -7.06 | 239.4 | -7.91 |
| | | 482.2 | 5.00 | 259.1 | -6.45 | 254.0 | -7.26 |
| | | 512.7 | 6.22 | 274.3 | -5.82 | 269.0 | -6.69 |
| | | 543.2 | 8.22 | 289.6 | -5.21 | 283.9 | -6.04 |
| | | 573.6 | 9.56 | 304.5 | -4.72 | 298.8 | -5.53 |
| | | 604.1 | 11.00 | 320.0 | -4.12 | 313.8 | -5.12 |
| | | 634.6 | 12.39 | 335.3 | -3.64 | 328.7 | -4.56 |
| | | 665.1 | 13.50 | 350.5 | -3.26 | 343.7 | -4.07 |
| | | | | 365.8 | -2.78 | 358.6 | -3.57 |
| | | | | 381.0 | -2.04 | 373.5 | -2.94 |
| | | | | 396.2 | -1.23 | 388.8 | -2.22 |
| | | | | 411.8 | -.61 | 403.4 | -1.51 |
| | | | | 426.4 | .06 | 418.6 | -.98 |
| | | | | 442.0 | 1.16 | 433.3 | -.24 |
| | | | | 457.5 | 2.05 | 448.2 | 1.01 |
| | | | | 472.1 | 2.82 | 463.2 | 1.80 |
| | | | | 487.7 | 3.65 | 478.1 | 2.65 |
| | | | | 503.2 | 4.50 | 493.4 | 3.38 |
| | | | | 518.2 | 5.34 | 508.0 | 4.26 |
| | | | | 533.4 | 6.25 | 523.3 | 5.14 |
| | | | | 548.6 | 7.04 | 537.9 | 5.96 |
| | | | | 563.9 | 7.77 | 552.8 | 6.79 |
| | | | | 579.1 | 8.53 | 567.8 | 7.48 |
| | | | | 594.4 | 9.32 | 583.0 | 8.28 |
| | | | | 609.6 | 10.12 | 597.7 | 9.02 |
| | | | | 624.8 | 10.91 | 612.6 | 9.83 |
| | | | | 640.1 | 11.51 | 627.8 | 10.60 |
| | | | | 655.3 | 12.09 | 642.5 | 11.19 |
| | | | | 670.9 | 12.75 | 657.7 | 11.77 |
| | | | | 685.8 | 13.38 | 672.4 | 12.40 |
| | | | | 701.0 | 14.02 | 687.3 | 13.02 |
| | | | | 716.6 | 14.72 | 702.2 | 13.67 |
| | | | | 731.5 | 15.40 | 717.2 | 14.33 |
| | | | | 746.8 | 16.03 | 732.4 | 15.07 |
| | | | | 762.0 | 16.67 | 747.1 | 15.66 |
| | | | | 777.5 | 17.26 | 762.0 | 16.30 |
| | | | | 792.5 | 17.85 | 776.9 | 16.89 |
| | | | | | | 791.9 | 17.45 |
| | | | | | | 806.8 | 18.09 |
| | | | | | | 821.8 | 18.67 |
| | | | | | | 836.7 | 19.27 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC TENNECO ET AL KRISTOFFER BAY B-06
-WELL SPUDDED 9 11 71
-DRILLING FOR 119 DAYS TO A TOTAL DEPTH OF 3925 METERS
-DRILLING STOPPED 8 3 72
-WELL ABANDONED 17 3 72

N.B. LOG OF 14 09 72 TAKEN BY PANARCTIC.

EARTH PHYSICS BRANCH HOLE NO. 158  BROCK I-20

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LATITUDE  77 DEGREES  59.7  MINUTES NORTH  LONGITUDE 114 DEGREES  33.9  MINUTES WEST

ELEVATION  16 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 16 9 72 | | DATE OF LOG 12 5 73 | | DATE OF LOG 19 5 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 73.2 | -9.11 | 15.3 | -13.16 | 15.3 | -15.35 |
| 85.3 | -8.72 | 30.5 | -13.05 | 30.0 | -15.17 |
| 100.6 | -8.06 | 45.8 | -14.21 | 44.7 | -15.19 |
| 115.8 | -7.39 | 61.1 | -14.06 | 59.7 | -14.83 |
| 131.1 | -6.67 | 76.7 | -13.30 | 75.3 | -14.00 |
| 146.3 | -5.89 | 91.9 | -12.41 | 90.0 | -13.32 |
| 161.5 | -5.11 | 107.2 | -11.59 | 105.0 | -12.11 |
| 176.8 | -4.22 | 122.2 | -10.53 | 120.3 | -11.18 |
| 192.0 | -3.61 | 137.7 | -9.74 | 135.0 | -10.56 |
| 207.3 | -3.00 | 152.7 | -8.88 | 150.0 | -9.47 |
| 222.5 | -2.89 | 168.0 | -7.64 | 165.3 | -8.61 |
| 231.6 | -2.50 | 182.9 | -6.94 | 180.3 | -7.35 |
| 237.7 | -1.89 | 198.5 | -6.25 | 195.0 | -6.74 |
| 240.8 | -1.67 | 213.5 | -5.81 | 210.0 | -6.39 |
| 253.0 | -2.39 | 229.4 | -5.31 | 225.3 | -5.99 |
| 268.2 | -2.00 | 244.6 | -4.93 | 240.3 | -5.55 |
| 283.5 | -1.56 | 259.6 | -4.59 | 255.0 | -5.20 |
| 298.7 | -1.44 | 274.9 | -4.19 | 270.0 | -4.78 |
| 313.9 | -1.39 | 290.4 | -3.78 | 285.0 | -4.38 |
| 329.2 | -1.17 | 305.4 | -3.36 | 300.0 | -4.02 |
| 344.4 | -1.06 | 320.7 | -3.15 | 315.0 | -3.70 |
| 359.7 | -.44 | 336.3 | -2.84 | 330.3 | -3.33 |
| 390.1 | 1.11 | 351.2 | -2.47 | 345.3 | -2.97 |
| 420.6 | 2.50 | 366.2 | -2.03 | 360.0 | -2.62 |
| 451.1 | 3.39 | 382.1 | -1.36 | 375.3 | -2.02 |
| 481.6 | 5.11 | 397.0 | -.42 | 390.0 | -1.47 |
| 512.1 | 6.56 | 412.3 | .17 | 405.3 | -.29 |
| 542.5 | 8.33 | 427.3 | .58 | 420.0 | .31 |
| 573.0 | 9.94 | 442.8 | 1.15 | 435.3 | .85 |
| 603.5 | 11.67 | 458.1 | 2.30 | 450.0 | 1.44 |
| 634.0 | 13.22 | 473.4 | 3.22 | 465.0 | 2.28 |
| 664.5 | 15.00 | 488.7 | 4.02 | 480.3 | 3.21 |
| 694.9 | 15.89 | 503.9 | 4.80 | 495.0 | 4.00 |
| | | 519.2 | 5.59 | 510.0 | 4.79 |
| | | 534.8 | 6.97 | 525.3 | 5.53 |
| | | 549.7 | 7.65 | 540.6 | 6.82 |
| | | 565.0 | 8.59 | 555.0 | 7.59 |
| | | 580.3 | 9.68 | 569.7 | 8.61 |
| | | 595.5 | 10.65 | 585.3 | 9.68 |
| | | 610.9 | 11.56 | 600.0 | 10.59 |
| | | 625.8 | 12.32 | 615.3 | 11.49 |
| | | 641.1 | 13.29 | 630.0 | 12.33 |
| | | 656.6 | 14.35 | 645.0 | 13.30 |
| | | 671.9 | 15.10 | 660.0 | 14.31 |
| | | 687.2 | 15.62 | 675.0 | 14.99 |
| | | 702.4 | 16.05 | 690.0 | 15.51 |
| | | 718.3 | 16.56 | 705.0 | 15.94 |
| | | 733.0 | 17.12 | 720.0 | 16.45 |
| | | 748.3 | 17.70 | 735.0 | 17.01 |
| | | 763.5 | 18.39 | 750.0 | 17.65 |
| | | 779.4 | 19.14 | 765.0 | 18.34 |
| | | | | 780.3 | 19.04 |
| | | | | 795.0 | 19.62 |
| | | | | 810.3 | 20.21 |
| | | | | 825.0 | 20.78 |
| | | | | 840.0 | 21.25 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC BROCK I-20
- -WELL SPUDDED 14  4 72
- -DRILLING FOR  73 DAYS TO A TOTAL DEPTH OF 3177 METERS
- -DRILLING STOPPED 26  6 72
- -WELL ABANDONED 28  6 72

N.B.  LOG OF 16 09 72 TAKEN BY PANARCTIC.

EARTH PHYSICS BRANCH HOLE NO. 165  KILAGMIOTAK F-48

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LATITUDE 69 DEGREES 27.5 MINUTES NORTH  LONGITUDE 134 DEGREES 11.9 MINUTES WEST

ELEVATION 20 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 1 4 73 | | DATE OF LOG 19 6 73 | | DATE OF LOG 4 2 74 | | DATE OF LOG 15 8 74 | |
|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 16.5 | -6.81 | 14.9 | -6.80 | 18.9 | -8.73 | 13.1 | -8.00 |
| 31.1 | -4.94 | 29.8 | -5.85 | 34.7 | -7.21 | 28.0 | -6.99 |
| 45.7 | -4.21 | 44.7 | -5.40 | 65.2 | -6.40 | 57.9 | -6.57 |
| 61.0 | -4.21 | 59.5 | -5.43 | 95.7 | -5.95 | 88.1 | -6.30 |
| 77.1 | -3.90 | 74.7 | -5.29 | 126.2 | -5.20 | 118.0 | -5.84 |
| 91.4 | -3.21 | 89.3 | -4.88 | 156.4 | -4.65 | 147.5 | -5.26 |
| 107.6 | -2.68 | 104.2 | -4.63 | 186.5 | -4.16 | 177.4 | -5.00 |
| 121.9 | -1.42 | 119.4 | -3.74 | 217.0 | -3.80 | 207.3 | -4.56 |
| 137.2 | -.67 | 134.0 | -2.66 | 247.2 | -3.04 | 237.4 | -4.28 |
| 152.4 | -.58 | 148.8 | -1.18 | 277.4 | -2.07 | 267.3 | -3.83 |
| 167.6 | -.52 | 163.7 | -.91 | 307.8 | -1.38 | 296.9 | -1.39 |
| 182.9 | -.60 | 178.6 | -1.19 | 323.1 | -1.04 | 311.8 | -1.68 |
| 198.1 | -.58 | 193.5 | -.84 | | | | |
| 213.4 | -.56 | 208.4 | -.70 | | | | |
| 228.6 | -.58 | 223.2 | -.76 | | | | |
| 243.8 | -.59 | 238.1 | -.77 | | | | |
| 259.1 | -.58 | 253.0 | -.67 | | | | |
| 274.3 | -.59 | 268.2 | -.71 | | | | |
| 289.6 | -.62 | 282.8 | -.66 | | | | |
| 304.8 | -.63 | 297.7 | -.66 | | | | |
| 320.0 | -.63 | 312.5 | -.66 | | | | |
| 335.3 | -.22 | 327.4 | -.27 | | | | |
| 350.5 | -.25 | | | | | | |
| 365.8 | -.28 | | | | | | |
| 381.0 | -.36 | | | | | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF MOBIL KILAGMIOTAK F-48
-WELL SPUDDED 4 2 72
-DRILLING FOR 268 DAYS TO A TOTAL DEPTH OF 4772 METERS
-DRILLING STOPPED 21 8 72
-WELL ABANDONED 12 10 72

N.B. Caliper survey run day previous to log of 15 08 74.

EARTH PHYSICS BRANCH HOLE NO. 166  MOKKA A-02

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LATITUDE  79 DEGREES  32.2  MINUTES NORTH  LONGITUDE  87 DEGREES  1.2  MINUTES WEST

ELEVATION  253 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DEPTH (M) | DATE 14 4 73 TEMP (C) | DATE 23 5 74 TEMP (C) |
|---|---|---|
| 0.0 | -2.80 | |
| 15.2 | -4.40 | |
| 30.5 | -6.10 | -12.90 |
| 45.7 | -7.80 | -12.60 |
| 61.0 | -7.80 | -12.40 |
| 76.2 | -7.20 | -12.20 |
| 91.4 | -6.70 | -11.70 |
| 106.7 | -6.10 | -11.20 |
| 137.2 | | |
| 137.2 | | -10.40 |
| 152.4 | -5.10 | -9.70 |
| 167.6 | -5.60 | -9.10 |
| 182.9 | -6.70 | -8.90 |
| 198.1 | -5.60 | -8.10 |
| 213.4 | -5.60 | -7.60 |
| 228.6 | -6.70 | -7.30 |
| 243.8 | -6.70 | -6.90 |
| 259.1 | -5.00 | -6.30 |
| 274.3 | -5.00 | -5.90 |
| 289.6 | -4.40 | -5.50 |
| 320.0 | -5.60 | -4.60 |
| 350.5 | -3.90 | -3.70 |
| 381.0 | -4.40 | -2.50 |
| 411.5 | -3.90 | -1.70 |
| 442.0 | -3.90 | -1.00 |

TEMPERATURE RESULTS ARE OBTAINED FROM A MULTI-THERMISTOR CABLE
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

IMPERIAL PANARCTIC ET AL MOKKA A-02
- -WELL SPUDDED 17 10 72
- -DRILLING FOR 170 DAYS TO A TOTAL DEPTH OF 3300 METERS
- -DRILLING STOPPED  5  4 73
- -WELL ABANDONED 15  4 73

N.B.  CABLE INSTALLED ON OUTSIDE OF CASING BY IMPERIAL OIL.
READING OF 14 04 73 BY I.O.E.  READINGS THEREAFTER BY E.P.B.

EARTH PHYSICS BRANCH HOLE NO. 167  UNIPKAT I-22

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LATITUDE 69 DEGREES 11.7 MINUTES NORTH  LONGITUDE 135 DEGREES 20.5 MINUTES WEST

ELEVATION 5 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 1 4 73 | | DATE OF LOG 25 4 73 | | DATE OF LOG 20 6 73 | | DATE OF LOG 3 11 73 | | DATE OF LOG 4 2 74 | | DATE OF LOG 16 8 74 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 15.2 | -.19 | 15.2 | -1.90 | 14.9 | -.70 | 15.2 | -2.22 | 14.6 | -1.45 | 13.4 | -2.55 |
| 30.5 | .72 | 30.5 | -.70 | 30.1 | -.31 | 30.5 | -1.33 | 29.9 | -.99 | 28.3 | -.79 |
| 45.7 | 2.65 | 45.7 | 1.00 | 59.5 | 1.56 | 45.7 | -1.33 | 60.4 | .27 | 58.2 | -.58 |
| 61.0 | 4.59 | 61.0 | 2.40 | 89.3 | 3.74 | 61.0 | -.83 | 90.8 | 1.81 | 88.1 | 1.19 |
| 76.2 | 6.18 | 76.2 | 4.10 | 119.1 | 5.35 | 76.2 | .44 | 121.3 | 3.42 | 118.3 | 2.72 |
| 91.4 | 6.93 | 91.4 | 5.10 | 148.8 | 6.42 | 91.4 | 1.39 | 151.8 | 4.84 | 148.1 | 3.74 |
| 106.7 | 8.14 | 106.7 | 5.90 | 178.6 | 7.56 | 106.7 | 1.94 | 182.3 | 5.98 | 178.0 | 5.05 |
| 121.9 | 8.87 | 121.9 | 6.80 | 208.4 | 8.93 | 121.9 | 2.78 | 212.8 | 7.35 | 208.2 | 6.46 |
| 137.2 | 8.94 | 137.2 | 7.00 | 238.1 | 9.78 | 137.2 | 3.33 | 243.2 | 8.19 | 238.0 | 7.42 |
| 152.4 | 9.88 | 152.4 | 7.80 | 267.9 | 10.66 | 152.4 | 4.06 | 273.7 | 9.18 | 267.9 | 8.34 |
| 182.9 | 10.83 | 167.6 | 8.40 | 297.7 | 11.16 | 167.6 | 4.78 | 304.5 | 9.61 | 297.2 | 9.11 |
| 213.4 | 11.87 | 182.9 | 8.80 | 327.4 | 11.69 | 182.9 | 5.33 | 335.0 | 10.49 | 327.1 | 9.76 |
| 243.8 | 12.50 | 198.1 | 9.60 | 357.2 | 12.33 | 198.1 | 6.22 | 365.5 | 11.29 | 356.9 | 10.40 |
| 274.3 | 13.45 | 213.4 | 9.90 | 387.2 | 13.32 | 213.4 | 6.83 | 395.9 | 12.06 | 386.8 | 11.29 |
| 304.8 | 13.72 | 228.6 | 10.40 | 416.7 | 13.79 | 228.6 | 7.22 | 426.4 | 12.63 | 416.7 | 12.17 |
| 335.3 | 14.21 | 243.8 | 10.70 | 446.5 | 14.27 | 243.8 | 7.78 | 456.9 | 13.23 | 446.2 | 12.48 |
| 365.8 | 15.03 | 259.1 | 11.20 | 476.3 | 14.91 | 259.1 | 8.06 | 487.7 | 14.04 | 476.1 | 13.13 |
| 396.2 | 15.76 | 274.3 | 11.50 | 506.3 | 15.62 | 274.3 | 8.61 | 518.2 | 14.58 | 506.0 | 13.90 |
| 426.7 | 16.15 | 289.6 | 11.80 | 535.8 | 16.15 | 289.6 | 8.89 | 548.6 | 15.39 | 535.8 | 14.48 |
| 457.2 | 16.66 | 304.8 | 12.00 | 565.6 | 17.08 | 304.8 | 9.22 | | | | |
| 487.7 | 17.55 | | | 595.3 | 17.68 | 335.3 | 9.78 | | | | |
| 518.2 | 17.83 | | | 625.1 | 18.38 | 365.8 | 10.56 | | | | |
| 548.6 | 18.76 | | | 654.8 | 18.95 | 396.2 | 11.33 | | | | |
| 579.1 | 19.23 | | | 684.6 | 19.55 | 426.7 | 11.89 | | | | |
| 609.6 | 20.22 | | | 714.4 | 20.20 | 457.2 | 12.44 | | | | |
| 640.1 | 20.52 | | | | | 487.7 | 13.11 | | | | |
| 670.6 | 21.12 | | | | | 518.2 | 13.67 | | | | |
| 701.0 | 21.77 | | | | | 548.6 | 14.44 | | | | |
| 731.5 | 23.07 | | | | | 579.1 | 15.22 | | | | |
| 762.0 | 23.05 | | | | | 609.6 | 16.00 | | | | |
| | | | | | | 640.1 | 16.67 | | | | |
| | | | | | | 670.6 | 17.22 | | | | |
| | | | | | | 701.0 | 17.78 | | | | |
| | | | | | | 731.5 | 18.61 | | | | |

N.B. LOGS OF 25 4 73 AND 03 11 73 BY SHELL USING ATKINS THERMISTOR.

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

SHELL UNIPKAT I-22
- -WELL SPUDDED 8 9 72
- -DRILLING FOR 179 DAYS TO A TOTAL DEPTH OF 4361 METERS
- -WELL ABANDONED 6 3 73

EARTH PHYSICS BRANCH HOLE NO. 168  DUNDAS C-80

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LATITUDE 74 DEGREES 39.0 MINUTES NORTH  LONGITUDE 113 DEGREES 23.0 MINUTES WEST

ELEVATION 240 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 28 4 73 | | DATE OF LOG 25 5 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 20.7 | -12.90 | 16.5 | -13.41 |
| 44.5 | -12.54 | 31.7 | -14.19 |
| 95.1 | -11.37 | 46.6 | -14.13 |
| 141.0 | -9.49 | 61.9 | -13.80 |
| 177.6 | -8.75 | 77.4 | -13.43 |
| 212.0 | -7.86 | 93.3 | -13.10 |
| 243.7 | -6.66 | 108.8 | -12.62 |
| 276.4 | -5.62 | 125.0 | -11.82 |
| 307.3 | -4.80 | 140.2 | -11.25 |
| 338.2 | -3.60 | 155.8 | -10.85 |
| 369.1 | -2.88 | 171.3 | -10.54 |
| 399.6 | -2.61 | 186.8 | -10.19 |
| 430.1 | -1.73 | 202.7 | -9.86 |
| 460.6 | -1.16 | 218.5 | -9.48 |
| 491.0 | -.72 | 236.5 | -8.93 |
| 521.5 | .03 | 253.3 | -8.52 |
| 551.7 | 1.65 | 269.1 | -8.00 |
| 582.5 | 2.93 | 284.7 | -7.52 |
| 613.0 | 3.91 | 300.8 | -7.26 |
| 643.4 | 4.97 | 316.7 | -6.70 |
| 652.6 | 5.21 | 331.6 | -6.21 |
| | | 346.6 | -5.63 |
| | | 361.2 | -5.27 |
| | | 376.4 | -5.10 |
| | | 391.1 | -4.78 |
| | | 406.3 | -4.47 |
| | | 421.2 | -4.17 |
| | | 435.9 | -3.62 |
| | | 450.8 | -3.25 |
| | | 465.7 | -3.01 |
| | | 480.7 | -2.64 |
| | | 495.6 | -2.25 |
| | | 510.5 | -1.78 |
| | | 525.5 | -1.31 |
| | | 540.4 | -.71 |
| | | 555.3 | -.04 |
| | | 570.3 | .59 |
| | | 585.2 | 1.16 |
| | | 600.2 | 1.81 |
| | | 615.1 | 2.52 |
| | | 630.0 | 3.13 |
| | | 645.3 | 3.77 |
| | | 659.9 | 3.86 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC DOME DUNDAS C-80
-WELL SPUDDED 14 10 72
-DRILLING FOR 97 DAYS TO A TOTAL DEPTH OF 4000 METERS
-WELL ABANDONED 19 1 73

EARTH PHYSICS BRANCH HOLE NO. 169  LOUISE BAY O-25

**********

LATITUDE  78 DEGREES  44.9  MINUTES NORTH  LONGITUDE 102 DEGREES  42.0  MINUTES WEST

ELEVATION  69 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 11 5 73 | | DATE OF LOG 21 5 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 30.2 | -9.85 | 29.9 | -12.33 |
| 61.4 | -8.37 | 60.0 | -10.57 |
| 91.6 | -6.72 | 89.9 | -8.79 |
| 122.5 | -4.80 | 121.3 | -6.92 |
| 153.0 | -3.18 | 153.6 | -5.07 |
| 183.6 | -1.44 | 183.2 | -3.31 |
| 213.5 | .29 | 213.4 | -1.62 |
| 244.3 | 2.15 | 242.9 | .28 |
| 274.9 | 3.83 | 273.1 | 2.20 |
| 305.7 | 5.60 | 303.0 | 3.86 |
| 336.0 | 7.32 | 332.5 | 5.74 |
| 366.5 | 9.09 | 362.7 | 7.38 |
| 397.0 | 10.69 | 392.6 | 9.34 |
| 427.6 | 12.31 | 422.5 | 10.77 |
| 458.1 | 14.02 | 452.0 | 12.49 |
| 488.7 | 15.77 | 481.9 | 14.31 |
| 519.2 | 17.64 | 511.8 | 16.36 |
| 549.7 | 19.88 | 541.9 | 18.53 |
| 580.3 | 21.96 | 571.5 | 20.78 |
| 610.8 | 23.87 | 601.7 | 22.88 |
| 641.4 | 26.35 | 631.2 | 25.30 |
| 672.2 | 28.63 | 661.1 | 27.71 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC LOUISE BAY O-25
  -WELL SPUDDED 23 11 72
  -DRILLING FOR  65 DAYS TO A TOTAL DEPTH OF 2281 METERS
  -WELL ABANDONED 27  1 73

EARTH PHYSICS BRANCH HOLE NO. 170  THOR P-38

**********

LATITUDE 78 DEGREES 7.8 MINUTES NORTH  LONGITUDE 103 DEGREES 15.2 MINUTES WEST

ELEVATION 5 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 13 9 72 | | DATE OF LOG 11 5 73 | | DATE OF LOG 19 5 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 25.3 | -14.72 | 15.0 | -16.54 | 14.9 | -16.74 |
| 55.8 | -13.72 | 30.8 | -15.86 | 31.1 | -15.92 |
| 86.3 | -12.67 | 45.8 | -15.33 | 46.6 | -15.45 |
| 116.7 | -11.78 | 61.1 | -14.78 | 62.2 | -14.90 |
| 147.2 | -10.28 | 76.4 | -14.17 | 77.1 | -14.34 |
| 177.7 | -8.39 | 91.6 | -13.68 | 92.0 | -13.93 |
| 208.2 | -6.78 | 106.9 | -13.23 | 107.0 | -13.44 |
| 238.7 | -5.33 | 122.2 | -12.58 | 121.9 | -12.87 |
| 269.1 | -3.44 | 137.4 | -11.77 | 136.9 | -12.24 |
| 299.6 | -1.56 | 152.7 | -10.92 | 151.5 | -11.18 |
| 317.9 | -.28 | 168.0 | -10.06 | 166.7 | -10.30 |
| 348.4 | 1.94 | 183.2 | -9.22 | 181.7 | -9.51 |
| 378.9 | 3.61 | 198.5 | -8.37 | 196.3 | -8.74 |
| 394.1 | 4.44 | 213.8 | -7.48 | 211.2 | -7.78 |
| 424.6 | 6.11 | 228.8 | -6.66 | 226.5 | -7.12 |
| 455.1 | 7.78 | 244.6 | -5.62 | 241.1 | -6.09 |
| 485.5 | 9.33 | 259.6 | -4.51 | 256.0 | -4.91 |
| 500.8 | 10.11 | 274.9 | -3.37 | 271.0 | -3.81 |
| | | 290.1 | -2.41 | 285.9 | -2.76 |
| | | 305.4 | -1.43 | 301.1 | -1.85 |
| | | 320.4 | -.47 | 315.8 | -.85 |
| | | 336.0 | .44 | 330.7 | -.13 |
| | | 350.9 | 1.35 | 345.6 | .94 |
| | | 366.5 | 2.23 | 360.6 | 1.81 |
| | | 381.8 | 3.05 | 375.5 | 2.65 |
| | | 397.0 | 3.88 | 390.4 | 3.39 |
| | | 412.3 | 4.63 | 405.4 | 4.13 |
| | | 427.6 | 5.45 | 420.6 | 4.91 |
| | | 442.8 | 6.27 | 435.3 | 5.82 |
| | | 458.4 | 7.07 | 450.5 | 6.59 |
| | | 473.1 | 7.79 | 465.1 | 7.38 |
| | | 488.7 | 8.56 | 481.3 | 8.16 |
| | | 503.9 | 9.29 | 495.0 | 8.83 |
| | | 519.2 | 9.91 | 509.9 | 9.50 |
| | | 534.5 | 10.51 | 525.5 | 10.11 |
| | | 549.7 | 11.18 | 542.5 | 10.95 |
| | | | | 555.3 | 11.36 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC TENNECO ET AL THOR P-38
- -WELL SPUDDED 6 4 72
- -DRILLING FOR 28 DAYS TO A TOTAL DEPTH OF 1829 METERS
- -DRILLING STOPPED 4 5 72
- -WELL ABANDONED 10 5 72

N.B. LOG OF 13 09 72 TAKEN BY PANARCTIC.
DEPTHS ADJUSTED FOR TOOL ERRORS AT 311 M. AND 411 M.

EARTH PHYSICS BRANCH HOLE NO. 171  DOME BAY P-36

**********

LATITUDE  78 DEGREES  25.9  MINUTES NORTH  LONGITUDE 103 DEGREES  15.8  MINUTES WEST

ELEVATION  154 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

DATE OF LOG
20  5 74

| DEPTH (M) | TEMP (C) |
|---|---|
| 30.3 | -14.30 |
| 60.3 | -14.30 |
| 90.3 | -14.38 |
| 120.0 | -14.50 |
| 150.0 | -14.46 |
| 180.0 | -14.20 |
| 210.0 | -13.87 |
| 240.0 | -13.62 |
| 270.3 | -13.21 |
| 300.0 | -12.91 |
| 330.0 | -12.60 |
| 360.3 | -11.98 |
| 390.3 | -11.09 |
| 420.3 | -10.50 |
| 450.0 | -9.62 |
| 480.0 | -8.57 |
| 510.0 | -7.00 |
| 540.0 | -5.73 |
| 570.0 | -4.44 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
LOGGING OF THIS HOLE IS COMPLETE

PANARCTIC ET AL DOME BAY P-36
-WELL SPUDDED 23  5 72
-DRILLING FOR  57 DAYS TO A TOTAL DEPTH OF 2454 METERS
-WELL ABANDONED 18  7 72

AIR-FILLED TEMPERATURE OBSERVATION WELL.

EARTH PHYSICS BRANCH HOLE NO. 172  DRAKE B-44

**********

LATITUDE 76 DEGREES 23.1 MINUTES NORTH  LONGITUDE 108 DEGREES 16.1 MINUTES WEST

ELEVATION 4 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 7 5 73 | | DATE OF LOG 16 5 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 15.8 | -14.23 | 15.2 | -14.54 |
| 31.4 | -13.32 | 35.4 | -13.53 |
| 47.5 | -12.04 | 53.3 | -12.04 |
| 62.8 | -11.01 | 70.4 | -10.66 |
| 78.3 | -9.63 | 86.6 | -9.35 |
| 93.3 | -8.35 | 102.1 | -7.96 |
| 108.5 | -6.86 | 117.0 | -6.68 |
| 123.4 | -5.57 | 132.0 | -5.05 |
| 138.7 | -3.68 | 146.9 | -3.40 |
| 153.6 | -2.25 | 162.2 | -1.92 |
| 169.2 | -.86 | 177.1 | -.72 |
| 184.7 | .27 | 191.7 | .49 |
| 199.9 | 1.60 | 207.0 | 1.66 |
| 215.2 | 2.34 | 221.9 | 2.44 |
| 230.4 | 3.16 | 236.8 | 3.22 |
| 245.7 | 3.94 | 251.5 | 3.94 |
| 260.9 | 4.66 | 266.4 | 4.70 |
| 275.8 | 5.51 | 281.3 | 5.50 |
| 291.1 | 6.25 | 296.6 | 6.27 |
| 306.3 | 6.89 | 311.5 | 6.93 |
| 321.3 | 7.55 | 326.4 | 7.50 |
| 336.5 | 8.06 | 341.1 | 8.00 |
| 346.3 | 8.40 | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC TENNECO ET AL DRAKE B-44
-WELL SPUDDED 23 9 72
-DRILLING FOR 29 DAYS TO A TOTAL DEPTH OF 1396 METERS
-WELL ABANDONED 22 10 72

EARTH PHYSICS BRANCH HOLE NO. 175  GEMINI E-10

**********

LATITUDE  79 DEGREES  59.4  MINUTES NORTH  LONGITUDE  84 DEGREES  4.2  MINUTES WEST

ELEVATION  126 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 30 4 73 | | DATE OF LOG 22 5 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 34.4 | -3.54 | 30.7 | -14.99 |
| 69.8 | -7.78 | 60.1 | -14.60 |
| 101.5 | -5.44 | 90.2 | -13.83 |
| 132.3 | -3.58 | 120.2 | -13.14 |
| 162.8 | -3.74 | 150.3 | -11.40 |
| 193.2 | -1.60 | 180.4 | -9.79 |
| 223.4 | -.31 | 210.4 | -7.98 |
| 254.2 | -.43 | 240.5 | -7.35 |
| 284.7 | .79 | 263.0 | -6.32 |
| 315.2 | -.06 | 285.6 | -5.22 |
| 345.6 | .11 | 308.1 | -4.48 |
| 376.4 | -.07 | 331.0 | -4.09 |
| 406.9 | .24 | 353.2 | -3.15 |
| 436.8 | 1.48 | 375.7 | -2.26 |
| 467.9 | 4.75 | 398.3 | -1.51 |
| 498.0 | 6.85 | 420.8 | -.77 |
| 528.2 | 8.27 | 443.7 | -.41 |
| 559.0 | 9.79 | 465.9 | -.32 |
| 589.5 | 11.59 | 488.5 | 1.00 |
| 620.3 | 12.95 | 511.3 | 2.06 |
| 650.1 | 14.30 | 533.6 | 3.09 |
| 680.6 | 15.79 | 556.4 | 4.32 |
| 711.4 | 16.66 | 578.9 | 5.64 |
| 741.9 | 17.61 | 601.2 | 6.82 |
| 772.4 | 18.79 | 624.0 | 8.04 |
| 802.5 | 19.75 | 646.3 | 9.24 |
| | | 668.8 | 10.39 |
| | | 691.3 | 11.38 |
| | | 713.9 | 12.26 |
| | | 736.5 | 13.05 |
| | | 759.0 | 14.00 |
| | | 781.5 | 14.86 |
| | | 804.1 | 15.87 |
| | | 826.6 | 16.65 |
| | | 849.2 | 17.83 |
| | | 871.7 | 18.97 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC GEMINI E-10
  -WELL SPUDDED 14 10 72
  -DRILLING FOR 145 DAYS TO A TOTAL DEPTH OF 3845 METERS
  -DRILLING STOPPED  8  3 73
  -WELL ABANDONED 15  3 73

EARTH PHYSICS BRANCH HOLE NO. 176  YA YA P-53

**********

LATITUDE 69 DEGREES 12.8 MINUTES NORTH  LONGITUDE 134 DEGREES 42.7 MINUTES WEST

ELEVATION 36 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 19 6 73 | | DATE OF LOG 4 2 74 | | DATE OF LOG 16 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 14.9 | -5.40 | 32.3 | -6.77 | 13.7 | -7.18 |
| 29.8 | -5.07 | 62.8 | -5.91 | 28.7 | -6.86 |
| 59.6 | -4.04 | 93.3 | -5.31 | 58.5 | -6.25 |
| 89.5 | -3.45 | 123.7 | -4.44 | 88.4 | -5.71 |
| 119.3 | -1.46 | 154.2 | -3.98 | 118.3 | -4.93 |
| 149.4 | -1.63 | 185.0 | -3.58 | 148.4 | -4.34 |
| 178.9 | -.67 | 215.5 | -3.01 | 178.3 | -3.95 |
| 208.8 | -.64 | 246.0 | -2.30 | 208.2 | -3.51 |
| 238.6 | -.52 | 276.5 | -1.96 | 237.7 | -3.02 |
| 268.4 | -.41 | 306.9 | -1.25 | 267.6 | -2.42 |
| 298.2 | -.39 | 337.4 | -1.01 | 297.5 | -2.01 |
| 328.1 | -.43 | 367.9 | -.71 | 327.7 | -1.58 |
| 357.9 | -.47 | 398.7 | -.40 | 357.2 | -1.05 |
| 387.7 | -.58 | 429.2 | .58 | 387.1 | -.76 |
| 417.5 | 1.18 | | | 417.0 | -.02 |
| 447.4 | 2.13 | | | 446.8 | .85 |
| 477.2 | 2.81 | | | 476.7 | 1.66 |
| 507.0 | 3.58 | | | 506.6 | 2.44 |
| 536.8 | 4.32 | | | 536.0 | 3.04 |
| 566.7 | 4.73 | | | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF MOBIL YA YA P-53
- -WELL SPUDDED 8 12 72
- -DRILLING FOR 102 DAYS TO A TOTAL DEPTH OF 3033 METERS
- -WELL ABANDONED 20 3 73

EARTH PHYSICS BRANCH HOLE NO. 178  PARSONS N-10

**********

LATITUDE 68 DEGREES 59.8 MINUTES NORTH  LONGITUDE 133 DEGREES 31.8 MINUTES WEST

ELEVATION 68 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 21 6 73 | | DATE OF LOG 3 2 74 | | DATE OF LOG 15 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 14.8 | -.14 | 12.2 | -4.95 | 12.2 | -6.21 |
| 29.7 | -.36 | 27.4 | -4.30 | 26.8 | -4.91 |
| 59.3 | -.29 | 42.7 | -4.18 | 56.4 | -4.58 |
| 89.2 | -.44 | 57.9 | -4.10 | 86.6 | -4.08 |
| 118.9 | -.55 | 72.8 | -3.81 | 116.4 | -3.72 |
| 148.3 | -.71 | 88.4 | -3.55 | 146.3 | -3.03 |
| 178.2 | -.35 | 103.3 | -3.36 | 176.2 | -2.21 |
| 207.5 | -.39 | 118.6 | -3.28 | 206.0 | -1.79 |
| 237.5 | -.11 | 149.0 | -2.41 | 236.2 | -1.41 |
| 266.9 | -.03 | 179.8 | -1.28 | 265.8 | -.77 |
| 296.5 | .28 | 210.3 | -.97 | 295.7 | -.71 |
| 326.1 | .49 | 240.8 | -.87 | 325.5 | -.43 |
| 356.1 | 4.80 | 271.3 | -.45 | 355.4 | .56 |
| 385.5 | 5.35 | 301.4 | -.37 | 385.3 | 1.61 |
| 415.1 | 6.12 | 316.7 | -.33 | 415.4 | 2.45 |
| 444.7 | 6.81 | 332.2 | -.35 | 445.3 | 3.19 |
| 474.4 | 7.49 | 347.5 | .19 | 475.2 | 4.08 |
| 504.4 | 8.44 | 362.7 | 1.33 | 505.7 | 4.78 |
| 533.7 | 9.03 | 393.2 | 2.25 | 534.9 | 5.56 |
| 563.6 | 9.91 | 423.7 | 3.07 | 559.0 | 6.33 |
| 593.3 | 10.53 | 454.2 | 3.86 | | |
| 623.0 | 11.38 | 484.6 | 4.65 | | |
| 652.9 | 11.44 | 515.1 | 5.34 | | |
| | | 545.6 | 6.31 | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF MOBIL PARSONS N-10
-WELL SPUDDED 24 2 73
-DRILLING FOR 94 DAYS TO A TOTAL DEPTH OF 3205 METERS
-WELL ABANDONED 29 5 73

EARTH PHYSICS BRANCH HOLE NO. 179  REINDEER F-36

**********

LATITUDE 69 DEGREES 5.3. MINUTES NORTH  LONGITUDE 134 DEGREES 39.0 MINUTES WEST

ELEVATION 10 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 20 6 73 | | DATE OF LOG 3 2 74 | | DATE OF LOG 14 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 15.0 | -1.28 | 21.9 | -5.81 | 14.0 | -6.51 |
| 30.0 | -.81 | 37.2 | -5.58 | 29.0 | -6.12 |
| 45.0 | -.40 | 67.7 | -5.73 | 58.8 | -6.07 |
| 60.0 | -.71 | 98.1 | -5.22 | 89.0 | -5.87 |
| 75.0 | -.43 | 128.6 | -4.88 | 118.6 | -5.55 |
| 90.0 | -.28 | 159.1 | -4.19 | 148.4 | -4.97 |
| 105.0 | -.13 | 189.6 | -3.20 | 178.3 | -4.22 |
| 120.0 | -.92 | 220.1 | -2.27 | 208.2 | -3.16 |
| 135.0 | -.44 | 250.5 | -1.76 | 238.0 | -2.33 |
| 150.0 | -.34 | 281.3 | -.97 | 267.9 | -1.78 |
| 165.0 | -.42 | 311.8 | -.53 | 297.8 | -1.07 |
| 180.0 | -.40 | 327.1 | -.43 | 327.7 | -.47 |
| 195.0 | -.59 | 342.3 | .21 | 347.8 | .05 |
| 210.0 | -.68 | | | | |
| 225.0 | -.23 | | | | |
| 240.0 | -.19 | | | | |
| 255.0 | -.24 | | | | |
| 270.0 | -.25 | | | | |
| 285.0 | -.21 | | | | |
| 300.0 | -.07 | | | | |
| 315.0 | -.13 | | | | |
| 330.0 | -.00 | | | | |
| 345.0 | 2.12 | | | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF IMPERIAL SHELL REINDEER F-36
-WELL SPUDDED 13 3 73
-DRILLING FOR 54 DAYS TO A TOTAL DEPTH OF 1829 METERS
-DRILLING STOPPED 6 5 73
-WELL ABANDONED 15 5 73

EARTH PHYSICS BRANCH HOLE NO. 190  HACKETT RIVER 190-1

**********

LATITUDE  65 DEGREES  55.0  MINUTES NORTH  LONGITUDE 108 DEGREES  28.2  MINUTES WEST

ELEVATION  425 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DEPTH (M) | DATE 20 8 73 TEMP (C) | DATE 9 8 74 TEMP (C) |
|---|---|---|
| 13.1 | -7.44 | -7.56 |
| 26.1 | -6.95 | -7.34 |
| 39.0 | -7.04 | -7.39 |
| 51.7 | -7.24 | -7.34 |
| 64.3 | -7.14 | -7.23 |
| 76.7 | -7.12 | -7.26 |
| 89.0 | -7.16 | -7.22 |
| 101.3 | -7.18 | -7.12 |
| 125.7 | -7.12 | -7.12 |
| 149.8 | -6.85 | -6.74 |
| 173.7 | -6.71 | -6.68 |
| 197.8 | -6.61 | |

TEMPERATURE RESULTS ARE OBTAINED FROM A MULTI-THERMISTOR CABLE
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

COMINCO HACKETT RIVER EGL-73-6 CABLE 119
  -DRILLED TO A TOTAL DEPTH OF  295 METERS
  -DRILLING STOPPED 29  7 73

HOLE INCLINED 60 DEGREES AT SURFACE TO 50 DEGREES AT BOTTOM.  DEPTHS ARE
 CORRECTED TO VERTICAL. LENGTH OF HOLE = 295 M.

EARTH PHYSICS BRANCH HOLE NO. 190  HACKETT RIVER 190-2

**********

LATITUDE  65 DEGREES  55.0  MINUTES NORTH  LONGITUDE 108 DEGREES  28.2  MINUTES WEST

ELEVATION  425 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DEPTH (M) | DATE 20 8 73 TEMP (C) | DATE 9 8 74 TEMP (C) |
|---|---|---|
| 12.3 | -7.99 | -7.71 |
| 24.4 | -7.32 | -7.14 |
| 36.1 | -7.32 | -7.37 |
| 47.6 | -7.32 | -7.27 |
| 58.7 | -7.02 | -7.35 |
| 69.4 | -7.34 | -7.34 |
| 79.9 | -6.84 | -7.27 |
| 90.0 | -7.21 | -7.24 |
| 109.5 | -7.24 | -7.18 |
| 128.0 | -7.26 | -7.21 |
| 145.9 | -6.94 | -6.86 |
| 163.8 | -6.94 | |

TEMPERATURE RESULTS ARE OBTAINED FROM A MULTI-THERMISTOR CABLE
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

COMINCO HACKETT RIVER ECL-73-3 CABLE 118
  -DRILLED TO A TOTAL DEPTH OF  252 METERS
  -DRILLING STOPPED  3  7 73

HOLE INCLINED 55 DEGREES AT SURFACE TO 40 DEGREES AT BOTTOM.  DEPTHS ARE
 CORRECTED TO VERTICAL. LENGTH OF HOLE = 252 M.

EARTH PHYSICS BRANCH HOLE NO. 192  KUGPIK O-13

**********

LATITUDE  68 DEGREES  52.8  MINUTES NORTH  LONGITUDE 135 DEGREES  18.2  MINUTES WEST

ELEVATION  2 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 4 11 73 | | DATE OF LOG 5 2 74 | | DATE OF LOG 16 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 12.2 | -1.11 | 14.9 | -4.06 | 13.1 | -.86 |
| 27.4 | -.56 | 30.2 | -.94 | 28.0 | -.40 |
| 42.7 | .83 | 60.7 | 1.47 | 58.2 | .45 |
| 57.9 | 4.44 | 91.1 | 3.86 | 88.1 | 2.06 |
| 73.2 | 6.11 | 121.6 | 5.34 | 117.7 | 3.30 |
| 88.4 | 7.22 | 152.4 | 6.58 | 147.5 | 4.20 |
| 103.6 | 8.06 | 182.9 | 7.66 | 177.7 | 5.29 |
| 118.9 | 8.33 | 213.4 | 8.63 | 207.3 | 6.56 |
| 134.1 | 8.88 | 243.8 | 9.48 | 237.1 | 7.72 |
| 149.4 | 9.56 | 274.6 | 9.84 | 267.3 | 8.16 |
| 164.6 | 10.11 | 305.1 | 10.48 | 296.6 | 8.87 |
| 179.8 | 10.56 | 335.6 | 11.33 | 326.7 | 9.57 |
| 195.1 | 11.11 | 366.1 | 11.99 | 356.3 | 10.33 |
| 210.3 | 11.39 | 396.5 | 12.55 | 386.5 | 11.00 |
| 225.6 | 11.67 | 427.3 | 13.23 | 416.1 | 11.73 |
| 240.8 | 11.94 | 457.8 | 13.83 | 446.2 | 12.30 |
| 256.0 | 11.67 | 488.6 | 14.99 | 475.8 | 13.29 |
| 271.3 | 11.78 | 519.1 | 15.54 | 505.7 | 14.14 |
| 286.5 | 12.22 | 549.6 | 16.27 | 535.5 | 14.79 |
| 301.8 | 12.33 | | | | |
| 332.2 | 13.06 | | | | |
| 362.7 | 13.61 | | | | |
| 393.2 | 14.22 | | | | |
| 423.7 | 14.72 | | | | |
| 454.2 | 15.28 | | | | |
| 484.6 | 16.39 | | | | |
| 515.1 | 16.67 | | | | |
| 545.6 | 17.50 | | | | |
| 576.1 | 18.06 | | | | |
| 606.6 | 18.87 | | | | |
| 637.0 | 22.22 | | | | |
| 667.5 | 22.50 | | | | |
| 698.0 | 23.50 | | | | |
| 728.5 | 24.22 | | | | |

N.B.  LOG OF 04 11 73
BY SHELL USING ATKINS BRIDGE.

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

SHELL KUGPIK O-13
  -WELL SPUDDED 26  3 73
  -DRILLING FOR 188 DAYS TO A TOTAL DEPTH OF 3689 METERS
  -DRILLING STOPPED 30  9 73

EARTH PHYSICS BRANCH HOLE NO. 193  IKHIL I-37

**********

LATITUDE 68 DEGREES 46.6 MINUTES NORTH  LONGITUDE 134 DEGREES 7.8 MINUTES WEST

ELEVATION 125 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 19 12 73 | | DATE OF LOG 3 2 74 | | DATE OF LOG 15 8 74 | |
|---|---|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 0.0 | 5.60 | 12.2 | -7.65 | 10.4 | 3.99 |
| 30.5 | 3.90 | 27.4 | -7.32 | 25.9 | .35 |
| 61.0 | .60 | 57.9 | -2.15 | 55.2 | -4.19 |
| 91.4 | .60 | 89.0 | -.45 | 85.0 | -3.53 |
| 121.9 | .60 | 119.5 | -.10 | 115.2 | -3.47 |
| 152.4 | .60 | 150.0 | -.12 | 144.8 | -2.14 |
| 182.9 | 1.10 | 180.4 | -.04 | 174.3 | -.46 |
| 213.4 | 1.70 | 211.2 | -.02 | 204.5 | -.23 |
| 243.8 | 2.20 | 241.7 | -.01 | 234.7 | -.28 |
| 274.3 | 3.30 | 272.2 | .52 | 264.3 | -.25 |
| 304.8 | 2.80 | 303.0 | .07 | 293.8 | -.16 |
| 335.3 | 2.80 | 318.2 | .03 | 324.0 | -.04 |
| 365.8 | 7.50 | 333.8 | .24 | 353.6 | 1.73 |
| 396.2 | 8.30 | 349.0 | 3.87 | 383.7 | 3.87 |
| 426.7 | 10.00 | 364.5 | 4.71 | 413.3 | 4.54 |
| 457.2 | 10.60 | 395.0 | 5.81 | 443.2 | 5.45 |
| 487.7 | 11.70 | 425.5 | 7.69 | 472.7 | 6.27 |
| 518.2 | 12.80 | 456.0 | 8.09 | 502.9 | 7.02 |
| 548.6 | 13.30 | 486.5 | 9.15 | 532.8 | 8.05 |
| | | 516.9 | 9.98 | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF MOBIL IKHIL I-37
-WELL SPUDDED 10 4 73
-DRILLING FOR 237 DAYS TO A TOTAL DEPTH OF 4704 METERS
-WELL ABANDONED 3 12 73

N.B. LOG OF 19 12 73 BY GULF USING E.P.B. CABLE AND PROBE WITH ATKINS BRIDGE.
ABSOLUTE VALUE OF READINGS FOR THIS LOG UNCERTAIN.

EARTH PHYSICS BRANCH HOLE NO. 194  ATIGI O-48

**********

LATITUDE 68 DEGREES 57.0 MINUTES NORTH  LONGITUDE 133 DEGREES 56.1 MINUTES WEST

ELEVATION 85 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 19 3 74 | | DATE OF LOG 15 8 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 15.5 | -9.05 | 25.9 | -.28 |
| 30.5 | -6.73 | 55.8 | -1.16 |
| 61.0 | -4.95 | 85.6 | -5.92 |
| 91.4 | -3.90 | 115.8 | -5.79 |
| 121.9 | -3.84 | 145.4 | -5.44 |
| 152.4 | -2.30 | 175.3 | -5.29 |
| 182.9 | -3.46 | 205.1 | -4.56 |
| 213.4 | -3.27 | 235.3 | -4.74 |
| 243.8 | -3.36 | 265.2 | -4.47 |
| 274.3 | -3.32 | 294.7 | -4.18 |
| 304.8 | -3.10 | 324.6 | -3.91 |
| 335.3 | -1.15 | 354.5 | -3.84 |
| 365.8 | -2.83 | 384.4 | -3.34 |
| 396.2 | -1.85 | 414.2 | -2.83 |
| 426.7 | -1.07 | 444.1 | -2.53 |
| 457.2 | -1.21 | 474.0 | -1.78 |
| 487.7 | -.79 | 503.8 | -1.23 |
| 518.2 | -.46 | 533.7 | -.88 |
| 548.6 | -.19 | 548.6 | -.52 |
| 579.1 | 1.88 | 563.6 | .13 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF MOBIL ATIGI O-48
-WELL SPUDDED 9 1 74
-DRILLING FOR 50 DAYS TO A TOTAL DEPTH OF 1981 METERS
-WELL ABANDONED 28 2 74

EARTH PHYSICS BRANCH HOLE NO. 195  LINCKENS ISLAND P-46

**********

LATITUDE  77 DEGREES  45.8  MINUTES NORTH  LONGITUDE  97 DEGREES  45.4  MINUTES WEST

ELEVATION  0.3  METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DEPTH (M) | TEMP (C) |
|---|---|
| | DATE 21 5 74 |
| 15.2 | |
| 30.5 | -13.56 |
| 45.7 | -11.89 |
| 61.0 | -11.06 |
| 76.2 | -10.22 |
| 91.4 | -9.72 |
| 106.7 | -8.78 |
| 121.9 | -7.67 |
| 137.2 | -6.11 |
| 152.4 | -5.00 |
| 167.6 | -3.22 |
| 182.9 | -2.39 |
| 198.1 | -1.39 |
| 213.4 | -.83 |
| 228.6 | -.39 |
| 243.8 | .28 |
| 259.1 | .83 |
| 274.3 | 1.50 |
| 289.6 | 1.94 |
| 304.8 | 2.33 |
| 335.3 | 3.61 |
| 365.8 | 4.17 |
| 396.2 | 4.83 |
| 426.7 | 5.28 |
| 457.2 | 5.56 |
| 487.7 | 6.39 |
| 518.2 | 6.78 |

TEMPERATURE RESULTS ARE OBTAINED FROM A MULTI-THERMISTOR CABLE
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

SUN GULF GLOBAL LINCKENS ISLAND P-46
  -WELL SPUDDED  6  3 73
  -DRILLING FOR  67 DAYS TO A TOTAL DEPTH OF 1832 METERS
  -WELL ABANDONED 12  5 73

LOCATED ON SHOAL, COLLAR ELEVATION 0.3 M.

EARTH PHYSICS BRANCH HOLE NO. 196  BENT HORN N-72

**********

LATITUDE 76 DEGREES 21.8 MINUTES NORTH  LONGITUDE 103 DEGREES 58.2 MINUTES WEST

ELEVATION 63 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

DATE OF LOG
17 5 74

| DEPTH (M) | TEMP (C) |
|---|---|
| 32.0 | -13.11 |
| 61.9 | -12.50 |
| 92.0 | -11.81 |
| 122.8 | -11.12 |
| 153.3 | -10.29 |
| 184.7 | -9.31 |
| 216.1 | -8.65 |
| 246.0 | -7.31 |
| 277.1 | -6.46 |
| 307.2 | -5.63 |
| 336.8 | -4.90 |
| 366.7 | -4.22 |
| 396.5 | -3.34 |
| 426.4 | -2.56 |
| 456.3 | -1.55 |
| 486.2 | -1.51 |
| 501.1 | -1.51 |
| 509.0 | -1.25 |
| 516.0 | -1.10 |
| 523.6 | -1.04 |
| 531.6 | -1.00 |
| 538.6 | -.97 |
| 545.9 | -.96 |
| 560.8 | -.90 |
| 575.8 | -.82 |
| 590.7 | -.73 |
| 605.6 | -.65 |
| 620.6 | -.65 |
| 635.5 | -.63 |
| 643.1 | -.59 |
| 650.4 | -.67 |
| 658.4 | -.63 |
| 665.4 | -.32 |
| 695.3 | 1.32 |
| 710.2 | 1.50 |
| 725.1 | 1.87 |
| 755.0 | 2.73 |
| 785.2 | 3.49 |
| 814.7 | 4.10 |
| 844.6 | 4.94 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC TENNECO ET AL BENT HORN N-72
- WELL SPUDDED 24 11 73
- DRILLING FOR 133 DAYS TO A TOTAL DEPTH OF 4383 METERS
- WELL ABANDONED 6 4 74

EARTH PHYSICS BRANCH HOLE NO. 197  NEIL O-15

**********

LATITUDE  60 DEGREES  44.6  MINUTES NORTH  LONGITUDE  83 DEGREES  4.8  MINUTES WEST

ELEVATION  497 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

DATE OF LOG
23  5 74

| DEPTH (M) | TEMP (C) |
|---|---|
| 29.6 | -2.75 |
| 44.8 | -3.47 |
| 59.8 | -4.00 |
| 74.7 | -3.73 |
| 89.9 | -3.77 |
| 104.9 | -4.39 |
| 119.8 | -3.87 |
| 134.8 | -3.93 |
| 149.4 | -3.40 |
| 164.7 | -3.06 |
| 179.3 | -2.87 |
| 194.5 | -3.07 |
| 209.5 | -2.67 |
| 224.1 | -2.11 |
| 239.1 | -2.13 |
| 254.0 | -.82 |
| 269.0 | -.34 |
| 283.9 | -.16 |
| 298.8 | -.25 |
| 313.8 | -.09 |
| 329.0 | -.44 |
| 343.7 | -.10 |
| 351.4 | -.23 |
| 358.6 | -.20 |
| 363.4 | -.05 |
| 368.1 | .27 |
| 372.3 | .57 |
| 376.5 | .76 |
| 381.0 | .50 |
| 388.5 | .81 |
| 396.2 | .75 |
| 403.7 | 1.55 |
| 418.3 | 2.29 |
| 432.4 | .17 |
| 448.2 | 1.78 |
| 463.5 | .54 |
| 478.1 | .91 |
| 493.0 | 2.87 |
| 508.0 | 3.59 |
| 523.3 | 2.66 |
| 537.9 | 3.76 |
| 552.8 | 4.14 |
| 567.8 | 4.36 |
| 598.0 | 5.23 |
| 627.8 | 6.36 |
| 657.4 | 7.06 |
| 687.3 | 7.86 |
| 717.2 | 9.04 |
| 747.1 | 8.96 |
| 776.9 | 10.17 |
| 806.8 | 10.20 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

GULF WC ET AL NEIL O-15
-WELL SPUDDED 17  3 74
-DRILLING FOR  51 DAYS TO A TOTAL DEPTH OF 2448 METERS
-WELL ABANDONED  7  5 74

EARTH PHYSICS BRANCH HOLE NO. 198  DRAKE D-68

**********

LATITUDE  76 DEGREES  27.1 MINUTES NORTH  LONGITUDE 108 DEGREES  55.7 MINUTES WEST

ELEVATION  37 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 16 5 74 | | DATE OF LOG 5 8 74 | |
|---|---|---|---|
| DEPTH (M) | TEMP (C) | DEPTH (M) | TEMP (C) |
| 32.6 | -3.51 | 13.1 | -5.93 |
| 63.7 | -3.12 | 28.7 | -7.82 |
| 93.9 | -.94 | 57.9 | -6.86 |
| 124.4 | -.22 | 87.8 | -3.72 |
| 154.2 | 1.13 | 118.0 | -1.48 |
| 184.1 | 3.16 | 147.8 | -.86 |
| 214.0 | 2.56 | 177.7 | -.18 |
| 244.1 | 4.85 | 207.3 | .06 |
| 274.0 | 8.02 | 237.1 | 1.18 |
| 303.9 | 9.33 | 266.7 | 4.86 |
| 334.1 | 10.59 | 296.6 | 6.40 |
| 363.6 | 11.76 | 326.4 | 7.81 |
| 393.5 | 13.01 | 356.3 | 9.04 |
| 423.4 | 13.53 | 386.5 | 10.37 |
| 452.9 | 14.55 | 416.1 | 11.29 |
| 482.8 | 15.32 | 445.9 | 12.26 |
| 512.7 | 16.87 | 476.1 | 13.14 |
| 542.8 | 17.83 | 506.0 | 14.49 |
| 572.7 | 19.12 | 535.8 | 15.56 |
| 602.6 | 19.72 | 565.4 | 17.11 |
| 632.2 | 20.25 | 595.0 | 17.87 |
| 662.0 | 20.65 | | |
| 691.9 | 21.80 | | |
| 722.1 | 22.19 | | |
| 751.9 | 22.87 | | |
| 781.5 | 23.81 | | |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC DRAKE D-68
  -WELL SPUDDED  7  6 73
  -DRILLING FOR 291 DAYS TO A TOTAL DEPTH OF 5415 METERS
  -WELL ABANDONED 25  3 74

EARTH PHYSICS BRANCH HOLE NO. 199  DRAKE E-78

**********

LATITUDE  76 DEGREES  27.3  MINUTES NORTH  LONGITUDE 108 DEGREES  29.4  MINUTES WEST

ELEVATION  2 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

---

DATE OF LOG
5  8 74

| DEPTH (M) | TEMP (C) |
|---|---|
| 13.7 | -12.78 |
| 29.0 | -11.59 |
| 43.6 | -10.53 |
| 58.5 | -9.44 |
| 73.4 | -8.05 |
| 88.4 | -6.68 |
| 103.2 | -5.36 |
| 118.4 | -4.09 |
| 132.8 | -2.69 |
| 147.6 | -1.46 |
| 162.3 | -.22 |
| 177.3 | 1.10 |
| 191.6 | 2.31 |
| 206.3 | 3.40 |
| 220.9 | 4.17 |
| 235.4 | 4.82 |
| 249.9 | 5.56 |
| 264.4 | 6.10 |
| 273.8 | 6.72 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC POR HOMESTEAD DRAKE E-78
-WELL SPUDDED  2  5 74
-DRILLING FOR  16 DAYS TO A TOTAL DEPTH OF 1356 METERS
-DRILLING STOPPED 18  5 74
-WELL ABANDONED 27  5 74

WELL WAS DIRECTIONALLY DRILLED.  TRUE VERTICAL TOTAL DEPTH = 1221 M.
LENGTH OF HOLE = 1356 M.  DEPTHS IN TABLES HAVE BEEN CORRECTED TO VERTICAL.

EARTH PHYSICS BRANCH HOLE NO. 200  HECLA I-69

**********

LATITUDE  76 DEGREES  18.7  MINUTES NORTH  LONGITUDE 110 DEGREES  23.3  MINUTES WEST

ELEVATION  2 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

DATE OF LOG
5 8 74

| DEPTH (M) | TEMP (C) |
|---|---|
| 13.4 | -14.71 |
| 28.3 | -13.61 |
| 43.3 | -11.50 |
| 58.2 | -9.04 |
| 73.1 | -7.16 |
| 88.0 | -5.59 |
| 103.2 | -3.69 |
| 117.8 | -2.09 |
| 132.7 | -.60 |
| 147.8 | .89 |
| 162.0 | 1.99 |
| 177.2 | 2.95 |
| 191.5 | 3.77 |
| 206.1 | 4.50 |
| 220.6 | 5.32 |
| 235.0 | 6.10 |
| 249.7 | 6.92 |
| 263.7 | 7.65 |
| 277.9 | 8.34 |
| 292.1 | 8.80 |
| 306.4 | 9.47 |
| 320.5 | 10.02 |
| 334.4 | 10.58 |
| 348.3 | 11.06 |
| 361.9 | 11.45 |
| 375.6 | 11.80 |
| 389.2 | 12.11 |
| 402.8 | 12.44 |
| 416.2 | 12.72 |
| 429.9 | 13.03 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

PANARCTIC TENNECO ET AL HECLA I-69
-WELL SPUDDED 22  2 73
-DRILLING FOR  66 DAYS TO A TOTAL DEPTH OF 1457 METERS
-DRILLING STOPPED 29  4 73
-WELL ABANDONED  9  5 73

WELL WAS DIRECTIONALLY DRILLED.  TRUE VERTICAL TOTAL DEPTH = 1224 M.
LENGTH OF HOLE = 1457 M. DEPTHS IN TABLES HAVE BEEN CORRECTED TO VERTICAL.

EARTH PHYSICS BRANCH HOLE NO. 253  TEDJI LAKE K-24

**********

LATITUDE  67 DEGREES  43.6  MINUTES NORTH  LONGITUDE 126 DEGREES  49.9  MINUTES WEST

ELEVATION  343 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

| DATE OF LOG 17 8 74 | |
|---|---|
| DEPTH (M) | TEMP (C) |
| 11.9 | .01 |
| 26.8 | .02 |
| 58.5 | -1.53 |
| 86.6 | -.98 |
| 116.4 | -1.36 |
| 146.0 | -.85 |
| 175.9 | -1.04 |
| 206.0 | -.95 |
| 235.6 | -.77 |
| 266.1 | -.26 |
| 295.7 | -.63 |
| 325.5 | -.45 |
| 355.1 | -.48 |
| 385.0 | -.37 |
| 414.5 | -.01 |
| 444.1 | .32 |
| 474.0 | .47 |
| 503.8 | .66 |
| 534.8 | .96 |

TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

ASHLAND ET AL TEDJI LAKE K-24
  -WELL SPUDDED 13  2 74
  -DRILLING FOR  46 DAYS TO A TOTAL DEPTH OF 1213 METERS
  -WELL ABANDONED 31  3 74

EARTH PHYSICS BRANCH HOLE NO. 254  YA YA A-28

**********

LATITUDE  69 DEGREES  17.2  MINUTES NORTH  LONGITUDE 134 DEGREES  35.5  MINUTES WEST

ELEVATION  40 METERS

SUMMARY OF DEPTH-TEMPERATURE LOGS

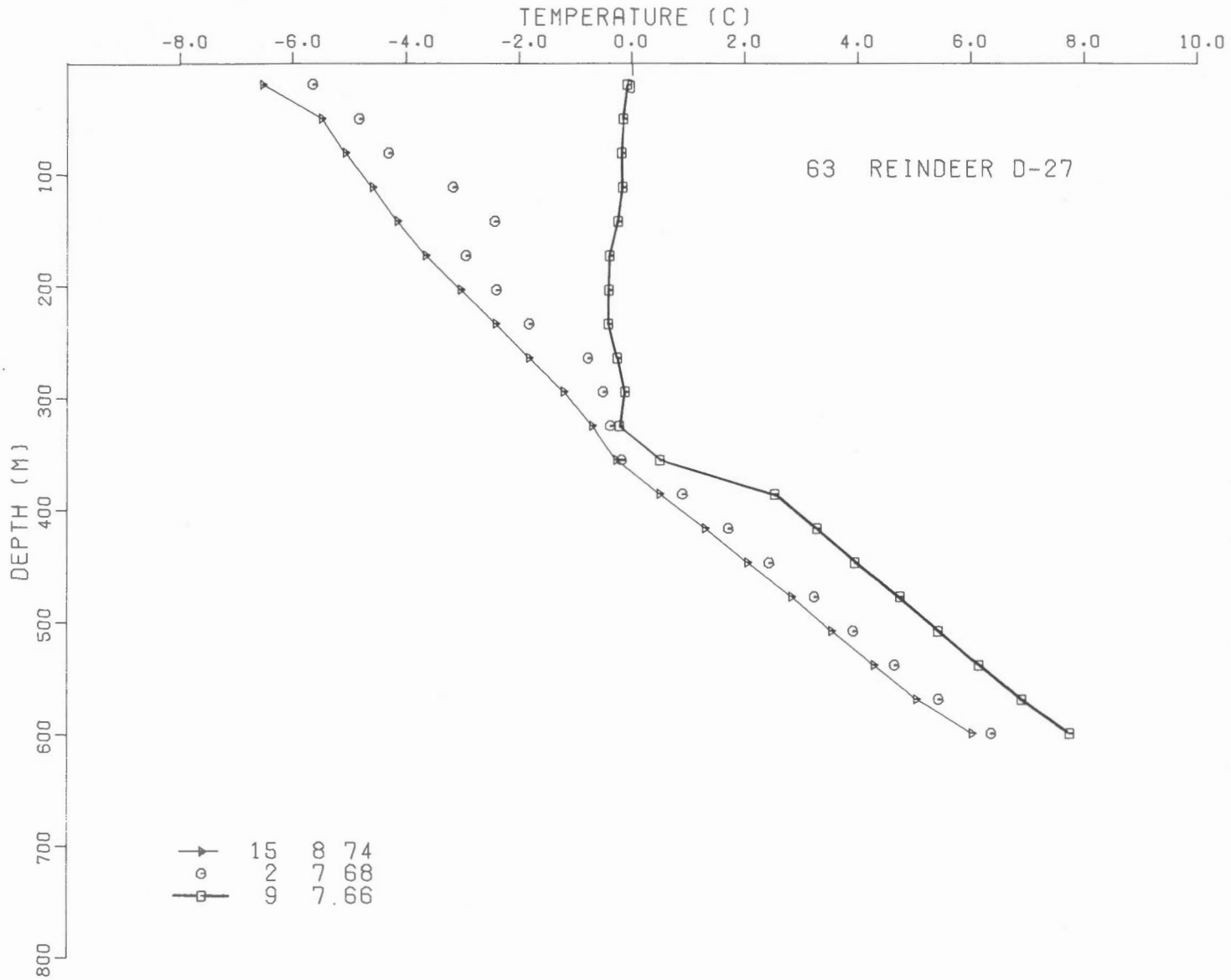
DATE OF LOG
16  8 74

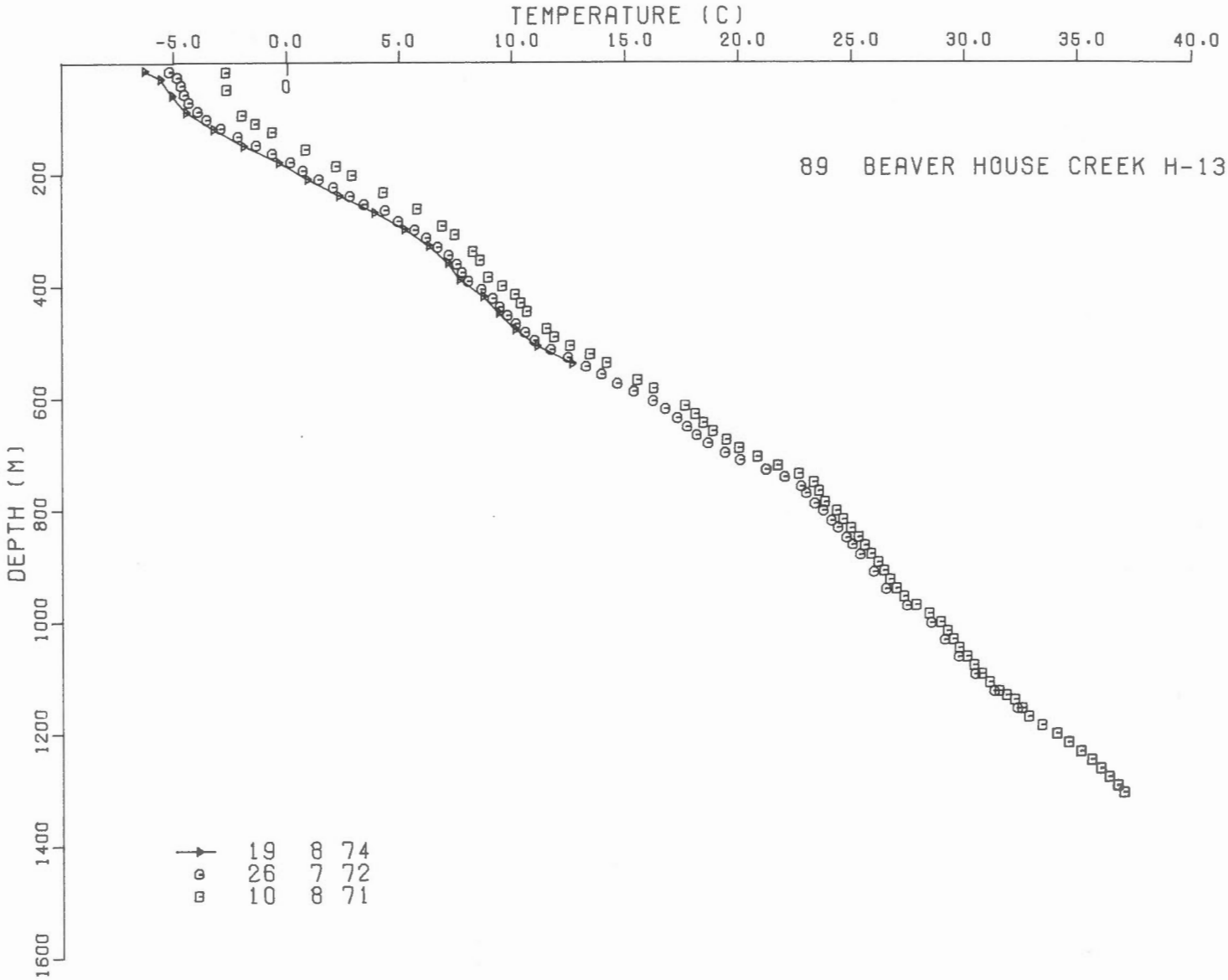
| DEPTH (M) | TEMP (C) |
|---|---|
| 56.7 | -.37 |
| 86.9 | -.44 |
| 116.7 | -.51 |
| 146.6 | -1.08 |
| 176.2 | -1.04 |
| 206.0 | -1.03 |
| 235.9 | -1.06 |
| 265.8 | -1.12 |
| 295.7 | -1.05 |
| 325.5 | -.91 |
| 355.1 | -.84 |
| 384.7 | -.88 |
| 414.5 | -.71 |
| 444.4 | -.55 |
| 474.3 | -.51 |
| 503.8 | -.46 |
| 533.7 | -.43 |

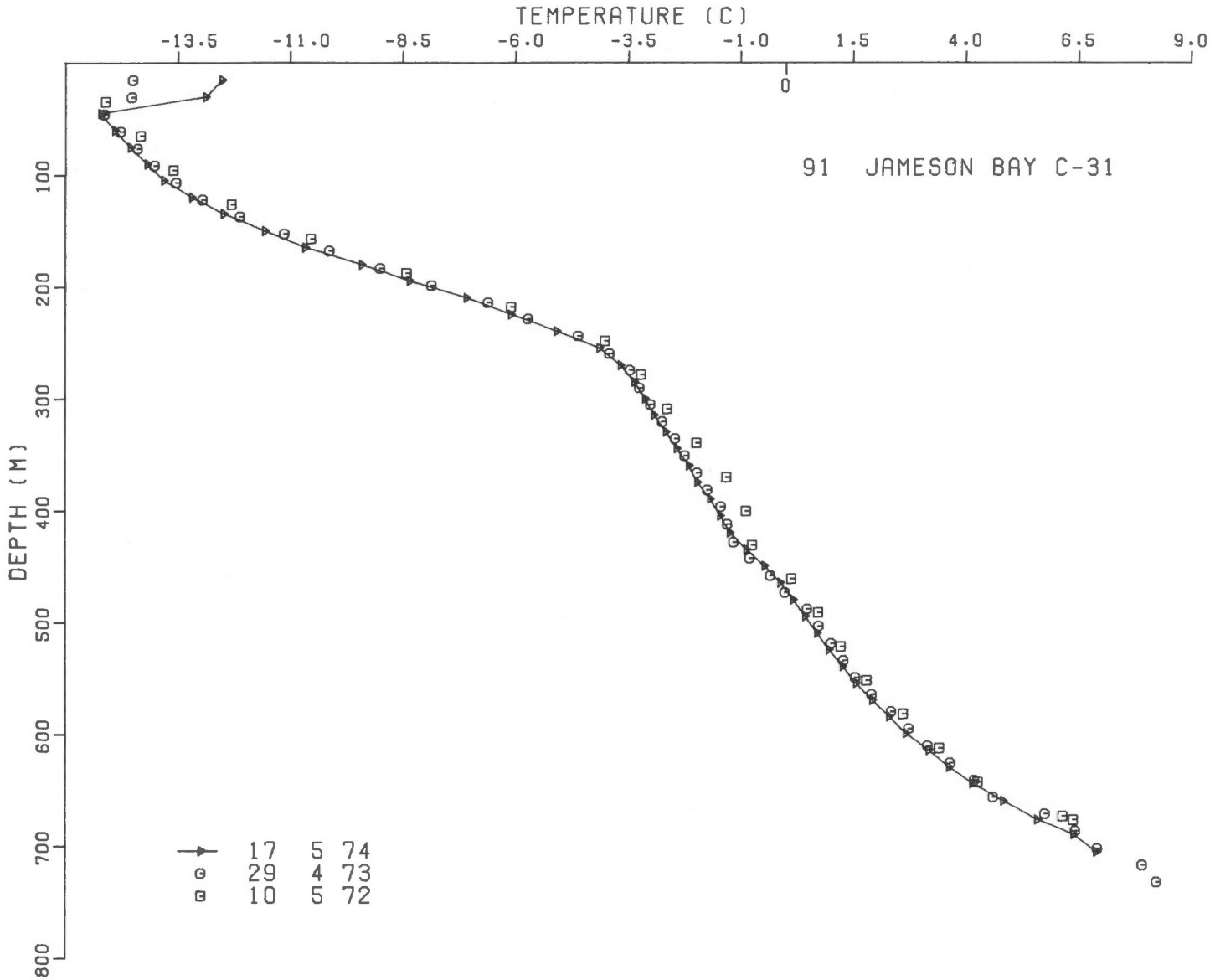
TEMPERATURE RESULTS ARE OBTAINED FROM SINGLE THERMISTOR LOGS
FURTHER TEMPERATURE LOGS ARE EXPECTED FOR THIS HOLE

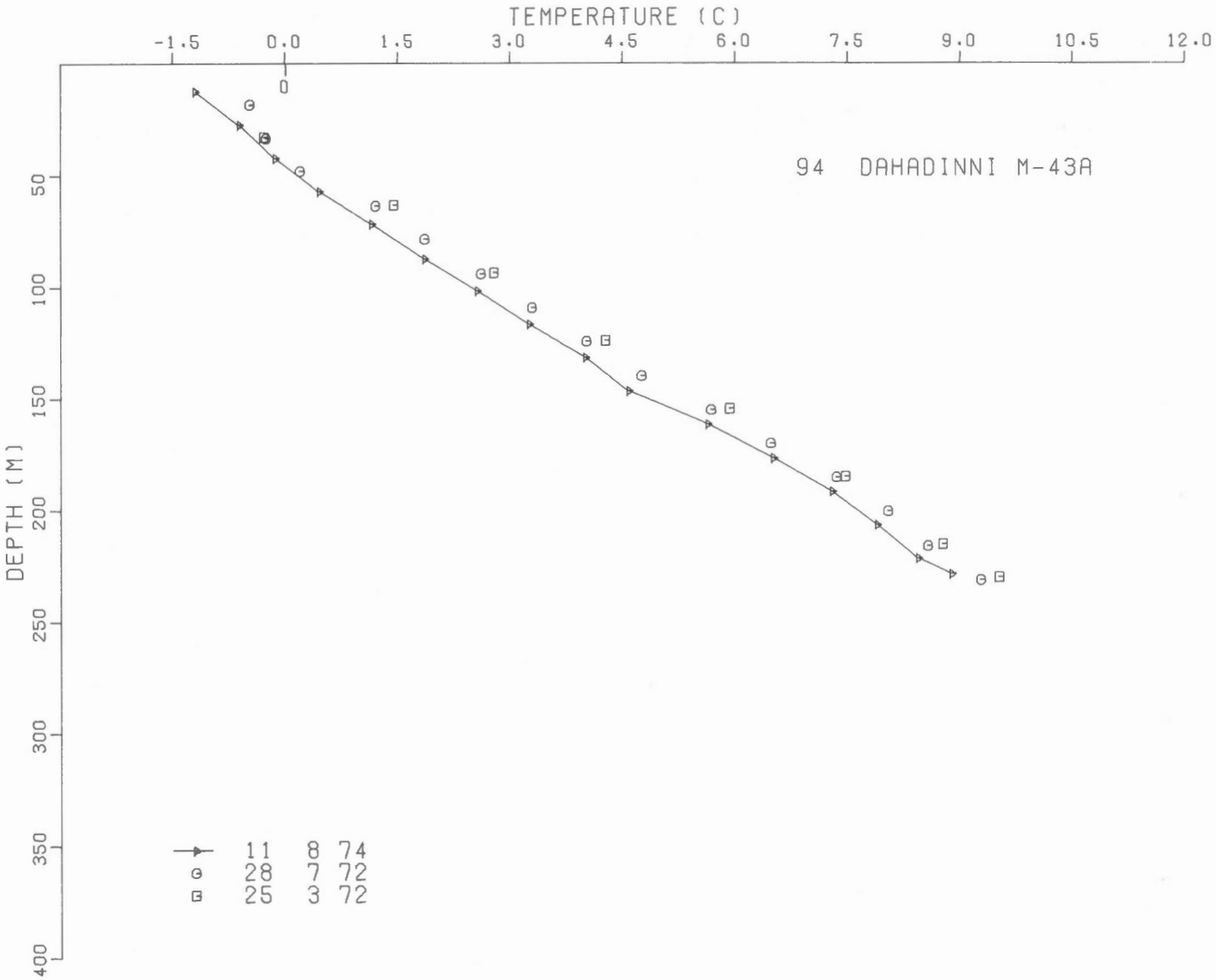
GULF MOBIL YA YA A-28
  -WELL SPUDDED 28  2 74
  -DRILLING FOR  98 DAYS TO A TOTAL DEPTH OF 3944 METERS
  -WELL ABANDONED  6  7 74

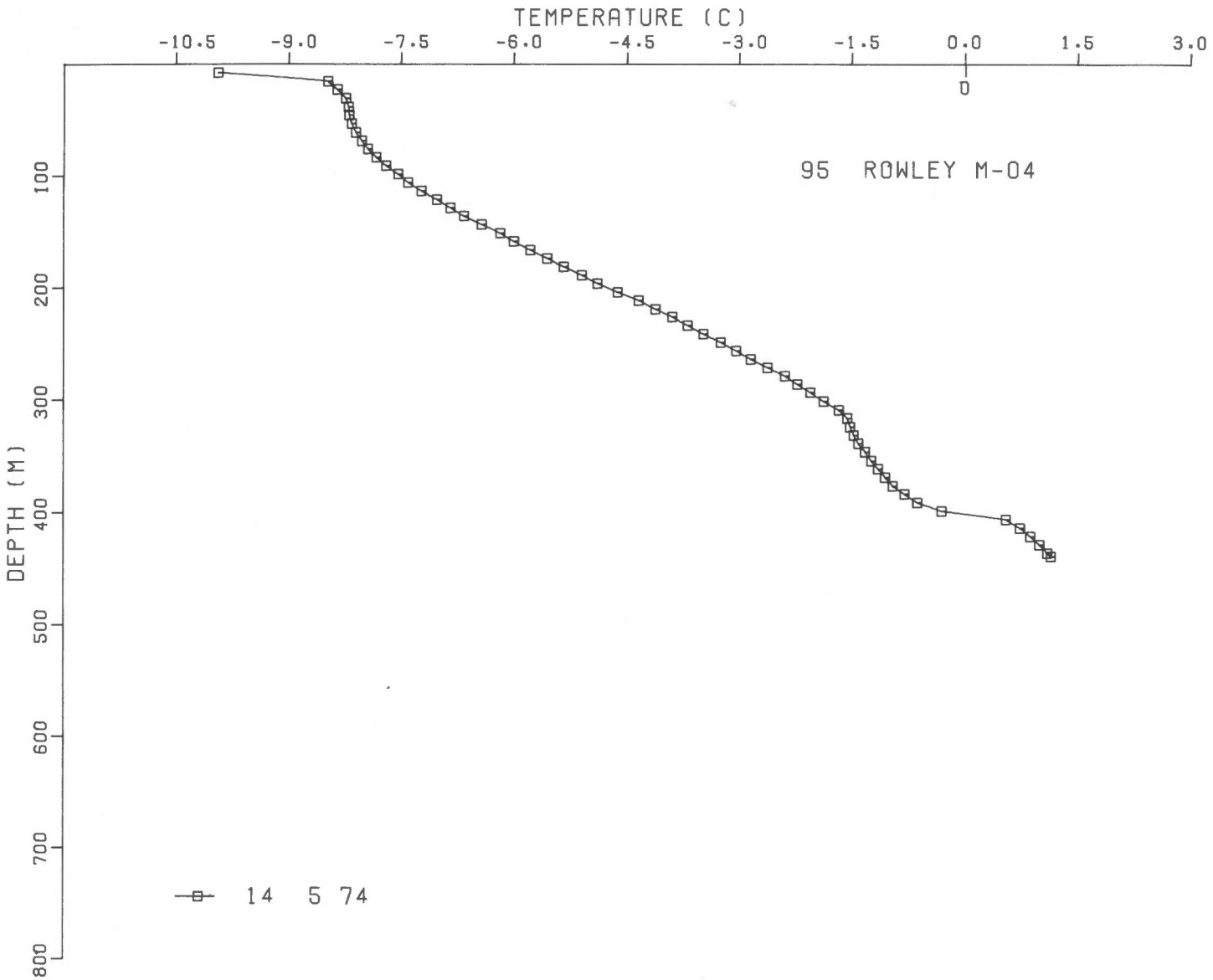
## 3.2 Graphs of Temperature versus Depth

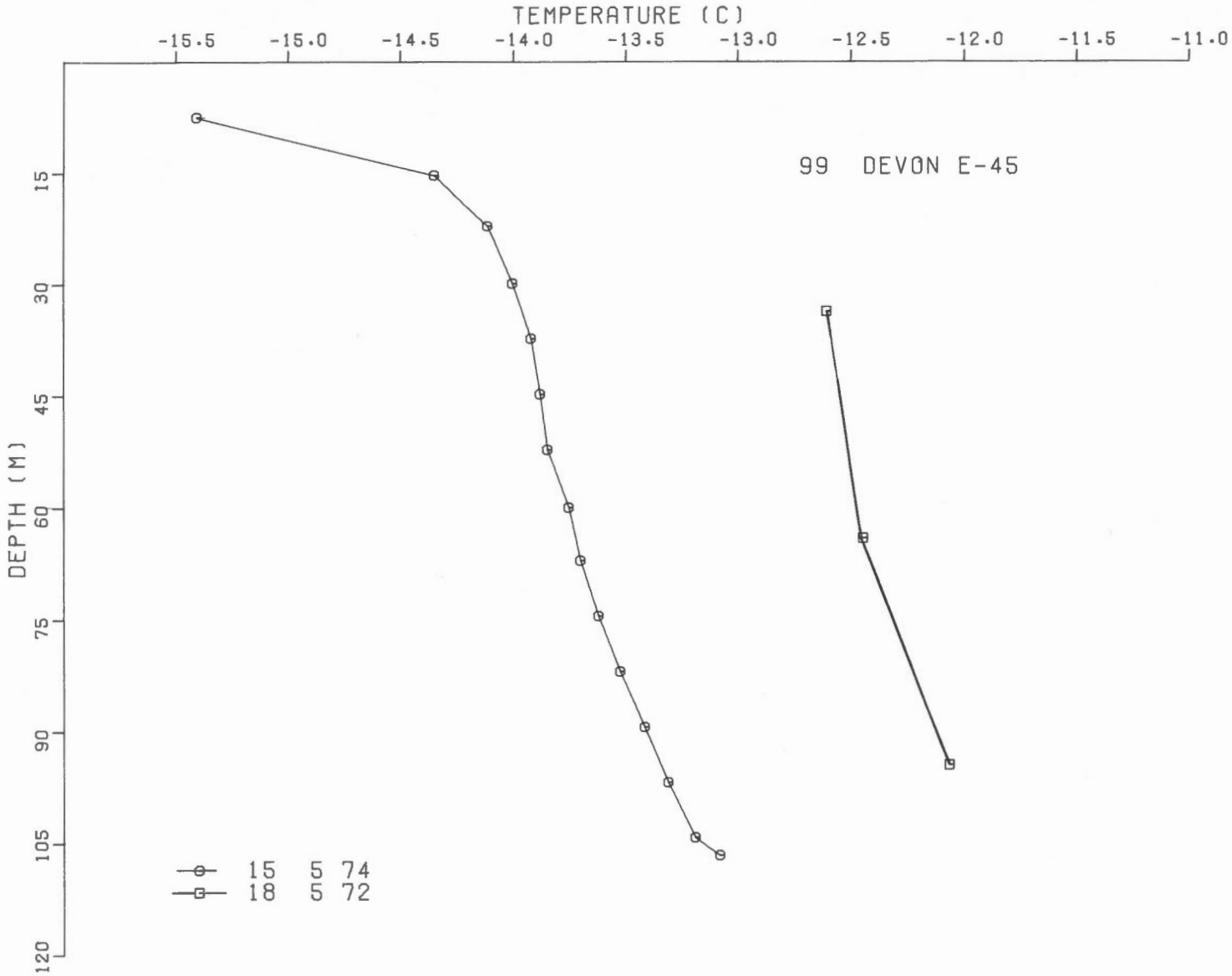

TEMPERATURE (C)
-8.0
-6.0
-4.0
-2.0
0.0
2.0
4.0
6.0
8.0
10.0
DEPTH (M)
100
200
300
400
500
600
700
800
63 REINDEER D-27
15 8 74
2 7 68
9 7.66

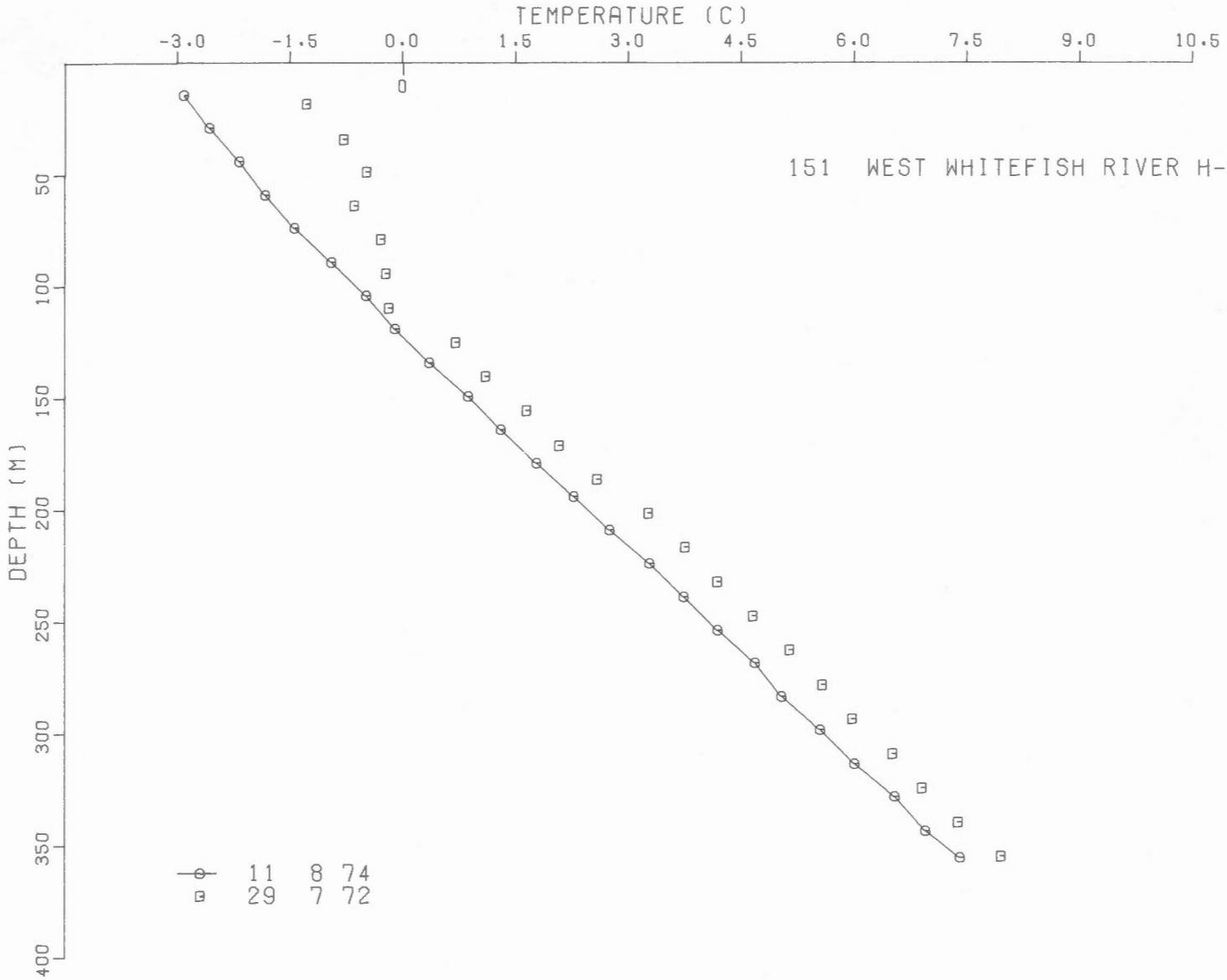

TEMPERATURE (C)
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
0
89 BEAVER HOUSE CREEK H-13
DEPTH (M)
200
400
600
800
1000
1200
1400
1600
19 8 74
26 7 72
10 8 71

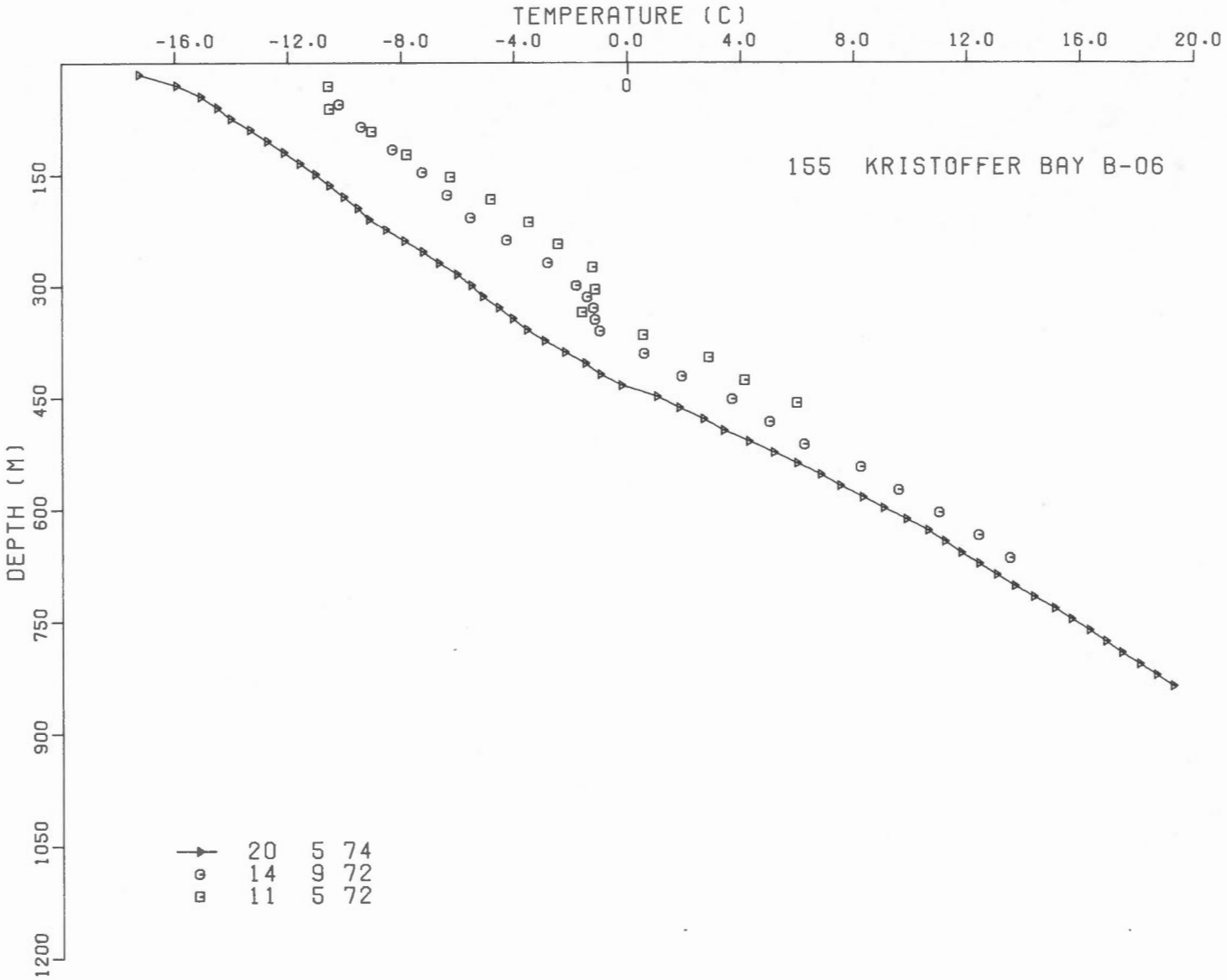

TEMPERATURE (C)
-13.5
-11.0
-8.5
-6.0
-3.5
-1.0
0
1.5
4.0
6.5
9.0
91 JAMESON BAY C-31
DEPTH (M)
100
200
300
400
500
600
700
800
17 5 74
29 4 73
10 5 72

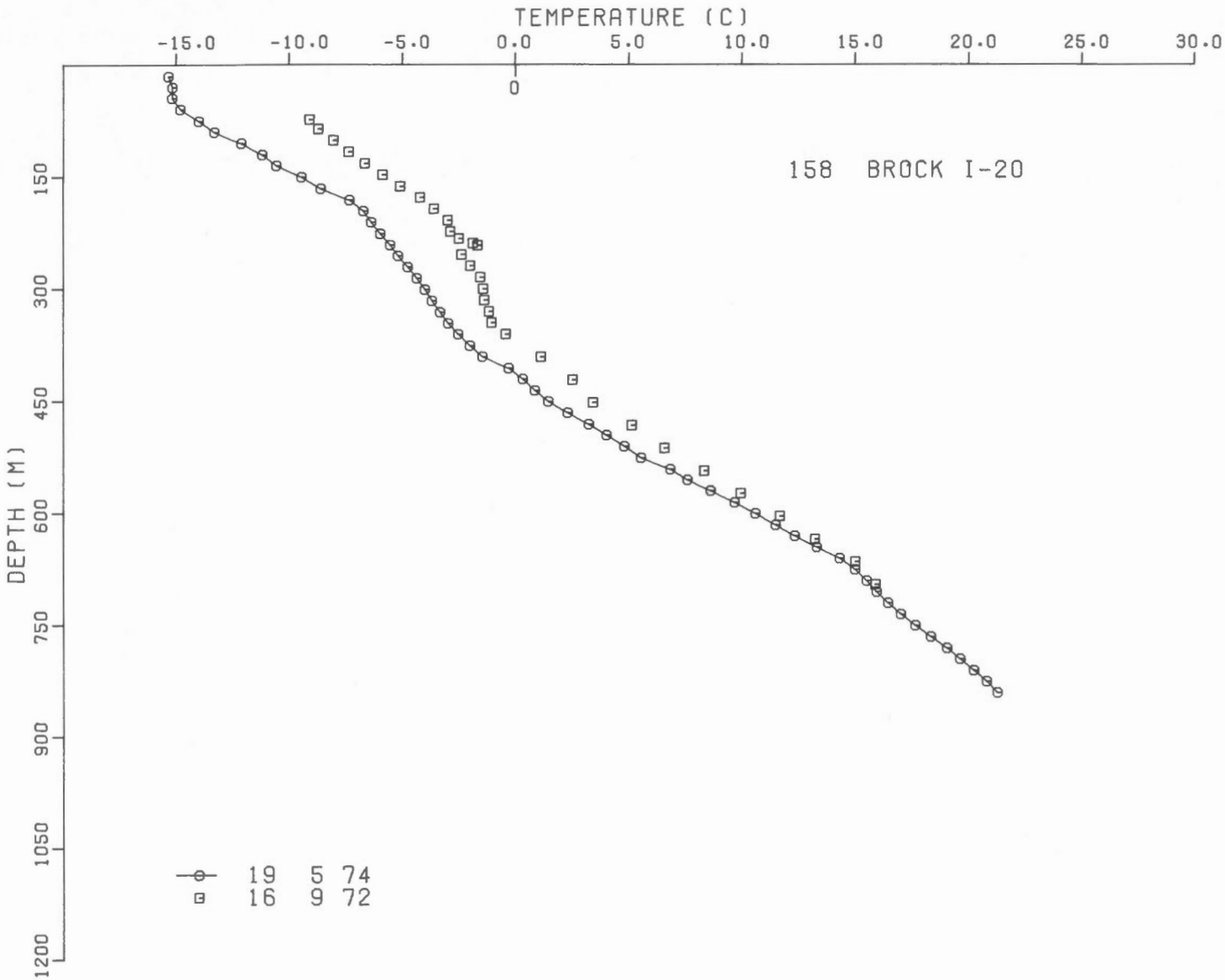

TEMPERATURE (C)
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
9.0
10.5
12.0
0
DEPTH (M)
50
100
150
200
250
300
350
400
94 DAHADINNI M-43A
11 8 74
28 7 72
25 3 72

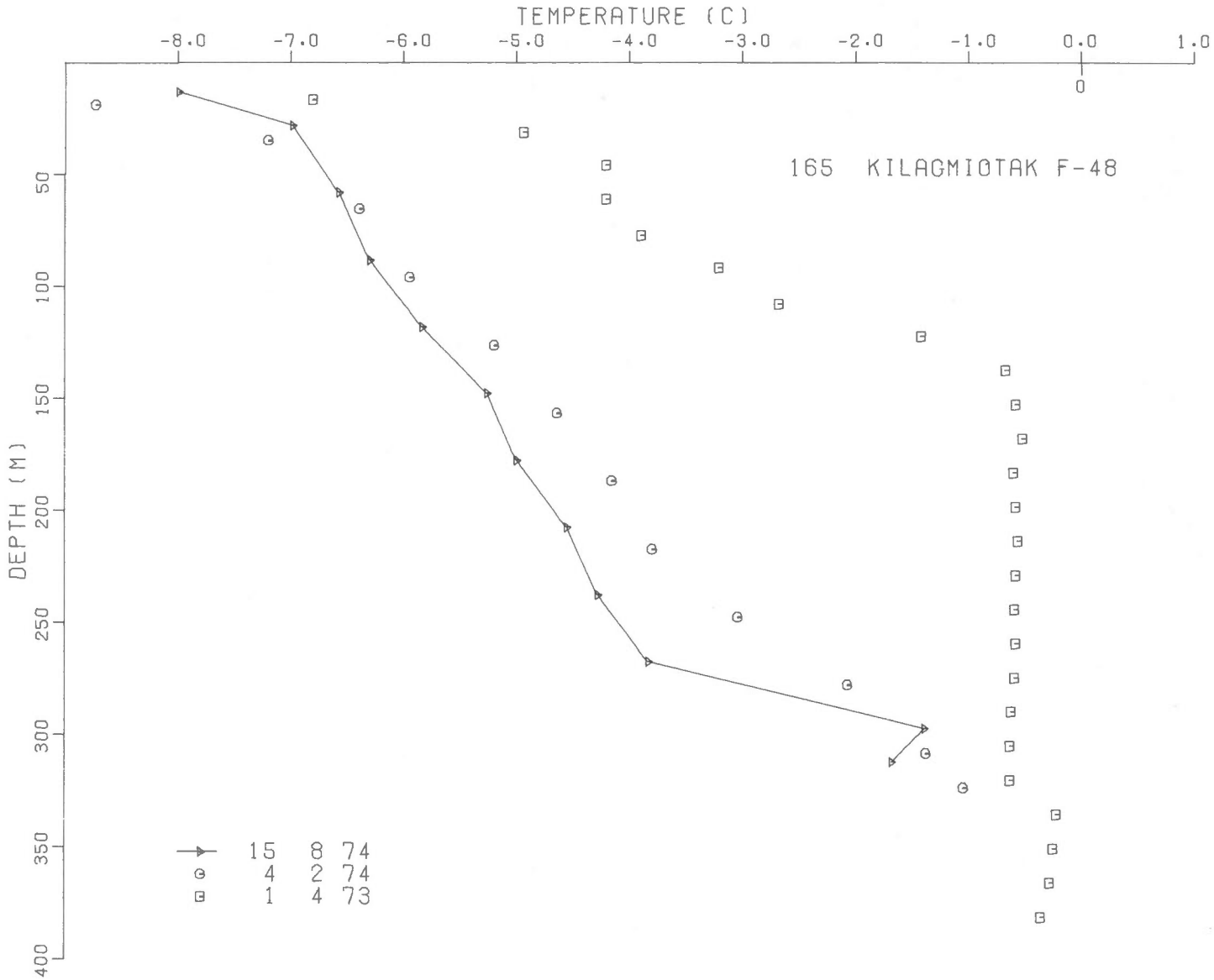

TEMPERATURE (C)
-10.5
-9.0
-7.5
-6.0
-4.5
-3.0
-1.5
0.0
1.5
3.0
0
95 ROWLEY M-04
DEPTH (M)
100
200
300
400
500
600
700
800
14 5 74

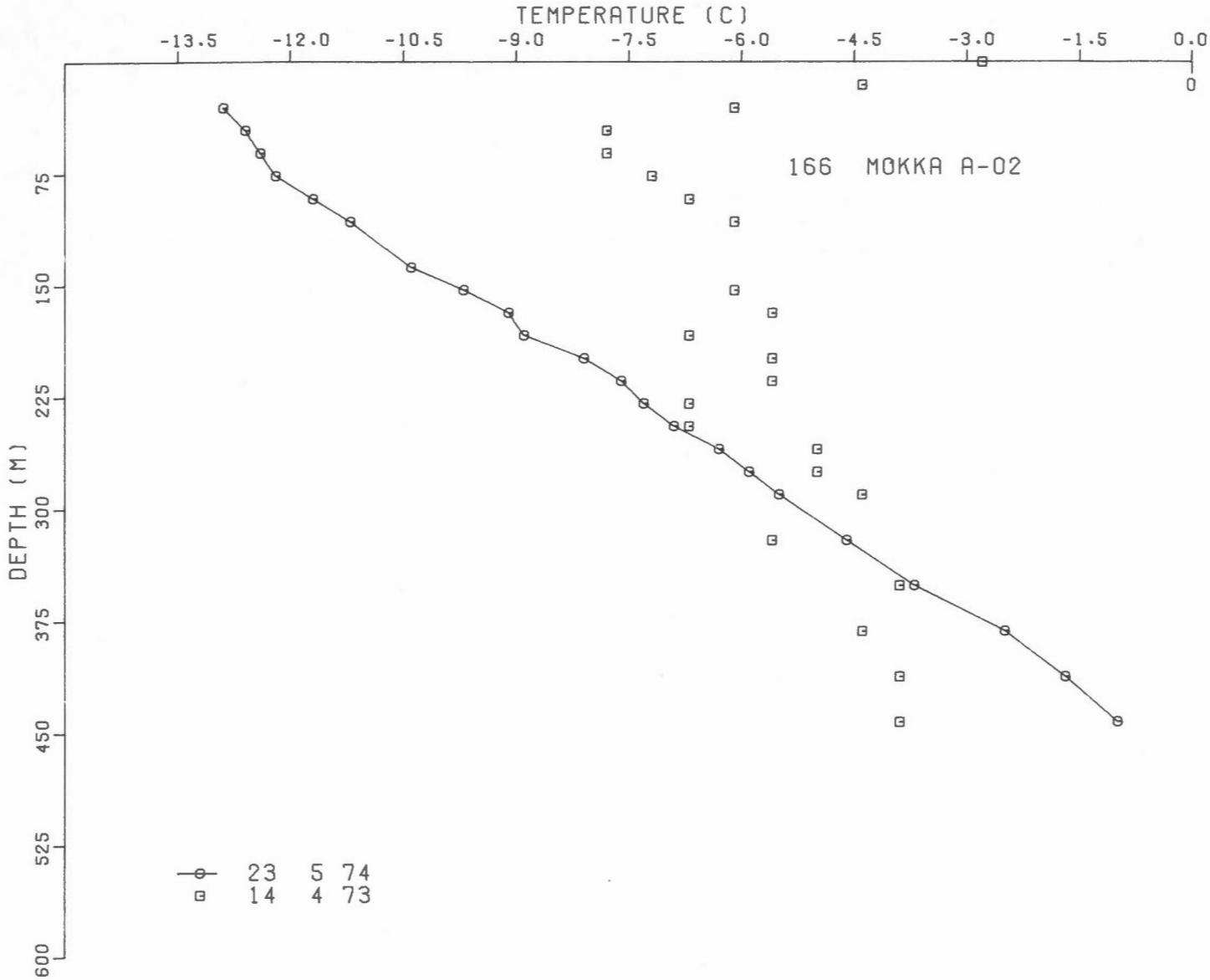

TEMPERATURE (C)
-15.5
-15.0
-14.5
-14.0
-13.5
-13.0
-12.5
-12.0
-11.5
-11.0
DEPTH (M)
15
30
45
60
75
90
105
120
99 DEVON E-45
15 5 74
18 5 72

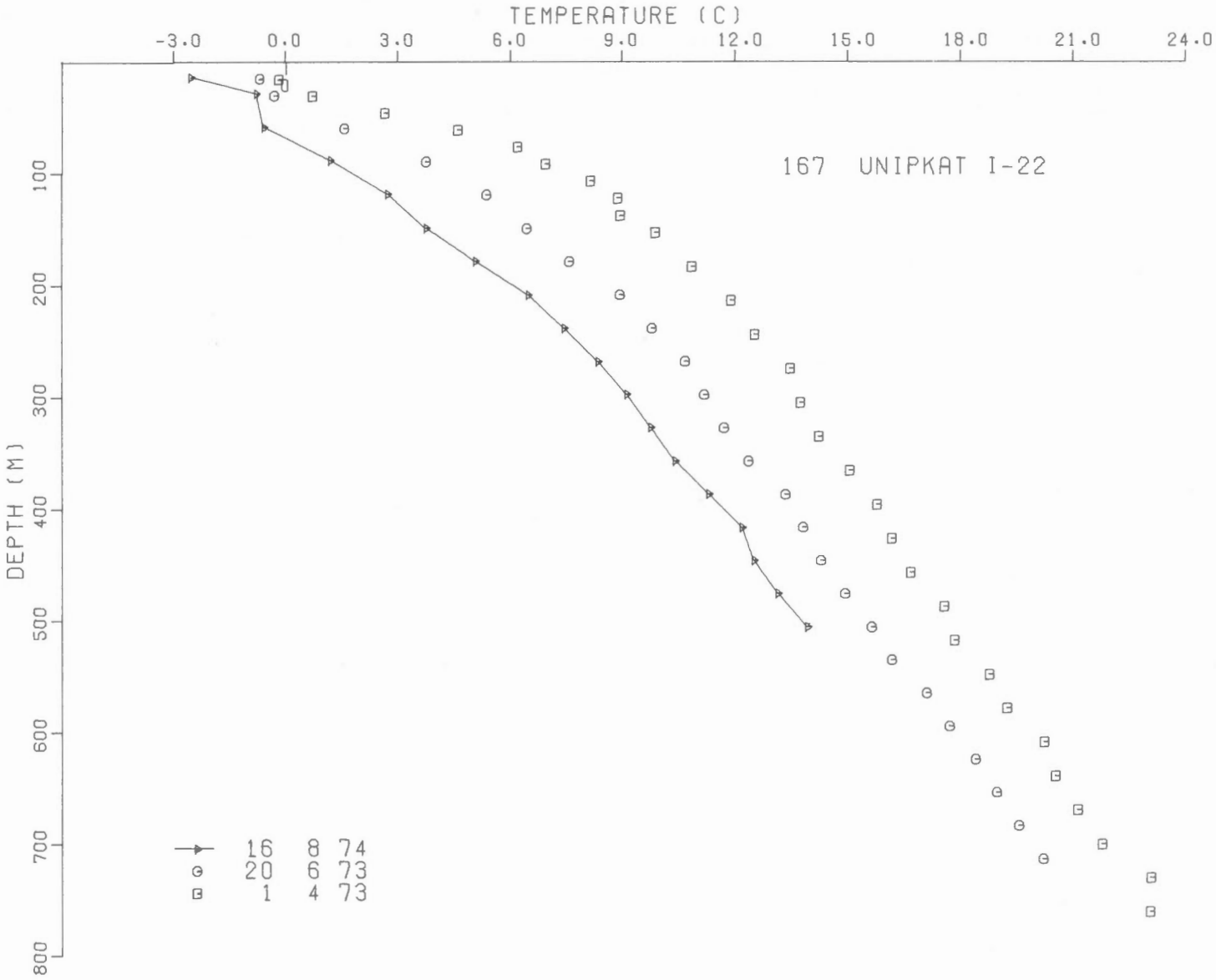

TEMPERATURE (C)
-3.0
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
9.0
10.5
0
151 WEST WHITEFISH RIVER H-3
DEPTH (M)
50
100
150
200
250
300
350
400
11 8 74
29 7 72

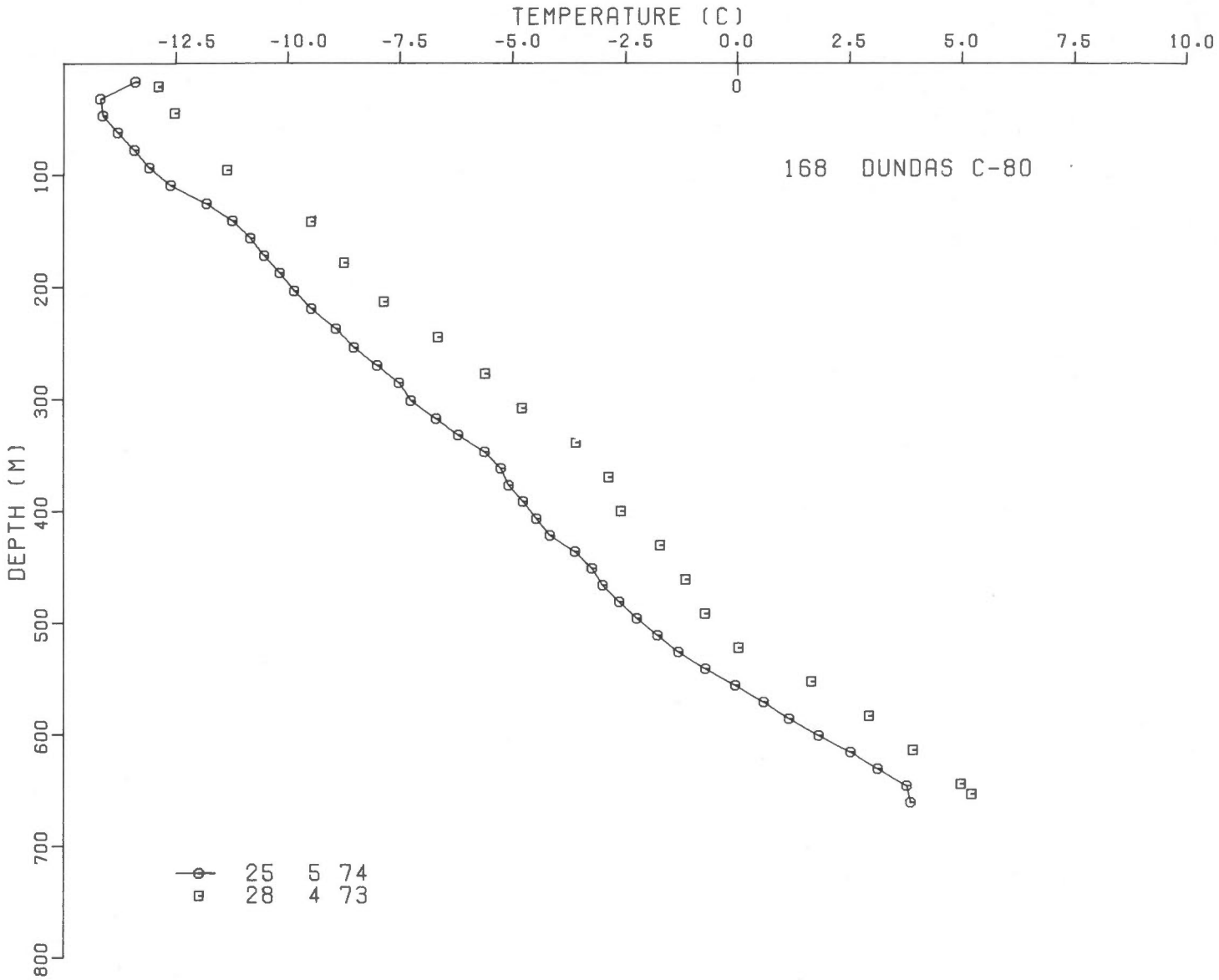

TEMPERATURE (C)
-16.0
-12.0
-8.0
-4.0
0.0
4.0
8.0
12.0
16.0
20.0
0
155 KRISTOFFER BAY B-06
DEPTH (M)
150
300
450
600
750
900
1050
1200
20 5 74
14 9 72
11 5 72

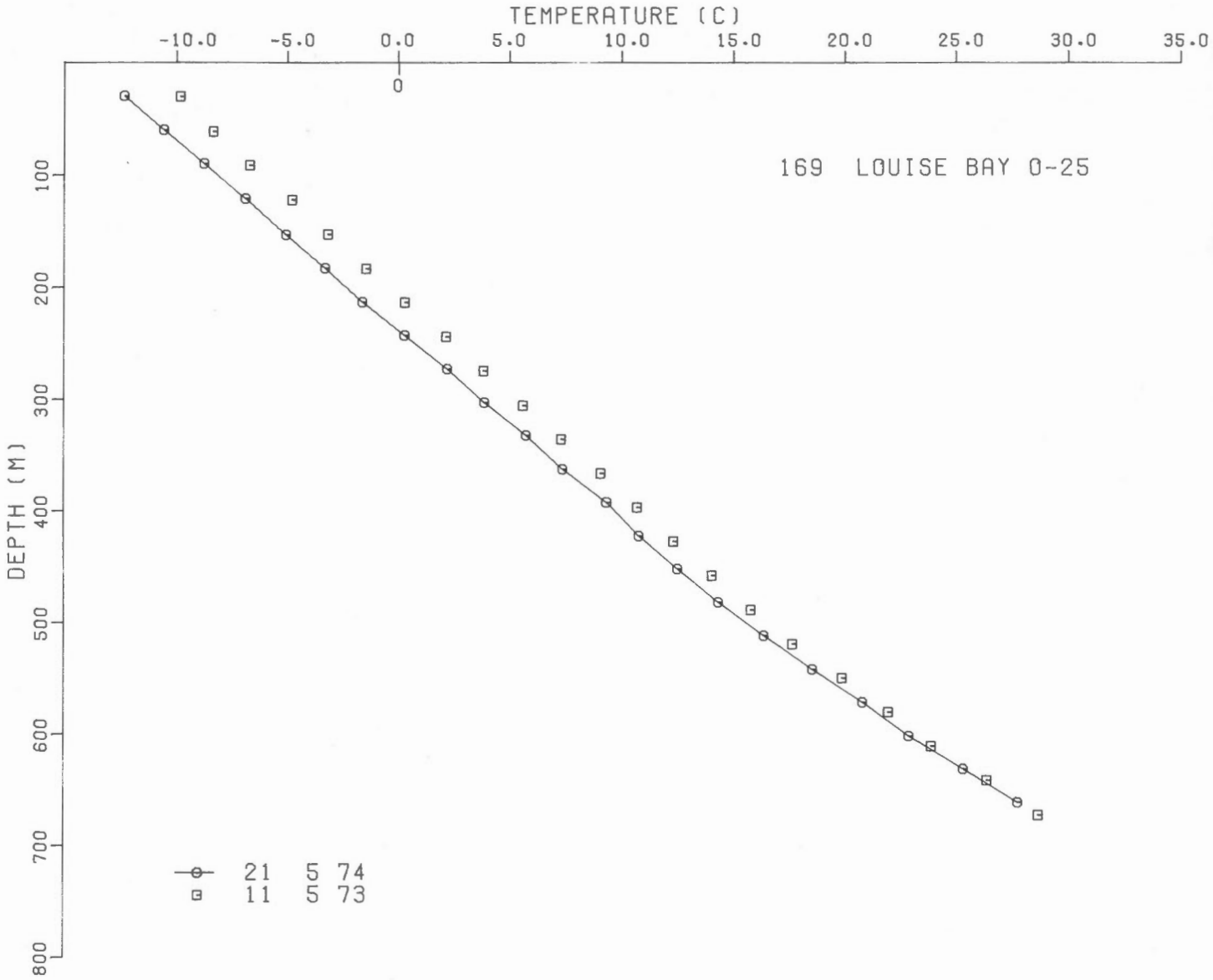

TEMPERATURE (C)
-15.0
-10.0
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
0
158 BROCK I-20
DEPTH (M)
150
300
450
600
750
900
1050
1200
19 5 74
16 9 72

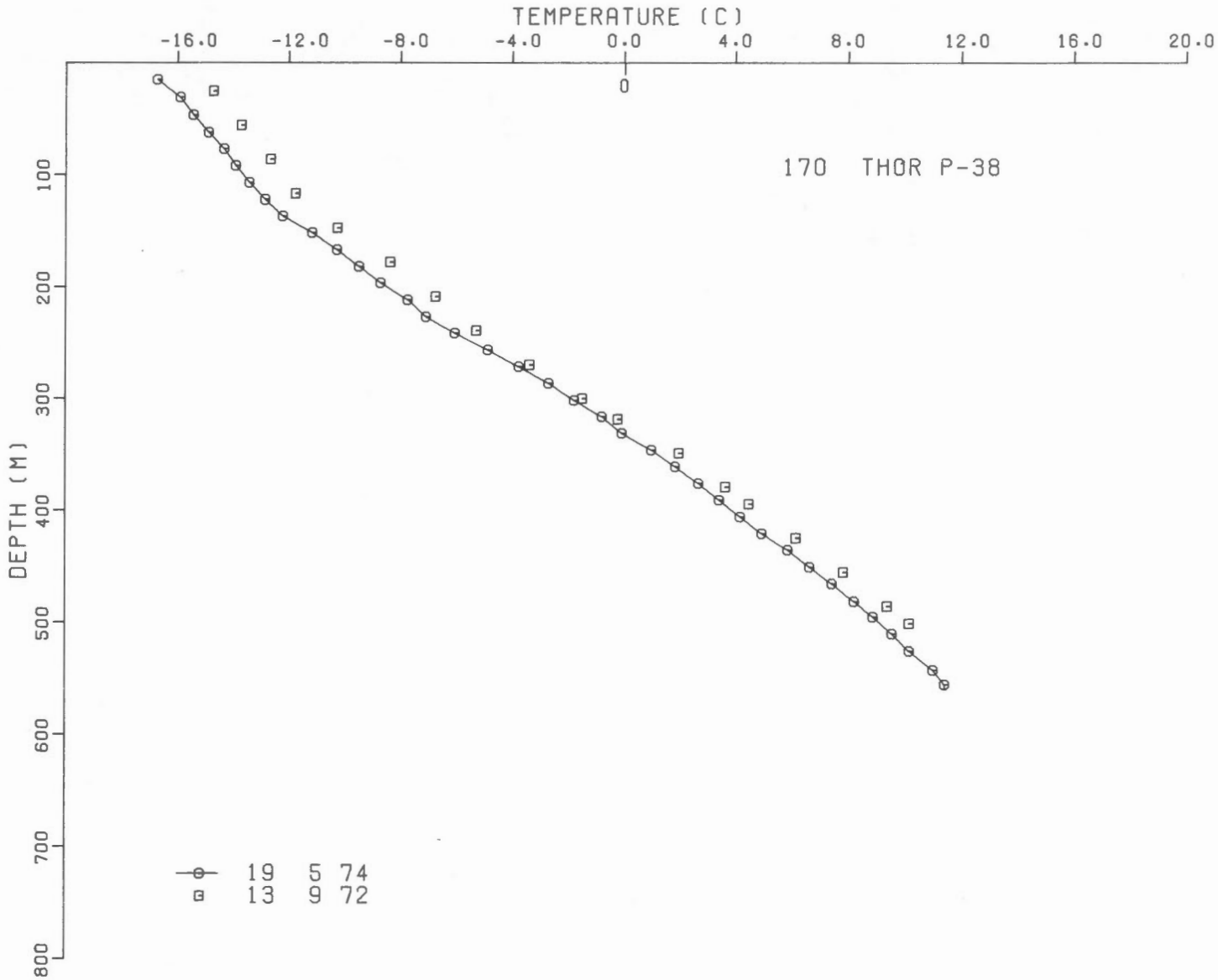

TEMPERATURE (C)
-8.0
-7.0
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
0
165 KILAGMIOTAK F-48
DEPTH (M)
50
100
150
200
250
300
350
400
15 8 74
4 2 74
1 4 73

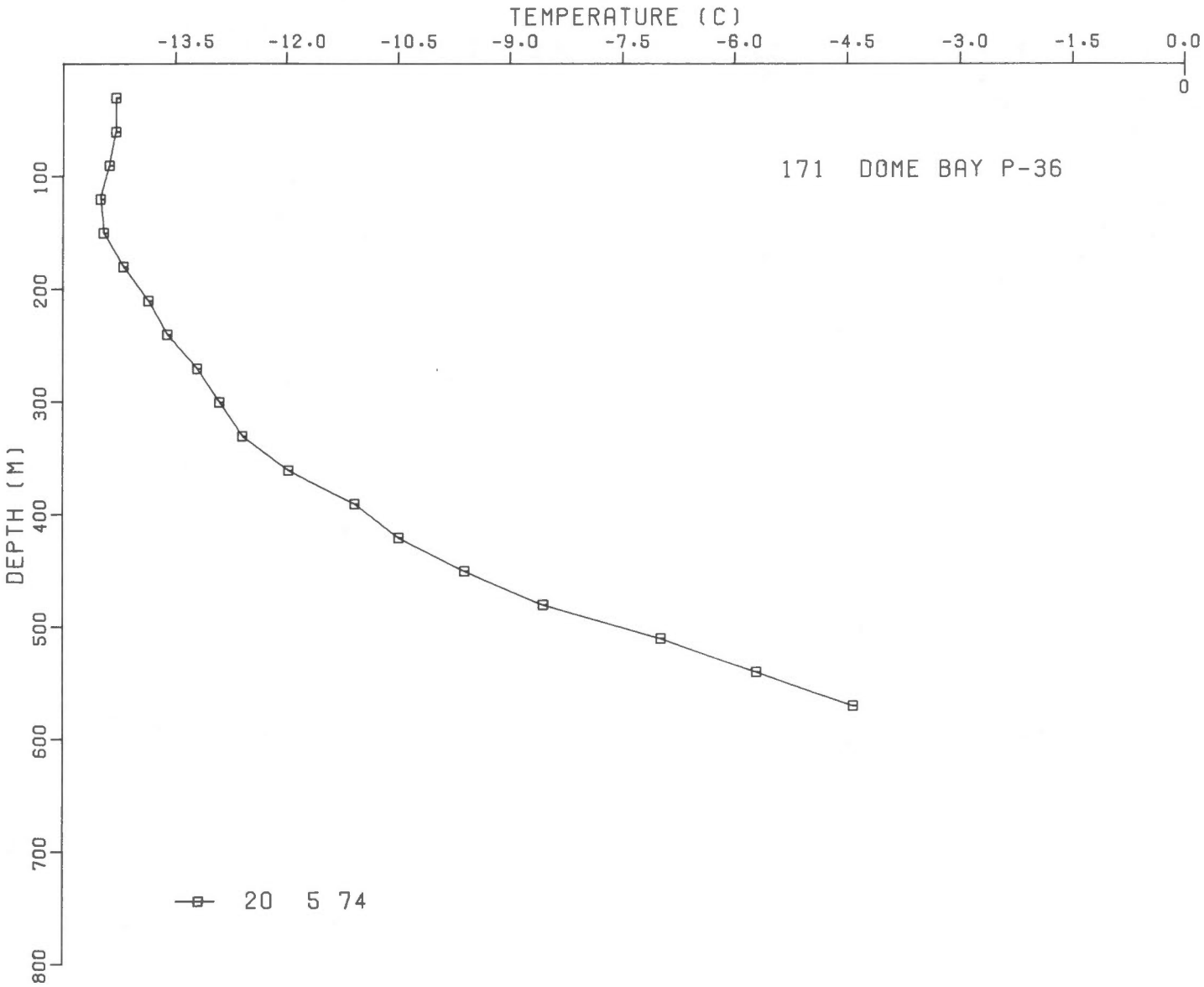

TEMPERATURE (C)
-13.5
-12.0
-10.5
-9.0
-7.5
-6.0
-4.5
-3.0
-1.5
0.0
0
166 MOKKA A-02
DEPTH (M)
75
150
225
300
375
450
525
600
23 5 74
14 4 73

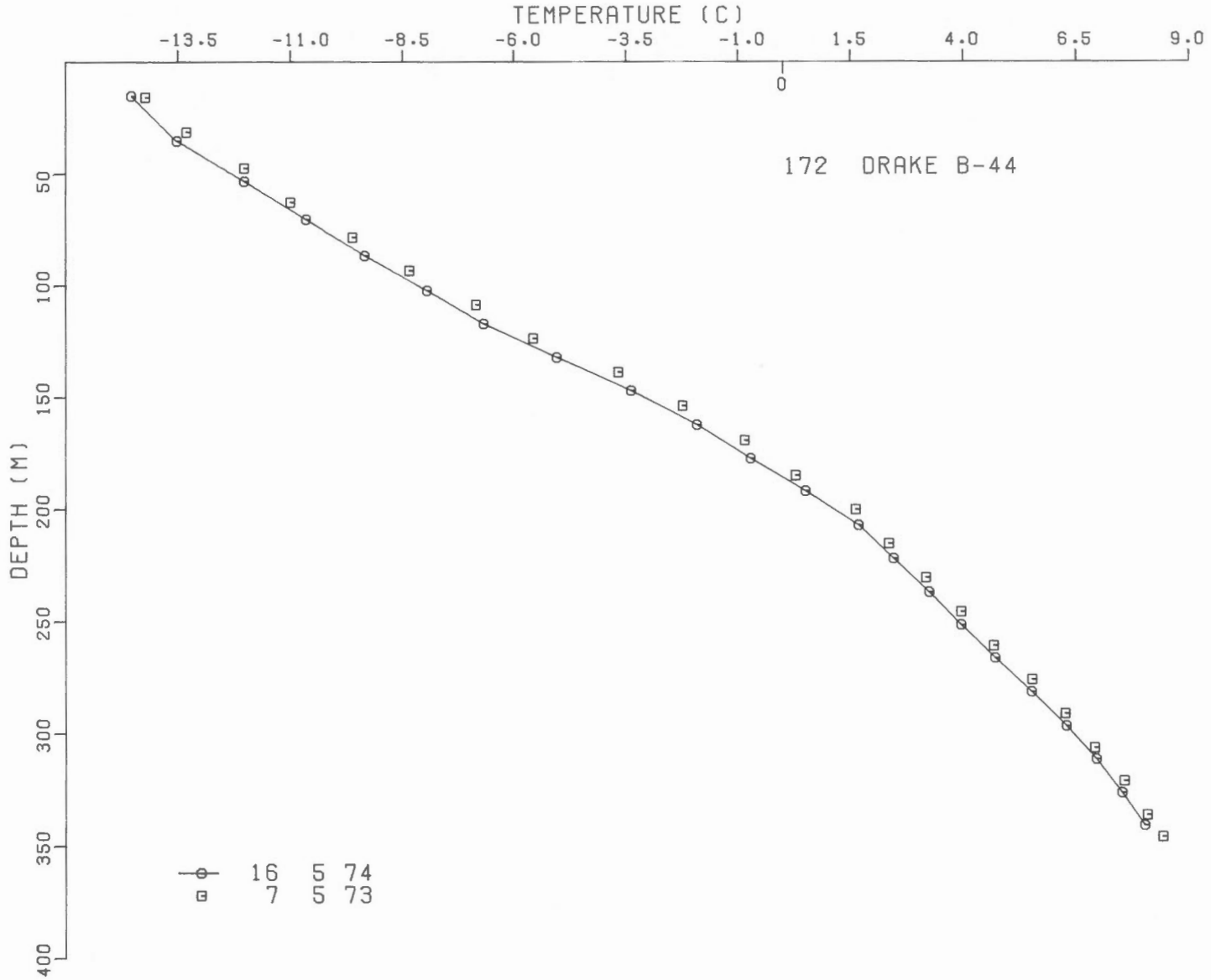

TEMPERATURE (C)
-3.0
0.0
3.0
6.0
9.0
12.0
15.0
18.0
21.0
24.0
DEPTH (M)
100
200
300
400
500
600
700
800
167 UNIPKAT I-22
16 8 74
20 6 73
1 4 73

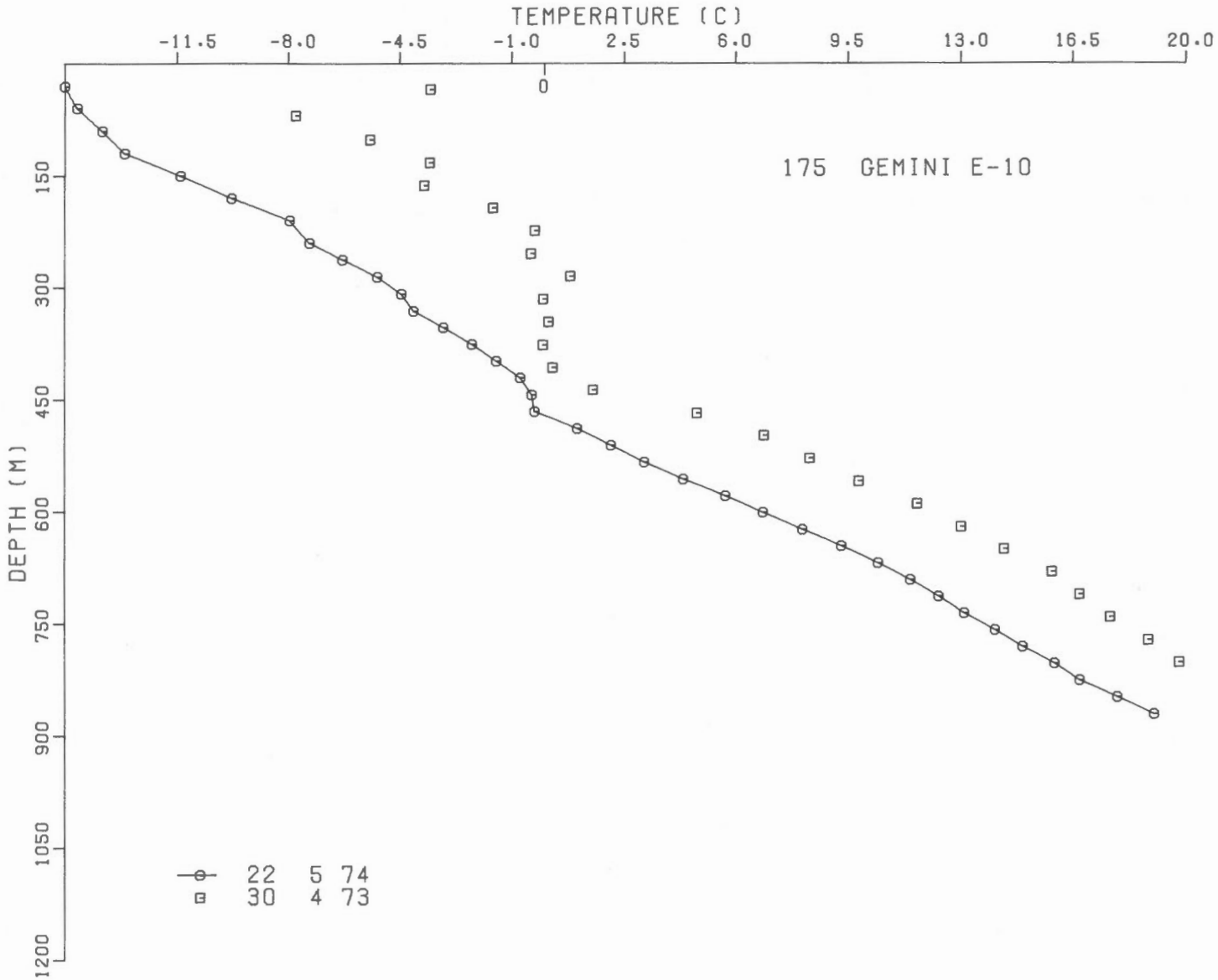

TEMPERATURE (C)
-12.5
-10.0
-7.5
-5.0
-2.5
0.0
0
2.5
5.0
7.5
10.0
168 DUNDAS C-80
DEPTH (M)
100
200
300
400
500
600
700
800
25 5 74
28 4 73

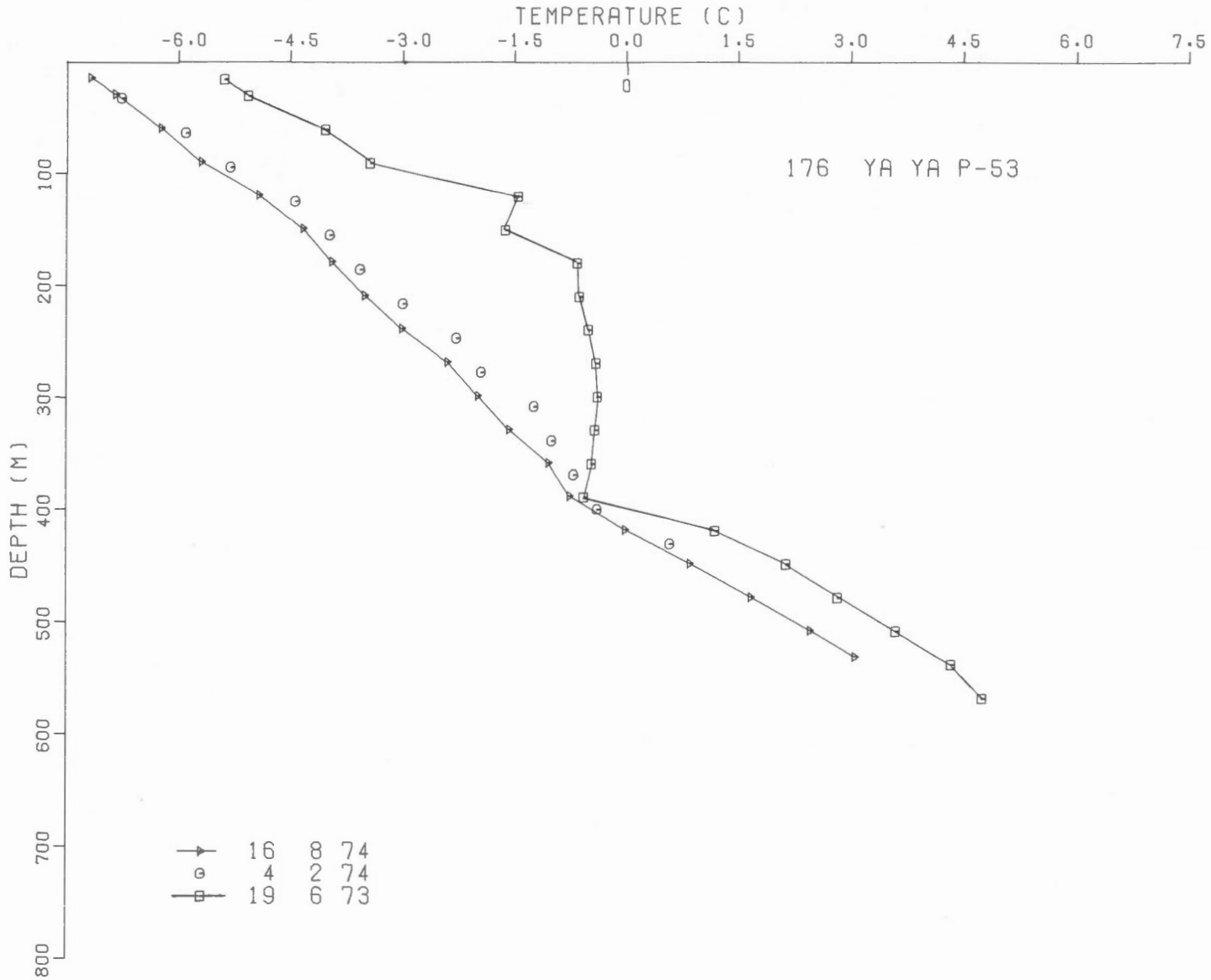

TEMPERATURE (C)
-10.0
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
0
169 LOUISE BAY 0-25
DEPTH (M)
100
200
300
400
500
600
700
800
21 5 74
11 5 73

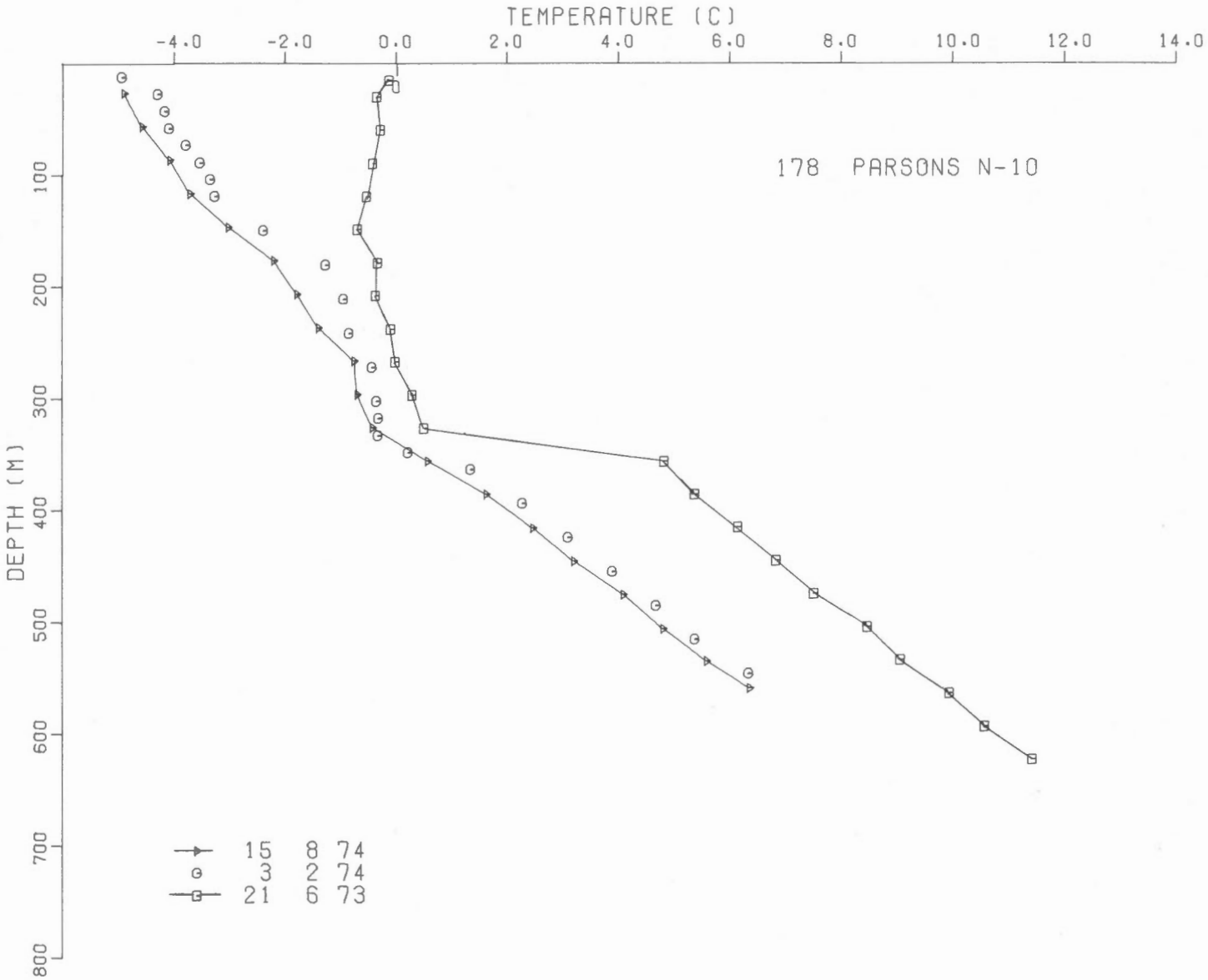

TEMPERATURE (C)
-16.0
-12.0
-8.0
-4.0
0.0
4.0
8.0
12.0
16.0
20.0
0
170 THOR P-38
DEPTH (M)
100
200
300
400
500
600
700
800
19 5 74
13 9 72

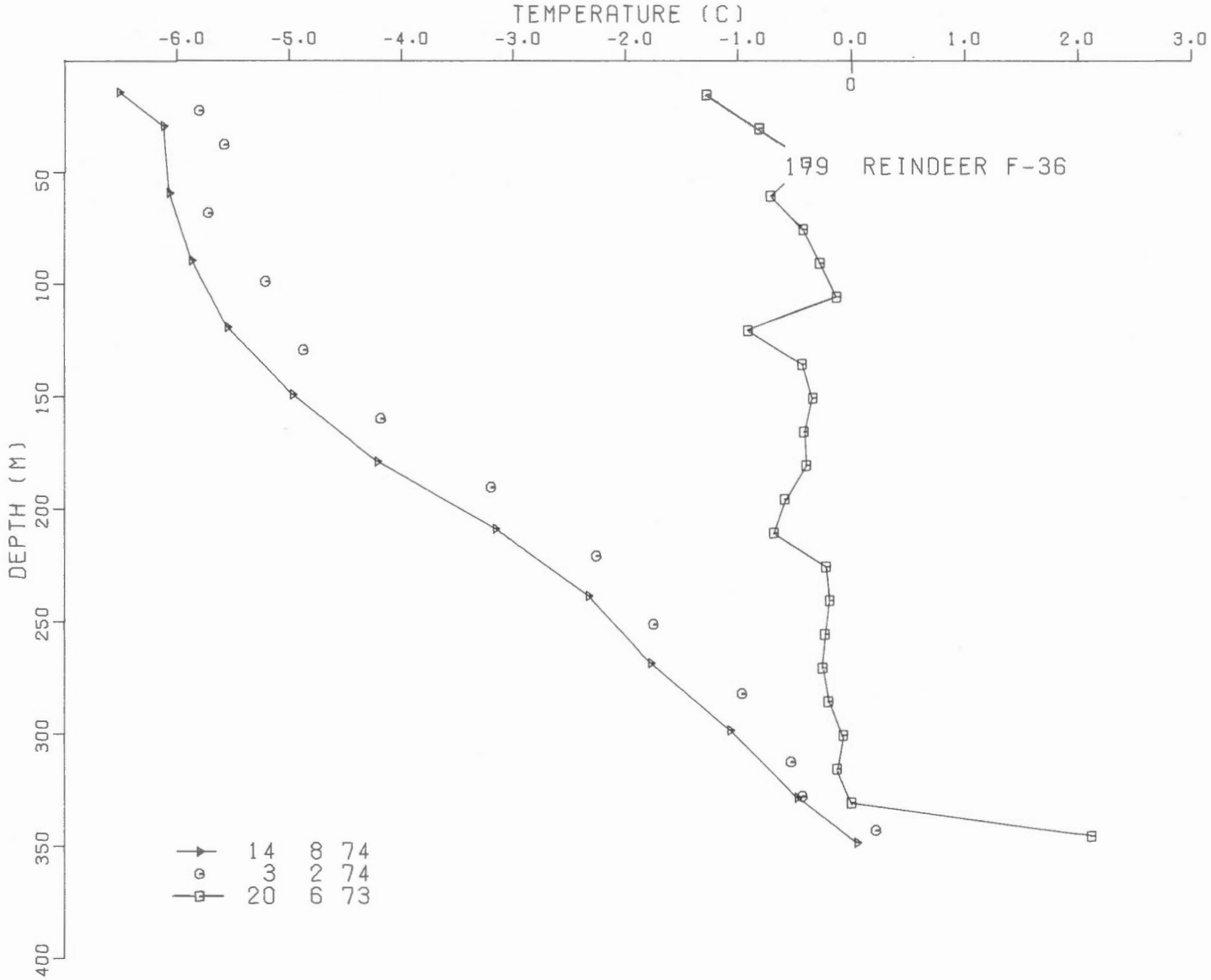

TEMPERATURE (C)
-13.5
-12.0
-10.5
-9.0
-7.5
-6.0
-4.5
-3.0
-1.5
0.0
0
171 DOME BAY P-36
DEPTH (M)
100
200
300
400
500
600
700
800
20 5 74

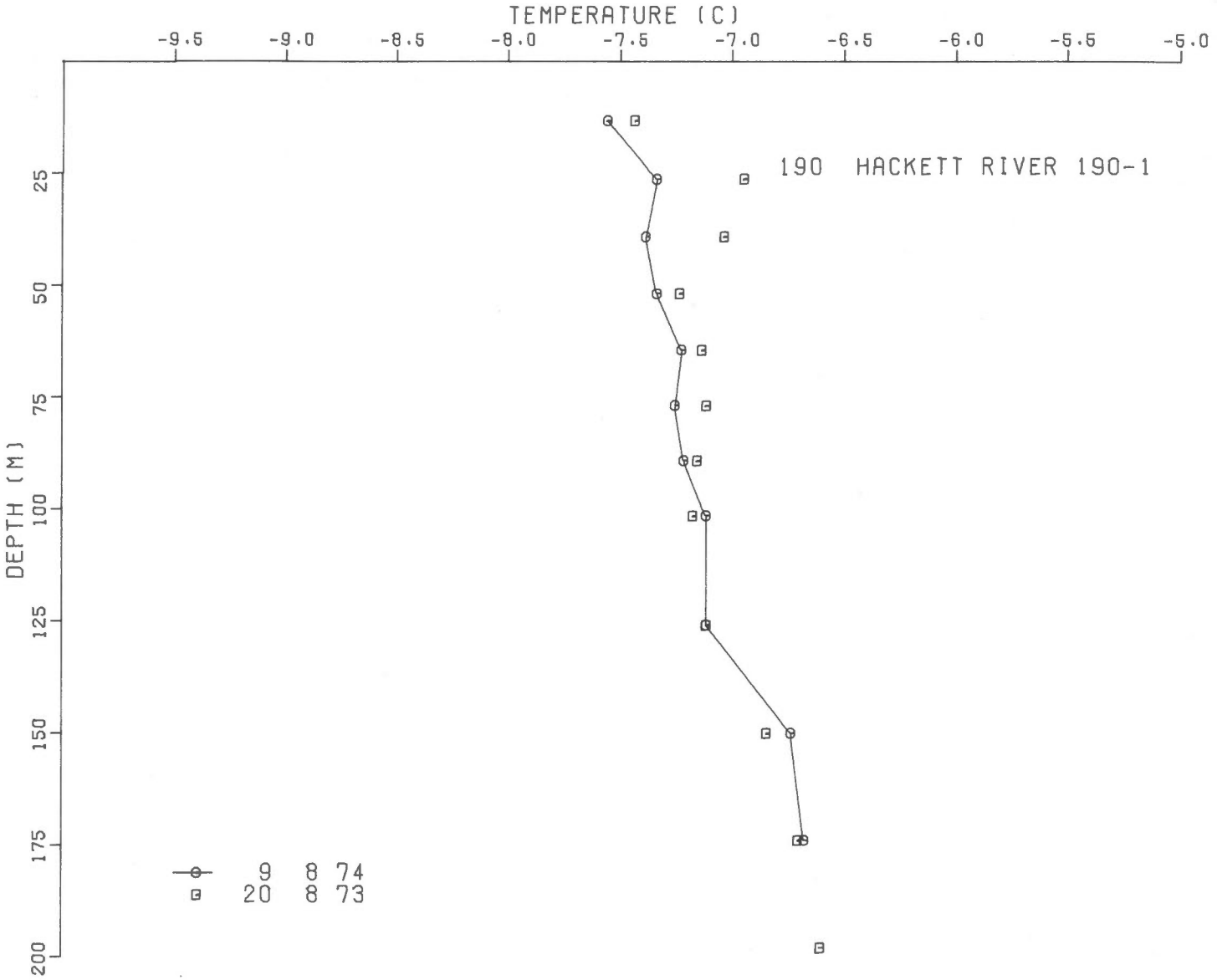

TEMPERATURE (C)
-13.5
-11.0
-8.5
-6.0
-3.5
-1.0
0
1.5
4.0
6.5
9.0
172 DRAKE B-44
DEPTH (M)
50
100
150
200
250
300
350
400
16 5 74
7 5 73

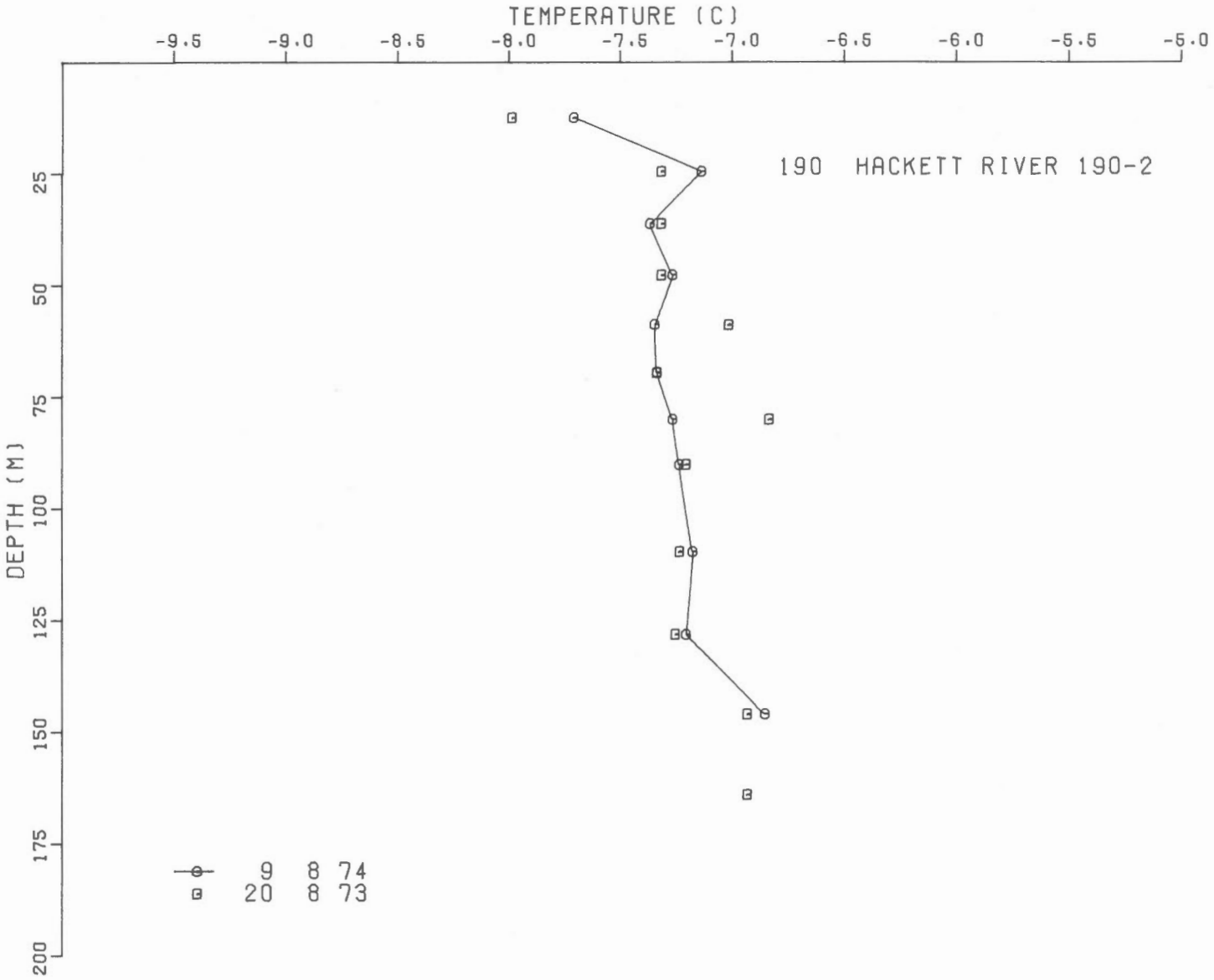

TEMPERATURE (C)
-11.5
-8.0
-4.5
-1.0
0
2.5
6.0
9.5
13.0
16.5
20.0
175 GEMINI E-10
DEPTH (M)
150
300
450
600
750
900
1050
1200
22 5 74
30 4 73

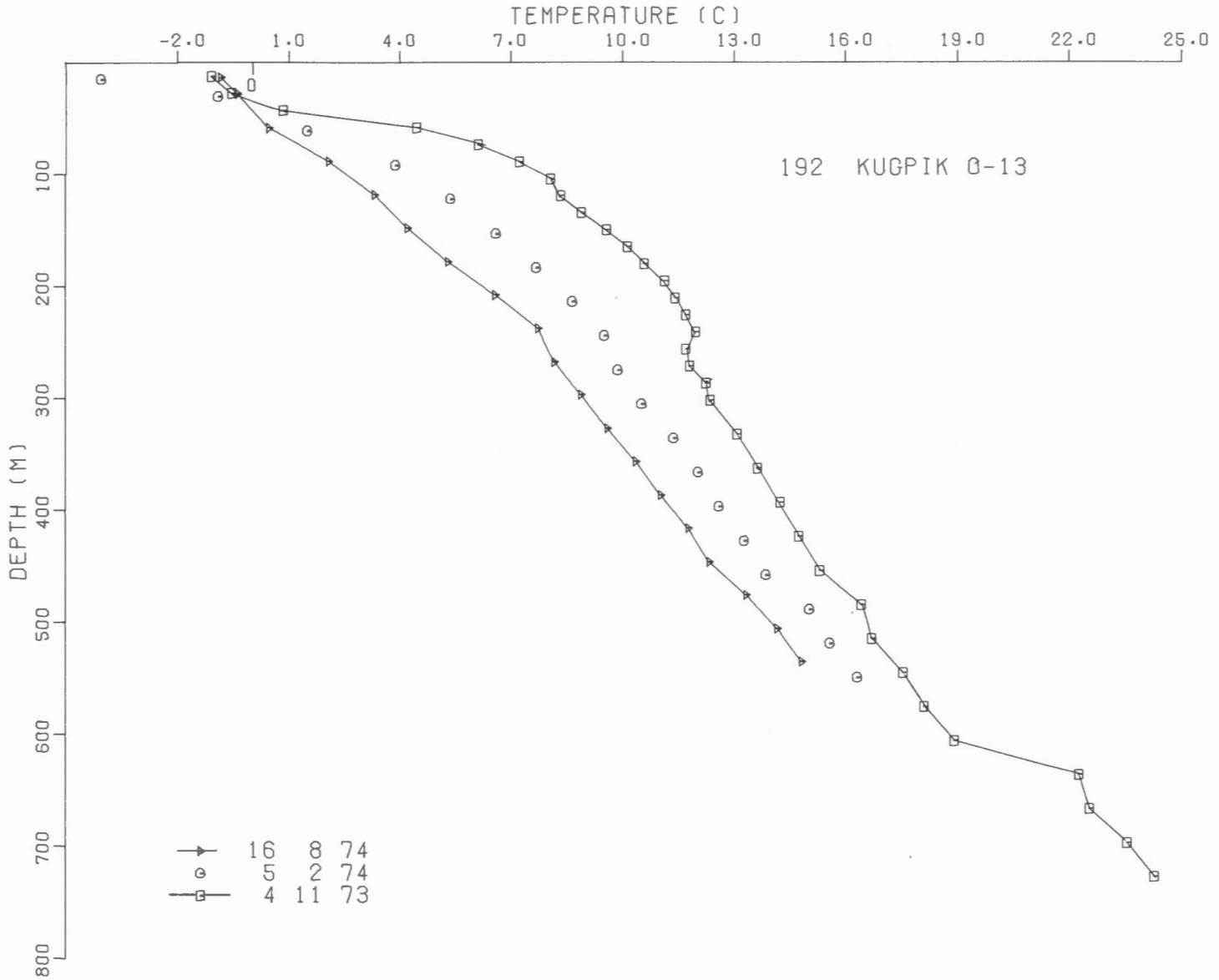

TEMPERATURE (C)
-6.0
-4.5
-3.0
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
0
176 YA YA P-53
DEPTH (M)
100
200
300
400
500
600
700
800
16 8 74
4 2 74
19 6 73

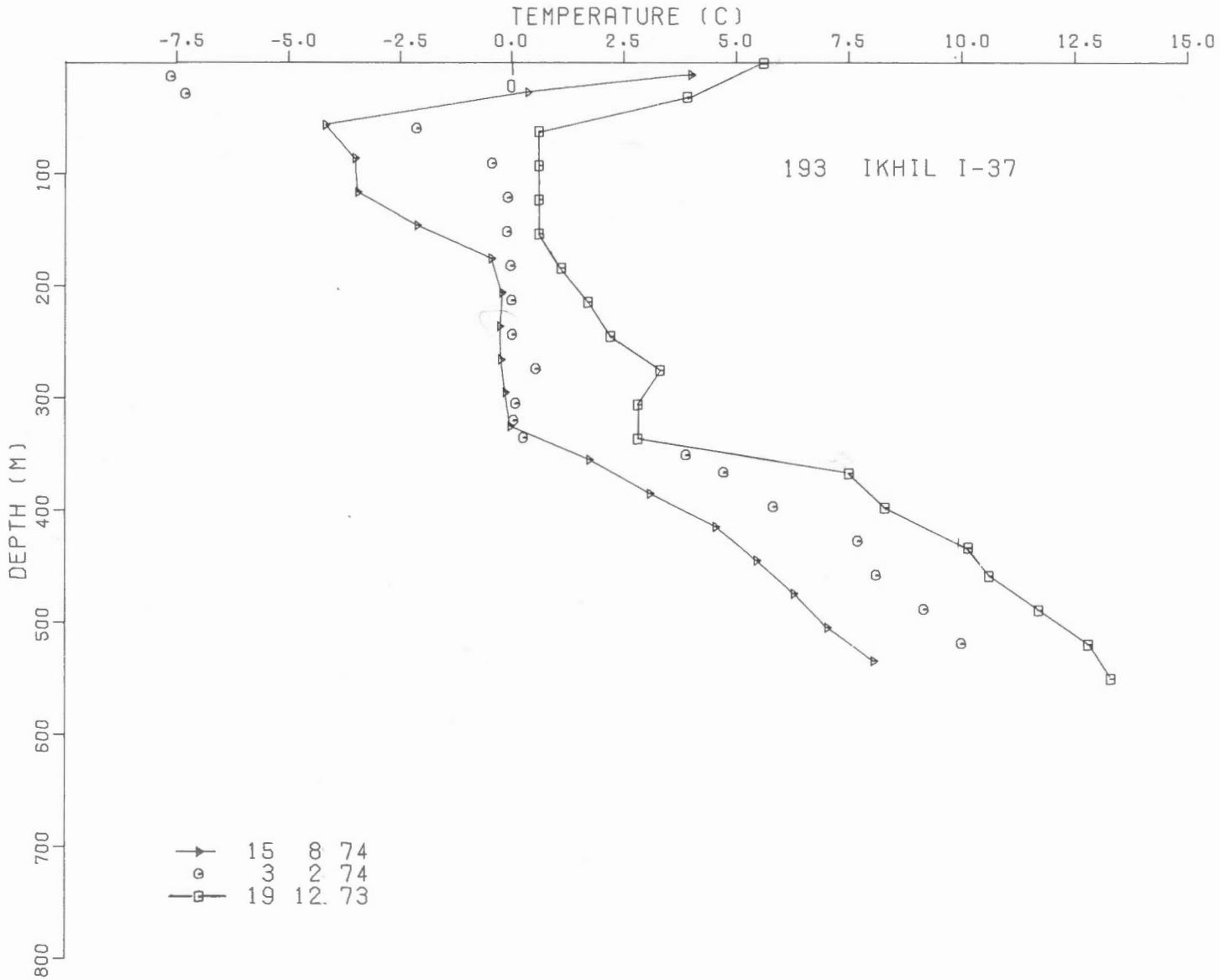

TEMPERATURE (C)
-4.0
-2.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
178 PARSONS N-10
DEPTH (M)
100
200
300
400
500
600
700
800
15 8 74
3 2 74
21 6 73

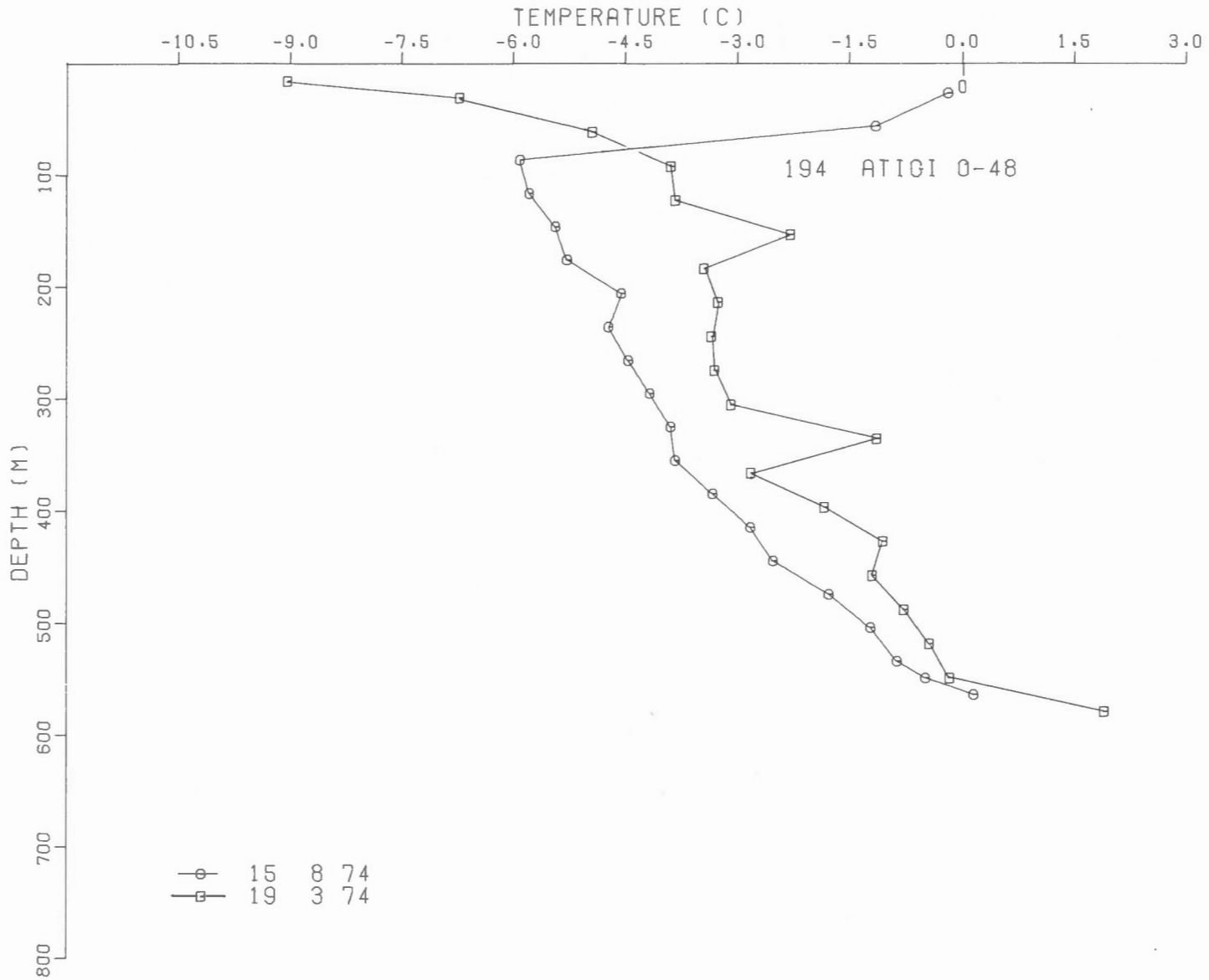

TEMPERATURE (C)
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
0
199 REINDEER F-36
DEPTH (M)
50
100
150
200
250
300
350
400
14 8 74
3 2 74
20 6 73

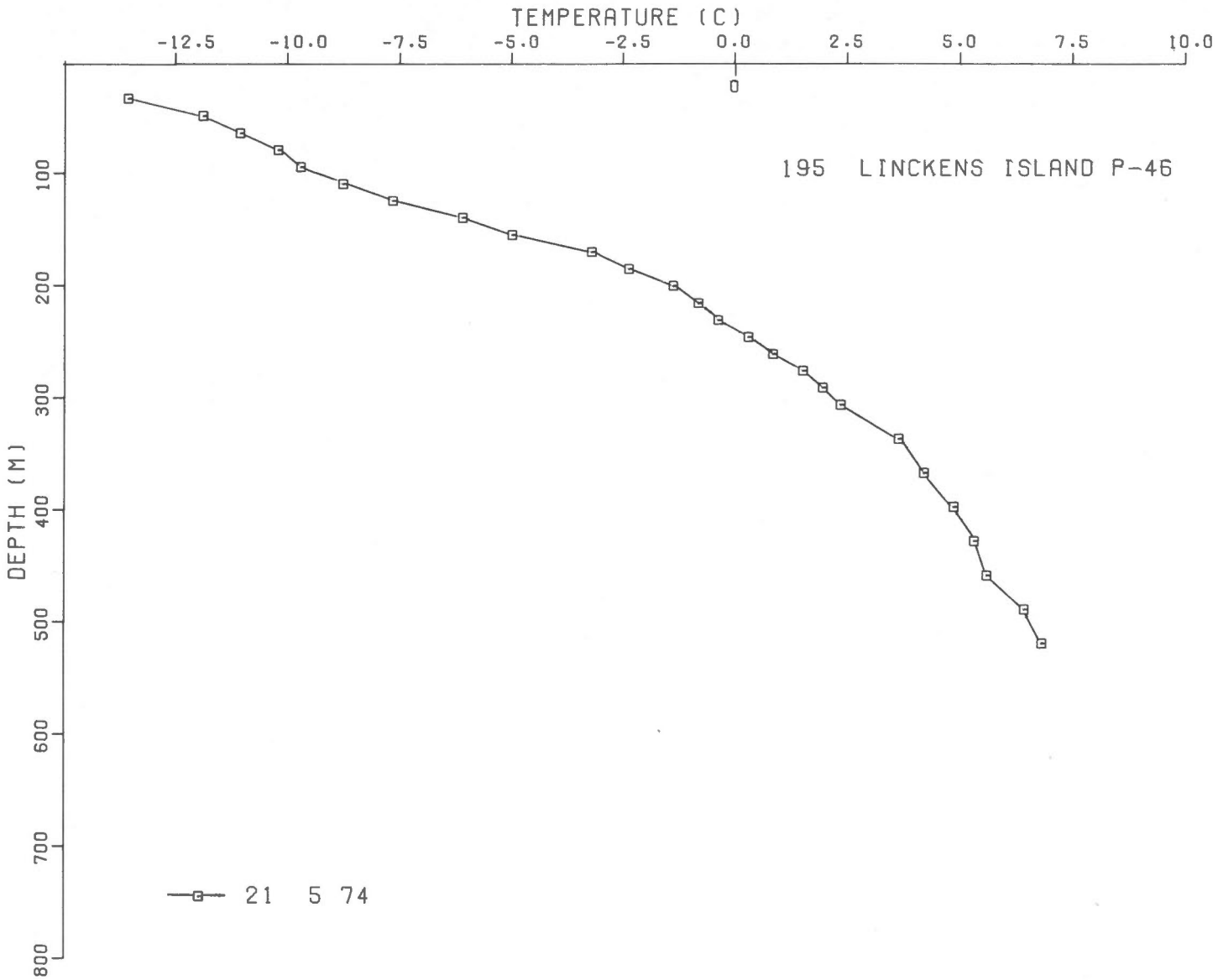

TEMPERATURE (C)
-9.5
-9.0
-8.5
-8.0
-7.5
-7.0
-6.5
-6.0
-5.5
-5.0
DEPTH (M)
25
50
75
100
125
150
175
200
190 HACKETT RIVER 190-1
9 8 74
20 8 73

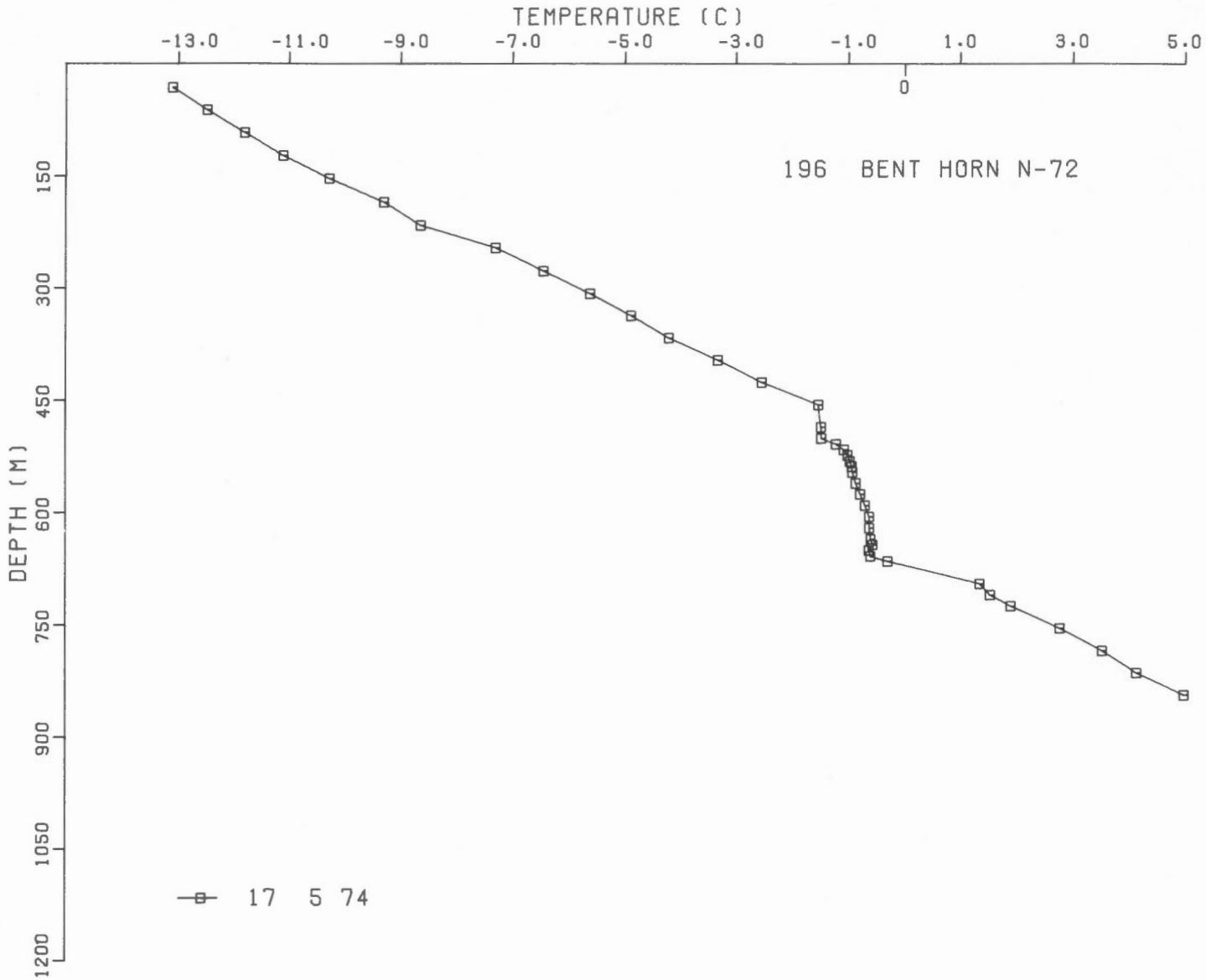

TEMPERATURE (C)
-9.5
-9.0
-8.5
-8.0
-7.5
-7.0
-6.5
-6.0
-5.5
-5.0
DEPTH (M)
25
50
75
100
125
150
175
200
190 HACKETT RIVER 190-2
9 8 74
20 8 73

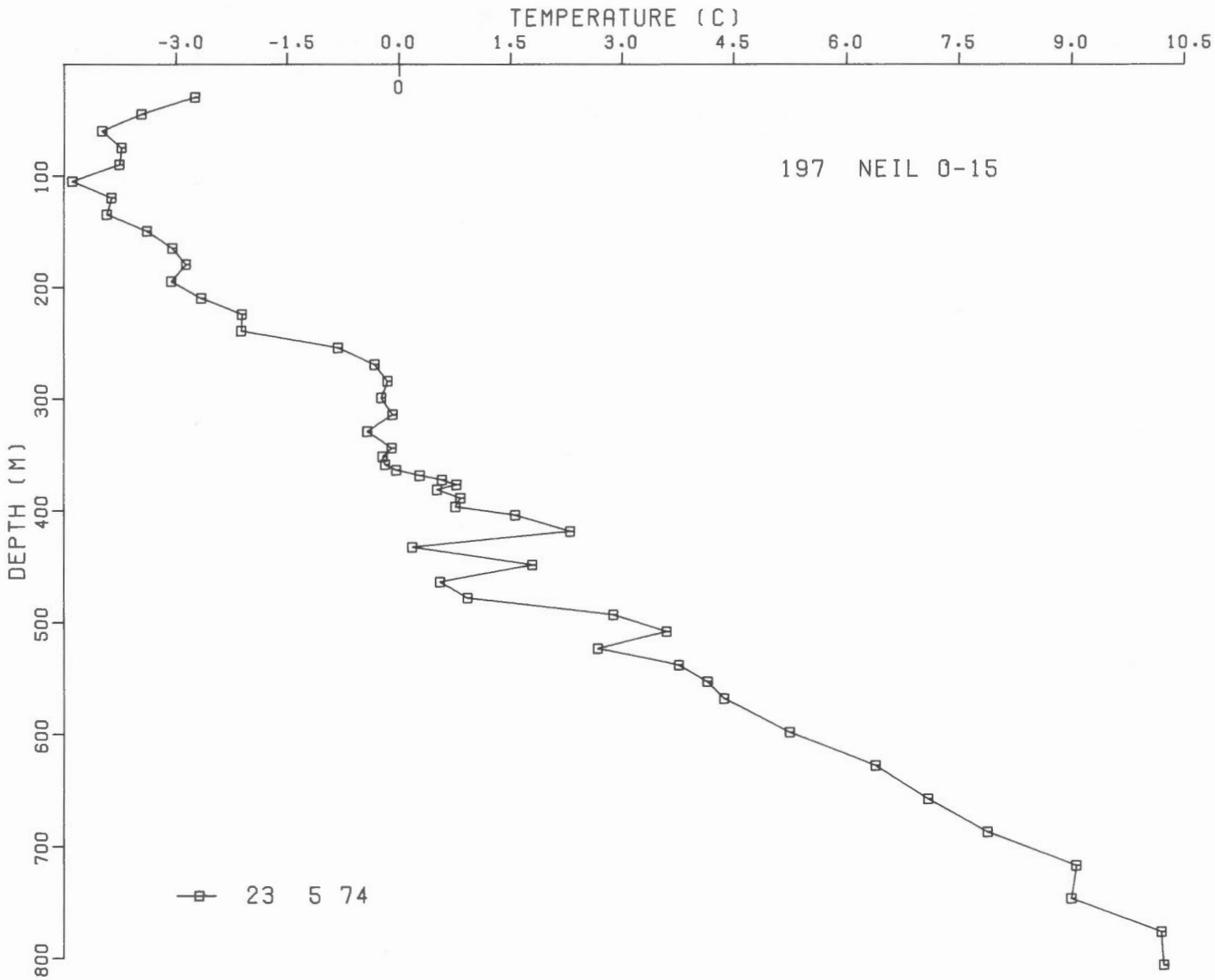

TEMPERATURE (C)
-2.0
1.0
4.0
7.0
10.0
13.0
16.0
19.0
22.0
25.0
192 KUGPIK 0-13
DEPTH (M)
100
200
300
400
500
600
700
800
16 8 74
5 2 74
4 11 73

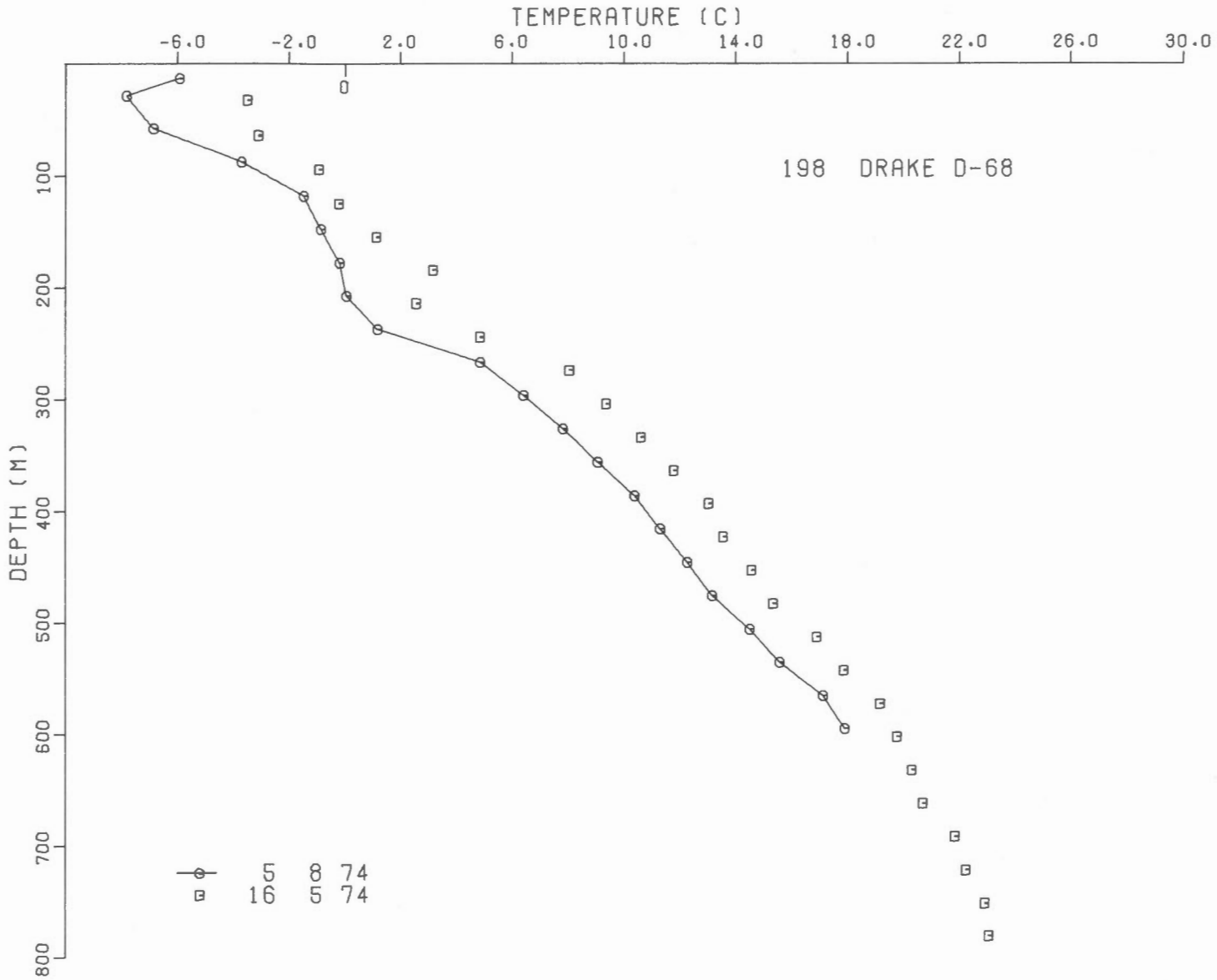

TEMPERATURE (C)
-7.5
-5.0
-2.5
0.0
2.5
5.0
7.5
10.0
12.5
15.0
193 IKHIL I-37
DEPTH (M)
100
200
300
400
500
600
700
800
15 8 74
3 2 74
19 12 73

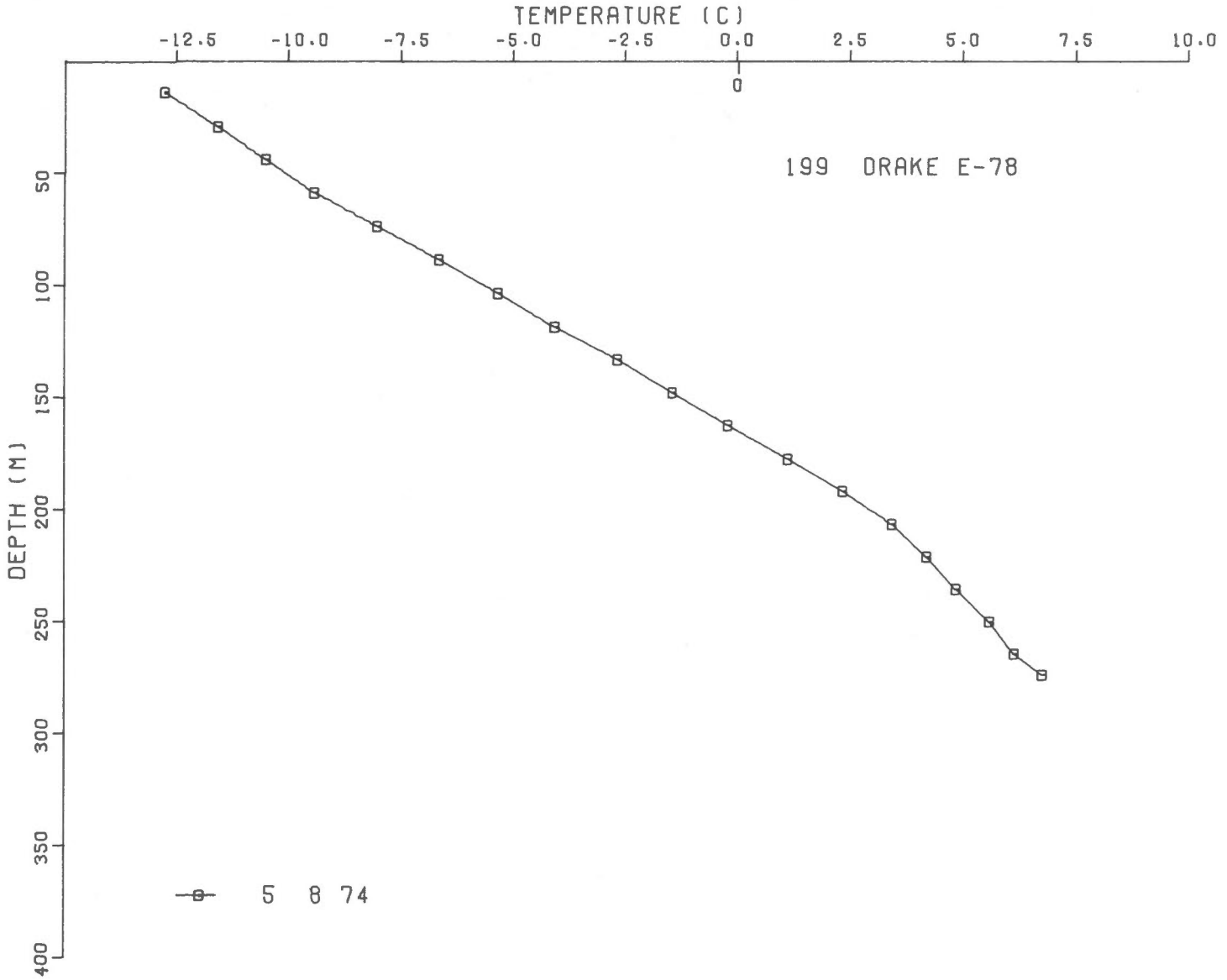

TEMPERATURE (C)
-10.5
-9.0
-7.5
-6.0
-4.5
-3.0
-1.5
0.0
1.5
3.0
DEPTH (M)
100
200
300
400
500
600
700
800
194 ATIGI 0-48
15 8 74
19 3 74

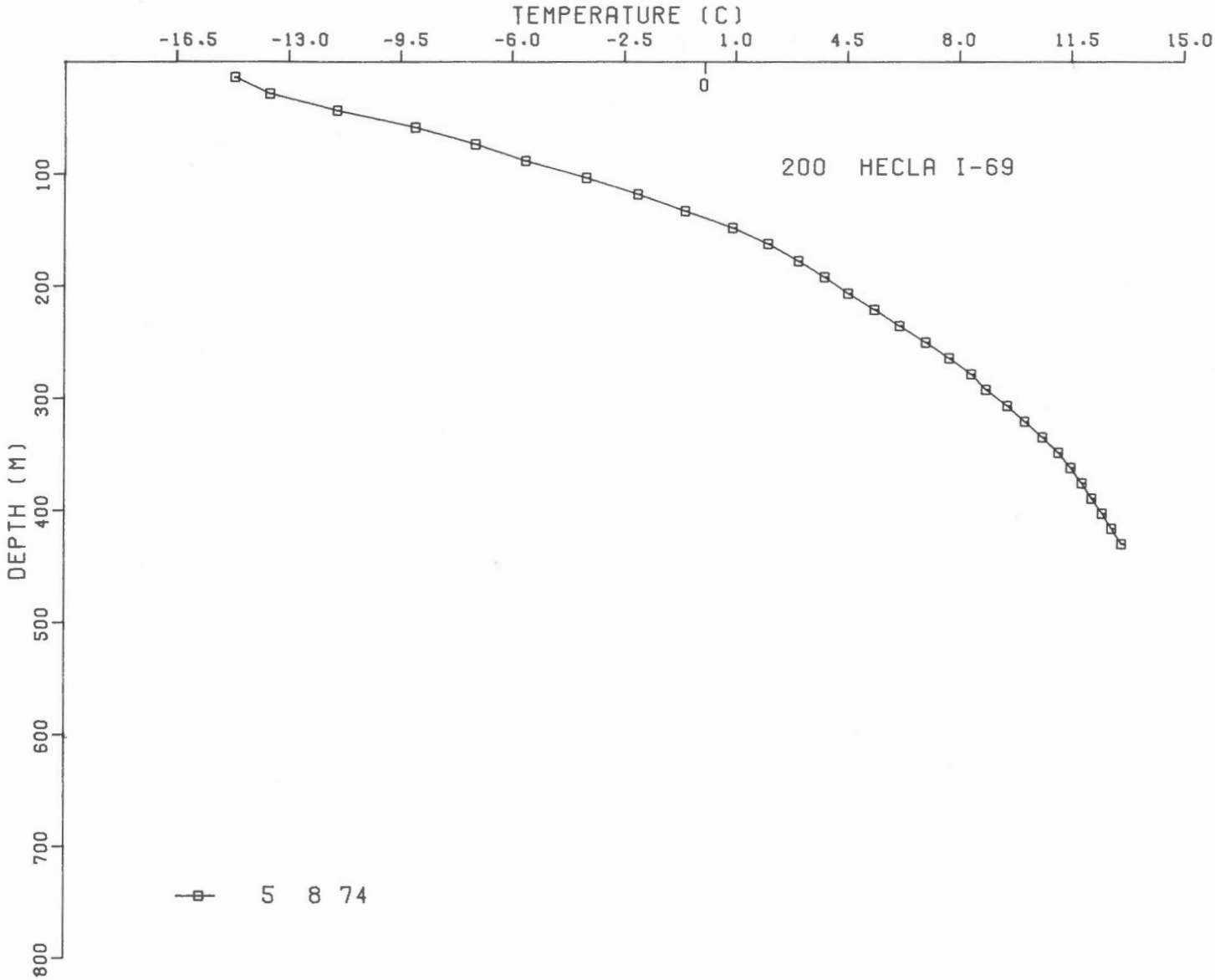

TEMPERATURE (C)
-12.5
-10.0
-7.5
-5.0
-2.5
0.0
2.5
5.0
7.5
10.0
0
195 LINCKENS ISLAND P-46
DEPTH (M)
100
200
300
400
500
600
700
800
21 5 74

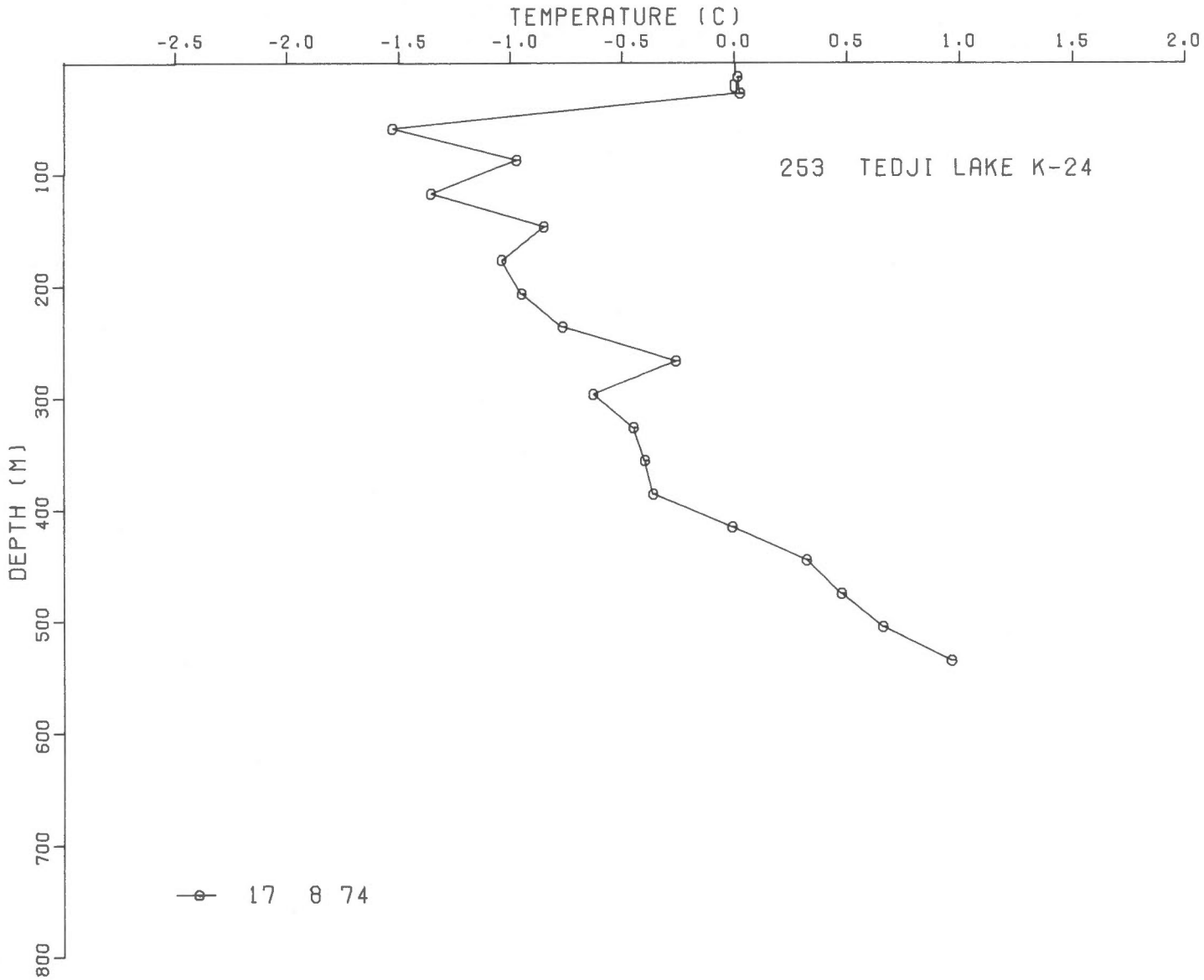

TEMPERATURE (C)
-13.0
-11.0
-9.0
-7.0
-5.0
-3.0
-1.0
0
1.0
3.0
5.0
196 BENT HORN N-72
DEPTH (M)
150
300
450
600
750
900
1050
1200
17 5 74

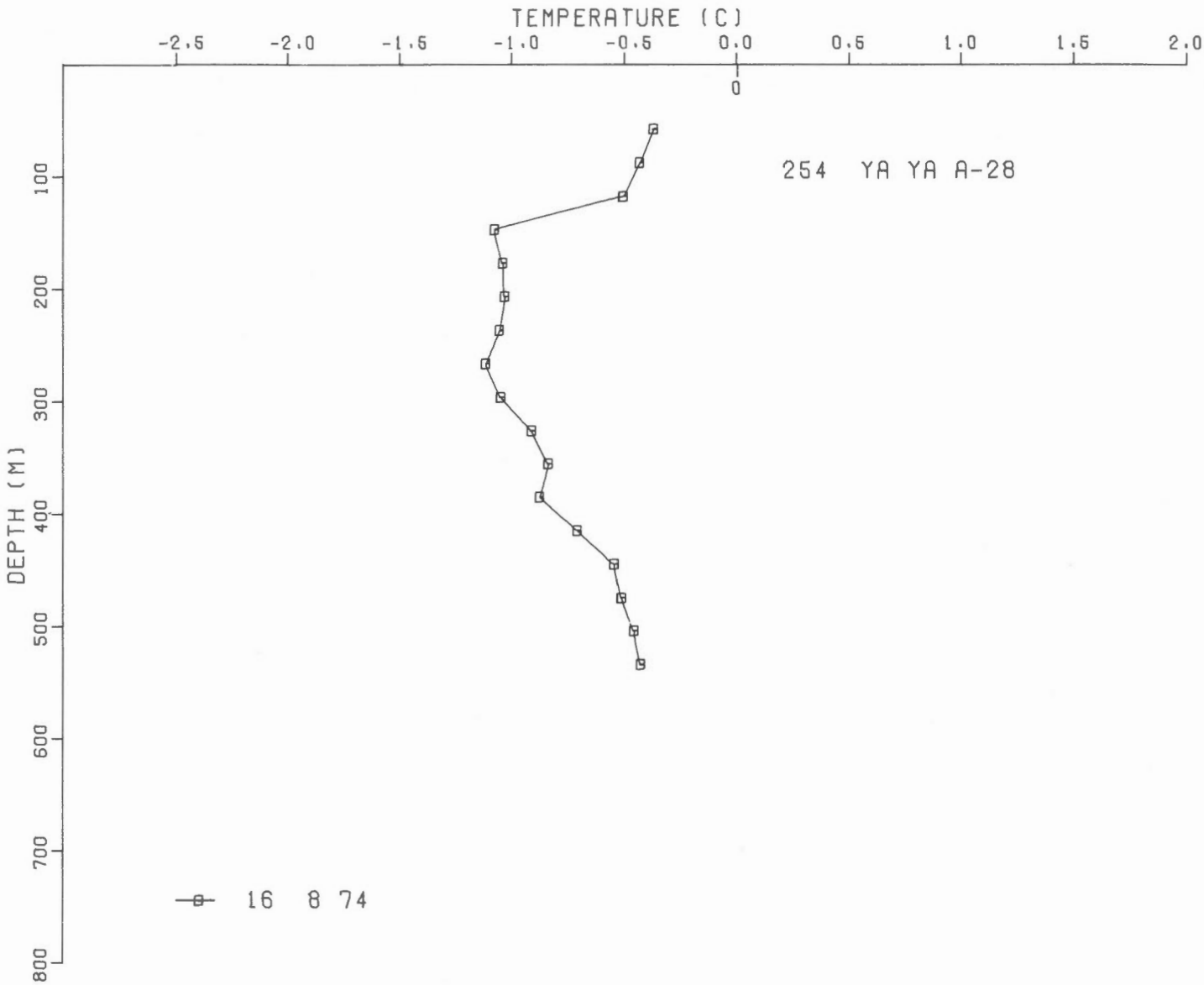

TEMPERATURE (C)
-3.0
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
9.0
10.5
0
197 NEIL 0-15
DEPTH (M)
100
200
300
400
500
600
700
800
23 5 74


TEMPERATURE (C)
-6.0
-2.0
2.0
6.0
10.0
14.0
18.0
22.0
26.0
30.0
0
198 DRAKE D-68
DEPTH (M)
100
200
300
400
500
600
700
800
5 8 74
16 5 74


TEMPERATURE (C)
-12.5
-10.0
-7.5
-5.0
-2.5
0.0
2.5
5.0
7.5
10.0
0
199 DRAKE E-78
DEPTH (M)
50
100
150
200
250
300
350
400
5 8 74


TEMPERATURE (C)
-16.5
-13.0
-9.5
-6.0
-2.5
1.0
4.5
8.0
11.5
15.0
0
200 HECLA I-69
DEPTH (M)
100
200
300
400
500
600
700
800
5 8 74


TEMPERATURE (C)
-2.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
DEPTH (M)
100
200
300
400
500
600
700
800
253 TEDJI LAKE K-24
17 8 74


TEMPERATURE (C)
-2.5
-2.0
-1.5
-1.0
-0.5
0.0
0.5
1.0
1.5
2.0
0
DEPTH (M)
100
200
300
400
500
600
700
800
254 YA YA A-28
16 8 74

## 3.3 Tables of Equilibrium Temperature

EARTH PHYSICS BRANCH HOLE NO. 63 REINDEER D-27

**********

LATITUDE 69 DEGREES 6.1 MINUTES NORTH LONGITUDE 134 DEGREES 36.9 MINUTES WEST

ELEVATION 29 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 18.3 | -7.18 | .08 | 10.24 | .29 | 50.55 |
| 48.8 | -6.12 | .07 | 8.58 | .25 | 42.30 |
| 79.2 | -5.61 | .09 | 8.02 | .33 | 39.54 |
| 109.7 | -4.59 | .31 | 7.24 | 1.11 | 35.67 |
| 140.2 | -4.09 | .26 | 6.29 | .93 | 30.94 |
| 170.7 | -3.92 | .05 | 5.25 | .19 | 25.79 |
| 201.2 | -3.22 | .05 | 4.23 | .18 | 20.71 |
| 231.6 | -2.51 | .06 | 3.21 | .21 | 15.65 |
| 262.1 | -1.76 | .16 | 2.59 | .56 | 12.58 |
| 292.6 | -1.06 | .09 | 1.58 | .32 | 7.59 |
| 323.1 | -.58 | .04 | .61 | .14 | 2.76 |
| 353.6 | -.36 | .01 | 1.22 | .05 | 5.79 |
| 384.0 | .31 | .01 | 3.24 | .02 | 15.80 |
| 414.5 | 1.13 | .00 | 3.13 | .01 | 15.28 |
| 445.0 | 1.87 | .00 | 3.03 | .02 | 14.78 |
| 475.5 | 2.66 | .00 | 3.05 | .02 | 14.87 |
| 506.0 | 3.38 | .00 | 2.97 | .01 | 14.47 |
| 536.4 | 4.12 | .00 | 2.94 | .02 | 14.33 |
| 566.9 | 4.88 | .00 | 2.93 | .01 | 14.28 |
| 597.4 | 5.87 | .00 | 2.72 | .01 | 13.25 |

EARTH PHYSICS BRANCH HOLE NO. 89 BEAVER HOUSE CREEK H-13

**********

LATITUDE 68 DEGREES 22.3 MINUTES NORTH LONGITUDE 135 DEGREES 33.0 MINUTES WEST

ELEVATION 68 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -5.66 | .01 | 4.59 | .03 | 15.43 |
| 75 | -5.22 | .03 | 4.46 | .07 | 14.97 |
| 100 | -4.48 | .05 | 4.14 | .14 | 13.89 |
| 125 | -3.46 | .05 | 4.34 | .13 | 14.58 |
| 150 | -2.26 | .00 | 4.35 | .01 | 14.62 |
| 175 | -1.05 | .09 | 4.22 | .26 | 14.15 |
| 200 | .14 | .02 | 4.08 | .07 | 13.71 |
| 225 | 1.33 | .05 | 3.99 | .13 | 13.40 |
| 250 | 2.46 | .07 | 4.13 | .19 | 13.86 |
| 275 | 3.84 | .01 | 3.68 | .02 | 12.35 |
| 300 | 4.97 | .03 | 3.37 | .07 | 11.27 |
| 325 | 5.89 | .03 | 3.06 | .08 | 10.23 |
| 350 | 6.68 | .01 | 2.75 | .04 | 9.18 |
| 375 | 7.20 | .01 | 2.46 | .02 | 8.18 |
| 400 | 7.82 | .01 | 2.71 | .04 | 9.02 |
| 425 | 8.65 | .01 | 2.49 | .03 | 8.30 |
| 450 | 9.22 | .01 | 2.39 | .04 | 7.97 |
| 475 | 9.84 | .02 | 2.52 | .05 | 8.38 |
| 500 | 10.60 | .03 | 2.56 | .08 | 8.53 |
| 525 | 11.75 | .02 | 2.85 | .05 | 9.50 |
| 550 | 13.02 | .03 | 2.64 | .06 | 8.79 |
| 575 | 14.15 | .04 | 2.64 | .09 | 8.81 |
| 600 | 15.45 | .02 | 2.40 | .04 | 7.97 |
| 625 | 16.45 | .01 | 2.30 | .03 | 7.66 |
| 650 | 17.19 | .02 | 2.13 | .04 | 7.06 |
| 675 | 17.95 | .03 | 2.32 | .07 | 7.70 |
| 700 | 19.03 | .05 | 2.37 | .12 | 7.87 |
| 725 | 20.58 | .03 | 2.22 | .07 | 7.37 |
| 750 | 22.02 | .04 | 1.92 | .09 | 6.37 |
| 775 | 22.78 | .01 | 1.32 | .01 | 4.33 |
| 800 | 23.40 | .00 | 1.33 | .00 | 4.36 |
| 825 | 23.94 | .01 | 1.29 | .02 | 4.22 |
| 850 | 24.48 | .01 | 1.25 | .02 | 4.09 |
| 875 | 24.98 | .00 | 1.19 | .00 | 3.88 |
| 900 | 25.49 | .02 | 1.16 | .05 | 3.76 |
| 925 | 25.94 | .00 | 1.12 | .00 | 3.64 |
| 950 | 26.53 | .00 | .96 | .00 | 3.08 |
| 975 | 27.28 | .00 | 1.09 | .00 | 3.52 |
| 1000 | 28.17 | .00 | 1.07 | .00 | 3.47 |
| 1025 | 28.70 | .00 | .98 | .00 | 3.16 |
| 1050 | 29.24 | .00 | .85 | .00 | 2.71 |
| 1075 | 29.80 | .00 | .79 | .00 | 2.51 |
| 1100 | 30.45 | .00 | .65 | .00 | 2.04 |
| 1125 | 31.13 | .00 | .64 | .00 | 2.02 |
| 1150 | 31.96 | .00 | .68 | .00 | 2.15 |

EARTH PHYSICS BRANCH HOLE NO. 91 JAMESON BAY C-31

**********

LATITUDE 76 DEGREES 40.2 MINUTES NORTH LONGITUDE 116 DEGREES 43.7 MINUTES WEST

ELEVATION 58 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -15.35 | .03 | 3.07 | .20 | 6.71 |
| 75 | -14.83 | .00 | 3.56 | .02 | 7.79 |
| 100 | -14.21 | .02 | 3.83 | .13 | 8.40 |
| 125 | -13.28 | .00 | 4.45 | .03 | 9.76 |
| 150 | -11.85 | .05 | 4.46 | .38 | 9.80 |
| 175 | -10.07 | .05 | 3.87 | .35 | 8.47 |
| 200 | -8.12 | .03 | 3.22 | .19 | 7.03 |
| 225 | -6.34 | .00 | 3.58 | .00 | 7.84 |
| 250 | -4.71 | .03 | 3.55 | .19 | 7.76 |
| 275 | -3.70 | .02 | 1.90 | .17 | 4.10 |
| 300 | -3.35 | .04 | 2.54 | .27 | 5.52 |
| 325 | -3.03 | .03 | 3.49 | .21 | 7.64 |
| 350 | -2.70 | .06 | 4.51 | .45 | 9.89 |
| 375 | -2.40 | .05 | 5.53 | .38 | 12.17 |
| 400 | -1.91 | .04 | 4.89 | .30 | 10.74 |
| 425 | -1.40 | .11 | 2.87 | .82 | 6.25 |
| 450 | -.73 | .13 | 2.45 | .93 | 5.33 |
| 475 | -.18 | .07 | 2.71 | .54 | 5.91 |
| 500 | .38 | .04 | 2.42 | .26 | 5.27 |
| 525 | .83 | .04 | 2.27 | .29 | 4.93 |
| 550 | 1.33 | .01 | 2.08 | .04 | 4.51 |
| 575 | 1.89 | .03 | 2.57 | .20 | 5.60 |
| 600 | 2.53 | .04 | 2.74 | .29 | 5.96 |
| 625 | 3.38 | .04 | 1.87 | .29 | 4.04 |
| 650 | 4.20 | .05 | 2.48 | .34 | 5.40 |
| 675 | 5.21 | .12 | 5.34 | .84 | 11.75 |

EARTH PHYSICS BRANCH HOLE NO. 94 DAHADINNI M-43A

**********

LATITUDE 63 DEGREES 53.0 MINUTES NORTH LONGITUDE 124 DEGREES 39.3 MINUTES WEST

ELEVATION 248 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -.05 | .07 | .93 | .16 | 5.15 |
| 75 | 1.07 | .01 | 1.24 | .01 | 7.00 |
| 100 | 2.24 | .02 | 1.20 | .05 | 6.74 |
| 125 | 3.45 | .01 | 1.21 | .01 | 6.79 |
| 150 | 4.65 | .09 | 1.45 | .19 | 8.18 |
| 175 | 6.23 | .01 | 1.02 | .02 | 5.70 |
| 200 | 7.73 | .20 | .58 | .43 | 3.10 |
| 225 | 8.82 | .29 | .59 | .63 | 3.18 |

EARTH PHYSICS BRANCH HOLE NO. 95 ROWLEY M-04

**********

LATITUDE 69 DEGREES 4.0 MINUTES NORTH LONGITUDE 79 DEGREES 3.8 MINUTES WEST

ELEVATION 48 METERS

LOGARITHMIC RETURN TC EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 25 | -8.40 | .03 | 5.27 | .60 | 3.00 |
| 50 | -8.18 | .00 | .26 | .02 | .13 |
| 75 | -7.98 | .00 | 1.25 | .00 | .69 |
| 100 | -7.52 | .00 | .70 | .02 | .37 |
| 125 | -6.91 | .01 | .35 | .24 | .17 |
| 150 | -6.22 | .00 | 1.05 | .07 | .57 |
| 175 | -5.53 | .01 | 1.65 | .18 | .92 |
| 200 | -4.76 | .01 | 2.36 | .30 | 1.33 |
| 225 | -3.90 | .01 | .88 | .26 | .48 |
| 250 | -3.19 | .02 | 1.18 | .38 | .65 |
| 275 | -2.45 | .02 | .17 | .40 | .07 |
| 300 | -1.88 | .02 | 1.34 | .44 | .74 |
| 325 | -1.50 | .01 | .17 | .28 | .07 |
| 350 | -1.27 | .02 | .57 | .34 | .30 |
| 375 | -.94 | .07 | 2.01 | 1.37 | 1.13 |
| 400 | -.02 | .14 | 5.69 | 2.79 | 3.25 |
| 425 | .96 | .01 | .14 | .19 | .06 |

LOG OF 12 07 72 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

EARTH PHYSICS BRANCH HOLE NO. 99 DEVON F-45

**********

LATITUDE 75 DEGREES 4.3 MINUTES NORTH LONGITUDE 91 DEGREES 48.3 MINUTES WEST

ELEVATION 244 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -14.07 | .00 | 2.27 | .00 | 4.56 |
| 75 | -13.83 | .01 | 2.23 | .01 | 4.47 |

EARTH PHYSICS BRANCH HOLE NO. 151  WEST WHITEFISH RIVER H-34

**********

LATITUDE 65 DEGREES 33.4 MINUTES NORTH  LONGITUDE 124 DEGREES 35.7 MINUTES WEST

ELEVATION 227 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -2.02 | .19 | 7.65 | 1.57 | 5.20 |
| 75 | -1.28 | .22 | 4.59 | 1.75 | 3.11 |
| 100 | -.34 | .24 | .86 | 1.97 | .56 |
| 125 | .37 | .28 | 1.91 | 2.26 | 1.27 |
| 150 | 1.20 | .28 | 1.55 | 2.27 | 1.03 |
| 175 | 2.02 | .33 | 1.29 | 2.69 | .85 |
| 200 | 2.86 | .37 | 2.14 | 2.96 | 1.43 |
| 225 | 3.67 | .33 | 1.91 | 2.69 | 1.27 |
| 250 | 4.42 | .32 | 1.93 | 2.62 | 1.29 |
| 275 | 5.00 | .19 | 2.62 | 1.55 | 1.76 |
| 300 | 5.70 | .13 | 2.65 | 1.09 | 1.78 |
| 325 | 6.65 | .22 | 1.60 | 1.76 | 1.06 |
| 350 | 7.12 | .00 | 3.24 | .00 | 2.18 |

EARTH PHYSICS BRANCH HOLE NO. 155  KRISTOFFER BAY B-06

**********

LATITUDE 78 DEGREES 15.3 MINUTES NORTH  LONGITUDE 102 DEGREES 32.0 MINUTES WEST

ELEVATION 15 METERS

LOGARITHMIC RETURN TC EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 25 | -17.24 | .00 | 5.88 | .00 | 19.00 |
| 50 | -15.52 | .01 | 4.57 | .02 | 14.73 |
| 75 | -14.60 | .01 | 4.34 | .02 | 14.00 |
| 100 | -13.54 | .00 | 4.43 | .00 | 14.27 |
| 125 | -12.57 | .00 | 4.50 | .01 | 14.51 |
| 150 | -11.74 | .02 | 4.90 | .04 | 15.83 |
| 175 | -11.00 | .04 | 5.32 | .06 | 17.20 |
| 200 | -10.26 | .04 | 5.68 | .05 | 18.36 |
| 225 | -9.40 | .03 | 5.80 | .05 | 18.74 |
| 250 | -8.19 | .01 | 5.51 | .02 | 17.80 |
| 275 | -7.16 | .02 | 5.45 | .03 | 17.62 |
| 300 | -6.05 | .06 | 4.51 | .09 | 14.54 |
| 325 | -4.96 | .14 | 3.24 | .22 | 10.40 |
| 350 | -4.22 | .08 | 3.39 | .13 | 10.88 |
| 375 | -3.44 | .03 | 4.34 | .04 | 13.98 |
| 400 | -2.33 | .02 | 4.95 | .04 | 15.98 |
| 425 | -1.28 | .05 | 4.95 | .07 | 15.97 |
| 450 | .46 | .00 | 4.72 | .01 | 15.21 |

LOG OF 14 09 72 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

EARTH PHYSICS BRANCH HOLE NO. 158  BROCK I-20

**********

LATITUDE  77 DEGREES  59.7  MINUTES NORTH  LONGITUDE 114 DEGREES  33.9  MINUTES WEST

ELEVATION  16 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -15.91 | .00 | 8.45 | .00 | 16.80 |
| 75 | -15.12 | .14 | 9.38 | .36 | 18.67 |
| 100 | -13.51 | .14 | 8.38 | .36 | 16.67 |
| 125 | -11.83 | .08 | 7.55 | .20 | 15.01 |
| 150 | -10.33 | .13 | 7.15 | .34 | 14.20 |
| 175 | -8.54 | .08 | 6.53 | .21 | 12.97 |
| 200 | -7.37 | .10 | 6.31 | .25 | 12.51 |
| 225 | -6.64 | .04 | 5.98 | .09 | 11.86 |
| 250 | -5.95 | .04 | 5.79 | .10 | 11.48 |
| 275 | -5.22 | .04 | 5.31 | .10 | 10.51 |
| 300 | -4.49 | .00 | 4.76 | .01 | 9.42 |
| 325 | -3.90 | .02 | 4.14 | .04 | 8.19 |
| 350 | -3.23 | .03 | 3.72 | .07 | 7.35 |
| 375 | -2.52 | .04 | 4.43 | .11 | 8.76 |
| 400 | -1.14 | .02 | 4.20 | .05 | 8.30 |
| 425 | -.12 | .17 | 4.21 | .42 | 8.32 |
| 450 | 1.01 | .05 | 3.63 | .13 | 7.15 |
| 475 | 2.58 | .02 | 3.37 | .06 | 6.65 |
| 500 | 3.94 | .00 | 3.18 | .00 | 6.26 |
| 525 | 5.31 | .10 | 3.15 | .25 | 6.20 |
| 550 | 7.10 | .03 | 2.53 | .08 | 4.97 |
| 575 | 8.84 | .05 | 1.91 | .13 | 3.72 |
| 600 | 10.51 | .07 | 1.52 | .17 | 2.95 |
| 625 | 11.96 | .04 | 1.27 | .10 | 2.43 |
| 650 | 13.63 | .07 | .85 | .18 | 1.60 |
| 675 | 15.01 | .07 | .49 | .17 | .87 |

EARTH PHYSICS BRANCH HOLE NO. 165  KILAGMIOTAK F-48

**********

LATITUDE 69 DEGREES 27.5 MINUTES NORTH  LONGITUDE 134 DEGREES 11.9 MINUTES WEST

ELEVATION 20 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -8.72 | .39 | 5.49 | .68 | 39.96 |
| 75 | -8.23 | .35 | 5.14 | .61 | 37.40 |
| 100 | -8.40 | .46 | 6.53 | .81 | 47.55 |
| 125 | -8.86 | .40 | 9.28 | .71 | 67.75 |
| 150 | -8.77 | .70 | 10.86 | 1.24 | 79.41 |
| 175 | -8.25 | .60 | 10.22 | 1.05 | 74.67 |
| 200 | -7.63 | .73 | 9.54 | 1.29 | 69.69 |
| 225 | -7.03 | .66 | 8.75 | 1.15 | 63.90 |
| 250 | -6.22 | .64 | 7.70 | 1.13 | 56.19 |
| 275 | -4.62 | .50 | 5.53 | .89 | 40.20 |
| 300 | -2.22 | .24 | 2.14 | .42 | 15.35 |

EARTH PHYSICS BRANCH HOLE NO. 166  MOKKA A-02

**********

LATITUDE  79 DEGREES  32.2  MINUTES NORTH  LONGITUDE  87 DEGREES  1.2  MINUTES WEST

ELEVATION  253 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 30.5 | -13.72 | | 2.36 | | 10.75 |
| 45.7 | -13.18 | | 1.66 | | 7.52 |
| 61.0 | -12.95 | | 1.59 | | 7.20 |
| 76.2 | -12.80 | | 1.73 | | 7.84 |
| 91.4 | -12.30 | | 1.73 | | 7.84 |
| 106.7 | -11.81 | | 1.77 | | 8.01 |
| 152.4 | -10.13 | | 1.25 | | 5.58 |
| 167.6 | -9.52 | | 1.21 | | 5.42 |
| 182.9 | -9.16 | | .76 | | 3.33 |
| 198.1 | -8.40 | | .87 | | 3.81 |
| 213.4 | -7.84 | | .69 | | 3.00 |
| 228.6 | -7.37 | | .21 | | .75 |
| 243.8 | -6.92 | | .07 | | .14 |
| 259.1 | -6.46 | | .45 | | 1.88 |
| 274.3 | -6.01 | | .31 | | 1.23 |
| 289.6 | -5.63 | | .38 | | 1.55 |
| 320.0 | -4.48 | | -.35 | | -1.86 |
| 350.5 | -3.68 | | -.07 | | -.61 |
| 381.0 | -2.27 | | -.66 | | -3.31 |
| 411.5 | -1.44 | | -.76 | | -3.79 |
| 442.0 | -.65 | | -1.01 | | -4.92 |

EARTH PHYSICS BRANCH HOLE NO. 167 UNIFKAT I-22

**********

LATITUDE 69 DEGREES 11.7 MINUTES NORTH LONGITUDE 135 DEGREES 20.5 MINUTES WEST

ELEVATION 5 METERS

LOGARITHMIC RETURN TC EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 25 | -1.42 | .33 | .66 | .26 | 2.98 |
| 50 | -1.10 | .20 | 1.87 | .16 | 8.94 |
| 75 | -.34 | .12 | 2.89 | .09 | 13.95 |
| 100 | 1.00 | .13 | 3.03 | .10 | 14.60 |
| 125 | 2.21 | .13 | 3.06 | .10 | 14.77 |
| 150 | 3.25 | .18 | 2.96 | .14 | 14.29 |
| 175 | 4.30 | .16 | 2.87 | .12 | 13.82 |
| 200 | 5.50 | .15 | 2.73 | .12 | 13.14 |
| 225 | 6.47 | .18 | 2.58 | .14 | 12.42 |
| 250 | 7.27 | .18 | 2.48 | .14 | 11.92 |
| 275 | 8.00 | .20 | 2.46 | .15 | 11.80 |
| 300 | 8.57 | .15 | 2.32 | .12 | 11.12 |
| 325 | 9.19 | .10 | 2.27 | .08 | 10.88 |
| 350 | 9.79 | .11 | 2.24 | .09 | 10.76 |
| 375 | 10.48 | .12 | 2.23 | .10 | 10.70 |
| 400 | 11.17 | .09 | 2.16 | .08 | 10.37 |
| 425 | 11.73 | .06 | 2.05 | .05 | 9.79 |
| 450 | 12.13 | .10 | 2.06 | .08 | 9.85 |
| 475 | 12.67 | .10 | 2.10 | .09 | 10.04 |
| 500 | 13.30 | .09 | 2.03 | .07 | 9.72 |
| 525 | 13.85 | .09 | 1.96 | .08 | 9.35 |
| 550 | 14.70 | | 1.88 | | 8.96 |
| 575 | 15.63 | | 1.63 | | 7.73 |
| 600 | 15.97 | | 1.81 | | 8.66 |
| 625 | 16.66 | | 1.71 | | 8.14 |
| 650 | 17.26 | | 1.59 | | 7.57 |
| 675 | 17.75 | | 1.60 | | 7.58 |
| 700 | 18.27 | | 1.60 | | 7.61 |

LOG OF 03 11 73 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

EARTH PHYSICS BRANCH HOLE NO. 168  DUNDAS C-80

**********

LATITUDE 74 DEGREES 39.0 MINUTES NORTH  LONGITUDE 113 DEGREES 23.0 MINUTES WEST

ELEVATION 240 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -14.64 | | 3.22 | | 8.41 |
| 75 | -14.07 | | 3.23 | | 8.45 |
| 100 | -13.50 | | 3.37 | | 8.83 |
| 125 | -12.42 | | 3.28 | | 8.58 |
| 150 | -11.60 | | 3.30 | | 8.64 |
| 175 | -11.04 | | 3.22 | | 8.43 |
| 200 | -10.53 | | 3.41 | | 8.92 |
| 225 | -9.96 | | 3.73 | | 9.78 |
| 250 | -9.36 | | 4.18 | | 10.98 |
| 275 | -8.59 | | 4.21 | | 11.06 |
| 300 | -8.08 | | 4.46 | | 11.71 |
| 325 | -7.25 | | 4.52 | | 11.88 |
| 350 | -6.33 | | 4.33 | | 11.38 |
| 375 | -5.92 | | 4.46 | | 11.72 |
| 400 | -5.31 | | 3.91 | | 10.26 |
| 425 | -4.79 | | 4.22 | | 11.07 |
| 450 | -3.95 | | 3.75 | | 9.82 |
| 475 | -3.43 | | 3.58 | | 9.37 |
| 500 | -2.68 | | 3.16 | | 8.26 |
| 525 | -1.87 | | 3.01 | | 7.88 |
| 550 | -.93 | | 3.59 | | 9.42 |
| 575 | .12 | | 3.61 | | 9.45 |
| 600 | 1.21 | | 3.29 | | 8.61 |
| 625 | 2.42 | | 2.75 | | 7.16 |
| 650 | 3.32 | | 2.63 | | 6.85 |

EARTH PHYSICS BRANCH HOLE NO. 169  LOUISE BAY O-25

**********

LATITUDE 78 DEGREES 44.9 MINUTES NORTH  LONGITUDE 102 DEGREES 42.0 MINUTES WEST

ELEVATION 69 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -11.94 | | 6.15 | | 10.86 |
| 75 | -10.39 | | 5.61 | | 9.90 |
| 100 | -8.88 | | 5.44 | | 9.60 |
| 125 | -7.42 | | 5.59 | | 9.87 |
| 150 | -5.96 | | 5.31 | | 9.37 |
| 175 | -4.45 | | 5.10 | | 9.00 |
| 200 | -3.02 | | 5.12 | | 9.03 |
| 225 | -1.52 | | 5.07 | | 8.93 |
| 250 | .12 | | 4.74 | | 8.36 |
| 275 | 1.77 | | 4.19 | | 7.37 |
| 300 | 3.15 | | 4.32 | | 7.60 |
| 325 | 4.76 | | 3.94 | | 6.92 |
| 350 | 6.18 | | 3.96 | | 6.96 |
| 375 | 7.71 | | 3.69 | | 6.49 |
| 400 | 9.29 | | 3.15 | | 5.52 |
| 425 | 10.48 | | 3.45 | | 6.06 |
| 450 | 11.95 | | 3.28 | | 5.75 |
| 475 | 13.51 | | 3.01 | | 5.27 |
| 500 | 15.23 | | 2.50 | | 4.36 |
| 525 | 17.05 | | 2.06 | | 3.57 |
| 550 | 18.89 | | 2.05 | | 3.56 |
| 575 | 20.83 | | 1.56 | | 2.70 |
| 600 | 22.62 | | 1.17 | | 1.99 |
| 625 | 24.71 | | .63 | | 1.04 |
| 650 | 26.75 | | .48 | | .77 |

EARTH PHYSICS BRANCH HOLE NO. 170  THOR P-38

**********

LATITUDE 78 DEGREES 7.8 MINUTES NORTH  LONGITUDE 103 DEGREES 15.2 MINUTES WEST

ELEVATION 5 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -15.76 | .08 | 9.35 | .66 | 7.14 |
| 75 | -14.80 | .05 | 8.86 | .43 | 6.76 |
| 100 | -14.04 | .04 | 9.01 | .31 | 6.88 |
| 125 | -13.06 | .00 | 8.63 | .00 | 6.58 |
| 150 | -11.59 | .02 | 7.58 | .20 | 5.78 |
| 175 | -10.22 | .05 | 8.47 | .41 | 6.46 |
| 200 | -8.85 | .04 | 8.33 | .30 | 6.35 |
| 225 | -7.44 | .02 | 7.50 | .16 | 5.71 |
| 250 | -5.57 | .01 | 4.83 | .05 | 3.67 |
| 275 | -3.60 | .03 | 2.70 | .22 | 2.03 |
| 300 | -1.98 | .03 | 2.33 | .21 | 1.75 |
| 325 | -.52 | .03 | 3.92 | .21 | 2.97 |
| 350 | .95 | .04 | 5.48 | .34 | 4.17 |
| 375 | 2.38 | .05 | 5.14 | .42 | 3.90 |
| 400 | 3.63 | .02 | 5.77 | .19 | 4.39 |
| 425 | 4.91 | .04 | 6.21 | .33 | 4.72 |
| 450 | 6.27 | .07 | 6.20 | .55 | 4.72 |
| 475 | 7.54 | .08 | 6.30 | .69 | 4.79 |
| 500 | 8.72 | .09 | 6.80 | .72 | 5.18 |

EARTH PHYSICS BRANCH HOLE NO. 172  DRAKE B-44

**********

LATITUDE  76 DEGREES  23.1  MINUTES NORTH  LONGTTJDE 108 DEGREES  16.1  MINUTES WEST

ELEVATION  4 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -12.57 | | 5.08 | | 3.99 |
| 75 | -10.49 | | 4.17 | | 3.27 |
| 100 | -8.40 | | 5.22 | | 4.10 |
| 125 | -6.06 | | 4.99 | | 3.92 |
| 150 | -3.39 | | 5.82 | | 4.58 |
| 175 | -1.15 | | 5.25 | | 4.13 |
| 200 | .86 | | 5.43 | | 4.28 |
| 225 | 2.45 | | 3.04 | | 2.37 |
| 250 | 3.71 | | 3.16 | | 2.47 |
| 275 | 4.99 | | 3.50 | | 2.74 |
| 300 | 6.31 | | 2.32 | | 1.81 |
| 325 | 7.32 | | 2.59 | | 2.02 |

EARTH PHYSICS BRANCH HOLE NO. 175  GEMINI E-10

**********

LATITUDE  79 DEGREES  59.4  MINUTES NORTH  LONGITUDE  84 DEGREES  4.2  MINUTES WEST

ELEVATION  126 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -17.22 | | 8.68 | | 34.29 |
| 75 | -16.04 | | 6.35 | | 25.03 |
| 100 | -15.75 | | 7.49 | | 29.57 |
| 125 | -15.22 | | 8.23 | | 32.51 |
| 150 | -13.49 | | 7.21 | | 28.45 |
| 175 | -12.00 | | 6.70 | | 26.40 |
| 200 | -10.55 | | 6.79 | | 26.76 |
| 225 | -9.64 | | 6.85 | | 27.02 |
| 250 | -8.65 | | 6.06 | | 23.86 |
| 275 | -7.37 | | 5.71 | | 22.49 |
| 300 | -6.11 | | 4.75 | | 18.69 |
| 325 | -5.31 | | 3.90 | | 15.28 |
| 350 | -4.18 | | 3.14 | | 12.27 |
| 375 | -2.88 | | 2.07 | | 8.04 |
| 400 | -1.89 | | 1.51 | | 5.80 |
| 425 | -1.15 | | 1.57 | | 6.06 |
| 450 | -1.26 | | 3.03 | | 11.85 |
| 475 | -1.14 | | 4.69 | | 18.44 |
| 500 | .09 | | 5.04 | | 19.81 |
| 525 | 1.25 | | 5.05 | | 19.85 |
| 550 | 2.55 | | 4.99 | | 19.64 |
| 575 | 3.99 | | 4.95 | | 19.49 |
| 600 | 5.34 | | 4.93 | | 19.40 |
| 625 | 6.74 | | 4.73 | | 18.57 |
| 650 | 8.14 | | 4.52 | | 17.77 |
| 675 | 9.37 | | 4.52 | | 17.76 |
| 700 | 10.49 | | 4.30 | | 16.88 |
| 725 | 11.46 | | 4.13 | | 16.21 |
| 750 | 12.48 | | 4.00 | | 15.71 |
| 775 | 13.48 | | 3.96 | | 15.55 |
| 800 | 14.63 | | 3.71 | | 14.52 |

EARTH PHYSICS BRANCH HOLE NO. 176  YA YA P-53

**********

LATITUDE 69 DEGREES 12.8 MINUTES NORTH  LONGITUDE 134 DEGREES 42.7 MINUTES WEST

ELEVATION 36 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 25 | -7.48 | .00 | 2.99 | .00 | 8.22 |
| 50 | -7.17 | .09 | 3.60 | .19 | 9.93 |
| 75 | -6.68 | .04 | 3.82 | .09 | 10.53 |
| 100 | -6.32 | .07 | 4.62 | .15 | 12.78 |
| 125 | -5.92 | .08 | 5.73 | .16 | 15.88 |
| 150 | -5.26 | .08 | 4.71 | .17 | 13.04 |
| 175 | -5.13 | .11 | 5.60 | .24 | 15.51 |
| 200 | -4.65 | .07 | 5.18 | .15 | 14.33 |
| 225 | -4.05 | .01 | 4.52 | .01 | 12.49 |
| 250 | -3.40 | .07 | 3.81 | .14 | 10.52 |
| 275 | -2.89 | .01 | 3.23 | .02 | 8.89 |
| 300 | -2.28 | .14 | 2.48 | .30 | 6.80 |
| 325 | -1.80 | .15 | 1.83 | .31 | 4.96 |
| 350 | -1.30 | .08 | 1.11 | .17 | 2.96 |
| 375 | -.88 | .09 | .47 | .18 | 1.17 |
| 400 | -.63 | .00 | 1.01 | .01 | 2.69 |
| 425 | -.14 | .02 | 2.03 | .04 | 5.54 |
| 450 | .55 | .00 | 2.13 | .00 | 5.82 |
| 475 | 1.25 | .00 | 1.96 | .00 | 5.34 |
| 500 | 1.92 | .00 | 1.93 | .00 | 5.24 |
| 525 | 2.56 | .00 | 1.90 | .00 | 5.17 |

EARTH PHYSICS BRANCH HOLE NO. 178  PARSONS N-10

**********

LATITUDE  68 DEGREES  59.8  MINUTES NORTH  LONGITUDE 133 DEGREES  31.8  MINUTES WEST

ELEVATION  68 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -5.13 | .05 | 2.83 | .05 | 7.17 |
| 75 | -4.68 | .06 | 2.54 | .06 | 6.41 |
| 100 | -4.24 | .08 | 2.22 | .08 | 5.59 |
| 125 | -3.80 | .06 | 1.90 | .06 | 4.77 |
| 150 | -3.01 | .13 | 1.38 | .13 | 3.42 |
| 175 | -2.14 | .23 | 1.05 | .22 | 2.57 |
| 200 | -1.70 | .24 | .79 | .24 | 1.92 |
| 225 | -1.43 | .19 | .72 | .19 | 1.74 |
| 250 | -1.09 | .10 | .60 | .10 | 1.42 |
| 275 | -.72 | .09 | .46 | .09 | 1.06 |
| 300 | -.68 | .08 | .58 | .08 | 1.37 |
| 325 | -.55 | .01 | .61 | .01 | 1.43 |
| 350 | -.24 | .11 | 2.44 | .11 | 6.16 |
| 375 | .81 | .04 | 2.56 | .04 | 6.46 |
| 400 | 1.60 | .04 | 2.43 | .04 | 6.13 |
| 425 | 2.28 | .04 | 2.40 | .04 | 6.05 |
| 450 | 2.93 | .04 | 2.36 | .04 | 5.94 |
| 475 | 3.65 | .01 | 2.27 | .01 | 5.72 |
| 500 | 4.20 | .01 | 2.41 | .01 | 6.08 |
| 525 | 4.87 | .02 | 2.34 | .02 | 5.90 |
| 550 | 5.60 | .00 | 2.30 | .00 | 5.79 |

EARTH PHYSICS BRANCH HOLE NO. 179  REINDEER F-36

**********

LATITUDE 69 DEGREES 5.3 MINUTES NORTH  LONGITUDE 134 DEGREES 39.0 MINUTES WEST

ELEVATION 10 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -7.03 | .05 | 8.01 | .10 | 11.78 |
| 75 | -6.95 | .08 | 8.00 | .16 | 11.76 |
| 100 | -6.63 | .00 | 7.93 | .01 | 11.65 |
| 125 | -6.14 | .01 | 6.62 | .03 | 9.72 |
| 150 | -5.61 | .03 | 6.48 | .05 | 9.52 |
| 175 | -4.78 | .09 | 5.39 | .18 | 7.90 |
| 200 | -3.73 | .11 | 3.85 | .22 | 5.62 |
| 225 | -2.93 | .10 | 3.35 | .20 | 4.88 |
| 250 | -2.32 | .06 | 2.59 | .12 | 3.76 |
| 275 | -1.63 | .13 | 1.74 | .26 | 2.50 |
| 300 | -1.05 | .09 | 1.21 | .18 | 1.72 |
| 325 | -.59 | .01 | .67 | .02 | .92 |

EARTH PHYSICS BRANCH HOLE NO. 192  KUGPIK O-13

**********

LATITUDE  68 DEGREES  52.8  MINUTES NORTH  LONGITUDE 135 DEGREES  18.2  MINUTES WEST

ELEVATION  2 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -.75 | .19 | 1.78 | .16 | 8.90 |
| 75 | -.47 | .18 | 3.63 | .15 | 18.46 |
| 100 | .79 | .02 | 3.87 | .01 | 19.68 |
| 125 | 2.00 | .19 | 3.62 | .16 | 18.39 |
| 150 | 2.76 | .28 | 3.79 | .23 | 19.27 |
| 175 | 3.69 | .29 | 3.74 | .24 | 19.00 |
| 200 | 4.77 | .21 | 3.56 | .17 | 18.08 |
| 225 | 5.91 | .17 | 3.18 | .14 | 16.11 |
| 250 | 6.81 | .23 | 2.76 | .19 | 13.98 |
| 275 | 7.34 | .21 | 2.53 | .17 | 12.78 |
| 300 | 7.99 | .19 | 2.41 | .16 | 12.14 |
| 325 | 8.62 | .24 | 2.38 | .20 | 12.02 |
| 350 | 9.31 | .25 | 2.28 | .21 | 11.47 |
| 375 | 9.91 | .24 | 2.21 | .19 | 11.11 |
| 400 | 10.50 | .19 | 2.14 | .16 | 10.75 |
| 425 | 11.13 | .21 | 2.02 | .17 | 10.14 |
| 450 | 11.67 | .20 | 1.97 | .17 | 9.90 |
| 475 | 12.49 | .18 | 1.98 | .15 | 9.92 |
| 500 | 13.32 | .23 | 1.80 | .19 | 9.01 |
| 525 | 13.95 | .20 | 1.68 | .17 | 8.39 |

EARTH PHYSICS BRANCH HOLE NO. 193  IKHIL I-37

**********

LATITUDE 68 DEGREES 46.6 MINUTES NORTH  LONGITUDE 134 DEGREES 7.8 MINUTES WEST

ELEVATION 125 METERS

LOGARITHMIC RETURN TO EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -6.02 | 1.46 | 2.67 | .81 | 17.03 |
| 75 | -4.94 | .35 | 2.16 | .19 | 13.68 |
| 100 | -4.32 | .81 | 2.01 | .44 | 12.70 |
| 125 | -3.71 | .78 | 1.77 | .43 | 11.18 |
| 150 | -2.39 | .38 | 1.20 | .21 | 7.47 |
| 175 | -1.02 | .14 | .72 | .08 | 4.38 |
| 200 | -1.03 | .31 | .87 | .17 | 5.34 |
| 225 | -1.25 | .43 | 1.11 | .24 | 6.86 |
| 250 | -1.46 | .48 | 1.37 | .27 | 8.60 |
| 275 | -1.70 | .52 | 1.79 | .29 | 11.27 |
| 300 | -1.55 | .67 | 1.55 | .37 | 9.72 |
| 325 | -1.34 | .69 | 1.43 | .38 | 8.98 |
| 350 | .67 | .49 | 1.75 | .27 | 11.04 |
| 375 | 1.08 | .08 | 2.53 | .04 | 16.09 |
| 400 | 2.42 | .10 | 2.31 | .05 | 14.70 |
| 425 | 3.46 | .31 | 2.49 | .17 | 15.85 |
| 450 | 4.14 | .13 | 2.41 | .07 | 15.30 |
| 475 | 4.81 | .13 | 2.45 | .07 | 15.60 |
| 500 | 5.34 | .15 | 2.59 | .08 | 16.52 |
| 525 | 6.10 | .00 | 2.57 | .00 | 16.35 |

EARTH PHYSICS BRANCH HOLE NO. 194  ATIGI O-48

**********

LATITUDE 68 DEGREES 57.0 MINUTES NORTH  LONGITUDE 133 DEGREES 56.1 MINUTES WEST

ELEVATION 85 METERS

LOGARITHMIC RETURN TC EQUILIBRIUM

| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 75 | -4.17 | | -.23 | | -.38 |
| 100 | -6.35 | | 1.85 | | 2.47 |
| 125 | -6.17 | | 1.87 | | 2.50 |
| 150 | -6.15 | | 2.81 | | 3.78 |
| 175 | -5.82 | | 2.00 | | 2.67 |
| 200 | -5.01 | | 1.25 | | 1.64 |
| 225 | -5.01 | | 1.29 | | 1.69 |
| 250 | -4.91 | | 1.17 | | 1.54 |
| 275 | -4.63 | | .99 | | 1.29 |
| 300 | -4.38 | | .93 | | 1.21 |
| 325 | -4.42 | | 1.96 | | 2.62 |
| 350 | -4.32 | | 1.77 | | 2.36 |
| 375 | -3.73 | | .90 | | 1.17 |
| 400 | -3.40 | | 1.24 | | 1.63 |
| 425 | -3.12 | | 1.51 | | 2.00 |
| 450 | -2.68 | | 1.13 | | 1.48 |
| 475 | -1.96 | | .75 | | .96 |
| 500 | -1.46 | | .61 | | .76 |
| 525 | -1.13 | | .55 | | .68 |
| 550 | -.54 | | .34 | | .40 |

EARTH PHYSICS BRANCH HOLE NO. 198  DRAKE D-68

**********

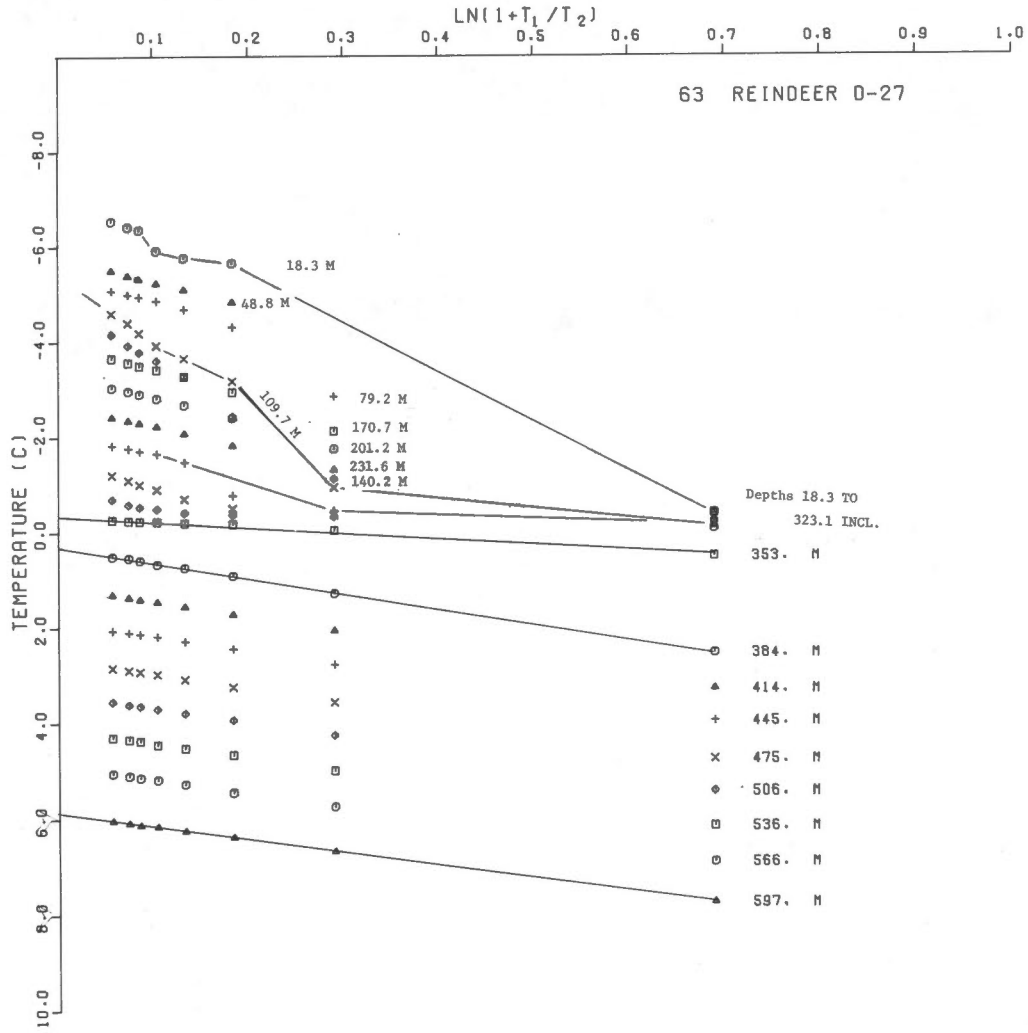
LATITUDE 76 DEGREES 27.1 MINUTES NORTH  LONGITUDE 108 DEGREES 55.7 MINUTES WEST

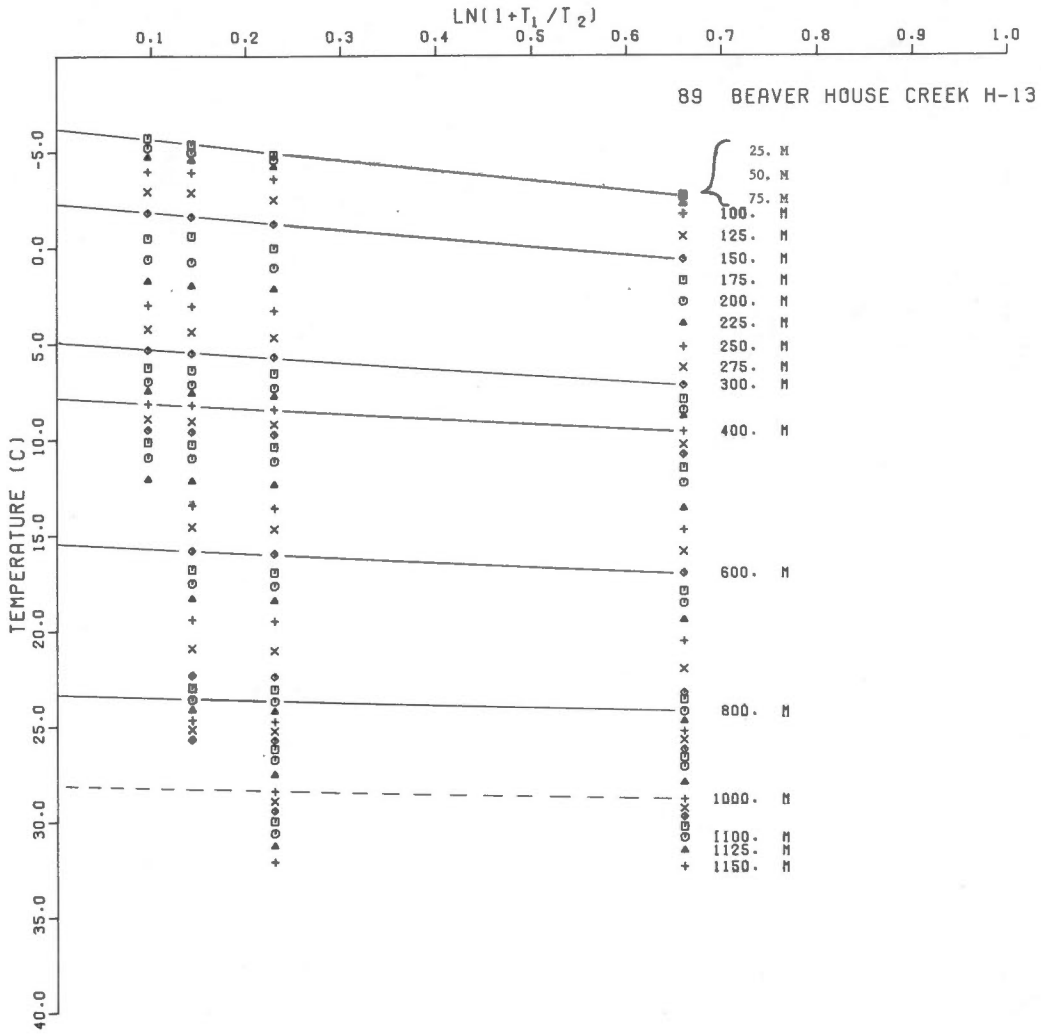
ELEVATION 37 METERS

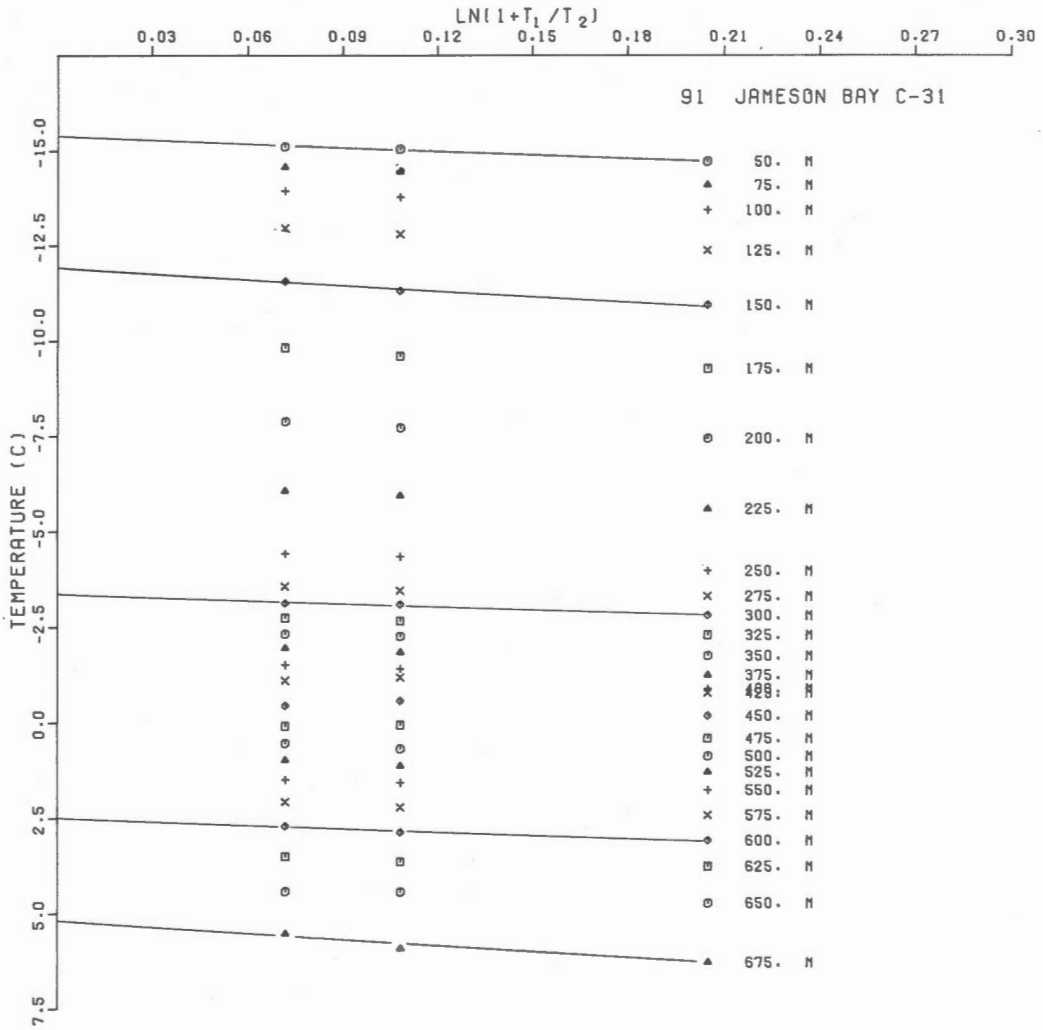
LOGARITHMIC RETURN TO EQUILIBRIUM

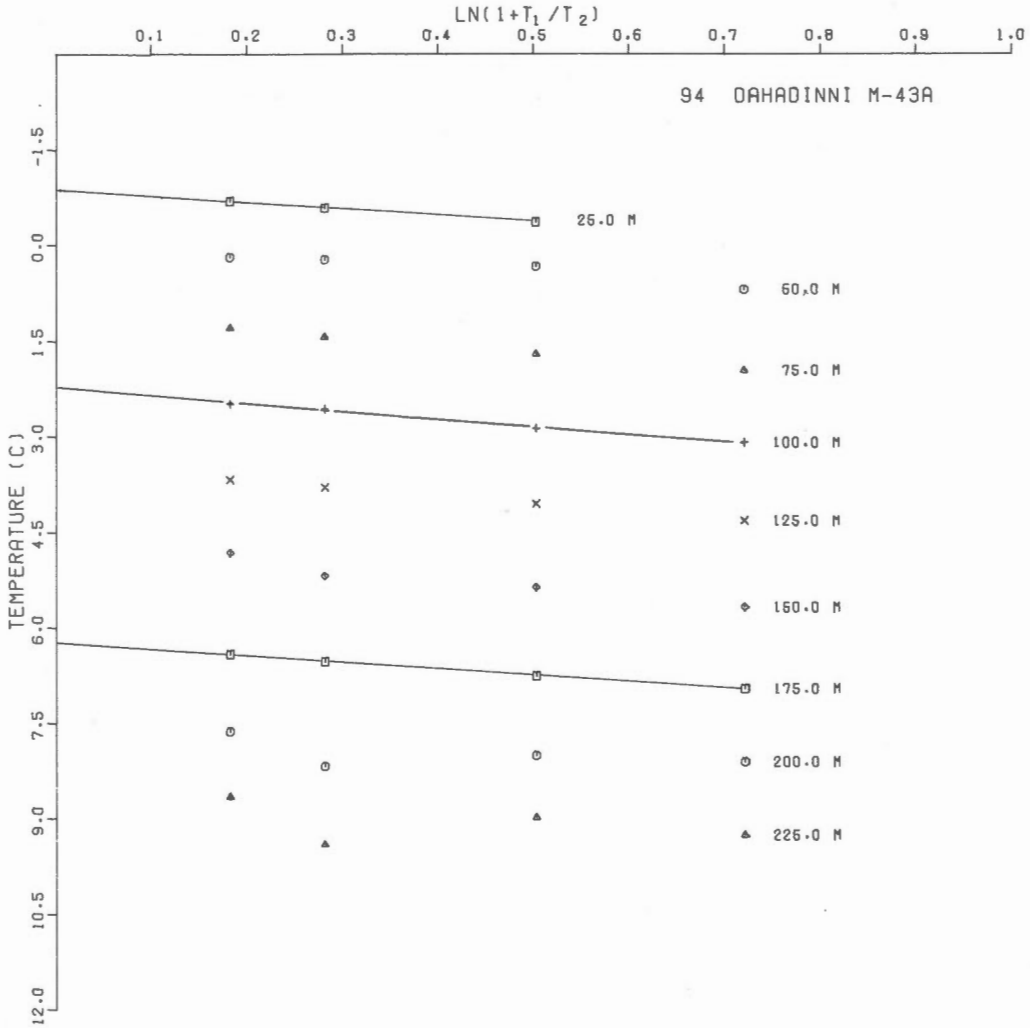
| DEPTH (M) | EQUILIBRIUM TEMPERATURE (C) | DELTA T(EQ) (C) | SOURCE FUNCTION (C) | DELTA S.F. (C) | TIME TO T(EQ)+0.1 (YEARS) |
|---|---|---|---|---|---|
| 50 | -13.03 | | 5.03 | | 39.68 |
| 75 | -9.31 | | 3.62 | | 28.45 |
| 100 | -5.92 | | 2.65 | | 20.70 |
| 125 | -3.11 | | 1.51 | | 11.62 |
| 150 | -3.52 | | 2.30 | | 17.95 |
| 175 | -4.53 | | 3.65 | | 28.73 |
| 200 | -4.37 | | 3.72 | | 29.30 |
| 225 | -3.39 | | 3.50 | | 27.53 |
| 250 | -1.36 | | 3.53 | | 27.71 |
| 275 | 1.01 | | 3.64 | | 28.64 |
| 300 | 2.55 | | 3.41 | | 26.81 |
| 325 | 3.94 | | 3.24 | | 25.40 |
| 350 | 5.02 | | 3.20 | | 25.13 |
| 375 | 6.20 | | 3.12 | | 24.46 |
| 400 | 7.18 | | 3.07 | | 24.08 |
| 425 | 8.47 | | 2.64 | | 20.65 |
| 450 | 9.19 | | 2.72 | | 21.26 |
| 475 | 10.01 | | 2.64 | | 20.63 |
| 500 | 11.14 | | 2.62 | | 20.51 |
| 525 | 11.94 | | 2.75 | | 21.49 |
| 550 | 13.47 | | 2.41 | | 18.82 |
| 575 | 14.56 | | 2.38 | | 18.59 |

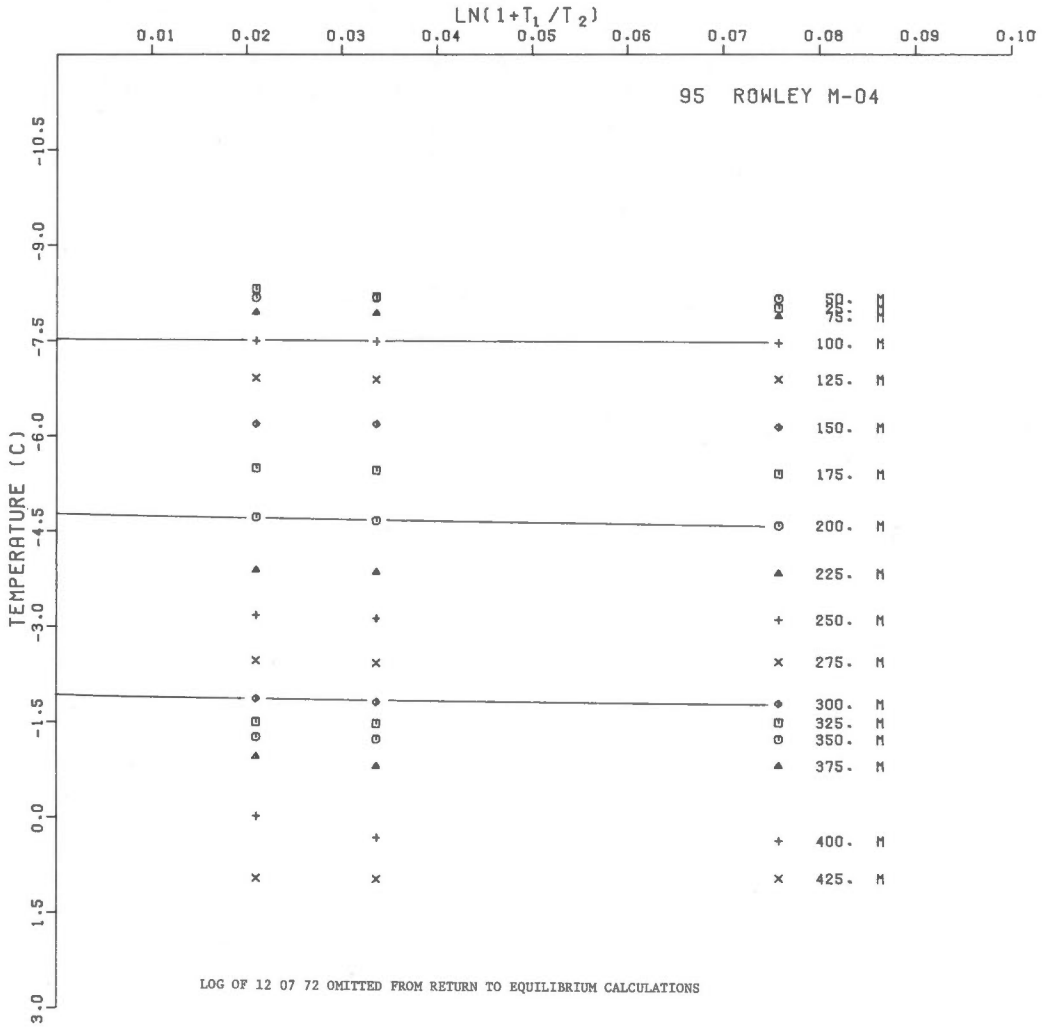
## 3.4 Graphs of the Return to Thermal Equilibrium


LN(1+T1 /T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
63 REINDEER 0-27
TEMPERATURE (C)
-8.0
-6.0
-4.0
-2.0
0.0
2.0
4.0
6.0
8.0
10.0
18.3 M
48.8 M
109.7 M
79.2 M
170.7 M
201.2 M
231.6 M
140.2 M
Depths 18.3 TO
323.1 INCL.
353. M
384. M
414. M
445. M
475. M
506. M
536. M
566. M
597. M

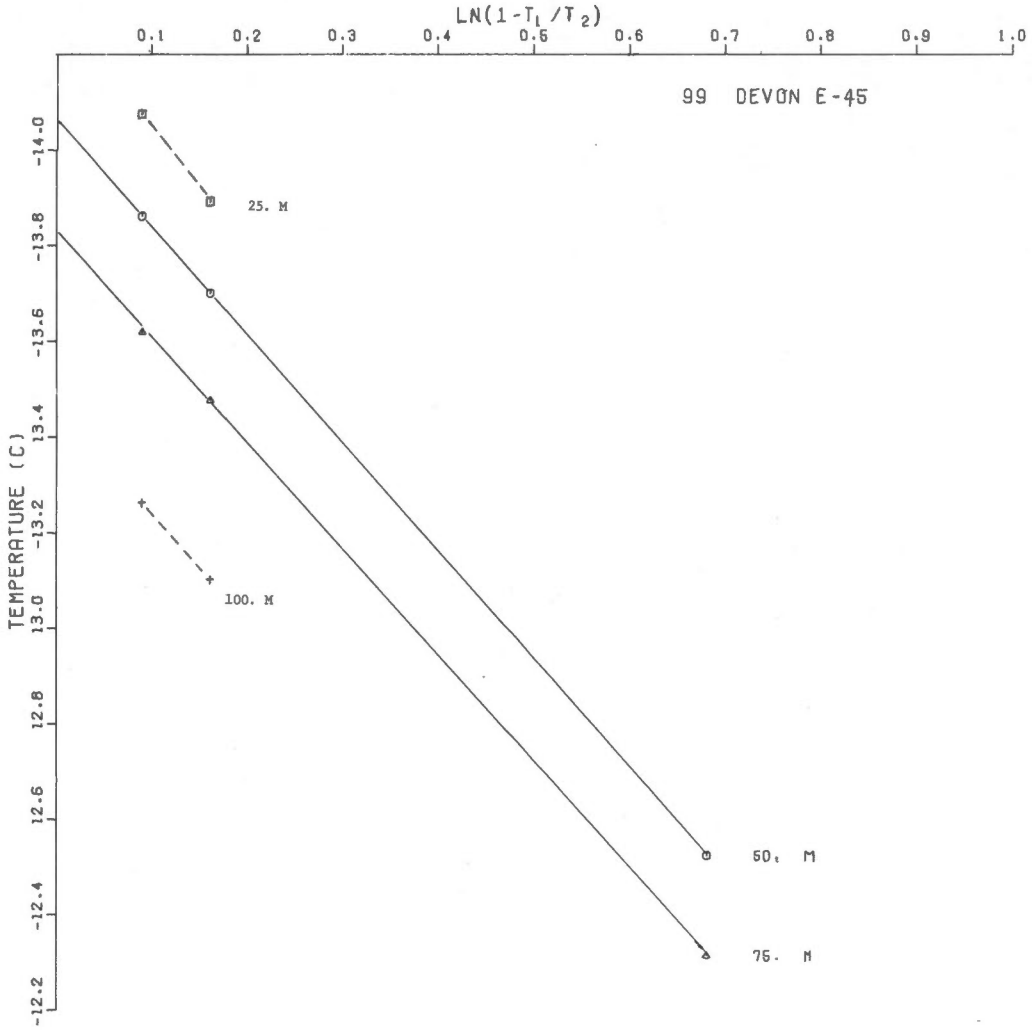

LN(1+T1/T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
89 BEAVER HOUSE CREEK H-13
TEMPERATURE (C)
-5.0
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
25. M
50. M
75. M
100. M
125. M
150. M
175. M
200. M
225. M
250. M
275. M
300. M
400. M
600. M
800. M
1000. M
1100. M
1125. M
1150. M

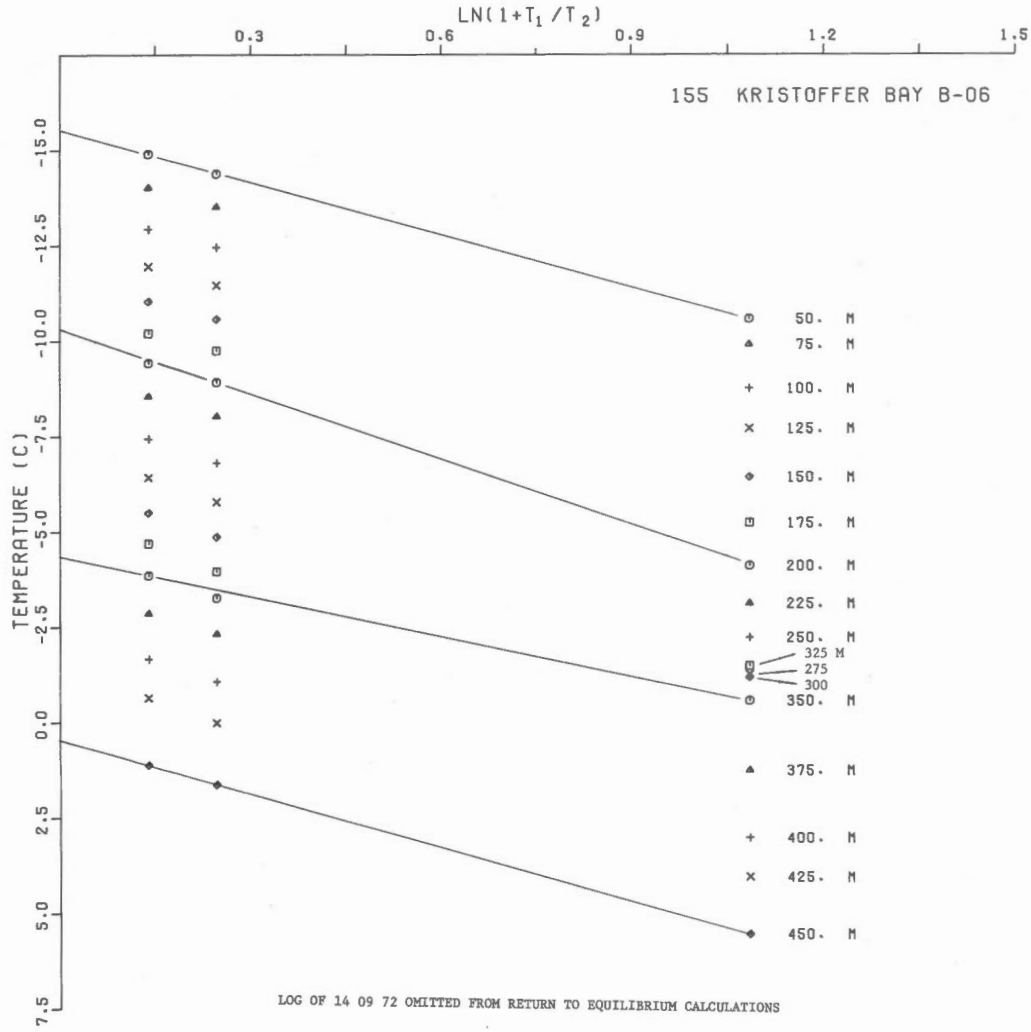

LN(1+T1 /T2)
0.03
0.06
0.09
0.12
0.15
0.18
0.21
0.24
0.27
0.30
91 JAMESON BAY C-31
TEMPERATURE (C)
-15.0
-12.5
-10.0
-7.5
-5.0
-2.5
0.0
2.5
5.0
7.5
50. M
75. M
100. M
125. M
150. M
175. M
200. M
225. M
250. M
275. M
300. M
325. M
350. M
375. M
450. M
475. M
500. M
525. M
550. M
575. M
600. M
625. M
650. M
675. M


LN(1+T1 /T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
94 DAHADINNI M-43A
TEMPERATURE (C)
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
9.0
10.5
12.0
25.0 M
50.0 M
75.0 M
100.0 M
125.0 M
150.0 M
175.0 M
200.0 M
225.0 M

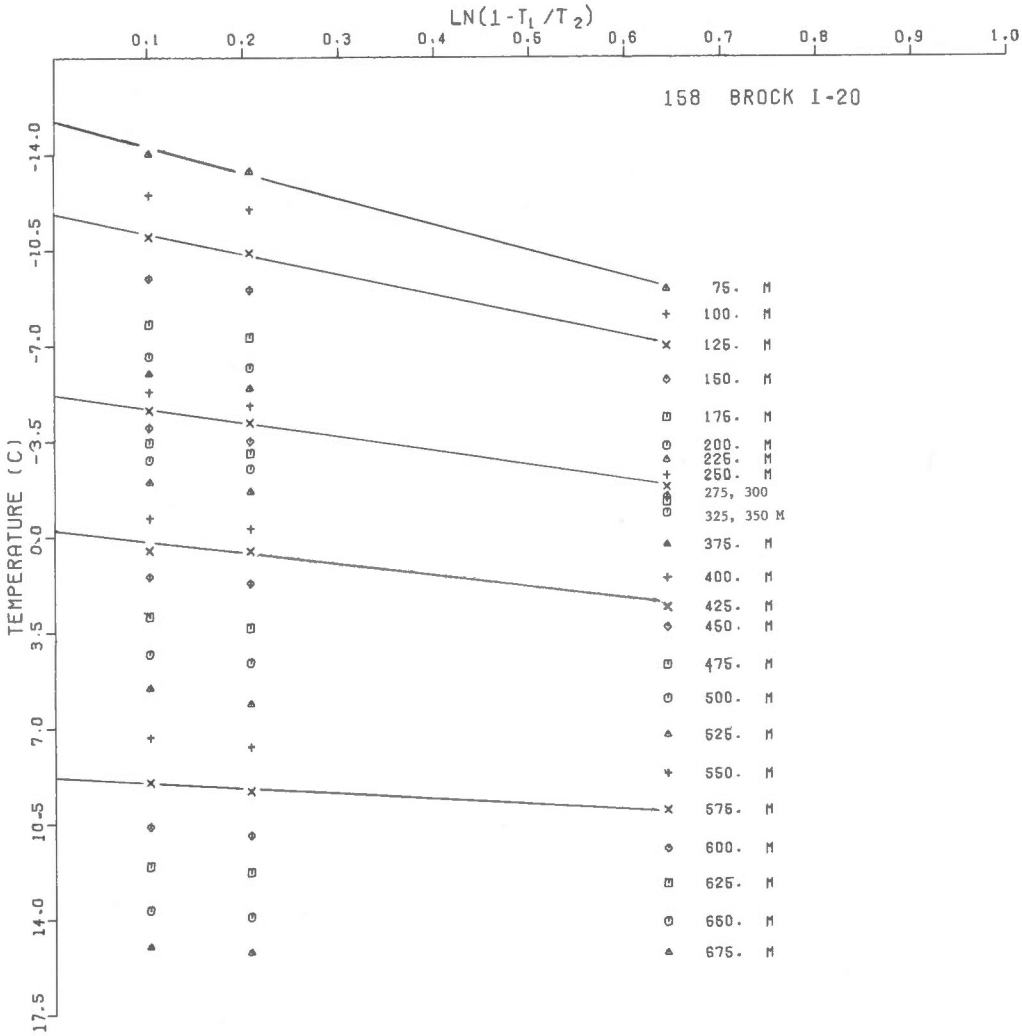


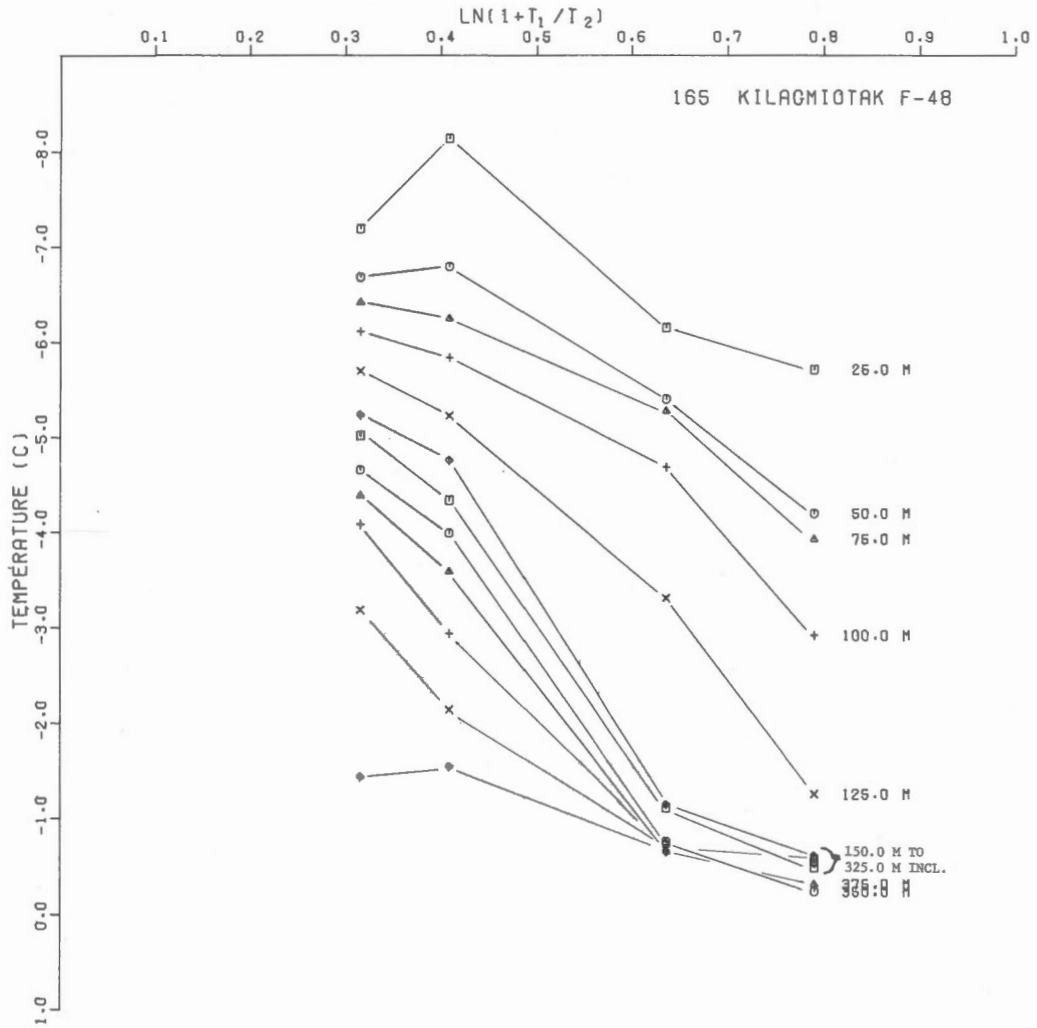

LOG OF 12 07 72 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

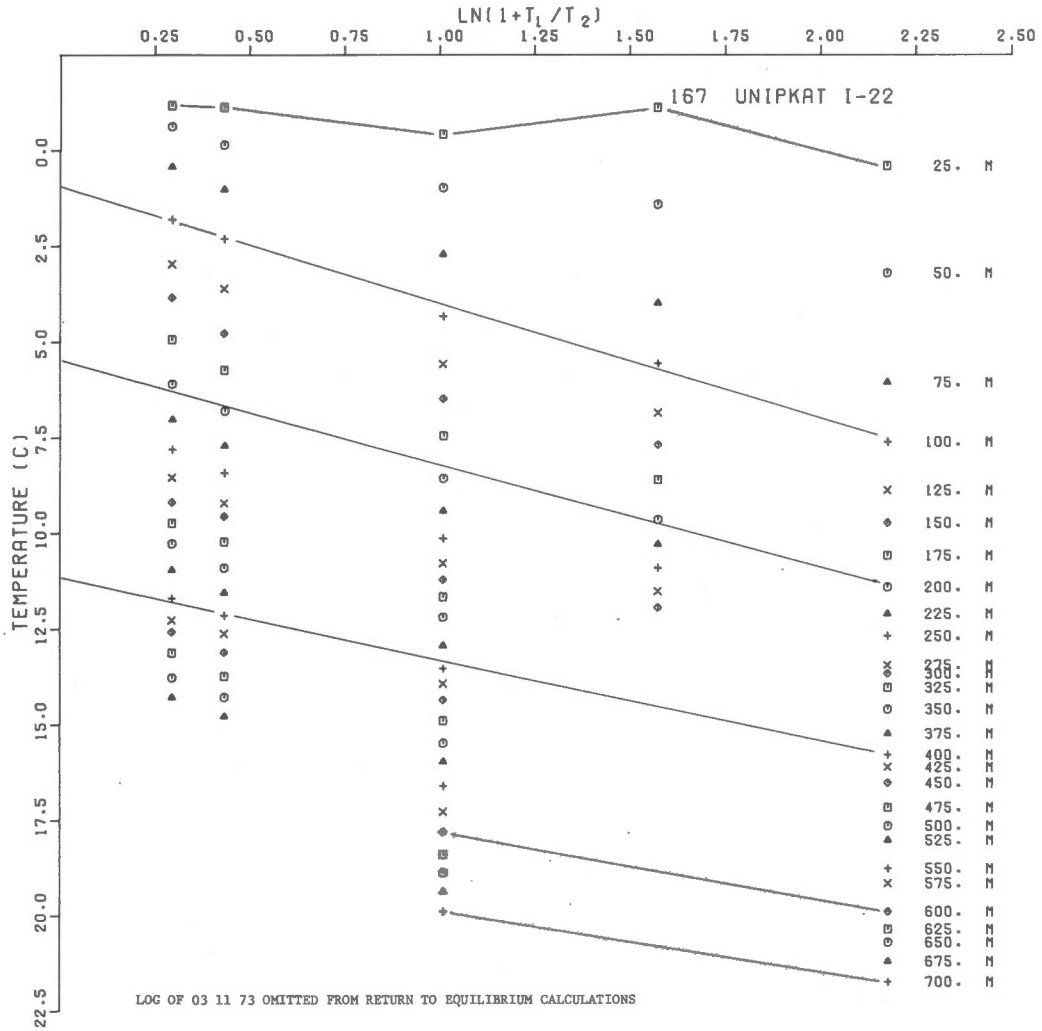

LN(1-T1/T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
99 DEVON E-45
TEMPERATURE (C)
-14.0
-13.8
-13.6
13.4
-13.2
13.0
12.8
12.6
-12.4
-12.2
25. M
100. M
50. M
75. M



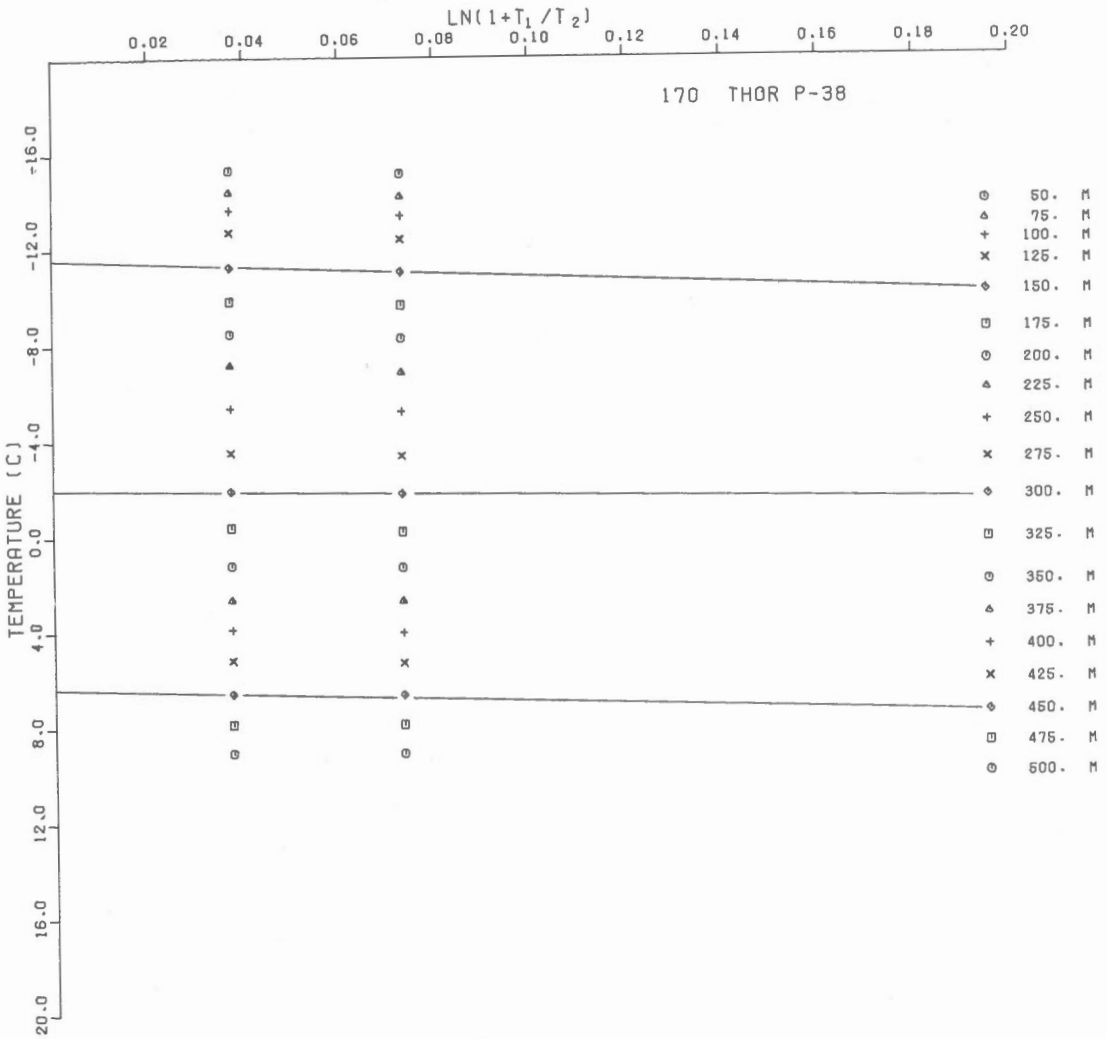

LOG OF 14 09 72 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

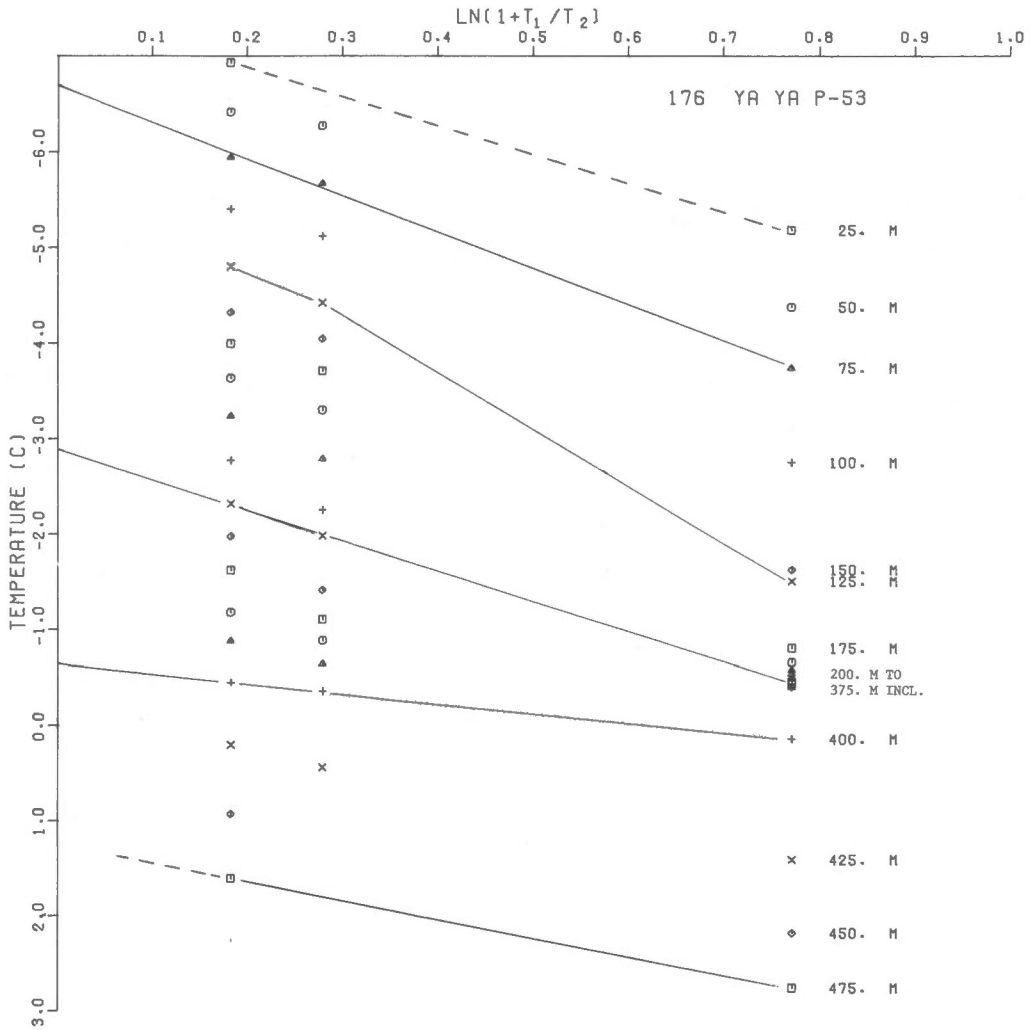

LN(1-T_L/T_2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
158 BROCK I-20
TEMPERATURE (C)
-14.0
-10.5
-7.0
-3.5
0.0
3.5
7.0
10.5
14.0
17.5
75. M
100. M
125. M
150. M
175. M
200. M
225. M
250. M
275, 300
325, 350 M
375. M
400. M
425. M
450. M
475. M
500. M
525. M
550. M
575. M
600. M
625. M
650. M
675. M

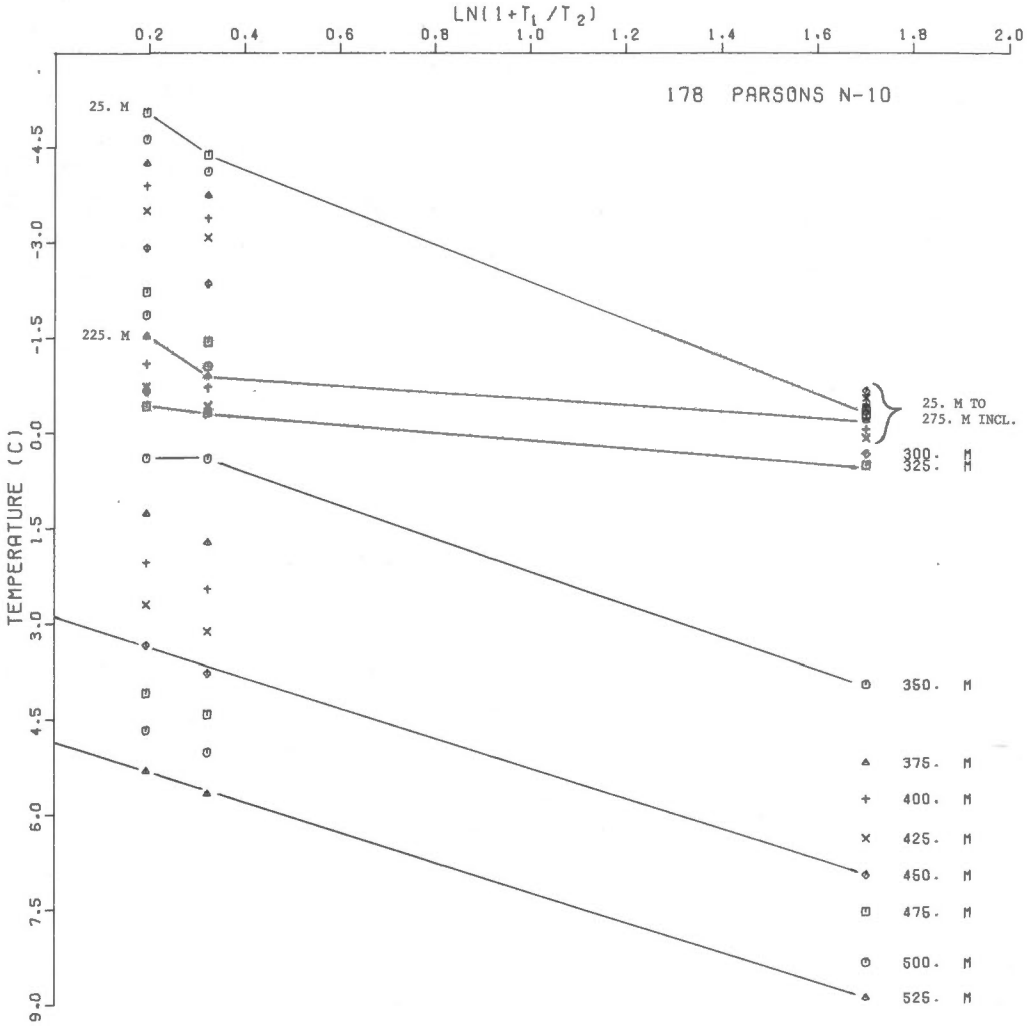

LN(1+T1/T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
165 KILAGMIOTAK F-48
TEMPERATURE (C)
-8.0
-7.0
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
25.0 M
50.0 M
75.0 M
100.0 M
125.0 M
150.0 M TO
325.0 M INCL.
375.0 M
350.0 M

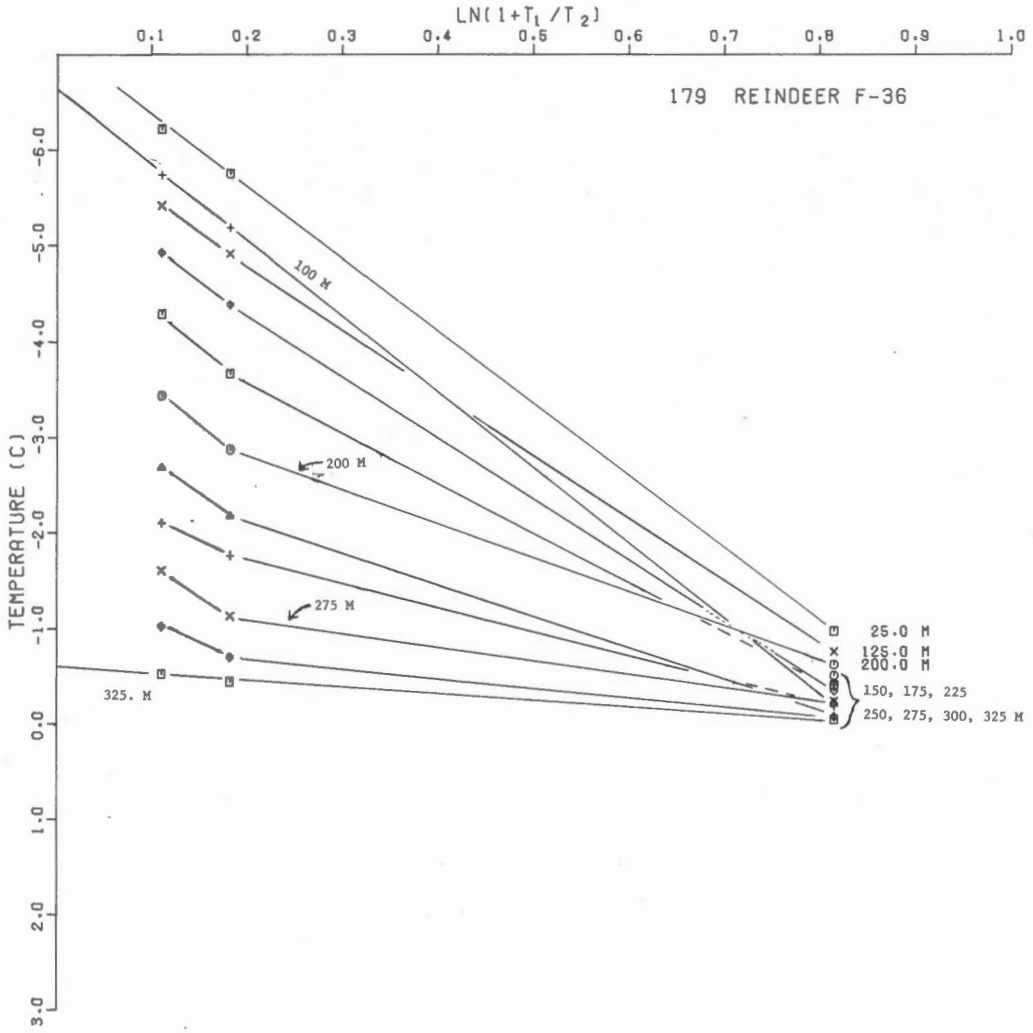


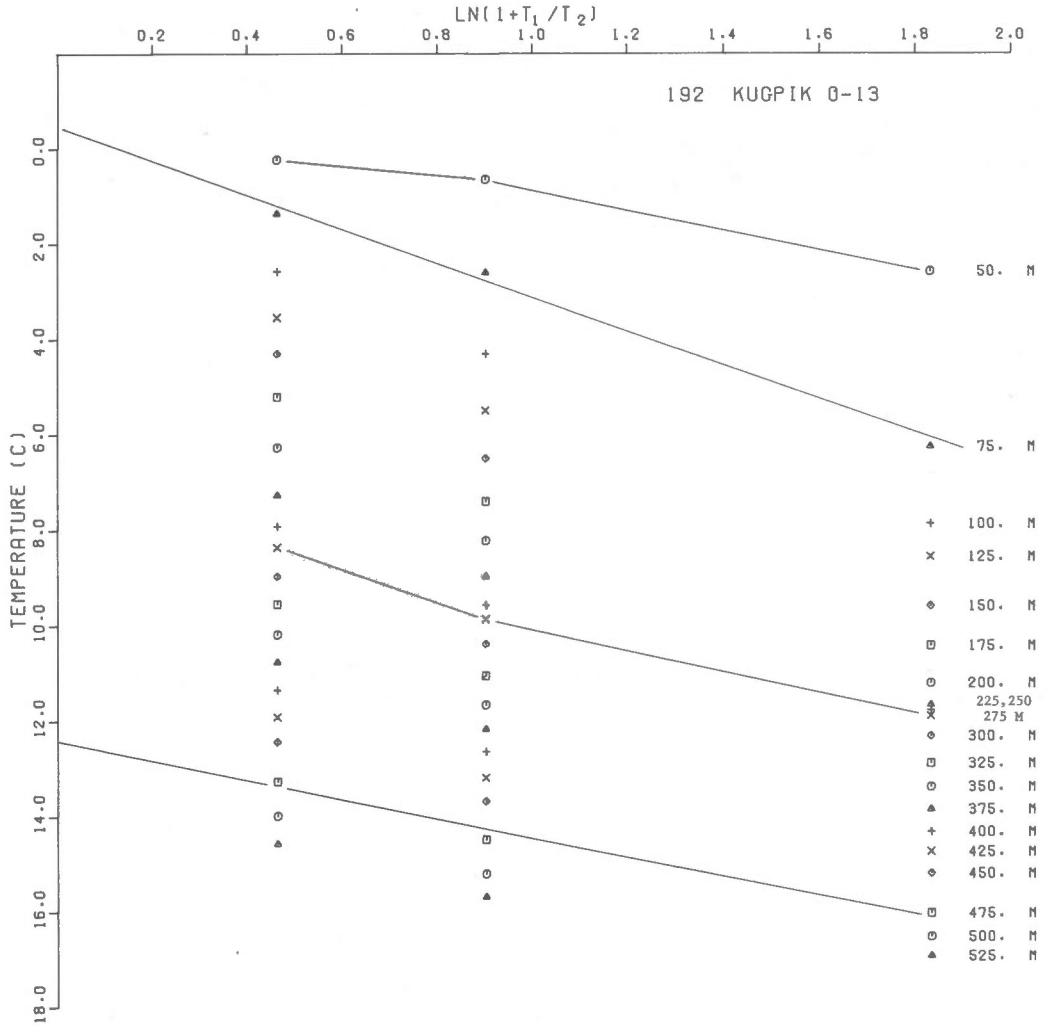

LOG OF 03 11 73 OMITTED FROM RETURN TO EQUILIBRIUM CALCULATIONS

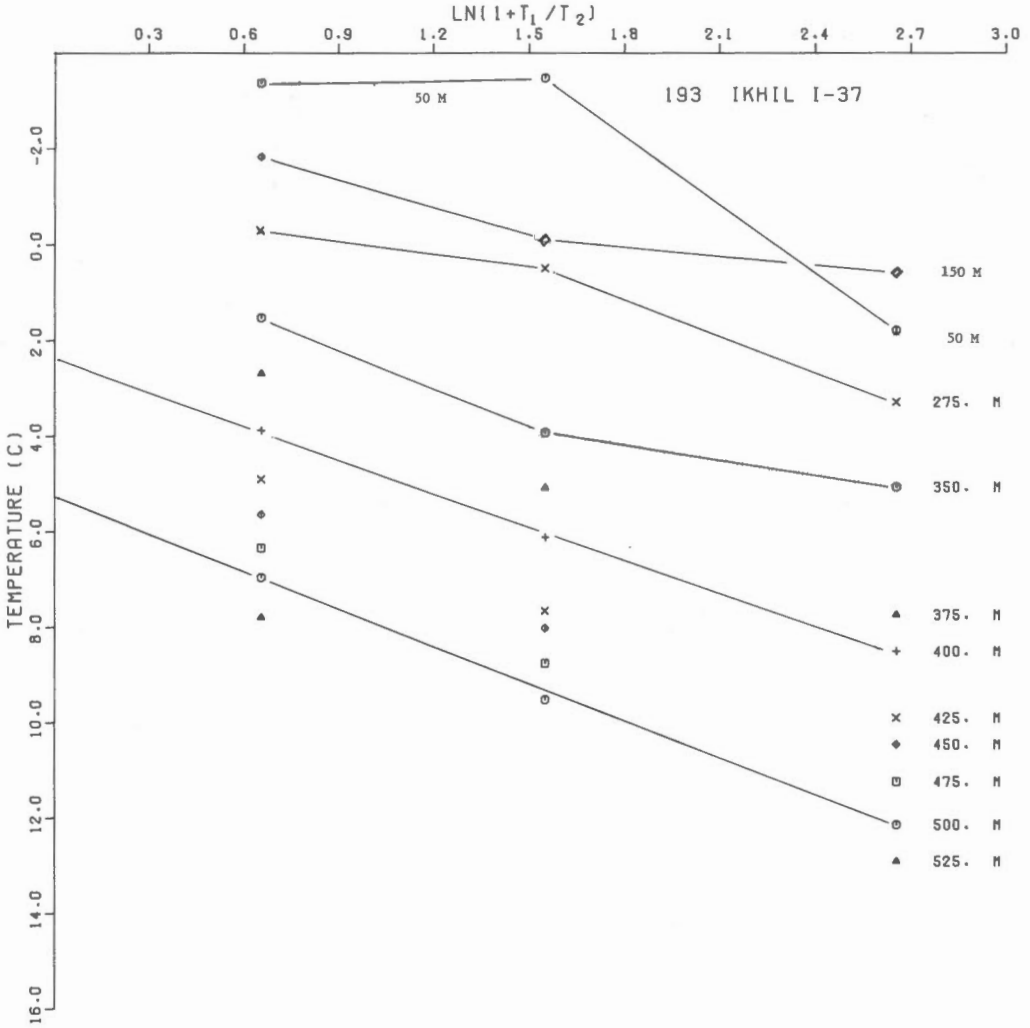

LN(1+T1 /T2)
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
0.18
0.20
170 THOR P-38
TEMPERATURE (C)
-16.0
-12.0
-8.0
-4.0
0.0
4.0
8.0
12.0
16.0
20.0
50. M
75. M
100. M
125. M
150. M
175. M
200. M
225. M
250. M
275. M
300. M
325. M
350. M
375. M
400. M
425. M
450. M
475. M
500. M


LN(1+T1 /T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
176 YA YA P-53
TEMPERATURE (C)
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
25. M
50. M
75. M
100. M
150. M
125. M
175. M
200. M TO
375. M INCL.
400. M
425. M
450. M
475. M


LN(1+T1/T2)
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
178 PARSONS N-10
TEMPERATURE (C)
-4.5
-3.0
-1.5
0.0
1.5
3.0
4.5
6.0
7.5
9.0
25. M
225. M
25. M TO
275. M INCL.
300. M
325. M
350. M
375. M
400. M
425. M
450. M
475. M
500. M
525. M


LN( 1+T1 /T2)
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
179 REINDEER F-36
TEMPERATURE (C)
-6.0
-5.0
-4.0
-3.0
-2.0
-1.0
0.0
1.0
2.0
3.0
100 M
200 M
275 M
325. M
25.0 M
125.0 M
200.0 M
150, 175, 225
250, 275, 300, 325 M


LN(1+T1 /T2)
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
192 KUGPIK 0-13
TEMPERATURE (C)
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
18.0
50. M
75. M
100. M
125. M
150. M
175. M
200. M
225,250
275 M
300. M
325. M
350. M
375. M
400. M
425. M
450. M
475. M
500. M
525. M


LN(1+T1/T2)
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
193 IKHIL I-37
50 M
TEMPERATURE (C)
-2.0
0.0
2.0
4.0
6.0
8.0
10.0
12.0
14.0
16.0
150 M
50 M
275. M
350. M
375. M
400. M
425. M
450. M
475. M
500. M
525. M