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**SUBSURFACE TEMPERATURE DATA FROM WELLS NORTH OF SIXTY  
YUKON - NORTHWEST TERRITORIES**

**GEOTECH Ltd.  
4500 - 5th Street N.E.  
Calgary, Alberta  
T2E 7C3**

**Earth Physics Branch Open File Number 84-28  
Dossier public de la Direction de la Physique du Globe No. 84-28**

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#### ABSTRACT

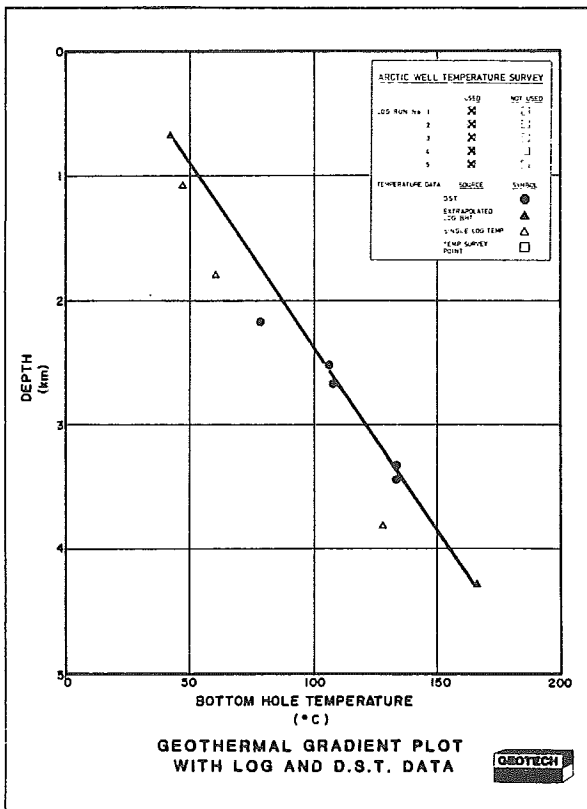
The report details bottom-hole and drill-stem test temperature data acquired in 548 wells in the Yukon and the western North West Territories including the Mackenzie Valley. Processed data is presented as temperature depth plots for each well and contoured maps constructed depicting the regional variation of temperatures at depths of 1,2,3,4 km and the mean temperature gradients. Subsurface temperatures are generally cooler away from the margin of the Mackenzie Mountains, isotherms approximately paralleling the geologic features. High temperature areas close to 160°C at 4 km are centered at Trout Lake just north of 60°N and 124°W in N.W.T. and close to the Snake River in Yukon at 65°40'N and 135°W.

#### RÉSUMÉ

Les températures acquises durant les essais aux tiges et les essais de fonds de puits sont détaillées pour 548 puits dans le Yukon et l'ouest des Territoires du Nord-Ouest, y compris la vallée du fleuve Mackenzie. Les données traitées sont présentées sous forme de profile de la température en fonction de la profondeur pour chaque puits, et de cartes en courbe de niveau montrant la variation régionale de la température aux profondeurs de 1,2,3,4 km et la variation des gradients thermiques moyens. Les températures souterraines s'abaissent en général à mesure que l'on s'éloigne de la marge de la Chaîne de Montagnes Mackenzie et les isothermes sont plus ou moins parallèles aux grands traits géologiques. Les régions de température élevée (près de 160°C à 4 km de profondeur) se situent autour du lac Trout juste au nord de 60°N de latitude et 124°W de longitude dans les T.N.O., et près de la rivière Snake au Yukon (65°40':N et 135°W).

# SUBSURFACE TEMPERATURE DATA

## FROM WELLS NORTH OF SIXTY YUKON - NORTH WEST TERRITORIES

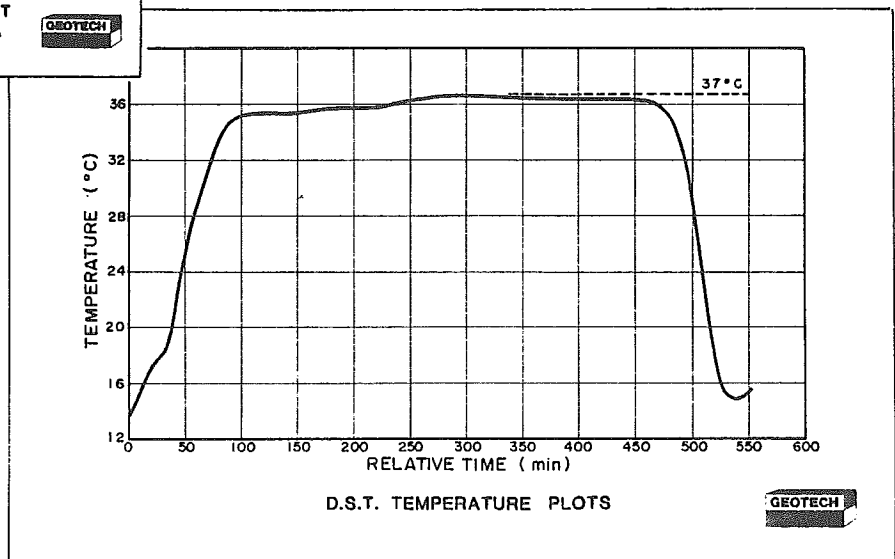


PREPARED FOR :

**EARTH PHYSICS BRANCH  
DEPARTMENT OF ENERGY,  
MINES AND RESOURCES**

OTTAWA, CANADA

MARCH 1984



March 30, 1984



Department of Energy, Mines & Resources  
Earth Physics Branch  
No. 1 Observatory Crescent,  
OTTAWA, Ontario  
K1A 0Y3

ATTENTION: DR. A. JUDGE

Dear Dr. Judge:

GEOTECH is pleased to submit our final report, in six copies, for "The Collection of Subsurface Temperatures from Wells North of Sixty", D.S.S. File No. 23SQ.23235-3-1134. Included with these copies of the report we are enclosing, under separate cover, two copies of: all raw data sheets for open hole logs and drill stem tests, the Horner extrapolation plots and calculation sheets, and the temperature logs used in the study (Appendix B, Volumes 1-6).


Also, all log and D.S.T. data were loaded on magnetic computer tape. A copy of this tape and the data format documentation have been sent with this report.

The optional part of this project regarding integration of results from a similar study by the University of Alberta covering southern Saskatchewan and Manitoba could not be addressed in the scope of this work. The two study areas were too far apart to warrant correlation of trends. However, the University of Alberta report was reviewed and it was concluded that further interpretation of the open hole data, i.e. Horner plots, integration of DST data, etc., as conducted in this study could improve the accuracy of the results for this area.

This fulfills GEOTECH's contractual obligation for this project. Useful and interesting results were obtained from this study and good correlation was obtained between this and GEOTECH's 1983 study: "Subsurface Temperature Data From Arctic Wells".

GEOTECH appreciates the opportunity to continue its service to the Earth Physics Branch and trust the enclosed data will meet your needs. If there are any questions regarding this project please feel free to call us.

Yours sincerely,  
tti GEOTECHnical resources ltd.,

  
A. Matiiisen,  
President

**tti GEOTECHnical resources ltd.**

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128





SUBSURFACE TEMPERATURE DATA

FROM WELLS NORTH OF SIXTY

YUKON-NORTHWEST TERRITORIES

Prepared for:

EARTH PHYSICS BRANCH

Department of Energy, Mines and Resources

OTTAWA, Canada

MARCH, 1984

*tti GEOTECH*nical resources *ltd.*

4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128

ACKNOWLEDGEMENTS

**GEOTECH** wishes to acknowledge the work of Dr. W.F. Bawden, P.Eng., in the 1983 study "Subsurface Temperature Data from Arctic Wells".

Much time and organizational effort was saved by having procedures already established which could be utilized in this study.

The co-operation of Riley's Datashare International Limited and Canadian Hydrodynamics Limited in supplying the majority of the raw data was vital to the project. Also, the assistance of operators including Esso Resources Canada Limited, Paramount Resources Limited and Forward Resources Limited in providing temperature data is recognized.

SUMMARY

This project, similar in principle and procedure to the 1983 **GEOTECH** study for the Department of Earth Physics, is a compilation and interpreted presentation of subsurface temperature data from wells drilled by the petroleum industry in the Yukon and western Northwest Territories.

Subsurface temperature data obtained from open hole well log headers, drill stem tests and temperature surveys were used to derive depth versus temperature graphs where possible for each of the 548 wells examined during the study. Where available from these graphs, temperatures at 1,2,3 and 4 kilometer depths and the value of the assumed linear geothermal gradient were used to develop corresponding contoured isotherm plots and a geothermal gradient contour plot.

This report contains discussions of the petroleum industry operations from which all data were obtained, the theory and procedures of data analysis, reduction and presentation, and the results of the study. Factors related to temperature data applicabilty, quality and distribution from hydrocarbon wells in general, and to this project specifically are also discussed.



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## 1.0 INTRODUCTION

tti **GEOTECH**ical resources ltd. (**GEOTECH**), of Calgary, Alberta was contracted in January of 1984 by the Earth Physics Branch, Department of Energy, Mines and Resources, Ottawa, to collect and collate all available subsurface temperature observations from hydrocarbon wells in the Western Sedimentary Basin of the Yukon-Northwest Territories, (D.S.S. File No. 23SQ.23235-1134). This project is an extension of a similar study submitted by **GEOTECH** in April, 1983 covering the Mackenzie Delta - Beaufort Sea and Arctic Island regions (D.S.S. File No. 15 SQ 23235-2-0615)<sup>(1)</sup>. Because of the similarity of the two projects parts of the text of this report have been taken from the 1983 report.

The study area is bounded by the 60th and 68th parallels of latitude and the 112th and 141st meridians of longitude. This study area and those of the 1983 project are shown in Figure 1.1. A total of 548 wells were considered in this study.

The three major data sources from oil industry well drilling operations are:

- bottom hole temperature measurements taken during well logging,
- formation fluid temperature measured during drill stem testing, and,

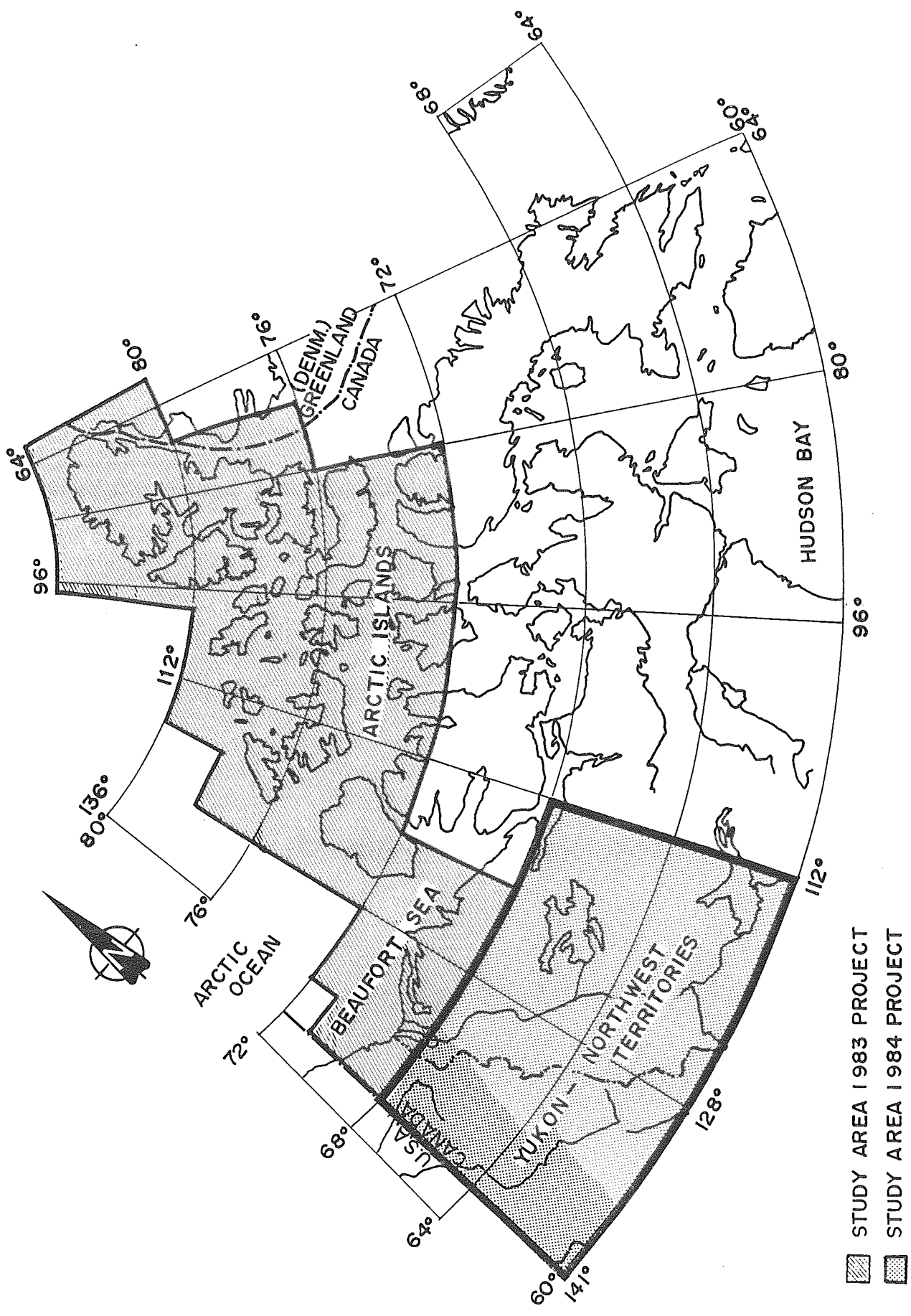


- temperature survey logs.

Processed data for each well was presented as a depth versus temperature graph. Where warranted by the data, the temperature at 1,2,3 and 4 kilometer depths was transferred to corresponding maps on which isotherms were contoured. Also, where warranted, the geothermal gradient ( $^{\circ}\text{C}/\text{km}$ ) was calculated and used to produce a gradient contour map.

A discussion and analysis of the contour maps which are the essence of this project is given. Integration of the results of this project with the 1983 work is also presented. A computer tape of all the raw data obtained under this contract was prepared. The data tape is discussed further in a separate section.

Each copy of this report includes all the contour maps and the depth versus temperature plots. All raw data, Horner temperature plots and calculation sheets are bound separately in six volumes as Appendix B to this report.



LOCATION MAP

FIGURE 1.1

## 2.0 DATA BASE

The Schedule of Wells for the Northwest Territories and Yukon Territory compiled by the Ministry of Indian and Northern Affairs, Oil and Gas Resources Evaluation Division was used as the master list of wells drilled in the study area. With the most recent addendums, the Schedule of Wells provided an up-to-date list of wells as of December 1983. A total of 766 wells were listed in the Schedule of Wells for this study area. Of these, 548 were considered in this study.

Wells included in this study were all those for which the Schedule of Wells indicates either open hole logs or drill stem tests (DST's) or both were run. The list of wells included in this study is given in Table 2.1. Figure 2.1 (folded in pocket at the end of this report) shows the location of the wells listed in Table 2.1.

Wells not included from the Schedule of Wells were those in which neither logs nor DST's were run; that is, no temperature data was available from such wells. These wells were typically "strat test" holes or core holes. Only 36 such wells in the Schedule were excluded outside the Norman Wells grid.

The Norman Wells grid (65-20-126-45) required special attention because numerous wells have been drilled in a relatively



small area. The Schedule of Wells indicates some 200 wells have been drilled. For practical purposes in this study only a limited selection from all the wells drilled could be included. The selection of wells was governed by the following factors:

- depth - very few wells are deeper than 800m T.D. and the deepest wells were preferred,
- verticality - vertical wells were preferred,
- availability and quality of data - wells in which both logs and DST's were run were preferred, and
- date of completion - more recent wells have better data quality.

Any further analysis of all wells in this grid would add little, if any, new information to this study, primarily because of the limited depth of the typical well. Even with the 18 wells selected considerable repetition of information was noted. However, this improves confidence in the data in this particular area.

The data base for this study was organized, like the Schedule of Wells, according to the Grid Survey System. Wells are grouped by 10 minutes of latitude and by 15 minutes of longitude wide grids. Within any 10 minute by 15 minute grid, the alphanumeric unit and section label was used to sort and identify each well.

In the list of wells (Table 2.1) the availability and type of temperature data is indicated by an "X" under the appropriate column, "Logs" or "DST". An "X" means at least one temperature/depth data point was obtained from the indicated source. A blank entry indicates that logs or DST's were run but no temperature/depth data could be obtained.

All data points obtained were plotted on a depth versus temperature graph, one graph for each well. If no usable or reliable data points could be obtained from a well a graph was not prepared.

Temperature data for all but a few wells were obtained via the data bank of services of Riley's Datashare International Limited and Canadian Hydrodynamics Limited, both of Calgary. Data for a few recent wells still on confidential status was obtained with the co-operation of the operators.

Temperature surveys were obtained from Riley's Datashare. Only three were useful for the purposes of this study (see discussion in Section 4.3) and copies of these surveys are included in Appendix B, Volume 6.

TABLE 2.1

Temp. Data Source  
LOG DST

ID Code	Bands	Well Name	Latitude	Longitude	Temp. Data Source
D16	060-10	MIAMI AMOCO E CAMERON D16	060/05/08.000/N	116/33/31.000/W	X
E69	060-10	CANSO N. CAMERON HILLS E69	060/08/24.240/N	116/57/47.790/W	X X
H34	060-10	CANSO N. CAMERON HILLS H34	060/03/17.250/N	116/51/03.400/W	X X
B13	060-10	PARAMOUNT H.B. CAMERON B13	060/02/15.000/N	117/02/48.000/W	X
J12	060-10	H.B. CAMERON R. J12	060/01/30.200/N	117/02/22.560/W	X
J76	060-10	PARAMOUNT CAMERON J76	060/05/39.000/N	117/13/56.000/W	X
M31	060-10	PARAMOUNT CAMERON HILLS M31	060/00/55.970/N	117/07/22.300/W	X
F51	060-10	H.B. CAMERON HILLS F51	060/00/15.430/N	117/25/31.610/W	X
J11	060-10	PARAMOUNT DOKE CAMERON J11	060/00/40.000/N	117/17/40.000/W	X
J62	060-10	PARAMOUNT H.B. CAMERON J62	060/01/31.000/N	117/26/50.000/W	X
N24	060-10	H.B. CAMERON N24	060/03/35.000/N	117/19/55.850/W	X
A05	060-10	H.B. CAMERON HILLS A05	060/04/02.000/N	117/30/27.000/W	X
H57	060-10	SHELL KAKISA R. NO.1 H57	060/06/22.000/N	117/54/49.000/W	X
A77	060-10	MIAMI AMOCO KAKISA R. I52	060/01/34.000/N	117/54/42.000/W	X
I52	060-10	SHELL KAKISA R. NO.2 A77	060/06/12.000/N	118/28/18.000/W	X
G27	060-10	PAN AM BA A-1 SPAWN G27	060/06/16.000/N	118/19/35.000/W	X
G62	060-10	WESTCOAST SILT L. G62	060/01/30.000/N	119/12/00.000/W	X
F24	060-10	H.B. SHELL W CAMERON F24	060/03/21.000/N	119/19/22.000/W	X
R24	060-10	FINA GULF TRAINER L. B24	060/03/14.000/N	119/49/32.000/W	X
F55	060-10	FINA BA TRAINER L. P55	060/04/57.000/N	119/54/48.000/W	X
J44	060-10	ATKINSON ISLAND R. J44	060/03/31.000/N	120/23/10.000/W	X
K70	060-10	UNION PAN AM TRAINER K70	060/09/40.000/N	120/27/36.000/W	X
D29	060-10	PAN AM AI ISLAND R. D29	060/08/08.000/N	121/05/17.000/W	X
G50	060-10	IMPERIAL ISLAND R. NO.1 G50	060/09/29.000/N	121/08/16.000/W	X
K30	060-10	UNION PAN AM TRAINER K30	060/09/31.000/N	121/04/45.000/W	X
M41	060-10	H.B. PAN AM S. ISLAND R. M41	060/00/55.000/N	121/09/00.000/W	X
M52	060-10	H.B. AMOCO S. ISLAND R. M52	060/01/51.000/N	121/11/05.000/W	X
C60	060-10	H.B. PETITOT C60	060/09/01.740/N	121/25/36.700/W	X
O41	060-10	SHELL TROUT L. O41	060/00/54.000/N	121/38/05.000/W	X
N11	060-10	BANNER LITTLE GROWL N11	060/00/52.500/N	121/48/02.800/W	X
C77	060-10	DOKE PAN AM CSP CELIBETA C77	060/06/12.000/N	122/14/29.000/W	X
E56	060-10	HOME SIGNAL CSP CELIBETA NO.5 E56	060/05/17.000/N	122/11/05.000/W	X
F60	060-10	HOME SIGNAL CELIBETA NO.6 F60	060/09/22.000/N	122/10/27.000/W	X
H78	060-10	HOME SIGNAL CSP CELIBETA NO.2 H78	060/07/29.310/N	122/13/35.250/W	X
I44	060-10	HOME SIGNAL CSP CELIBETA NO.1 I44	060/03/43.160/N	122/22/51.290/W	X
J13	060-10	UNGAS CSP S. CELIBETA J13	060/02/44.000/N	122/17/29.000/W	X
H50	060-10	HOME SIGNAL CSP CELIBETA NO.7 H50	060/09/24.600/N	122/37/43.900/W	X
N39	060-10	CANADA SOUTHERN CELIBETA N39	060/08/50.000/N	122/36/56.000/W	X
E73	060-10	TEXACO NFA BOVIE L. NO.1 E73	060/02/09.000/N	122/58/36.000/W	X
E37	060-10	COLUMBIA GAS KOTANEELEE Y.T. E37	060/06/27.000/N	124/07/16.000/W	X
H38	060-10	COLUMBIA KOTANEELEE Y.T. H38	060/07/16.000/N	124/06/03.000/W	X
I27	060-10	CANADA SOUTHERN N. BEAVER R. Y.T. I27	060/06/42.000/N	124/03/53.000/W	X
I48	060-10	COLUMBIA KOTANEELEE Y.T. I48	060/07/35.000/N	124/07/36.000/W	X
M17	060-10	COLUMBIA KOTANEELEE Y.T. M17	060/06/45.000/N	124/03/30.000/W	X
F501	060-10	PAN AM KOTANEELEE Y.T. P501	060/09/47.000/N	124/07/54.000/W	X
F502	060-10	PAN AM KOTANEELEE Y.T. P502	060/09/47.000/N	124/07/54.000/W	X
G01	060-10	PAN AM BEAVER R. Y.T. G01	060/00/25.000/N	124/15/48.000/W	X
K02	060-10	SOBC SHELL BEAVERCROW Y.T. K02	060/01/44.000/N	125/01/12.000/W	X
B16	060-10	BLUEMNT BEAVERCROW Y.T. B16	060/05/04.000/N	125/17/05.000/W	X
O15	060-10	GULF WEST BEAVERCROW Y.T. O15	060/04/59.000/N	125/17/44.000/W	X
G679	060-10	SCURRY NV E. WATSON L. Y.T. G679	060/08/27.000/N	128/28/55.000/W	X
G63	060-20	SHELL H.B. GRUMBLER G63	060/12/28.760/N	115/57/10.850/W	X
L05	060-20	SHELL H.B. GRUMBLER L05	060/14/41.260/N	116/01/32.290/W	X
J13	060-20	CANSO GRUMBLER J13	060/12/43.000/N	116/17/40.000/W	X

Table 2.1 cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp.	Data Source
					LOG	DIST
G36	060-20	MIAMI AMOCO ALEXANDRA FALLS G36	060/15/26.000/N	116/36/30.000/W	X	X
J26	060-20	MURPHY ALEXANDRA FALLS NO.2 J26	060/15/30.800/N	116/34/40.000/W	X	X
O22	060-20	MIAMI AMOCO SWEDE O22	060/11/50.000/N	117/34/25.000/W	X	X
C22	060-20	PAN AM ANDEX CAMERON C22	060/11/11.270/N	117/49/47.900/W	X	X
L50	060-20	SHELL ALEXANDRA NO.4 L50	060/19/40.590/N	117/54/16.490/W	X	X
N18	060-20	PACIFIC AMOCO TATHLINA N18	060/17/46.000/N	118/03/00.000/W	X	X
M05	060-20	PACIFIC N. CAMERON HILLS M05	060/14/57.540/N	118/16/46.990/W	X	X
M19	060-20	SHELL MOBIL ALEXANDRA NO.6 M19	060/18/45.000/N	119/18/45.000/W	X	X
G07	060-20	FINA GULF TRAINER L. G07	060/16/18.000/N	119/45/52.000/W	X	X
O72	060-20	UNION PAN AM TRAINER O72	060/11/48.000/N	120/13/50.000/W	X	X
E35	060-20	UNION PAN AM TRAINER E35	060/14/21.000/N	120/22/29.000/W	X	X
C39	060-20	UNION PAN AM TRAINER C39	060/18/01.000/N	120/37/00.000/W	X	X
H28	060-20	UNION PAN AM TRAINER H28	060/17/16.000/N	120/34/10.000/W	X	X
E56	060-20	DOME PAN AM ALMX CSP ISLAND R. E56	060/15/24.070/N	121/11/13.690/W	X	X
G42	060-20	ATKINSON UNION ISLAND R. G42	060/11/20.000/N	121/08/05.000/W	X	X
J72	060-20	TEXACO BOVIE L. J72	060/11/37.000/N	122/58/44.000/W	X	X
M05	060-20	IOE AMOCO BOVIE M05	060/14/45.800/N	122/46/39.000/W	X	X
M78	060-20	TEXACO BOVIE L. M78	060/17/52.000/N	122/59/45.000/W	X	X
L68	060-20	AMOCO S. POINTED MTN. L68	060/17/42.800/N	123/57/55.900/W	X	X
L60	060-20	PAN AM MERRILL Y.T. L60	060/19/30.000/N	124/26/00.000/W	X	X
I72	060-30	SHELL H.B. GRUMBLER I72	060/21/41.150/N	115/43/08.970/W	X	X
J72	060-30	SHELL H.B. GRUMBLER J72	060/21/40.340/N	115/43/44.810/W	X	X
I16	060-30	SHELL H.B. GRUMBLER I16	060/25/37.660/N	115/46/55.570/W	X	X
A60	060-30	UNION ALEXANDRA FALLS NO.5 A60	060/29/00.000/N	116/09/30.000/W	X	X
F07	060-30	SHELL H.B. GRUMBLER F07	060/26/17.540/N	116/01/09.700/W	X	X
K16	060-30	UNION ALEXANDRA FALLS NO.4 K16	060/25/50.000/N	116/02/45.000/W	X	X
F35	060-30	UNION ALEXANDRA FALLS NO.2 F35	060/24/20.000/N	116/21/50.000/W	X	X
H38	060-30	UNION ALEXANDRA FALLS NO.1 H38	060/24/10.000/N	116/30/30.000/W	X	X
B05	060-30	UNION ALEXANDRA FALLS NO.1 B05	060/24/26.680/N	116/51/33.840/W	X	X
F39	060-30	UNION ALEXANDRA FALLS NO.3 B05	060/24/30.560/N	117/55/33.470/W	X	X
K55	060-30	MURPHY ALEXANDRA FALLS F39	060/23/48.000/N	117/55/10.000/W	X	X
O54	060-30	SHELL ALEXANDRA NO.2 K55	060/21/31.000/N	118/13/17.000/W	X	X
I72	060-30	PACIFIC H.B. ALEXANDRA O54	060/21/00.000/N	118/43/00.000/W	X	X
D62	060-30	PACIFIC H.B. N. TATHLINA I72	060/27/17.000/N	120/23/39.000/W	X	X
F48	060-30	SHELL ALEXANDRA D62	060/28/33.000/N	120/40/05.000/W	X	X
L59	060-30	ATKINSON TRAINER L. F48	060/29/15.000/N	121/04/15.000/W	X	X
R30	060-30	UNION PAN AM TRAINER L59	060/27/57.000/N	121/10/47.000/W	X	X
M51	060-30	SULPETRO TROUT L. B30	060/21/57.000/N	121/02/37.000/W	X	X
O12	060-30	PAN AM HOME A-1 ISLAND R. O12	060/23/52.000/N	121/05/55.000/W	X	X
P34	060-30	SULPETRO TROUT L. P34	060/26/21.000/N	121/54/46.000/W	X	X
H57	060-30	ATKINSON HELMET TROUT L. H57	060/24/14.900/N	121/52/31.000/W	X	X
A45	060-30	McDERMOTT TROUT L. A45	060/25/07.500/N	122/27/55.000/W	X	X
D66	060-30	GOBLES CELIBETA D66	060/20/34.000/N	122/16/04.000/W	X	X
K01	060-30	GOBLES CELIBETA K01	060/20/05.000/N	122/37/21.000/W	X	X
D31	060-30	IOE CHEVRON CELIBETA D31	060/28/35.100/N	122/39/13.400/W	X	X
L49	060-30	IOE ARROWHEAD L49	060/25/02.000/N	122/59/02.000/W	X	X
B76	060-30	BA TEX ARROWHEAD B76	060/24/52.000/N	123/01/40.000/W	X	X
M05	060-30	GULF PEX TEXACO ARROWHEAD M05	060/28/06.930/N	123/35/33.070/W	X	X
D29	060-30	PARAMOUNT LIARD D29	060/24/05.000/N	123/54/39.060/W	X	X
A55	060-30	AMOCO A-4 POINTED MTN. A55	060/27/19.000/N	123/51/55.000/W	X	X
F38	060-30	AMOCO B-2 POINTED MTN. F38	060/21/26.800/N	123/56/46.800/W	X	X
G62	060-30	PAN AM POINTED MTN. G62	060/24/33.000/N	123/53/51.700/W	X	X
K45	060-30	AMOCO POINTED MTN. K45	060/25/57.000/N	123/52/59.000/W	X	X
O46	060-30	PAN AM POINTED MTN. O46				

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. Data Source	
					LOG	DST
F24	060-30	AMOCO POINTED MTN. P24	060/23/54.000/N	123/48/57.000/W	X	X
F531	060-30	PAN AM POINTED MTN. P531	060/22/46.000/N	123/54/33.000/W	X	X
F532	060-30	PAN AM POINTED MTN. P532	060/22/46.000/N	123/54/33.000/W	X	
067	060-30	PAN AM KOTANELEE 067	060/26/51.000/N	124/11/56.000/W	X	
B07	060-40	MOBIL ALEX FALLS B07	060/36/00.000/N	115/45/38.000/W	X	
A77	060-40	N.W.T. EXCARPMENT L. NO.3 A77	060/36/05.000/N	116/13/19.000/W	X	
D44	060-40	UNION ALEXANDRA FALLS NO.6 D44	060/33/05.000/N	116/09/15.000/W	X	
D66	060-40	N.W.T. EXCARPMENT L. NO.2 D66	060/35/00.000/N	116/13/00.000/W	X	
L66	060-40	N.W.T. EXCARPMENT L. NO.1 L66	060/35/43.000/N	116/13/00.000/W	X	
E75	060-40	SHELL ALEXANDRA NO.5 E75	060/34/15.000/N	116/44/39.000/W	X	
D39	060-40	CALSTAN TATHLINA L. D39	060/38/01.000/N	117/22/20.000/W	X	
K10	060-40	CALSTAN TATHLINA L. K10	060/39/40.000/N	117/16/20.000/W	X	
G19	060-40	BRIGGS W. TATHLINA L. NO.2 G19	060/38/18.000/N	117/47/27.000/W	X	
G48	060-40	BRIGGS W. TATHLINA L. NO.1 G48	060/37/21.000/N	117/53/08.000/W	X	
K48	060-40	PLACID WOOD W. TATHLINA K48	060/37/36.000/N	117/53/40.000/W	X	
K24	060-40	CPOG CHEVRON TATHLINA K24	060/33/39.000/N	118/04/58.000/W	X	
E55	060-40	AM HESS GULF REDKNIFE E55	060/34/23.000/N	119/41/06.000/W	X	X
L26	060-40	BRIGGS TETCHO L. NO.1 L26	060/35/42.000/N	120/35/15.000/W	X	X
I63	060-40	ATKINSON HELMET ISLAND R. I63	060/32/41.000/N	120/56/20.000/W	X	X
M73	060-40	DOME PROVO PAN AM TROUT L. M73	060/32/50.000/N	121/29/54.000/W	X	X
M47	060-40	IMPERIAL ARROWHEAD M47	060/36/54.000/N	122/38/55.000/W	X	X
N2	060-40	BA TEXACO ARROWHEAD N2	060/31/46.000/N	123/01/18.000/W	X	X
H13	060-40	AMOCO B-1 E. FLETT H13	060/32/28.000/N	123/17/15.000/W	X	X
E54	060-40	PARAMOUNT BIG ISLAND E54	060/33/28.000/N	123/40/52.000/W	X	X
N19	060-40	AMOCO FLETT N19	060/38/48.000/N	123/48/07.000/W	X	X
C30	060-40	FNX LA BICHE C30	060/39/14.000/N	124/34/46.000/W	X	X
F08	060-40	CPOG LA BICHE F08	060/37/20.000/N	124/31/13.000/W	X	X
E30	060-50	GEN CRUDE RANVIK HAY R. E30	060/49/24.000/N	115/50/30.000/W		
F29	060-50	N.W.T. HEART L. NO.1 F29	060/48/18.000/N	116/35/06.000/W		
C19	060-50	N.W.T. DESMARAIS L. NO.1 C19	060/48/00.000/N	116/48/00.000/W	X	
D50	060-50	PLACID CHEVRON N.E. TATHLINA D50	060/49/07.000/N	117/09/08.000/W	X	
C27	060-50	BRIGGS N.E. TATHLINA NO.1 C27	060/46/01.000/N	117/19/44.000/W	X	
D34	060-50	BRIGGS N.E. TATHLINA L. NO.9 D34	060/43/12.000/N	117/22/17.000/W	X	
D44	060-50	BRIGGS TATHLINA L. NO.7 D44	060/42/33.000/N	117/24/00.000/W	X	
F25	060-50	BRIGGS TATHLINA L. NO.8 F25	060/44/28.000/N	117/19/46.000/W	X	
J65	060-50	PLACID CHEVRON KAKISA J65	060/44/42.000/N	117/27/07.000/W	X	
K18	060-50	BRIGGS N.E. TATHLINA L. NO.2	060/47/36.000/N	117/17/57.000/W	X	
A71	060-50	BRIGGS W. TATHLINA L. NO.3 A71	060/40/00.000/N	117/43/12.000/W	X	
F01	060-50	BRIGGS TATHLINA L. NO.3 F01	060/40/29.490/N	117/31/09.560/W	X	
J52	060-50	WILKINSON W. TATHLINA L. NO.4 J52	060/41/33.000/N	117/40/06.000/W	X	
K05	060-50	BRIGGS TATHLINA L. NO.5 K05	060/44/43.440/N	117/31/09.000/W	X	
L71	060-50	PLACID CHEVRON KAKISA L71	060/40/41.000/N	117/44/52.000/W	X	
N34	060-50	WILKINSON KAKISA R. N34	060/43/47.000/N	117/36/40.000/W	X	
A63	060-50	CPOG CHEVRON GULL CK. A63	060/42/01.000/N	118/11/40.000/W	X	
F46	060-50	PLACID CHEVRON GULL CK F46	060/45/29.000/N	118/08/38.000/W	X	
L69	060-50	CALSTAN IMPERIAL BOUVIER L69	060/48/34.000/N	118/42/59.740/W	X	
G31	060-50	CPOG CHEVRON KAKISA G31	060/40/20.000/N	118/51/07.000/W	X	
O80	060-50	UOHL TROUT R. O80	060/49/46.000/N	120/28/50.000/W	X	
J12	060-50	SHELL UNION PAN AM TETCHO J12	060/41/40.260/N	121/02/48.352/W	X	
H45	060-50	DOME PROVO TROUT L. H45	060/44/20.000/N	121/22/44.000/W	X	
I24	060-50	MURPHY BOC MUSKEG R. I24	060/43/38.000/N	122/03/45.000/W	X	
I46	060-50	IMP. SUN ARROWHEAD I46	060/45/37.000/N	122/22/47.000/W	X	
F73	060-50	IMPERIAL SUN NETLA RAVEN F73	060/42/25.000/N	122/44/10.000/W	X	

Table 2.1 Cont'd

ID Code	Bands		Well Name	Latitude	Longitude	Temp. Data Source	
	060-50	122-45				LOG	DST
C07	060-50	122-45	IMPERIAL SUN NETLA C07	060/46/13.000/N	122/46/18.000/W	X	X
B52	061-00	115-30	HORN R. HAY R. B52	060/51/04.000/N	115/40/17.000/W	X	X
G15	061-00	116-15	GENERAL CRUDE REEF CK. G15	060/54/24.000/N	116/17/30.000/W	X	X
G38	061-00	116-30	MC D G.C. DESMARAIS NO.1 G38	060/57/22.500/N	116/36/19.700/W	X	X
I41	061-00	116-30	N.W.T. HEART L. NO.2 I41	060/50/30.000/N	116/37/30.000/W	X	X
J48	061-00	116-45	SHELL DESMARAIS J48	060/57/43.460/N	116/53/07.900/W	X	X
K29	061-00	117-15	SHELL DESMARAIS K29	060/58/30.020/N	116/49/57.480/W	X	X
F35	061-00	117-15	PAN AM SHELL KAKISA F35	060/54/25.000/N	117/21/49.000/W	X	X
H36	061-00	117-15	PAN AM SHELL KAKISA H36	060/55/18.000/N	117/21/05.000/W	X	X
I44	061-00	117-15	PAN AM SHELL KAKISA I44	060/53/32.000/N	117/22/34.000/W	X	X
C04	061-00	117-45	SHELL KAKISA L. C04	060/53/10.000/N	117/46/15.000/W	X	X
L19	061-00	118-00	PAN AM SHELL KAKISA L19	060/58/36.000/N	118/03/28.000/W	X	X
O28	061-00	118-00	SHELL PAN AM TMD ISLANDS O28	060/57/53.000/N	118/04/23.000/W	X	X
F60	061-00	118-15	SHELL IMPERIAL FOETUS L. F60	060/59/18.500/N	118/25/40.400/W	X	X
D06	061-00	118-30	BRIGGS FOETUS L. NO.1 D06	060/55/13.000/N	118/31/49.000/W	X	X
B06	061-00	118-45	BRIGGS RABBIT L. NO.3 B06	060/56/07.000/N	118/45/44.000/W	X	X
O16	061-00	118-45	BRIGGS RABBIT L. NO.1 O16	060/55/51.000/N	118/47/29.000/W	X	X
O25	061-00	118-45	BRIGGS RABBIT L. NO.2 O25	060/54/53.080/N	118/49/36.790/W	X	X
E60	061-00	119-00	WILKINSON REDKNIFE R. E60	060/59/26.000/N	119/11/10.000/W	X	X
E33	061-00	119-15	WILKINSON REDKNIFE R. E33	060/52/29.000/N	119/22/23.000/W	X	X
N06	061-00	119-15	IMPERIAL REDKNIFE NO6	060/56/00.000/N	119/16/50.000/W	X	X
I19	061-00	120-00	BRIGGS TROUT R. NO.3 I19	060/58/44.000/N	120/01/55.000/W	X	X
A10	061-00	120-15	BRIGGS TROUT R. NO.4 A10	060/59/11.000/N	120/15/02.000/W	X	X
D18	061-00	120-15	BRIGGS TROUT R. NO.2 D18	060/57/09.000/N	120/18/38.000/W	X	X
K18	061-00	120-15	BRIGGS TROUT R. NO.6 K18	060/57/36.000/N	120/17/53.000/W	X	X
D06	061-00	120-30	BRIGGS TROUT R. NO.5 D06	060/55/03.000/N	120/31/34.000/W	X	X
K33	061-00	120-30	BRIGGS TROUT R. NO.1 K33	060/52/30.000/N	120/36/48.000/W	X	X
I49	061-00	121-45	SCURRY CORN. L. I49	060/58/39.931/N	121/52/37.863/W	X	X
H31	061-00	122-00	MURPHY ARROWHEAD R. H31	060/50/25.000/N	122/05/50.000/W	X	X
C65A	061-00	122-15	HORN R. CORNACK C65A	060/54/13.000/N	122/27/21.000/W	X	X
N33	061-00	122-30	AMOCO MURPHY CORNACK N33	060/52/47.100/N	122/36/43.600/W	X	X
H31	061-00	123-00	MURPHY NETLA H31	060/50/52.000/N	123/07/15.000/W	X	X
L20	061-00	123-30	MESA NAHANNI BUTTE L20	060/59/42.000/N	123/33/30.000/W	X	X

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp.	Data Source
					LOG	DIST
I41	061-10	MCD HAY R. NO.1 I41	061/00/37.000/N	115/37/48.000/W		
E72	061-10	GENERAL CRUDE DESMARAIS E72	061/01/18.000/N	116/29/42.000/W	X	X
O78	061-10	HORN R. BIG ISLAND 078	061/07/47.000/N	116/28/38.000/W	X	
B69	061-10	N.W.T. BIG ISLAND NO.1 B69	061/08/00.000/N	116/42/00.000/W	X	
G56	061-10	CALSTAN BIG ISLAND G56	061/05/23.000/N	116/40/00.000/W		
C38	061-10	N.W.T. BIG ISLAND NO.2 C38	061/07/00.000/N	116/52/00.000/W		
M29	061-10	SHELL BEAVER L. M29	061/08/46.930/N	117/05/19.650/W		
M39A	061-10	SHELL BEAVER L. M39A	061/01/02.000/N	117/17/55.000/W		
C12	061-10	CDR CHEVRON MILLS L. C12	061/09/41.000/N	117/31/39.000/W	X	X
L10	061-10	CDR CHEVRON MILLS L. L10	061/09/08.000/N	117/56/29.000/W	X	X
A70	061-10	CDR CHEVRON MILLS L. A70	061/02/58.000/N	118/14/23.000/W	X	X
N73	061-10	HORN R. BRALORNE KAKISA N73	061/08/12.000/N	118/38/28.000/W	X	X
C49	061-10	PLACID CHEVRON FOETUS L. C49	061/08/12.000/N	118/35/09.000/W	X	X
K21	061-10	BRIGGS N.E. RABBIT L. NO.1 K21	061/05/49.300/N	118/39/37.200/W	X	X
F56	061-10	PLACID CHEVRON FOETUS L. F56	061/00/25.000/N	118/45/13.000/W	X	X
H01	061-10	HORN R. G.P.D. NOEL RABBIT L. H01	061/03/40.180/N	119/18/49.280/W	X	X
I24	061-10	CS REDKNIFE I24	061/00/40.990/N	119/19/14.160/W	X	X
J21	061-10	CS REDKNIFE J21	061/07/30.000/N	120/22/30.000/W	X	X
I48	061-10	BRIGGS TURKEY L. NO.1 I48	061/01/29.000/N	121/21/12.000/W	X	X
G32	061-10	AMOCO DECALTA A-1 POPLAR R. G32	061/04/27.952/N	122/02/33.115/W	X	X
E15	061-10	SCURRY CDN. SUP. CORN. L. E15	061/02/28.000/N	123/48/30.000/W	X	X
E13	061-10	PAN AM A-1 MATTISON CK. E13	061/18/00.000/N	116/48/00.000/W		
C19	061-20	N.W.T. DEEP BAY NO.2 C19	061/19/00.000/N	116/48/00.000/W		
C20	061-20	N.W.T. DEEP BAY NO.4 C20	061/16/00.000/N	116/54/00.000/W		
D47	061-20	N.W.T. DEEP BAY NO.1 D47	061/14/05.000/N	117/28/41.000/W	X	X
B75	061-20	CDR TRIAD MILLS L. B75	061/16/37.000/N	117/39/36.000/W	X	X
I57	061-20	CDR CHEVRON MILLS L. I57	061/12/12.000/N	118/01/00.000/W	X	X
C03	061-20	CALSTAN MILLS L. C03	061/19/12.530/N	118/10/45.550/W	X	X
C60	061-20	PLACID CHEVRON MILLS L. C60	061/13/38.000/N	118/13/48.000/W	X	X
J74	061-20	CDR CHEVRON MILLS L. J74	061/17/50.000/N	118/02/00.000/W	X	X
F18	061-20	CHEVRON MILLS L. F18	061/16/70.000/N	120/46/45.000/W	X	X
E07	061-20	CDN. SUP. JEAN MARIE E07	061/14/17.000/N	120/52/39.000/W	X	X
H45	061-20	HORN R. DECALTA DEEP L. H45	061/13/54.400/N	121/34/38.300/W	X	X
O24A	061-20	H.B. SECURITY CPOG SIMPSON O24A	061/14/00.860/N	121/50/24.450/W	X	X
D25	061-20	H.B. GREAT PLAINS SIMPSON D25	061/11/27.000/N	122/14/54.000/W	X	X
E72	061-20	IOE SUN BLACKSTONE E72	061/14/06.000/N	122/44/59.000/W	X	X
D75	061-20	SHELL LIARD R. NO.2 D75	061/12/00.000/N	123/08/42.000/W	X	X
C42	061-20	PAN AM A-2 GRAINGER C42	061/14/35.000/N	123/02/40.000/W	X	X
J15	061-20	PAN AM A-1 GRAINGER J15	061/25/53.000/N	115/57/00.000/W		
O66	061-30	KORE SULPHUR BAY NO.1 O66	061/23/00.000/N	116/55/30.000/W	X	
C54	061-30	PUNCH DEEP BAY NO.7 C54	061/20/06.000/N	117/00/43.000/W	X	
B01	061-30	HORN R. IOE DEEP BAY B01	061/26/00.000/N	117/11/00.000/W	X	
D57	061-30	PUNCH DEEP BAY NO.5 D57	061/26/14.000/N	117/22/33.000/W	X	
A47	061-30	IOE PROVIDENCE A47	061/20/40.000/N	117/37/00.000/W	X	
K31	061-30	N.W.T. NO.1 K31	061/27/16.000/N	119/00/51.000/W	X	X
H28	061-30	GULF REDKNIFE H28	061/27/10.000/N	120/38/16.000/W	X	X
B48	061-30	CDN SUP. JEAN MARIE B48	061/22/10.000/N	120/44/05.000/W	X	X
C73	061-30	KERR MCGEE JEAN MARIE C73	061/22/48.000/N	120/44/10.000/W	X	X
N73	061-30	CDN SUP. JEAN MARIE N73	061/27/00.000/N	121/47/40.000/W	X	X
B18	061-30	WESTEROL LIARD RAPIDS 1A B18	061/31/45.570/N	116/39/46.740/W	X	X
F52	061-40	G.P.D. MILLS L. F52	061/37/31.000/N	117/35/51.000/W	X	X
I38	061-40	HORN R. MINK L. I38				

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp, LOG	Data Source DST
I47	061-40	C.S. LAFERTE R. I47	061/36/37.000/N	118/07/44.000/W		X
J03	061-40	C.S. NOEL LAFERTE R. J03	061/32/38.000/N	118/00/37.600/W	X	X
D73	061-40	C.S. LAFERTE R. D73	061/32/07.500/N	118/29/45.940/W		
H27	061-40	C.S. LAFERTE R. H27	061/36/22.000/N	118/33/59.000/W		
A50	061-40	C.S. LAFERTE R. A50	061/39/08.000/N	118/52/44.000/W		
O15	061-40	C.S. LAFERTE R. O15	061/34/53.000/N	118/47/35.000/W		
I08	061-40	HORN R. RABBITSKIN I08	061/37/32.000/N	119/30/17.000/W	X	X
D66	061-40	HORN R. TROUT D66	061/35/04.000/N	119/58/02.000/W	X	X
D14	061-40	GULF TROUT R. D14	061/33/10.180/N	120/03/39.960/W	X	X
J52	061-40	CIN SUP. JEAN MARIE J52	061/31/30.000/N	120/25/00.000/W	X	X
A80	061-40	WESTEROL NO.7A A80	061/39/13.000/N	120/43/34.000/W		
B43	061-40	BA JEAN MARIE CK. NO.1 B43	061/32/00.000/N	120/38/15.000/W		
G24	061-40	SCURRY CBN. SUP. SIBB. L. G24	061/33/23.758/N	122/34/41.068/W	X	X
B41	061-50	G.P.D. MILLS L. B41	061/40/05.650/N	116/53/17.020/W	X	X
L41	061-50	G.P.D. MILLS L. L41	061/40/38.940/N	117/08/59.770/W	X	X
B29	061-50	C.S. LAFERTE R. B29	061/48/08.000/N	118/04/29.000/W		
G71	061-50	C.S. LAFERTE R. G71	061/40/22.000/N	118/13/50.000/W	X	X
C25	061-50	C.S. LAFERTE R. C25	061/44/07.000/N	118/19/55.000/W	X	X
M39	061-50	C.S. LAFERTE R. M39	061/48/52.000/N	118/22/16.000/W	X	X
A66	061-50	C.S. LAFERTE R. A66	061/45/08.000/N	118/41/29.000/W		
G41	061-50	C.S. LAFERTE R. G41	061/40/22.000/N	118/38/12.000/W		
M16	061-50	C.S. LAFERTE R. M16	061/45/52.000/N	118/33/31.000/W	X	X
N15	061-50	C.S. NOEL LAFERTE R. N15	061/44/56.000/N	118/48/02.300/W	X	X
N54	061-50	C.S. LAFERTE R. N54	061/43/52.500/N	118/55/33.000/W	X	X
M65	061-50	G.P.D. NOEL MILLS W. M65	061/44/48.000/N	119/27/40.000/W		
M65A	061-50	G.P.D. NOEL MILLS W. M65A	061/44/50.000/N	119/27/40.000/W		
G77	061-50	WESTEROL NO.3A G77	061/46/26.000/N	120/43/48.000/W		
M77	061-50	WESTEROL NO.4A M77	061/46/49.000/N	121/14/46.000/W		
M34	061-50	HORN R. GULF AQUIT. M34	061/43/54.000/N	122/07/09.000/W	X	X
A37	061-50	HB AMERADA CAMSELL A37	061/46/09.150/N	122/35/55.300/W	X	X
E45	061-50	FPC SIBBESTON E45	061/44/25.000/N	122/53/55.000/W	X	X
H45	061-50	FPC SIBBESTON H45	061/44/25.000/N	122/52/40.000/W	X	X
G15	062-00	GENERAL CRUDE REEF CK G15	061/54/24.000/N	116/17/30.000/W		X
D74	062-00	C.S. LAFERTE R. D74	061/53/07.000/N	117/44/46.000/W		X
A21	062-00	C.S. LAFERTE R. A21	061/50/07.500/N	117/48/59.100/W		X
A36	062-00	C.S. LAFERTE R. A36	061/55/08.000/N	117/50/54.000/W		X
G68	062-00	C.S. LAFERTE R. G68	061/57/22.000/N	117/56/57.000/W		X
M02	062-00	C.S. LAFERTE R. M02	061/51/51.120/N	118/16/39.500/W	X	X
O16	062-00	C.S. LAFERTE R. O16	061/55/52.000/N	118/17/35.000/W	X	X
O24	062-00	HORN R. ANDEX ALMX GREEN O24	061/53/46.000/N	120/19/37.000/W	X	X
G24	062-00	IDE STRONG POINT G24	061/53/16.000/N	120/49/36.000/W	X	X
J66	062-00	FINA WILLOW L. J66	061/55/43.000/N	121/56/53.000/W	X	X
M70	062-00	MOBIL FORT SIMPSON M70	061/59/57.000/N	122/27/58.000/W	X	X
G69	062-00	HUSKY SIBBESTON G69	061/58/28.000/N	122/41/45.000/W	X	X
M05	062-00	HORN R. AM HESS GULF CLI L. M.05	061/54/58.000/N	123/01/47.000/W	X	X
N44	062-00	TEXACO RAM PLATEAU N44	061/53/47.000/N	123/53/36.000/W	X	X



ID Code	Bands	Well Name	Latitude	Longitude	Temp. Data Source	
					LOG	DST
K13	062-10	C.S. LAFERTE R. K13	062/02/37.500/N	117/48/02.810/W		
G61	062-10	C.S. LAFERTE R. G61	062/00/22.500/N	118/27/33.000/W	X	X
P13	062-10	IOE TRAIL R. P13	062/02/59.000/N	121/32/13.000/W	X	X
L59	062-10	FINA WILLOW L. L59	062/08/40.000/N	121/56/00.000/W		
J65	062-10	BA TRAIL CK. NO.1 J65	062/04/30.000/N	122/12/00.000/W		
B59	062-10	BA LONE MTN. NO.2 B59	062/08/00.000/N	122/40/00.000/W	X	X
G15	062-10	GULF AMERADA CLI L. G15	062/04/25.000/N	123/02/47.730/W	X	X
K54	062-10	BA AMERADA CLI L. K54	062/03/40.790/N	123/10/24.185/W	X	X
N42	062-10	TEXACO N. NAHANNI N42	062/01/54.000/N	124/08/36.000/W	X	X
P02	062-20	IMPERIAL DAVIDSON CK. P02	062/16/00.000/N	118/15/00.000/W	X	
R28	062-20	IMPERIAL WILLOW L. B28	062/17/03.000/N	119/04/20.000/W	X	
O27A	062-20	HUSKY WILLOW L. O27A	062/16/48.000/N	121/04/21.000/W	X	X
J70	062-20	IOE TRIAD EBBUTT J70	062/19/31.000/N	121/57/03.000/W	X	X
D50	062-20	IOE TRIAL EBBUTT D50	062/19/01.000/N	122/24/05.000/W	X	X
D51	062-20	BA LONE MTN NO.1 D51	062/15/00.000/N	122/45/00.000/W		
D76	062-30	HORN R. SHELL LEVIS D76	062/25/06.000/N	118/29/34.000/W	X	
G24	062-30	CHEVRON HORNELL LK. G24	062/23/21.000/N	119/34/40.000/W	X	X
F71	062-30	IMPERIAL HARRIS R. F71	062/20/21.000/N	120/14/30.000/W	X	X
G32	062-30	HUSKY HB WILLOW L. G32	062/21/22.000/N	120/51/13.000/W	X	X
N69	062-30	C.S. IOE JACKFISH N69	062/28/47.000/N	121/27/32.000/W	X	X
G72	062-30	CHEVRON SC EBBUTT G72	062/21/25.000/N	122/28/38.000/W	X	X
J05	062-30	HORN R. CANDEL EBBUTT J05	062/24/37.000/N	122/15/56.000/W	X	X
A42	062-30	HORN R. GULF AMHESS BARRY IS. A42	062/21/04.000/N	123/07/43.000/W	X	X
C16	062-30	BA ROOT R. NO.1 C16	062/25/00.000/N	123/18/00.000/W	X	X
A50	062-30	PACIFIC CARLSON L. A50	062/29/08.000/N	123/52/40.000/W	X	X
M69	062-30	TEXACO TECK IVERSON L. M69	062/28/57.000/N	124/27/59.000/W	X	X
A31	062-40	CHEVRON HARRIS R. A31	062/30/02.000/N	120/06/00.000/W	X	
I23	062-40	AQUIT HIGHLAND L. I23	062/32/44.660/N	122/19/08.000/W	X	
K42	062-40	AQUIT, HIGHLAND L. K42	062/31/39.870/N	122/23/36.180/W	X	
F71	062-40	CHEVRON C.S. BERRY F71	062/30/21.000/N	122/59/27.000/W	X	X
G47	062-40	HORN R. CANDEL WILLOW L. G47	062/36/23.000/N	122/53/12.000/W	X	X
I60	062-40	F.P.C. TENNECO ROOT R. I60	062/39/32.210/N	123/24/28.960/W	X	X
I71	062-50	HORN R. IOE WILLOW L. I71	062/40/44.000/N	121/43/18.000/W	X	
H10	062-50	HUSKY HB WILLOW L. H10	062/49/16.000/N	121/45/01.000/W	X	X
A39	062-50	HB WILLOW A39	062/48/05.000/N	122/50/53.000/W	X	
G77	063-00	IMPERIAL WINDFLOWER G77	062/56/23.000/N	118/59/00.000/W	X	

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. Data Source	
					LOG	DST
G60	063-10 122-45	HB GULF FISH L. G60	063/09/30.000/N	122/54/59.800/W	X	X
G70	063-10 124-00	SHELL WRIGLEY G70	063/09/17.000/N	124/11/50.000/W	X	X
F72	063-20 120-15	IOE CARTRIDGE F72	063/11/19.000/N	120/29/04.000/W	X	X
I54	063-20 123-45	DECALTA GULF I54	063/13/33.000/N	123/54/32.000/W	X	X
I70	063-20 124-45	IOE GORBLES DAHADINNI I70	063/19/41.000/N	124/56/35.000/W	X	X
P15	063-30 122-45	SHELL OCHRE R. P15	063/24/45.000/N	122/46/57.000/W	X	X
A12	063-40 124-00	DECALTA SOBEC GULF AMMIN A12	063/31/02.000/N	124/02/15.000/W	X	X
C35	063-50 120-30	IOE LAC TACHE C35	063/44/15.000/N	120/36/45.000/W	X	X
E11	063-50 123-00	UNION JAFEX BLACKWATER E11	063/40/20.000/N	123/03/30.000/W	X	X
F49	064-00 121-45	CDN. RES. SIGNAL KELLER L. F49	063/58/20.000/N	121/53/30.000/W	X	X
D65	064-00 124-15	DECALTA DAHADINNI D65	063/54/12.000/N	124/27/55.000/W	X	X
M43A	064-00 124-30	CANDEX DAHADINNI M43A	063/52/59.300/N	124/39/15.700/W	X	X
I46	064-00 124-45	SHELL CLOVERLEAF I46	063/55/44.000/N	124/52/39.000/W	X	X
G51	064-00 125-15	AQUIT. SILVAN PLATEAU G51	063/50/21.930/N	125/25/04.330/W	X	X

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp, Data Source	
					LOG	DST
G52	064-10	SHELL BLACKWATER L. G52	064/01/20.000/N	122/55/12.000/W	X	
F78	064-10	DECALIA MESA REDSTONE P78	064/07/57.000/N	124/28/15.000/W	X	
A28	064-10	DECALIA DOME KEELE S. A28	064/07/03.000/N	125/04/10.000/W	X	
K29	064-10	AMOCO CANDEX SHELL A-1 RED DOG K29	064/08/42.000/N	125/34/55.000/W	X	
O13	064-20	CDN. RES. SIGNAL KELLER L. O13	064/12/53.000/N	122/17/25.000/W	X	
P14	064-20	CDN. RES. SIGNAL KELLER L. P14	064/13/53.000/N	122/32/00.000/W	X	
J42	064-20	IMPERIAL REDSTONE NO.1 J42	064/11/42.000/N	124/38/19.000/W	X	X
B30	064-20	CANDEL DELCRI STEWART B30	064/19/12.000/N	125/19/20.000/W	X	
N62	064-30	DECALIA KEELE N62	064/21/48.000/N	124/57/12.000/W	X	X
I01	064-30	DECALIA LRI KEELE R. I01	064/20/40.050/N	125/00/07.340/W	X	X
L04	064-30	SHELL KEELE R. L04	064/23/37.000/N	125/01/43.000/W	X	X
J65	064-30	CANDEL DECKMG TATE J65	064/24/39.000/N	125/26/48.000/W	X	X
I54A	064-40	BUTTIES BLACKWATER L. I54A	064/33/43.880/N	122/39/40.200/W	X	
I70	064-40	CANDEX AMOCO SHELL LITTLE BEAR I70	064/39/44.270/N	125/56/35.090/W	X	
E30	064-50	AQUIT. OLD FORT POINT E30	064/49/26.000/N	124/50/16.000/W	X	X
L66	064-50	CANDEL POLICE ISLAND L66	064/45/38.000/N	125/12/57.000/W	X	X
B45	064-50	CANDEL DECKMG E. MACKEY B45	064/44/09.000/N	125/38/18.000/W	X	X
H61	065-00	SOBC CS ST. CHARLES CK. H61	064/50/24.000/N	123/56/28.000/W	X	X
N30	065-00	SOBC CS GREAT BEAR R. N30	064/59/45.000/N	124/04/51.000/W	X	X
K14	065-00	CANDEL DECKMG FT. NORMAN K14	064/53/42.000/N	125/18/08.000/W	X	X
A37	065-00	IMPERIAL BLUEFISH A37	064/56/01.000/N	125/50/54.000/W	X	X
K71	065-00	CS BLUEFISH K71	064/50/31.000/N	125/59/31.000/W	X	X
A37	065-00	MOBIL SLATER R. A37	064/56/05.000/N	126/05/42.000/W	X	X

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. LOG	Data Source DST
N28	065-10	IMPERIAL VERMILLION RIDGE NO.1 N28	065/07/51.000/N	126/05/00.000/W		
G78	126-15	IMPERIAL LOON CK. NO.2 G78	065/07/20.000/N	126/28/51.000/W		
J20	065-10	IMPERIAL CANYON CK. NO.2 J20	065/09/36.000/N	126/17/35.000/W		
K03	126-45	AQUIT. MOBIL DODO CANYON K03	065/02/33.360/N	126/46/13.960/W	X	X
N70	065-20	BP GREY GOOSE N70	065/19/58.000/N	123/42/15.000/W	X	X
D61	124-00	SINCLAIR WOLVERINE CK. D61	065/10/14.000/N	124/12/52.000/W	X	X
C21	125-00	AQUIT. BRACKETT L. C21	065/10/22.000/N	125/05/08.000/W	X	X
G51	065-20	IMPERIAL CANYON CK. NO.1 G51	065/10/22.000/N	126/24/51.000/W		
J20	126-15	IMPERIAL CANYON CK. J20	065/10/00.000/N	126/15/00.000/W		
A47	065-20	ESSO MACKENZIE R. NO.3 A47	065/16/08.275/N	126/52/03.850/W	X	X
A57	126-45	ESSO NORMAN WELLS N27	065/16/05.360/N	126/54/28.980/W	X	X
B48	065-20	ESSO NORMAN WELLS 36X	065/17/07.100/N	126/53/05.893/W	X	X
B48*	126-45	ESSO NORMAN WELLS 44X	065/17/07.100/N	126/53/05.893/W	X	X
C37	065-20	ESSO NORMAN WELLS C37X	065/16/57.000/N	126/51/16.600/W	X	X
C47	126-45	ESSO MACKENZIE R. NO.1 C47	065/16/12.300/N	126/53/35.000/W	X	X
E27	065-20	ESSO MACKENZIE R. NO.4 E27	065/16/19.275/N	126/50/23.220/W	X	X
E46	126-45	ESSO BEAR ISLAND NO.21 E46	065/15/24.926/N	126/54/08.996/W	X	X
H57	065-20	ESSO MACKENZIE R. NO.2 H57A	065/16/24.895/N	126/54/34.318/W	X	X
K36	126-45	ESSO BEAR ISLAND NO.22	065/15/35.220/N	126/51/59.000/W	X	X
N45	065-20	ESSO NORMAN WELLS N45X	065/15/24.730/N	126/52/05.580/W	X	X
O45	126-45	ESSO NORMAN WELLS O45X	065/15/28.070/N	126/52/17.520/W	X	X
F11	065-20	ESSO NORMAN WELLS P11X	065/16/28.010/N	126/56/58.170/W	X	X
F37	126-45	ESSO NORMAN WELLS 40X	065/16/54.461/N	126/51/02.189/W	X	X
R11	065-20	ESSO NORMAN WELLS R11X	065/16/12.570/N	126/57/18.960/W	X	X
R13	126-45	ESSO NORMAN WELLS R13X	065/16/08.250/N	126/57/18.960/W	X	X
R15	065-20	ESSO NORMAN WELLS R15X	065/16/03.430/N	126/56/44.080/W	X	X
B46	127-00	IMPERIAL RAY NO.1 B46	065/15/06.000/N	127/08/08.000/W		
F39	127-00	IMPERIAL RAIDER ISLAND NO.1 F39	065/18/15.000/N	127/06/57.000/W		
G12	065-20	IMPERIAL LOONEX G12	065/11/19.000/N	127/02/33.000/W		
P05	127-00	IMPERIAL MAC. NO.2 P05	065/14/51.000/N	127/00/22.000/W		
M07	065-30	B.F. RUSSEL M07	065/26/58.000/N	123/31/50.000/W	X	X
I74	124-30	SINCLAIR MAHONY L. I74	065/23/36.000/N	124/43/30.000/W	X	X
N37	065-30	ESSO NORMAN WELLS 39X	065/21/54.421/N	126/51/45.310/W	X	X
J48	127-00	BANFF OSCAR CK. J48	065/27/35.130/N	127/08/23.470/W	X	X
G44	065-30	IMPERIAL MORROWN CK. NO.1 G44	065/23/15.000/N	127/23/07.000/W		
H77	127-15	PACIFIC OSCAR CK. H77	065/26/22.000/N	127/28/15.000/W		
H15	065-30	IMPERIAL OSCAR RIDGE NO.1 H15	065/24/16.000/N	127/32/14.000/W		
H40	127-30	IMPERIAL HOOSIER RIDGE NO.1 H40	065/29/24.000/N	127/35/58.000/W		
O17	127-30	PACIFIC JUDILE O17	065/26/53.000/N	127/32/35.000/W		
L09	129-30	MOBIL HUME R. L09	065/28/31.000/N	129/31/32.000/W	X	X
A59	065-30	CANDEL MOBIL RAMPARTS A59	065/28/04.000/N	130/39/47.000/W	X	X
I77	130-30	CANDEL MOBIL RAMPARTS I77	065/26/32.000/N	130/58/18.000/W	X	X
K76	065-40	SINCLAIR WHITEFISH R. K76	065/35/32.000/N	123/29/16.000/W	X	X
M04	123-45	B.F. WHITE M04	065/33/56.000/N	123/46/30.000/W	X	X
H34	065-40	ARCO WHITEFISH R. H34	065/33/24.000/N	124/35/45.000/W	X	X
H71	127-00	BANFF OSCAR CK. H71	065/30/20.000/N	127/13/26.000/W	X	X
A16	065-40	IMPERIAL HOOSIER RIDGE NO.2 A16	065/30/00.000/N	127/30/00.000/W		
O41	127-30	PACIFIC JUDILE O41	065/30/45.000/N	127/38/00.000/W		
F57	065-40	MCD. CAN. MAIDA CK. F57	065/36/17.000/N	128/10/36.000/W	X	X
G56	128-00	MCD. CAN. MAIDA CK. G56	065/35/26.000/N	128/10/17.000/W	X	X
H73	065-40	IMPERIAL WHIRLPOOL NO.1 H73	065/32/25.000/N	128/13/17.000/W		
K68	128-00	AMOCO CARCAJOU K68	065/37/42.000/N	128/12/23.000/W	X	X

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. LOG	Data Source DST
J27	065-40	T.P.P.L. CARCAJOU J27	065/36/38.000/N	128/34/26.000/W	X	
L24	065-40	TRIAD BP CARAJOU L24	065/33/34.000/N	128/50/20.000/W	X	X
F47	065-40	CANDEL TEXACO ARCTIC RED F47	065/36/25.000/N	130/53/53.000/W	X	
A22	065-40	AMOCO CRANSWICK A22	065/31/01.000/N	131/48/55.000/W	X	
F62	065-50	ARCO LOST HILL L. F62	065/41/23.000/N	123/12/20.000/W	X	
M04	065-50	B.P. WHITE M04	065/40/00.000/N	123/45/00.000/W	X	
J05	065-50	MESA MURPHY HANNA R. J05	065/44/30.000/N	128/15/30.000/W	X	
H24	065-50	IMPERIAL SANS SAULT NO.1 H24	065/43/19.390/N	128/49/07.310/W	X	
H47	065-50	ARCO MOUNTAIN R. H47	065/46/23.000/N	129/07/50.000/W	X	
A23	065-50	CANDEL SOBC MOUNTAIN R. A23	065/42/14.000/N	129/19/12.000/W	X	
A42	065-50	AMOCO CRANSWICK Y.T. A42	065/41/13.000/N	133/07/52.000/W	X	
D77	065-50	SOBC BLACKSTONE Y.T. D77	065/46/10.770/N	137/14/54.780/W	X	
O18	065-50	INEXCO MALLARD Y.T. O18	065/47/58.000/N	140/17/41.000/W	X	
G22	066-00	B.P. LOSH L. G22	065/51/29.000/N	123/19/35.000/W	X	
G26	066-00	ATLANTIC BEAVERTAIL G26	065/55/25.000/N	128/34/25.000/W	X	
C31	066-00	ATLANTIC SHOALS C31	065/50/07.500/N	128/51/45.000/W	X	
D53	066-00	ARCO HUME R. D53	065/52/03.000/N	129/11/00.000/W	X	
D62	066-00	TRIAD HUME R. D62	065/51/46.000/N	129/12/04.000/W	X	
D64	066-00	DOME SOUTH PEEL D64	065/53/04.000/N	132/27/50.000/W	X	
K15	066-00	MCD GCD TAYLOR L. Y.T. K15	065/54/39.000/N	133/03/00.000/W	X	
C33	066-00	AQUIT. ALDER Y.T. C33	065/52/01.590/N	136/54/70.000/W	X	
M59	066-00	SOCONY BLACKIE NO.1 Y.T. M59	065/58/55.000/N	137/11/10.870/W	X	
D63	066-00	CHEVRON CHANCE Y.T. D63	065/52/09.000/N	137/42/51.000/W	X	
N58	066-00	MURPHY WHITESTONE Y.T. N58	065/57/50.000/N	138/25/30.000/W	X	
M55	066-00	INC. HUSKY BLACKFLY Y.T. M55	065/54/55.000/N	140/25/55.000/W	X	

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. LOG	Data Source
A53	066-10	TRIAD HUME A53	066/02/12.000/N	129/09/46.000/W	X	X
065	066-10	INEXCO WELDON CK. 065	066/04/45.000/N	132/27/01.000/W	X	X
M69	066-10	SHELL PEEL R. Y.T. M69	066/08/56.000/N	133/58/04.000/W	X	X
B34	066-10	SOCONY BIRCH Y.T. B34	066/03/03.140/N	136/51/17.510/W	X	X
E53	066-10	SOCONY SUBC BIRCH Y.T. E53	066/02/21.000/N	136/56/05.000/W	X	X
C18	066-10	CANOE R. E. CHANCE Y.T. C18	066/07/08.935/N	137/17/57.422/W	X	X
G08	066-10	SOCONY CHANCE Y.T. G08	066/07/18.100/N	137/30/50.800/W	X	X
J19	066-10	CANOE R. CHANCE Y.T. J19	066/08/31.200/N	137/32/28.022/W	X	X
L08	066-10	M. MINERALS CHANCE NO.1 L08	066/07/42.000/N	137/31/42.000/W	X	X
L081	066-10	M. MINERALS CHANCE NO.1 L081	066/07/25.000/N	137/48/16.000/W	X	X
F18	066-10	CHEVRON PORCUPINE Y.T. F18	066/02/35.000/N	137/46/58.000/W	X	X
I13	066-10	SORC F. PORCUPINE Y.T. I13	066/05/33.000/N	137/55/32.000/W	X	X
K56	066-10	SOCONY PORCUPINE R. Y.T. K56	066/05/59.000/N	138/20/00.000/W	X	X
N26	066-10	SOCONY WHITESTONE Y.T. N26	066/18/45.000/N	128/21/38.000/W	X	X
N39	066-20	MOBIL ONTAEK L. N39	066/17/23.000/N	128/37/30.000/W	X	X
H48	066-20	GLACIER HARE INDIAN NO.1 H48	066/14/48.000/N	128/39/48.000/W	X	X
F55	066-20	GLACIER RAMPARTS NO.1 F55	066/17/40.000/N	131/51/30.000/W	X	X
I38	066-20	DECALTA ONTARATUE I38	066/18/35.720/N	133/31/39.000/W	X	X
D08	066-20	ARCO SAINVILLE R. D08	066/10/36.500/N	134/01/02.220/W	X	X
K09	066-20	SHELL PEEL R. Y.T. K09	066/14/66.000/N	134/18/52.000/W	X	X
I21	066-20	SHELL PEEL R. Y.T. I21	066/12/12.000/N	134/45/04.000/W	X	X
N25	066-20	GULF CARIBOU Y.T. N25	066/10/08.500/N	137/22/01.500/W	X	X
C33	066-20	CHEVRON W. PARKIN Y.T. C33	066/11/13.500/N	137/26/04.500/W	X	X
D51	066-20	SOCONY W. PARKIN Y.T. D51	066/29/10.000/N	124/35/52.000/W	X	X
B62	066-20	SOCONY N. CATH Y.T. B62	066/28/26.000/N	128/58/24.000/W	X	X
A40	066-30	UNION DECALTA GOOD HOPE A40	066/20/45.000/N	128/58/00.000/W	X	X
H79	066-30	GLACIER LOON R. NO.1 H79	066/21/10.000/N	129/14/44.000/W	X	X
L61	066-30	ATLANTIC MANITOU L. L61	066/26/09.500/N	129/35/53.000/W	X	X
D72	066-30	ATLANTIC AIRPORT CK. NO.1 D72	066/26/38.000/N	130/08/50.000/W	X	X
A37	066-30	ATLANTIC N. CIRCLE R. NO.1 A37	066/23/22.500/N	132/05/51.500/W	X	X
K47	066-30	ATLANTIC CIRCLE R. NO.1 K47	066/22/36.930/N	133/12/15.470/W	X	X
H34	066-30	ATLANTIC ONTARATUE H34	066/25/35.400/N	134/14/07.900/W	X	X
K63	066-30	SHELL SAINVILLE R. K63	066/20/28.600/N	134/43/34.600/W	X	X
K76	066-30	SHELL PEEL R. Y.T. K76	066/24/51.200/N	136/46/22.700/W	X	X
H71	066-30	MOBIL PEEL Y.T. H71	066/20/12.000/N	137/13/01.000/W	X	X
N05	066-30	SOCONY TUTTLE Y.T. N05	066/20/22.000/N	140/06/13.000/W	X	X
D61	066-30	CHEVRON PARKIN Y.T. D61	066/35/32.000/N	130/20/21.000/W	X	X
G31	066-30	INEXCO PORCUPINE Y.T. G31	066/33/37.500/N	130/46/10.310/W	X	X
L26	066-40	CANDEL GRANDVIEW L26	066/30/31.900/N	134/04/32.300/W	X	X
K04	066-40	ATLANTIC ONTARATUE K04	066/38/17.878/N	134/39/33.055/W	X	X
J21	066-40	SHELL PEEL R. J21	066/35/09.400/N	134/45/37.500/W	X	X
H59	066-40	SHELL PEEL R. Y.T. H59	066/36/16.100/N	134/45/40.000/W	X	X
B06	066-40	SHELL PEEL R. Y.T. B06	066/30/38.320/N	134/50/50.590/W	X	X
B06A	066-40	SHELL PEEL R. Y.T. B06A	066/33/08.870/N	134/46/28.470/W	X	X
H37	066-40	SHELL TRAIL R. H37	066/32/54.000/N	137/50/08.150/W	X	X
R07A	066-40	SHELL PEEL R. Y.T. L01	066/46/56.032/N	138/25/30.000/W	X	X
L01	066-40	SOCONY ELLEN Y.T. C24	066/46/56.881/W	132/49/35.881/W	X	X
C24	066-40	SOCONY ELLEN Y.T. C24	066/44/28.139/N	133/09/58.203/W	X	X
N53	066-40	M. MINERALS N. HOPE Y.T. N53	066/49/42.000/N	133/24/03.000/W	X	X
027	066-50	SHELL ARCTIC RED R. 027				
G55	066-50	SHELL RED WEST G55				
L50	066-50	IOE MARTIN HOUSE L50				

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp. LOG	Data Source DST
C60	066-50	SKELLY ARCTIC RED Y.T. C60	066/49/00.000/N	133/55/19.000/W	X	X
L19	066-50	SHELL PEEL R. Y.T. L19	066/48/39.300/N	135/18/23.700/W	X	X
022	066-50	SOBC SHAEFFER CK. Y.T. 022	066/41/54.000/N	137/19/40.000/W	X	X
N49	066-50	PEEL PLATEAU EAGLE PLAINS Y.T. N49	066/48/54.000/N	138/08/30.000/W	X	
M48	067-00	UNION IOL E. MAUNDIR M48	066/57/54.000/N	124/24/00.000/W		
G72	067-00	IOE SATAH R. Y.T. 672	066/51/28.000/N	134/13/57.000/W	X	X
F37	067-00	PACIFIC PEEL Y.T. F37	066/56/26.000/N	134/51/54.000/W	X	X
078	067-00	CHEVRON PINE CK. Y.T. 078	066/57/53.000/N	137/58/58.000/W	X	X

Table 2.1 Cont'd

ID Code	Bands	Well Name	Latitude	Longitude	Temp, Data Source
					LOG DST
D77	067-10	FORWARD CAMP D77	067/06/03.000/N	124/14/35.000/W	X
M63	067-10	MOBIL BELT HILLS M63	067/02/45.000/N	126/27/45.000/W	X
B57	067-10	DECALIA ROND L. NO.5 B57	067/06/00.000/N	128/24/55.000/W	
F56	067-10	DECALIA ROND L. NO.2 F56	067/05/27.000/N	128/25/42.000/W	
L47	067-10	DECALIA ROND L. NO.4 L47	067/06/30.000/N	128/24/00.000/W	
F75	067-10	DECALIA ROND L. NO.1 F75	067/04/48.000/N	128/28/28.000/W	
A47	067-10	RICHFIELD GRANDVIEW HILLS A47	067/06/12.000/N	130/52/30.000/W	X
F57	067-10	SHELL TREE R. F57	067/06/27.241/N	132/25/40.411/W	X
H57	067-10	SHELL TREE R. E. H57	067/06/27.170/N	132/24/40.164/W	X
F79	067-10	IOE CLARE F79	067/08/20.000/N	133/14/20.000/W	X
K28	067-10	IOE SWAN L. K28	067/07/42.000/W	133/34/44.000/W	X
I05	067-10	CHEVRON WHITEFISH Y.T. I05	067/04/37.000/N	137/15/25.000/W	X
J70	067-10	CHEVRON WHITEFISH Y.T. J70	067/09/32.000/N	137/26/44.000/W	X
F34	067-10	SOCOBY MOLAR Y.T. F34	067/03/59.000/N	138/36/00.000/W	X
M20	067-20	FORWARD IZOK M20	067/19/58.280/N	123/48/28.940/W	X
D45	067-20	UNION MOBIL COLVILLE D45	067/14/08.570/N	125/09/20.870/W	X
E15	067-20	MOBIL COLVILLE E15	067/14/18.200/N	126/18/25.600/W	X
J42	067-20	MOBIL MANUEL L. J42	067/11/40.000/N	129/23/15.000/W	X
R32	067-20	ATLANTIC LITTLE CHICAGO N32	067/11/46.000/N	130/06/55.000/W	X
H36	067-20	IOE TREE R. H36	067/17/21.000/N	132/21/00.000/W	X
M05	067-20	IOE NEVEJO M05	067/14/58.000/N	134/01/45.000/W	X
B25	067-20	UNION AMOCO MCPHERSON B25	067/14/00.780/N	135/34/22.370/W	X
N50	067-20	AMERADA CROWN BELL R. N50	067/19/45.000/N	136/53/29.000/W	X
F48	067-20	CHEVRON GULF RIDGE Y.T. F48	067/17/23.000/N	137/53/35.000/W	X
D40	067-30	MOBIL SUN IROQUOIS D40	067/29/08.000/N	129/52/20.000/W	X
I06	067-30	INC. CNO ATTIOE L. I06	067/25/30.000/N	133/15/10.000/W	X
I50	067-30	IOE STONY I50	067/29/44.000/N	135/22/46.000/W	X
K44	067-40	UNION STOPOVER K44	067/33/31.000/N	123/38/32.000/W	X
D69	067-40	INC. NCO THUNDER R. D69	067/38/10.000/N	130/12/40.000/W	
R05	067-40	RICHFIELD PT. SEPARATION NO.1 A05	067/34/06.000/N	134/00/10.000/W	X
C78	067-40	SKELLY FT. MCPHERSON C78	067/37/04.000/N	134/14/20.000/W	X
J80	067-40	BLUEMOUNT S. DELTA J80	067/39/40.430/N	134/43/38.400/W	X
G06	067-40	DOME UNION STONY G06	067/35/28.000/N	135/15/50.000/W	X
F72	067-40	WESTCOAST PORCUPINE Y.T. F72	067/31/23.000/N	137/59/06.000/W	X
L21	067-50	PEX FINA N. COLVILLE L21	067/40/37.000/N	126/05/37.000/W	X
K24	067-50	ASHLAND TEDJI K24	067/43/38.000/N	126/49/56.000/W	X
K15	067-50	CAN. SOUTHERN CARNWATH R. NO.1 K15	067/44/40.000/N	128/47/53.000/W	X
I11	067-50	CANDEL MOBIL IROQUOIS I11	067/40/40.000/N	129/32/05.000/W	X
A73	068-00	CDR TENLEN A73	067/52/07.500/N	130/43/21.560/W	X
I51	068-00	BANFF AQUIT. TREELESS I51	067/54/42.040/N	135/24/28.010/W	X
K35	068-00	BANFF RAT PASS K35	067/54/42.600/N	135/21/56.800/W	X



### 3.0 THE BACKGROUND OF WELL DRILLING, LOGGING AND TESTING OPERATIONS.

The oil and gas industry conducts its drilling activities and associated operations to confirm, in the most efficient manner possible, the existence of hydrocarbon resources in geological formations thought to have reservoir potential.

The data used for this study are a by-product of some key measurements used in those evaluations.

Electrical well logs are the basis for evaluation of formation characteristics such as lithology, porosity, fluid saturations, strata thickness, strike and dip, fractures and others. To record these logs the wellbore is conditioned by circulation of drilling mud for varying lengths of time dictated by formation type, previous drilling difficulties, mud properties and by availability of logging equipment or crews. The length of circulation has a great effect on near wellbore formation temperatures.

The length of time between cessation of drilling and circulation is usually, but not always, available. It is a key element in the Horner-type extrapolation of a static bottom hole temperature (BHT) used in this study.

When the hole conditions do not allow the logging sonde to be lowered to total depth (T.D.) the drill string is lowered to the obstruction or to T.D. and additional circulation is carried out. This total operating time of the first hole conditioning, logging attempt(s) and additional hole conditioning(s) might be lumped together in the period between "Drilling Stopped" and "Circulation Stopped" on log headings explaining the extremely long "circulation time".

It is not within the scope of this study, nor is it felt necessary because of limited occurrences, to validate the exact sequence of drilling and logging operations which are available from the operating companies' daily rig reports. It is probable that some inconsistencies in temperature extrapolation can be eliminated through examining data that are more accurately recorded than the limited information typically available on log headings.

A greater source of error in the temperature data obtained from log headers is poor field procedures. In some cases only one maximum recording thermometer reading was obtained. This one reading was written in on subsequent logging passes as being "recorded". Additionally typographical errors are evident when instruments 1 and 3 may record 45° and run 2 would be written as 54°. Errors are also seen when field data are typed onto final

forms without proofreading. On deeper holes when several logging runs are combined the "final" log is a combination of all logs from that well. Often the final log heading contains drilling and circulation information on only the last sequence of logging operations. It would be possible, but not within the scope of this study, to refine the temperature data by examining the original "field print" logs.

Temperature logs are usually recorded within casing to establish temperature anomalies from the exothermic reaction of cement setting. These logs cannot be incorporated into a study of static formation temperatures. Other temperature logs are recorded during operations which require fluid flow into or from the formations. Such operations mask true formation temperature profiles and cause difficulty in interpretation. In this study only 3 of 18 temperature surveys outside the Norman Wells grid were used.

Drill stem testing provides an accurate indication of fluid transmissibility, pressures and temperature for a specific depth interval. The reliability of these measurements is excellent if the test is of sufficient duration, the packer elements of the tool were functioning properly and the tool did not plug with mud or formation cuttings. Failure to meet these criteria would usually result in the test being called a "misrun" and another test conducted.

A great degree of confidence can be placed in DST temperature data if the operations were successful in recovering significant volumes of formation fluids.

#### 4.0 TEMPERATURE DATA COLLECTION AND REDUCTION

Generally, data collection and reduction involved:

- checking well name and location information,
- converting data to S.I. units,
- calculating and plotting Horner BHT extrapolation data from available logs, and,
- plotting all temperature/depth data points on a graph.

Data for the majority of wells in this study were recorded in Imperial units. All such data were converted to S.I. units as follows:

- temperature in degrees Celsius ( $^{\circ}\text{C}$ ),
- depth in metres (m), and,
- pressure (for DST' s) in kilopascals (kPa).

In the following section, details of data collection theory and methods for each data type are discussed in detail.

##### 4.1 Open Hole Logs

Well log results become public after one year and copies of the logs may be obtained through various commercial agencies. For the present study the required data is usually contained on the well log header for each logging tool run.

GEOTECH contracted Riley's Datashare International to

retrieve the appropriate well header information from all available wells in the study areas and provided a standard form for recording this data (see example in Figure 4.2). In the majority of cases fewer than three log runs were done in a well, with two log runs being the average. With each log run space was left for five individual logs.

#### 4.1.1 Theory of Open Hole Log Data Analysis

It is well known that downhole temperatures recorded during routine logging operations do not measure true, static formation temperature. Due to cooling effects while circulating (i.e., conditioning hole prior to logging operations), recorded temperatures can be  $10^{\circ}\text{C}$  to  $45^{\circ}\text{C}$  lower than true, static formation temperature (2).

A simple and rapidly applied analytical technique has been developed for analyzing maximum bottom hole temperatures (BHT), which are recorded during well logging operations, to determine static formation temperature. The method requires use of a maximum recording thermometer on each logging run. In addition to maximum borehole temperature for each log run, it is necessary to record the time (after circulation stopped) that the logging instrument was on bottom. Also, duration of hole conditioning (i.e. "circulation time") prior to logging must be known.

Since a rise in pressure was found to be similar to a rise in temperature, it has been suggested that increases in BHT after circulation is stopped may be analyzed in a manner similar to Horner's pressure build-up technique (2).

Both temperature and pressure build-up can be described by the diffusivity equation, subject to constraints of an initial condition and a set of boundary conditions. A recent study has shown mathematically that the inner boundary condition for the temperature case is not analogous to that for the pressure case (2). However, since under most practical field conditions in situ temperature gradient changes very slowly, particularly for short circulating times, the proposed method will give a reliable estimate of true, static formation temperature. Extremely long circulation times (in excess of a day) would lead to static temperature estimates somewhat lower than actual (2).

The basic criterion for the technique is the straight-line relationship on semilogarithmic paper of maximum recorded temperature (BHT in °C or °F), versus the ratio of:

$$\frac{\Delta t}{t + \Delta t}$$

where:

$\Delta t$  = time "tool on bottom" - time circulation stopped (hr)

$t$  = time circulation stopped-time drilling stopped (hr)

Then, extrapolation of this straight line to a time ratio of

$$\frac{\Delta t}{t + \Delta t} = 1$$

will define true, static formation temperature (2).

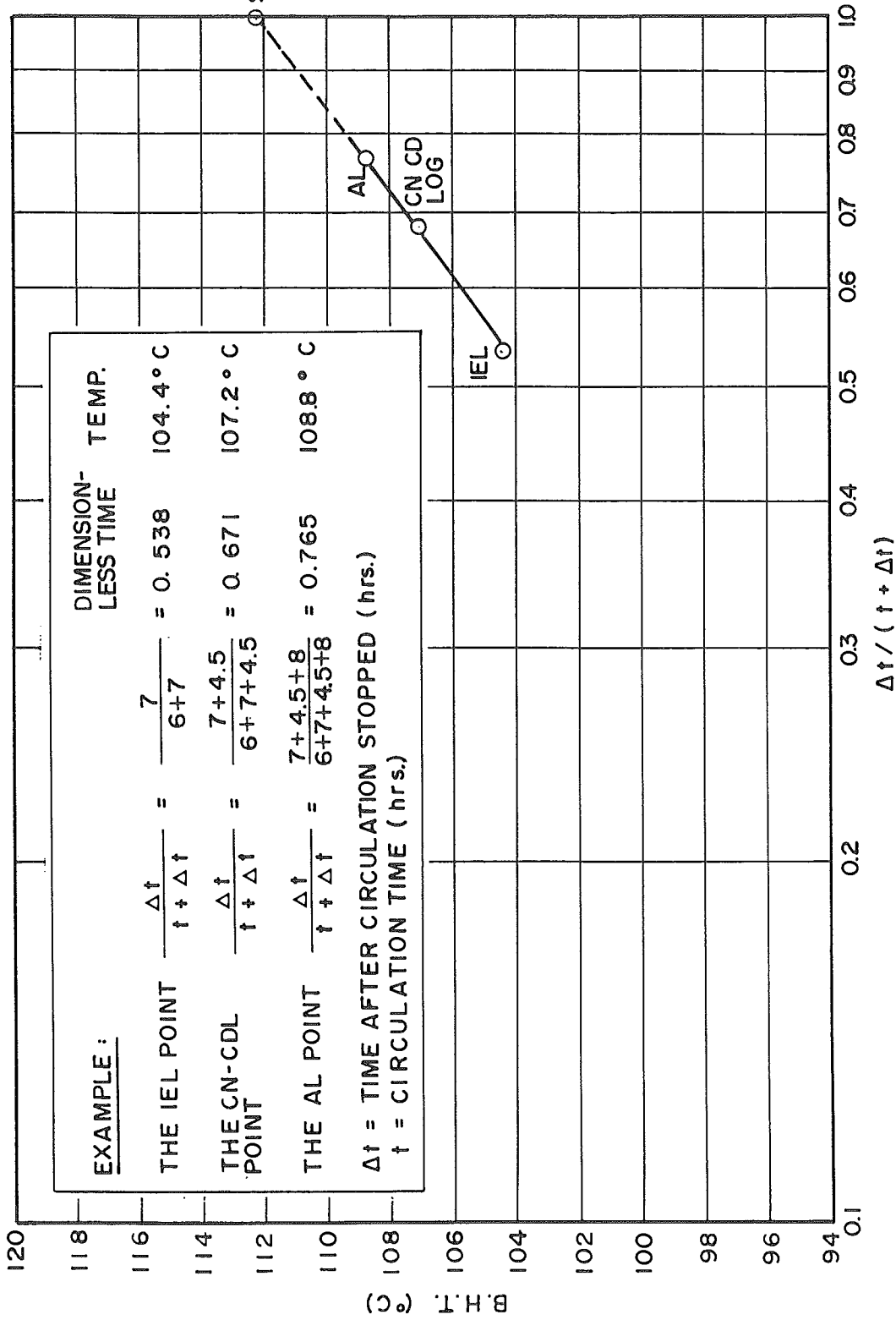
Figure 4.1 illustrates the analytical procedure described above. In this case three logs, each with a maximum recording thermometer have been run to 3048 metres. For each case the dimensionless time has been calculated and plotted versus temperature. The best straight line fit to these points is then extrapolated to a time ratio of 1.0 to estimate the true formation temperature.

#### 4.1.2 Examples

To illustrate the data reduction methods for log data, the following examples from this study are presented.

The Shell Wrigley G-70 well had two logging runs for which BHT plots could be made. The completed data sheet for this well is shown in Figure 4.2. In this example the "time since circulation" for some of the individual logs was not recorded, but in both log runs two points could be plotted enabling BHT extrapolations. Figures 4.3 and 4.4 show the Horner temperature plots with the extrapolated BHT for Log Runs No. 1 and 2 respectively.





### HORNER TEMPERATURE EXTRAPOLATION PLOT

REFERENCE: FERTL, W. H. AND WICHMAN, P. A. "HOW TO DETERMINE STATIC B.H.T. FROM WELL LOG DATA".

FIGURE 4.1



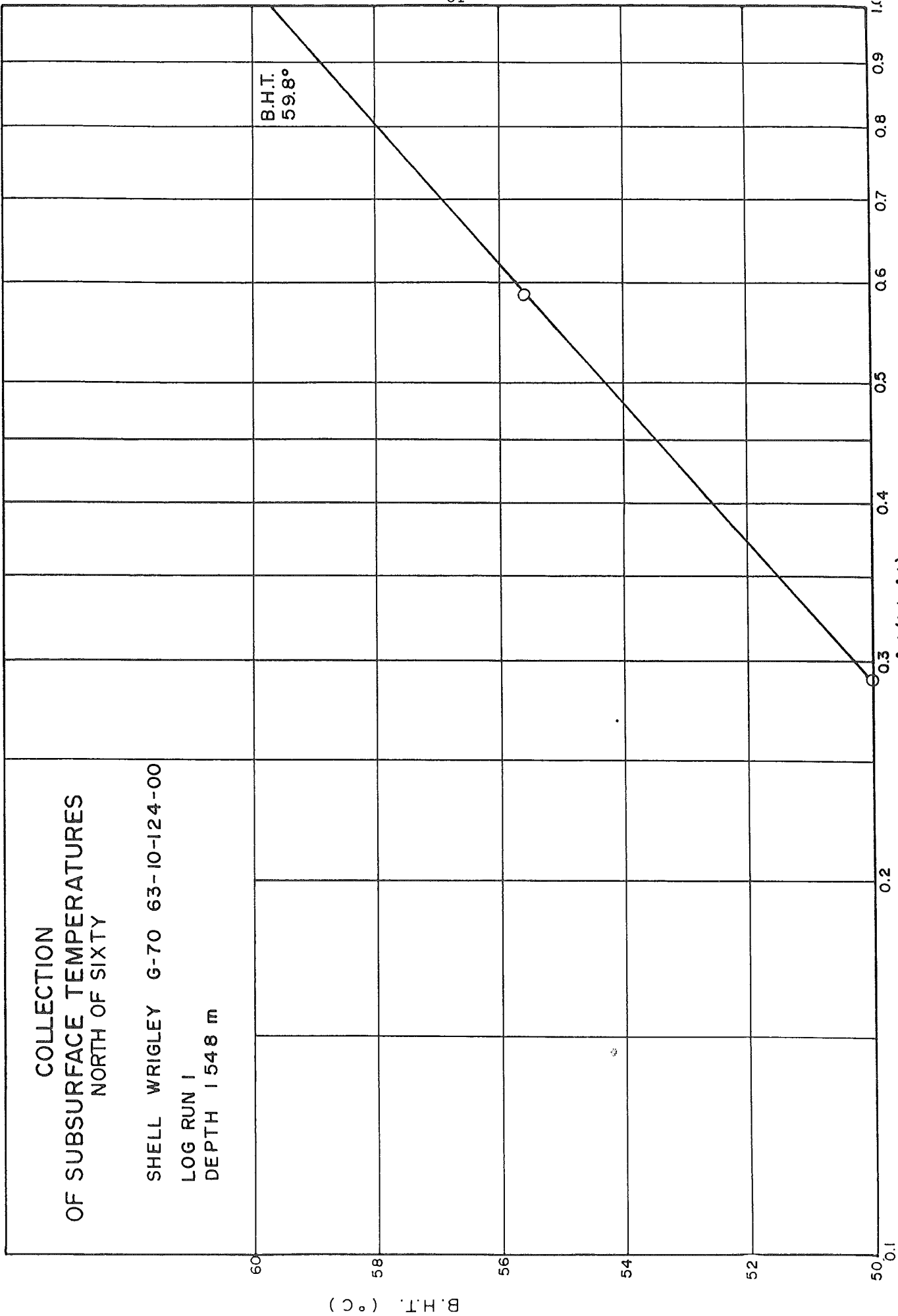
TEMPERATURE DATA FROM  
OPEN HOLE LOGS

WELL NAME	SHELL WRIGLEY G-70		G-70-63-10-124-00			
LOCATION	63 °	09 '	17 "	N Latitude		
	124 °	11 '	50 "	W Longitude		
<u>LOG RUN #1</u>	Drillers Depth	5080 FT	1548.4 M			
	Drilling Stopped	1000 HRS	30 OAY	JAN MO	65 YR	
	Circulation Stopped	1830 HRS	30 OAY	t=8.5		
	<u>TYPE LOG</u>	<u>DEPTH</u>	<u>TOOL ON BOTTOM</u>	<u>TIME SINCE CIRCULATION</u>	<u>°F</u>	<u>TEMP °C</u>
		<u>FT</u> <u>M</u>				
	SONIC	5074 1546.6	-	-	122	50.0
	IND E	5080 1548.4	2200/30	3.5	122	50.0
	MICRO C	5078 1547.8	630/31	12	132	55.6
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
<u>LOG RUN #2</u>	Drillers Depth	12250 FT	3733.8 M			
	Drilling Stopped	0130 HRS	DAY	MAR MO	65 YR	
	Circulation Stopped	1630 HRS	27 DAY	t=15.0		
	<u>TYPE LOG</u>	<u>DEPTH</u>	<u>TOOL ON BOTTOM</u>	<u>TIME SINCE CIRCULATION</u>	<u>°F</u>	<u>TEMP °C</u>
		<u>FT</u> <u>M</u>				
	MICRO C	12204 3719.8	430/28	12	200	93.3
	E LOG	12204 3719.8	430/29	36	207	97.2
	SONIC	12199 3718.3	1500/27	?	205	96.1
	CONT DIP	12198 3718.0	-		207	97.2
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
<u>LOG RUN #3</u>	Drillers Depth	_____ FT	_____ M			
	Drilling Stopped	_____ HRS	_____ DAY	_____ MO	_____ YR	
	Circulation Stopped	_____ HRS	_____ DAY			
	<u>TYPE LOG</u>	<u>DEPTH</u>	<u>TOOL ON BOTTOM</u>	<u>TIME SINCE CIRCULATION</u>	<u>°F</u>	<u>TEMP °C</u>
		<u>FT</u> <u>M</u>				
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	_____

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FIGURE 4.2  
Open Hole Log Data - Shell Wrigley G-70



COLLECTION  
OF SUBSURFACE TEMPERATURES  
NORTH OF SIXTY

SHELL WRIGLEY G-70 63-10-124-00  
LOG RUN 1  
DEPTH 1548 m

EXAMPLE HORNER TEMPERATURE PLOT  
FIGURE 4.3

FIGURE 4.3

COLLECTION  
 OF SUBSURFACE TEMPERATURES  
 NORTH OF SIXTY  
 SHELL WRIGLEY G-70 63-10-124-00  
 LOG RUN 2  
 DEPTH 3734 m

B.H.T. (°C)

103

101

99

97

95

93

B.H.T.  
 100°C

$\Delta t (t + \Delta t)$

0.2

0.3

0.4

0.5

0.6

0.7

0.8

0.9

1.0

FIGURE 4.4

EXAMPLE HORNER TEMPERATURE PLOT  
 FIGURE 4.4



For much of the log data the information was incomplete or erroneous. Therefore the Horner plot analysis was often not possible. Some of the typical problems with the log data are described below.

Incorrect or unrecorded times often prevented complete analysis. In the example above, Shell Wrigley G-70, no "tool on bottom" time was recorded for the sonic log in Run 1 and the continuous dip meter in Run 2. Therefore, these data points could not be used in the BHT extrapolation analysis. In Run 2 the sonic log time for "tool on bottom", as recorded, is earlier than the time circulation stopped. It is possible the date was actually the 28th, in which case the point fits the usual trend of rising temperature with time. However, such corrections could not be assumed. Where necessary erroneous or incomplete data was checked back to the source and corrected whenever possible.

The log data for Amoco Cranswick Y.T. A-42, Figure 4.5, illustrates incomplete data and interpretation limitations. In Run 2 only one log was run with no times recorded. Run 3 logs were not recorded over the same intervals or depths. Single log temperatures can be used. Run 4 has five logging passes with the same temperature noted over a period of 24 hours since circulation. No extrapolation is possible so the information is



TEMPERATURE DATA FROM  
OPEN HOLE LOGS

A-42-65-50-133-00

WELL NAME AMOCO CRANSWICK Y.T. A-42

LOCATION 65 0 41 13 " N Latitude  
135 0 07 52 " W Longitude  
LOG RUN #1 Drillers Depth 2200 FT 670.6 M  
Drilling Stopped 0845 HRS 23 DAY APR MO 72 YR  
Circulation Stopped 1345 HRS 23 DAY t=5.0

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C
BHC SGRC	2194	668.7	1800/23	4.25	98	36.7
D IND L	2188	666.7	1930/23	5.75	100	37.8
LOG RUN #2			5870 FT	1789.2 M		
Drillers Depth						
Drilling Stopped						
Circulation Stopped						

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C
MICROLL	3516	1071.7			118	47.8
LOG RUN #3			6575 FT	2004.1 M		
Drillers Depth						
Drilling Stopped						
Circulation Stopped						

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C
IND E	5878	1791.6	1930/11	3.5	142	61.1
IND E	6561	1999.8	1930/11	3.5	142	61.1
D IND L	2125	647.7	0500/10	?		

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TEMPERATURE DATA FROM  
OPEN HOLE LOGS

WELL NAME AMOCO CRANSWICK Y.T. A-42

LOCATION 0 0 " Latitude  
0 0 " Longitude  
LOG RUN #4 Drillers Depth 12505 FT 3811.5 M  
Drilling Stopped 1600 HRS 2 DAY MAR MO 73 YR  
Circulation Stopped 2200 HRS 2 DAY t=6.0

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C
D IND L	12492	3807.6	0600/3	8.0	265	129.4
BHC SGRC	12484	3805.1	1100/3	13.0	265	129.4
SNP	12240	3730.8	- /3		265	129.4
F DENS	12493	3807.9	1500/3	17.0	265	129.4
CONT DIP	12484	3805.1	2200/3	24	265	129.4
CONT DIP	12484	3805.1	2200/3	24	265	129.4
LOG RUN #5			1400 FT	4267.2 M		
Drillers Depth						
Drilling Stopped						
Circulation Stopped						

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C
D IND L	13960	4255.0	0530/16	9.5	280	137.8
BHC SGRC	13970	4258.1	1030/16	14.5	280	137.8
CONT DIP	13960	4255.0	-		285	140.6
CONT DIP	13960	4255.0	-		285	140.6
LOG RUN #6			FT	M		
Drillers Depth						
Drilling Stopped						
Circulation Stopped						

TYPE LOG	DEPTH FT	DEPTH M	TOOL ON BOTTOM	TIME SINCE CIRCULATION	TEMP °F	TEMP °C

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FIGURE 4.5  
Open Hole Log Data - Amoco Cranswick Y.T. A-42

considered as a single log temperature. Run 5 has a combination of the same temperature on different tools and a lack of "tool on bottom" times to again yield only a single log temperature.

In other cases, the times at which drilling stopped and circulation stopped were the same (i.e.  $t=0$ ), regardless of times tools were on bottom and the temperatures recorded, the dimensionless time ratio  $\frac{\Delta t}{t+\Delta t}$  would always have a value of 1.0. No BHT extrapolation was possible in this case.

In one case the data indicated a temperature decrease with increasing time; an inconsistent trend from a practical viewpoint.

Runs with excessively long "circulation time" or "time since circulation" were suspect. As outlined in Section 3.0 this probably indicates difficulties were encountered in the drilling or logging operations. The BHT extrapolation technique would not be strictly applicable in such cases. For long circulation times the dimensionless time ratio ( $\frac{\Delta t}{t+\Delta t}$ ) could have a value less than 0.1 in which case that data point could not be plotted on the Horner graph.

## 4.2 Drill Stem Tests

Data from DST's were obtained from the files of Canadian Hydrodynamics and as required from a few of the operating companies. The standard form used for recording DST data is shown in Figure 4.7. It was assumed that recorded temperatures were representative of true formation temperature as explained in Section 3.0. Formation names, where known, were recorded. The formation pressures recorded represent the maximum pressure during the DST, not the extrapolated true formation pressure obtained from a Horner plot for pressure. These pressures may therefore be regarded as the lower limit to the true formation pressure.

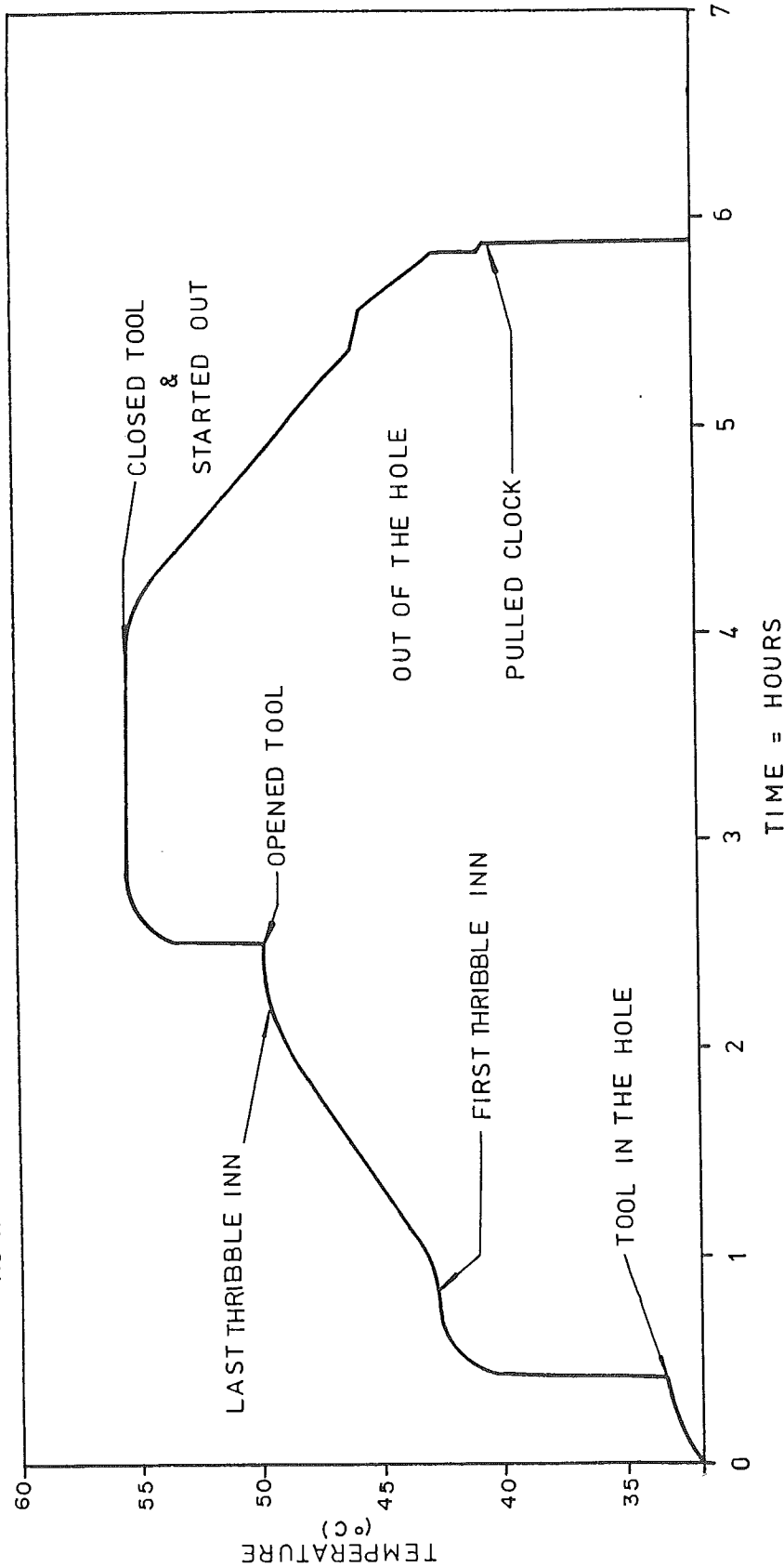
### 4.2.1 Theory of DST Data Analysis

Drill stem tests are run with either a maximum recording thermometer or with a Kuster type continuous recording temperature gauge. In the former case the data would be analysed as for open hole logs (see Section 4.1). If a Kuster - type continuous temperature record is available it can generally be used to determine the true formation temperature. Figure 4.6 shows an example (4). Here we see a standard Kuster temperature recorder used to record a temperature profile during a large water flow from a drill stem test. Note that the plateau temperature here is an excellent point at which to take an undisturbed formation temperature reading. Kuster recorders have also been used to



TEST DATA

DF. ELEVATION 292' 4 1/2" drill pipe 7606'  
 12 1/4" hole to 4595' 7" packer set at 7606'  
 7 5/8" rathole from 4595' to 4625' Thermometer below testing tool  
 MUD WT: 101b/Gal RECOVERY: 90' OF MUD  
 NO WATER CUSHION IN DRILL PIPE 4166' OF SALT WATER



# TEMPERATURE RECORD DURING A DRILL STEM TEST

REFERENCE: CONNOLLY, E.T. "GEOHERMAL SURVEY OF NORTH AMERICA PROGRESS REPORT AND ASSOCIATED DATA - GATHERING PROBLEMS". FOURTH FORMATION EVALUATION SYMPOSIUM OF THE CANADIAN WELL LOGGING SOCIETY, CALGARY, 1972 (4)



FIGURE 4.6

record open hole temperatures, in place of high-resolution, continuous-recording thermometers. It must be remembered, however, that any use of Kuster-type gauges calls for accurate and excessive note-taking, along with time observation to relate the recorded chart to downhole temperatures and times.

It was found during the present study that essentially all DST's run in the study area used continuous recording temperature probes. The majority of tests used a Kuster type mechanical probe. Recently these have been replaced by electronic recording probes.

#### 4.2.2 Examples

DST data for the two examples used in Section 4.1.2 are shown in Figures 4.7 and 4.8. These completed type forms are typical of the raw data received from the contracted data supply company.

No particular problems were encountered with the DST temperature data and all data points were plotted on the depth versus temperature graphs.



TEMPERATURE DATA FROM  
D.S.T. RECORDS IN ARCTIC WELLS

G-70-63-10-124-00

WELL NAME: SHELL WRIGLEY G-70  
 LOCATION: 63 ° 09 ' 17 " Latitude  
 124 ° 11 ' 50 " Longitude

D.S.T. No. 1  
 Test Date: 20 (Day) 1 (Month) 65 (Year)  
 Formation: Bear Rk.  
 Interval: 4049 (1234.1) to 4250 (1295.4) Feet XX Metres (XX)  
 Temperature: 124 °F 51.1 °C  
 Water Salinity: ppm  
 Peak Pressure Recorded: 1164 psi, 8025 Kpa  
 Gauge Type: K-3 AK-1 DMR  
 Range: 0 to 2700 psi, Kpa  
 REMARKS:

D.S.T. No. 2 (misrun)  
 Test Date: (Day) (Month) (Year)  
 Formation:  
 Interval: 11850 to 12188 Feet XX Metres  
 Temperature: °F °C  
 Water Salinity: ppm  
 Peak Pressure Recorded: psi, Kpa  
 Gauge Type: K-3 AK-1 DMR  
 Range: to psi, Kpa  
 REMARKS:

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FIGURE 4.7  
D.S.T. Data - Shell Wrigley G-70



TEMPERATURE DATA FROM

D.S.T. RECORDS IN ARCTIC WELLS A-42-65-50-133-00

WELL NAME: AMOCO CRANSWICK Y.T. A-42
LOCATION: 65 41 12.624 " Latitude
133 07 52.104 " Longitude

D.S.T. No. 1
Test Date: 24 (Day) 1 (Month) 73 (Year)
Formation: Hume
Interval: 7092 (2161.6) to 7125 (2171.7) Feet XX Metres (XX)
Temperature: 175 °F 79.4 °C
Water Salinity: ppm
Peak Pressure Recorded: 483 psi, 3330 Kpa
Gauge Type: K-3 AK-1 DMR
Range: 0 to 4000 psi, Kpa
REMARKS:

D.S.T. No. 2
Test Date: 30 (Day) 1 (Month) 73 (Year)
Formation: Landry
Interval: 8205 (2500.9) to 8238 (2510.9) Feet XX Metres (XX)
Temperature: 225 °F 107.2 °C
Water Salinity: ppm
Peak Pressure Recorded: 869 psi, 5991 Kpa
Gauge Type: K-3 AK-1 DMR
Range: 0 to 4000 psi, Kpa
REMARKS:

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TEMPERATURE DATA FROM

D.S.T. RECORDS IN ARCTIC WELLS

WELL NAME:
LOCATION: " Latitude
" Longitude

D.S.T. No. 3
Test Date: 2 (Day) 2 (Month) 73 (Year)
Formation: Cranswick
Interval: 8663 (2640.5) to 8695 (2650.2) Feet XX Metres (XX)
Temperature: 230 °F 110.0 °C
Water Salinity: ppm
Peak Pressure Recorded: 2145 psi, 14788 Kpa
Gauge Type: K-3 AK-1 DMR
Range: 0 to 4000 psi, Kpa
REMARKS:

D.S.T. No. 4
Test Date: 14 (Day) 2 (Month) 73 (Year)
Formation: Silurian
Interval: 10898 (3321.7) to 10931 (3331.8) Feet XX Metres (XX)
Temperature: 275 °F 135.0 °C
Water Salinity: ppm
Peak Pressure Recorded: 4237 psi, 29210 Kpa
Gauge Type: K-3 AK-1 DMR
Range: 0 to 5000 psi, Kpa
REMARKS:

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FIGURE 4.8

D.S.T. Data - Amoco Cranswick Y.T. A-42



TEMPERATURE DATA FROM

D.S.T. RECORDS IN ARCTIC WELLS

WELL NAME: \_\_\_\_\_  
 LOCATION: \_\_\_\_\_ " Latitude  
 \_\_\_\_\_ " Longitude

D.S.T. No. 5  
 Test Date: 19 (Day) 2 (Month) 73 (Year)  
 Formation: Silurian  
 Interval: 11223 (3420.8) to 11257 (3431.1) Feet XX Metres (XX)  
 Temperature: 275 °F 135.0 °C  
 Water Salinity: \_\_\_\_\_ ppm  
 Peak Pressure Recorded: 4467 psi, 30795 Kpa  
 Gauge Type: K-3 AK-1 DMR  
 Range: 0 to 5000 psi, Kpa  
 REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

D.S.T. No. 6 misrun  
 Test Date: \_\_\_\_\_ (Day) \_\_\_\_\_ (Month) \_\_\_\_\_ (Year)  
 Formation: \_\_\_\_\_  
 Interval: 11237 to 11271 Feet XX Metres \_\_\_\_\_  
 Temperature: \_\_\_\_\_ °F \_\_\_\_\_ °C  
 Water Salinity: \_\_\_\_\_ ppm  
 Peak Pressure Recorded: \_\_\_\_\_ psi, \_\_\_\_\_ Kpa  
 Gauge Type: K-3 AK-1 DMR  
 Range: \_\_\_\_\_ to \_\_\_\_\_ psi, Kpa  
 REMARKS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

FIGURE 4.8 Continued

#### 4.3 Temperature Survey Data

Data from this source were of limited value as explained in Section 3.0. Outside the Norman Wells grid (65-20-126-45), only eighteen temperature surveys were available in the study area. Of these eighteen surveys, only three were found to be applicable to this study. These three surveys appeared to record stabilized subsurface temperatures. However, the temperature survey data for well A-55-60-30-123-45 was inconsistent with other log and DST data. Copies of the three temperature surveys used are contained in Appendix B, Volume 6.

In the Norman Wells grid many temperature surveys have been run. However, these were run for purposes which made the results unusable in this study or were too shallow to be significant.

#### 4.4 Norman Wells Grid

To date some 200 wells have been drilled in the Norman Wells grid (65-20-126-45). As mentioned in Section 2.0, a selection of wells was made and these were analyzed as outlined above.

Many of the wells in the area were directionally drilled and were therefore not used for determining temperatures at true vertical depth from surface. Data from the wells selected were of little use because the producing formations, the Canol and Kee

Scarp, are at less than one kilometer depth. Most temperature data was taken at around 600 m to 700 m depth. The data obtained were mainly from a single log run. No DST's were run but some similar temperature readings were obtained from production logging and tests. These data were plotted using the DST symbol.

The wells included in the study provided limited but consistent information. Therefore an exhaustive study of all the wells in this grid would not yield any better information on the scale of the presentation maps. A larger scale map of this area could be used to plot isotherms at 600 m or 650 m depth. This work was outside the scope of this report and the lack of extrapolated BHT or DST data on the majority of the wells may not justify such a detailed study.

#### 4.5 Computer Data Tape

As an additional part of this study, all the raw log and DST temperature data were loaded onto magnetic tape using GEOTECH's in-house computing facilities. Selective printing of this file generated the well list of Table 2.1.

The tape format is virtually the same as for the 1983 study. The few modifications are outlined below. The wells in this study were sorted using the Grid Survey System based on latitude and longitude. Within each grid, the alphanumeric unit/section was

used to label the wells. The keyed field used to sort the wells then consists of the unit/section label (eg. A-53) and the grid label (eg. 65-20-126-45). An additional field was introduced to indicate whether log or DST data were available from the wells included in the study. If one or more temperature/depth data points were plotted from log data or DST data the flag in this extra field would place an "X" under the appropriate column in Table 2.1.

As in the 1983 study, a value of -1 in any column of the data file indicates no data were available. S.I. units are used for all the raw data as follows:

time = hours

depth = metres

temperature = degrees Celsius

pressure = kilopascals

A hard copy example of the data file for the Amoco Cranswick A-42 well is given in Figure 4.9. A copy of the data tape and the file documentation has been sent to the Scientific Authority with the copies of this report and Appendices.



Well name : AMOCO CRANSWICK Y.T. A42  
 Latitude : 065/41/13.000/N Longitude : 135/07/52.000/W

RUN #	Drillers Depth	Circ Time	Log Type	Depth	Time	Temp
1	670.6	5.0	D IND L	666.9	5.75	37.8
			BHC SGRC	668.7	4.25	36.7
2	1789.2	-1.0	MICROLL	1071.7	-1.00	47.8
3	2004.1	-1.0	IND E	1791.6	3.50	61.1
			IND/E	1999.8	-1.00	-1.0
			D IND L	647.7	-1.00	-1.0
4	3811.5	6.0	D IND L	3807.6	8.00	129.4
			BHC SGRC	3805.1	13.00	129.4
			SNP	3730.8	-1.00	129.4
			F DENS	3807.9	17.00	129.4
			CONT DIP	3805.1	24.00	129.4
			COMP DIP	3805.1	24.00	129.4
5	4267.2	5.0	D IND L	4255.0	9.50	137.8
			BHC SGRC	4258.1	14.50	137.8
			CONT DIP	4255.0	-1.00	140.6
			COMP DIP	4255.0	-1.00	140.6

DST #	Date	Interval	Temp	Pressure
1	24/04/73	2161.6- 2171.7	79.4	3330
2	30/01/73	2500.9- 2510.9	107.2	5991
3	02/02/73	2640.5- 2650.2	110.0	14788
4	14/02/73	3321.7- 3331.8	135.0	29210
5	19/02/73	3420.8- 3431.1	135.0	30795
6	00/00/00	3425.0- 3435.4	-1.0	-1

note : a field containing -1 indicates incomplete or missing data

FIGURE 4.9  
 Computer Data Records for Amoco Cranswick YT A-42

## 5.0 DATA ANALYSIS

After collecting and reducing the data as explained in Section 4, the temperature/depth data points were plotted on depth versus temperature graphs, one graph per well. From these graphs, temperatures, where available, at 1,2,3 and 4 kilometer depths were transferred onto corresponding base maps. Isotherms were then contoured through these data. In addition, where the gradient line was sufficiently long (at least 0.6 km) the value of the gradient was calculated and entered on a fifth base map which was also contoured. These contour plots are discussed further in Section 5.2

### 5.1 Depth Versus Temperature Graphs

As stated in Section 4, all temperature/depth data points obtained from the raw data were plotted. The legend on each graph indicates which logging runs yielded data. Single log temperatures (open triangles), the least reliable data, were plotted regardless of whether the temperature reflected stabilized conditions. Where Horner plots could be made only the extrapolated BHT was plotted (solid triangles). DST data points were plotted directly (solid circles) as were data from the limited number of temperature surveys used (open squares).

Where data warranted, a best straight line fit for the geothermal gradient was drawn. Where data of reasonable quality

existed over a limited depth interval, the gradient line was sometimes extrapolated (dashed lines) to even kilometer depths.

In a few cases a bilinear geothermal gradient was obvious from the plotted data. Two examples are shown in Appendix A, Figures 46 and 421. The geothermal gradient for these wells was calculated using the longer or deeper part of the profile.

Interpretation of the plotted data was made when the gradient lines were drawn in and data for the isotherms and geothermal gradient plots obtained. The graphs for the examples considered in Section 4 are discussed below to illustrate the analysis and interpretation done.

The depth versus temperature graph for the Shell Wrigley G-70 well is given in Figure 5.1. Both logging runs yielded extrapolated BHT's as described in Section 4.1.2. and when plotted with the single DST data point, a consistent linear temperature gradient was drawn between the three points. Temperatures at 1, 2, 3 and 4 kilometer depths and the value of the gradient in Celsius degrees per kilometer were entered on the appropriate base maps.

Figure 5.2 is the graph for the Amoco Cranswick Y.T. A-42 well. All five logging runs yielded a temperature/depth data point and these were plotted with the DST data. The extrapolated BHT from Run 1 is consistent with a gradient line drawn through four

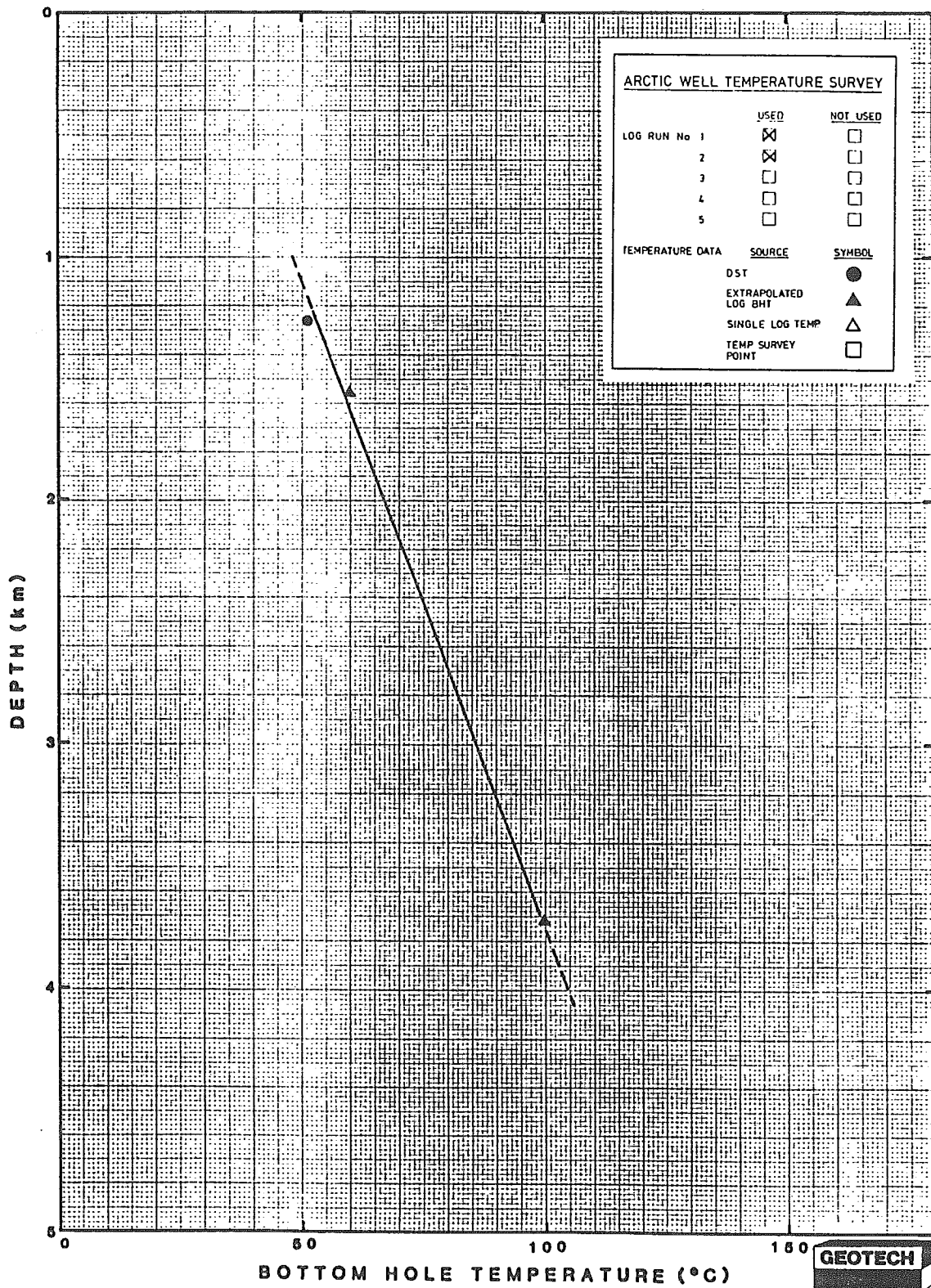


FIGURE 5.1  
Depth vs Temperature Graph-Shell Wrigley G-70

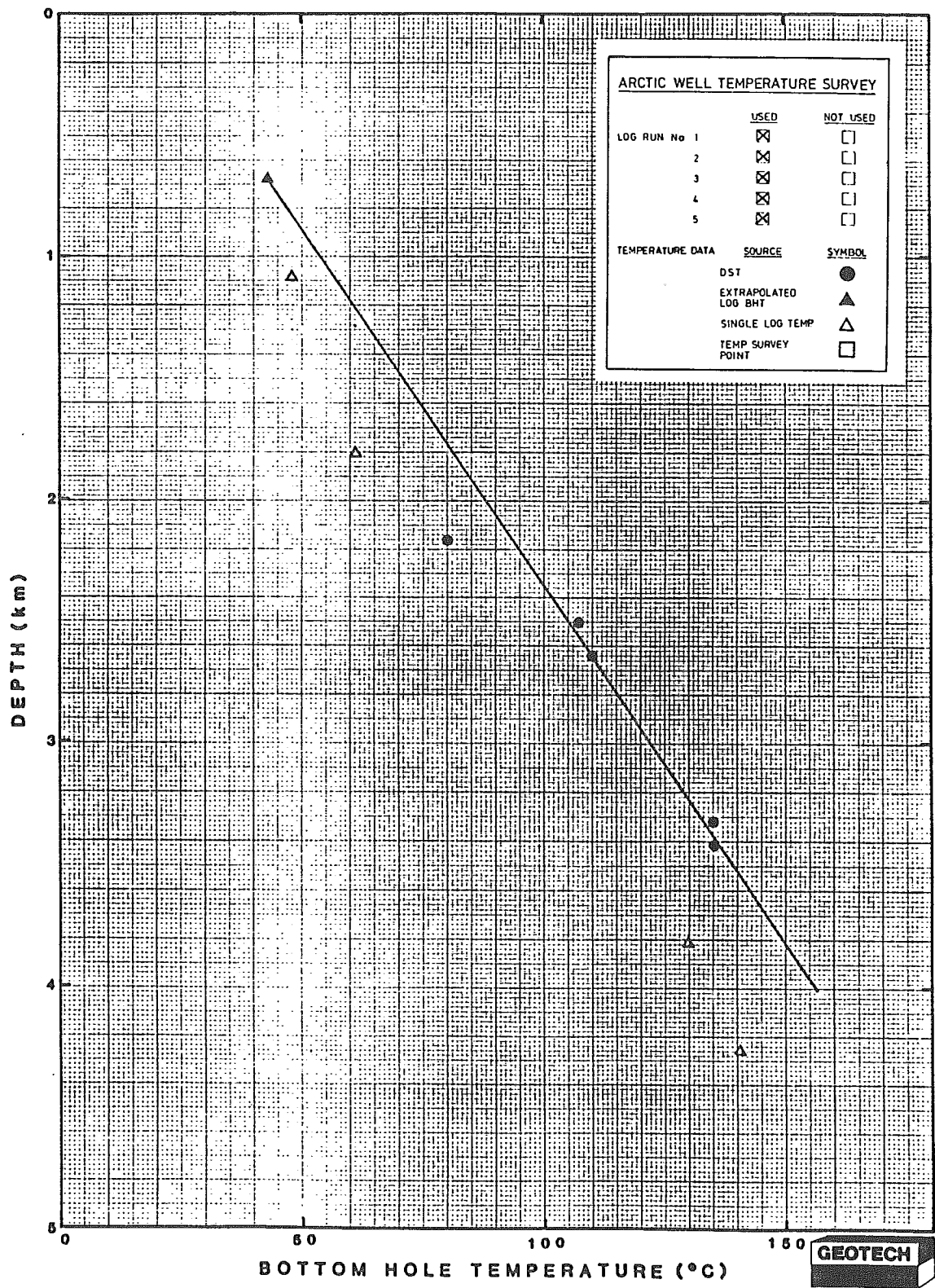


FIGURE 5.2

Depth vs Temperature Graph-Amoco Cranswick YT A-42

of the five DST points. The single log data points from Runs 2 to 5 illustrate the expected cooler temperatures from such data. Thus, from this trend shown on the graph it can be inferred that these single log temperatures probably do not represent stabilized BHT for those runs. One DST point plotted off the interpreted gradient profile which could indicate it represents an erroneous reading. However, more likely it illustrates the scatter in data. It is evident from this example that all recorded DST temperatures are not necessarily indicative of equilibrated formation temperature. This is a function of the duration of a given DST as discussed in Section 3.0.

In two grids, 60-10-124-00 and 60-30-123-45, there were a number of closely spaced wells. For these grids a composite graph, in addition to the graphs for the individual wells, was plotted. These composite graphs, reproduced from Appendix A in Figures 5.3 and 5.4 respectively, were used to obtain data for the isotherm and gradient contour plots rather than using the data from each individual well. These composite graphs, having a greater number of data points, give a good indication of data scatter, assuming that there is little variation in the geothermal gradient among the wells in each grid.

The composite graphs show that single log temperatures plot mostly on the lower side of the interpreted gradient profile. As a related result the largest data scatter is seen among single log

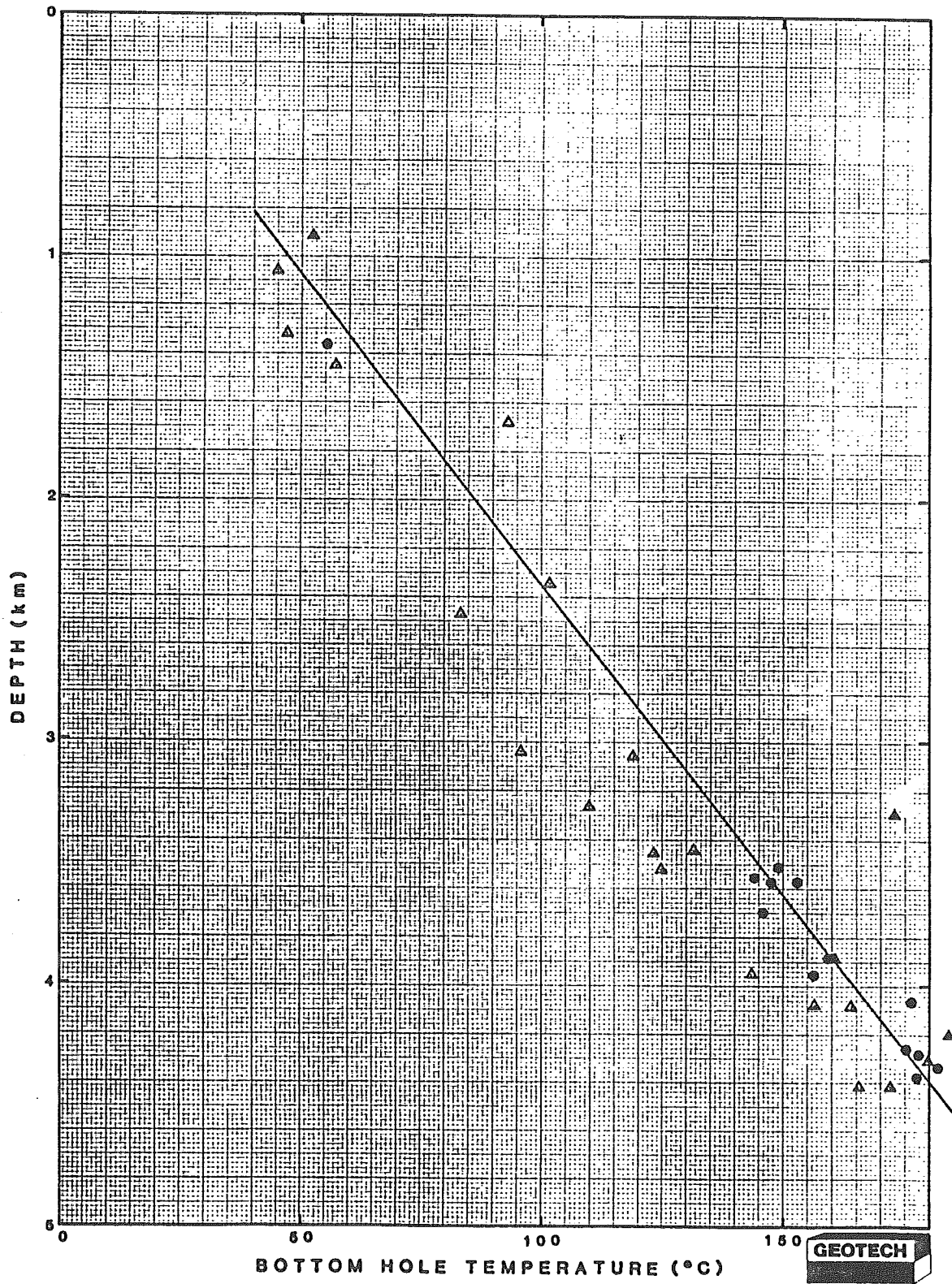


FIGURE 5.3

Composite Graphy - Grid 60-10-124-00

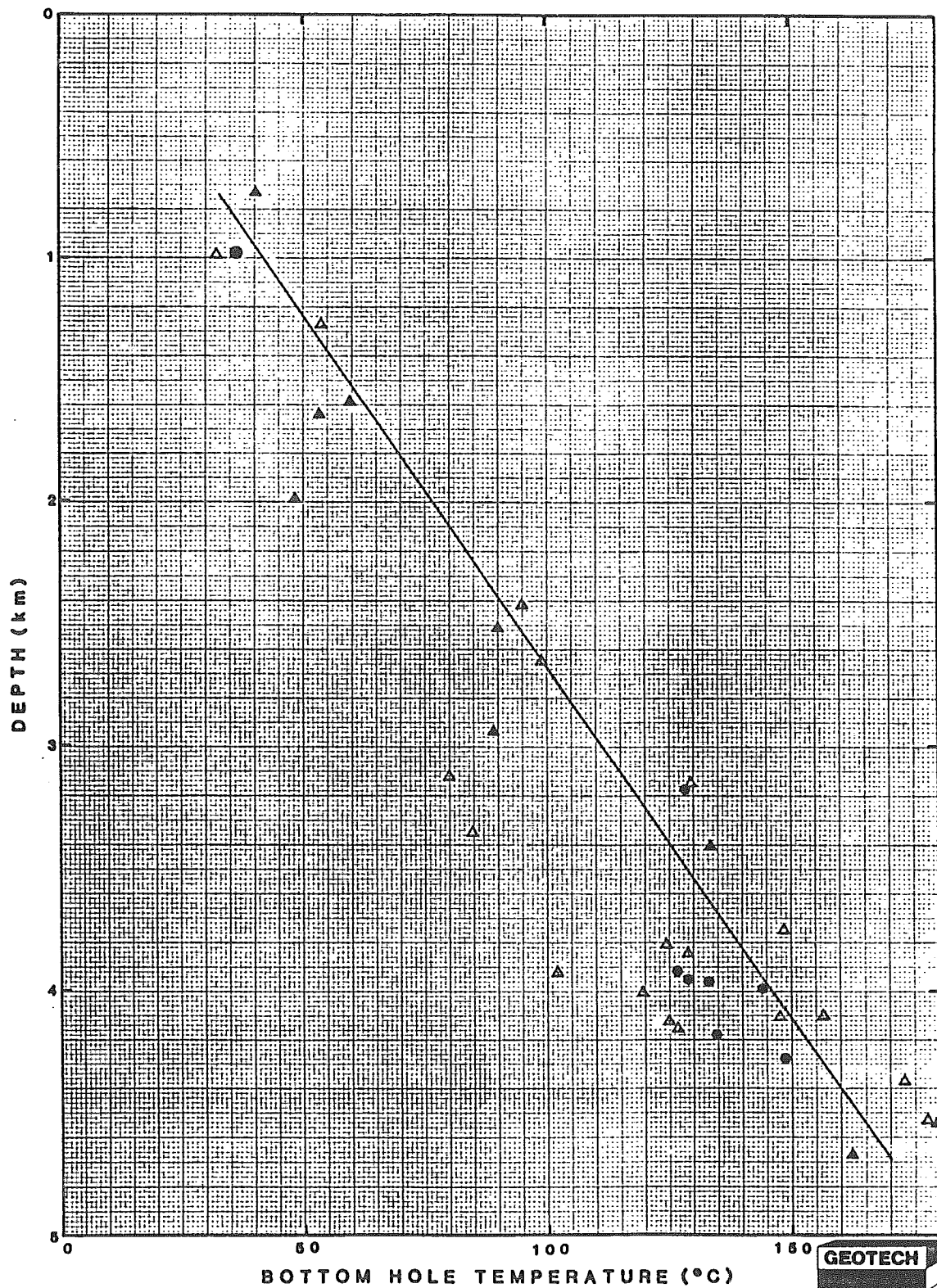


FIGURE 5.4  
Composite Graph - Grid 60-30-123-45



data points. There is some scatter in extrapolated BHT points and somewhat less among DST points. The conclusions regarding data quality drawn from these composite graphs are discussed in Section 6.

In many cases the data did not justify interpolation of a geothermal gradient profile. Figures 5.5 and 5.6 give typical examples of shallow wells where this occurred. In Figure 5.5 the data appear consistent, but with the depth limitation no gradient profile was drawn.

Figure 5.6 shows inconsistent, unreliable data also in a narrow depth range. Again, no temperature data for the isotherm plots or gradient plot could be extracted from this graph.

Graphs for all the wells which yielded at least one data point are included in Appendix A to this report. The graphs are arranged by grid according to the Grid Survey System and by alpha numeric order using the unit/section label within each grid as explained previously.

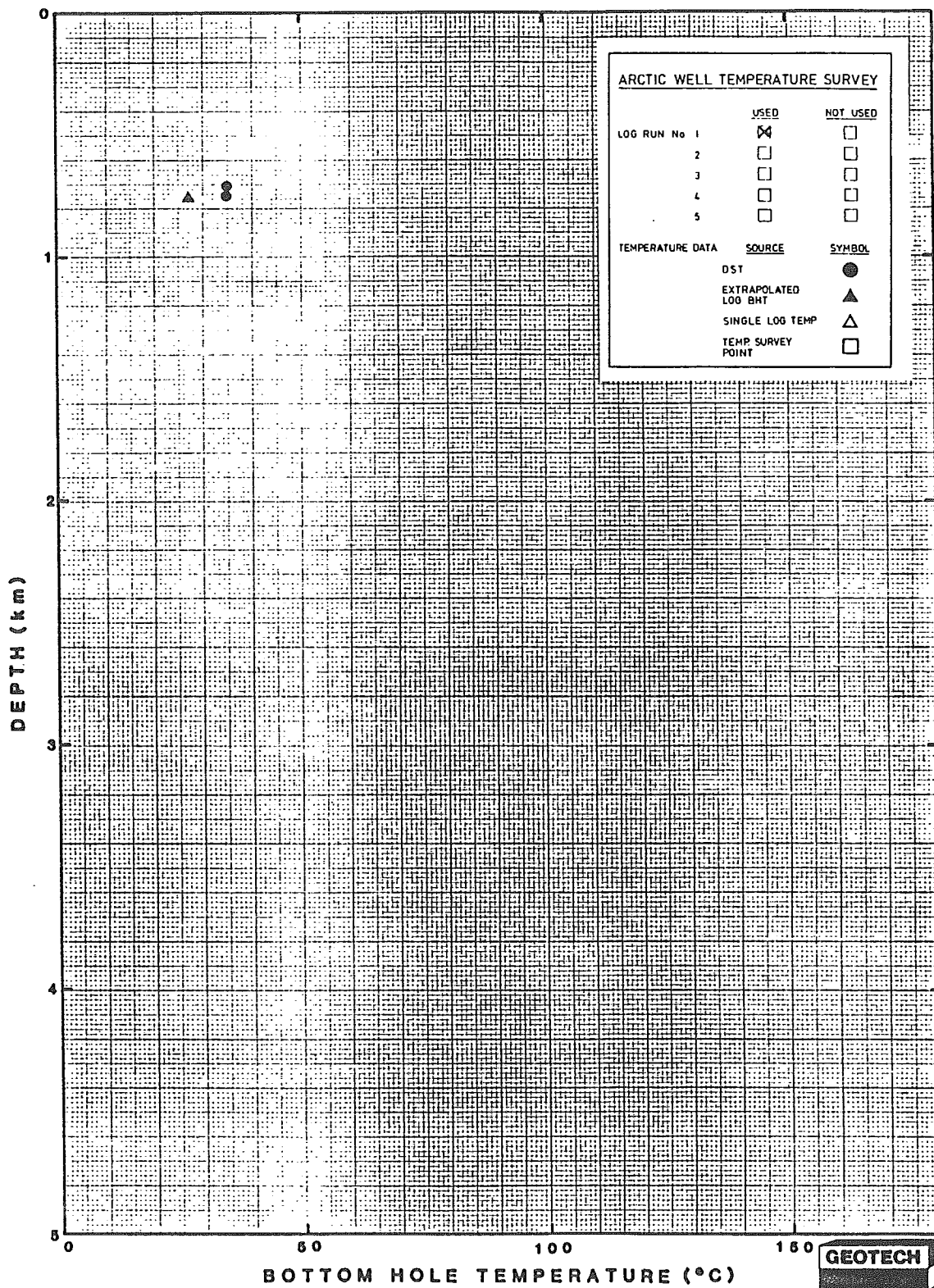


FIGURE 5.5

Depth Vs Temperature Graph-SOBC C.S. Great Bear R. N-30

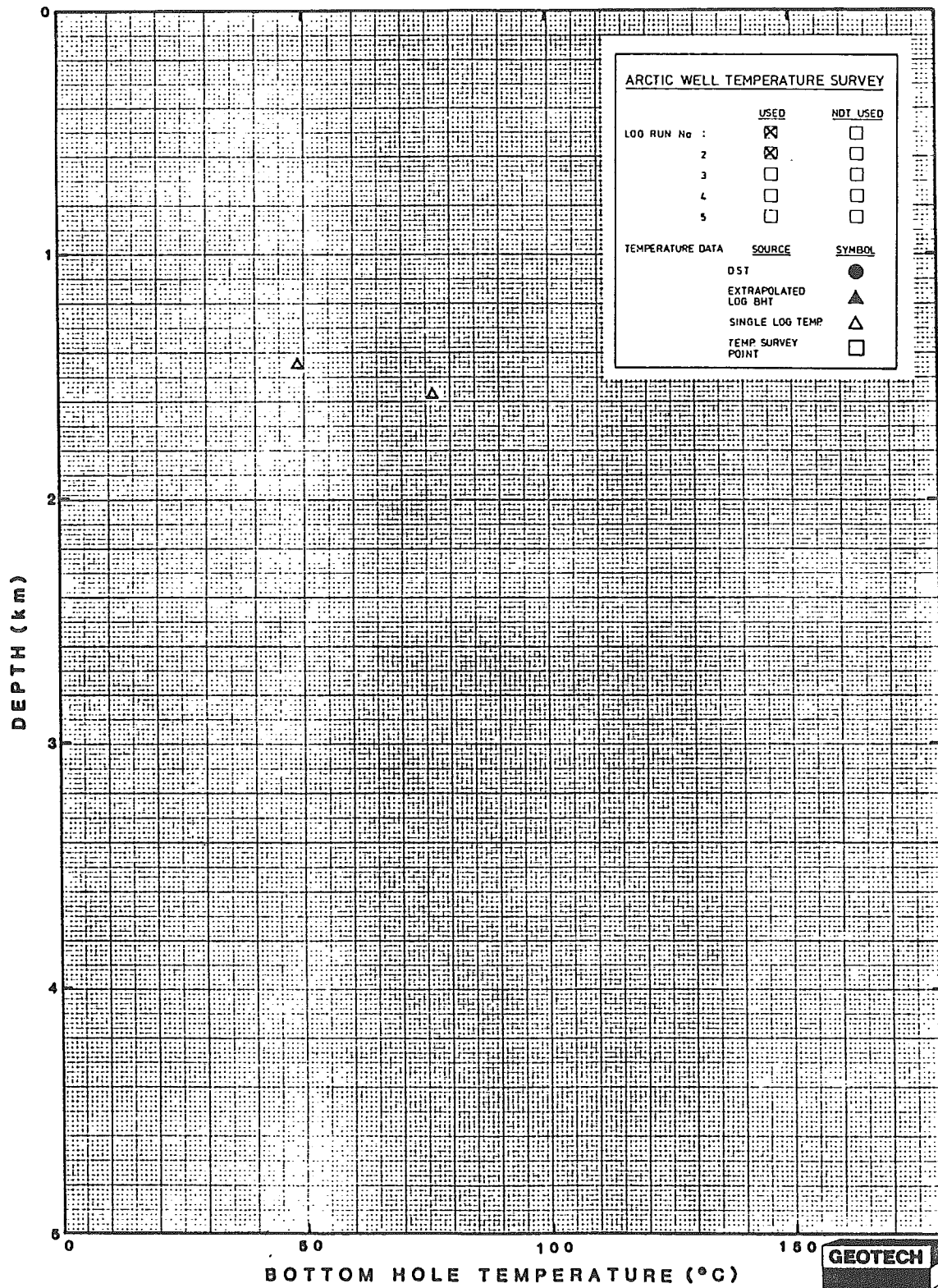


FIGURE 5.6

Depth vs Temperature Graph-Fina B.A. Trainor L. P-55

## 5.2 Isotherm and Geothermal Gradient Contour Plots

Figures 5.7 to 5.10 show the contoured isotherms for subsurface temperatures at 1,2,3 and 4 kilometer depths respectively. The contour interval used was 10 degrees Celsius for the isotherms. The large prints of these figures are folded in pockets at the end of this report and reduced format versions are included in this Section.

As discussed further in Section 6, the data were limited to hydrocarbon well sites which fall roughly into a band crossing the study area from northwest to southeast. Although data became severely limited with depth, there are some general trends that appear consistent on all the isotherm plots. The plots at one and two kilometer depths illustrate these trends best.

Subsurface temperatures are generally cooler away from the northwesterly trending, arcuate margin of the Mackenzie Mountain belt. The isotherms are approximately parallel to this geologic boundary, and have lower values at greater distance from it. This overall trend is especially pronounced to the south of South Nahanni along the Liard River.

There are two higher temperature (heat source) areas superimposed on the above regional trend. One is centered just north of the sixtieth parallel near Trout Lake, Northwest

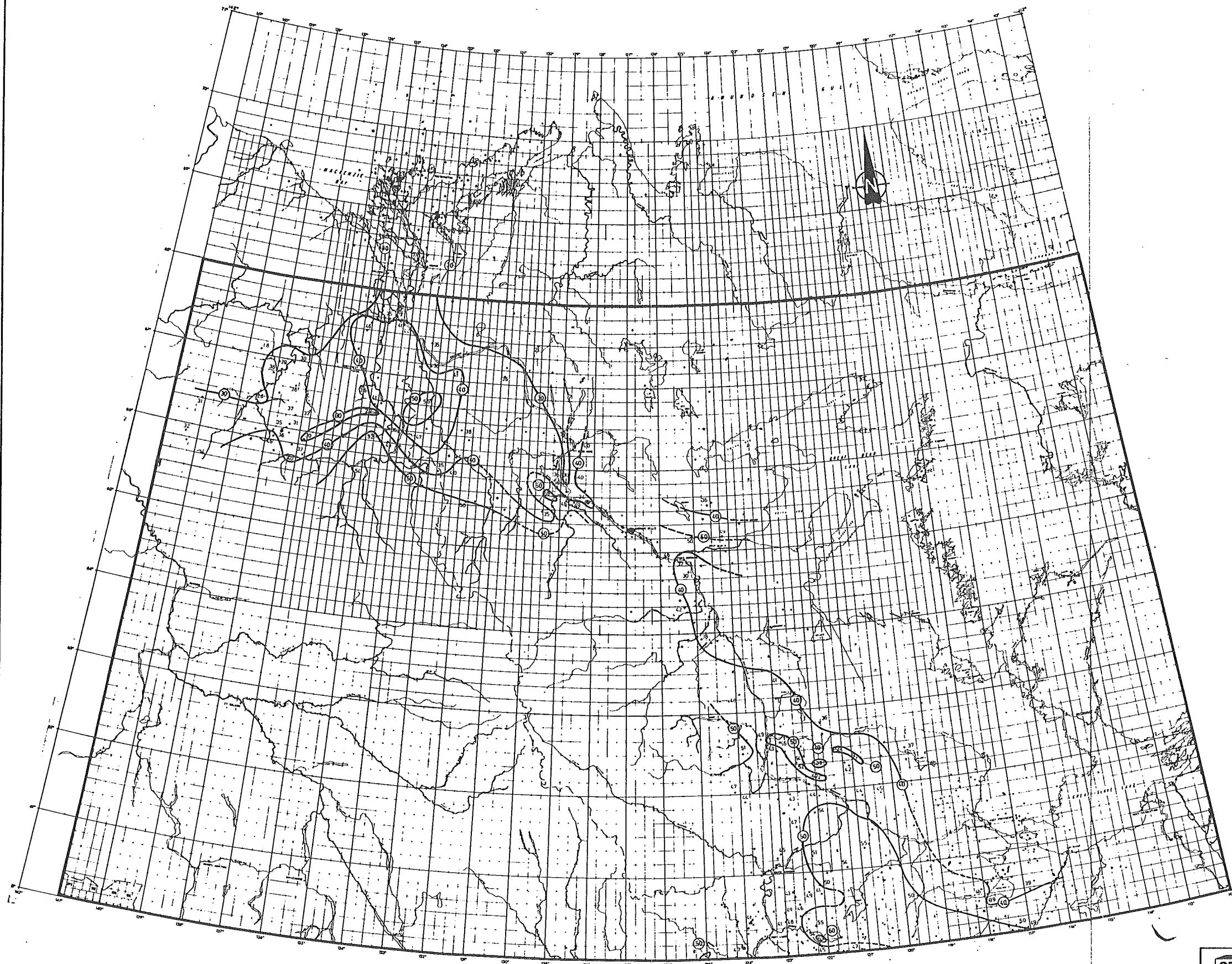
Territories. The other heat source, which may actually be a lobate extension of the regional trend described above, is in the northwest corner of the study area around the Snake River.

Consistency between this study and that of 1983 is seen from the isotherm plots. The isotherms in the northwest corner of this study area match those of the Mackenzie Delta - Beaufort Sea area. The portions of the isotherms from the 1983 study that join with and illustrate the match with this study have been added on Figures 5.7 to 5.10.

The contoured geothermal temperature gradient plot (Figure 5.11 folded in pocket and in this Section in reduced format) had only small areas with data. Generally gradient data were sparse and the resulting contours (using a  $10^{\circ}\text{C}/\text{km}$  interval) are of very limited use. However, the relatively higher temperature anomalies around Trout Lake and in the northwest part of the study area are shown in this plot. The strong cooling trend away from the Mackenzie Mountains is also seen south along the Liard River.


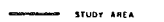
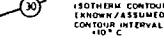
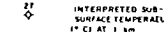
The geothermal gradient contours in this study could not be extended to join those from the 1983 study because of lack of data in the northwestern area.

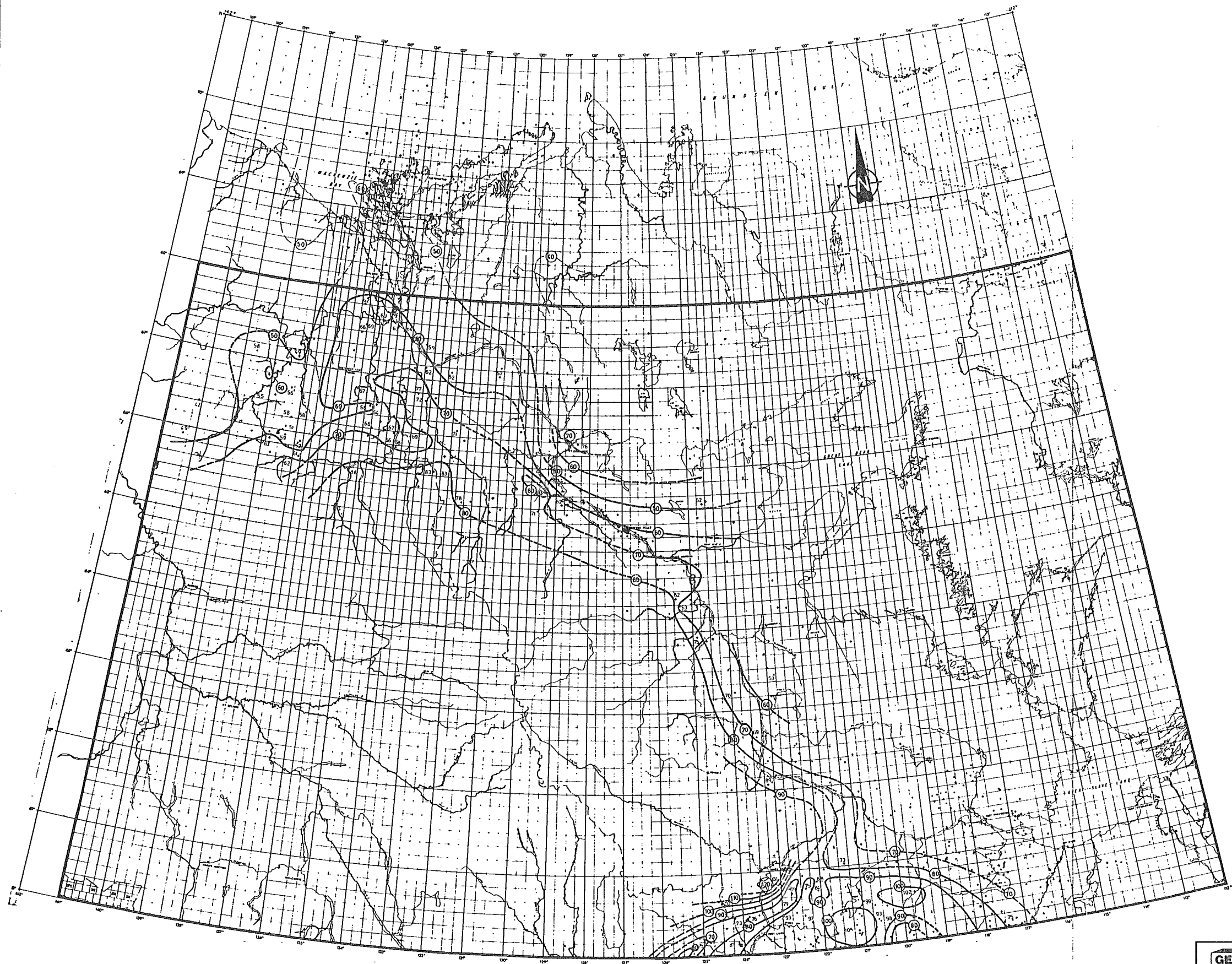
Figure 5.12 illustrating generalized normal and high heat flow conditions is included for reference in describing the subsurface thermal regime of the study area.



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
		<small>GEOTECHNICAL RESOURCES LTD.</small> <small>4500 54th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128</small>	
<b>LEGEND</b>		<b>PROJECT</b> SUBSURFACE TEMPERATURES FROM WELLS NORTH OF SIXTY YUKON-NORTHWEST TERRITORIES	
 STUDY AREA		<b>TITLE</b> ISOTHERM PLOT DEPTH = 1 km	
 ISOTHERM CONTOUR <small>(KNOWN/ASSUMED)          CONTOUR INTERVAL          100°C</small>		<small>DRAWING No.</small> 9330-E-0002 0 <b>FIGURE 5.7</b>	
 INTERPRETED SUB- <small>SURFACE TEMPERATURE          1°C AT 1 km</small>			



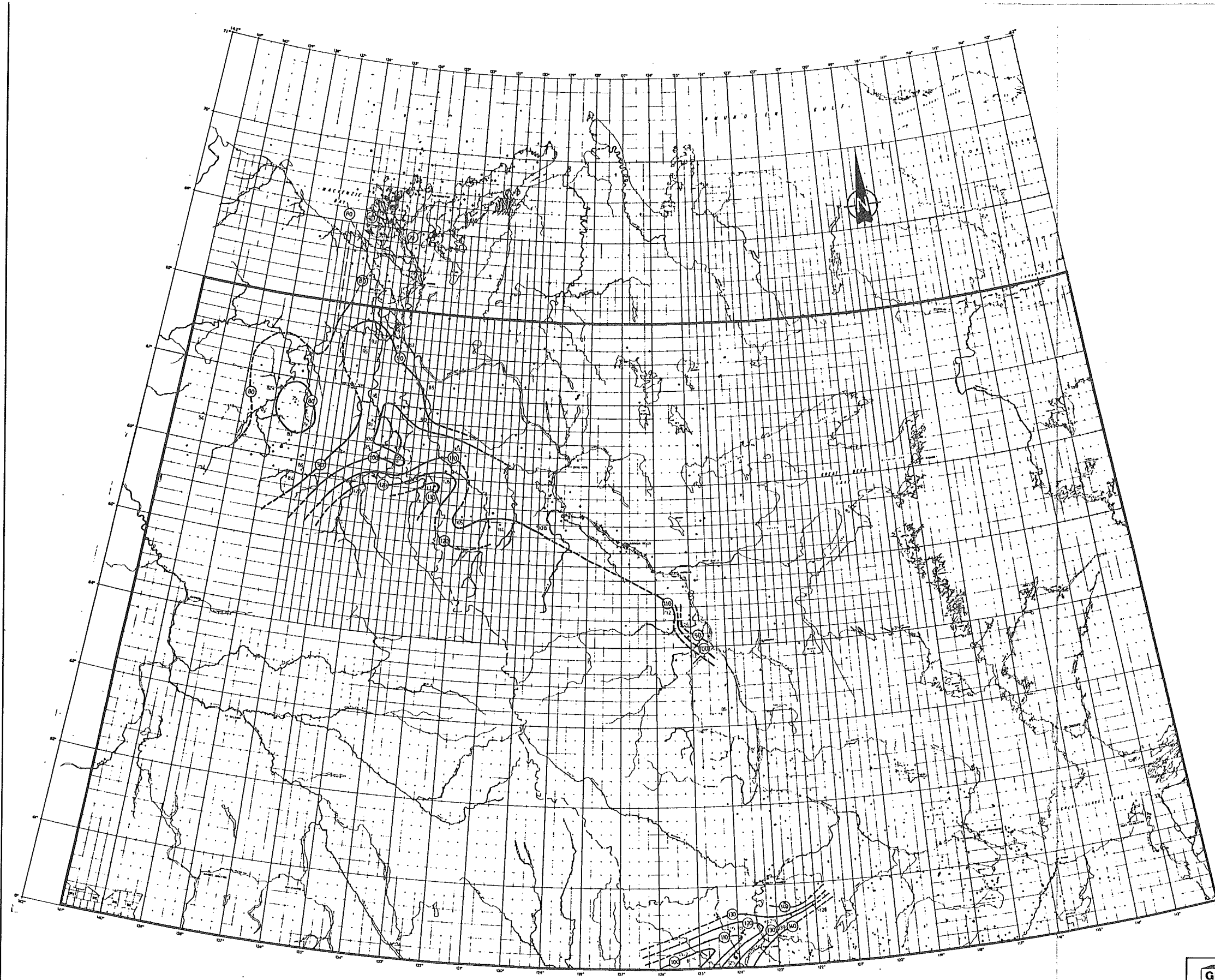
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		25 GEOTECHNICAL RESOURCES INC. 4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4128	
<b>LEGEND</b>		<b>PROJECT</b> SUBSURFACE TEMPERATURES FROM WELLS NORTH OF SIXTY YUKON-NORTHWEST TERRITORIES	
— STUDY AREA		<b>TITLE</b> ISOTHERM PLOT DEPTH = 2 km	
	ISOTHERM CONTOUR (KNOWN / ASSUMED) CONTOUR INTERVAL 10° C	<b>DRAWING No.</b> 9330-E-0003 <b>FIGURE 5.8</b>	
	INTERPRETED 90m SURFACE TEMPERATURE (°C) AT 2km		





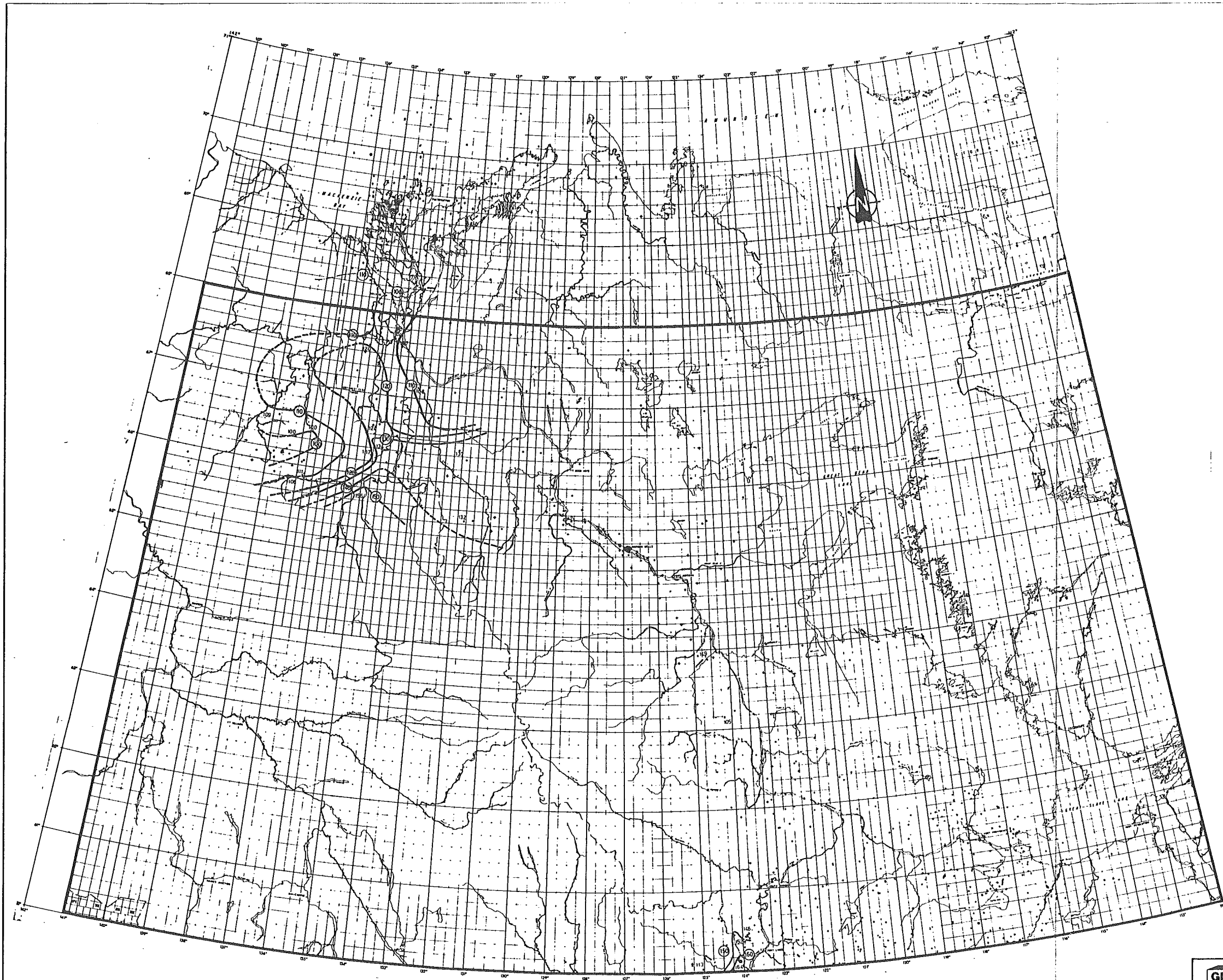
YUKON-NORTHWEST TERRITORIES



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		<small>111 GEOTECHNICAL resources Inc.</small> <small>4500 5th STREET N.E. CALGARY, ALBERTA T2E 7C3 (403) 230-4128</small>	
		<b>PROJECT</b> SUBSURFACE TEMPERATURES FROM WELLS NORTH OF SIXTY YUKON-NORTHWEST TERRITORIES	
<b>LEGEND</b>		<b>TITLE</b> ISOTHERM PLOT DEPTH = 3 km	
	STUDY AREA		ISOTHERM CONTOUR (KNOWN / ASSUMED) CONTOUR INTERVAL 1.0° C
	INTERPRETED SUB- SURFACE TEMPERATURE (° C) AT 3 km	DRAWING NO.	9330-E-0004 0 FIGURE 5.9



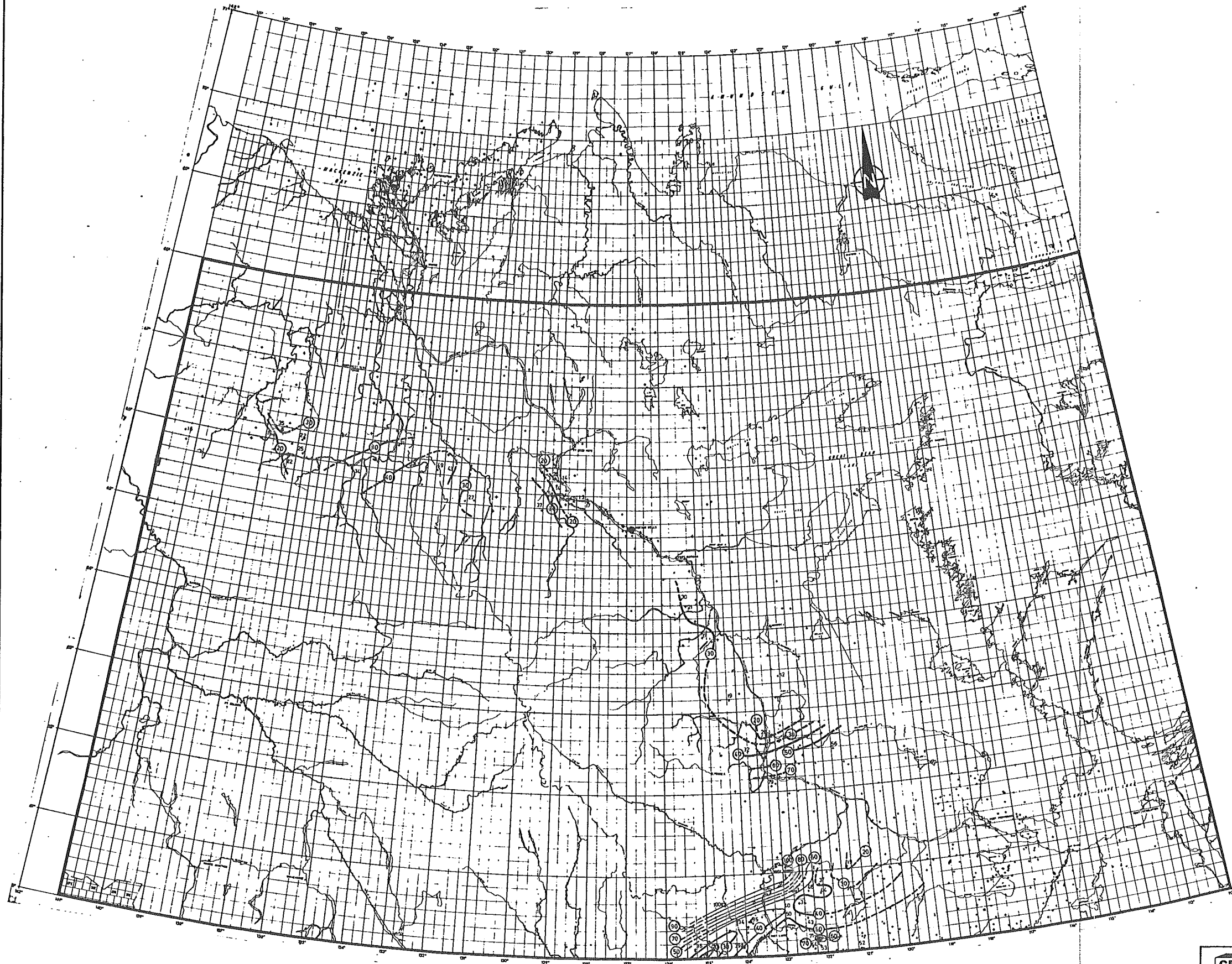


YUKON-NORTHWEST TERRITORIES



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		4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 7C3 (403) 230-4108	
<b>LEGEND</b>		<b>PROJECT</b> SUBSURFACE TEMPERATURES FROM WELLS NORTH OF SIXTY YUKON-NORTHWEST TERRITORIES	
STUDY AREA		<b>TITLE</b> ISOTHERM PLOT DEPTH = 4 km	
	ISOTHERM CONTOUR (KNOWN / ASSUMED) CONTOUR INTERVAL = 10 °C	DRAWING NO.	FIGURE 5.10
	INTERPRETED SUB- SURFACE TEMPERATURE (°C) AT 4 km	9330-E-0005	0

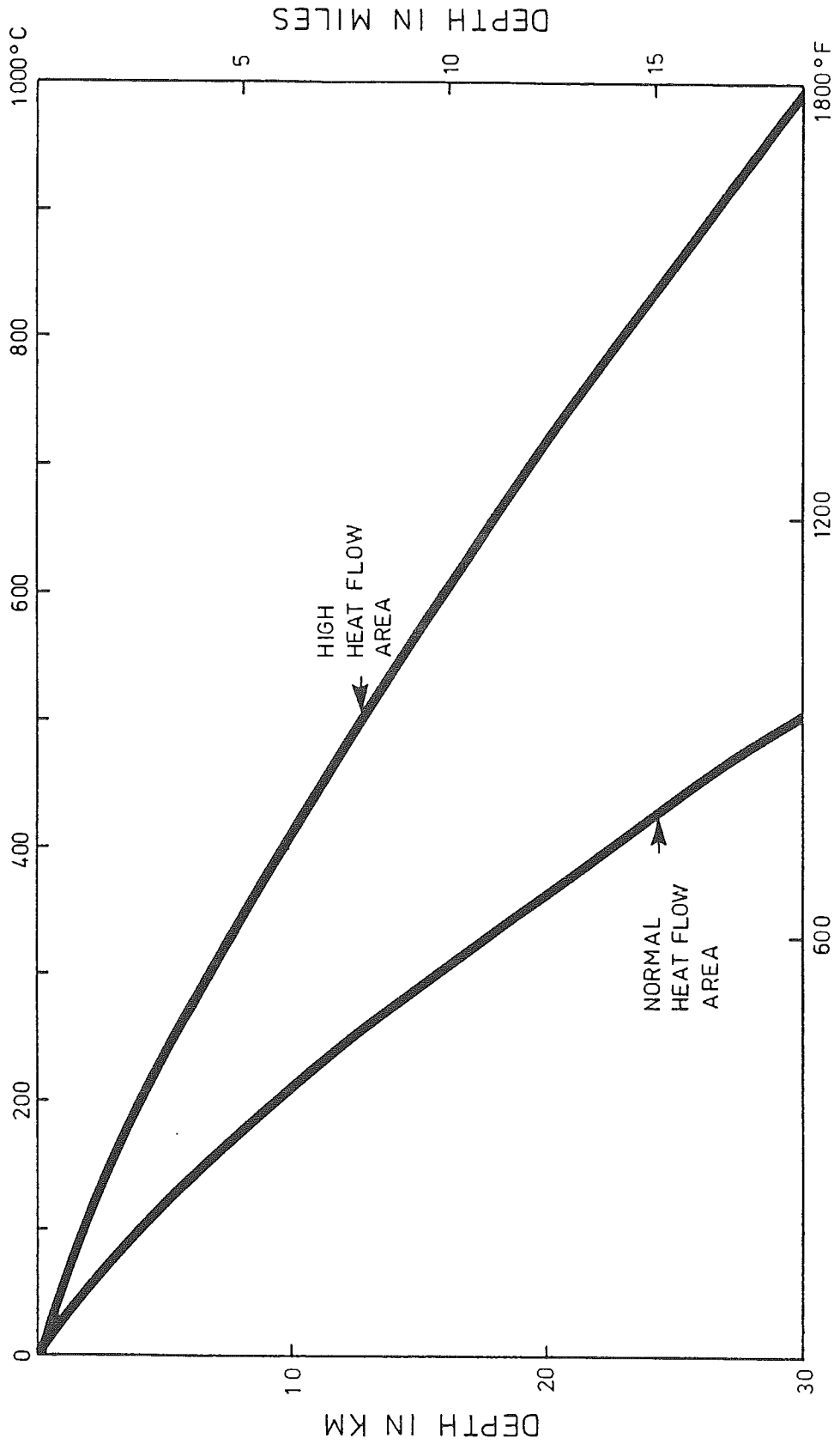


YUKON-NORTHWEST TERRITORIES



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	4500 - 5th STREET N.E., CALGARY, ALBERTA T2E 1C3 (403) 230-4128 PROJECT <b>SUBSURFACE TEMPERATURES FROM WELLS          NORTH OF SIXTY          YUKON-NORTHWEST TERRITORIES</b>
	FILE: <b>GEO THERMAL TEMPERATURE          GRADIENT PLOT</b>
<b>LEGEND</b> — STUDY AREA GRADIENT CONTOUR (KNOWN/ASSUMED) CONTOUR INTERVAL = 10° C/30m INTERPRETED GRADIENT (°C/30m)	DRAWING NO. 9330-E-0006 0 FIGURE 5.11



# TEMPERATURE VS DEPTH IN EARTH

( AFTER THE PETROLEUM INFORMATION CORPORATION, 1979 ) ( 3 )

FIGURE 5.12



## 6.0 DATA DISTRIBUTION AND QUALITY

As stated previously, the data base for this study was obtained from petroleum exploration, development and production well drilling. Consequently, limitations occurred in this study. These limitations and an assessment of data quality are discussed below.

Of the 548 wells included in this study 14 percent had no data available and therefore a depth versus temperature graph was not plotted. Although the Schedule of Wells indicated logs or DST's were run, typically depth or temperature data were missing from the records. These wells are indicated in the List of Wells (Table 2.1) by blanks under both the Log and DST columns.

Five percent had sufficient data to enable the interpolation of a gradient line over an interval of two or more kilometers. Only 2 percent of the wells had an interpolated gradient line intersecting all the even kilometer depths. These statistics illustrate that the majority of wells in this study were of limited use because of few data points or a small depth range.

Hydrocarbon well drilling, and thus the database for this project, is concentrated in a band running diagonally across the study area from northwest to southeast. Geographically this area of well coverage is mainly encompassed by the Liard, Hay, Horn, Mackenzie, Arctic Red, Peel, Eagle and Providence River drainage basins.

As geology is the key governing factor in hydrocarbon well drilling location, distribution in the geologic context is most significant. The wells penetrate Paleozoic and Mesozoic formations of the Western Sedimentary Basin which follows the same diagonal trend noted above. The contact between the Basin and the Canadian Shield follows a line roughly joining the middle of Great Bear and Great Slave Lakes. The lack of hydrocarbon potential in the Canadian Shield explains the absence of hydrocarbon well drilling, and hence no temperature data available in the northeastern third of the study area. Similarly, no hydrocarbon wells have been drilled in the intensely folded and intruded Mackenzie Mountain Belt west of the Basin and covering the southwest third of the study area.

Temperature data with depth at a given location is also governed by geologic factors. As the sedimentary sequence thickens and dips regionally to the west, wells tend to have been drilled

to greater depths in this direction. However, it is the local depth at which prospective producing formations are found that governs well depth. The lack of isotherm and gradient data in the relatively high concentration of wells just west of Great Slave Lake is due mainly to this geologic factor of shallow Basin depth.

Data coverage to the north and west of Norman Wells, although somewhat sparse, was fairly uniform over this area enabling better contouring.

As illustrated by the depth versus temperature graphs in Appendix A, the linear gradient assumption fits the data reasonably well. A more sophisticated analysis might indicate a nonlinear curve fit to be superior in some cases, but such analysis is beyond the scope of this study.

Data scatter over small areas was illustrated and described in Section 5. Natural perturbations in the geothermal regime, the sources of error noted above and in previous Sections, and the assumption of a linear gradient all contribute to data scatter.

Isotherm and gradient plot data were extracted only from wells where the temperature/depth data provided a reasonable degree of confidence. Although often limited in plan coverage and depth at a location, a good degree of confidence is given to the

data on the isotherm and gradient plots. Given all the factors affecting data quality discussed in previous Sections, the general trends and temperatures shown in these plots can be considered accurate to within  $\pm 5$  Celcius degrees.

## 7.0 CONCLUSION

Although limited in distribution and quality the data set for this project yielded the subsurface temperature information contained in the isotherm plots (Figures 5.7 - 5.10) and geothermal gradient contour plot (Figure 5.11). These data points are considered to be reliable. A regional trend of cooler temperatures with increasing distance from the Mackenzie Mountain Belt was observed. Local relatively higher temperature zones were noted near Trout Lake and the Snake River.

It is probable that if additional data from other sources were added to the contour plots, the contour interpolation in this study would have to be altered. The regional and local trends noted above would be refined but not contradicted significantly.



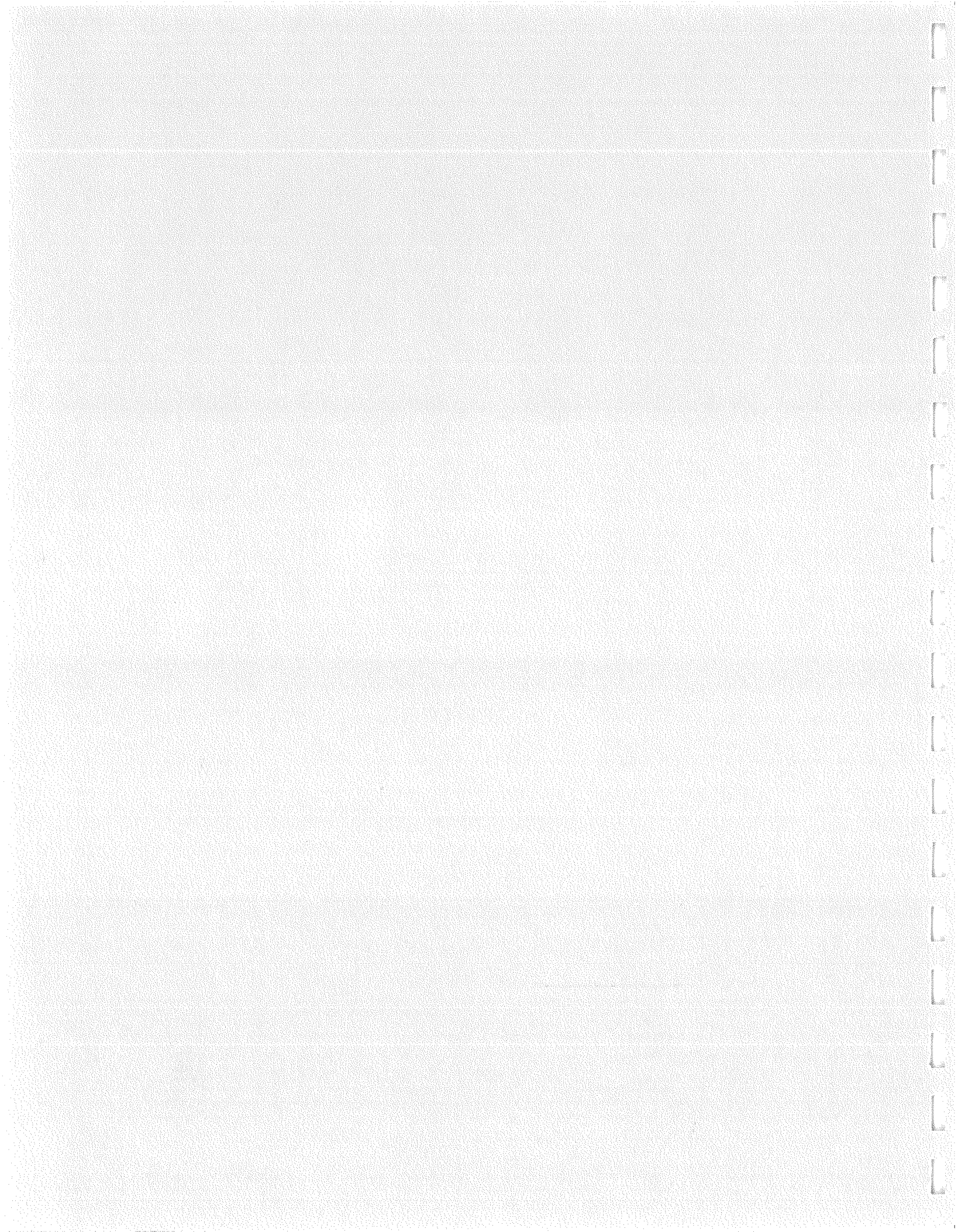
## REFERENCES

1. tti GEOTECHNICAL resources ltd. "Subsurface Temperature Data from Arctic Wells," Calgary, April 1983.
2. Fertl, W.H. and Wichmann, P.A. "How to Determine Static BHT From Well Log Data." World Oil, January 1977, pp. 105 - 106.
3. Petroleum Information Corporation. "The Geothermal Resources - Earth's Natural Heat Providing Energy Now." 1979.
4. Connolly, E.T. Geothermal Survey of North America Progress Report and Associated Data - Gathering Problems. Fourth Formation Evaluation Symposium of the Canadian Well Logging Society, Calgary, 1972.

APPENDIX A



60-10



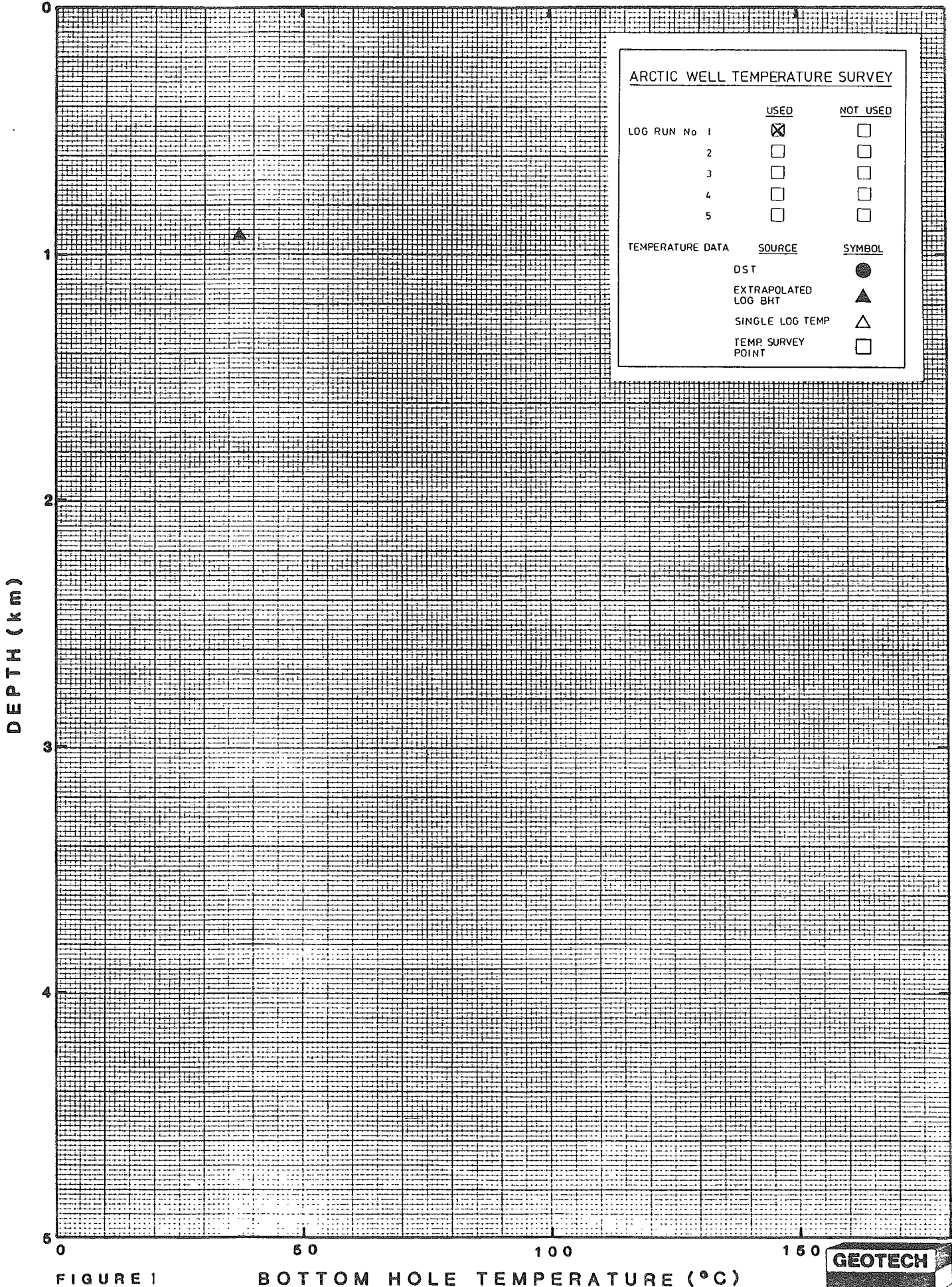
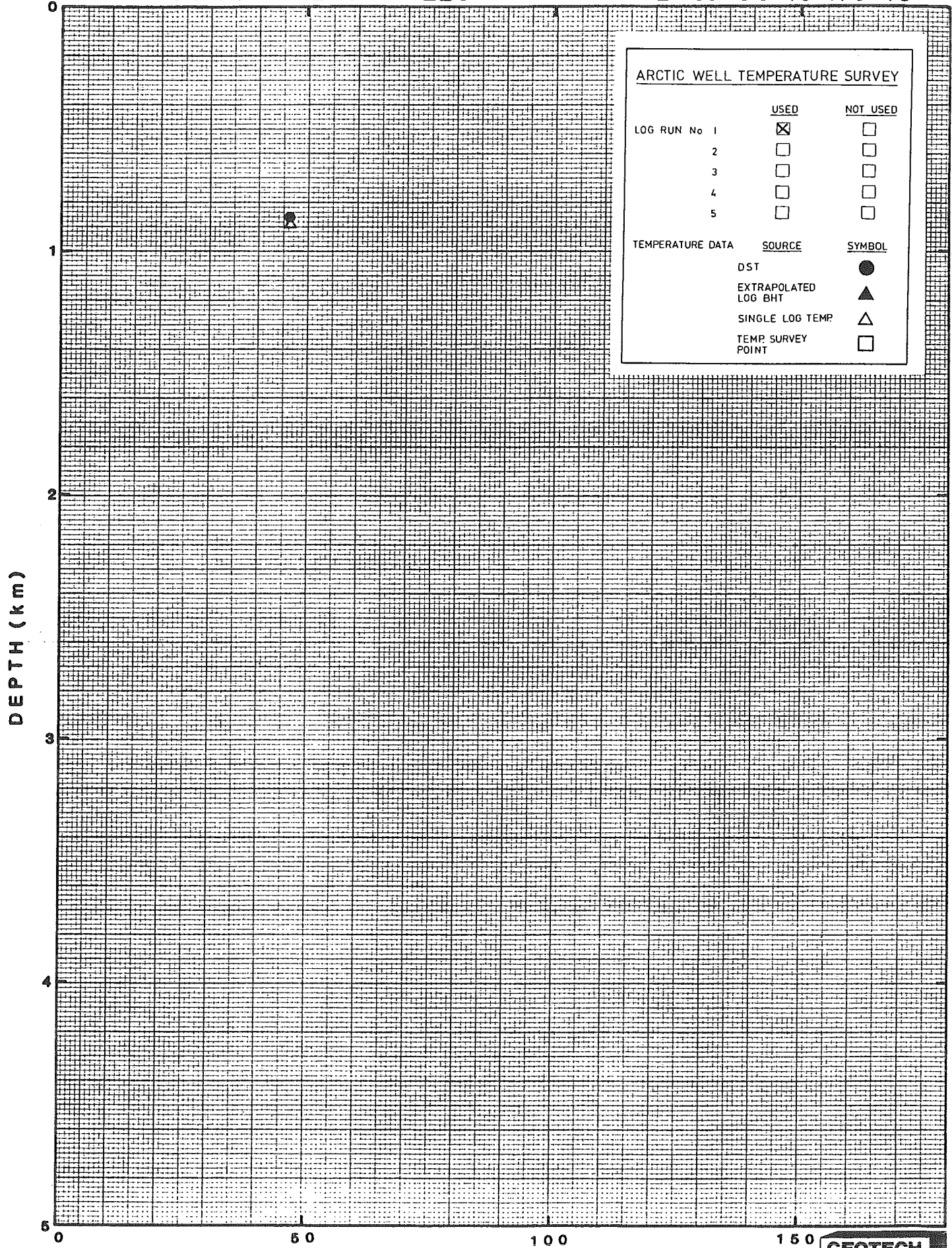


FIGURE 1

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 2

BOTTOM HOLE TEMPERATURE (°C)



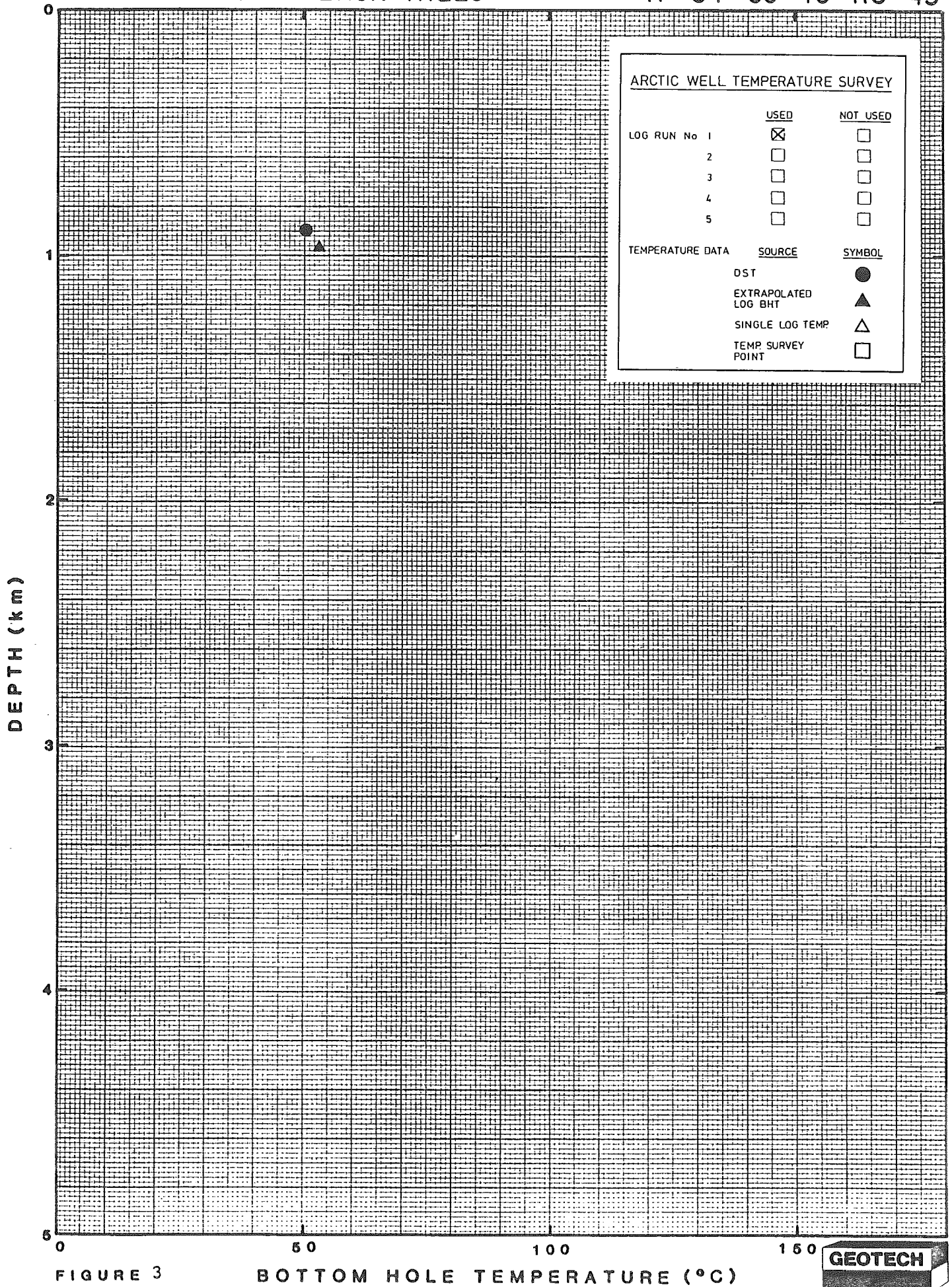


FIGURE 3

BOTTOM HOLE TEMPERATURE (°C)





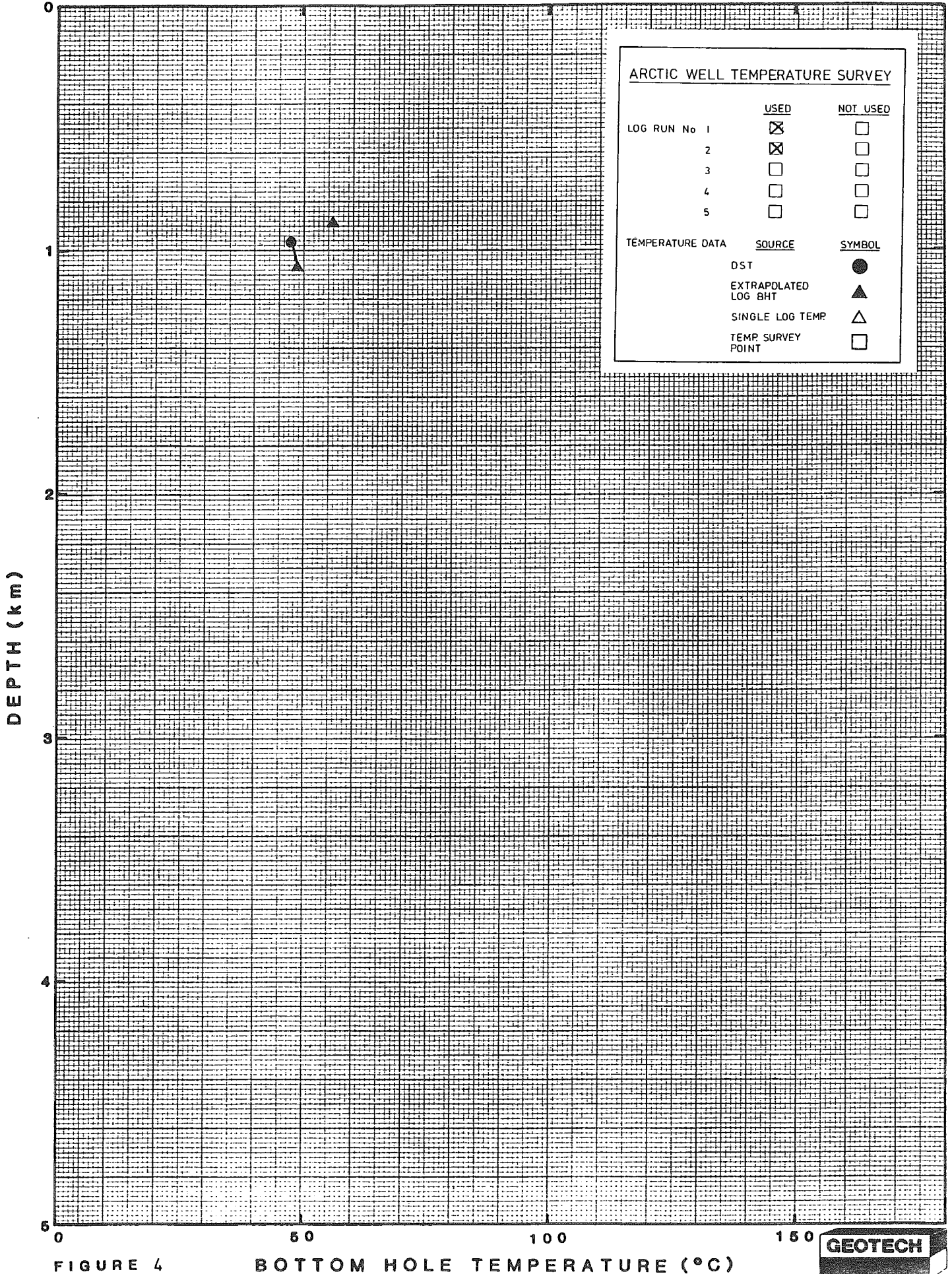


FIGURE 4

BOTTOM HOLE TEMPERATURE (°C)



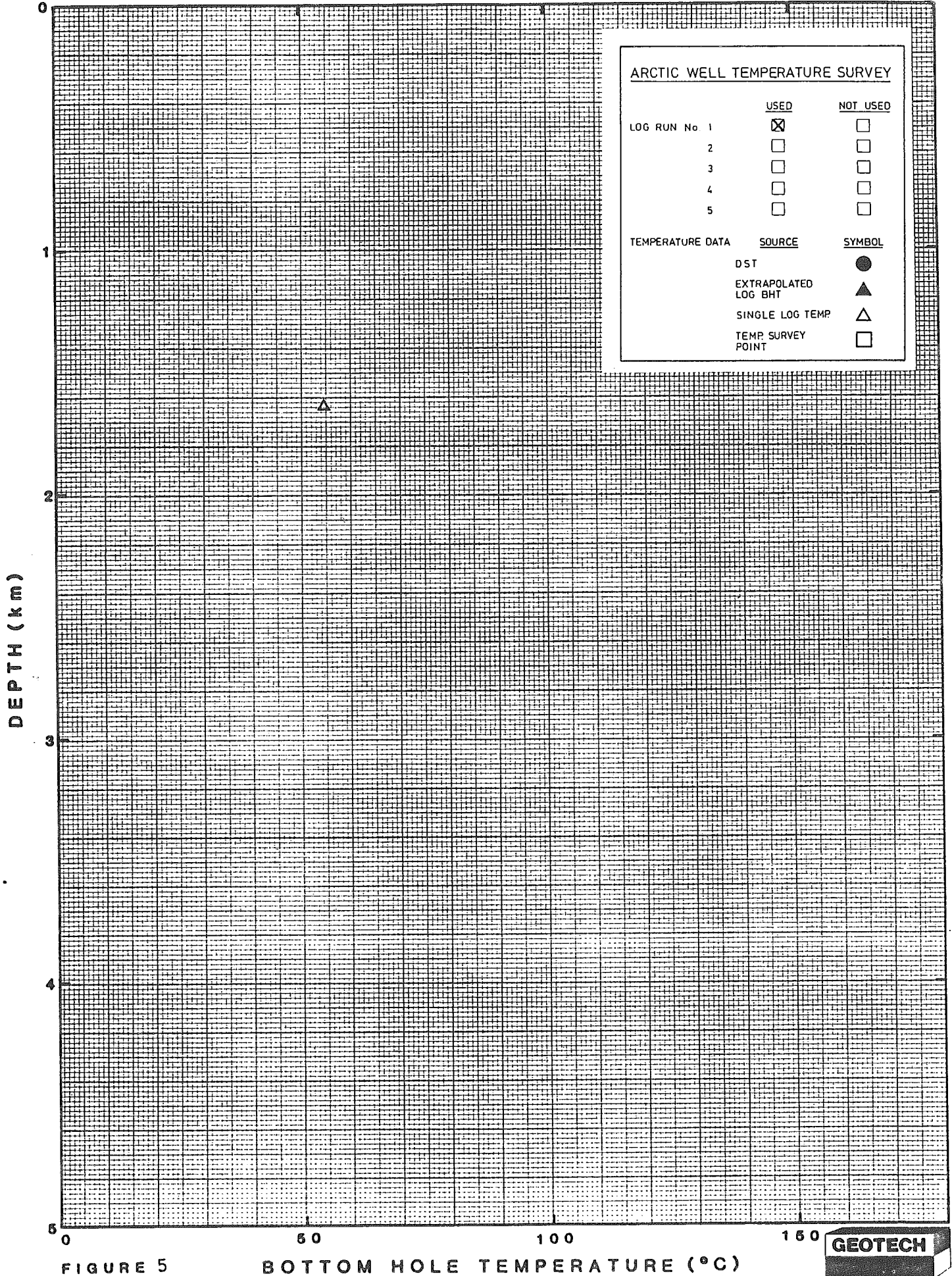


FIGURE 5

BOTTOM HOLE TEMPERATURE (°C)



# PARAMOUNT CAMERON HILLS

M-31 60-10-117-00

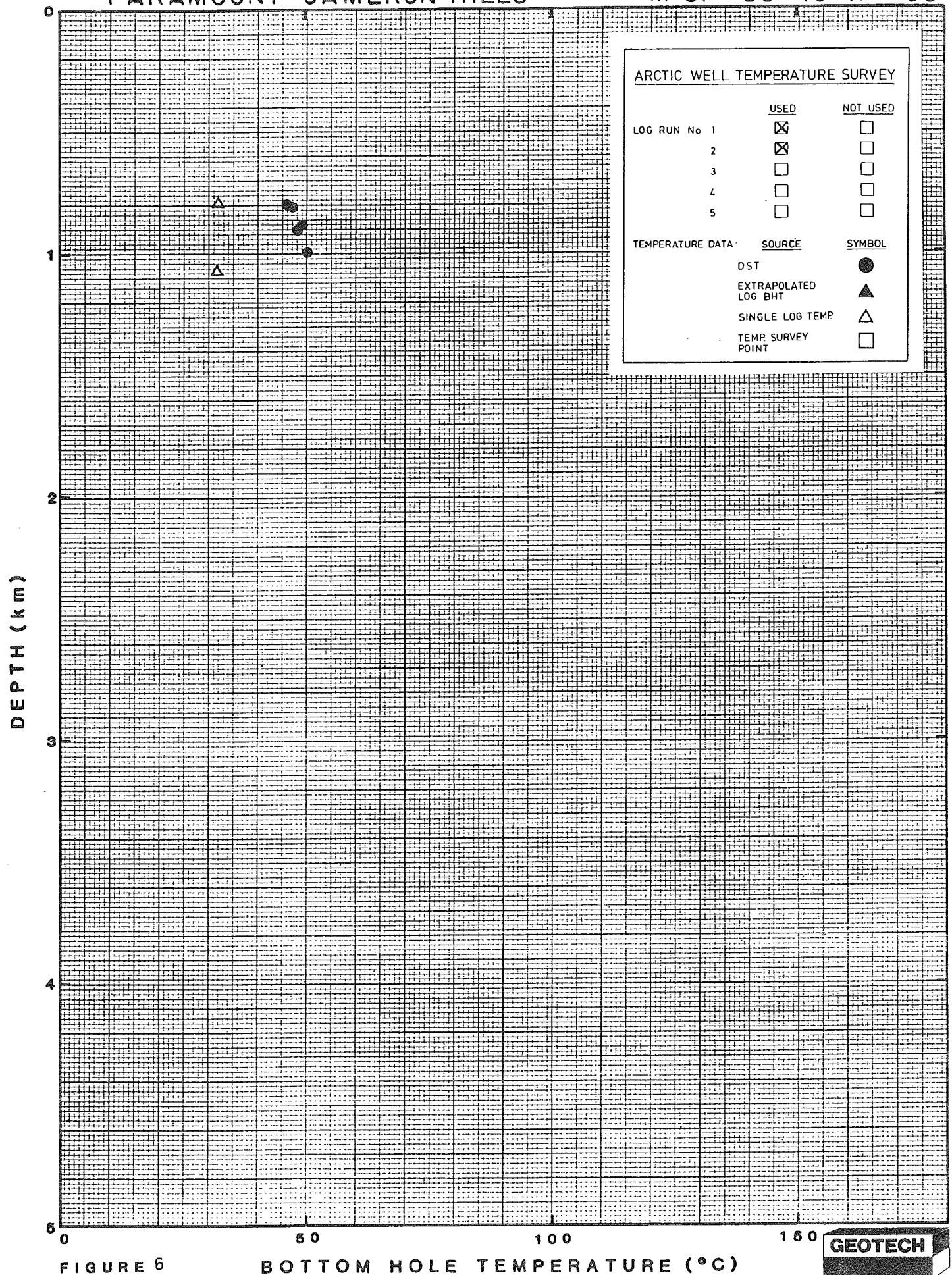


FIGURE 6

BOTTOM HOLE TEMPERATURE (°C)





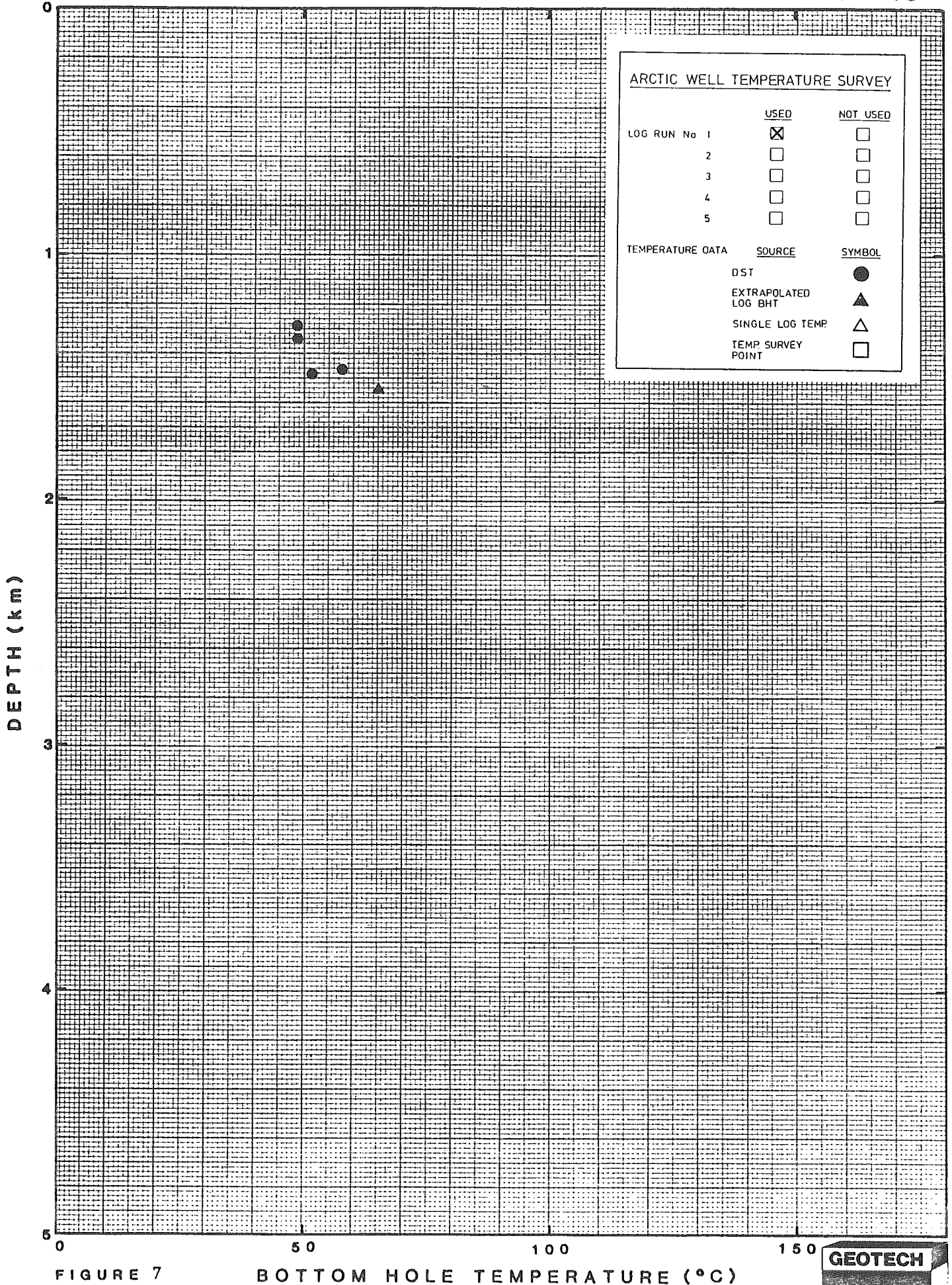


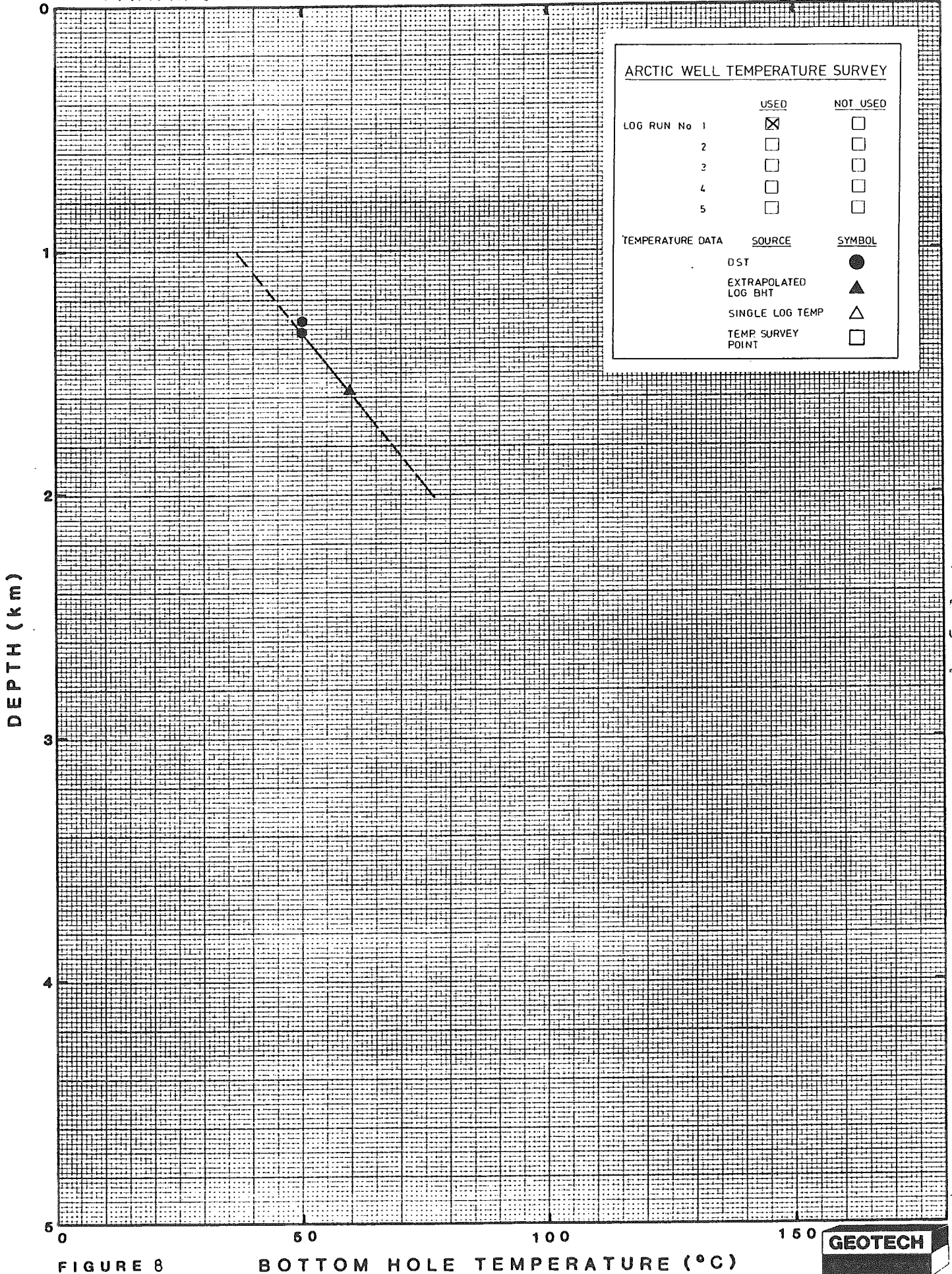
FIGURE 7

BOTTOM HOLE TEMPERATURE (°C)



PARAMOUNT DOME CAMERON

J-11 60-10-117-15



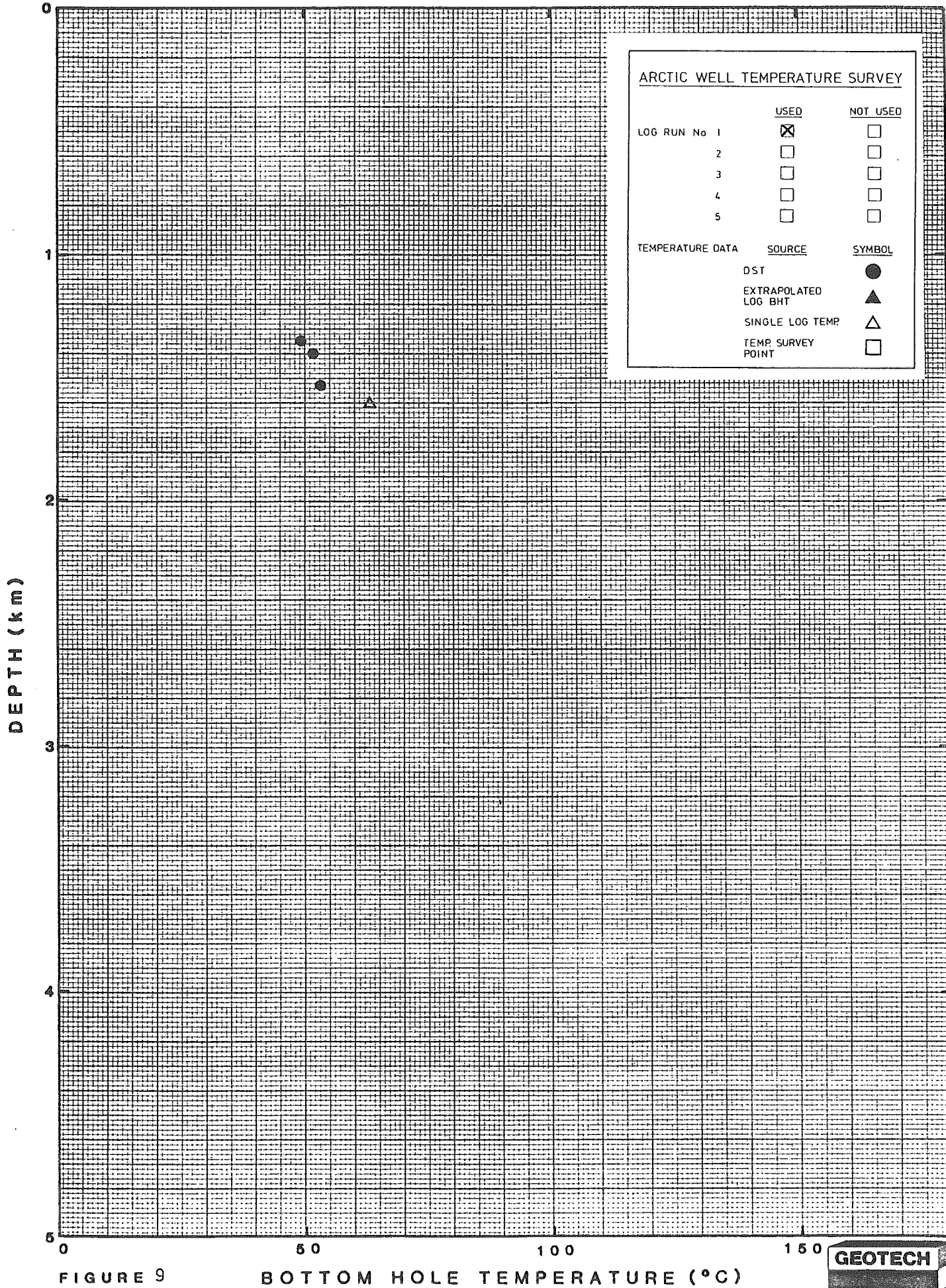


FIGURE 9

BOTTOM HOLE TEMPERATURE (°C)





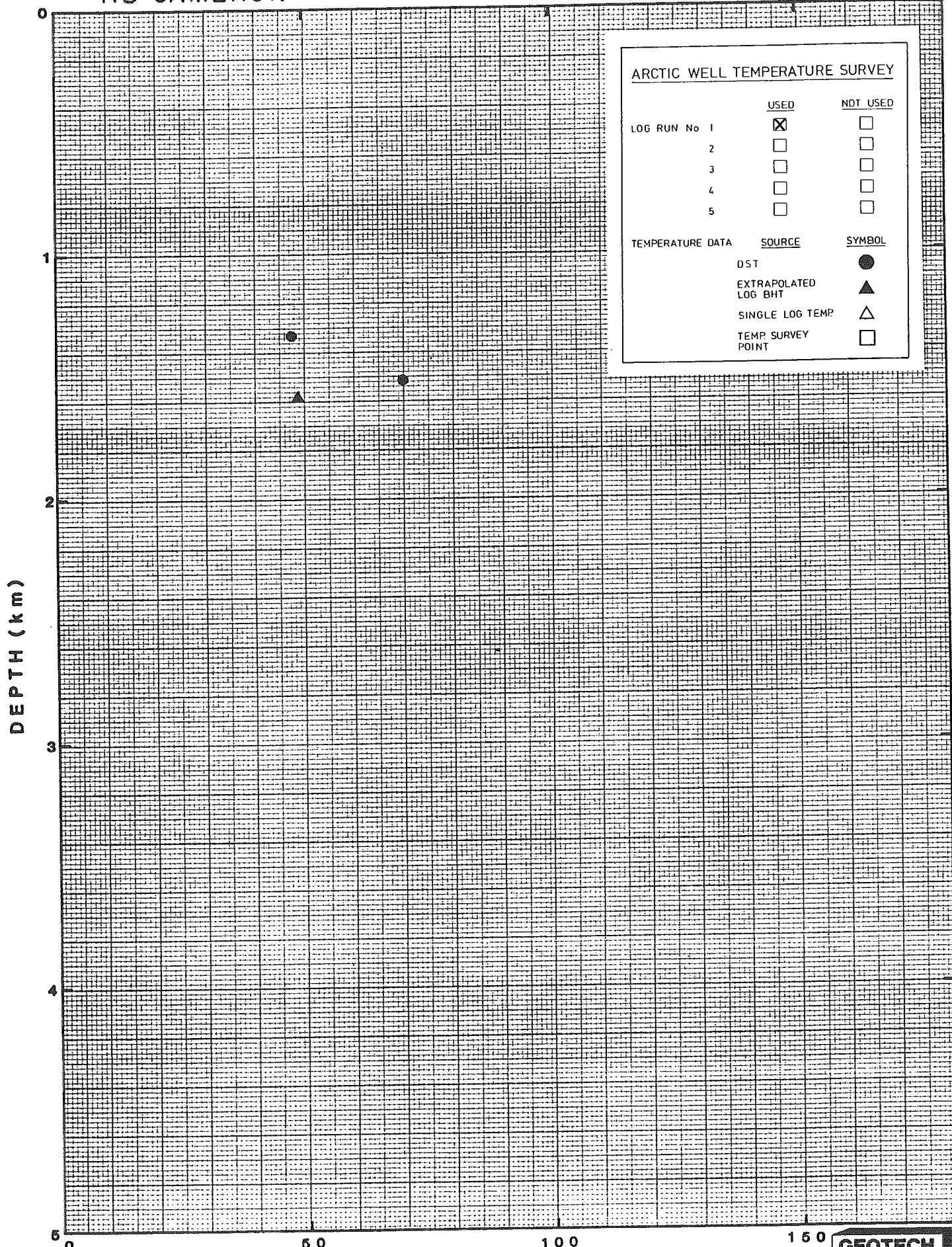


FIGURE 10

BOTTOM HOLE TEMPERATURE (°C)



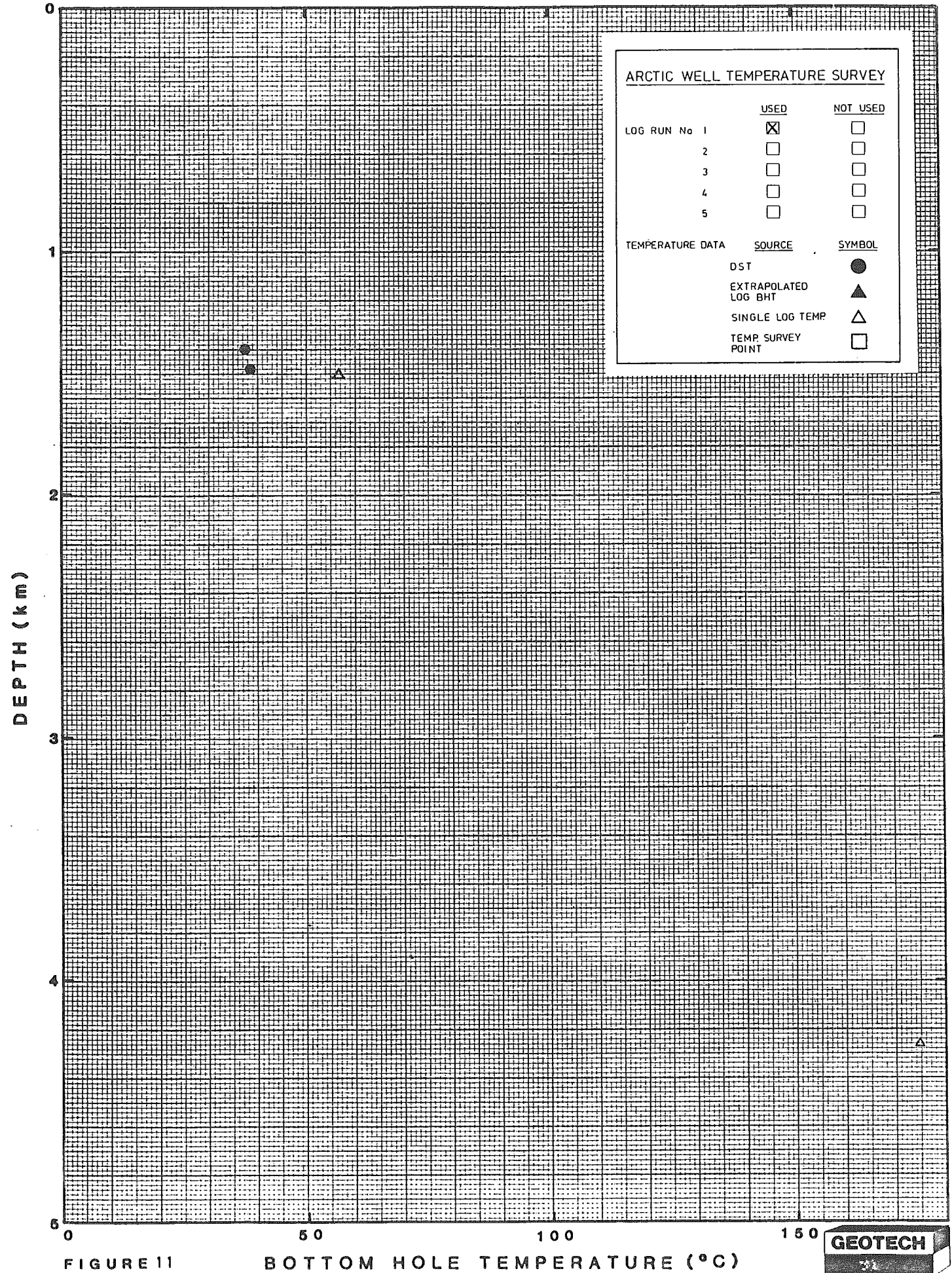


FIGURE 11

BOTTOM HOLE TEMPERATURE (°C)



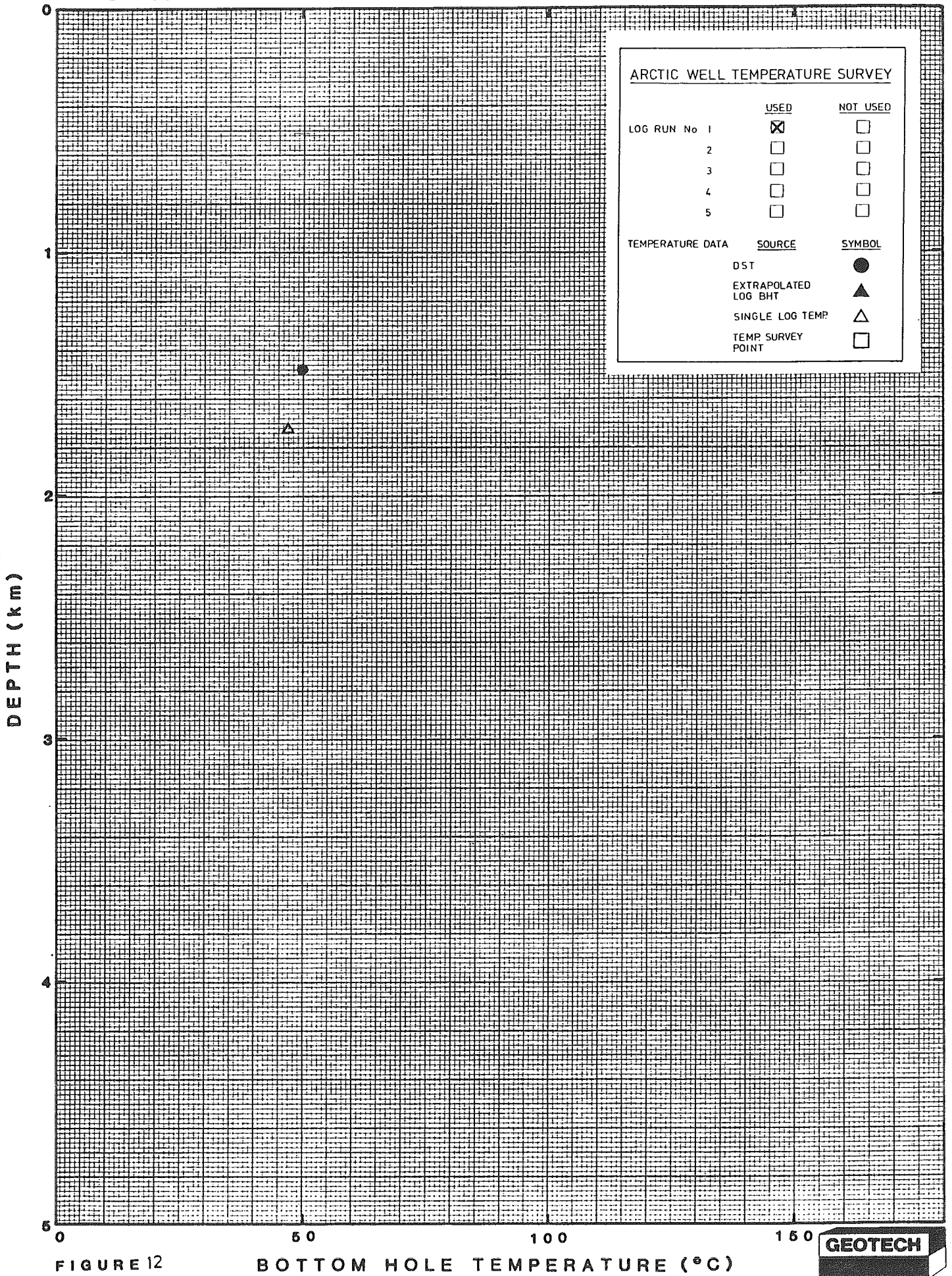
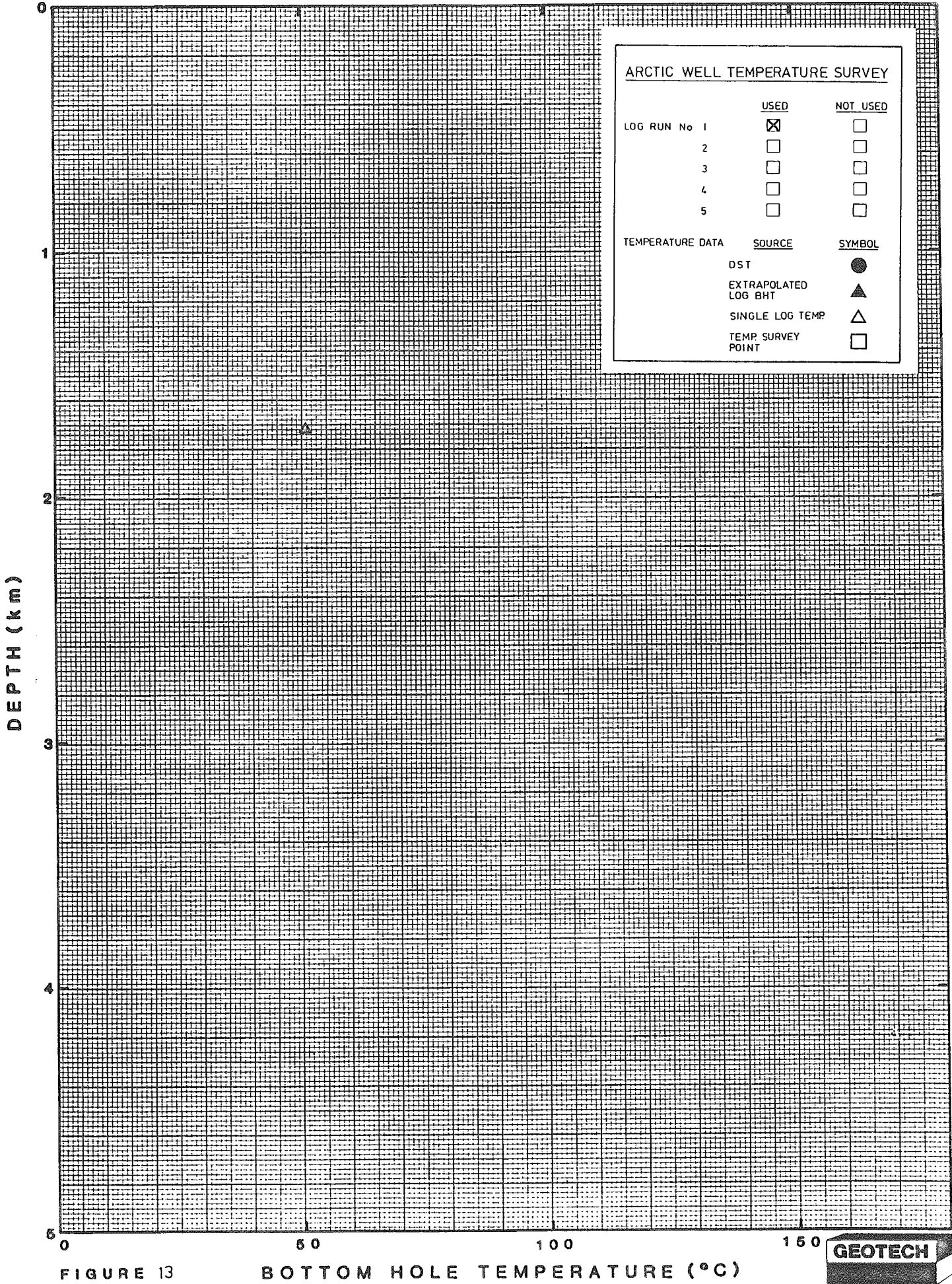


FIGURE 12

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 13

BOTTOM HOLE TEMPERATURE (°C)



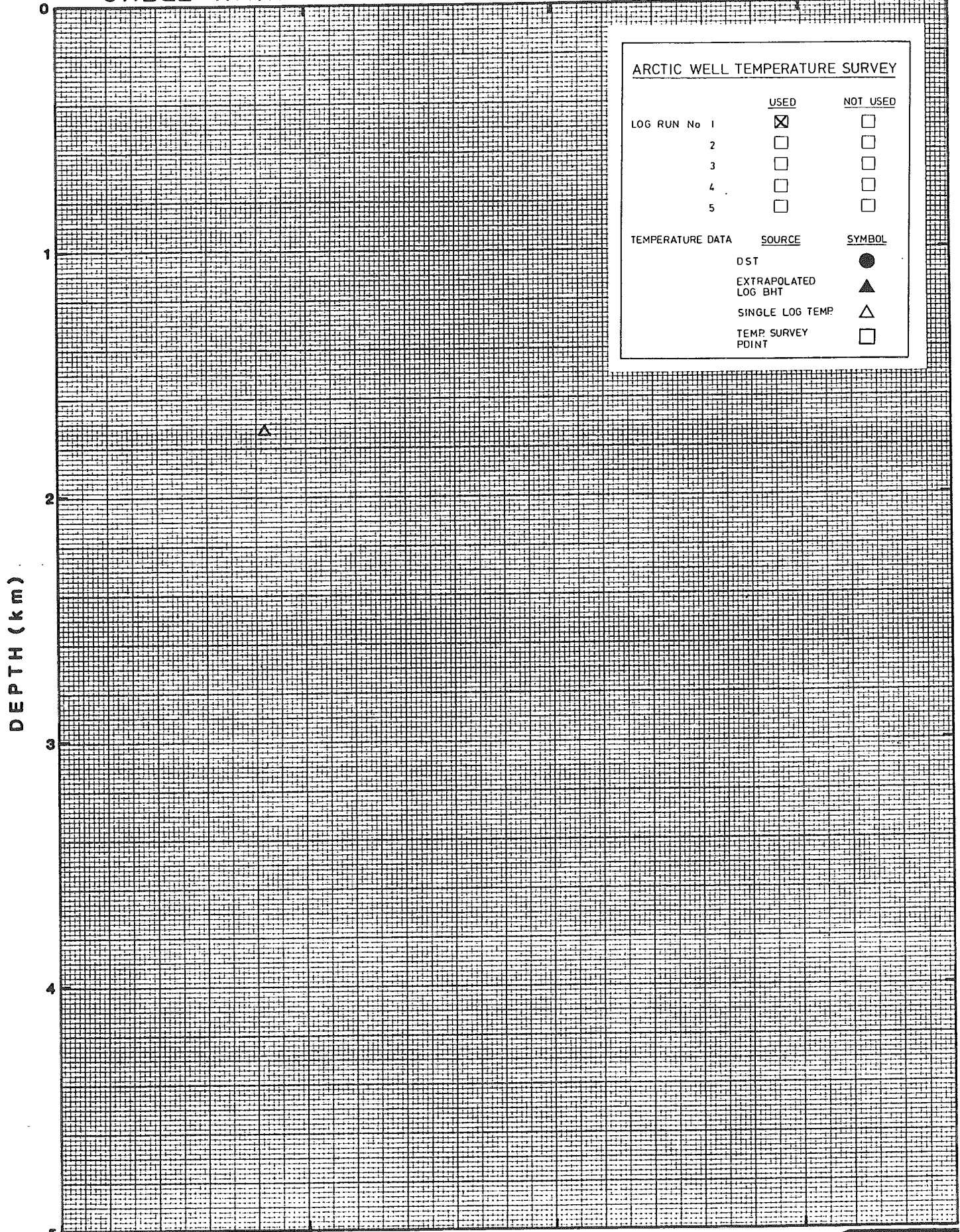
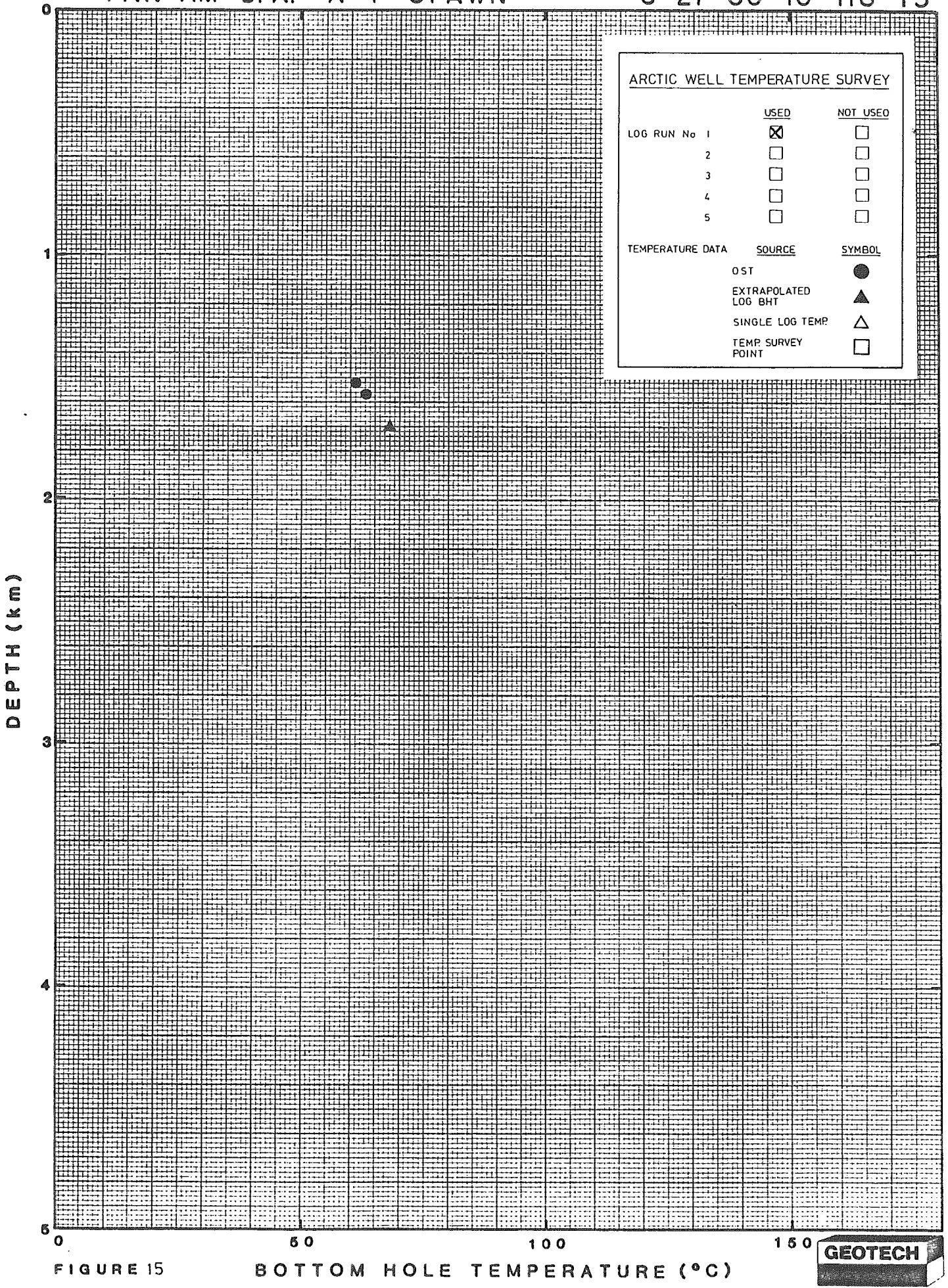


FIGURE 14

BOTTOM HOLE TEMPERATURE (°C)





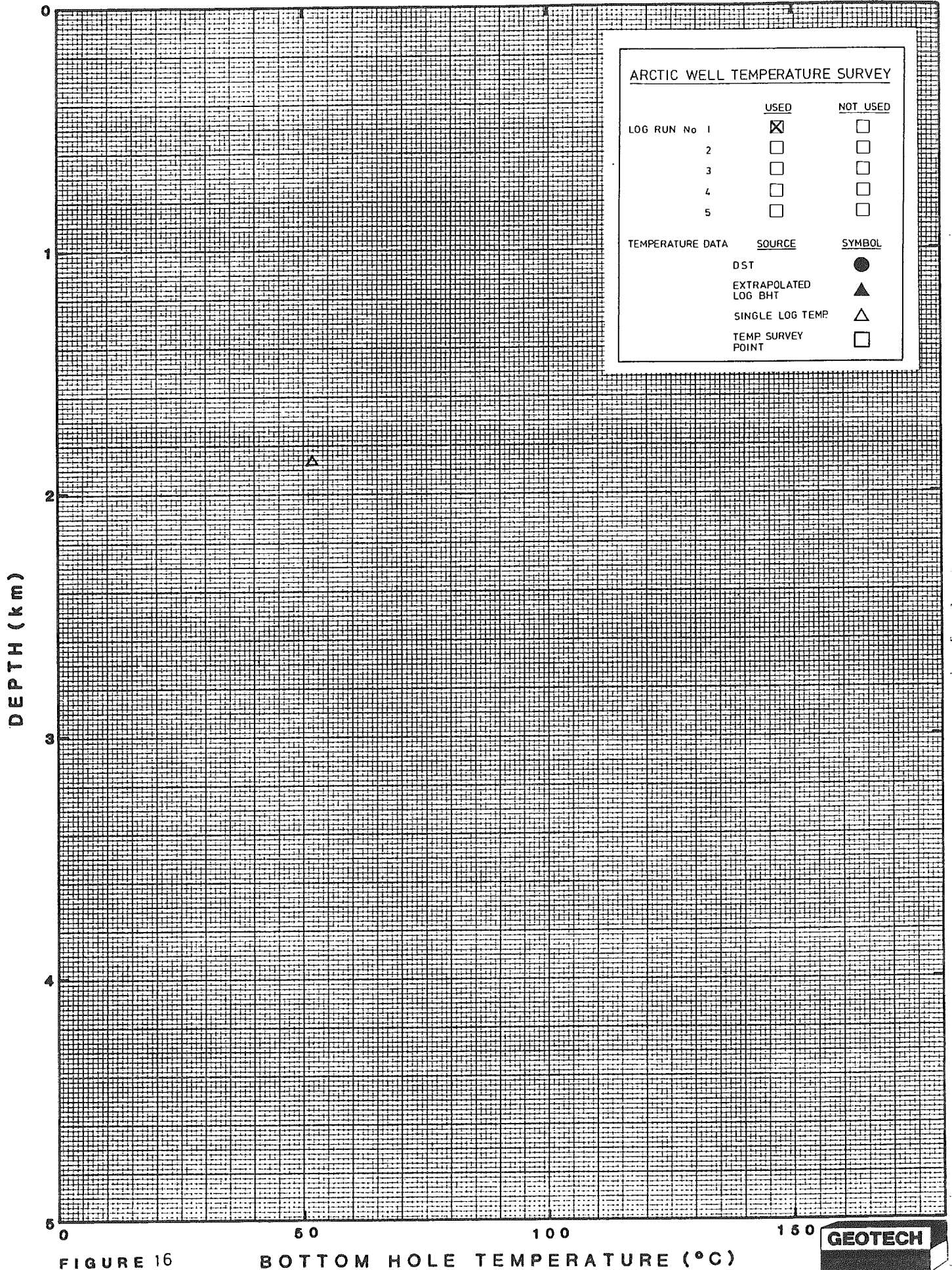


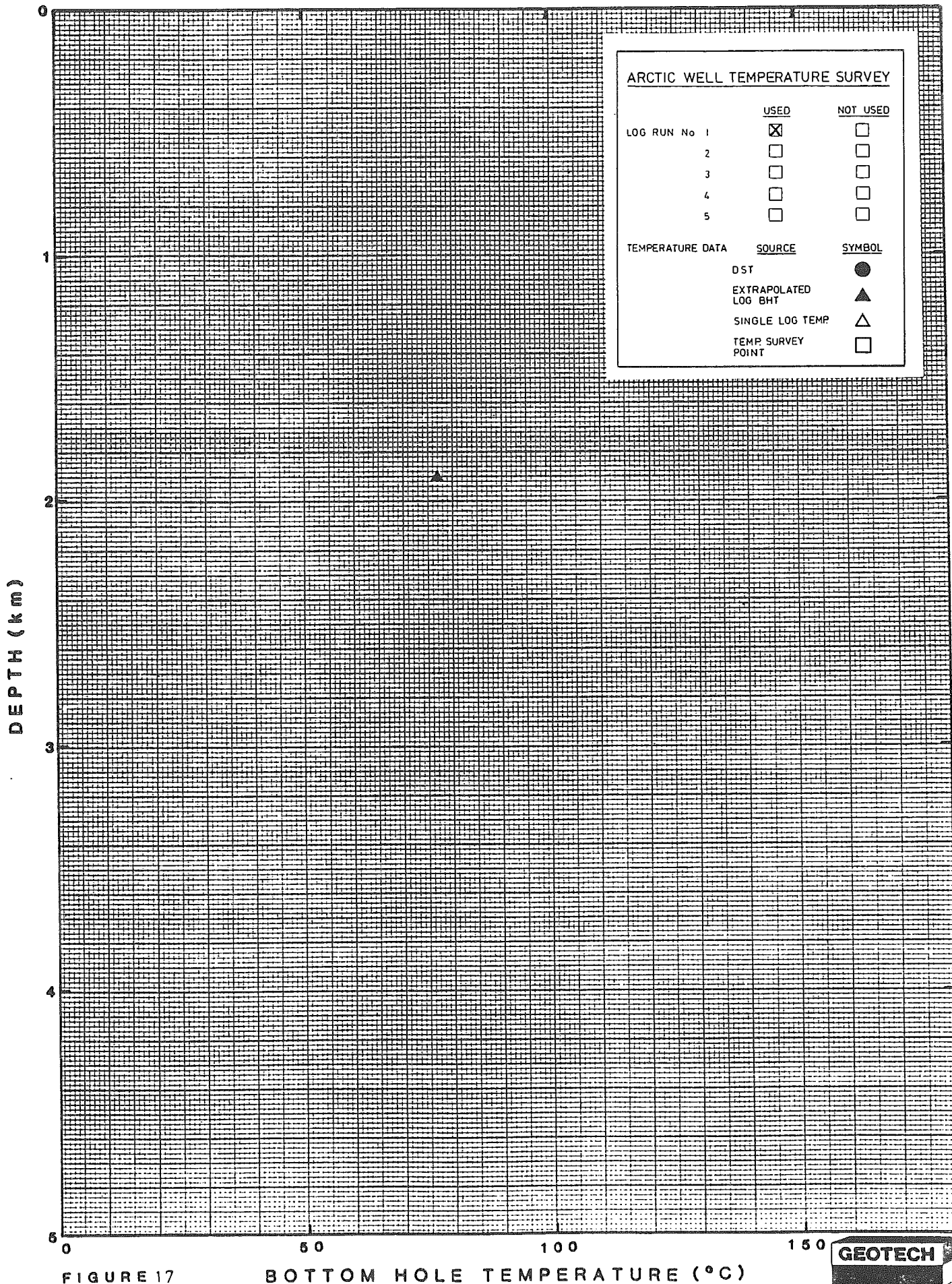
DEPTH (km)

FIGURE 15

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA		
	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 17

BOTTOM HOLE TEMPERATURE (°C)





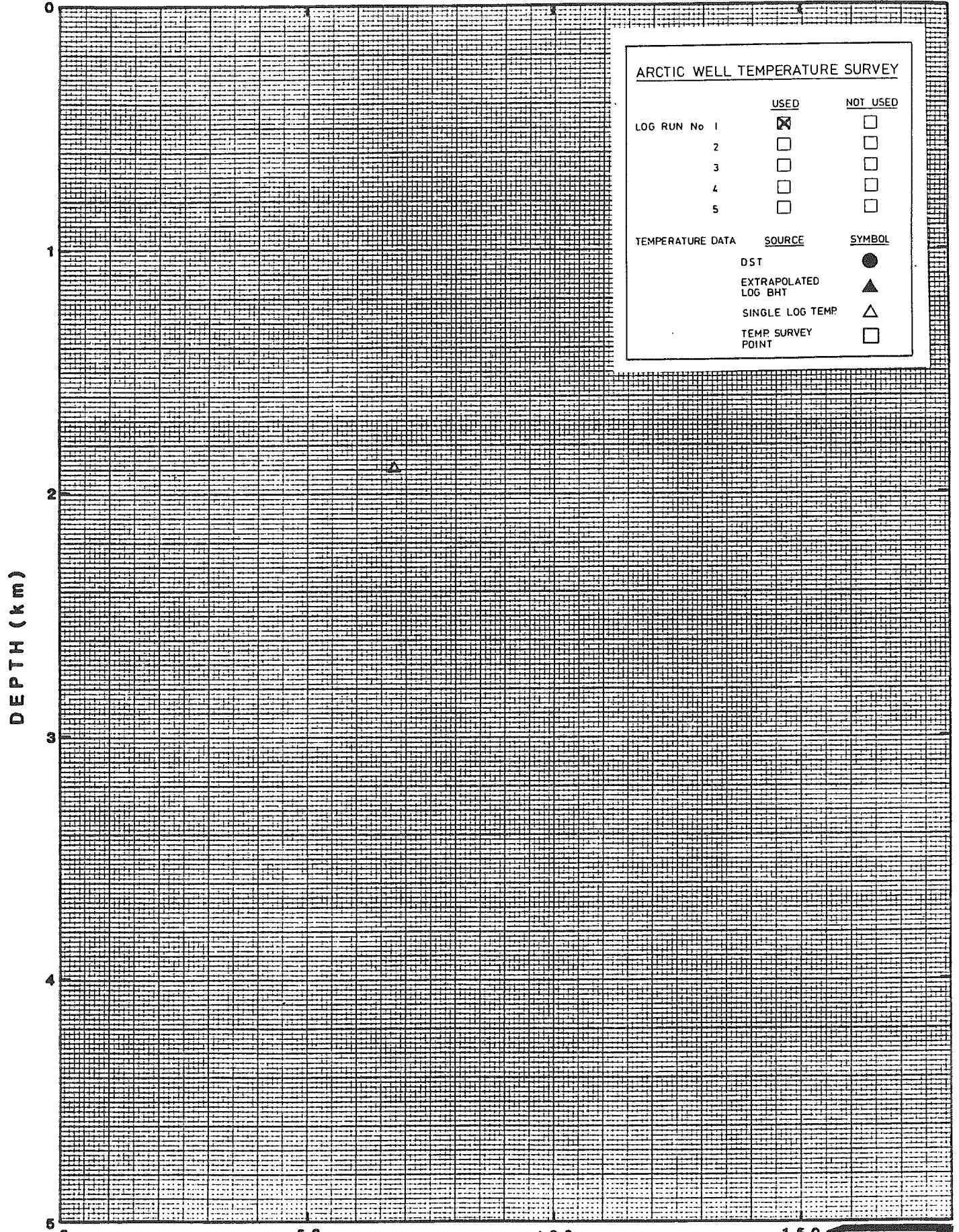
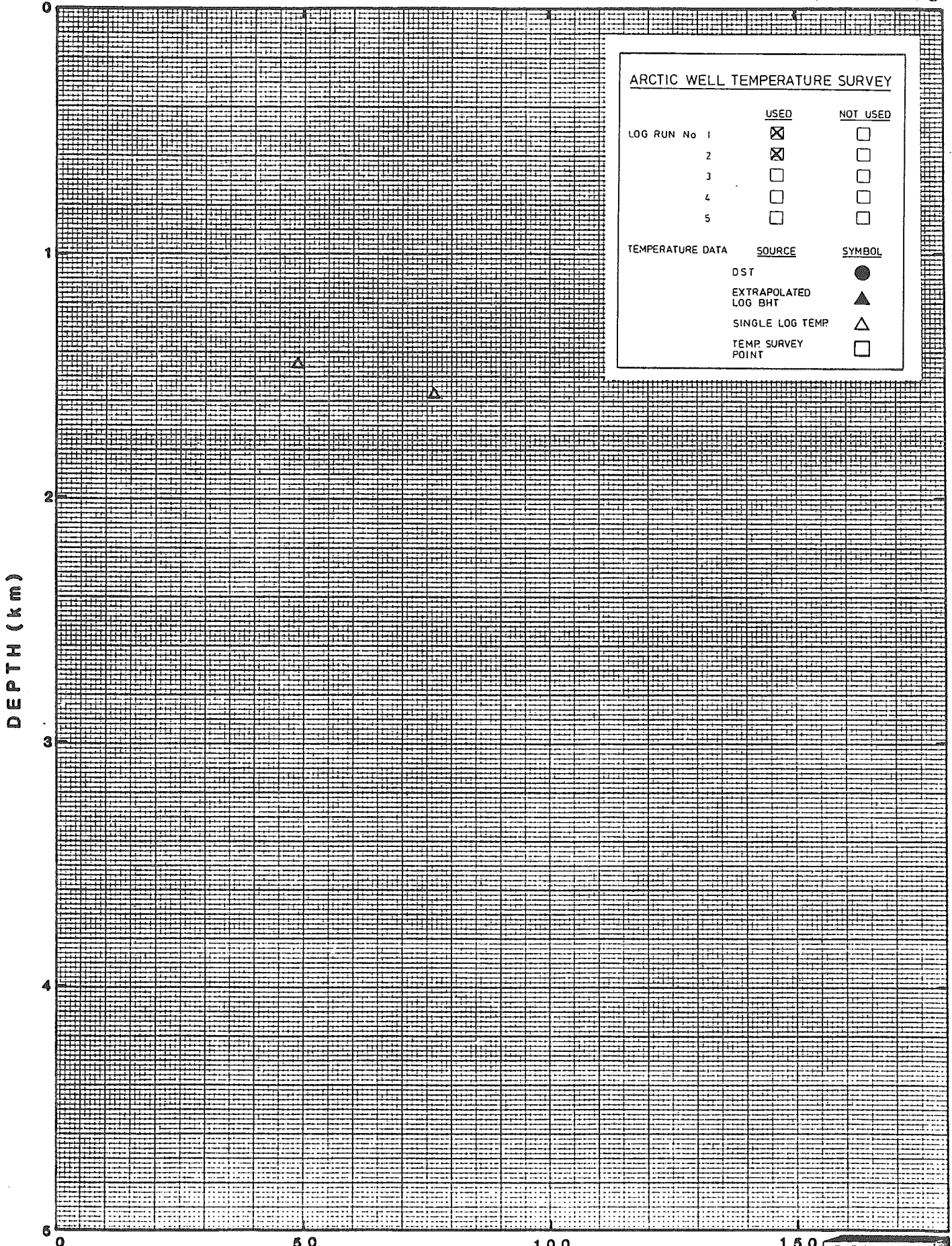


FIGURE 18

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 19

BOTTOM HOLE TEMPERATURE (°C)





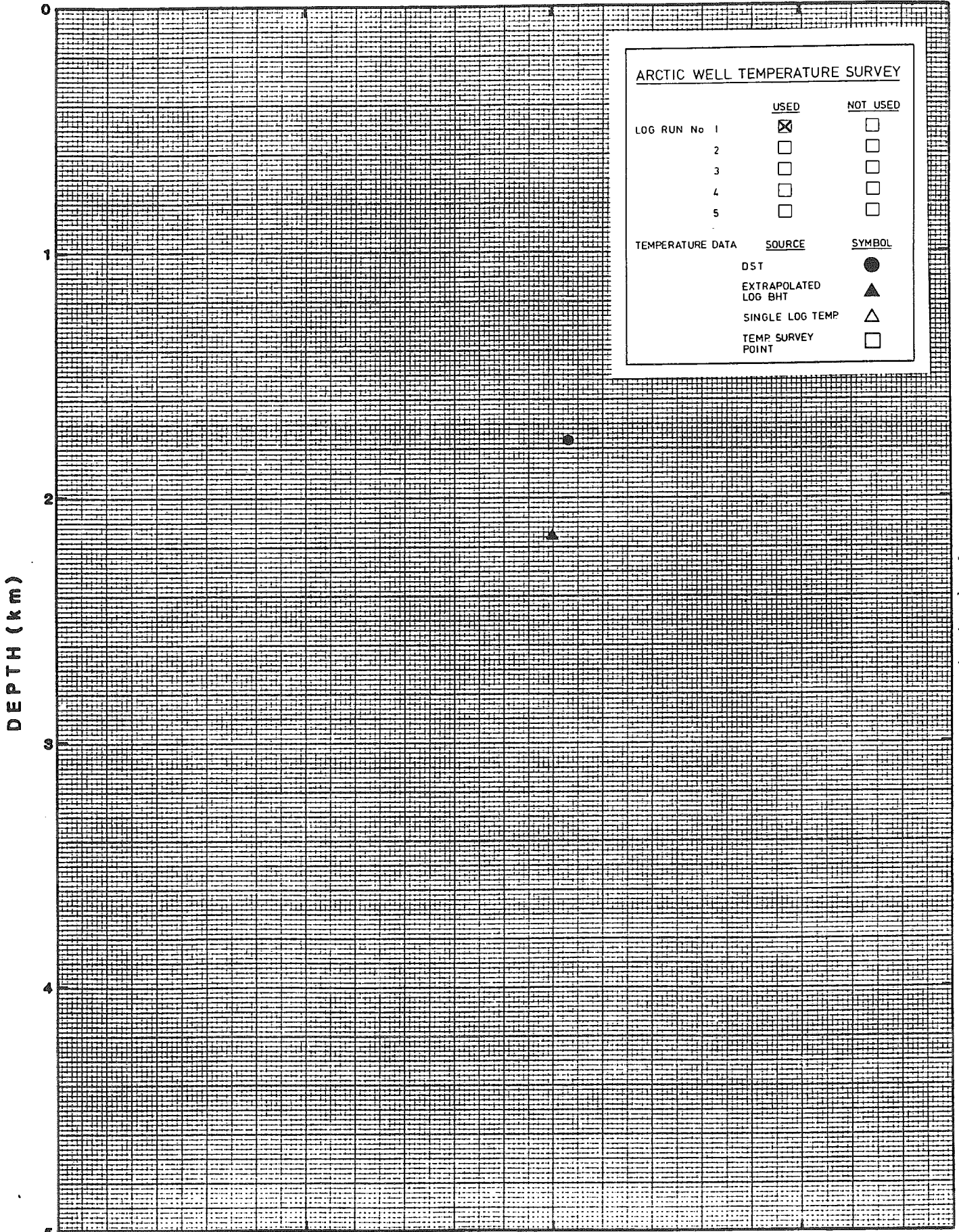
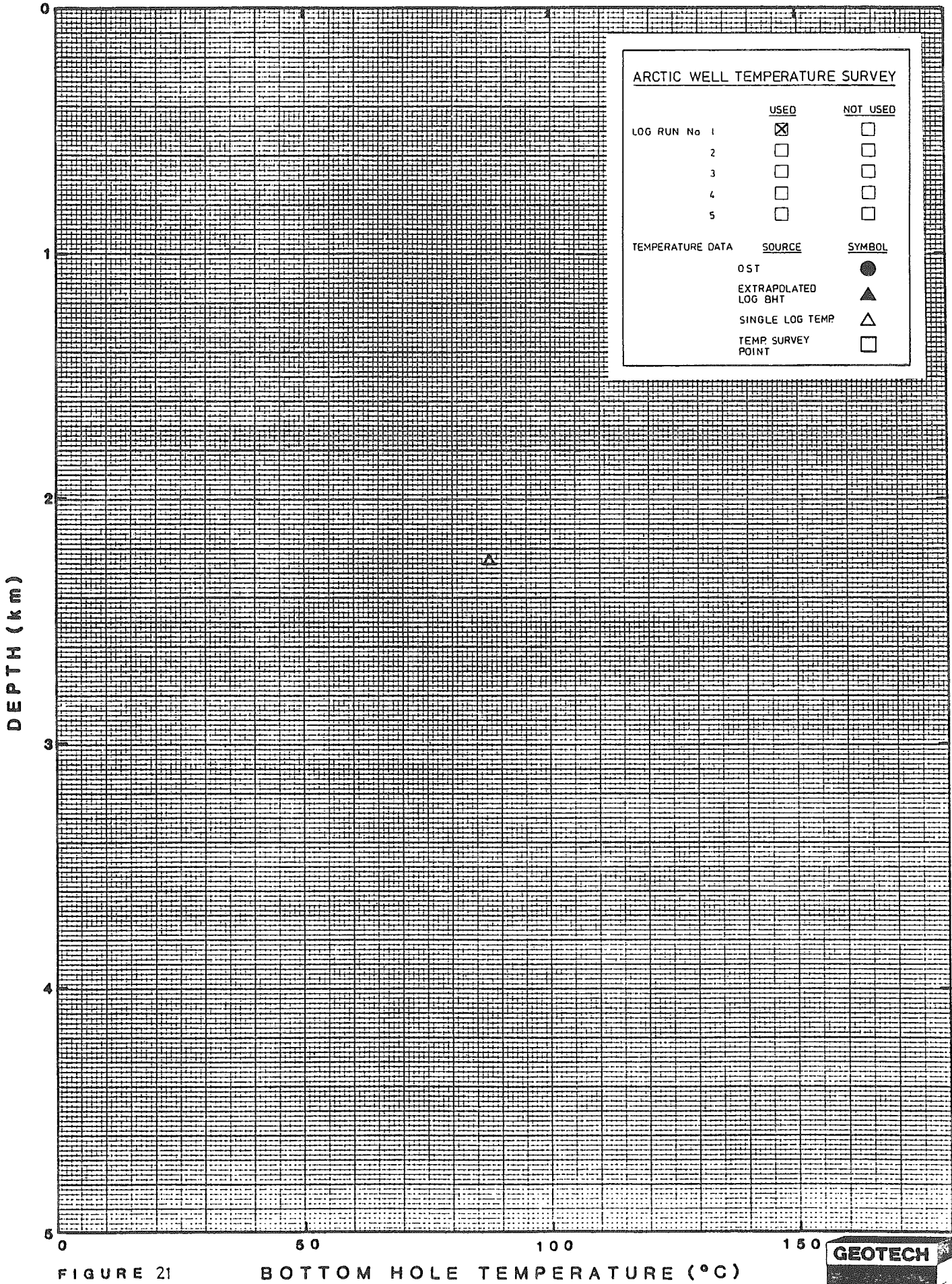


FIGURE 20

BOTTOM HOLE TEMPERATURE (°C)



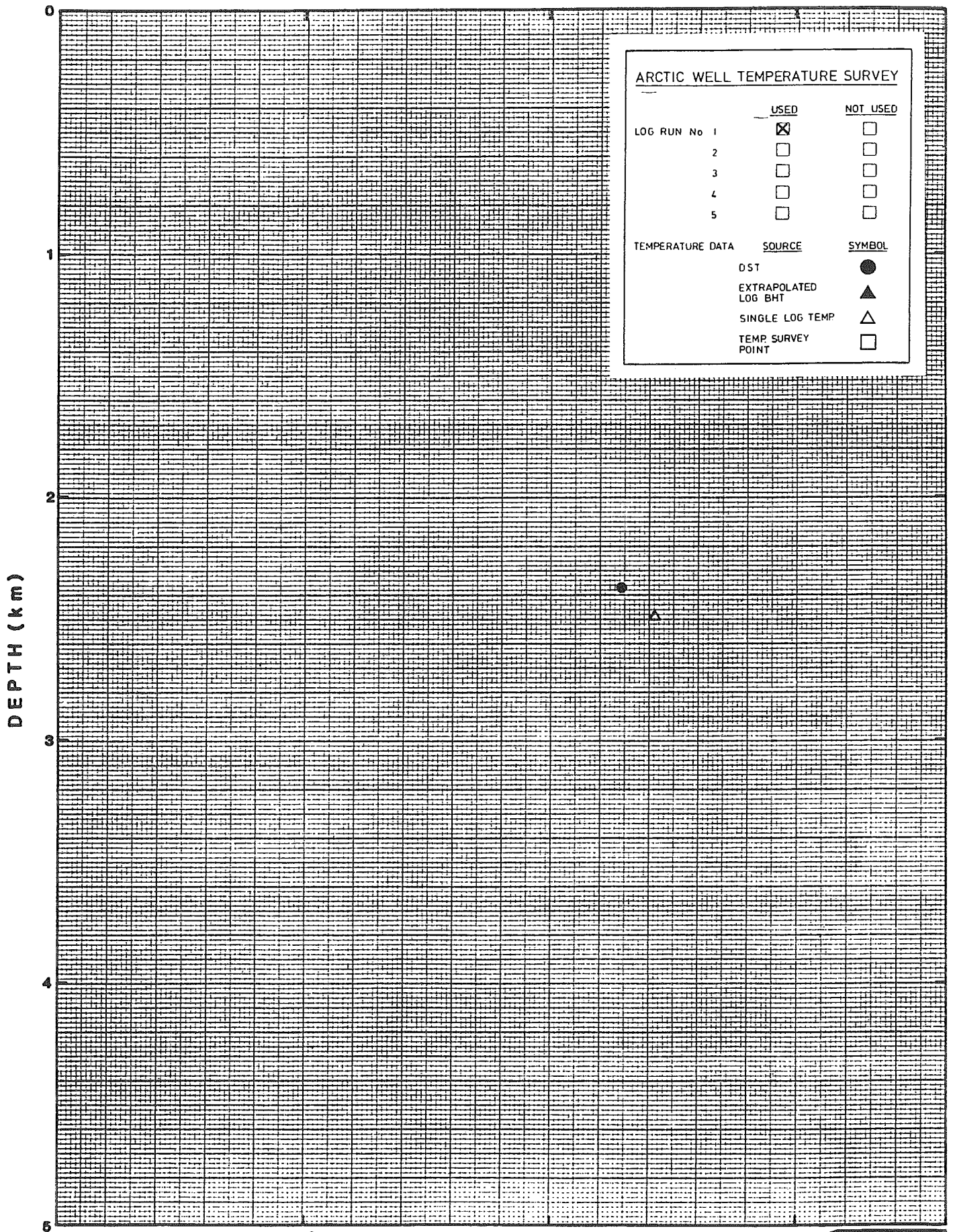


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150  
FIGURE 21 BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0 50 100 150

FIGURE 22 BOTTOM HOLE TEMPERATURE (°C)





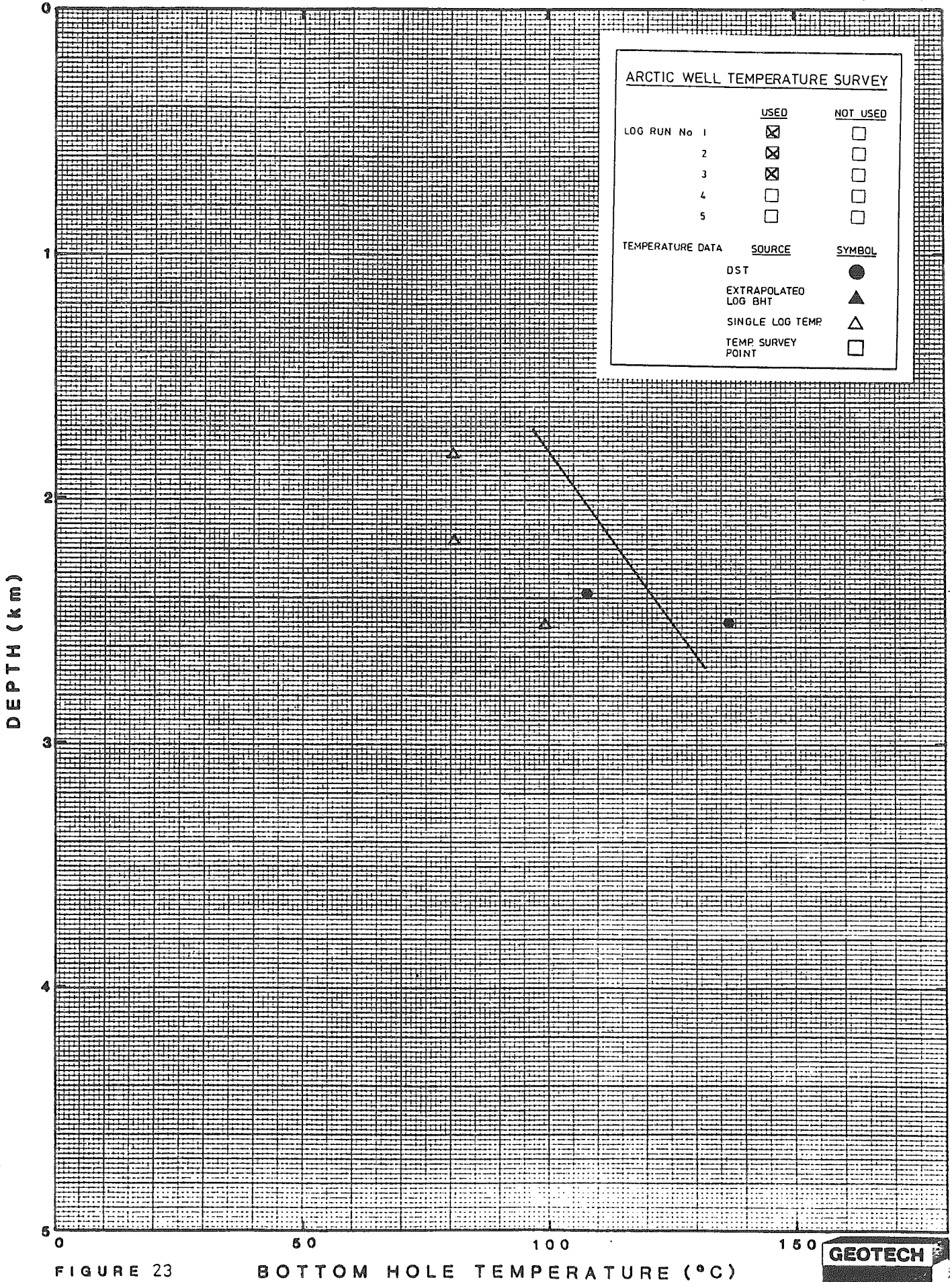
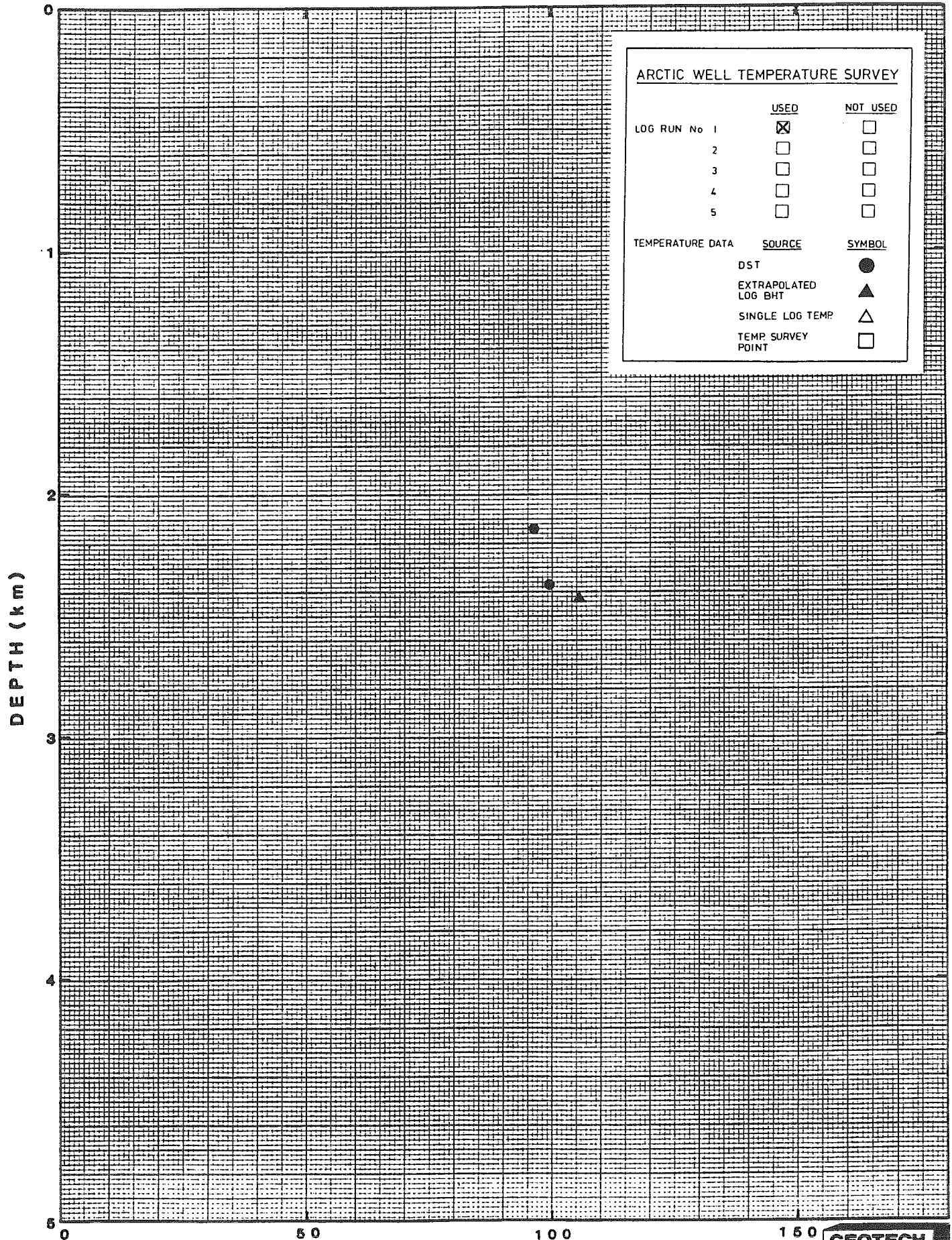


FIGURE 23

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 24

BOTTOM HOLE TEMPERATURE (°C)



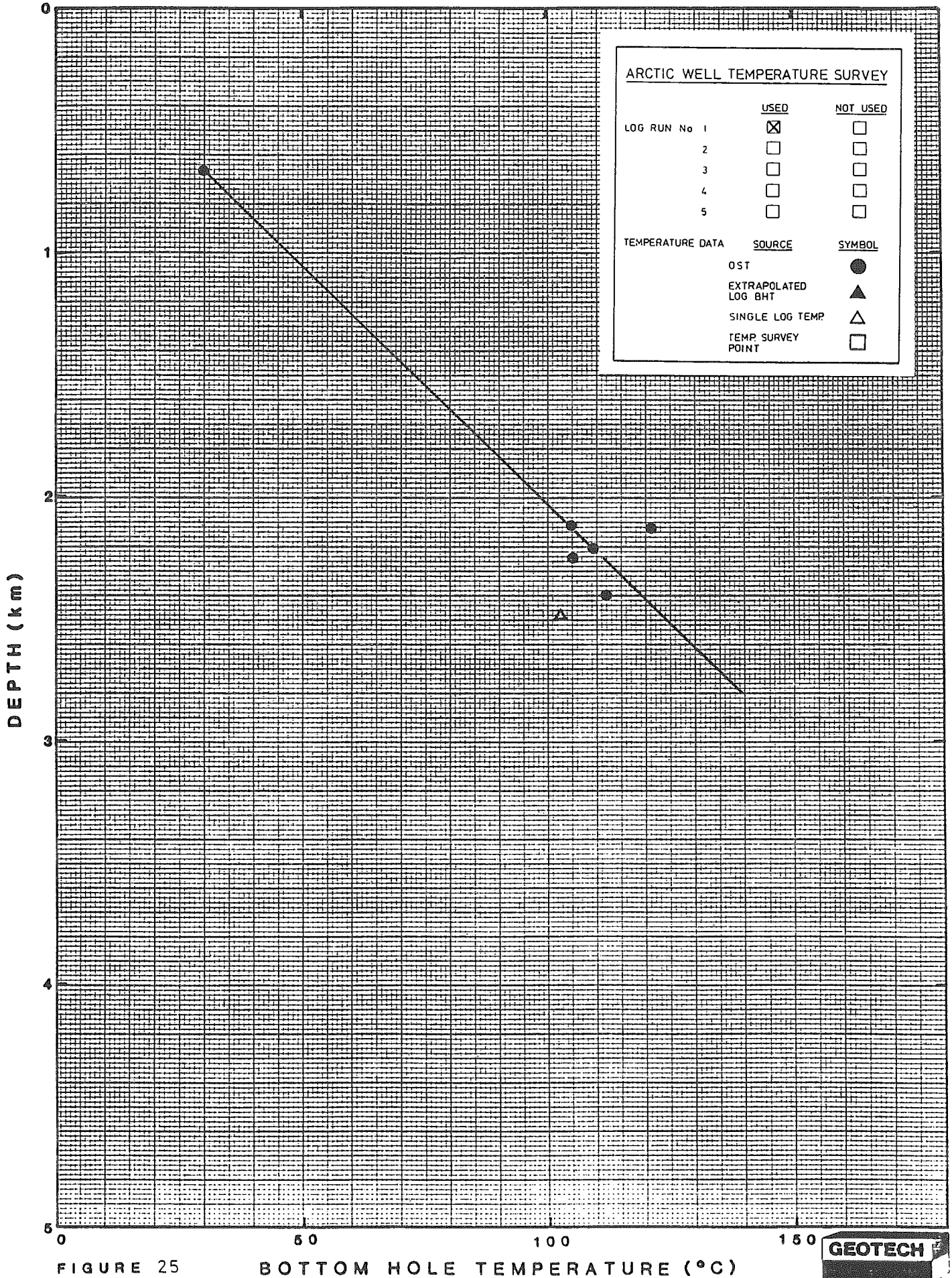


FIGURE 25

BOTTOM HOLE TEMPERATURE (°C)





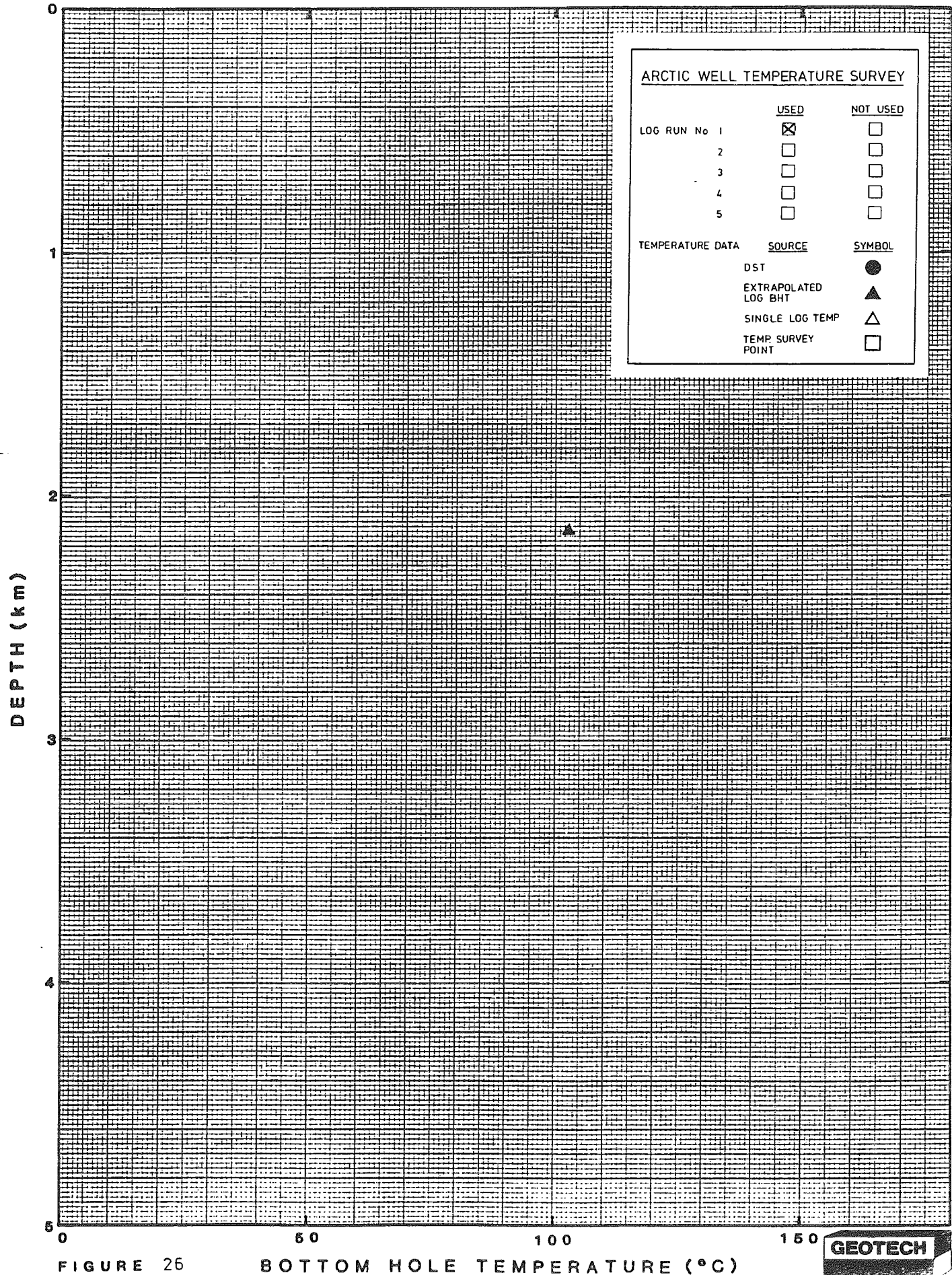


FIGURE 26

BOTTOM HOLE TEMPERATURE (°C)

1-7

DEPTH (km)

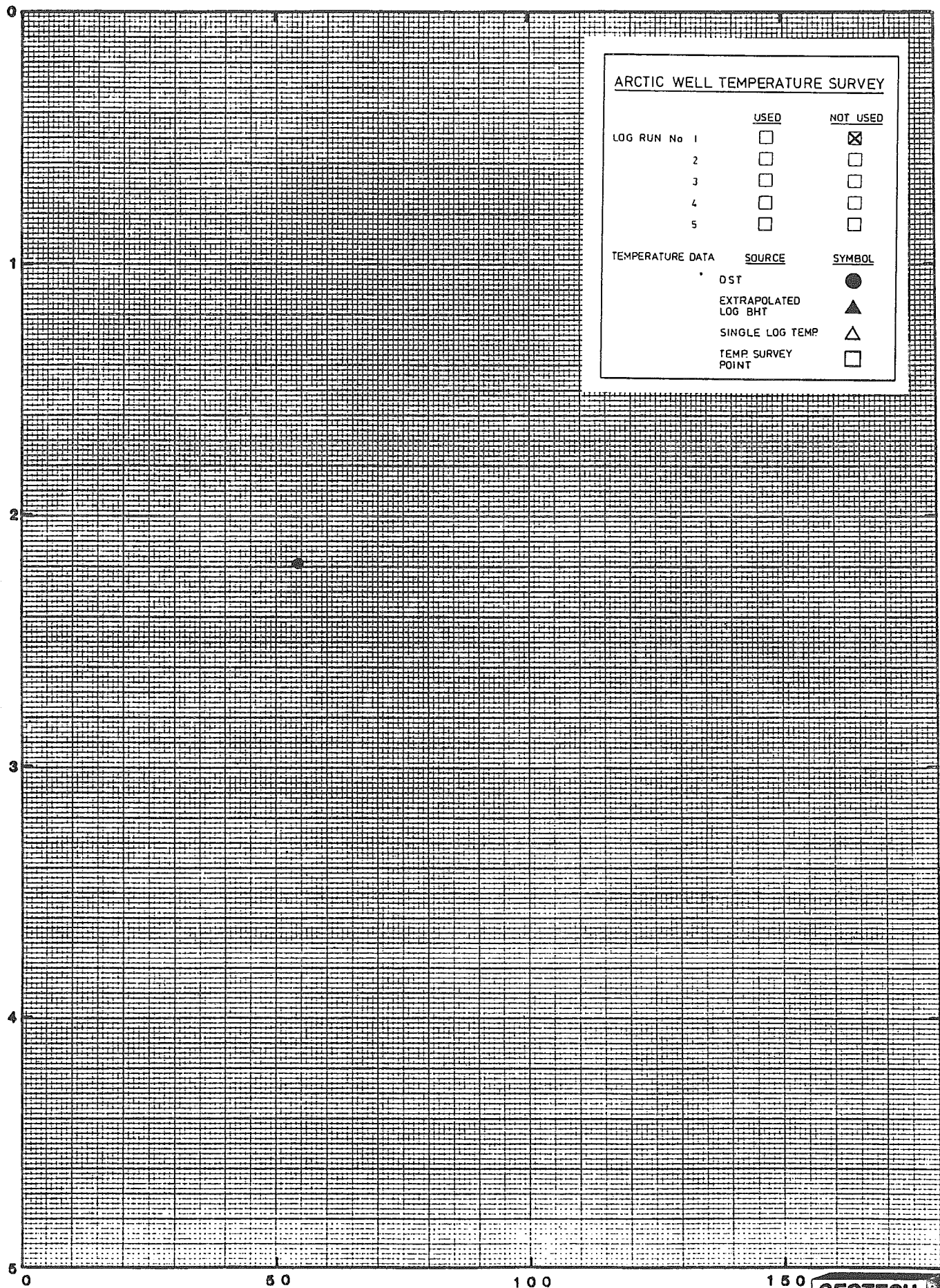


FIGURE 27

BOTTOM HOLE TEMPERATURE (°C)





SHELL TROUT L.

0-41 60-10-121-30

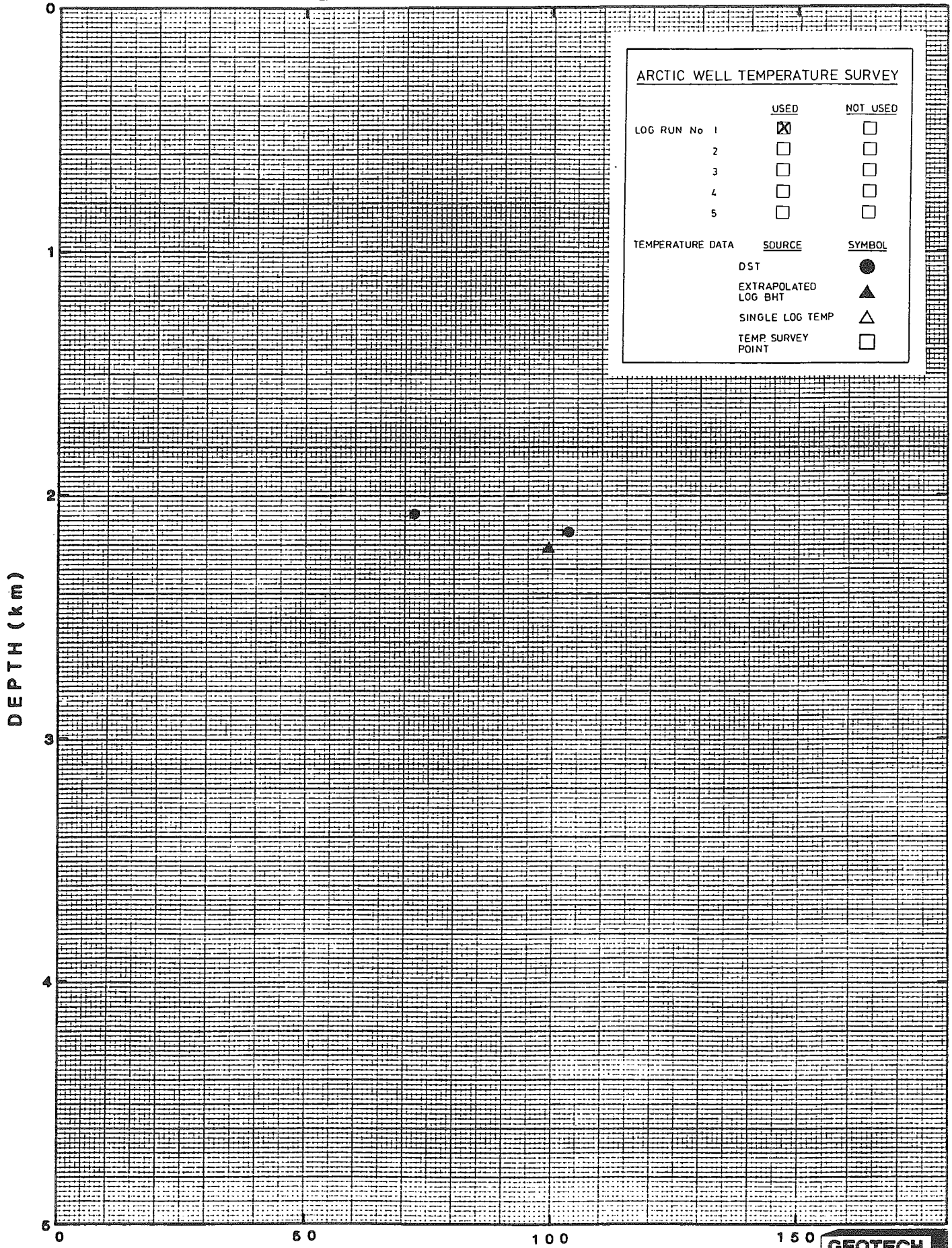


FIGURE 28

BOTTOM HOLE TEMPERATURE (°C)



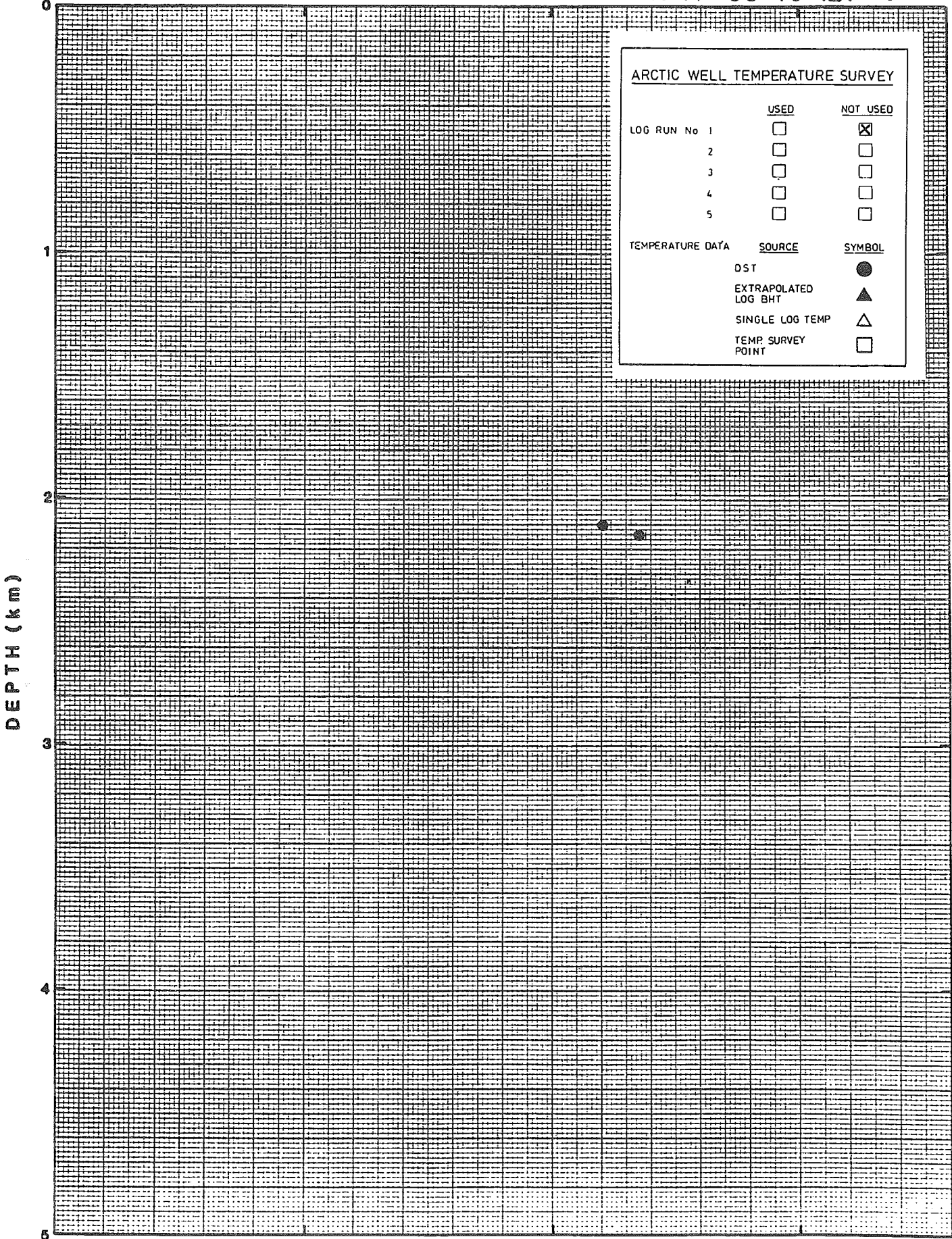
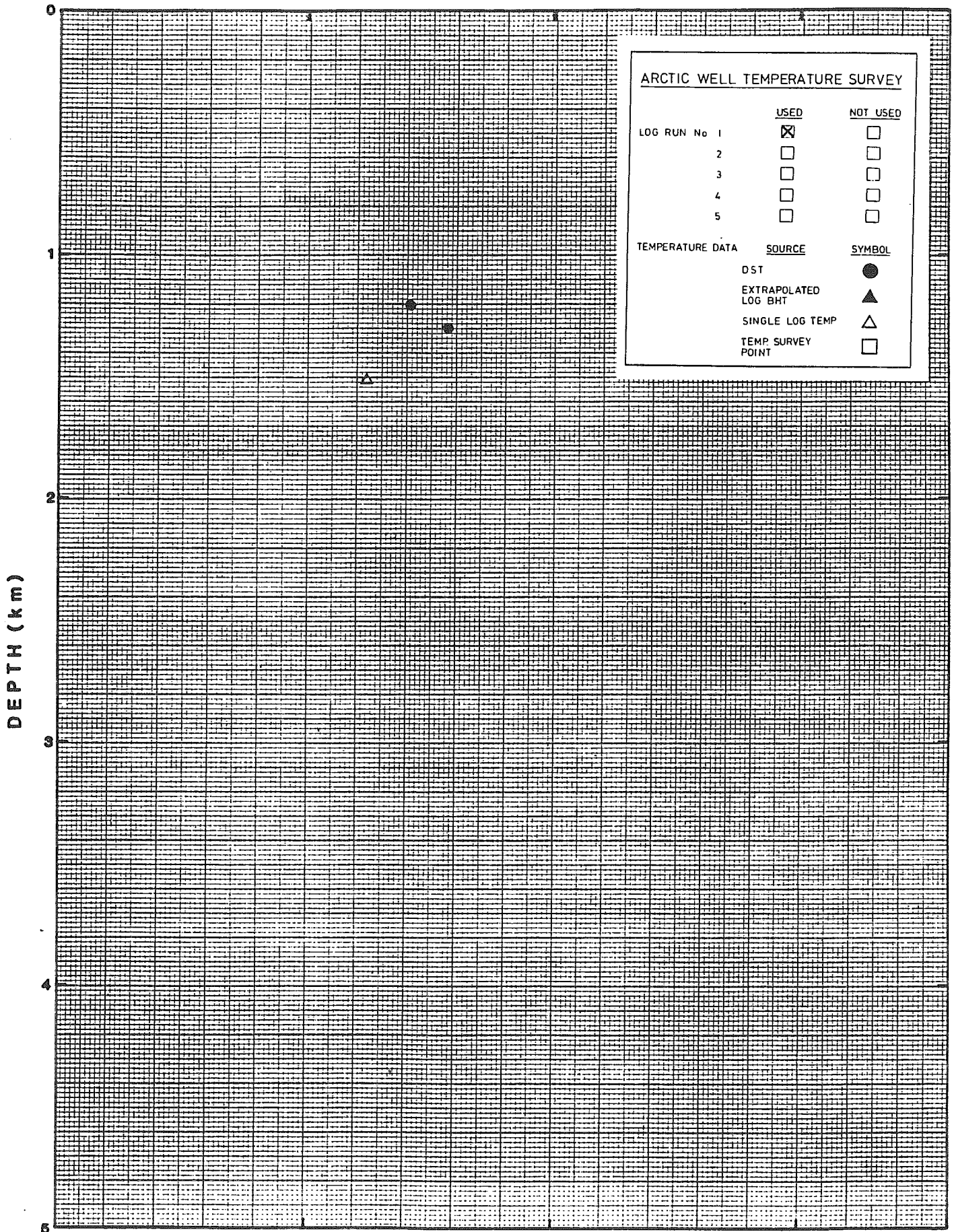


FIGURE 29

BOTTOM HOLE TEMPERATURE (°C)





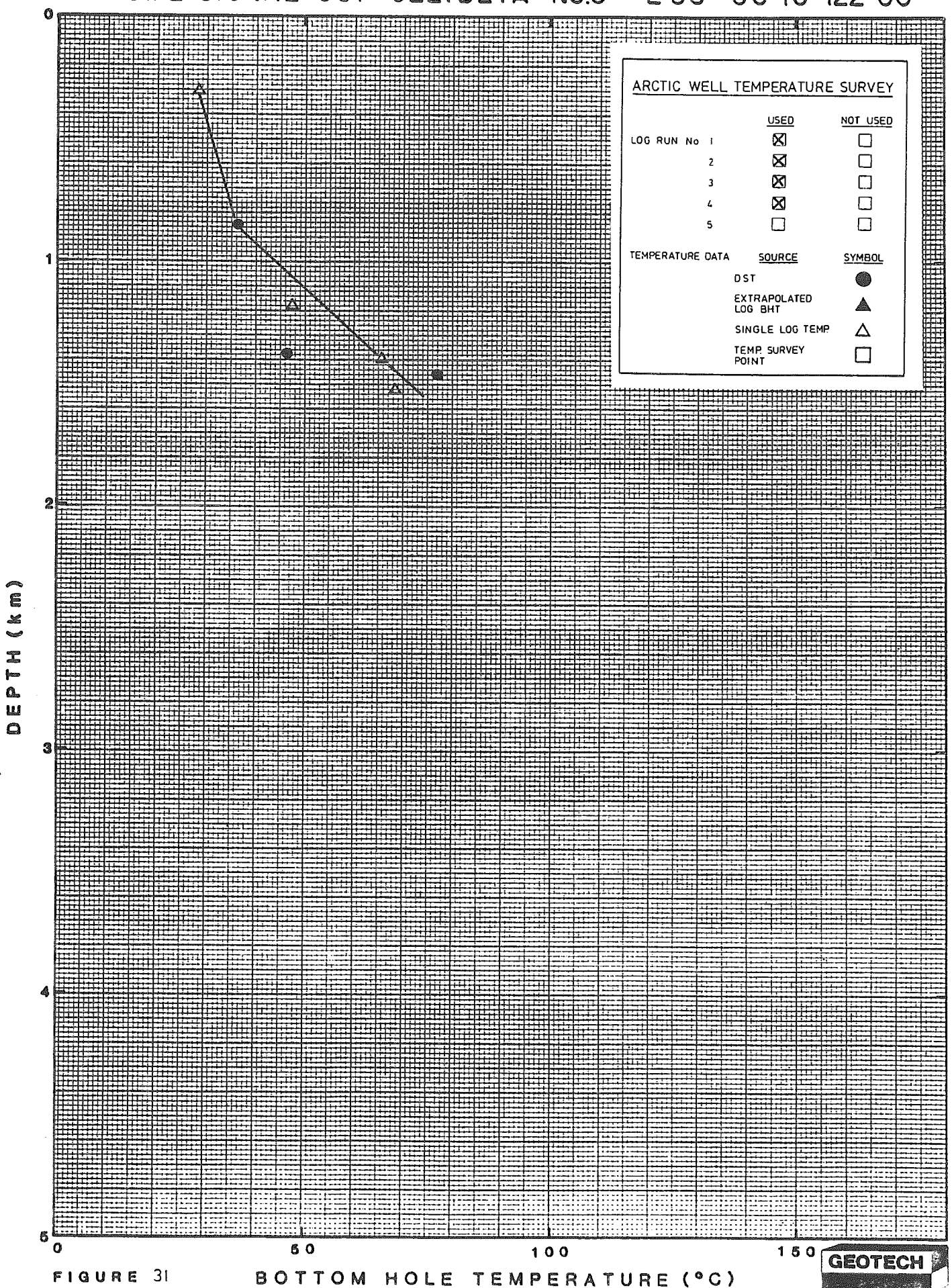
DEPTH (km)

0 50 100 150

FIGURE 30 BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 31

BOTTOM HOLE TEMPERATURE (°C)



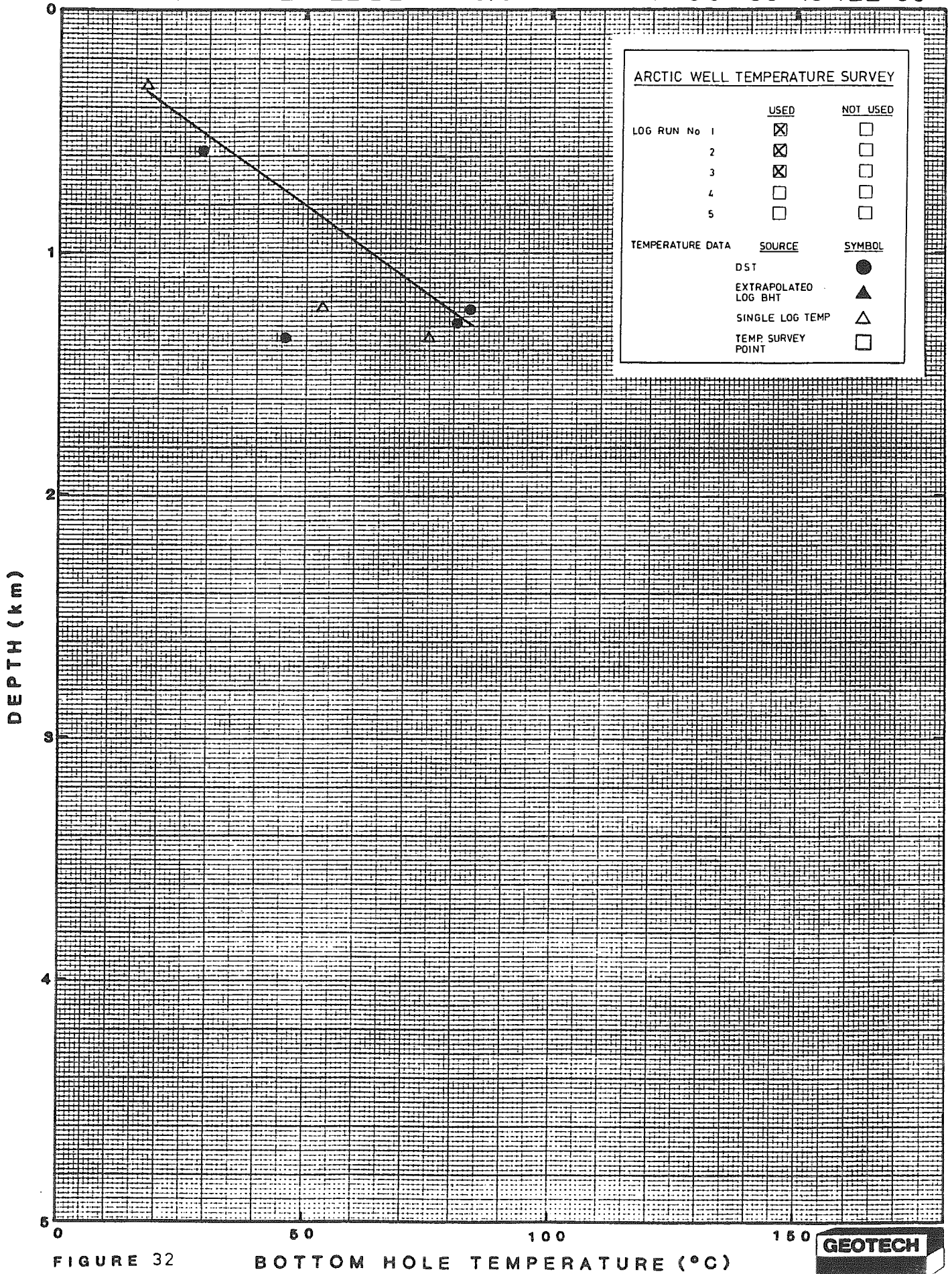


FIGURE 32

BOTTOM HOLE TEMPERATURE (°C)



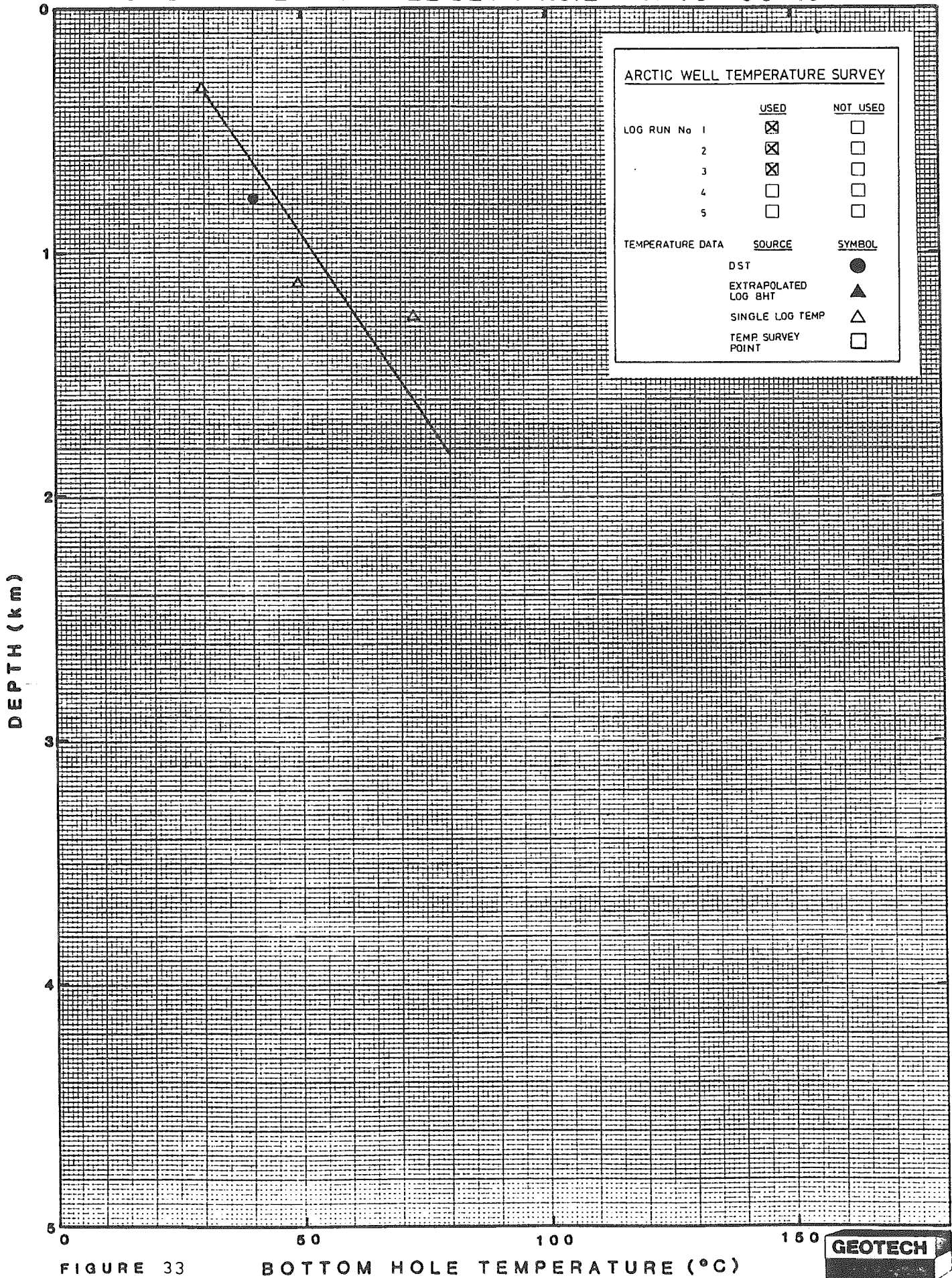
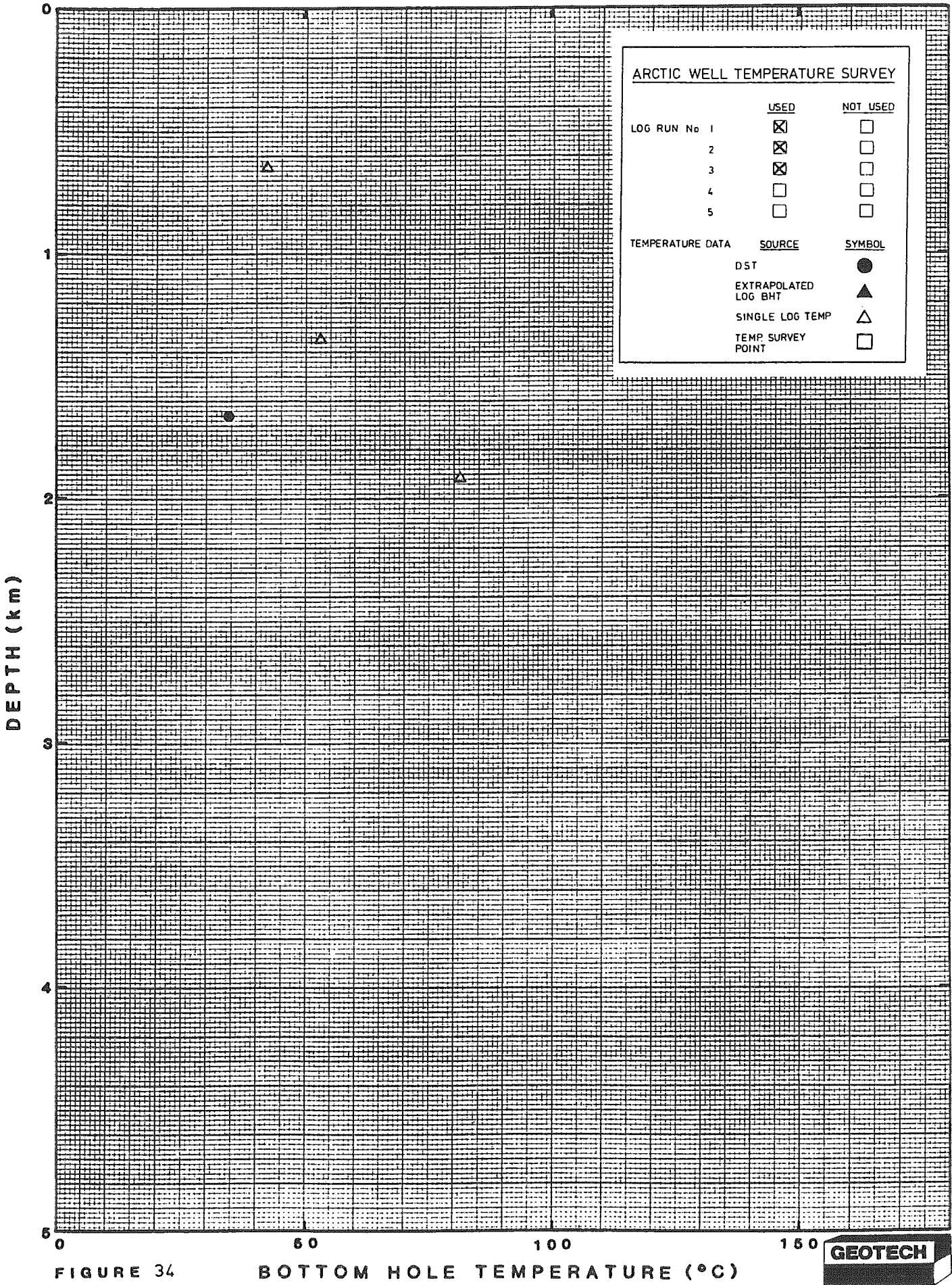


FIGURE 33

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 34

BOTTOM HOLE TEMPERATURE (°C)



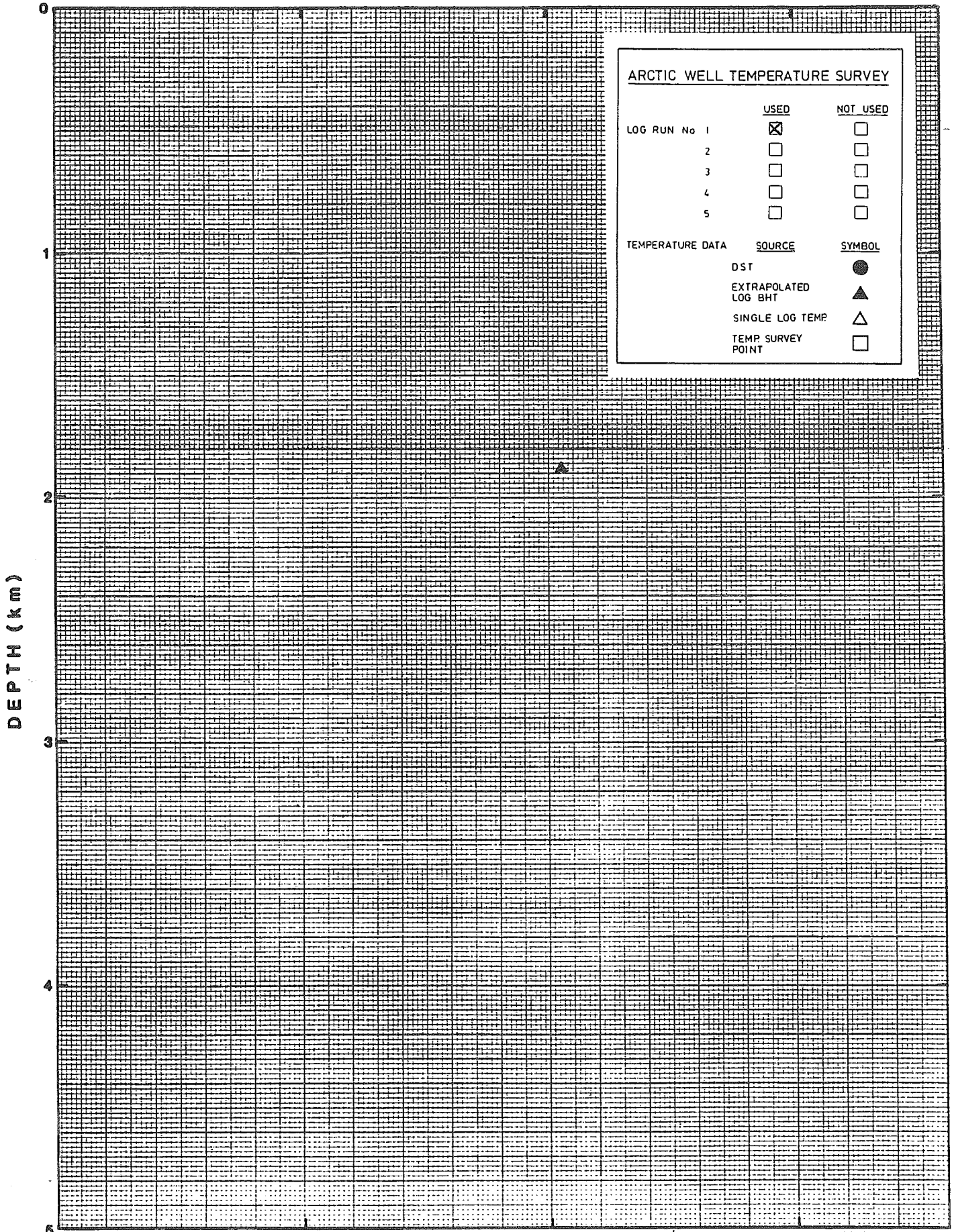


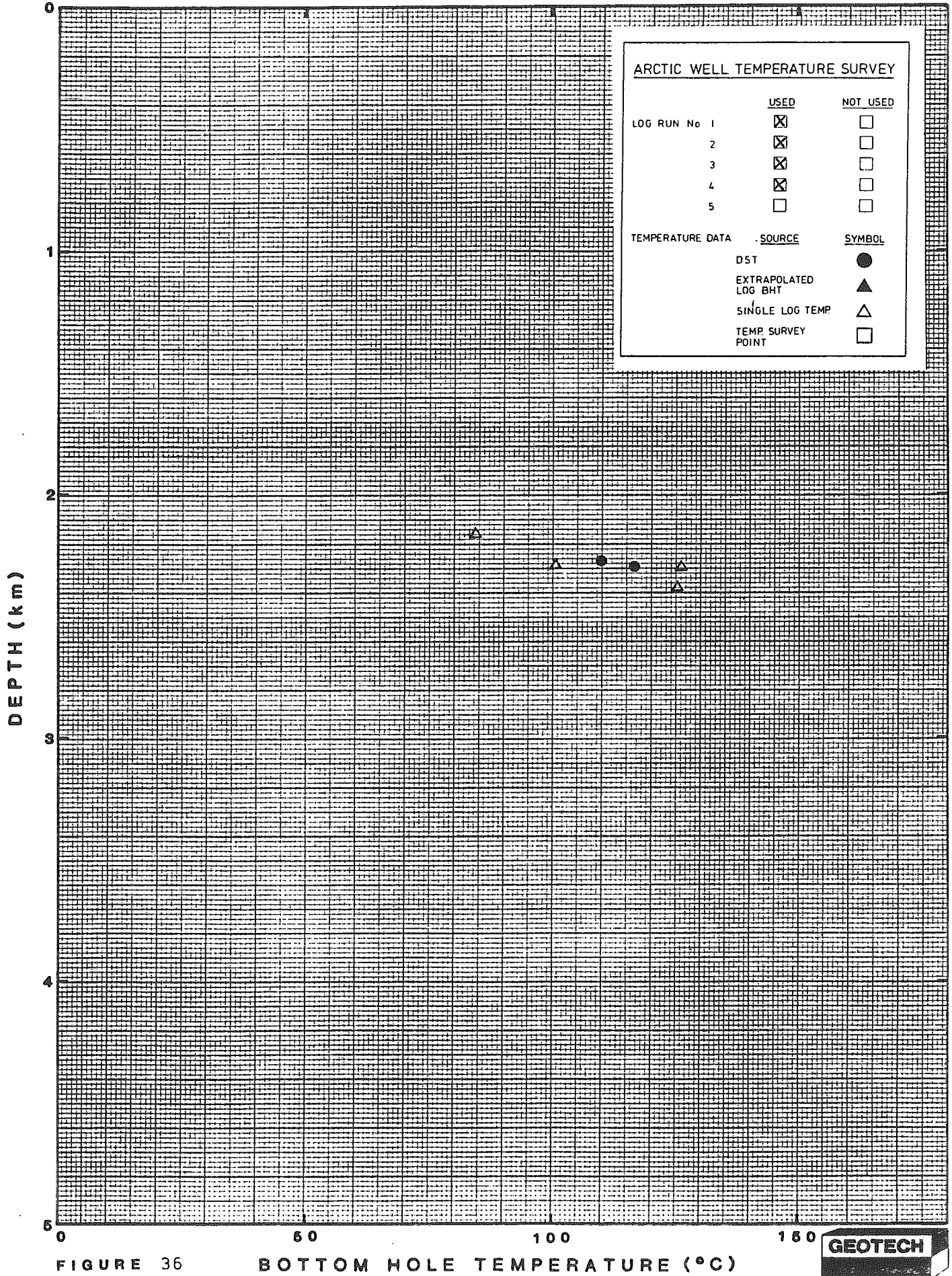
FIGURE 35

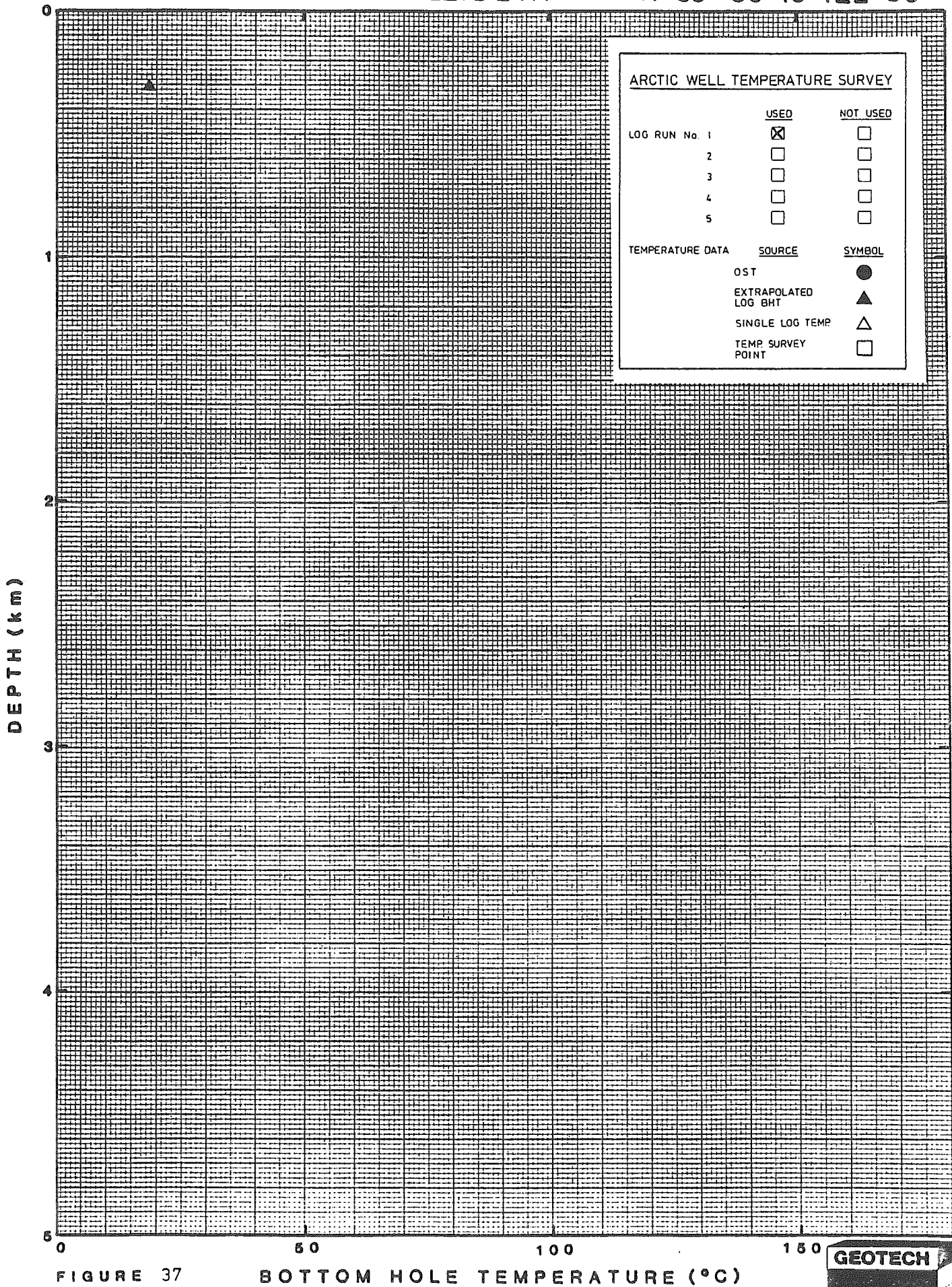
BOTTOM HOLE TEMPERATURE (°C)





# HOME SIGNAL CSP CELIBETA NO.7 H-50 60-10-122-30





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	OST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0 50 100 150

FIGURE 37 BOTTOM HOLE TEMPERATURE (°C)



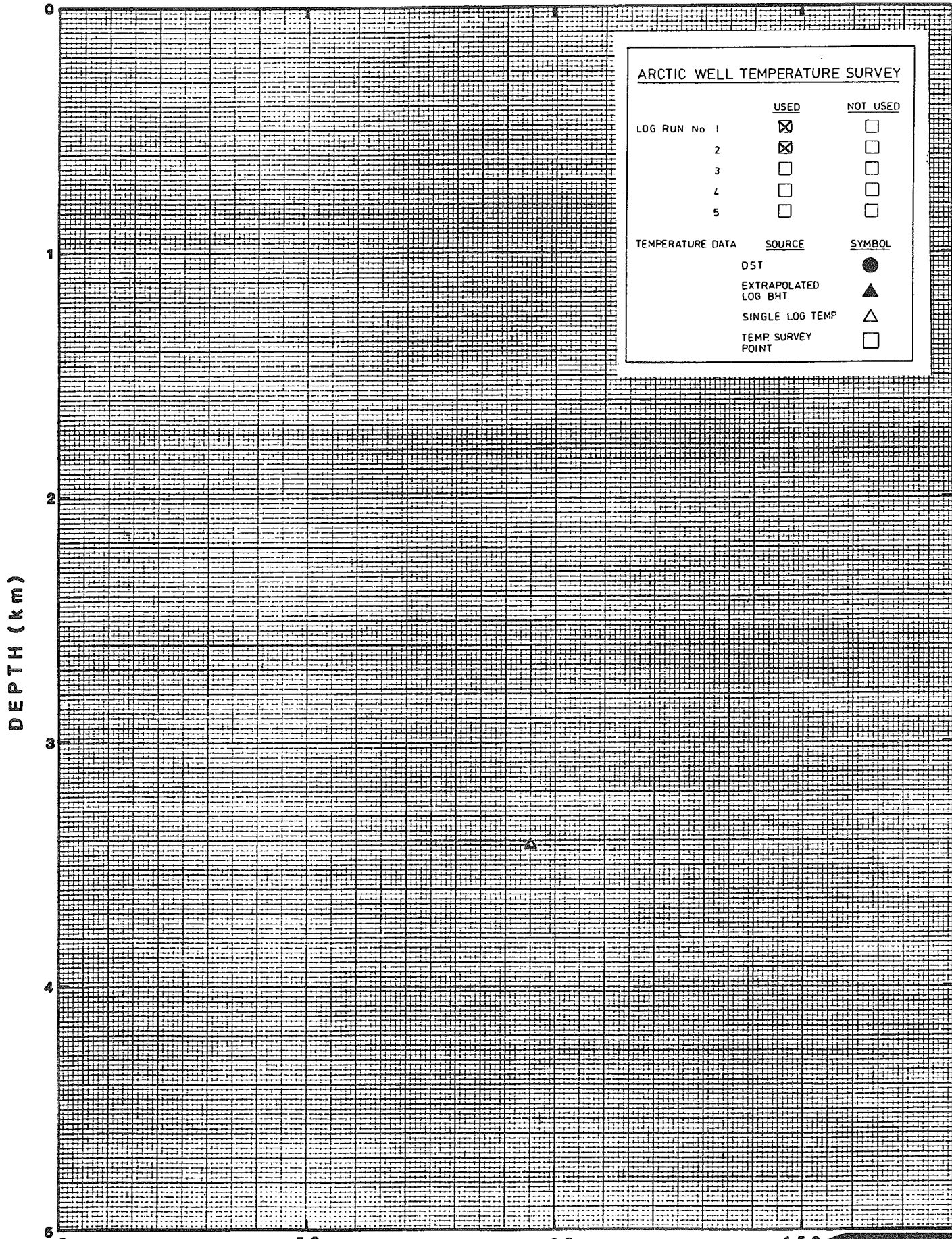
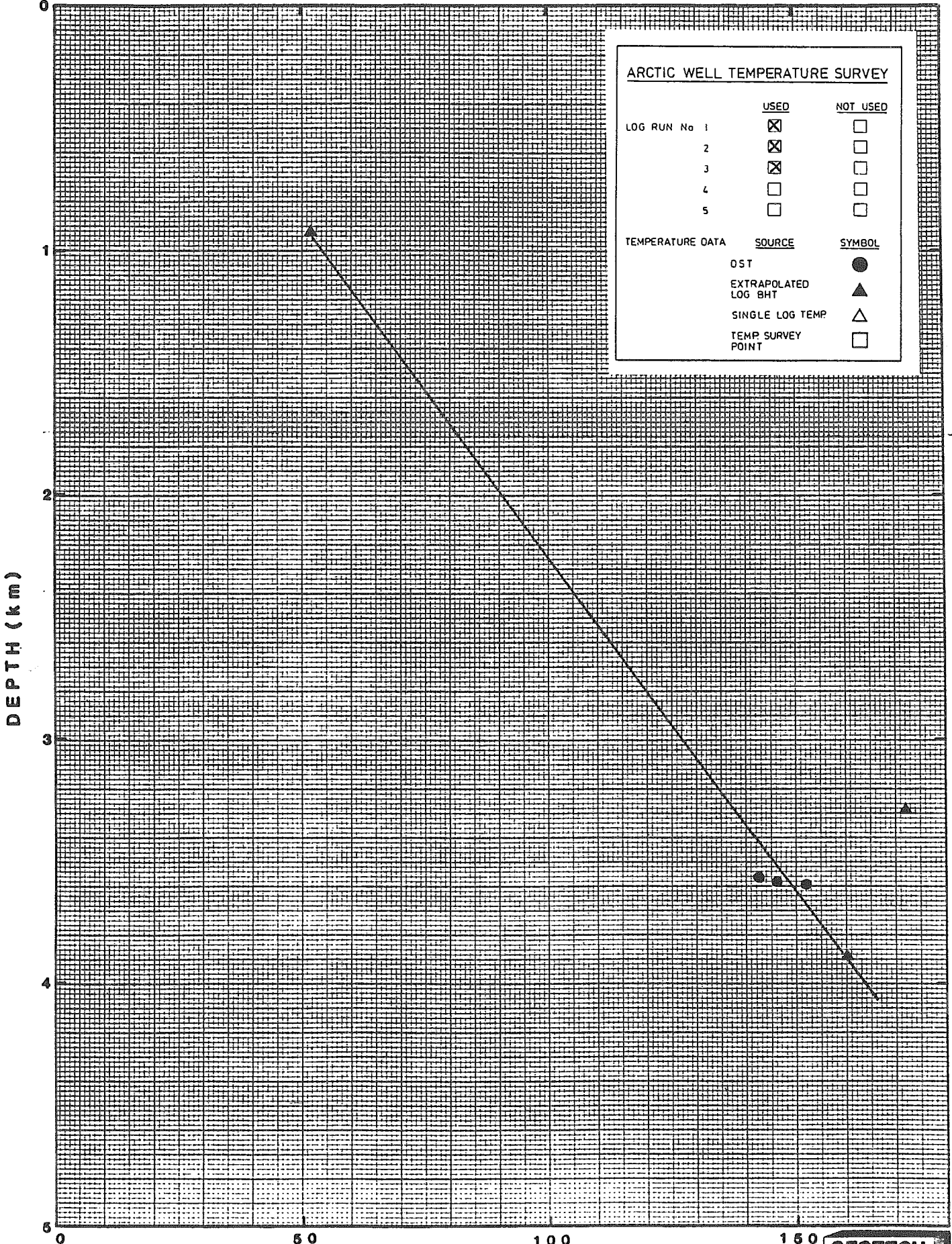


FIGURE 38

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>
	OST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

FIGURE 39

BOTTOM HOLE TEMPERATURE (°C)



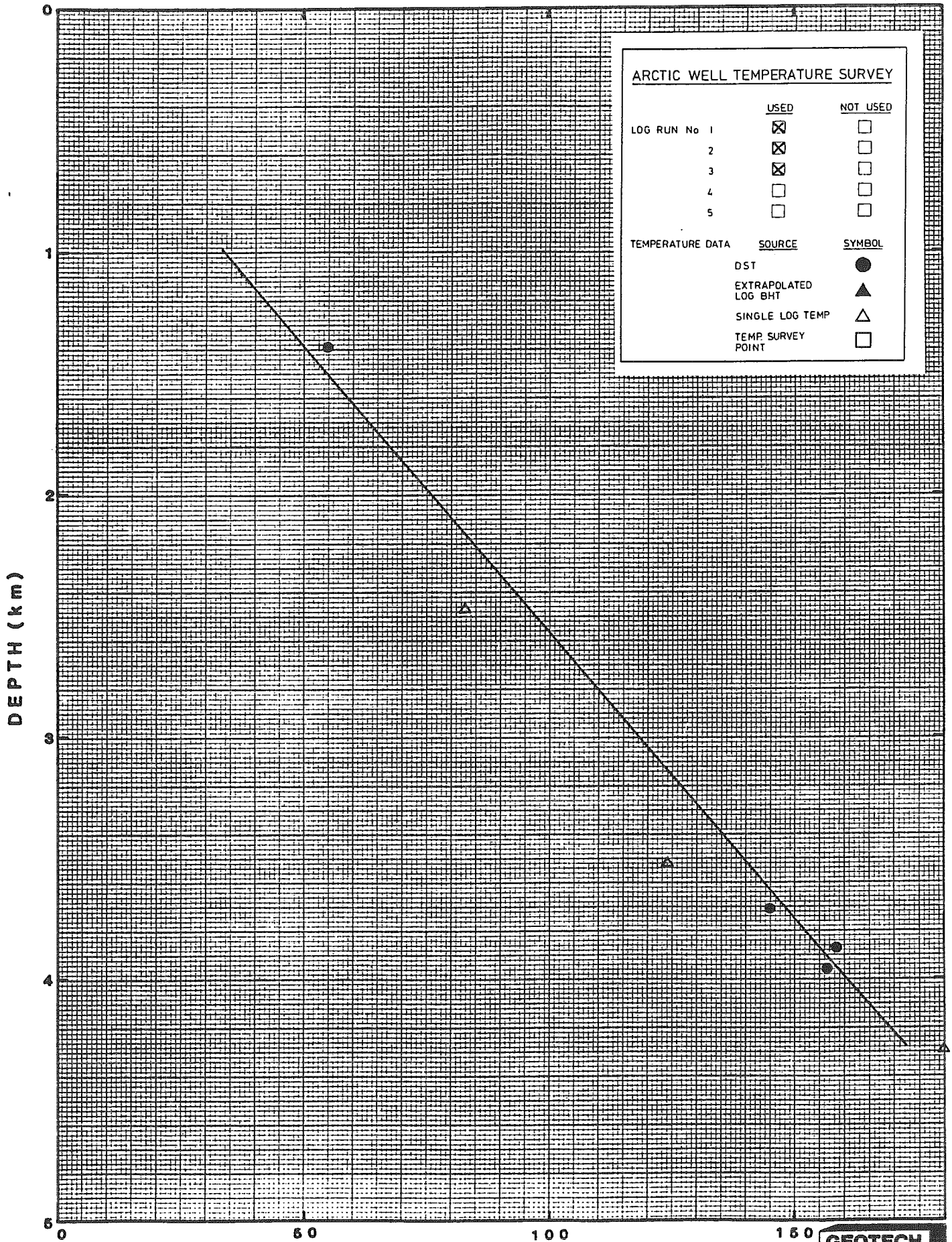


FIGURE 40

BOTTOM HOLE TEMPERATURE (°C)

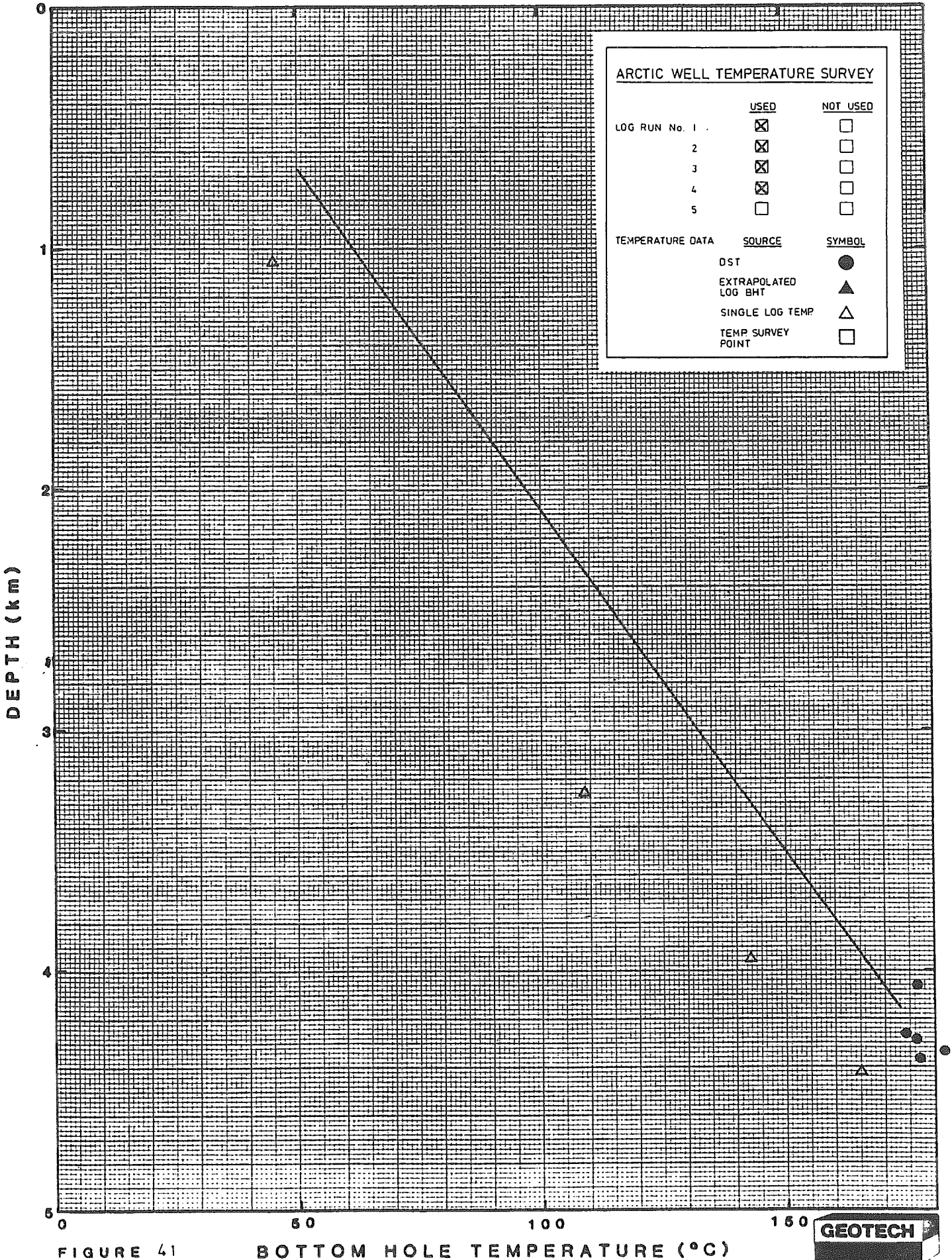
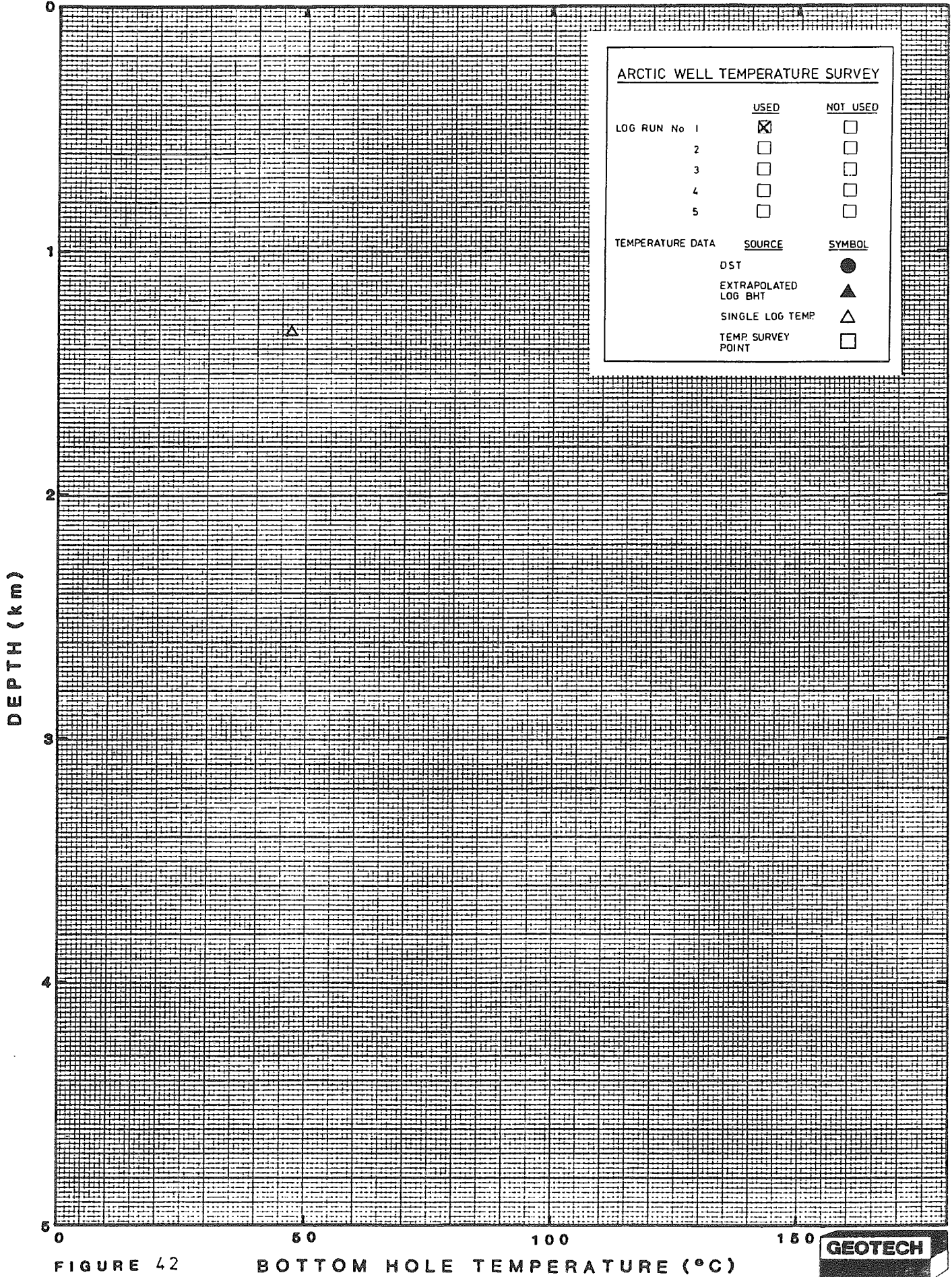


FIGURE 41

BOTTOM HOLE TEMPERATURE (°C)







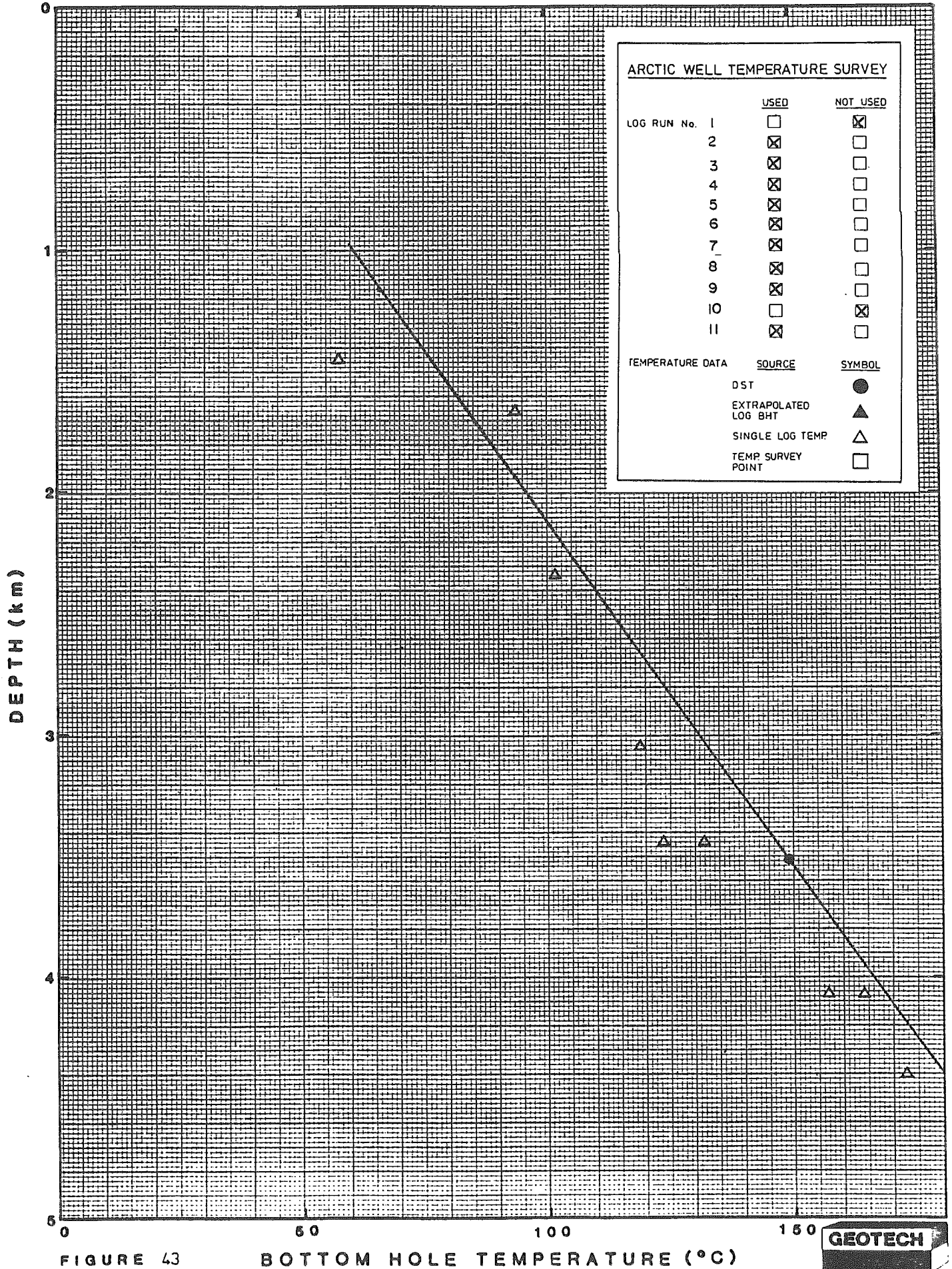


FIGURE 43

BOTTOM HOLE TEMPERATURE (°C)





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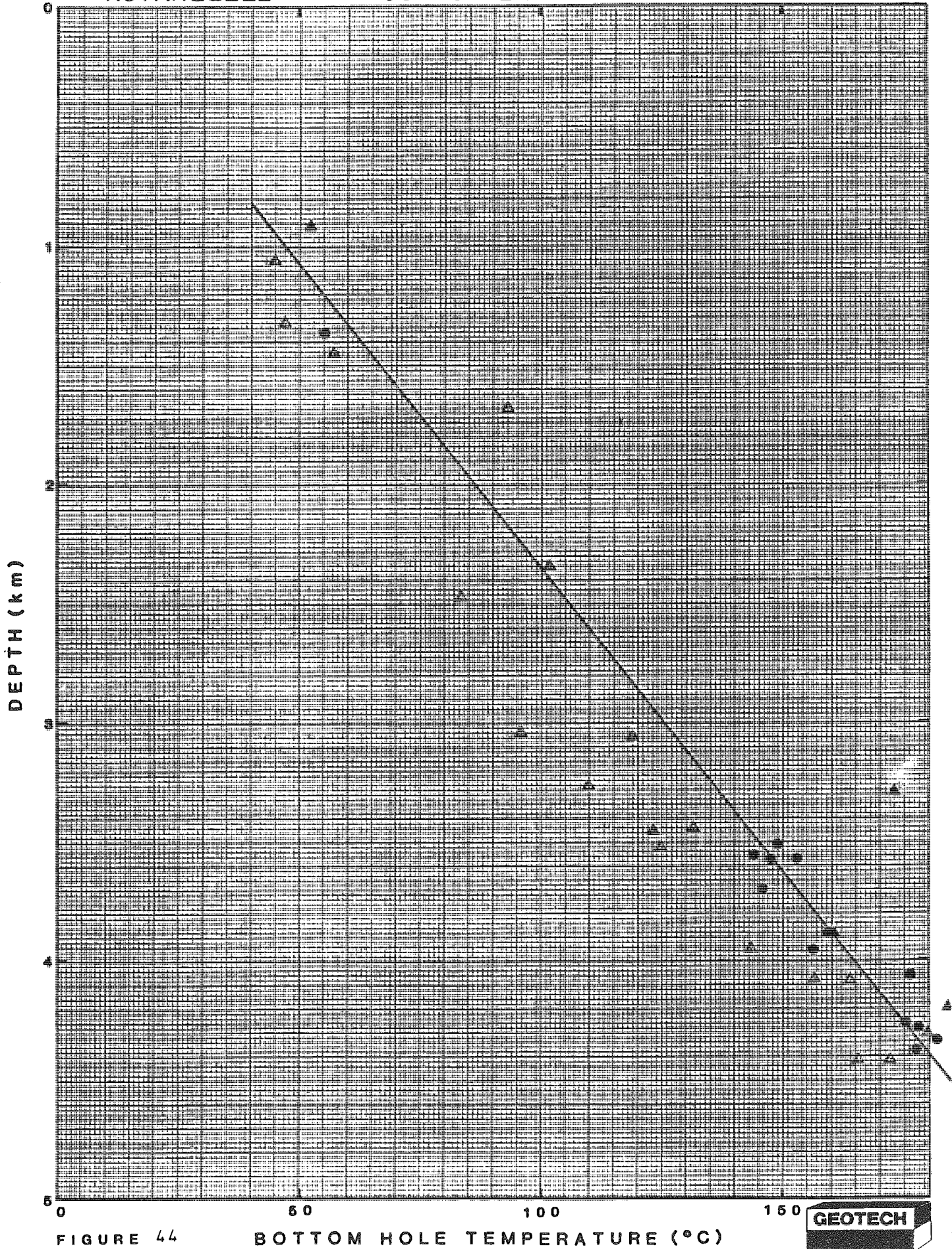


FIGURE 44

BOTTOM HOLE TEMPERATURE (°C)



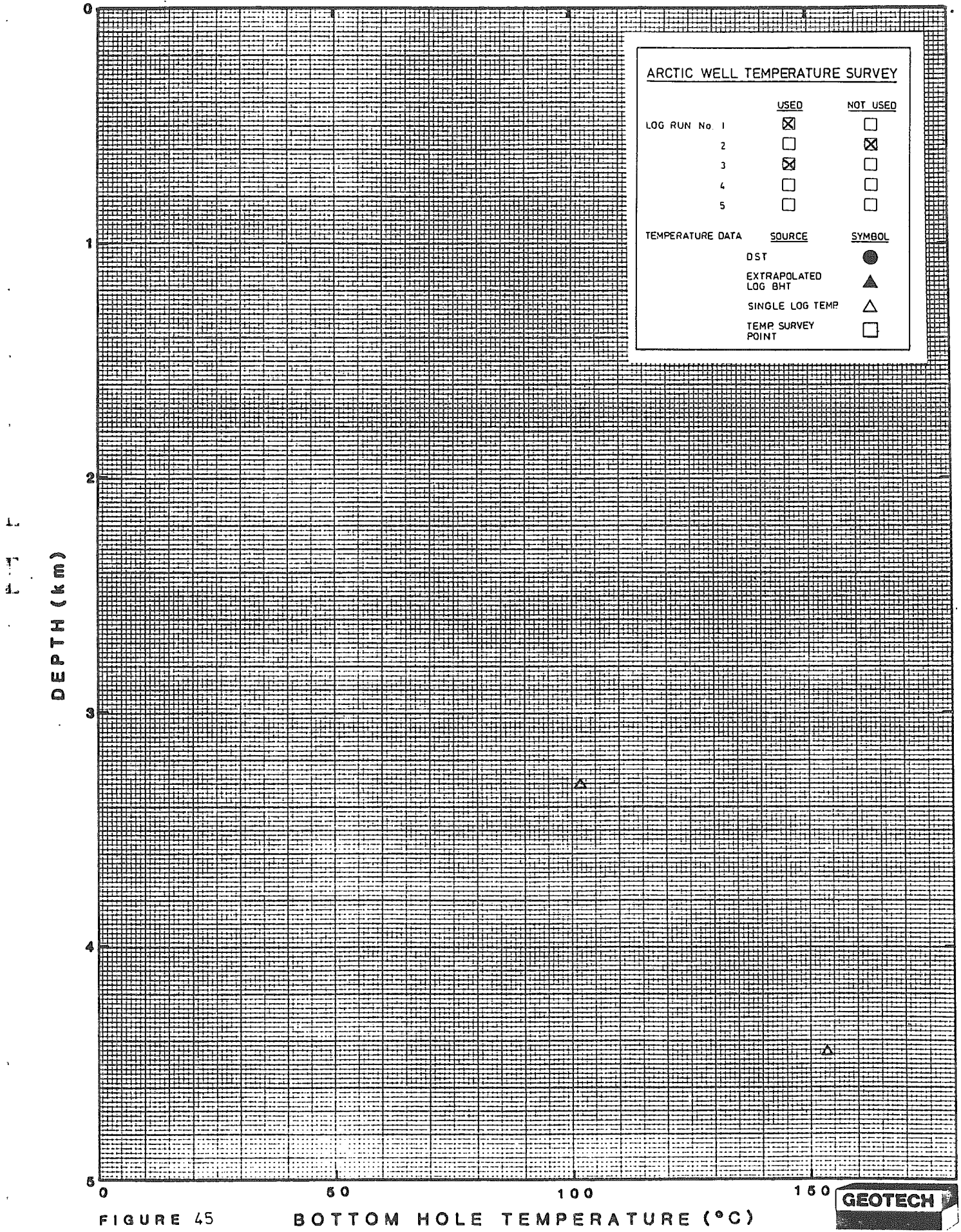


FIGURE 45

BOTTOM HOLE TEMPERATURE (°C)



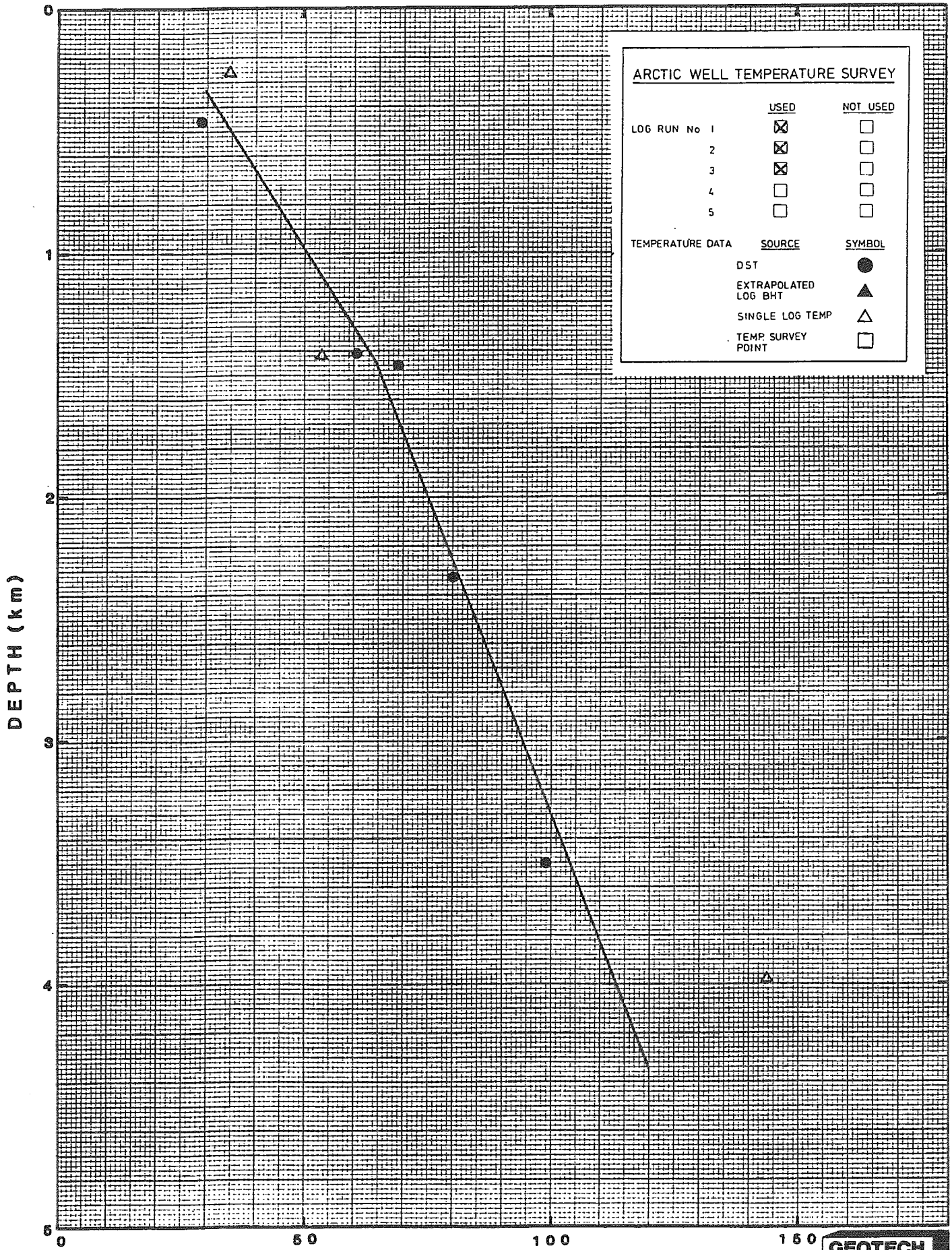


FIGURE 46

BOTTOM HOLE TEMPERATURE (°C)





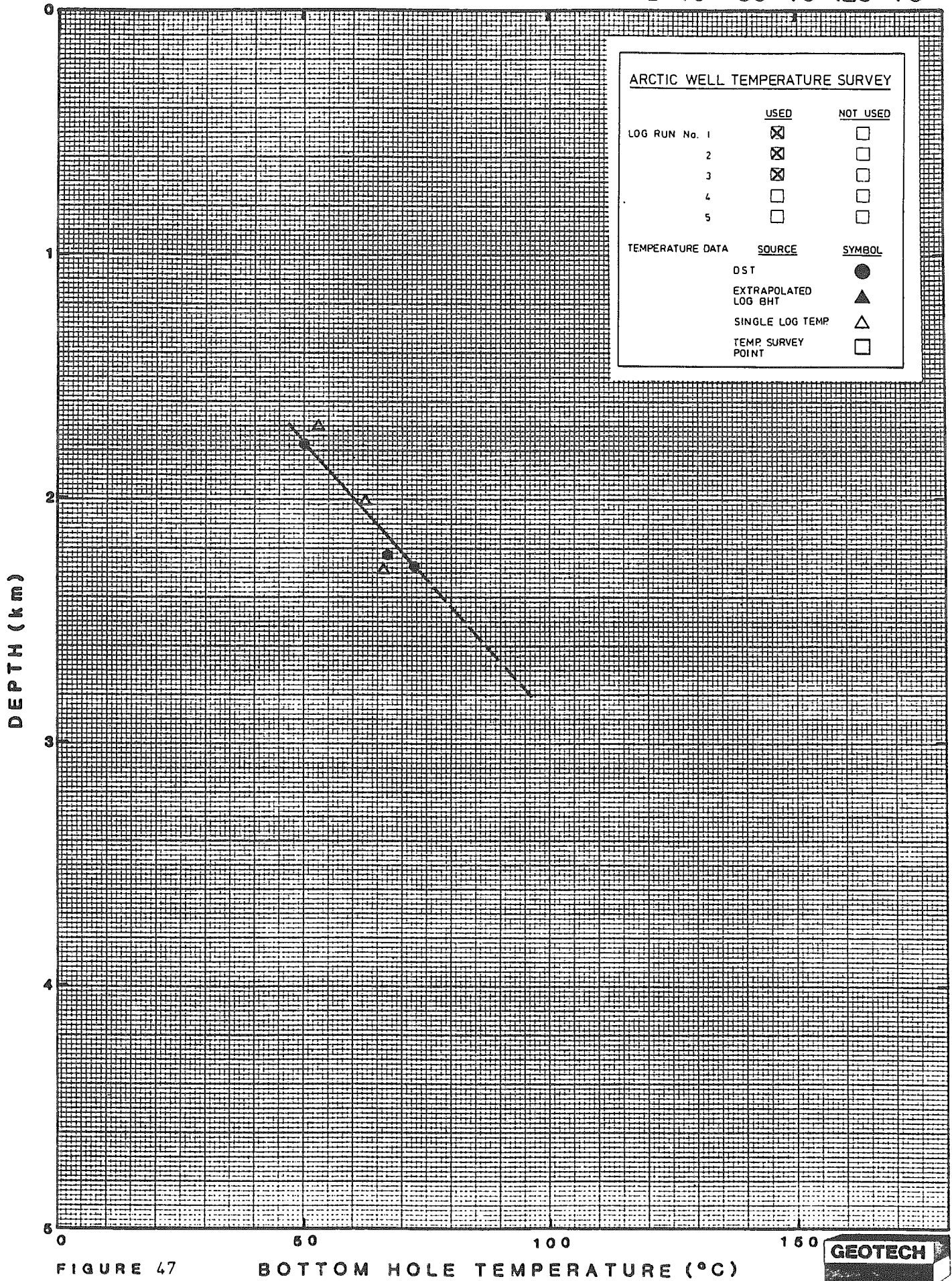


FIGURE 47

BOTTOM HOLE TEMPERATURE (°C)



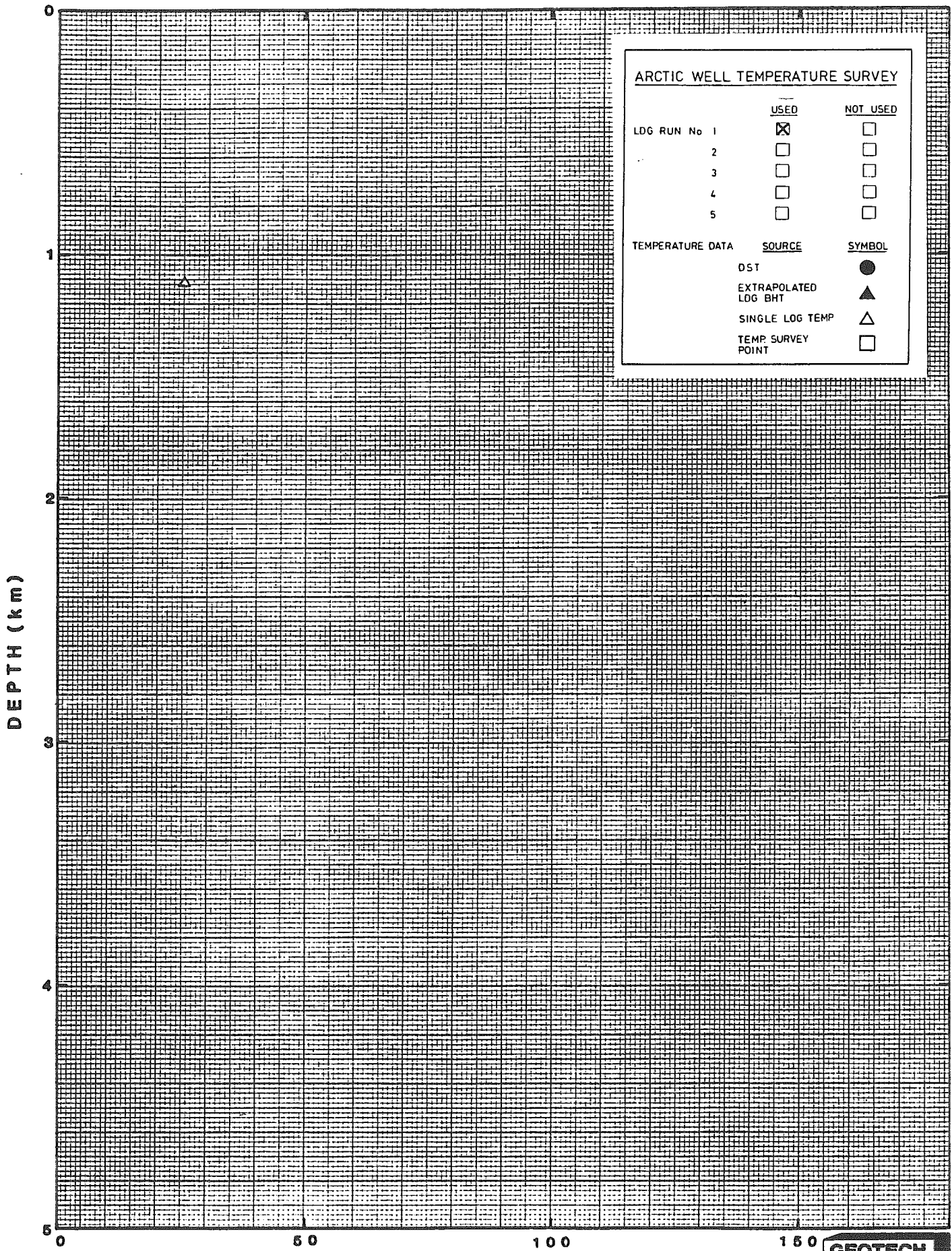
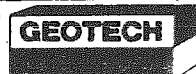
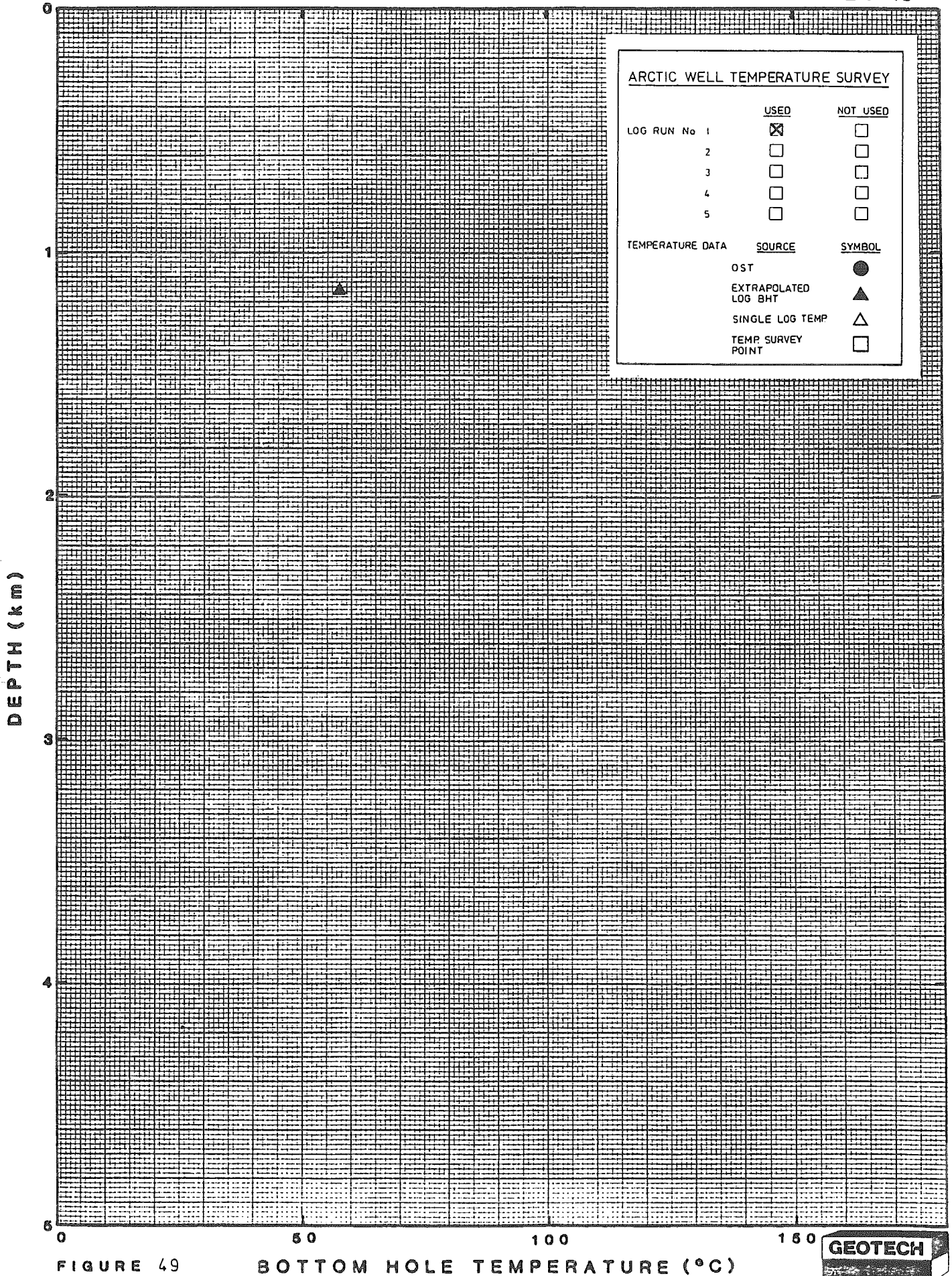


FIGURE 48

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 49

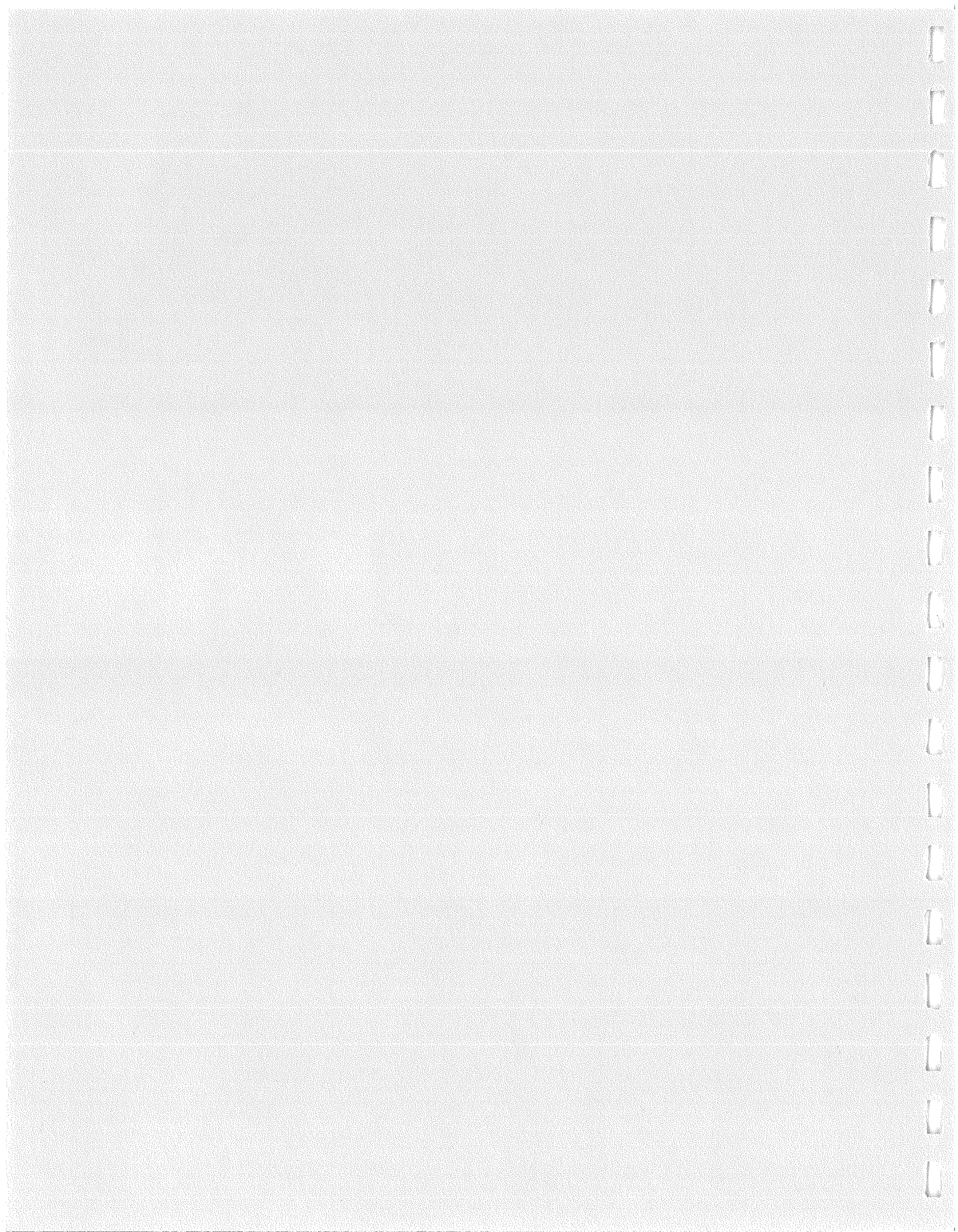
BOTTOM HOLE TEMPERATURE (°C)







60-20





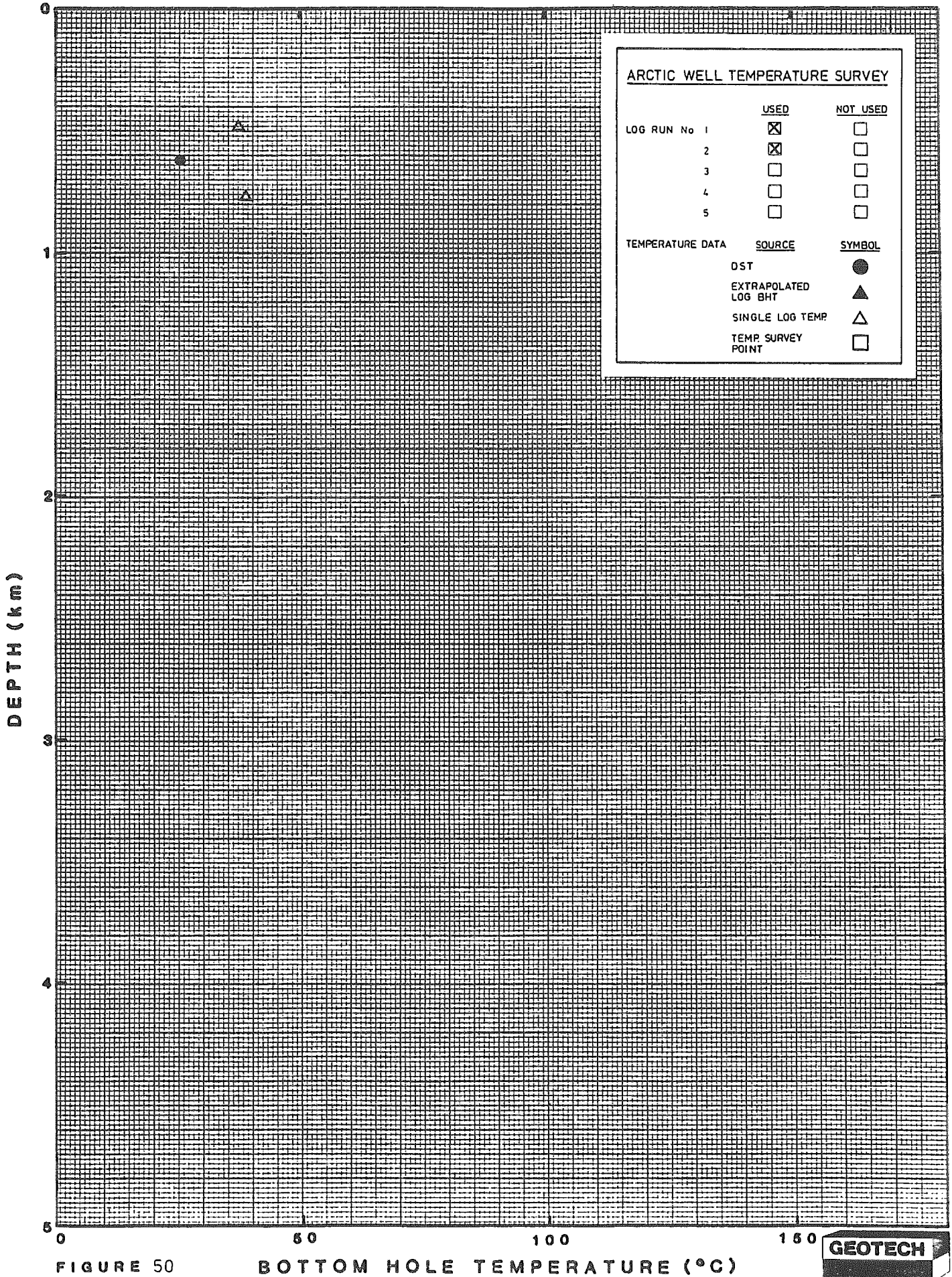


FIGURE 50

BOTTOM HOLE TEMPERATURE (°C)



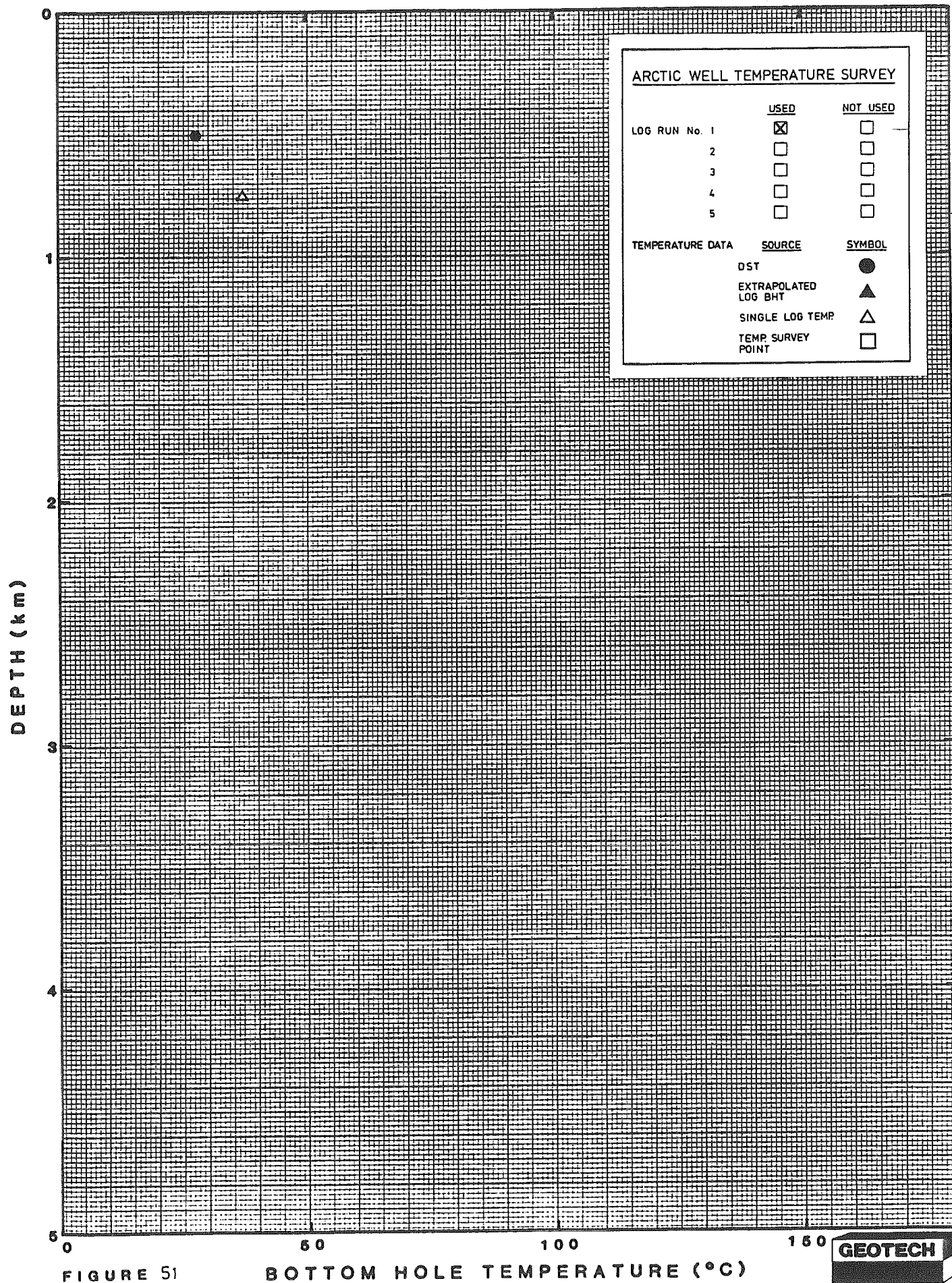
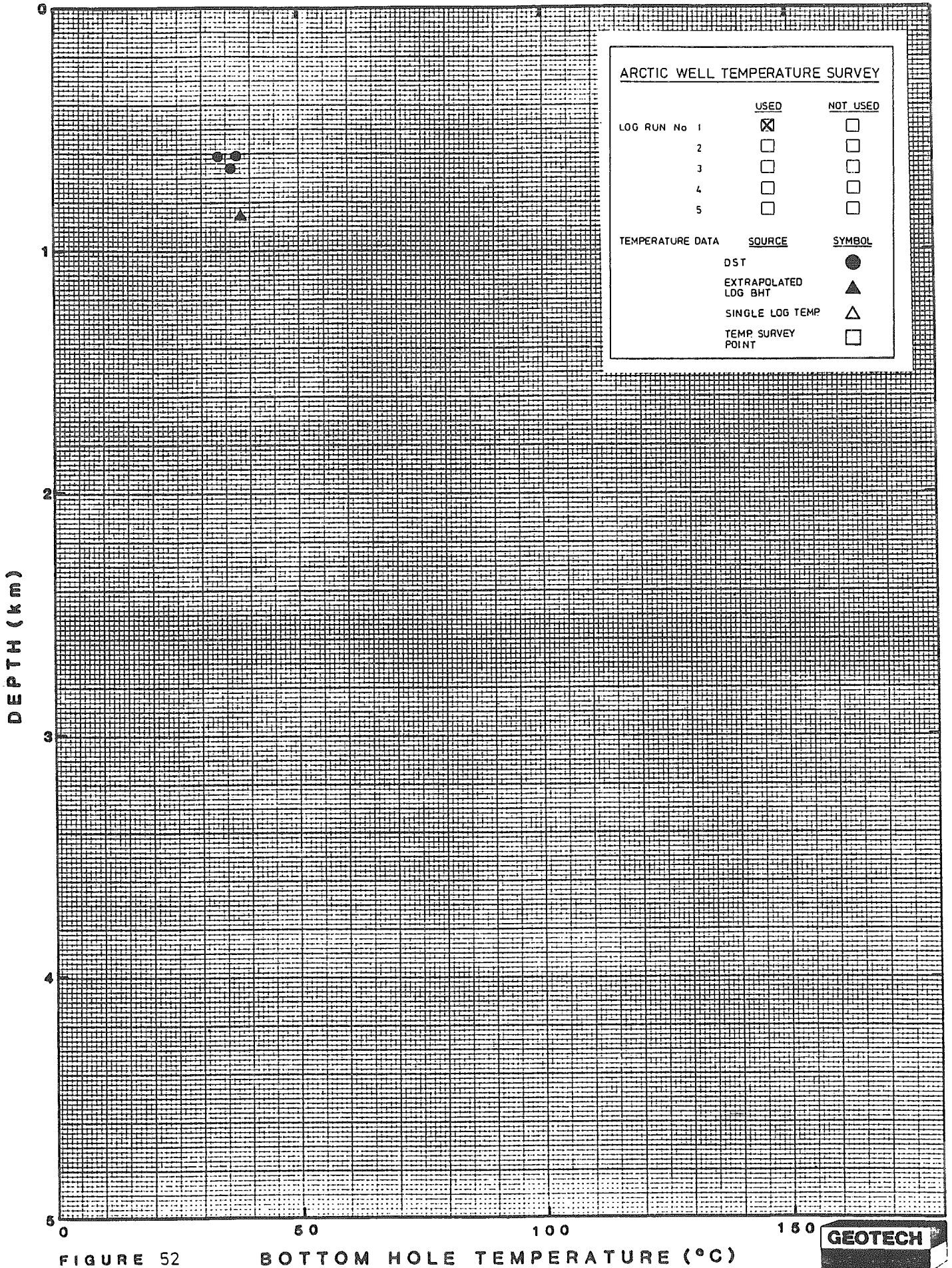


FIGURE 51

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 52

BOTTOM HOLE TEMPERATURE (°C)





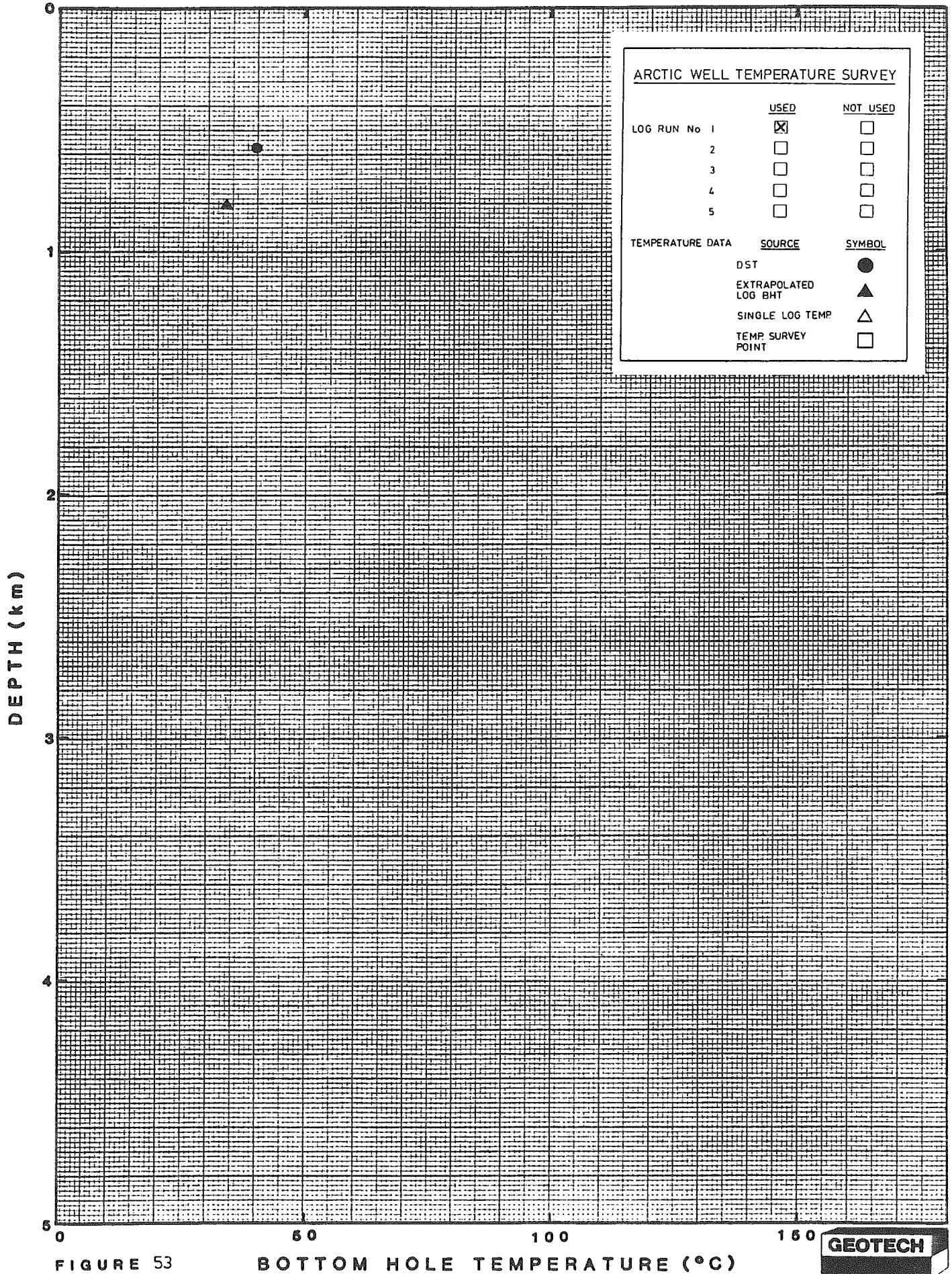


FIGURE 53

BOTTOM HOLE TEMPERATURE (°C)



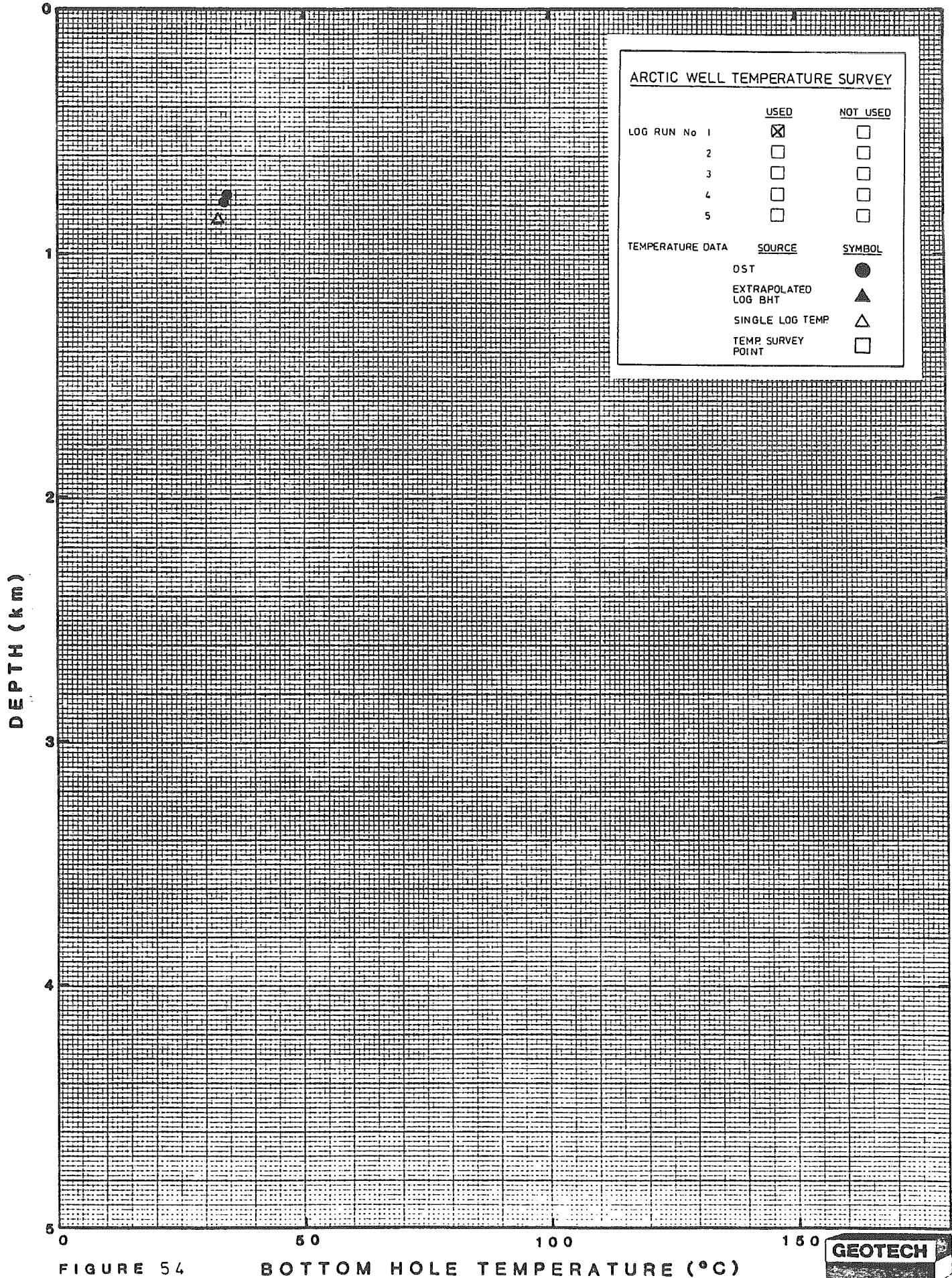


FIGURE 54

BOTTOM HOLE TEMPERATURE (°C)



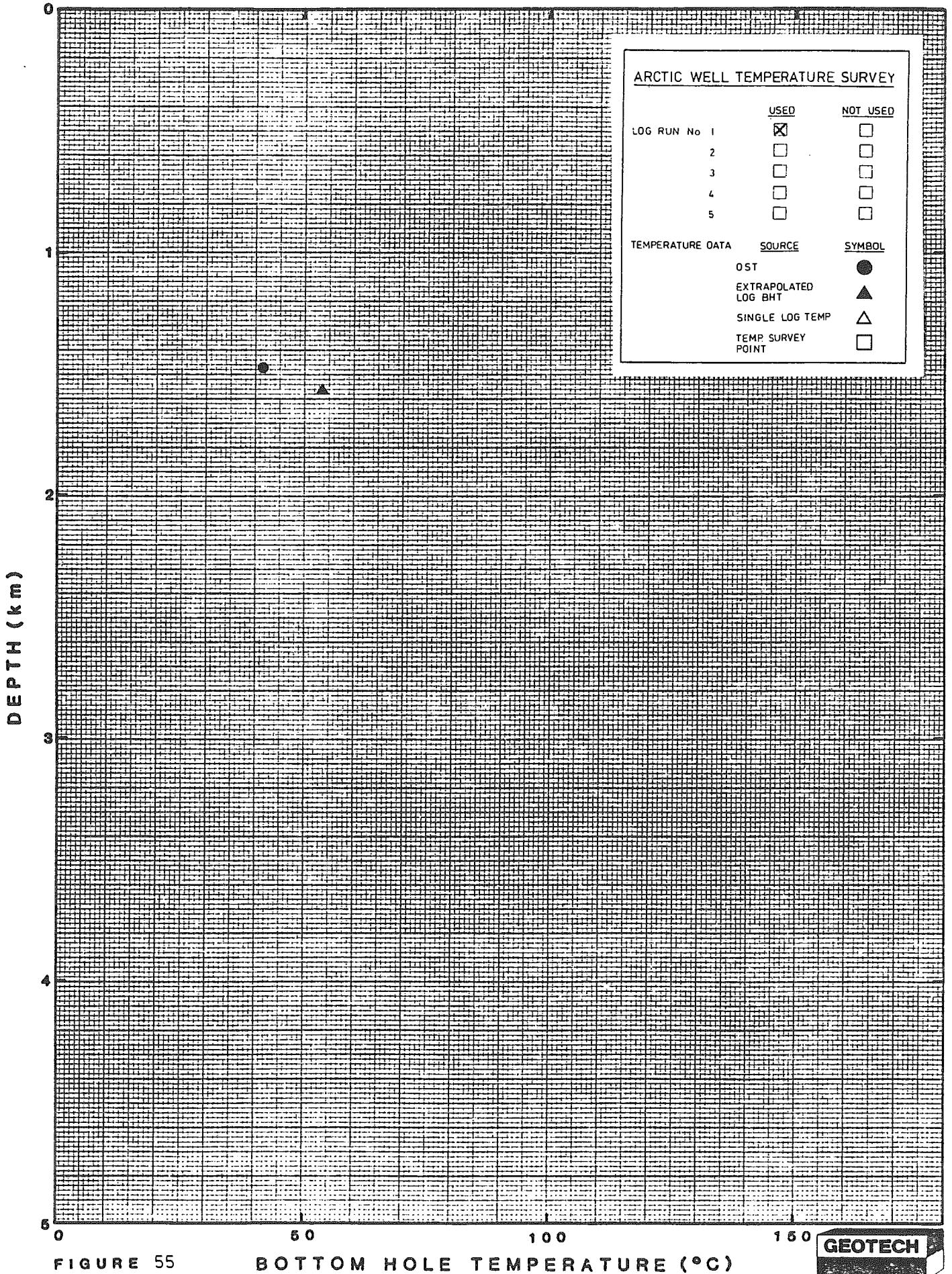
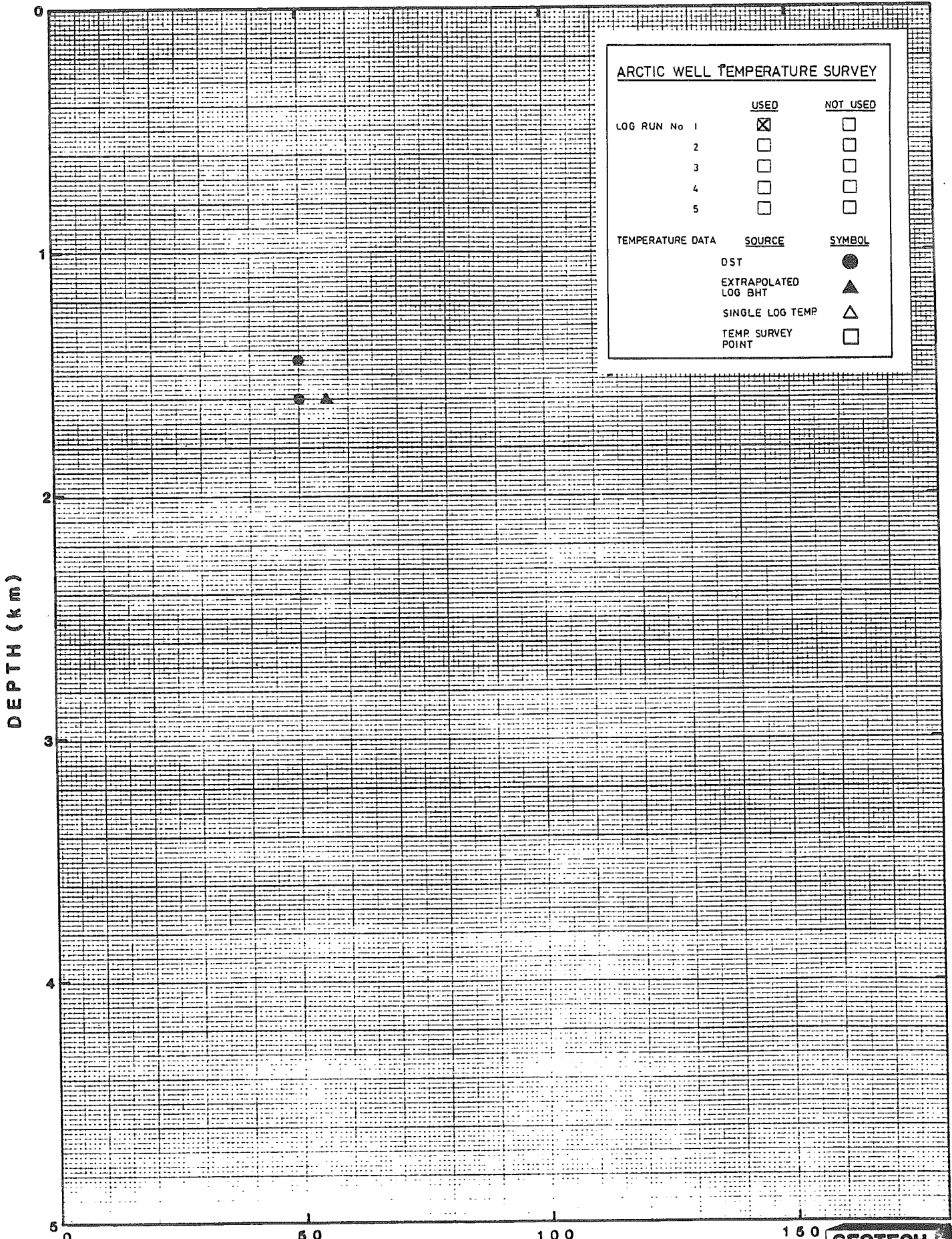


FIGURE 55

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 56

BOTTOM HOLE TEMPERATURE (°C)



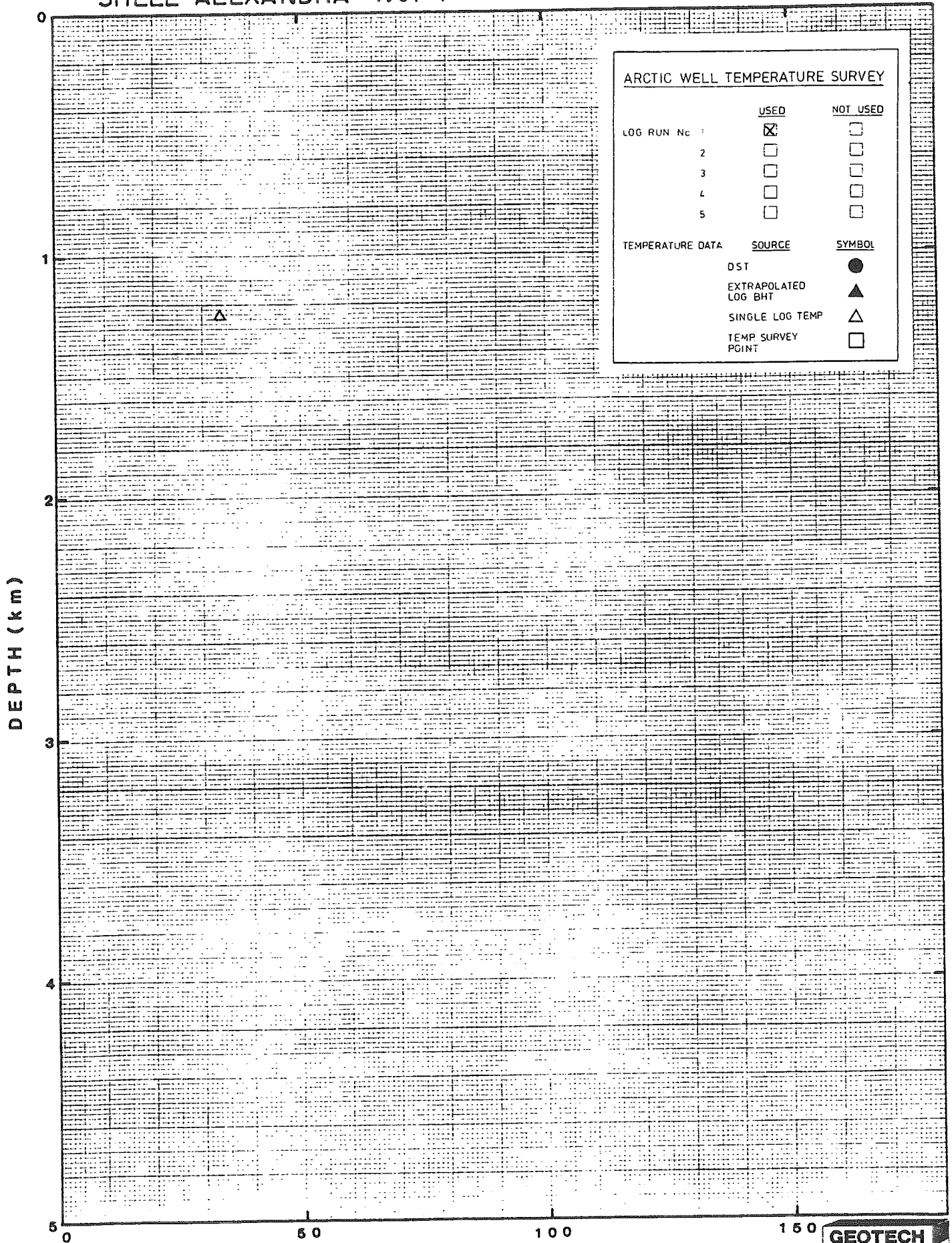


FIGURE 57

BOTTOM HOLE TEMPERATURE (°C)

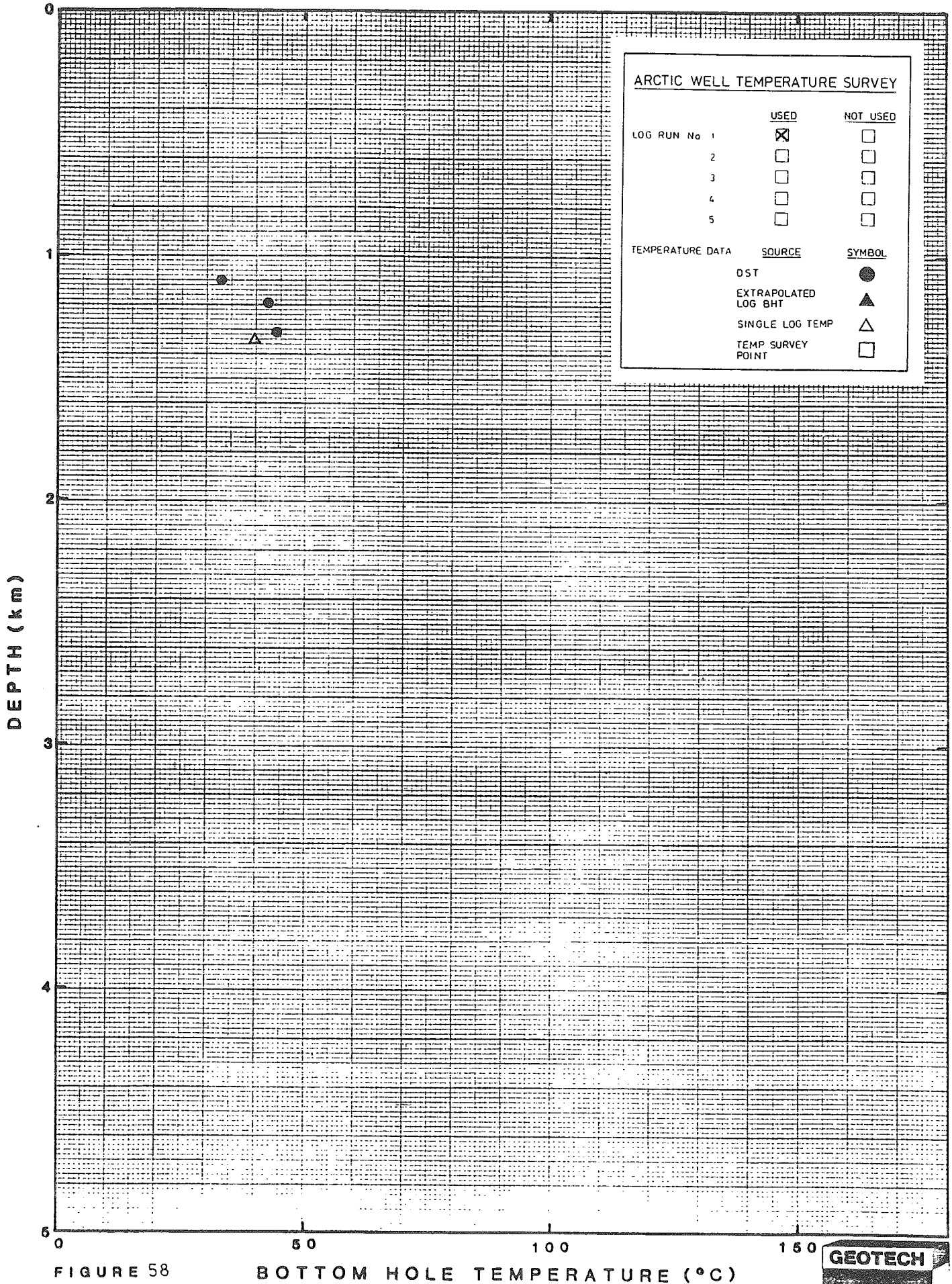
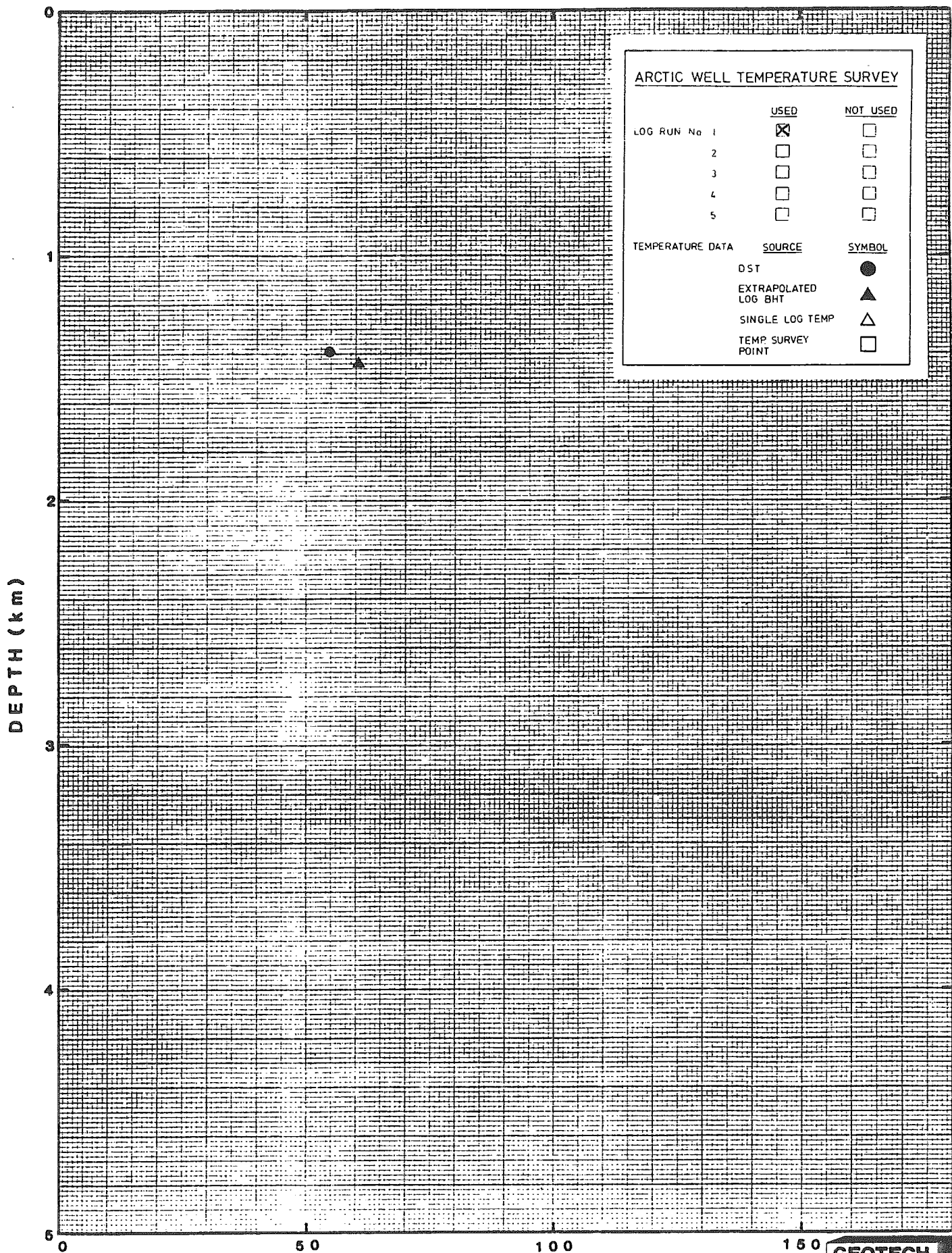


FIGURE 58

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 59

BOTTOM HOLE TEMPERATURE (°C)



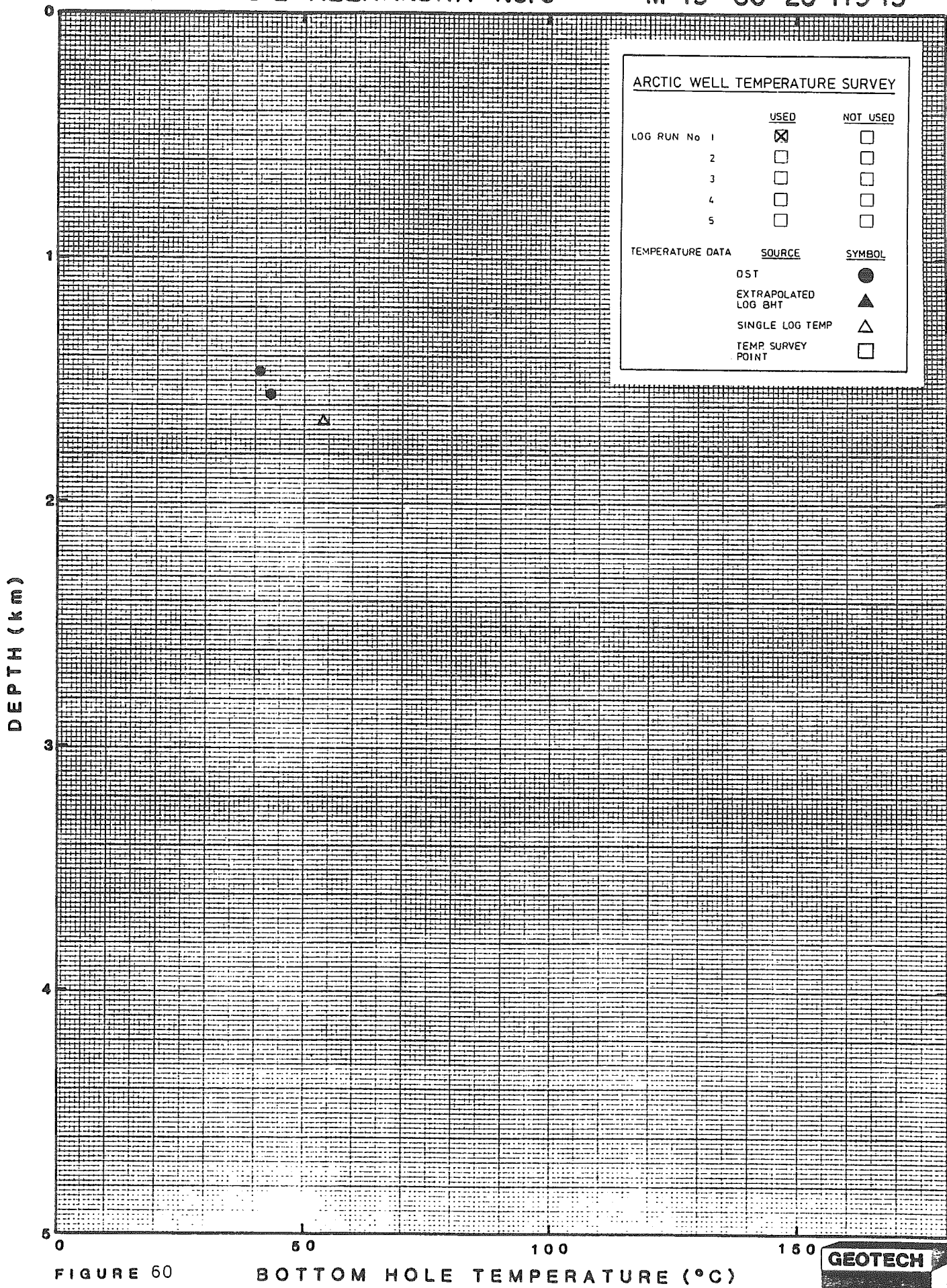


FIGURE 60

BOTTOM HOLE TEMPERATURE (°C)



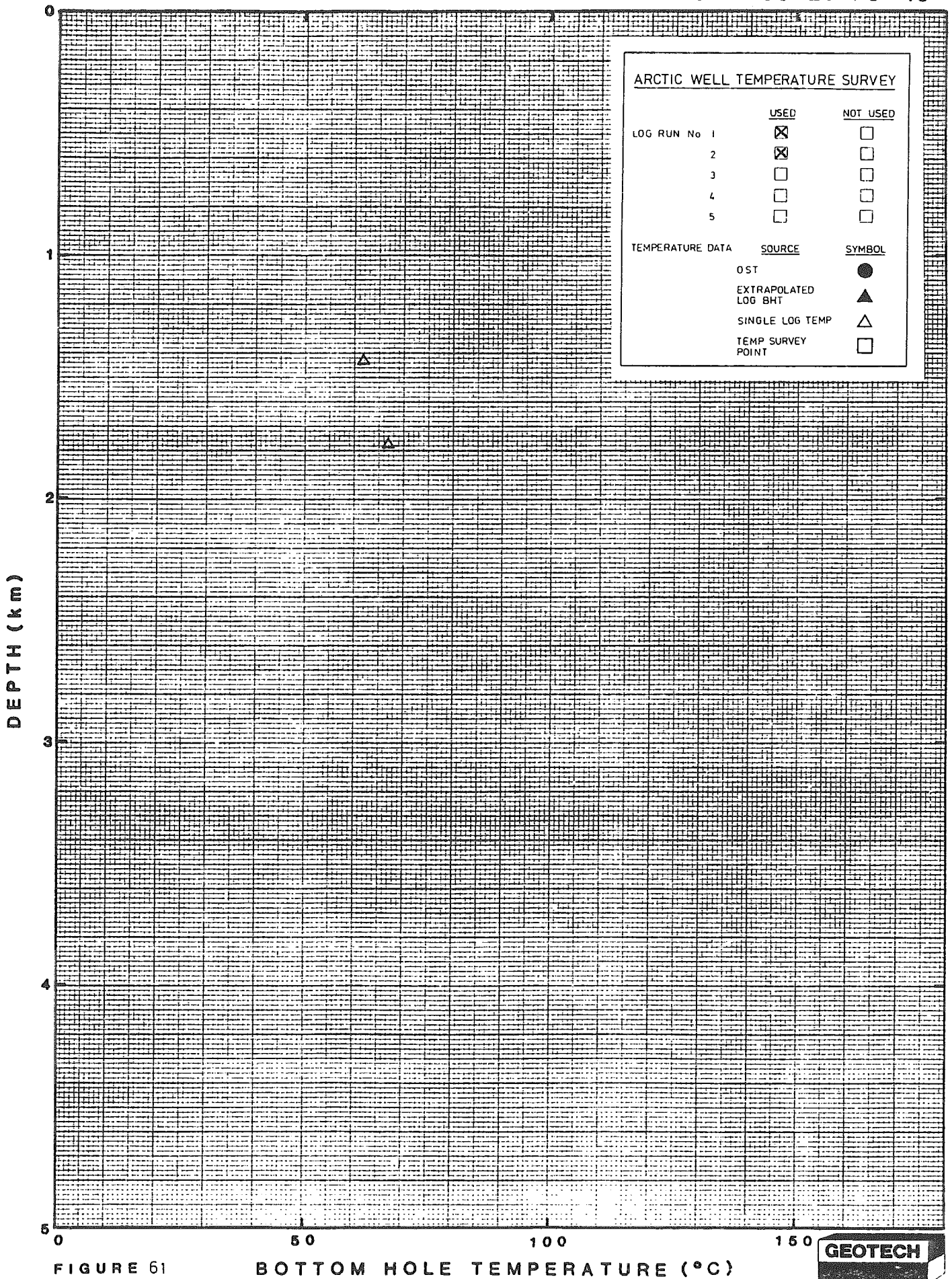


FIGURE 61

BOTTOM HOLE TEMPERATURE (°C)





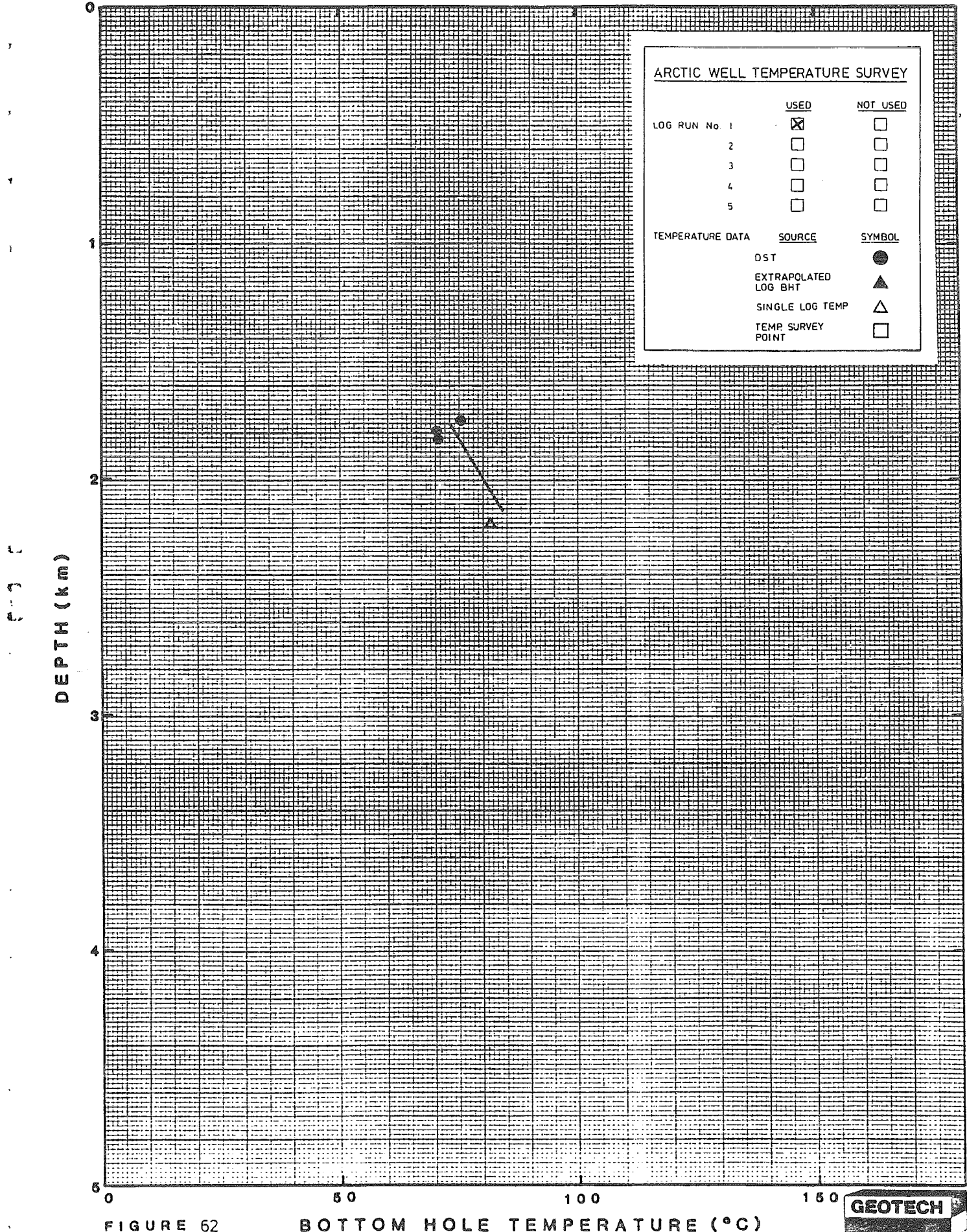


FIGURE 62

BOTTOM HOLE TEMPERATURE (°C)



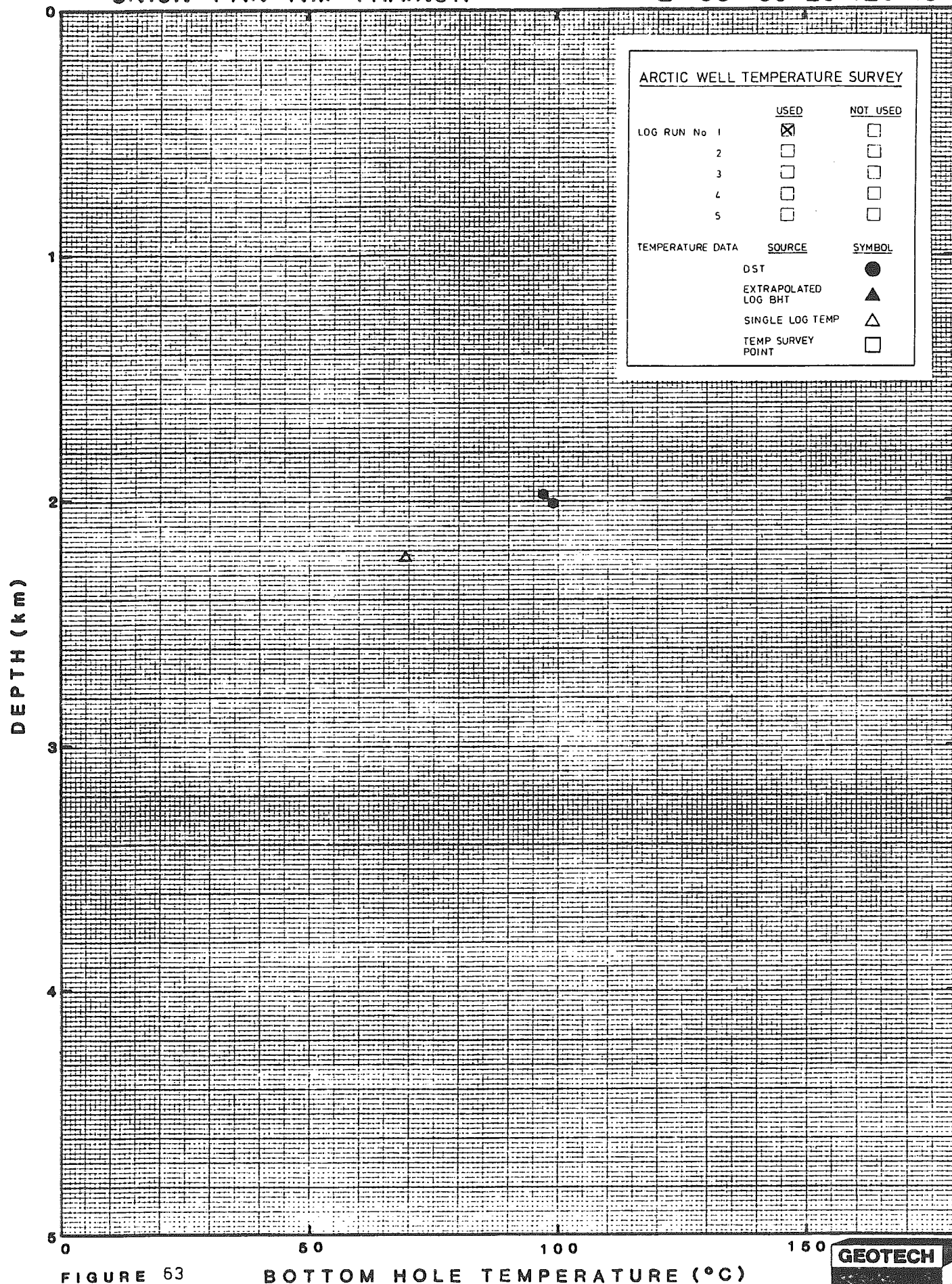
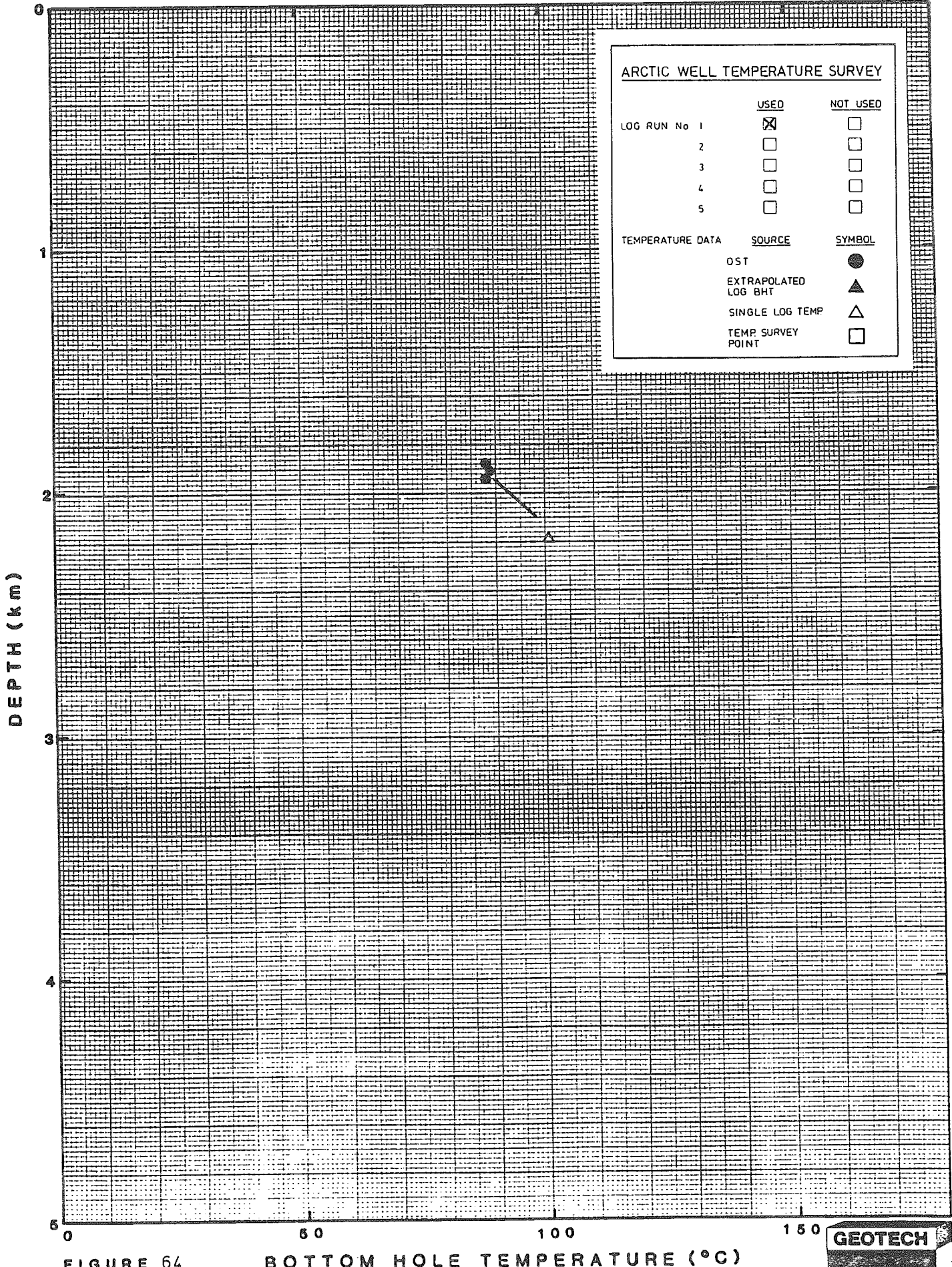


FIGURE 63

BOTTOM HOLE TEMPERATURE (°C)





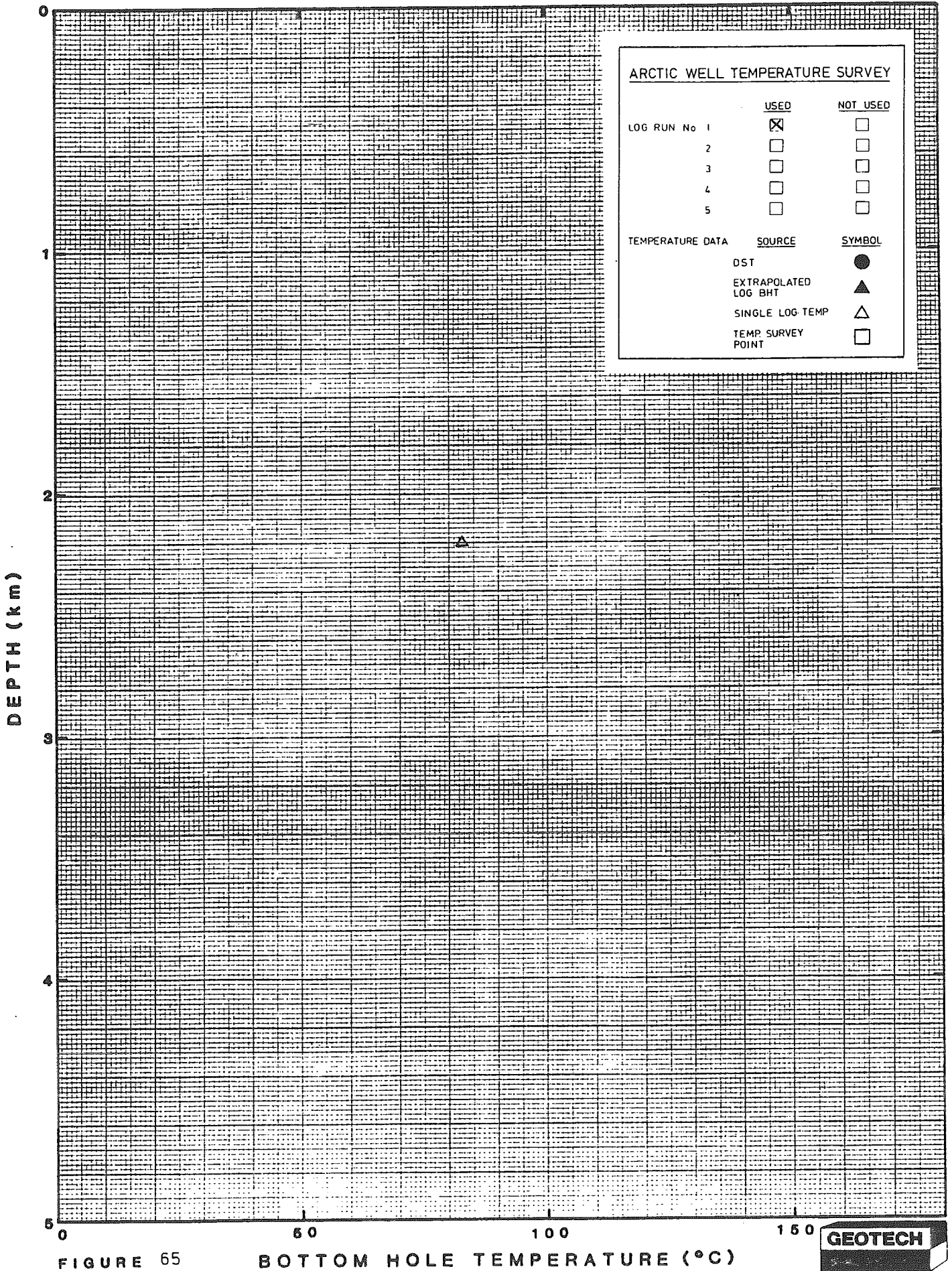


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 64

BOTTOM HOLE TEMPERATURE (°C)





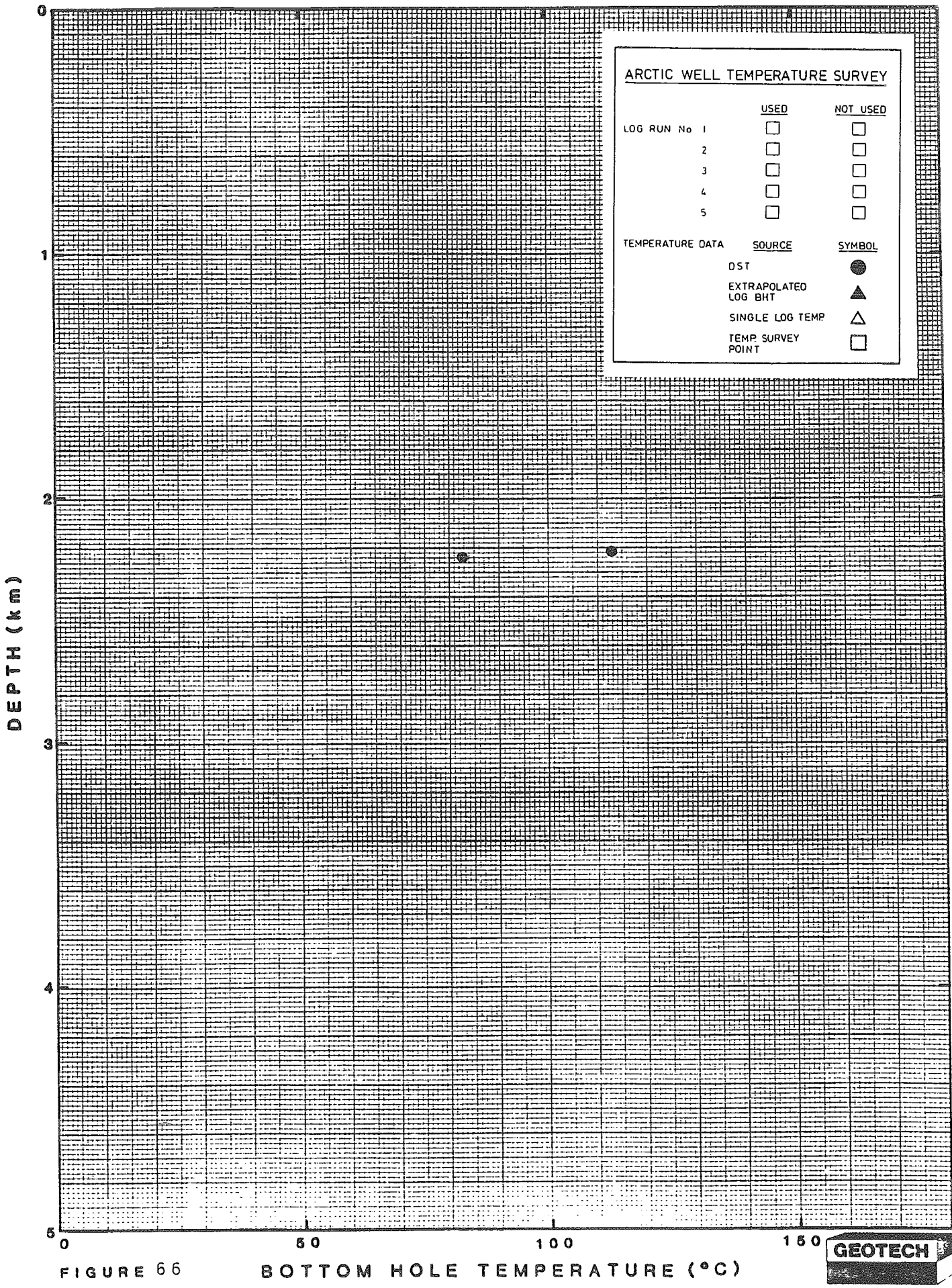


FIGURE 66

BOTTOM HOLE TEMPERATURE (°C)





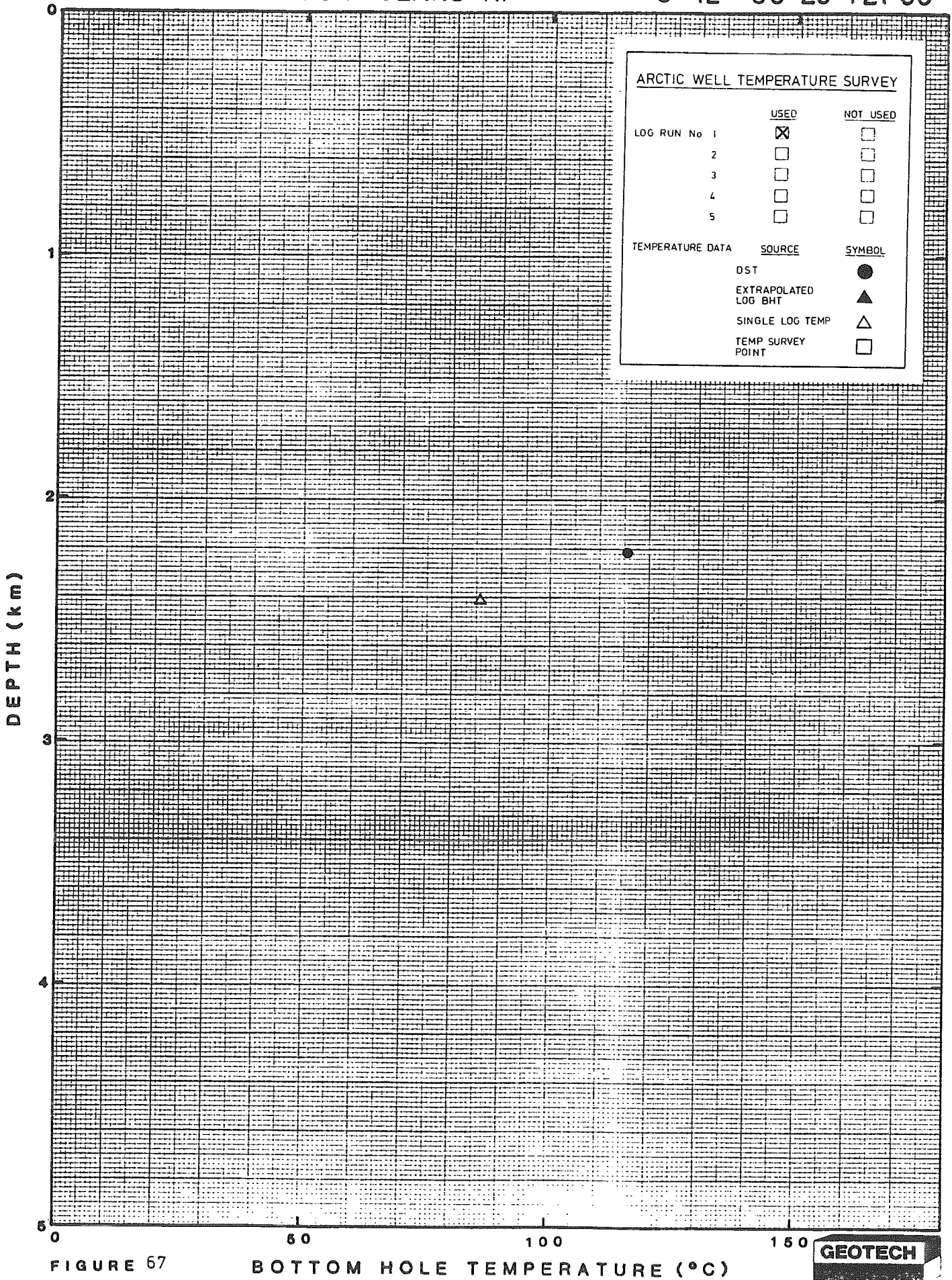


FIGURE 67



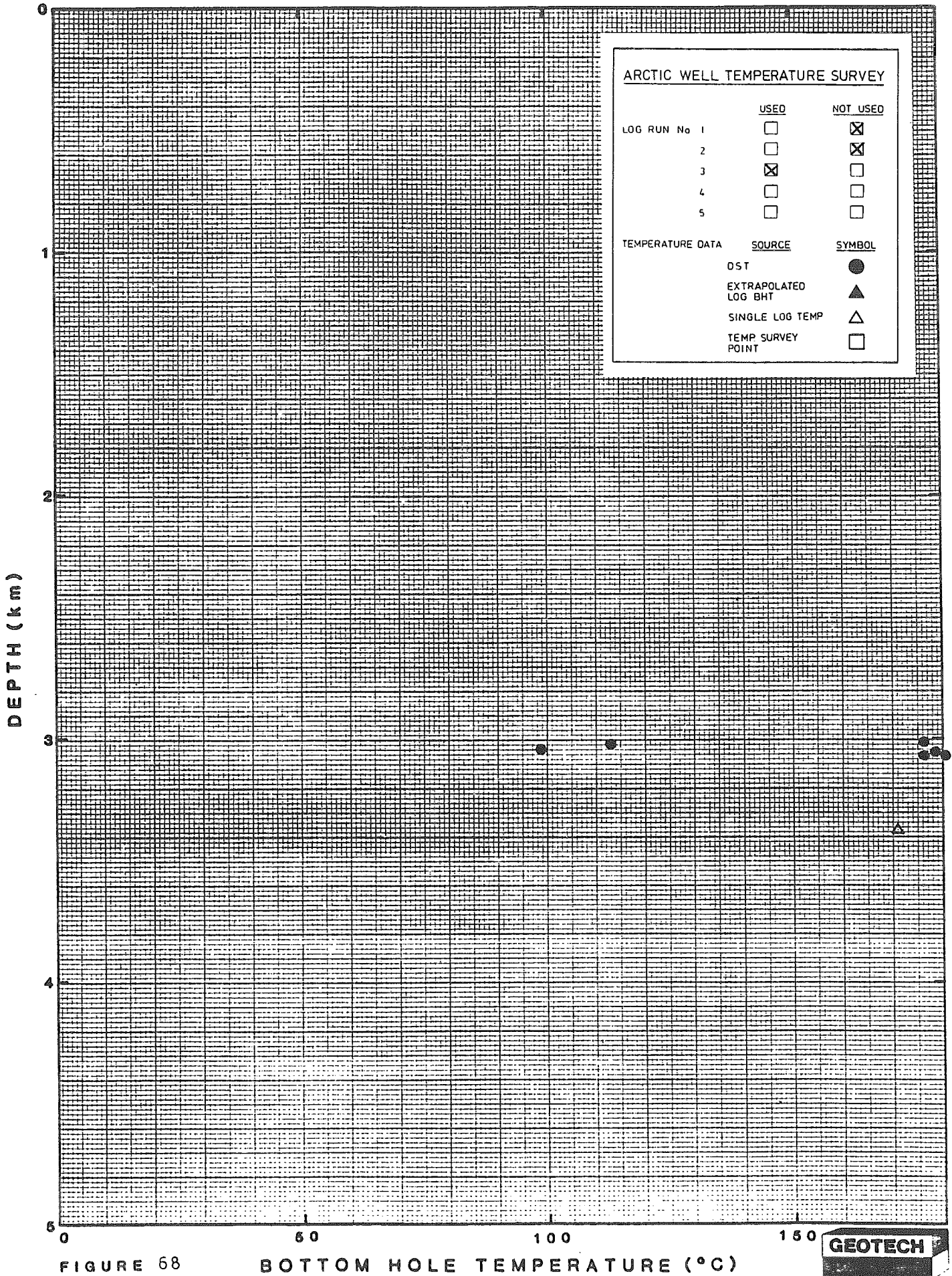
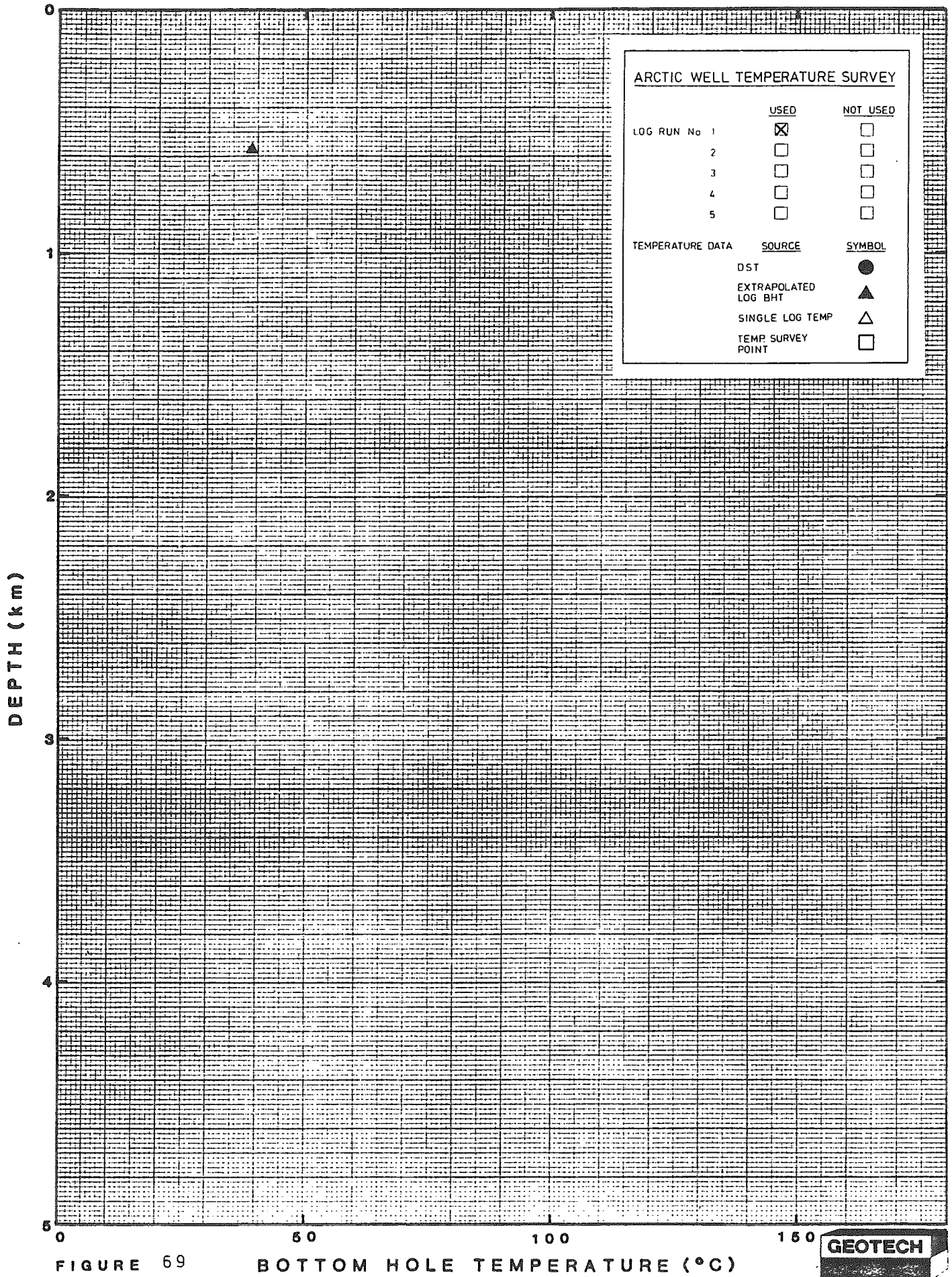


FIGURE 68

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 69

BOTTOM HOLE TEMPERATURE (°C)



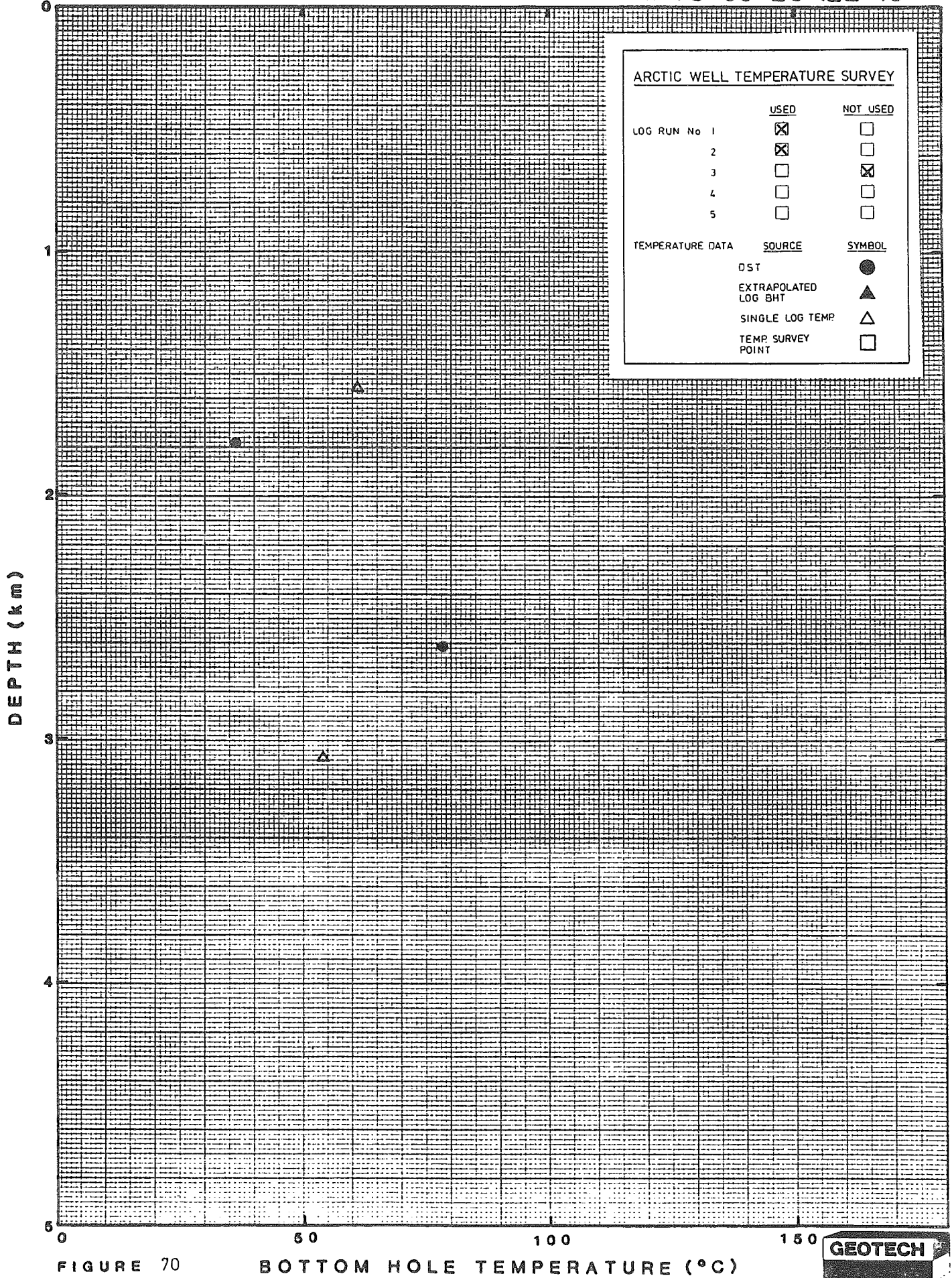
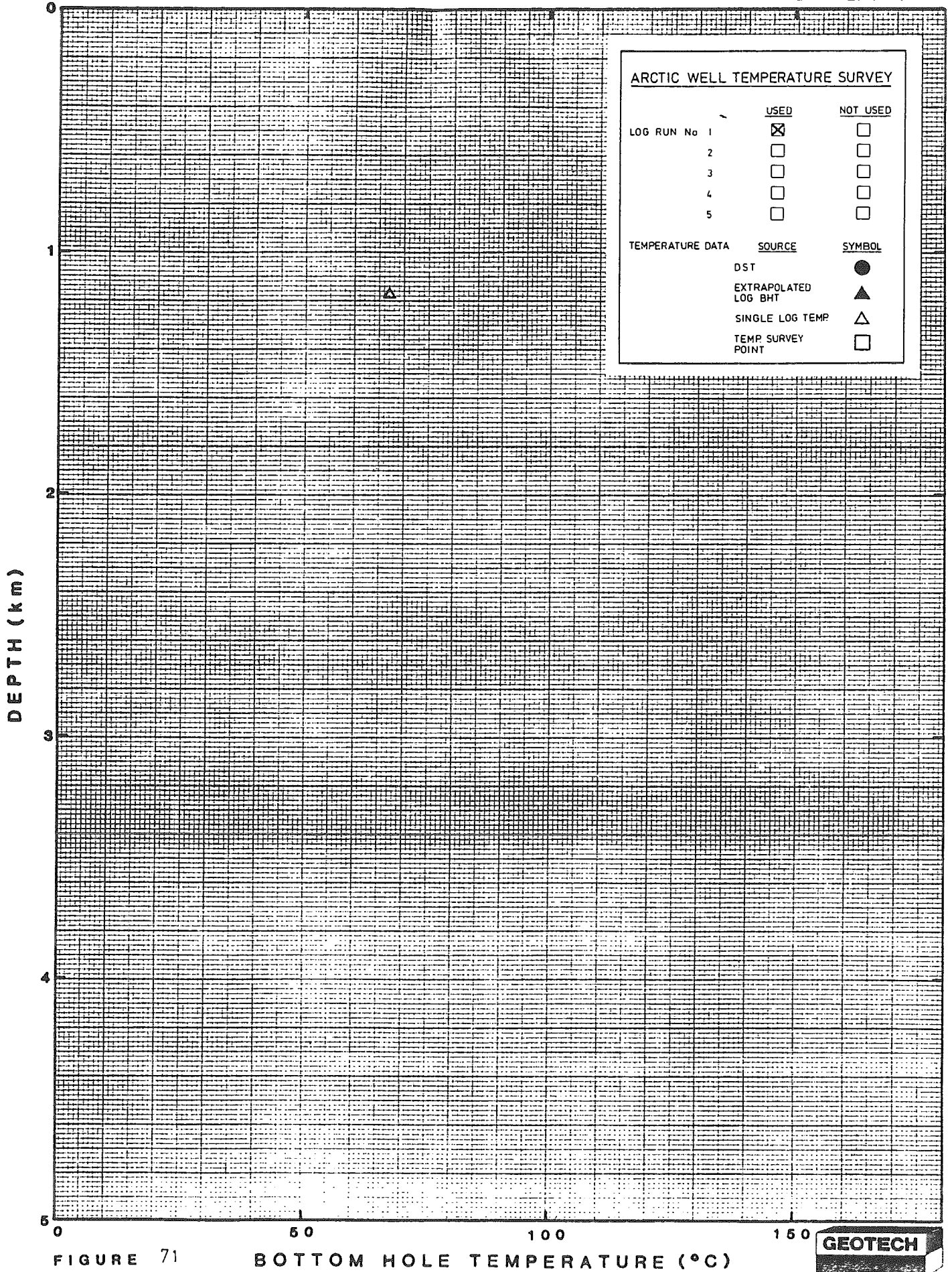


FIGURE 70

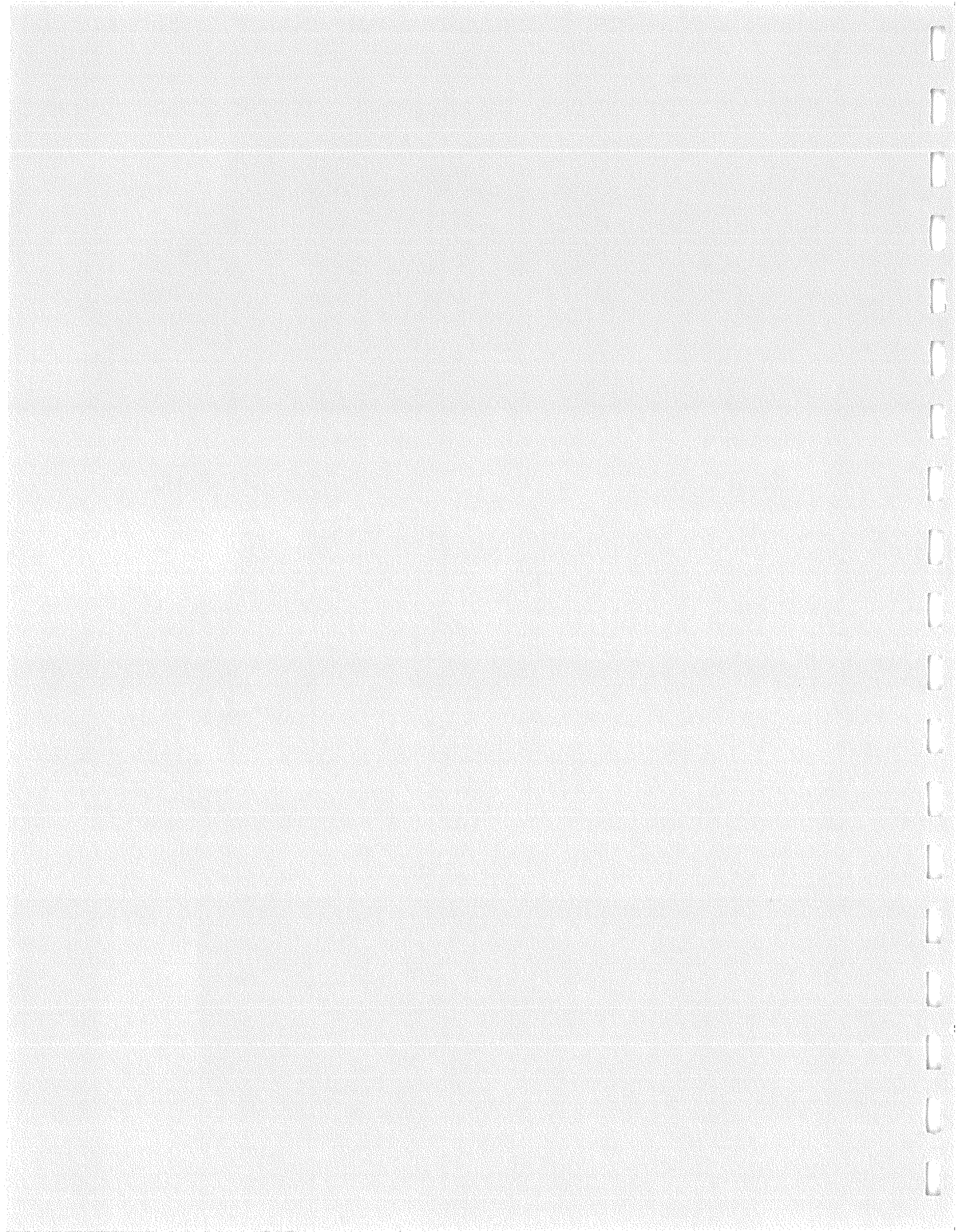
BOTTOM HOLE TEMPERATURE (°C)













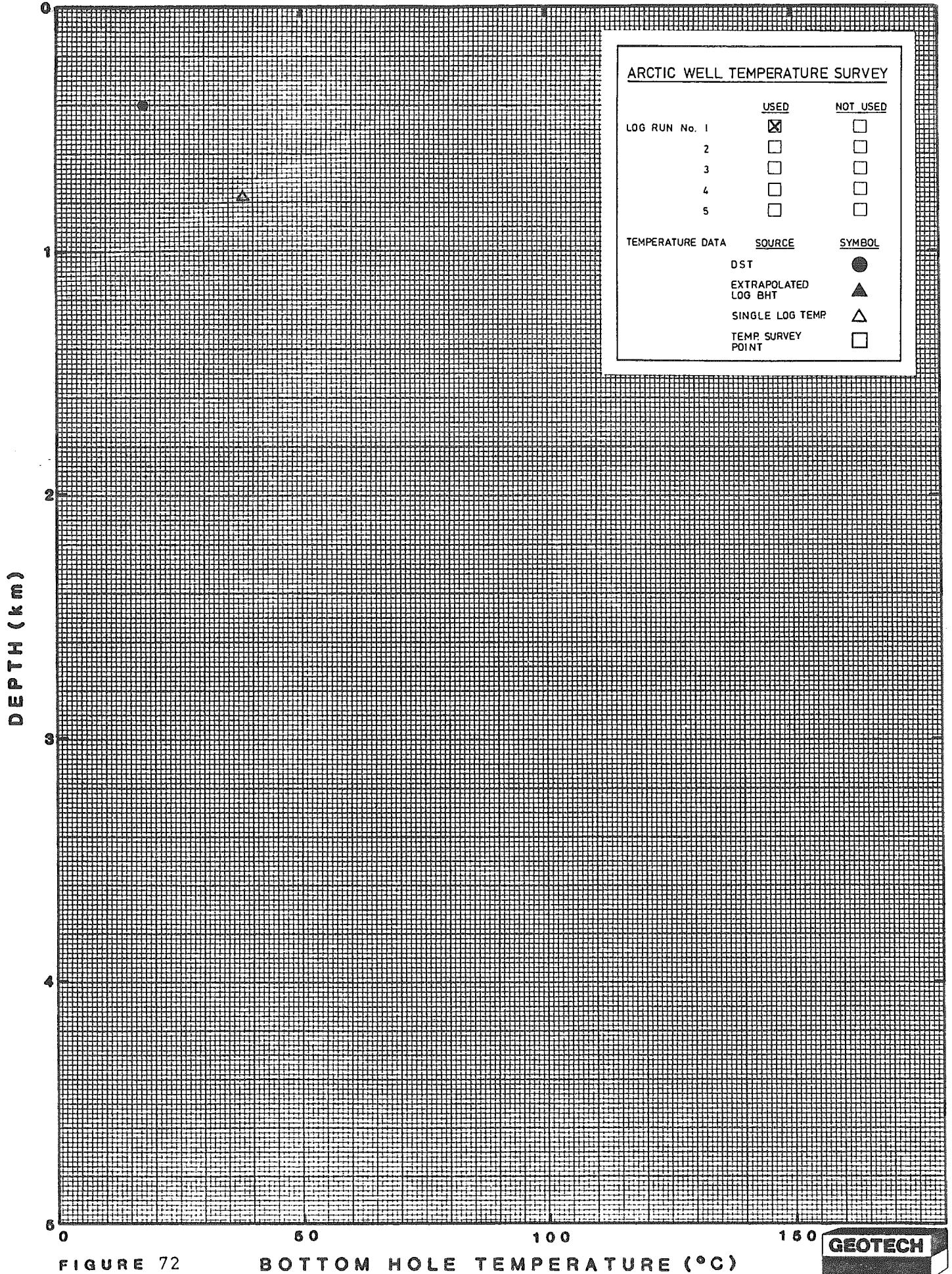


FIGURE 72

BOTTOM HOLE TEMPERATURE (°C)



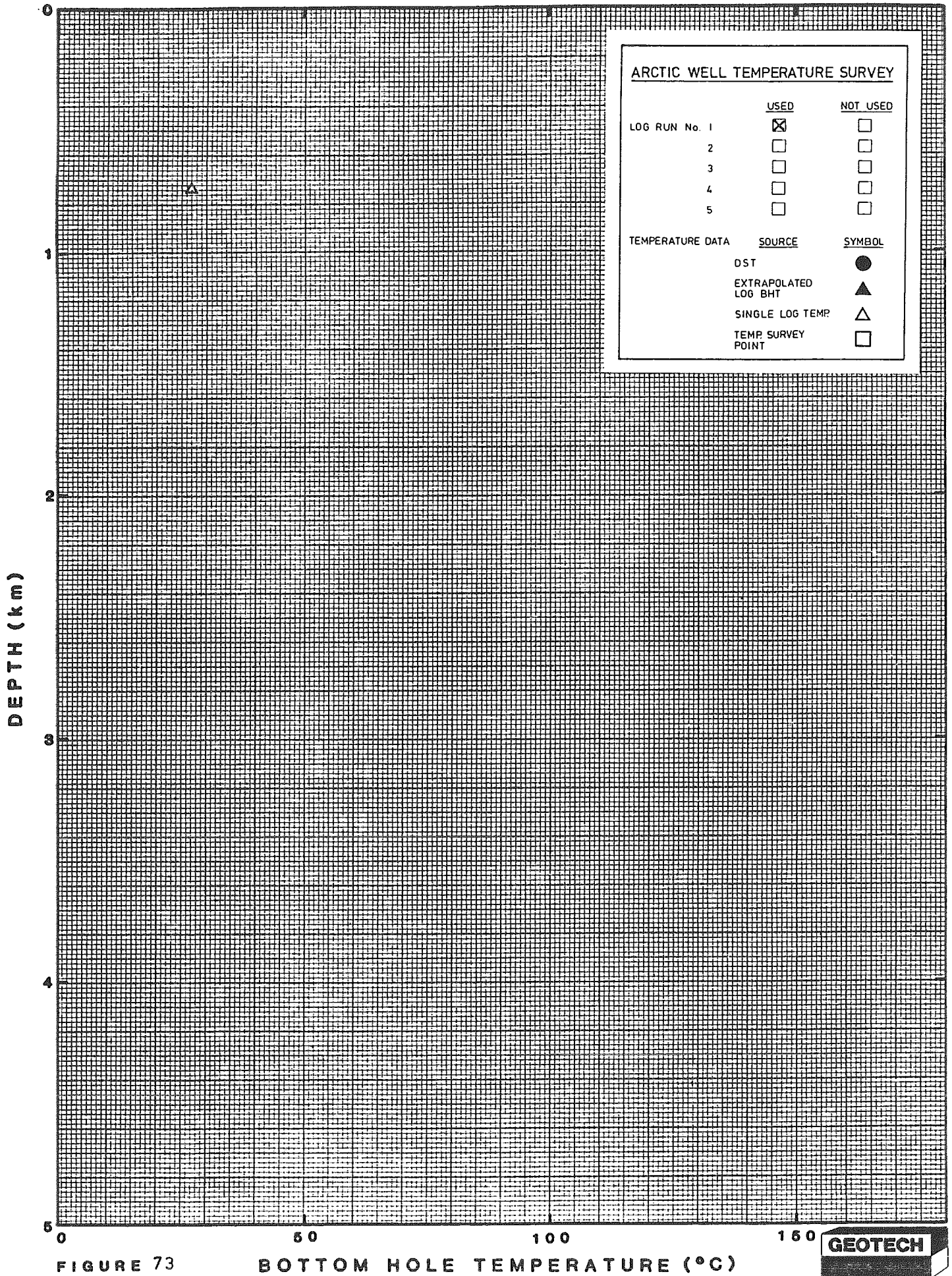


FIGURE 73

BOTTOM HOLE TEMPERATURE (°C)



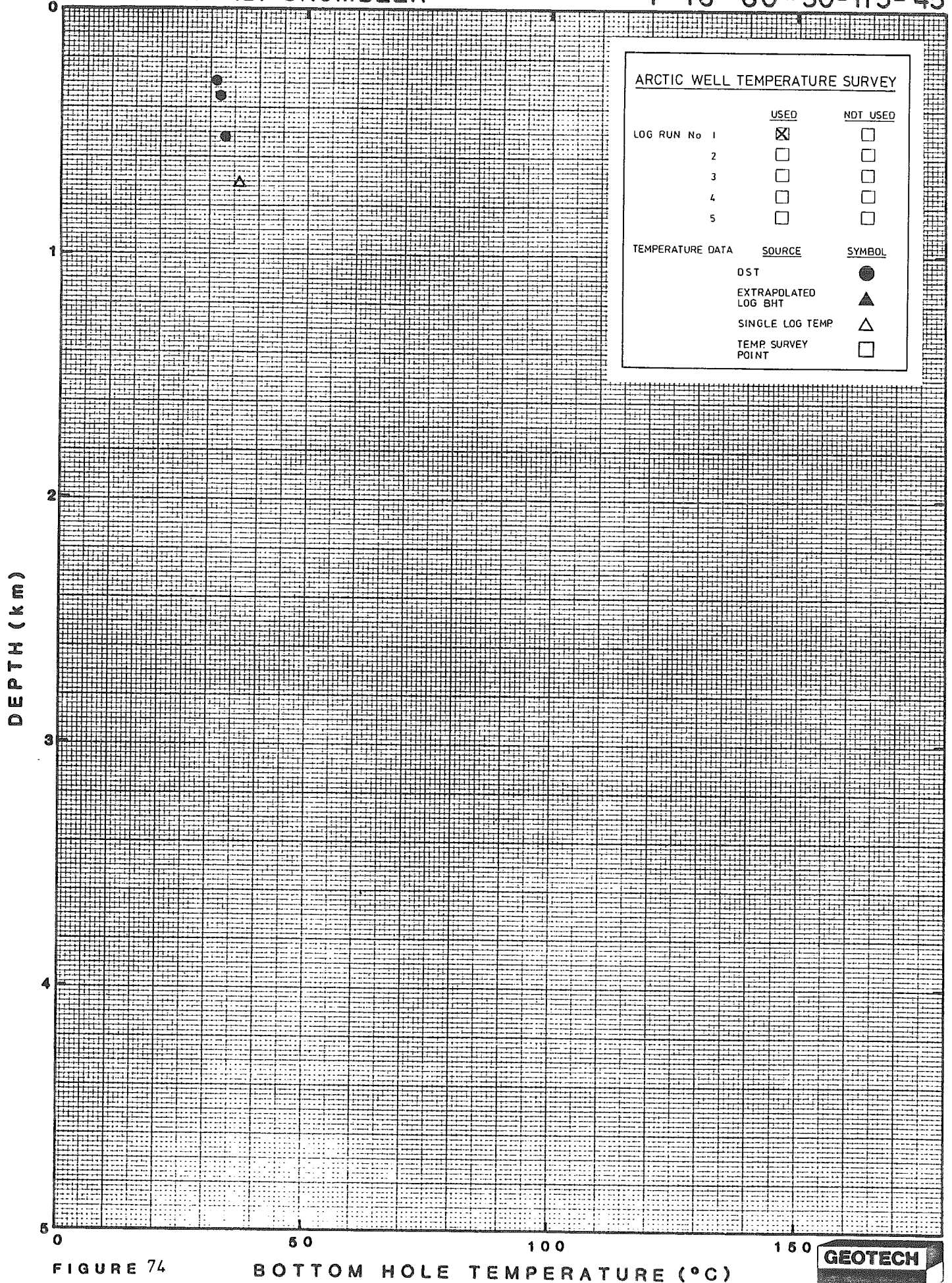


FIGURE 74

BOTTOM HOLE TEMPERATURE (°C)





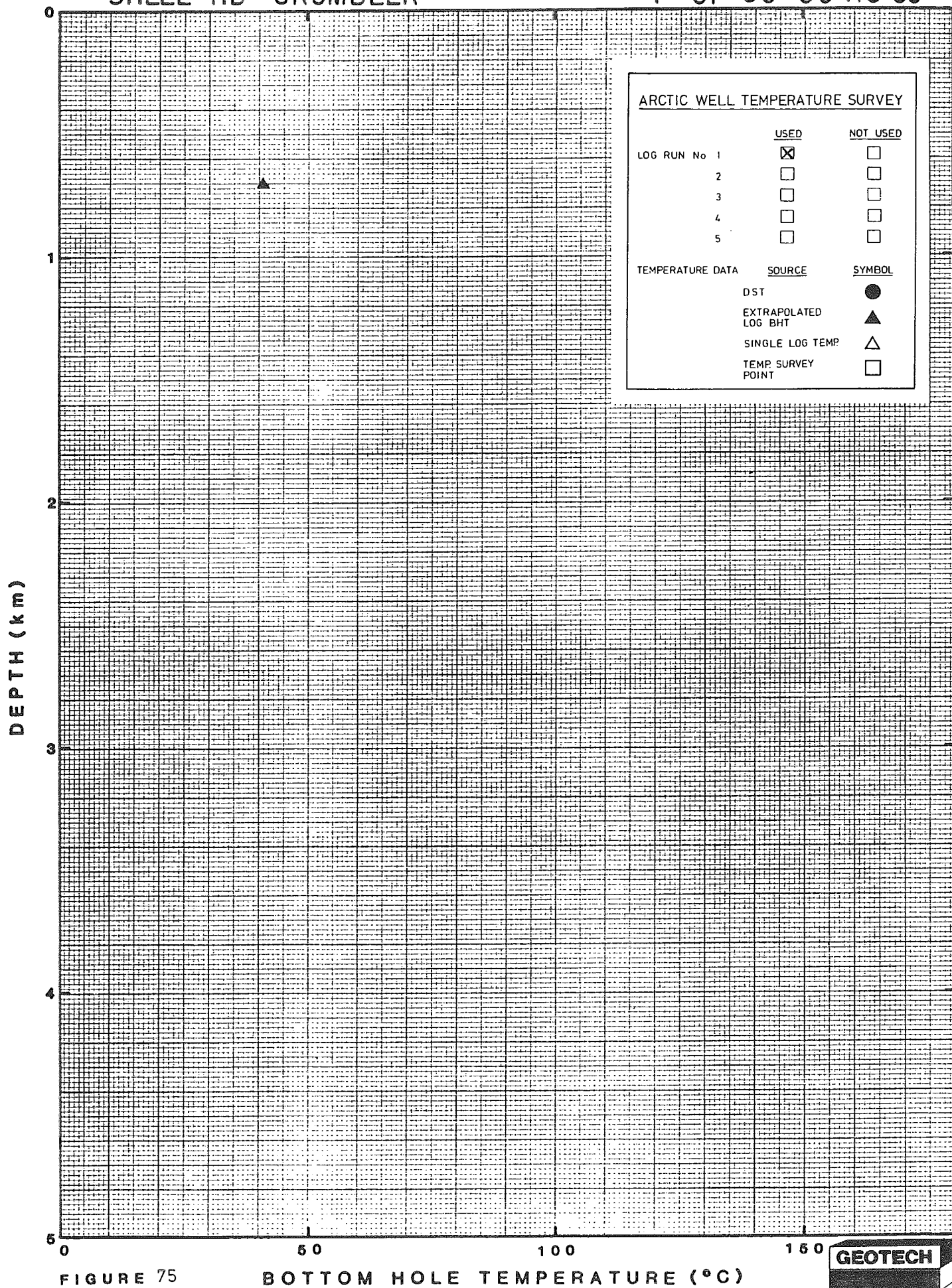
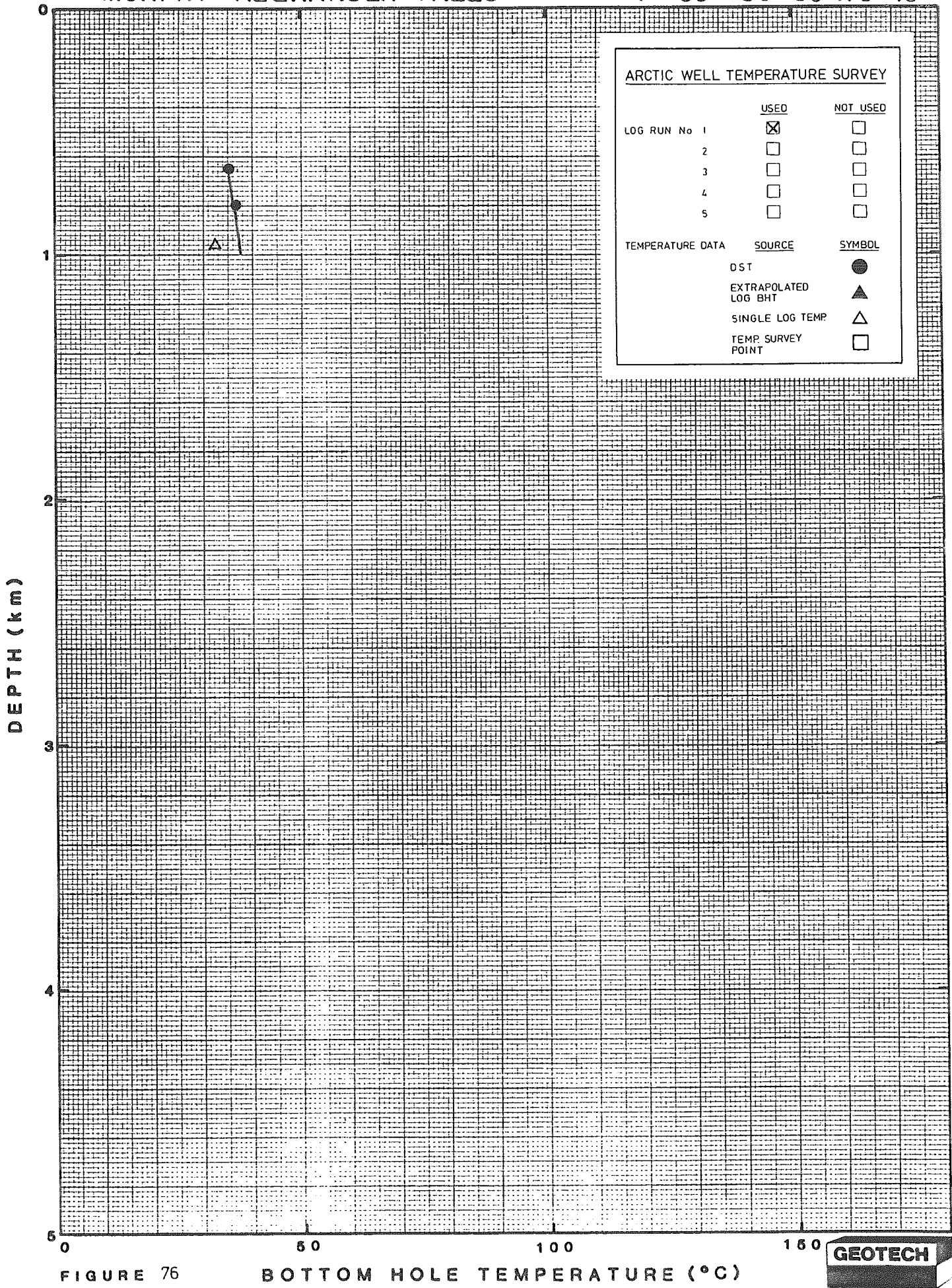


FIGURE 75

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 76

BOTTOM HOLE TEMPERATURE (°C)





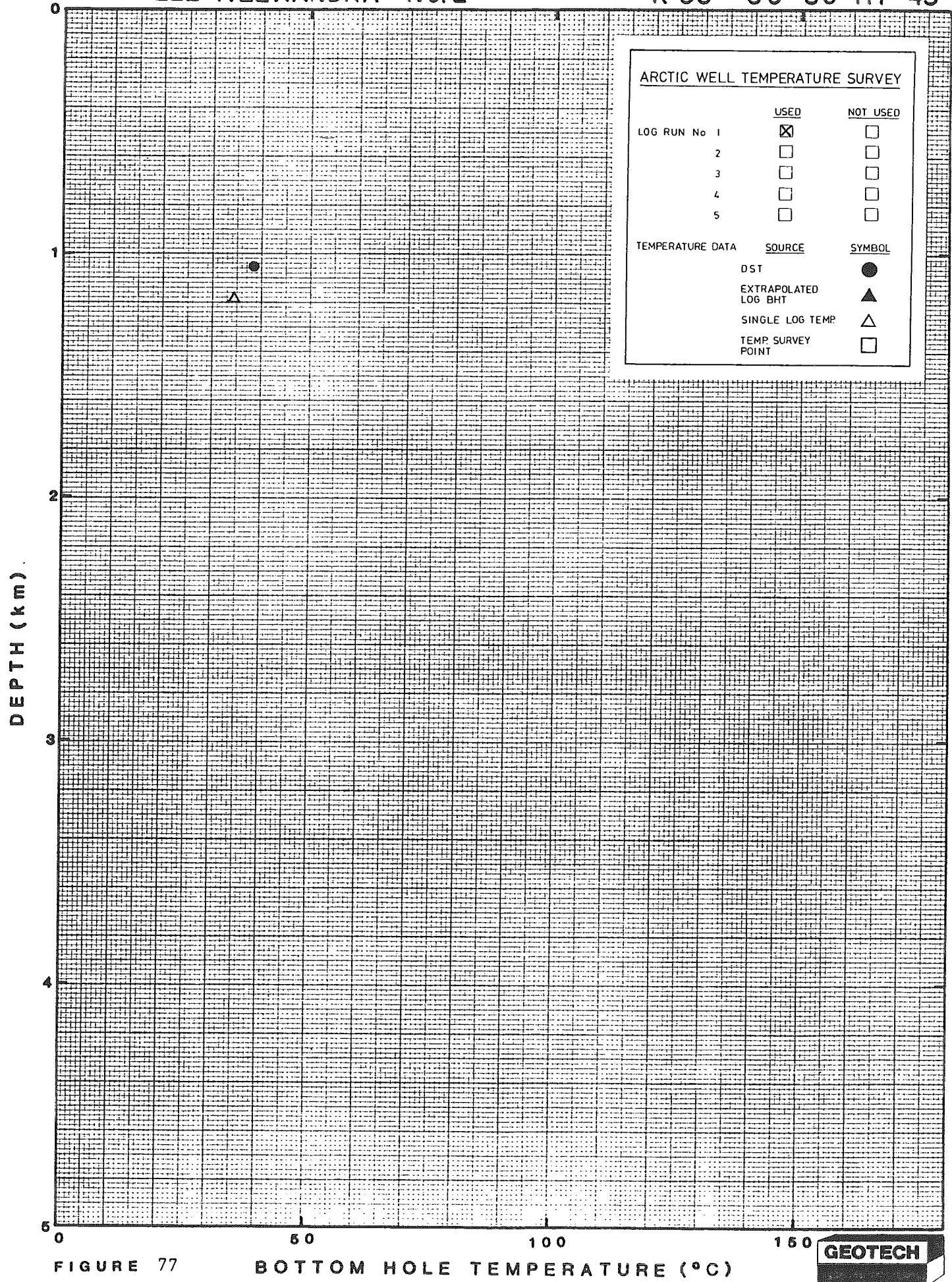


FIGURE 77

BOTTOM HOLE TEMPERATURE (°C)



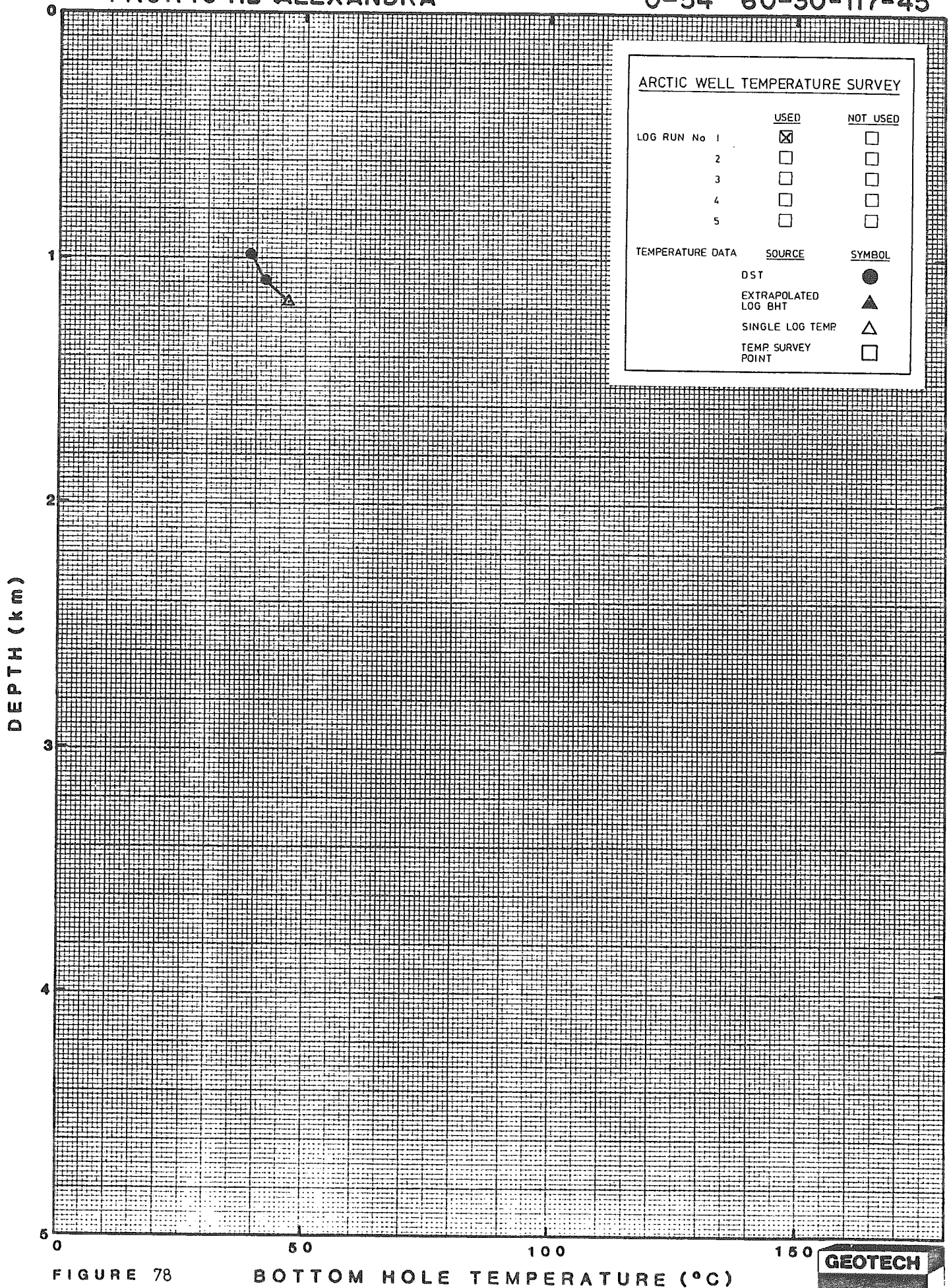


FIGURE 78

BOTTOM HOLE TEMPERATURE (°C)



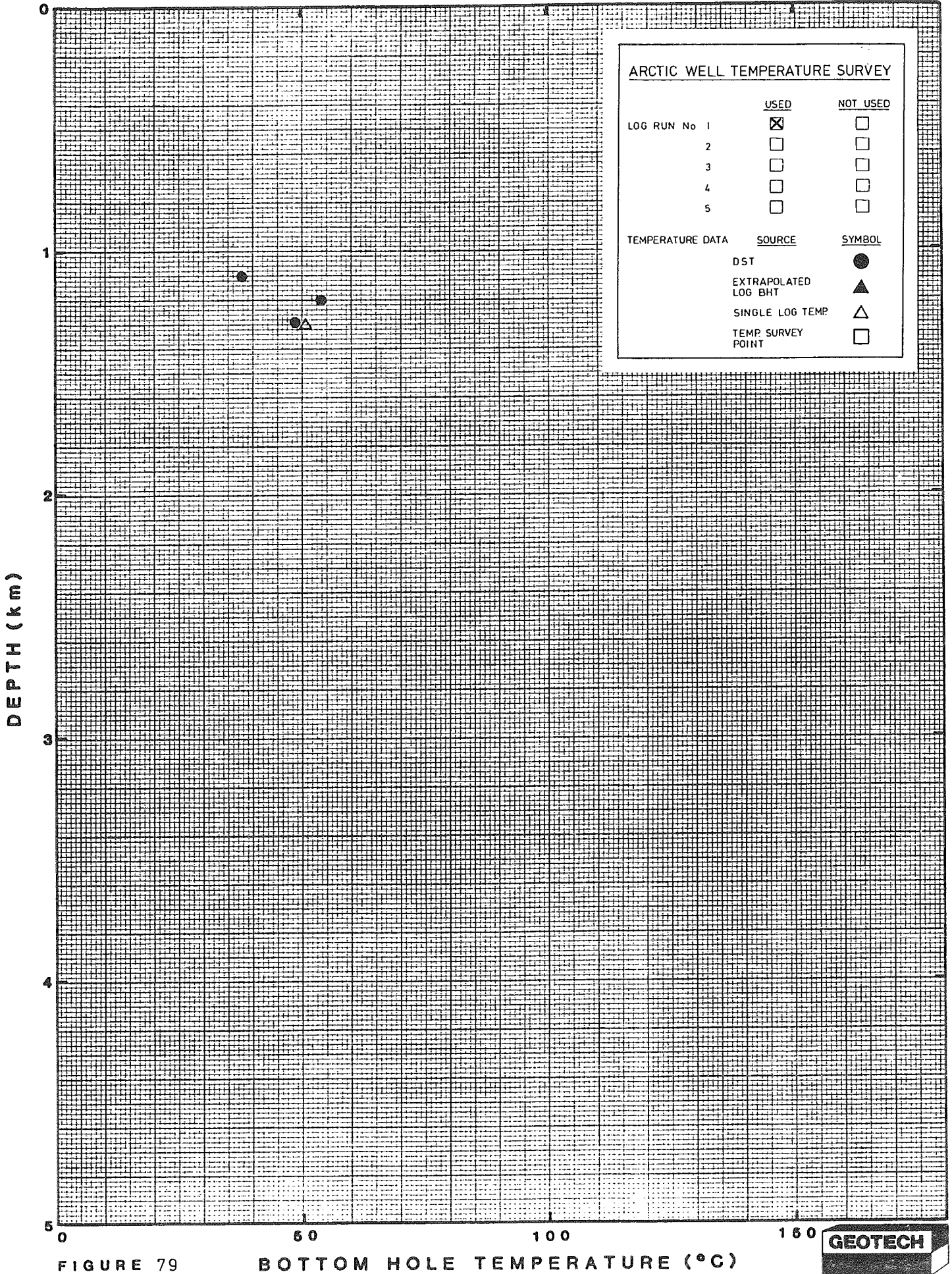


FIGURE 79

BOTTOM HOLE TEMPERATURE (°C)





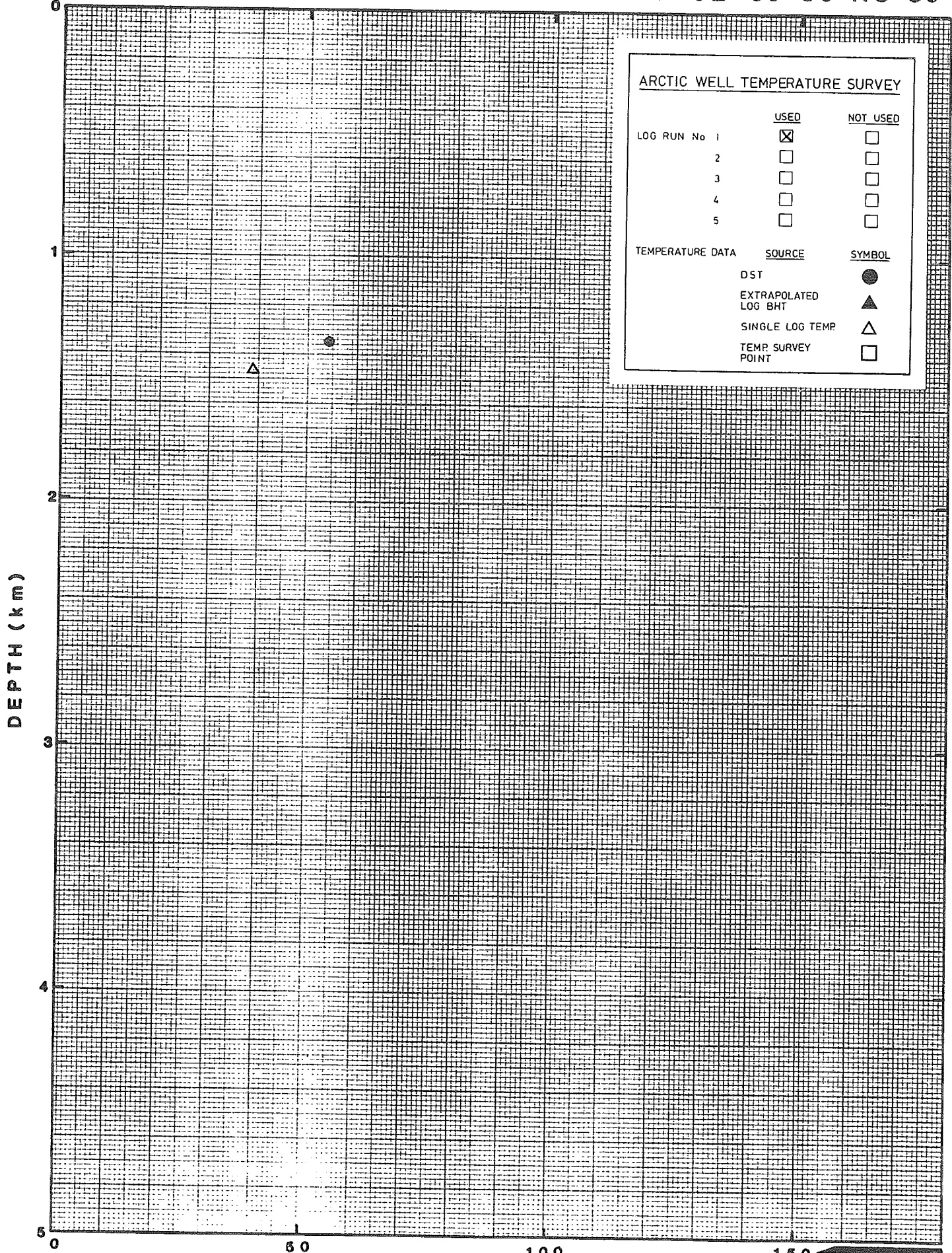


FIGURE 80

BOTTOM HOLE TEMPERATURE (°C)



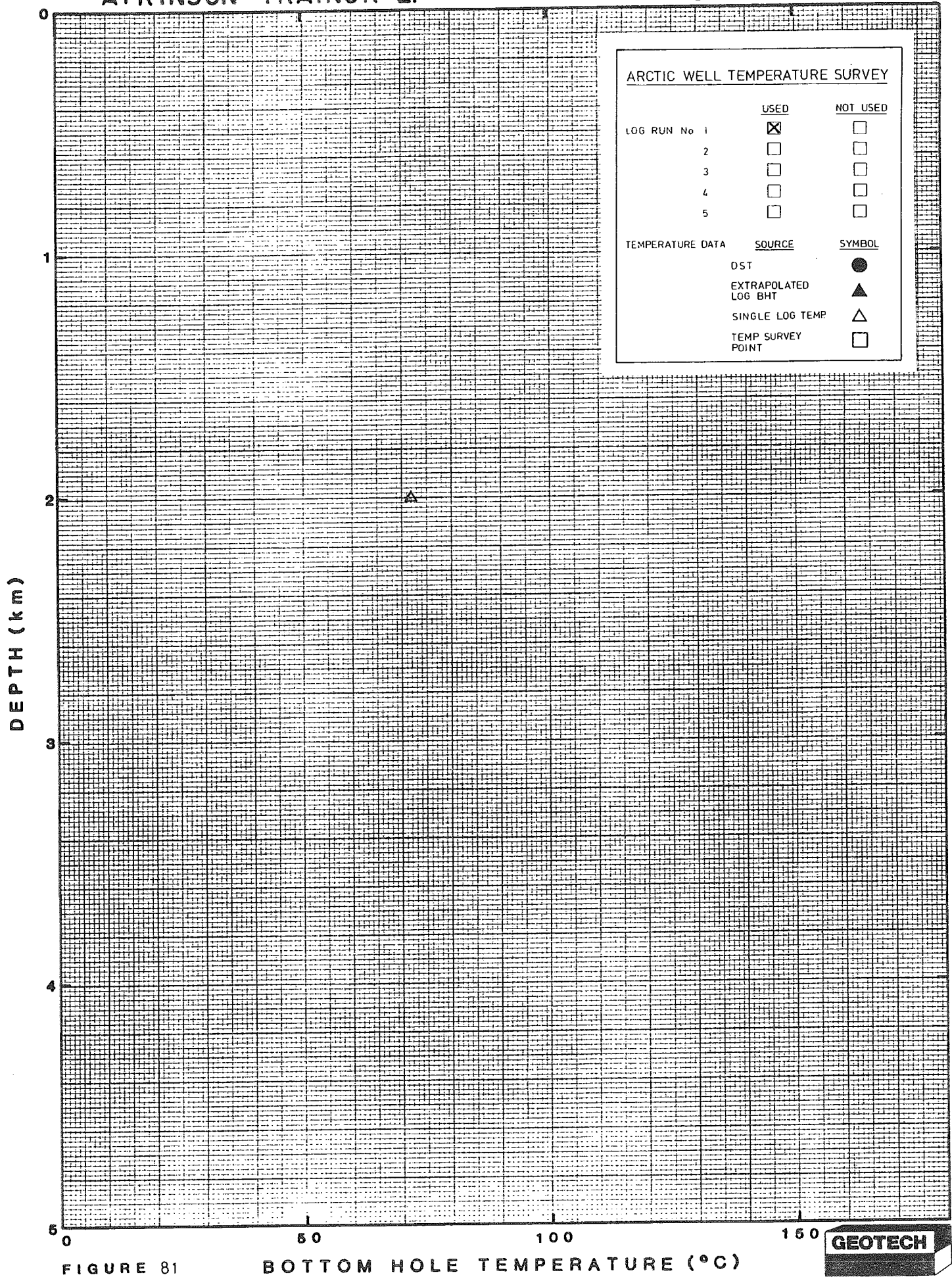


FIGURE 81

BOTTOM HOLE TEMPERATURE (°C)





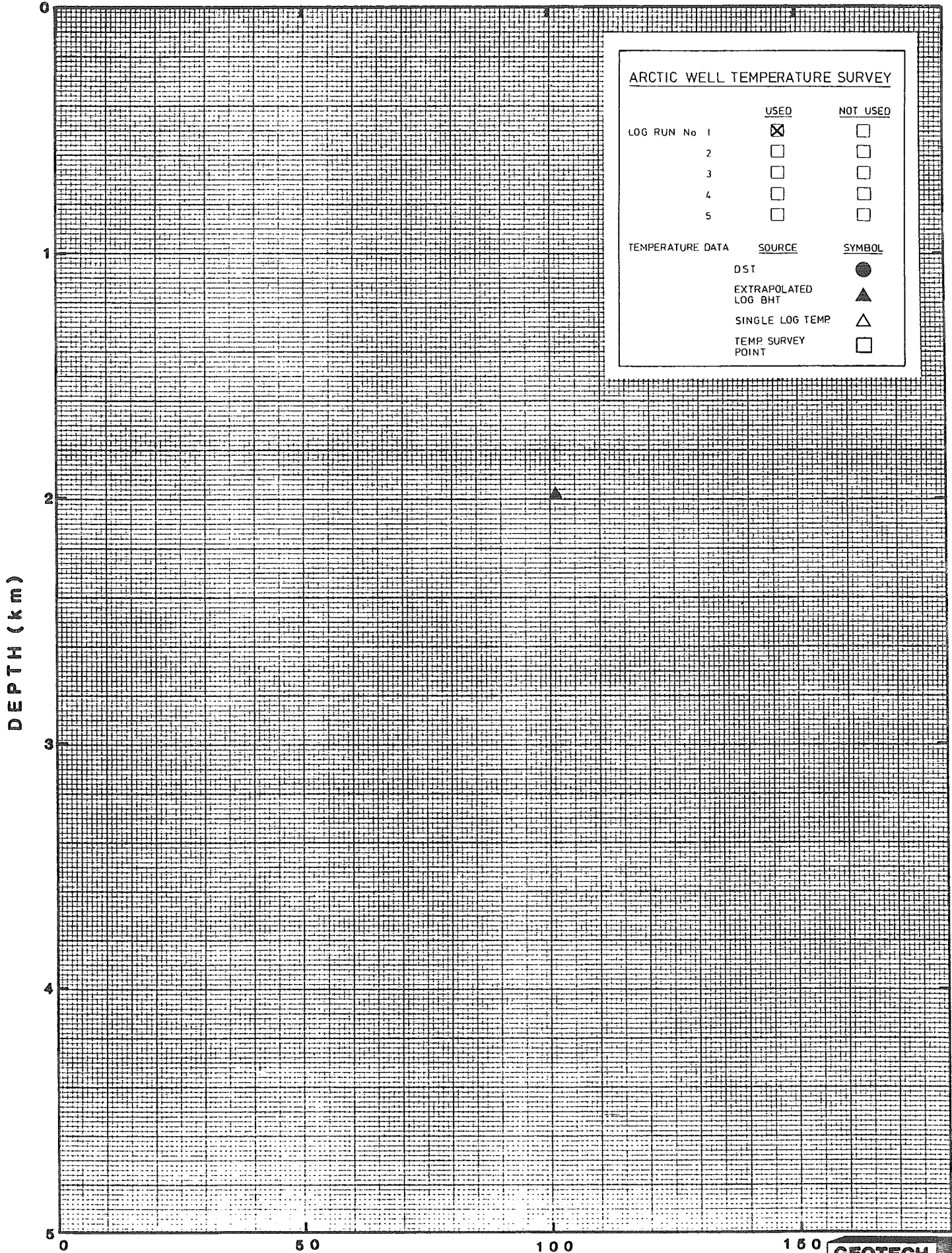


FIGURE 82

BOTTOM HOLE TEMPERATURE (°C)



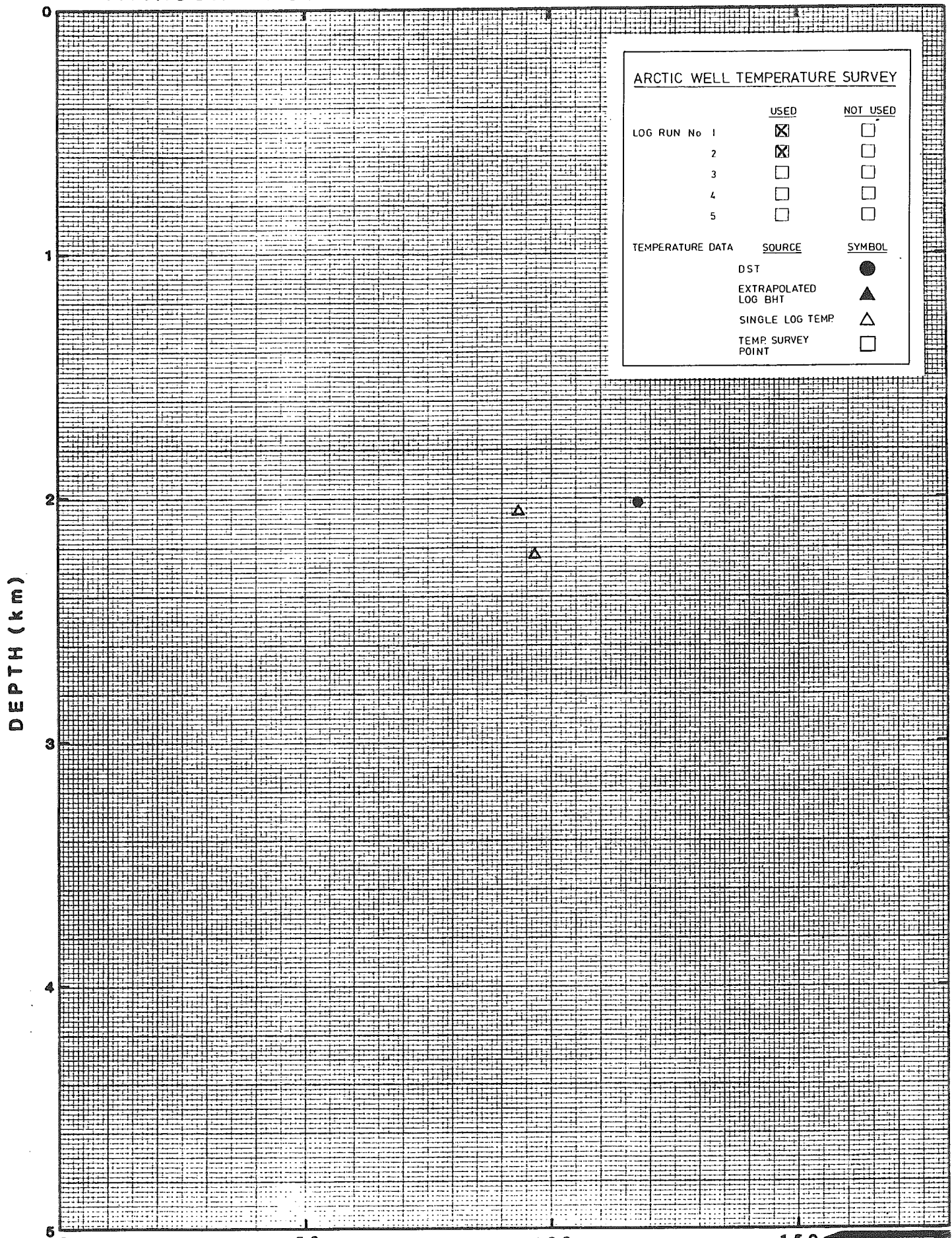


FIGURE 83

BOTTOM HOLE TEMPERATURE (°C)



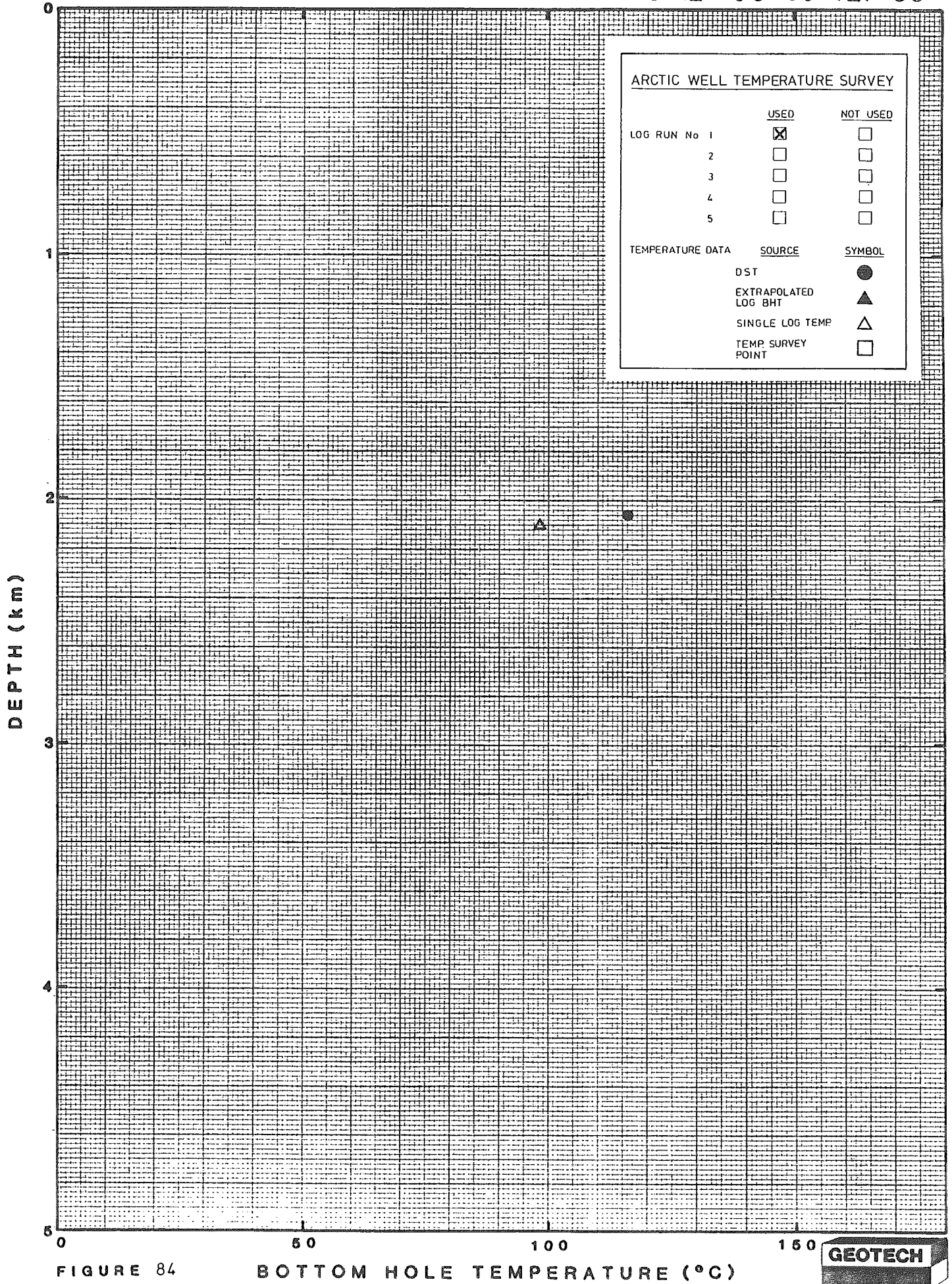
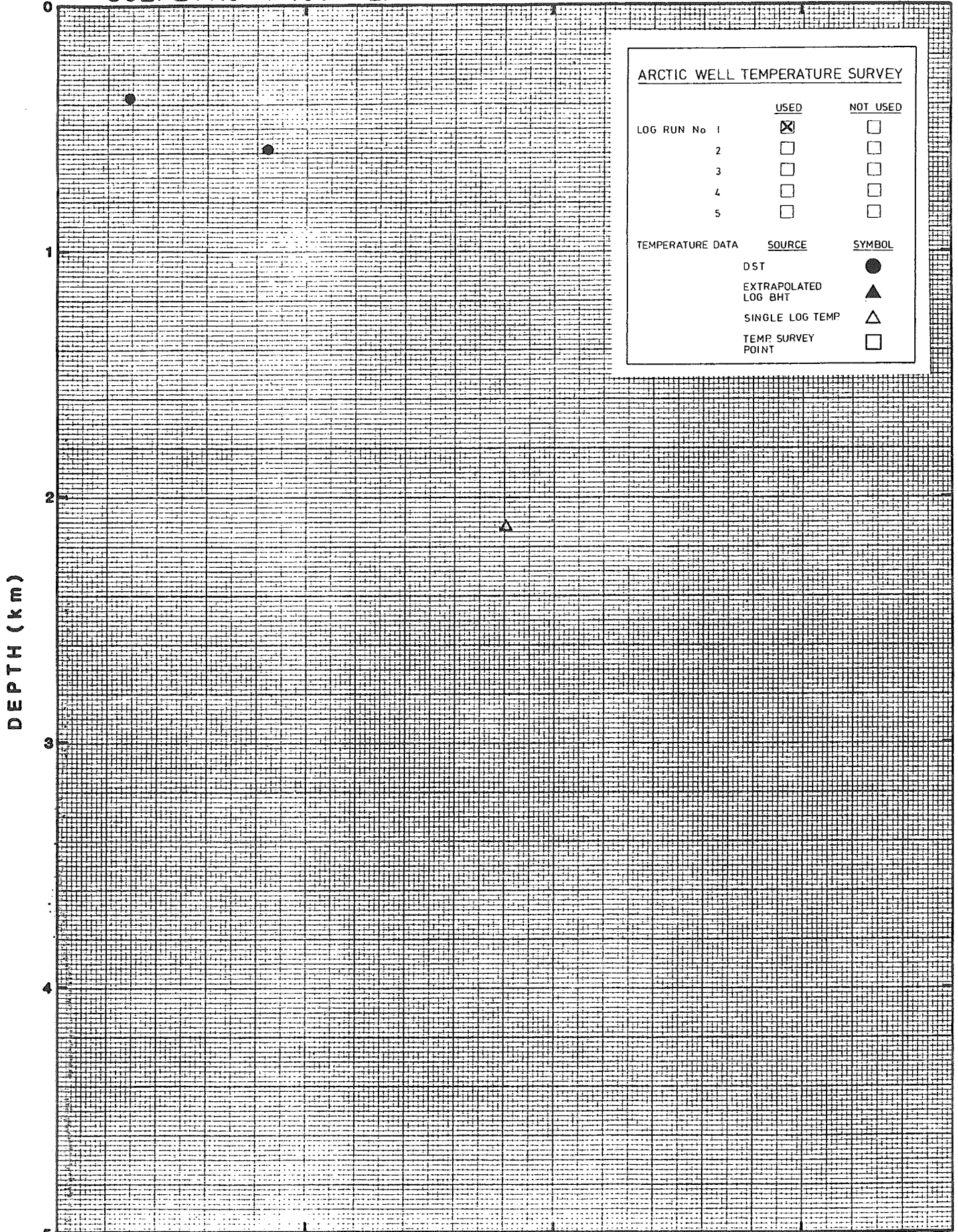


FIGURE 84

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150

FIGURE 85 BOTTOM HOLE TEMPERATURE (°C)



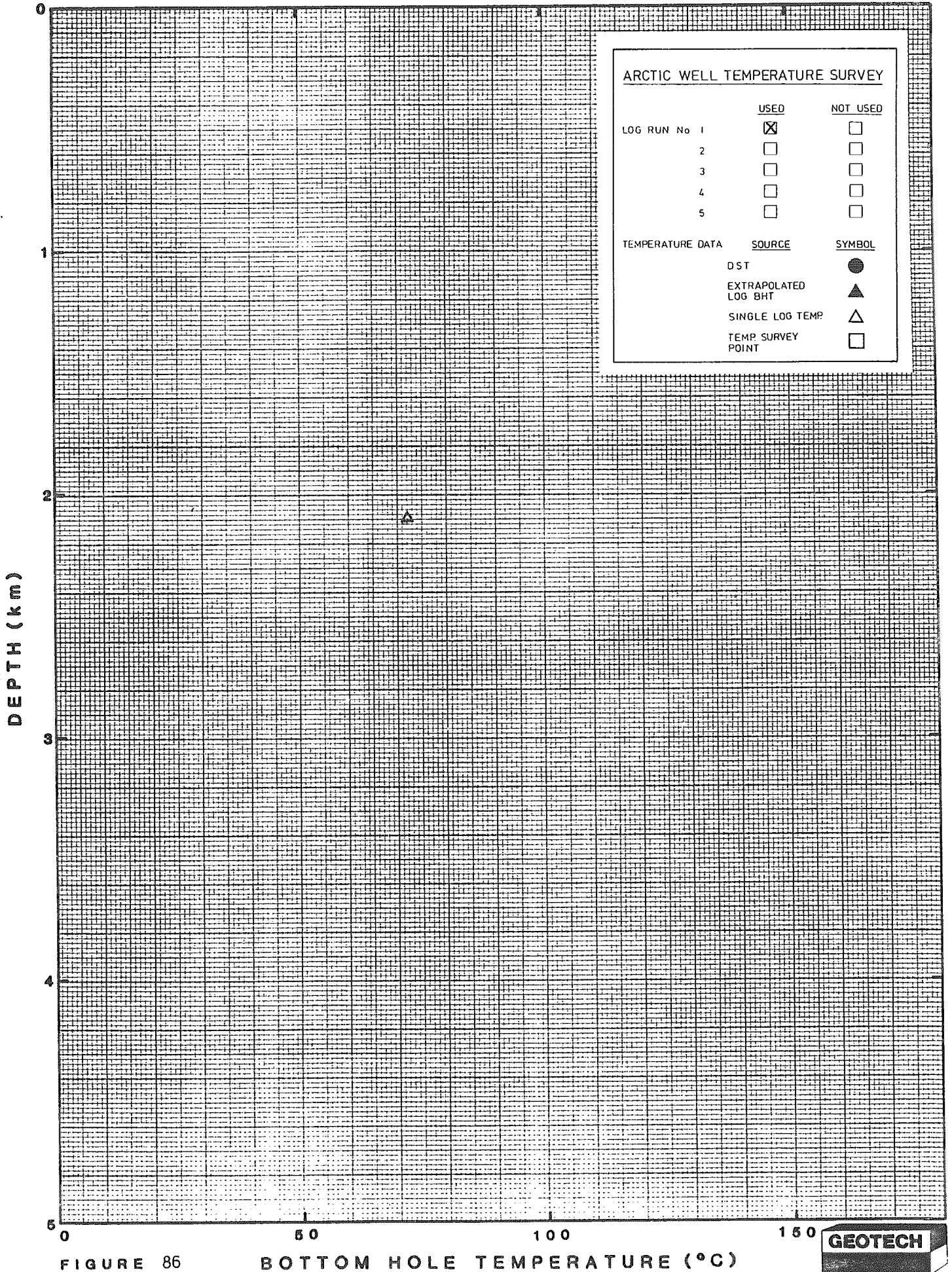


FIGURE 86





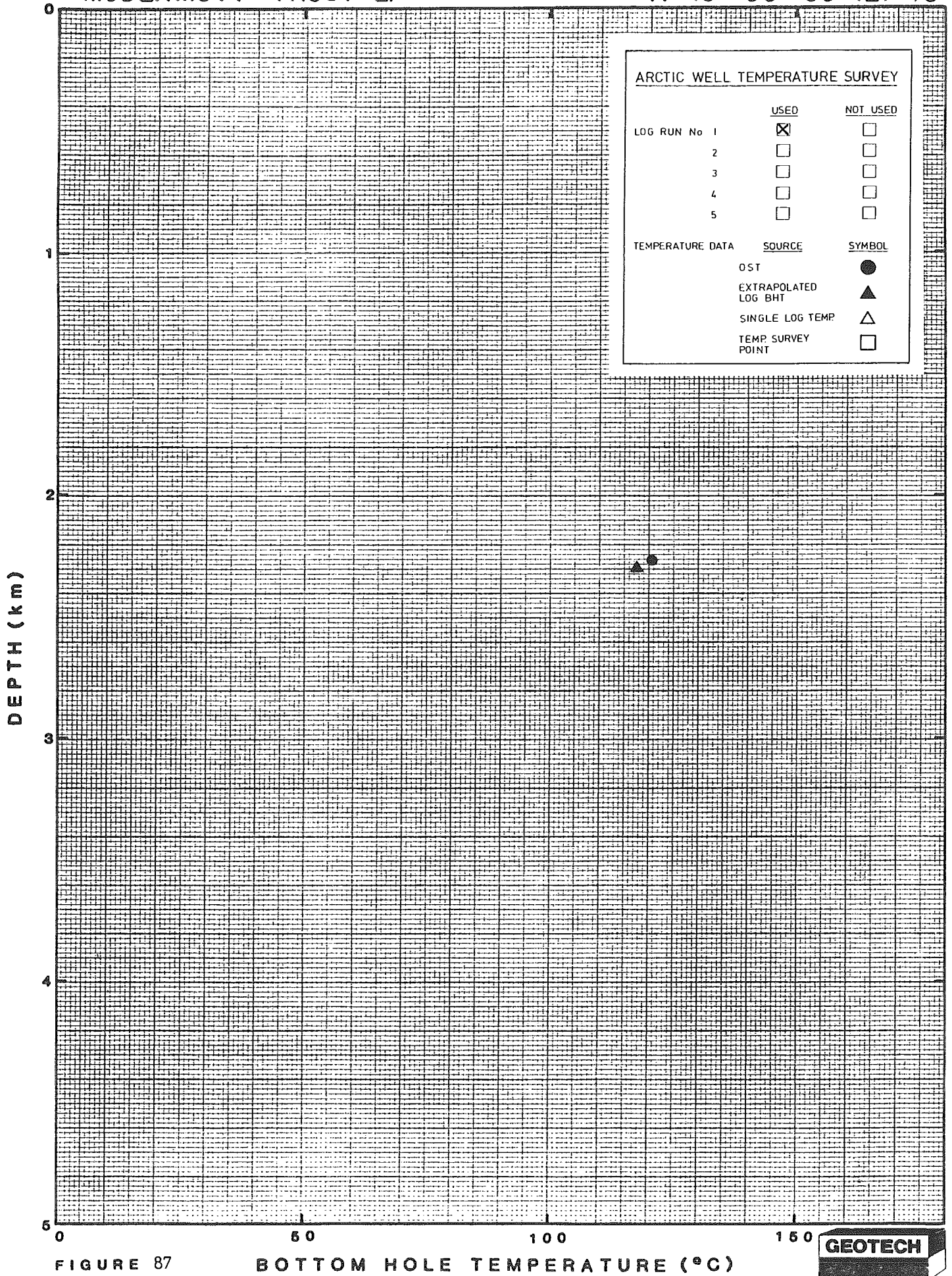


FIGURE 87

BOTTOM HOLE TEMPERATURE (°C)

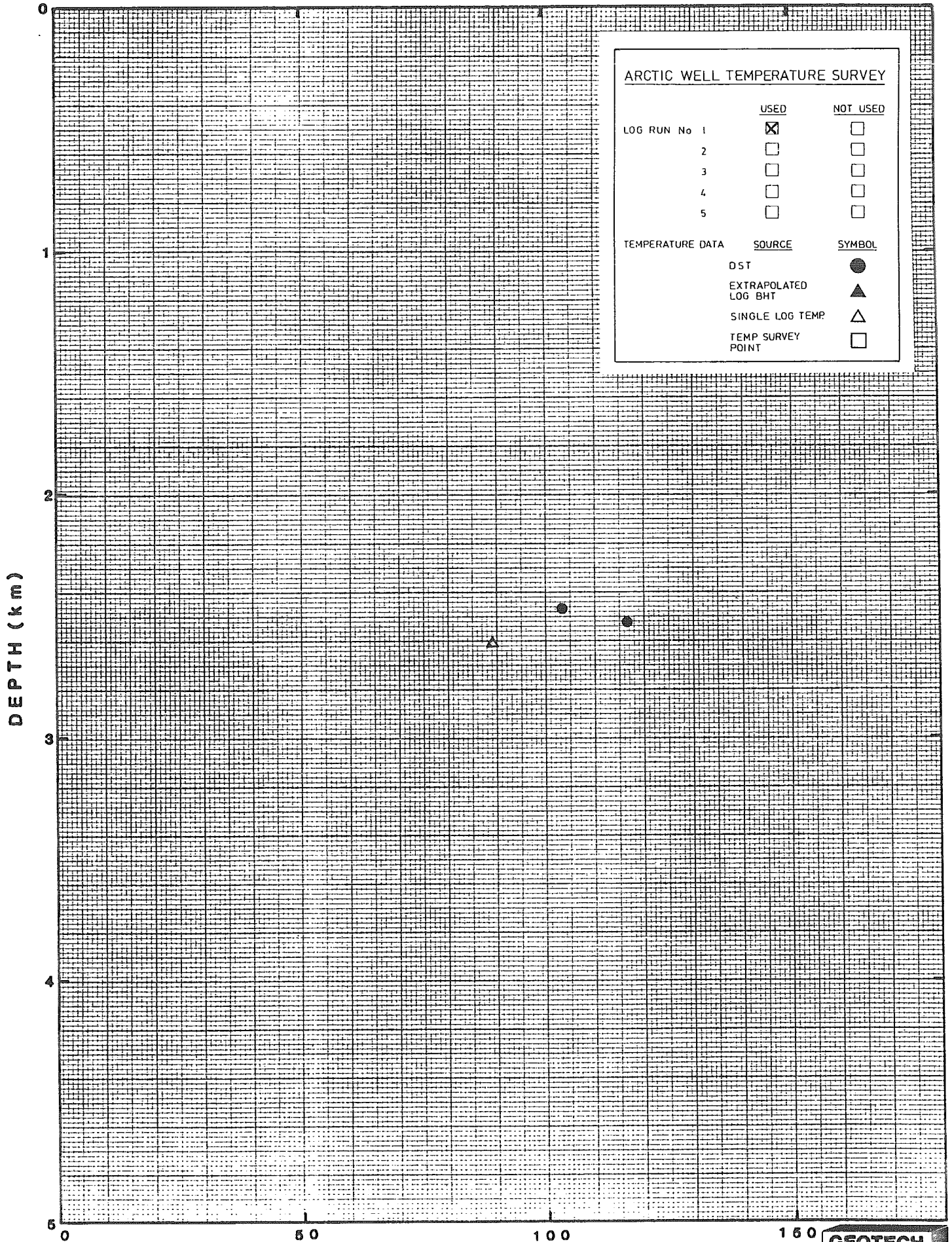


FIGURE 88

BOTTOM HOLE TEMPERATURE (°C)



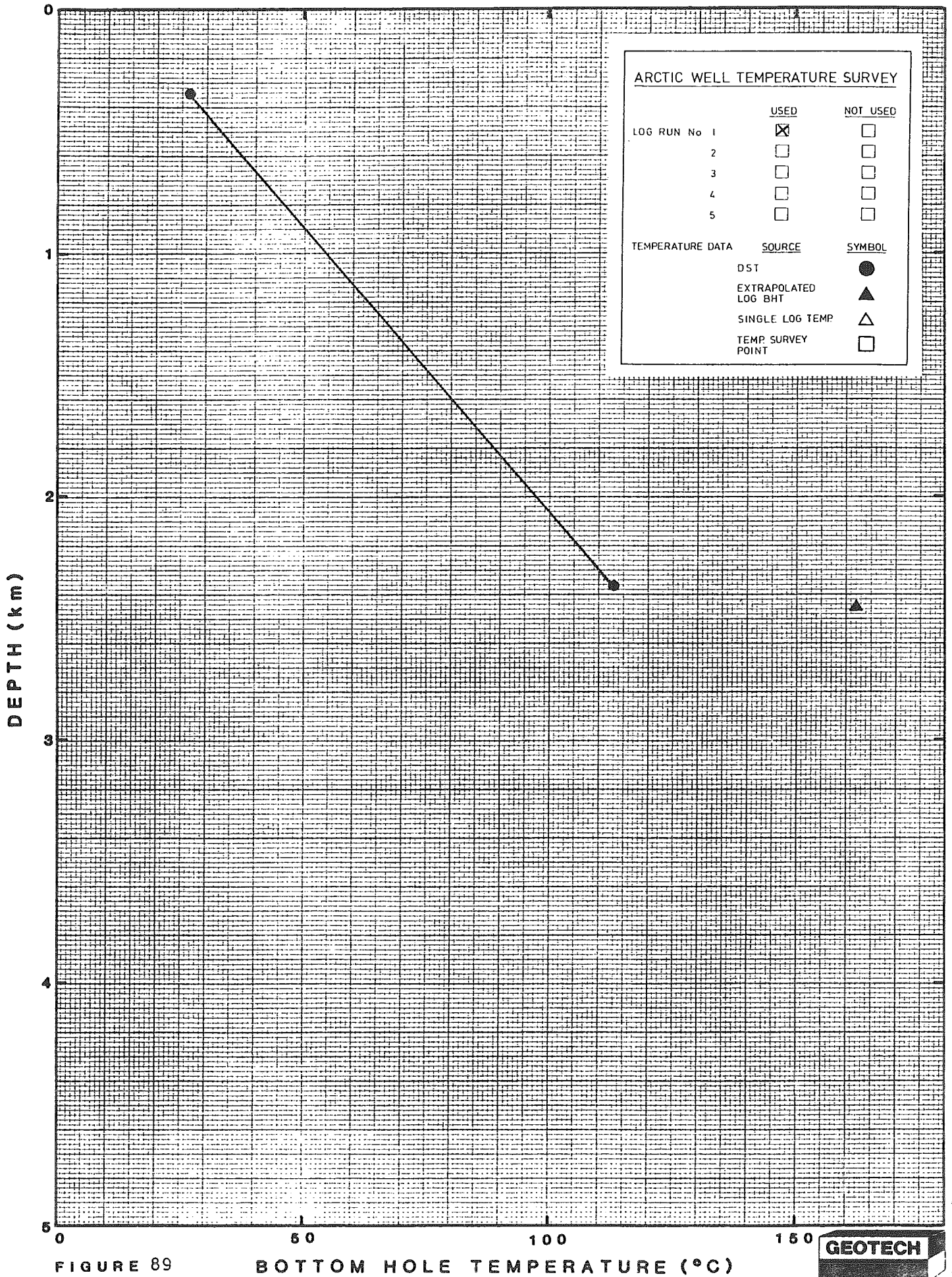


FIGURE 89

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No	1 <input checked="" type="checkbox"/>	<input type="checkbox"/>
	2 <input type="checkbox"/>	<input type="checkbox"/>
	3 <input type="checkbox"/>	<input type="checkbox"/>
	4 <input type="checkbox"/>	<input type="checkbox"/>
	5 <input type="checkbox"/>	<input type="checkbox"/>
<u>TEMPERATURE DATA</u>	<u>SOURCE</u>	<u>SYMBOL</u>
	OST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

△

DEPTH (km)

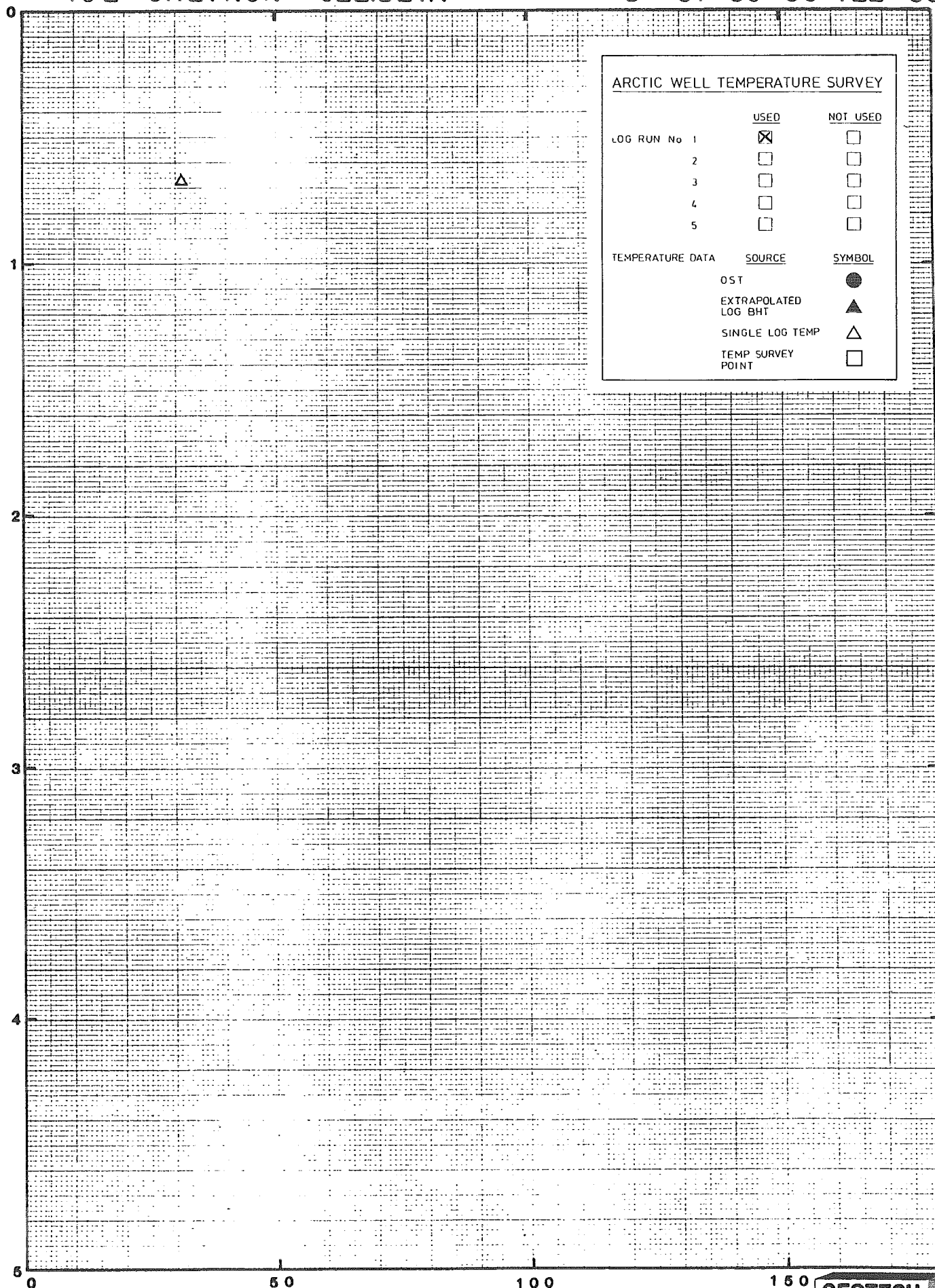


FIGURE 90

BOTTOM HOLE TEMPERATURE (°C)





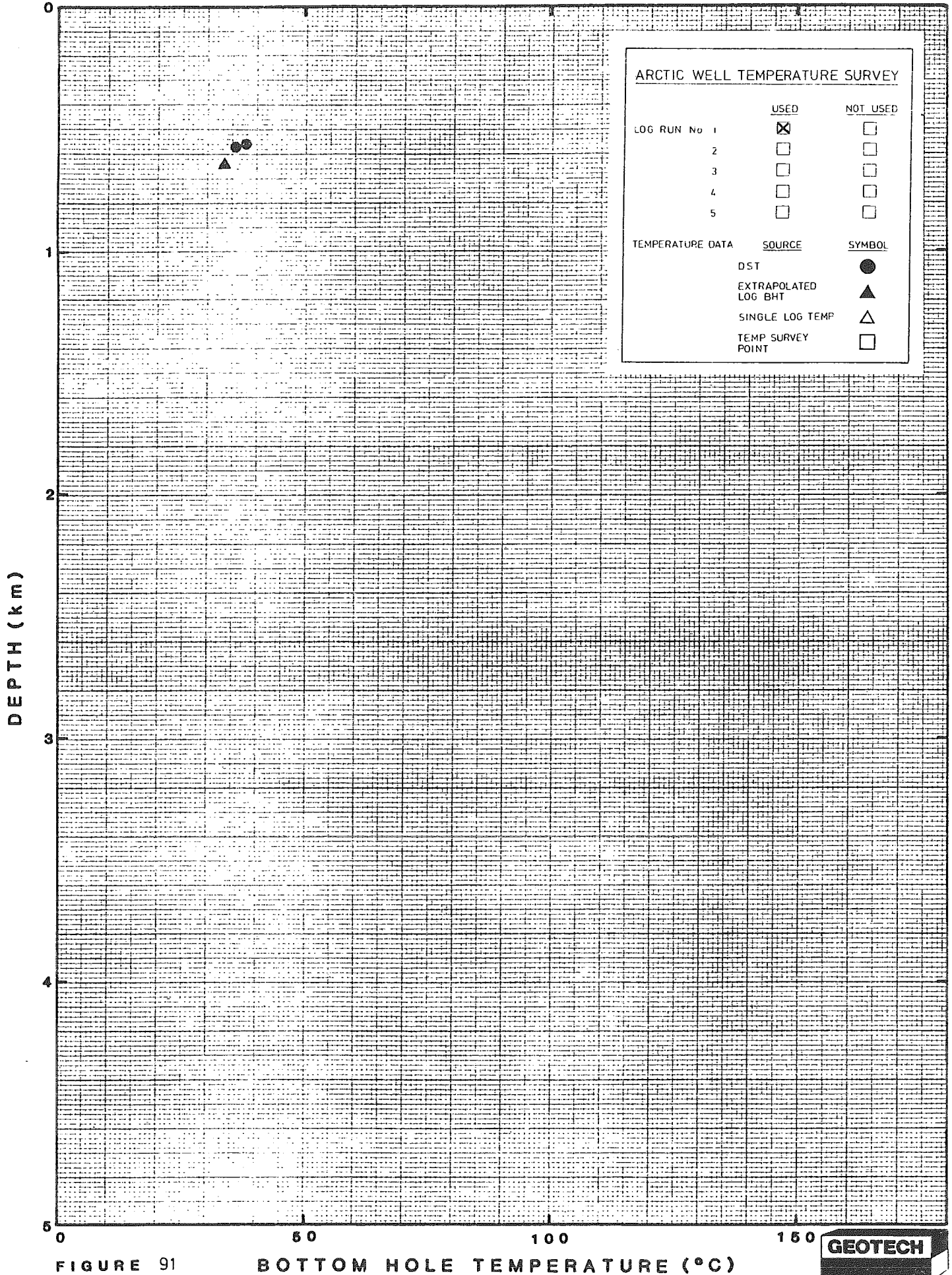


FIGURE 91

BOTTOM HOLE TEMPERATURE (°C)





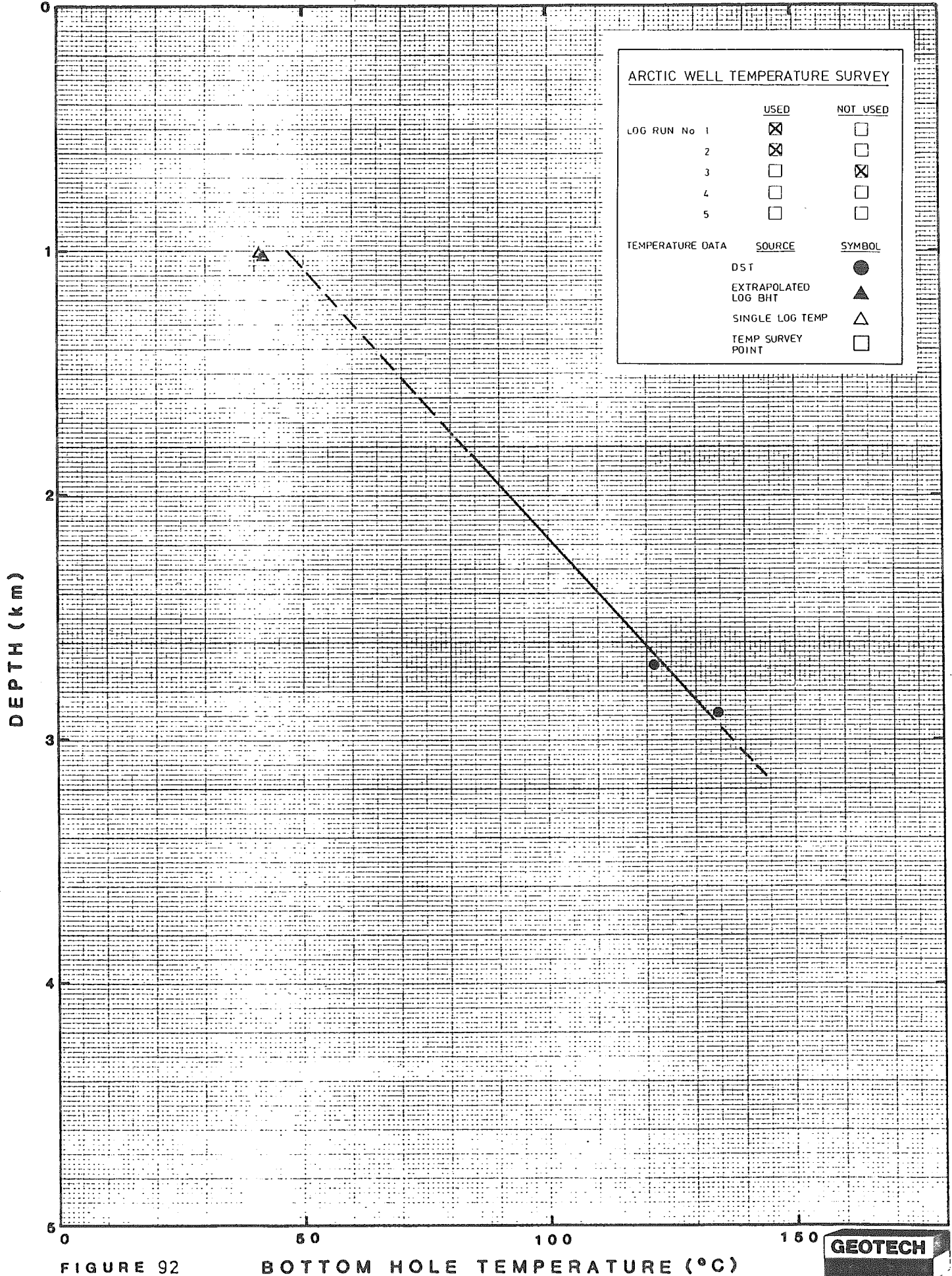
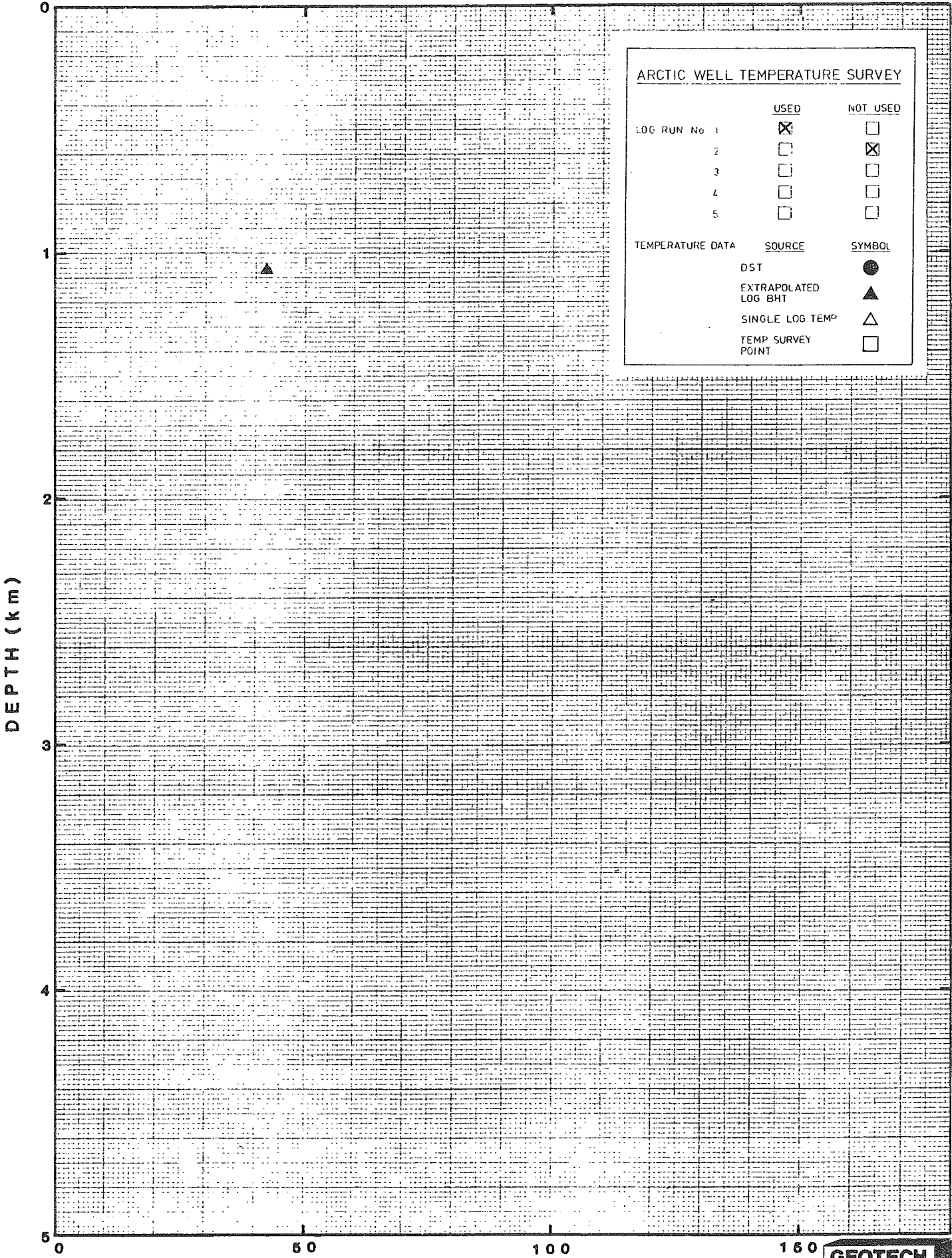


FIGURE 92

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 93

BOTTOM HOLE TEMPERATURE (°C)



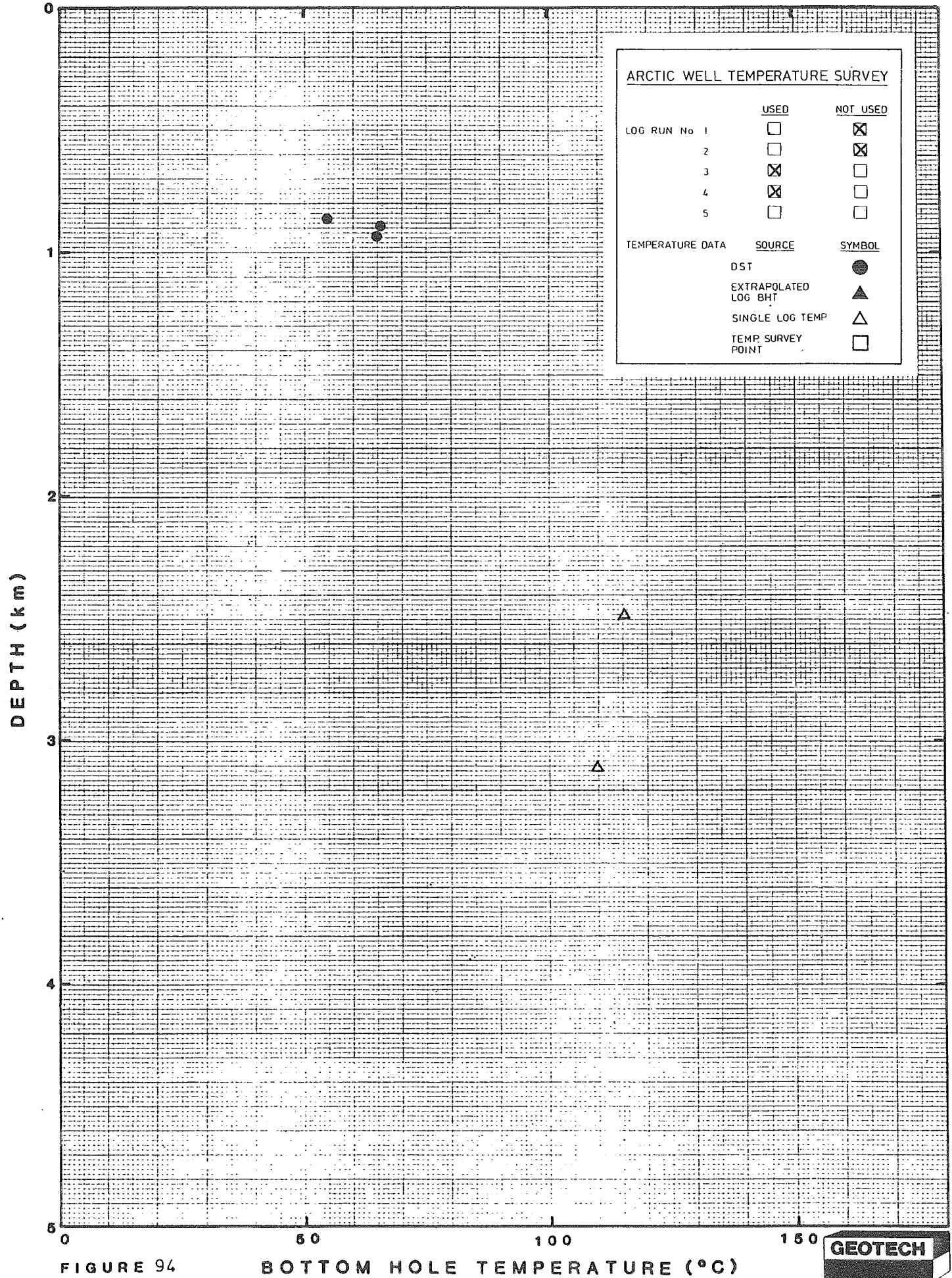


FIGURE 94

BOTTOM HOLE TEMPERATURE (°C)



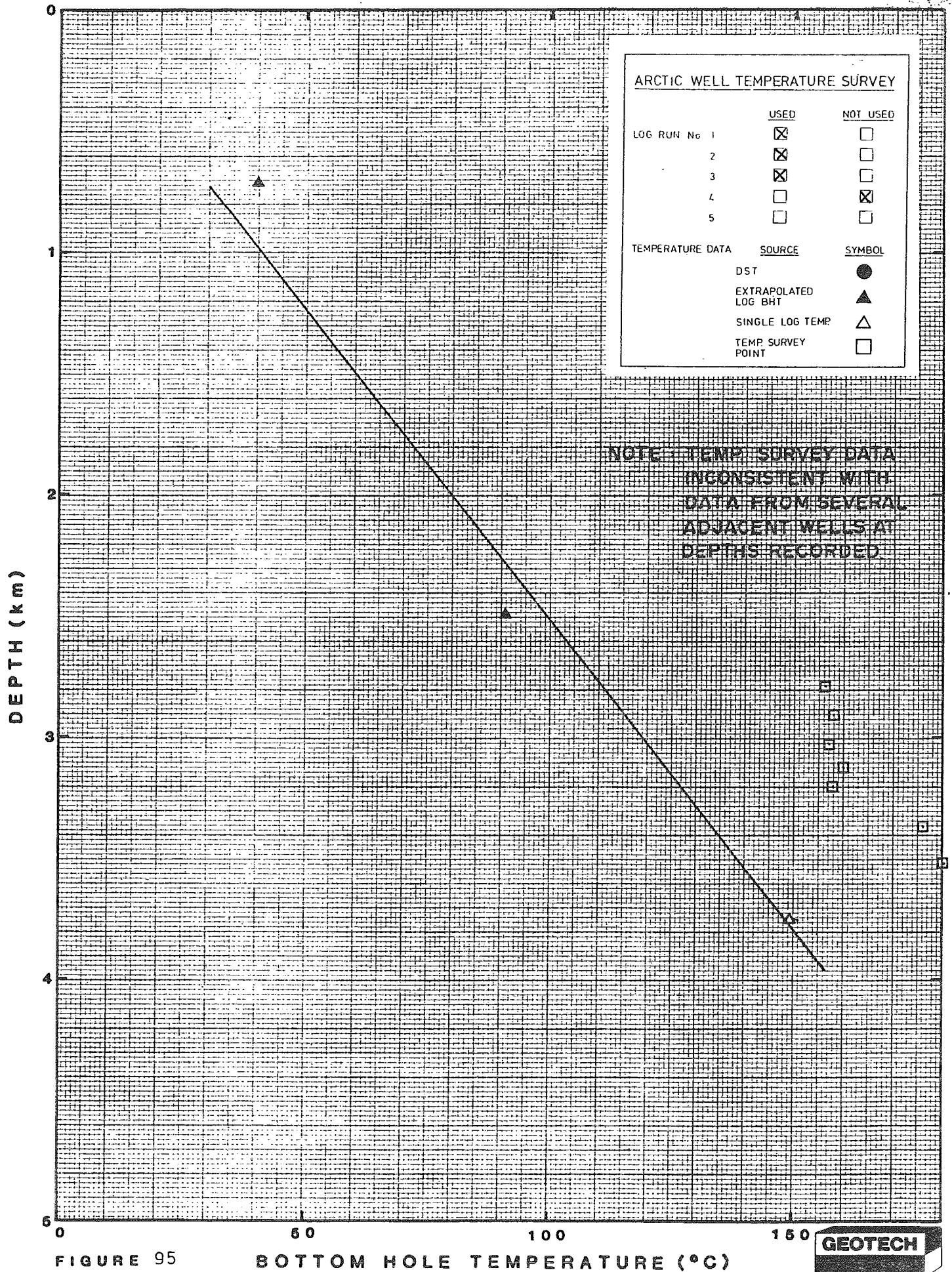
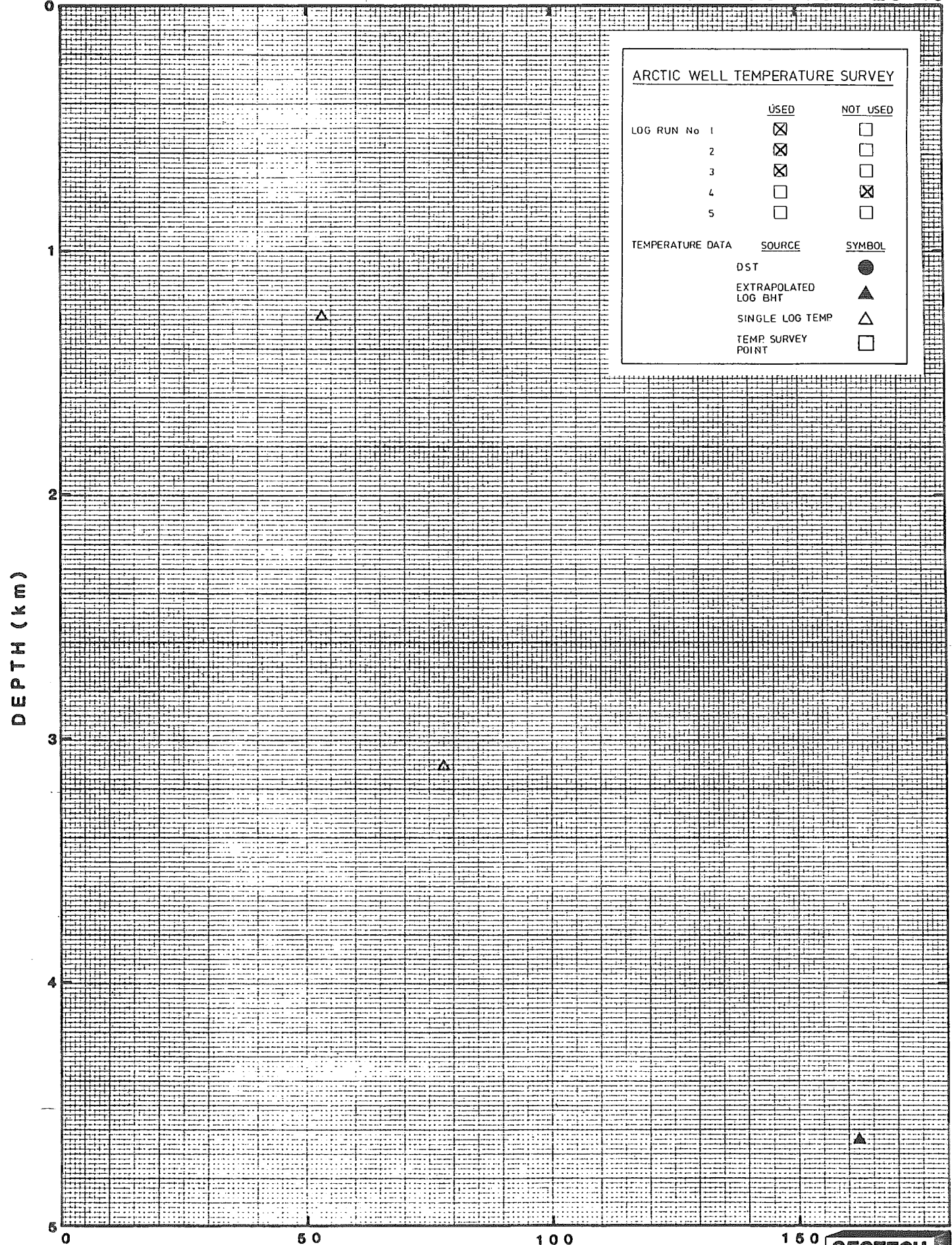


FIGURE 95

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 96

BOTTOM HOLE TEMPERATURE (°C)





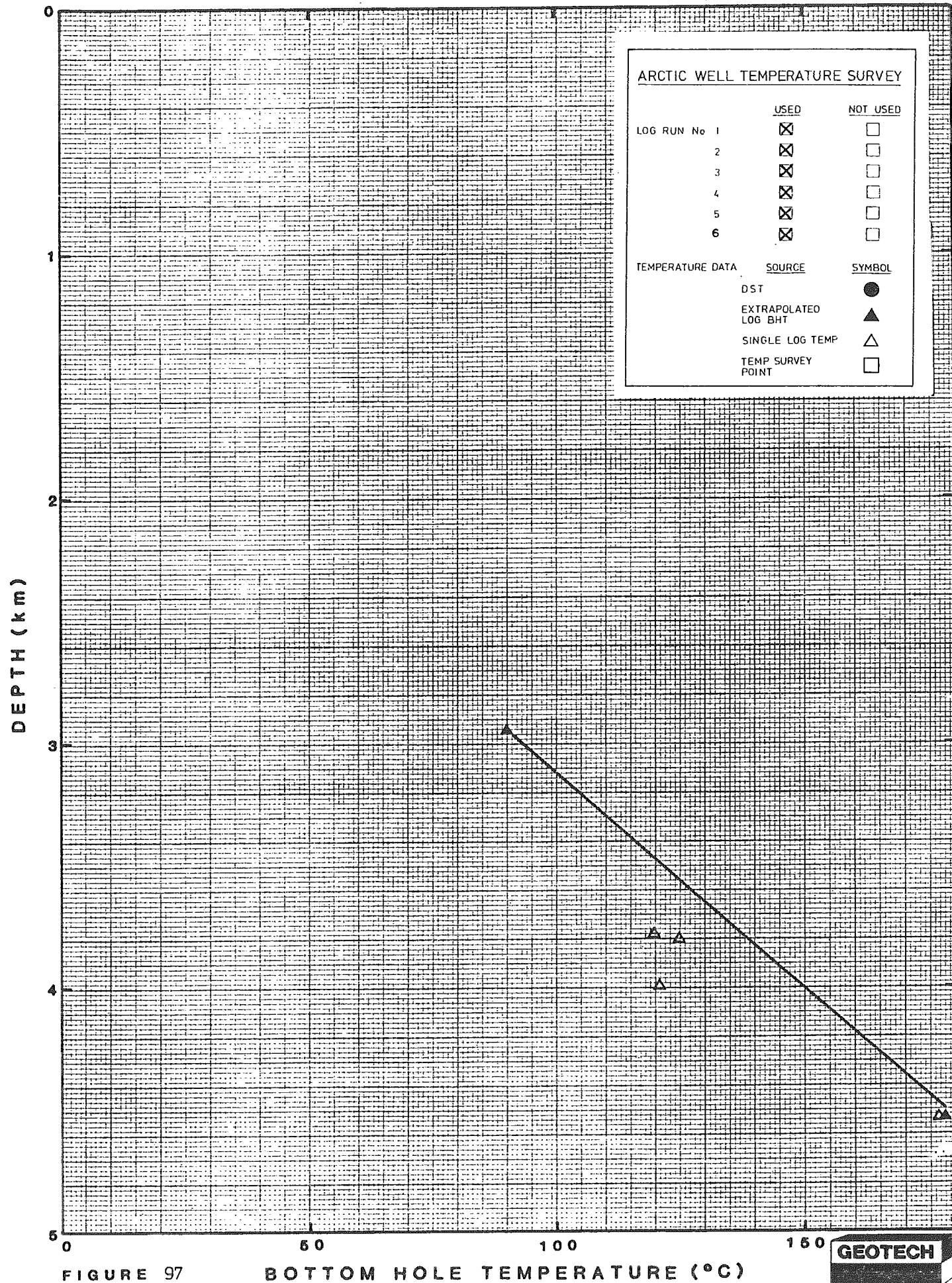


FIGURE 97

BOTTOM HOLE TEMPERATURE (°C)

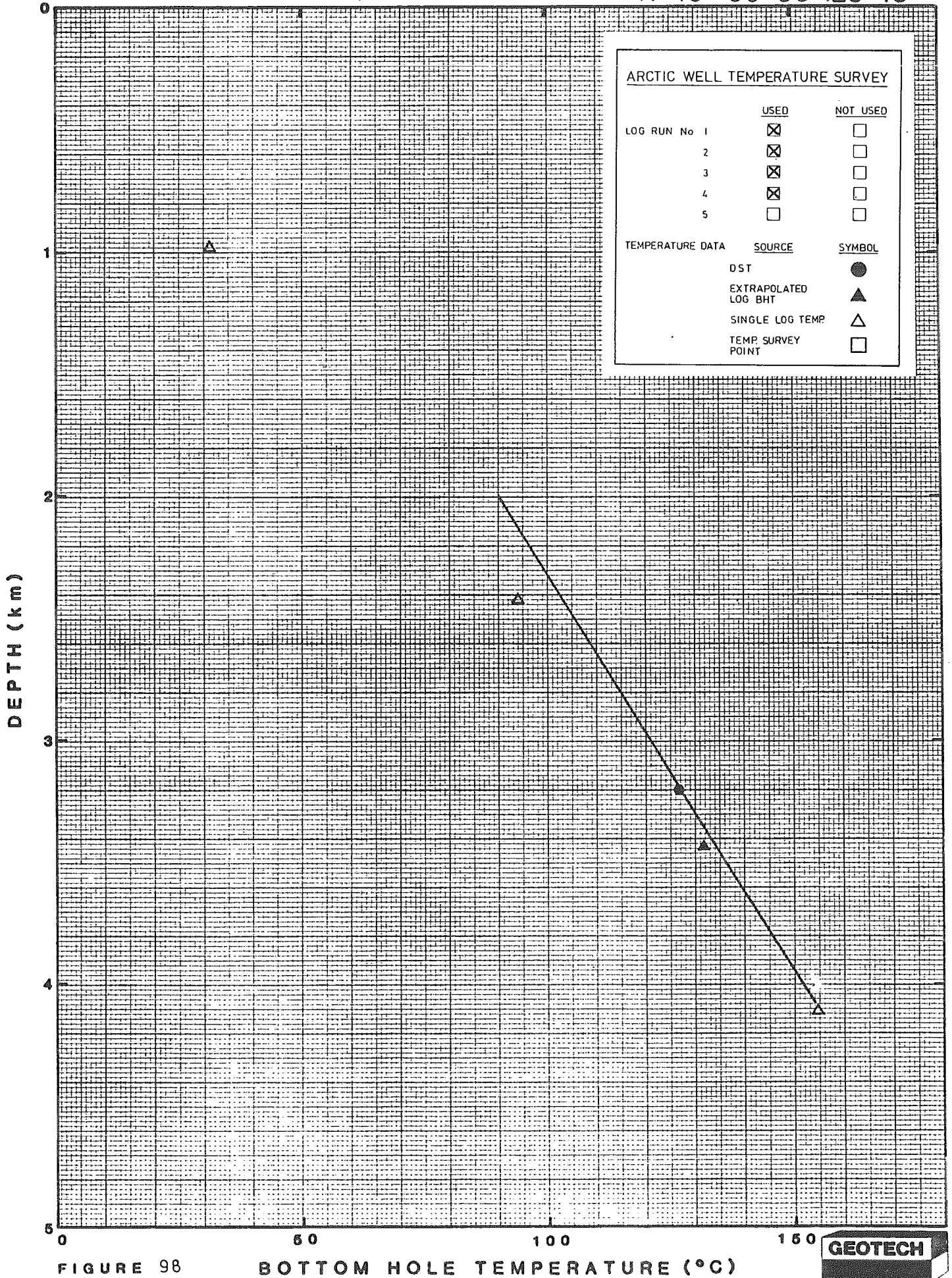
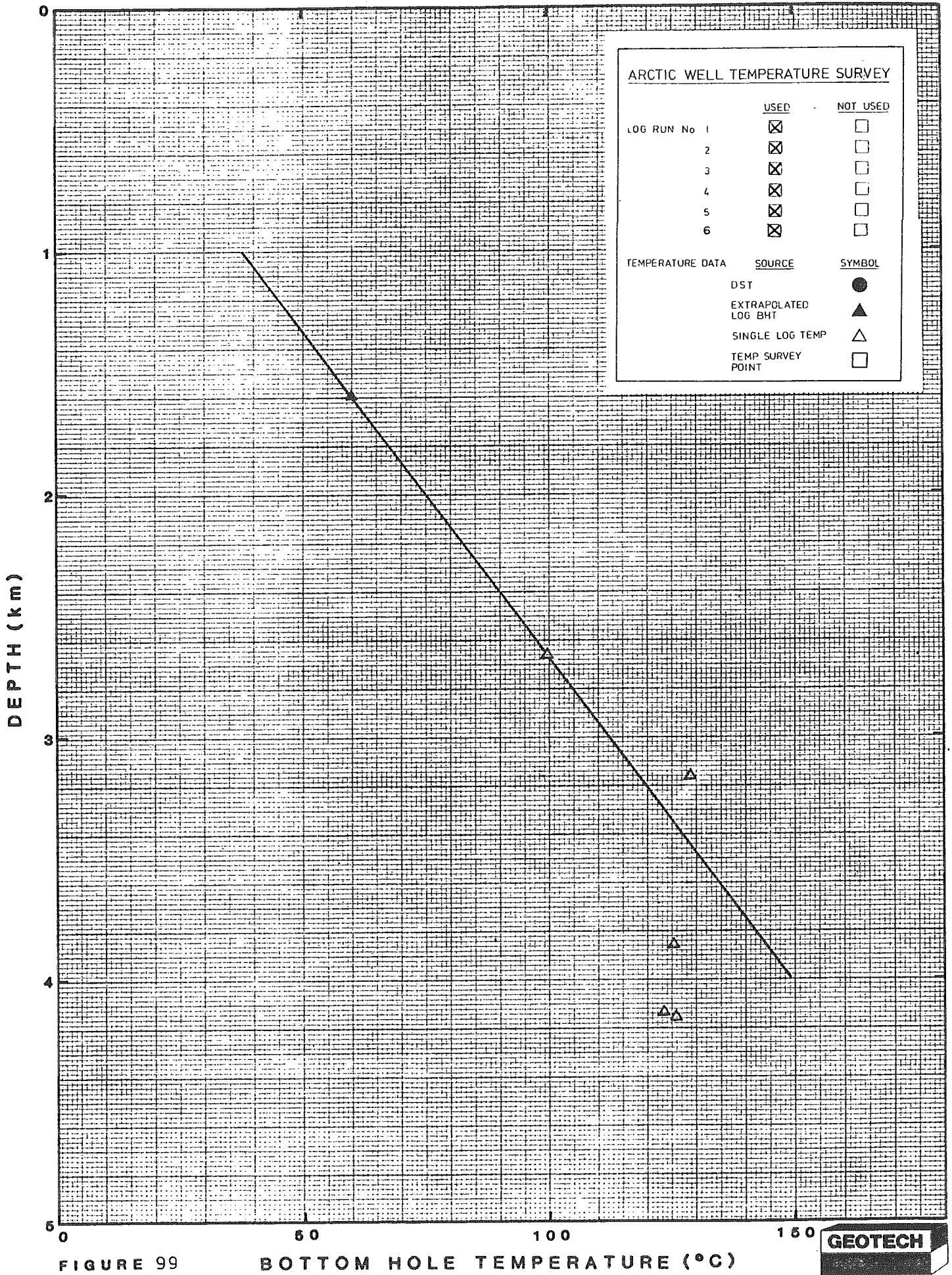


FIGURE 98

BOTTOM HOLE TEMPERATURE (°C)







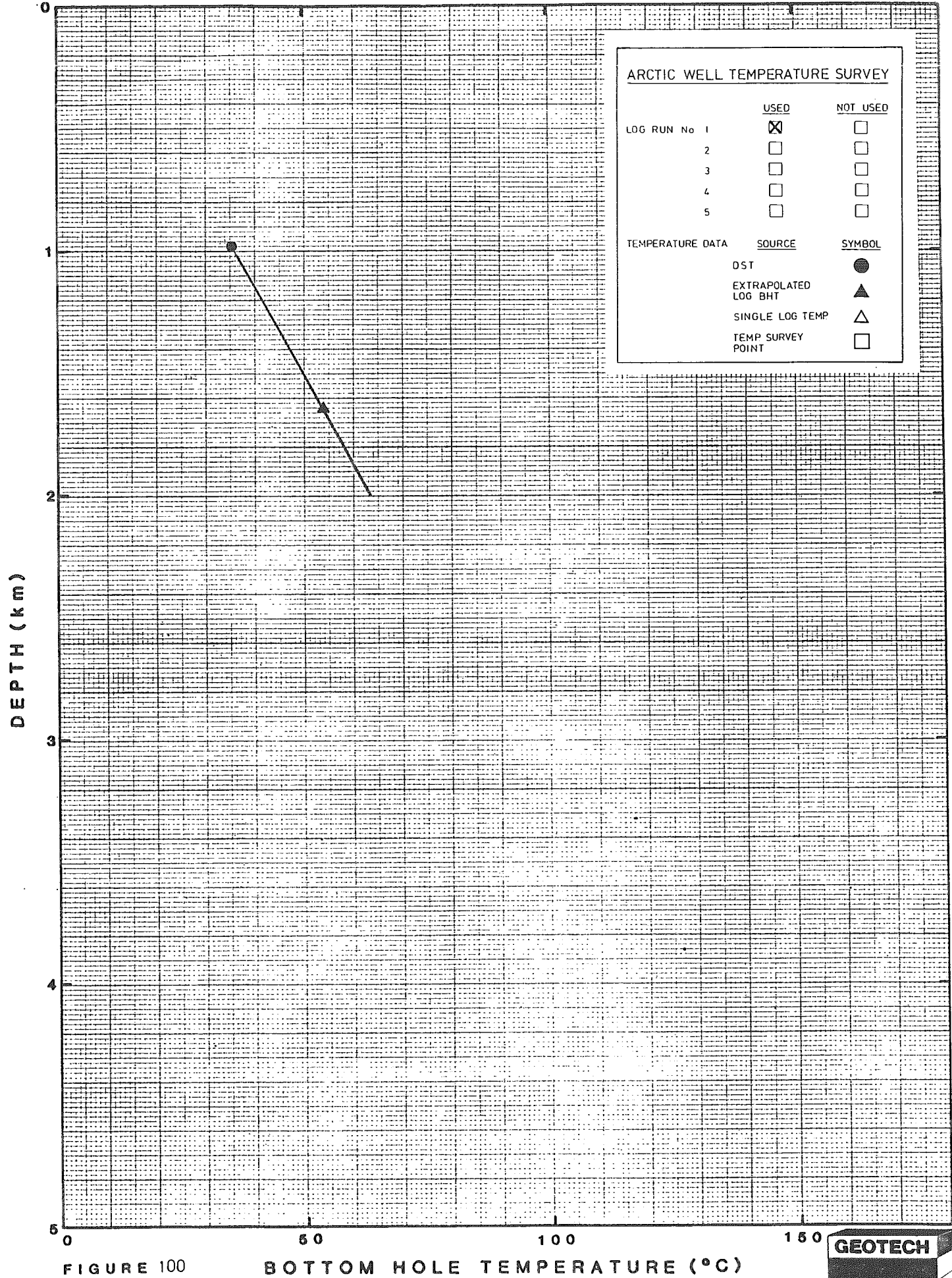


FIGURE 100

BOTTOM HOLE TEMPERATURE (°C)



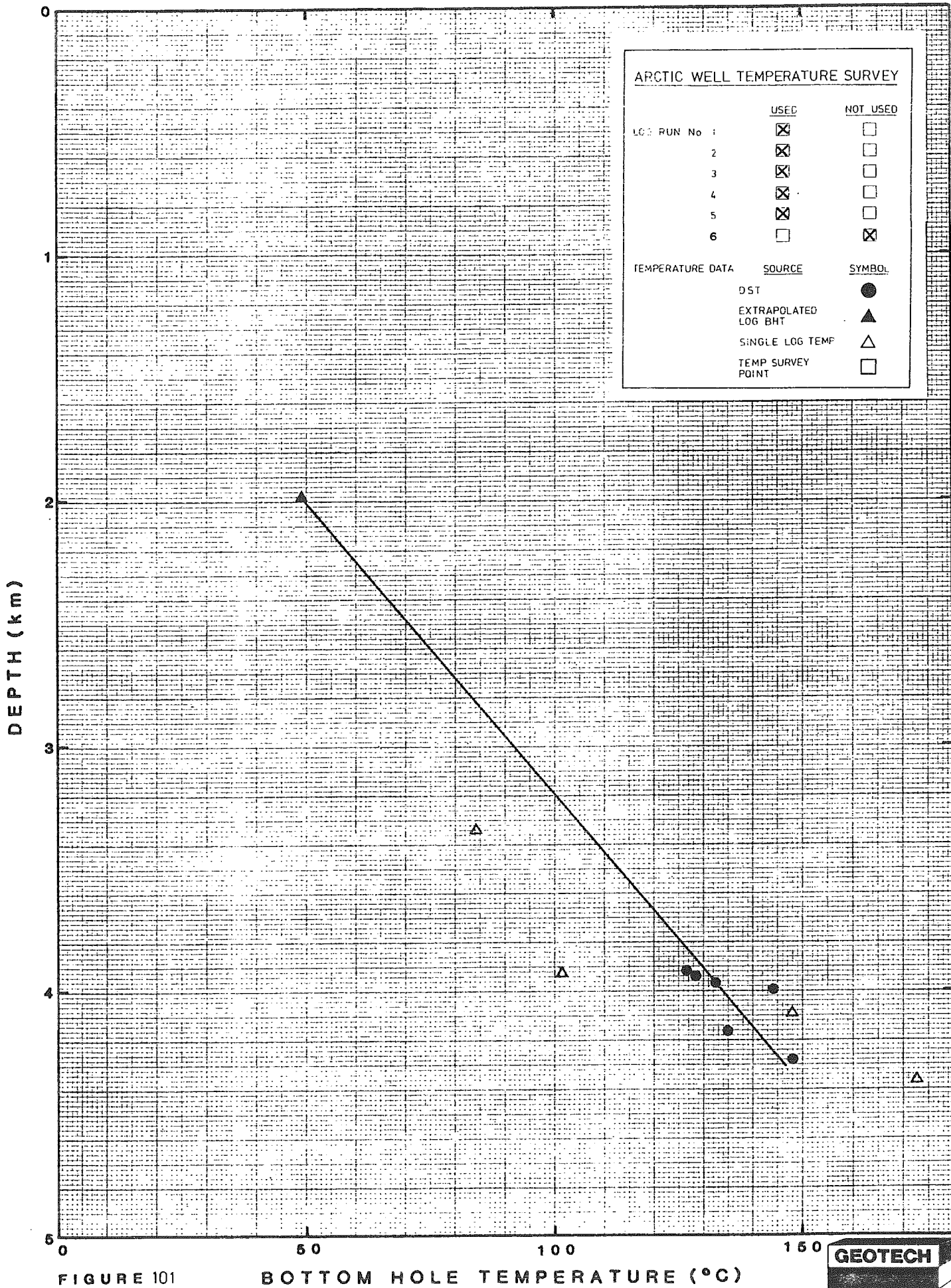


FIGURE 101

BOTTOM HOLE TEMPERATURE (°C)





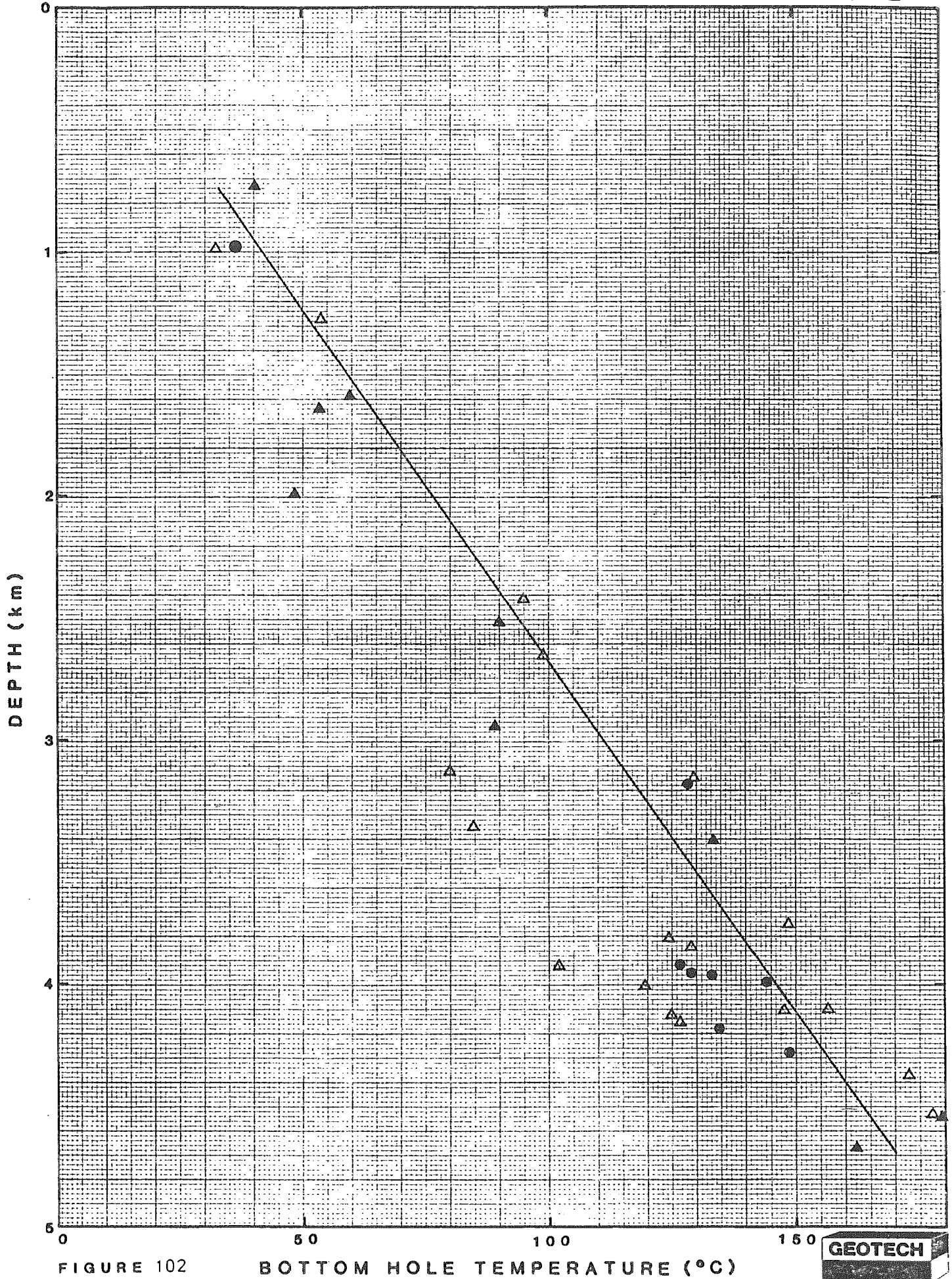


FIGURE 102

BOTTOM HOLE TEMPERATURE (°C)



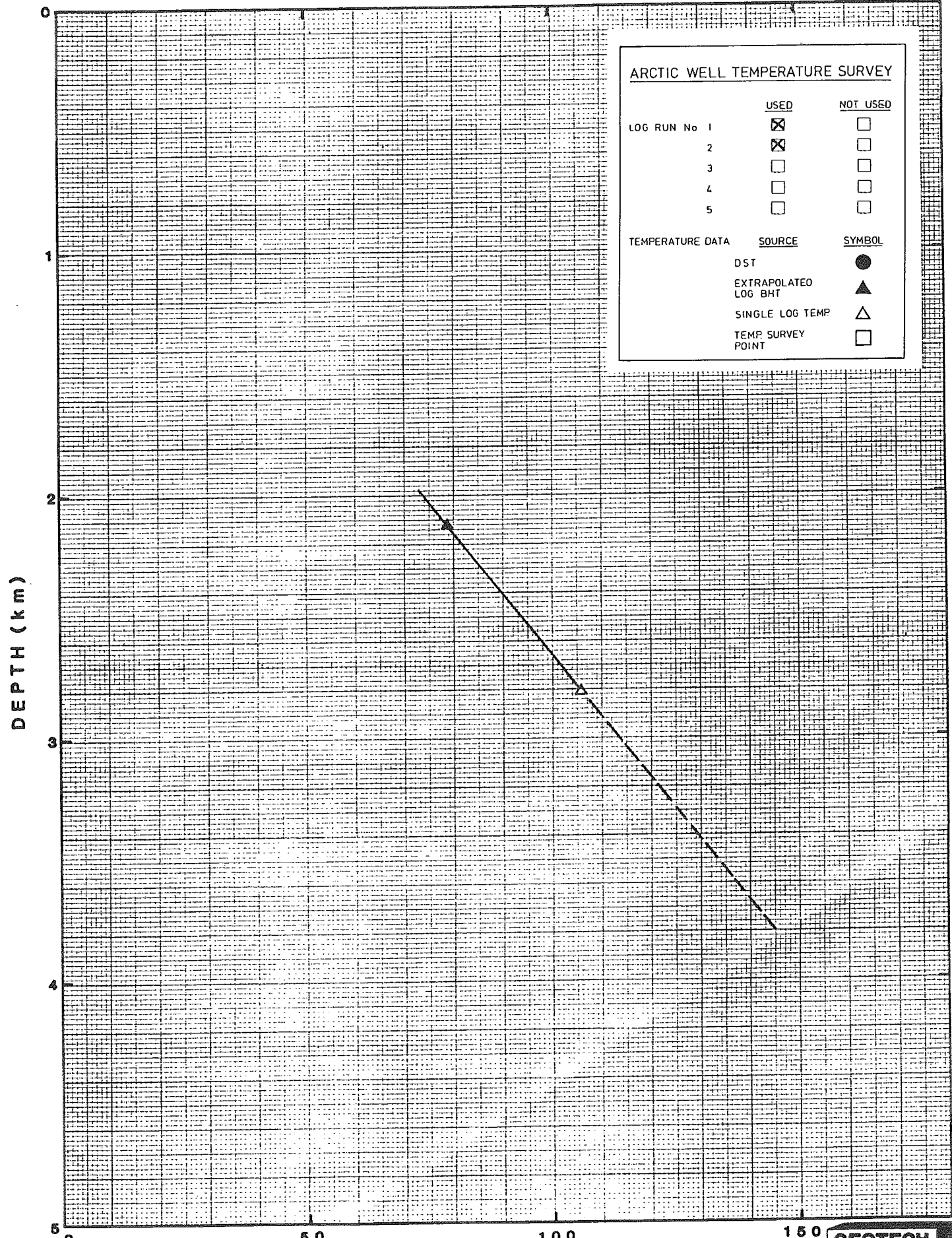


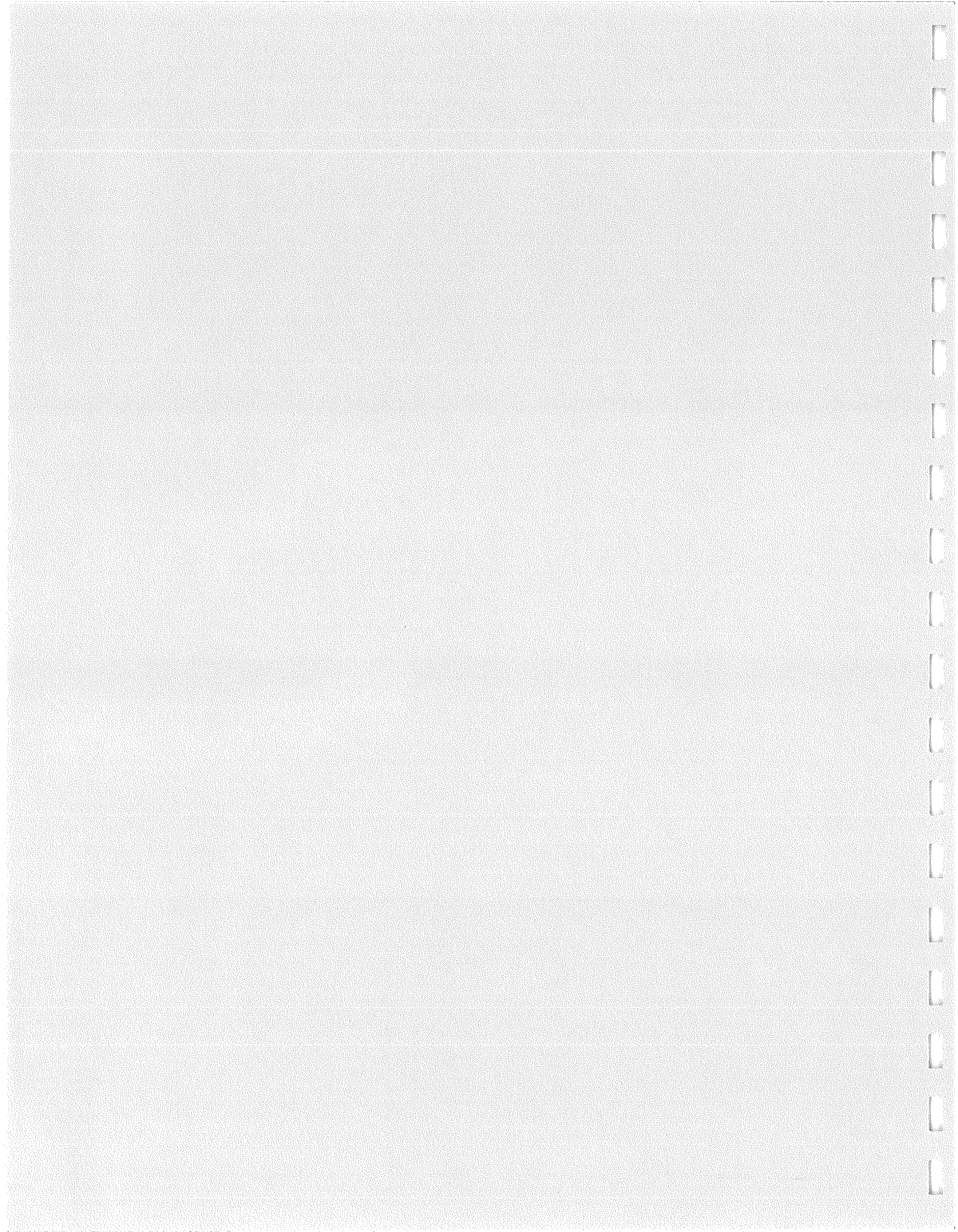
FIGURE 103

BOTTOM HOLE TEMPERATURE (°C)



60-40





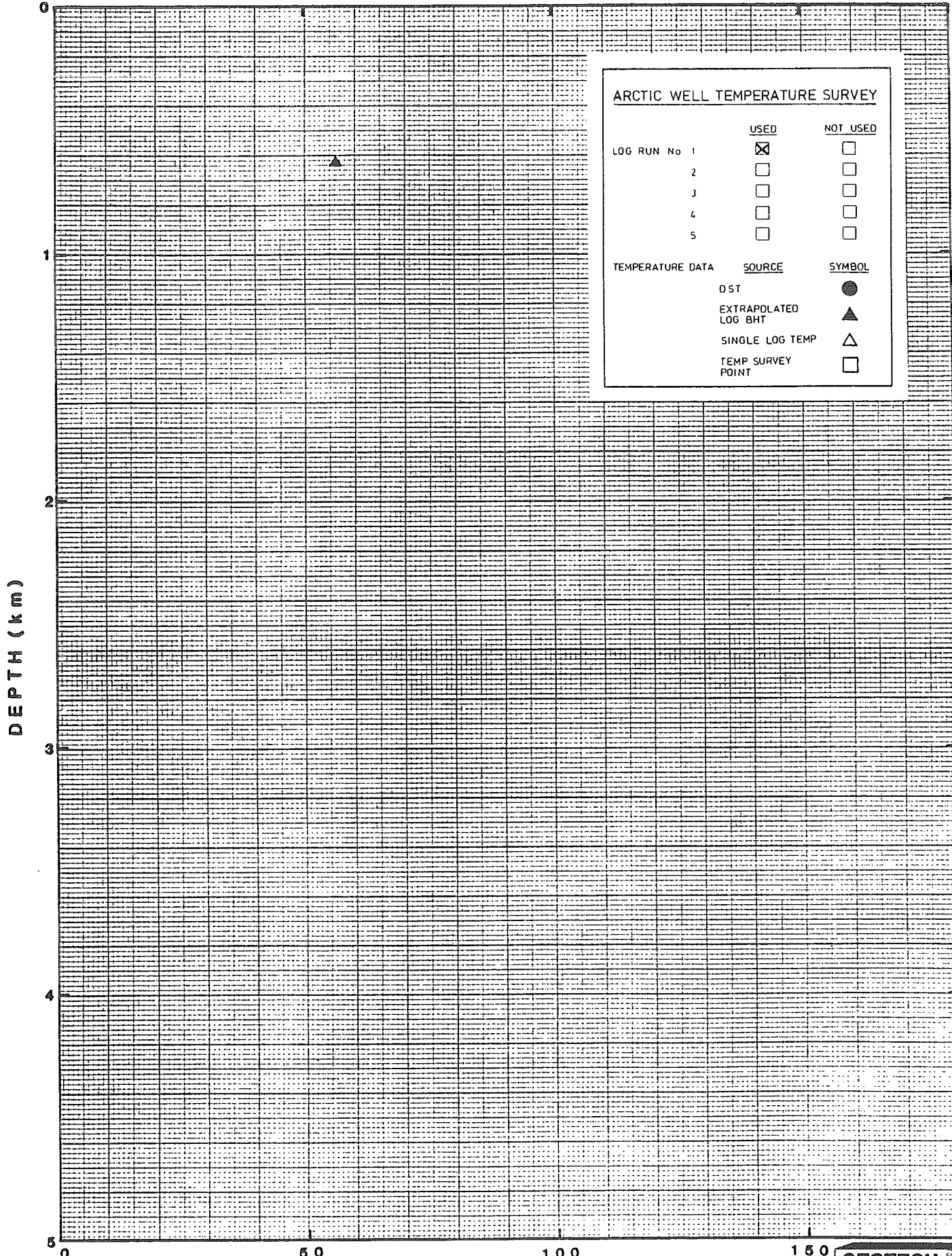
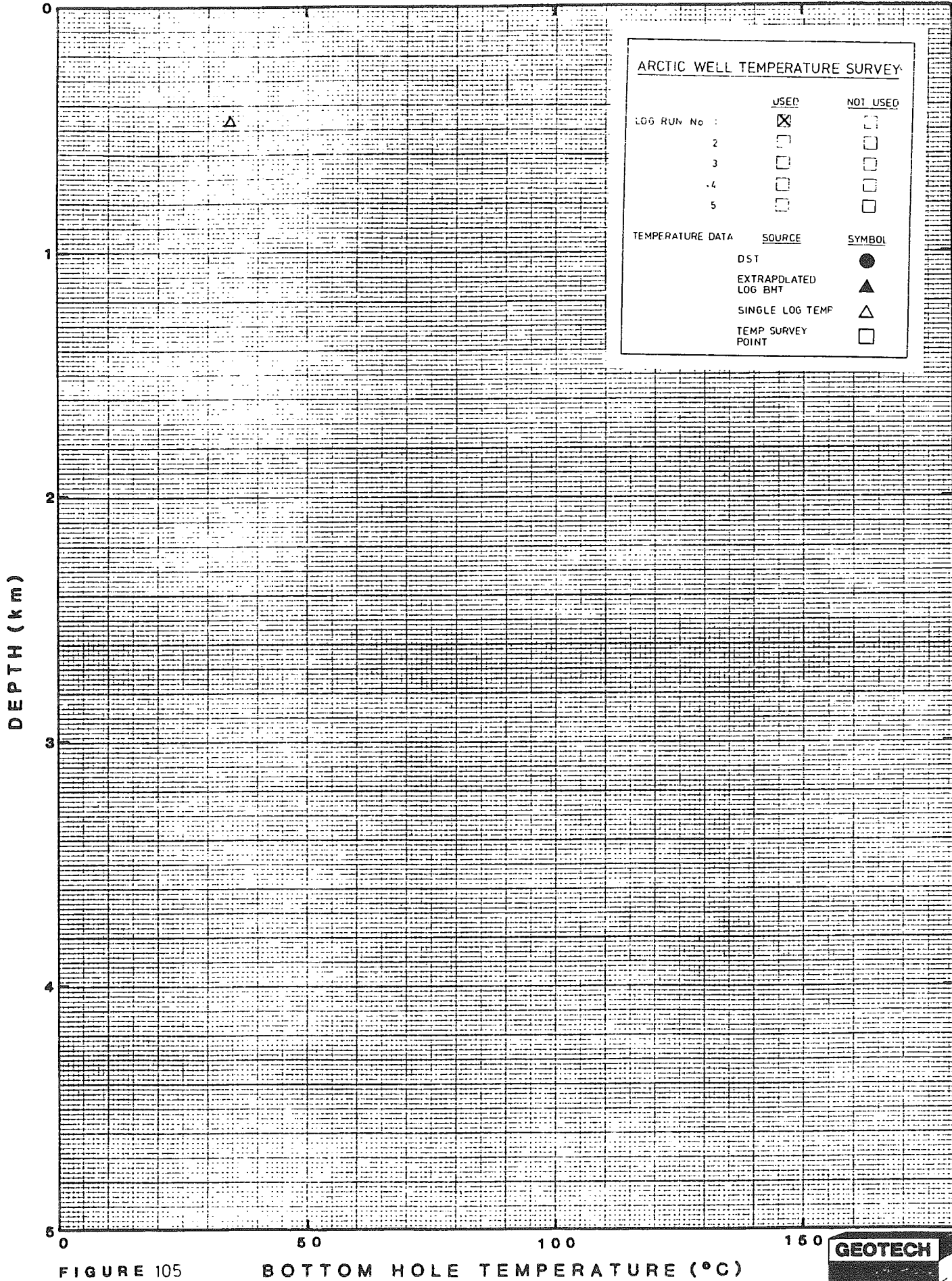


FIGURE 104

BOTTOM HOLE TEMPERATURE (°C)





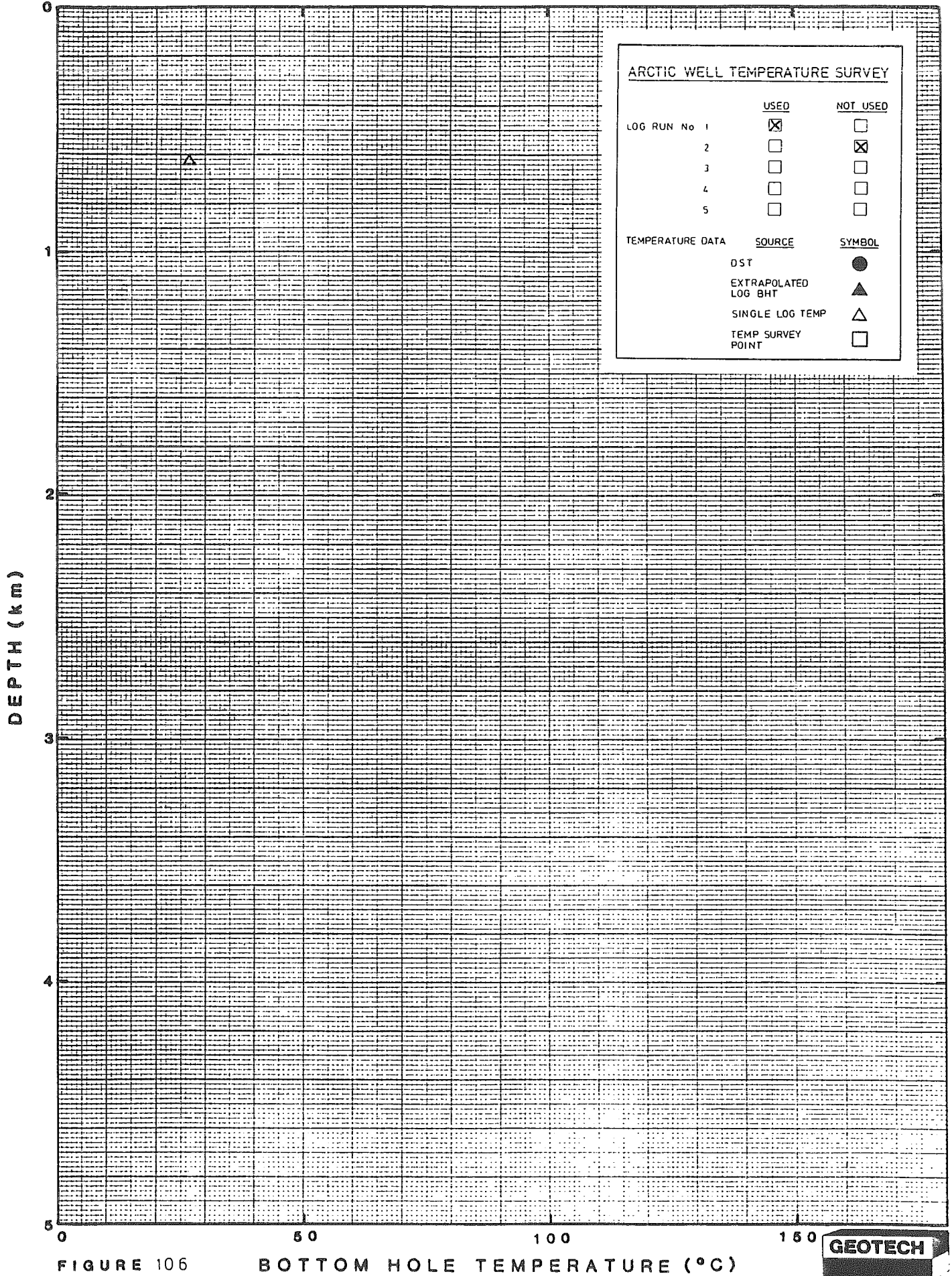


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No :	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA		
SOURCE	SYMBOL	
DST	●	
EXTRAPOLATED LOG BHT	▲	
SINGLE LOG TEMP	△	
TEMP SURVEY POINT	□	

FIGURE 105

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

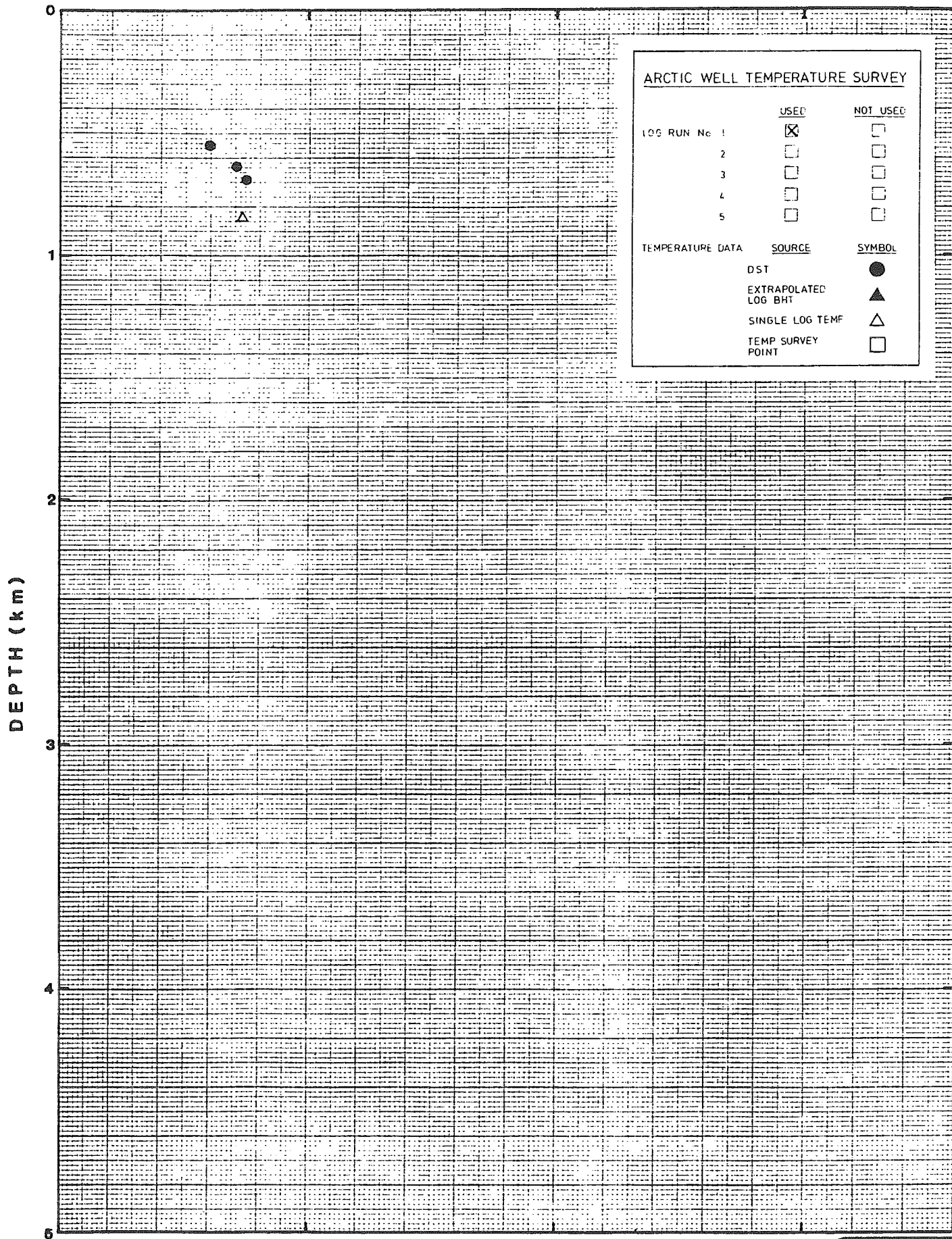
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

100

FIGURE 106

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

0 50 100 150

FIGURE 107 BOTTOM HOLE TEMPERATURE (°C)



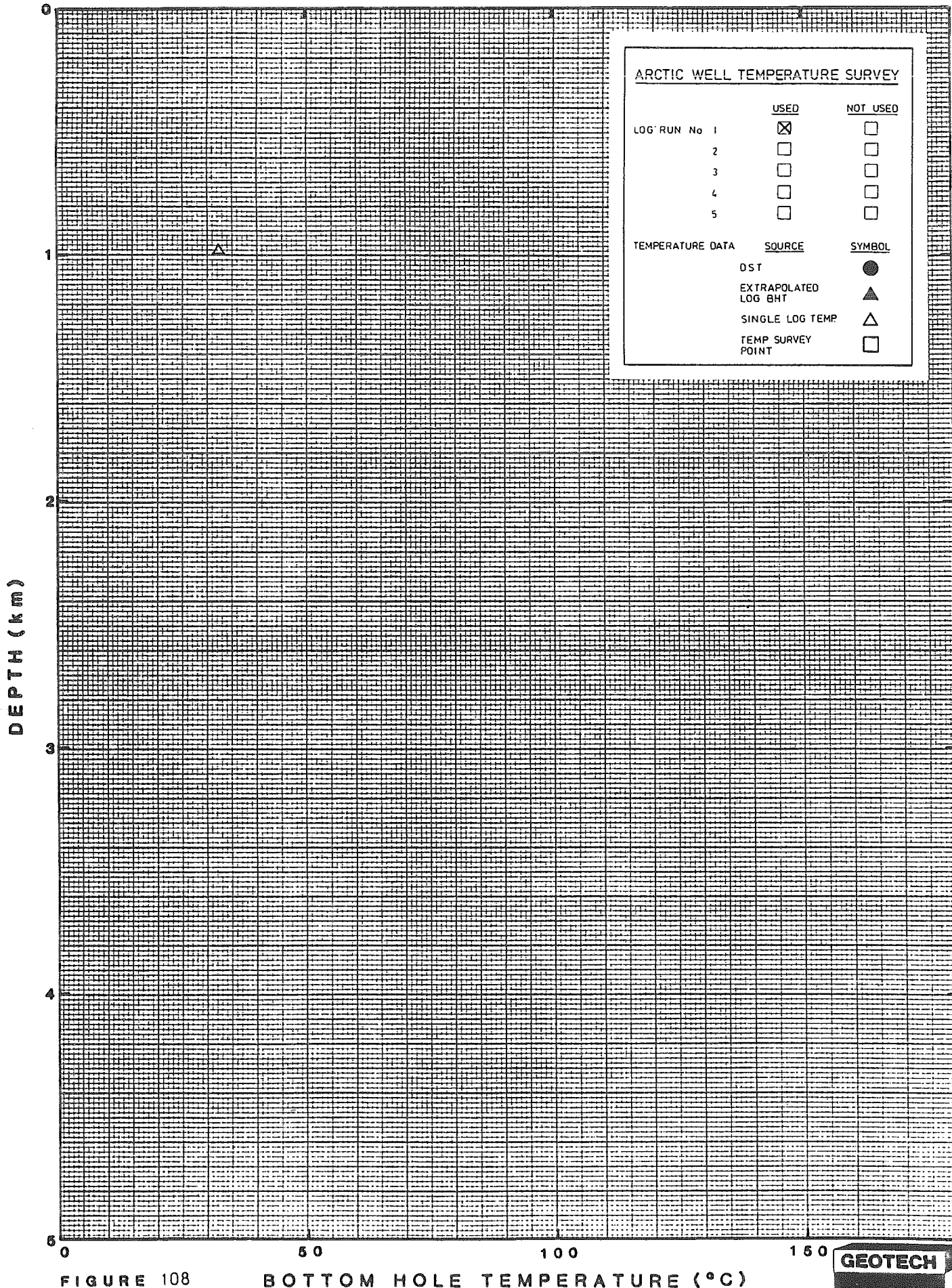
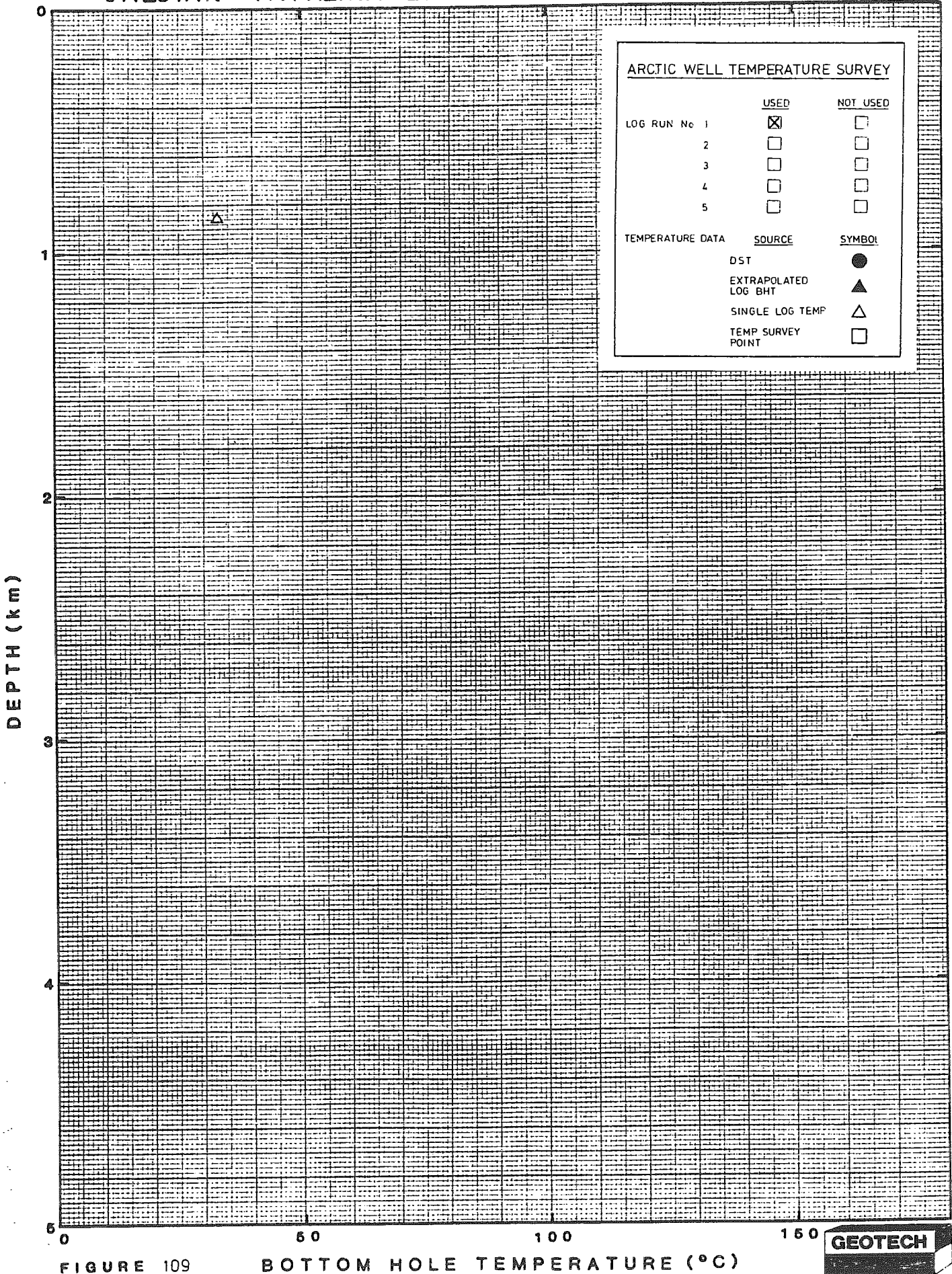


FIGURE 108

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 109

BOTTOM HOLE TEMPERATURE (°C)





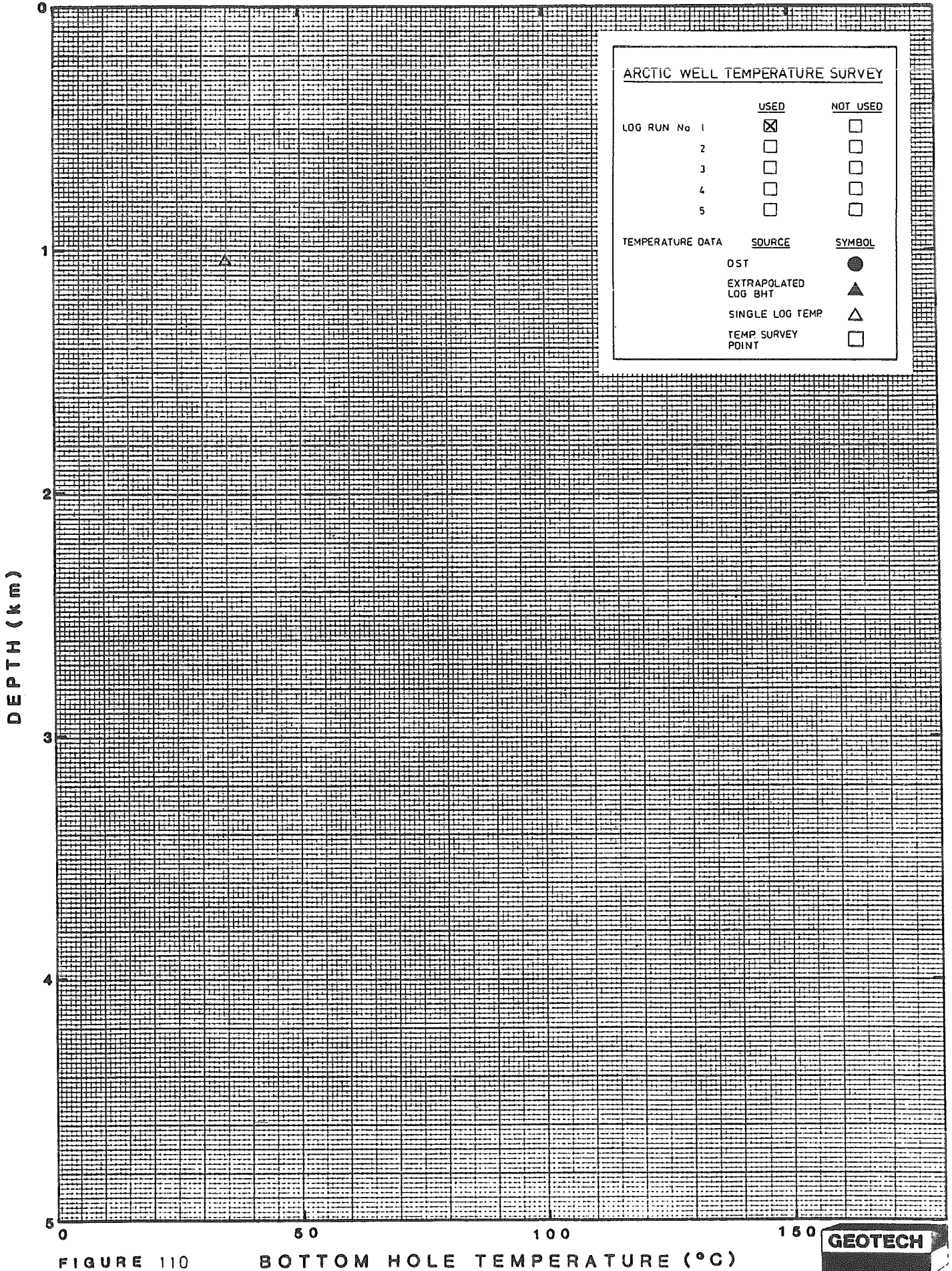
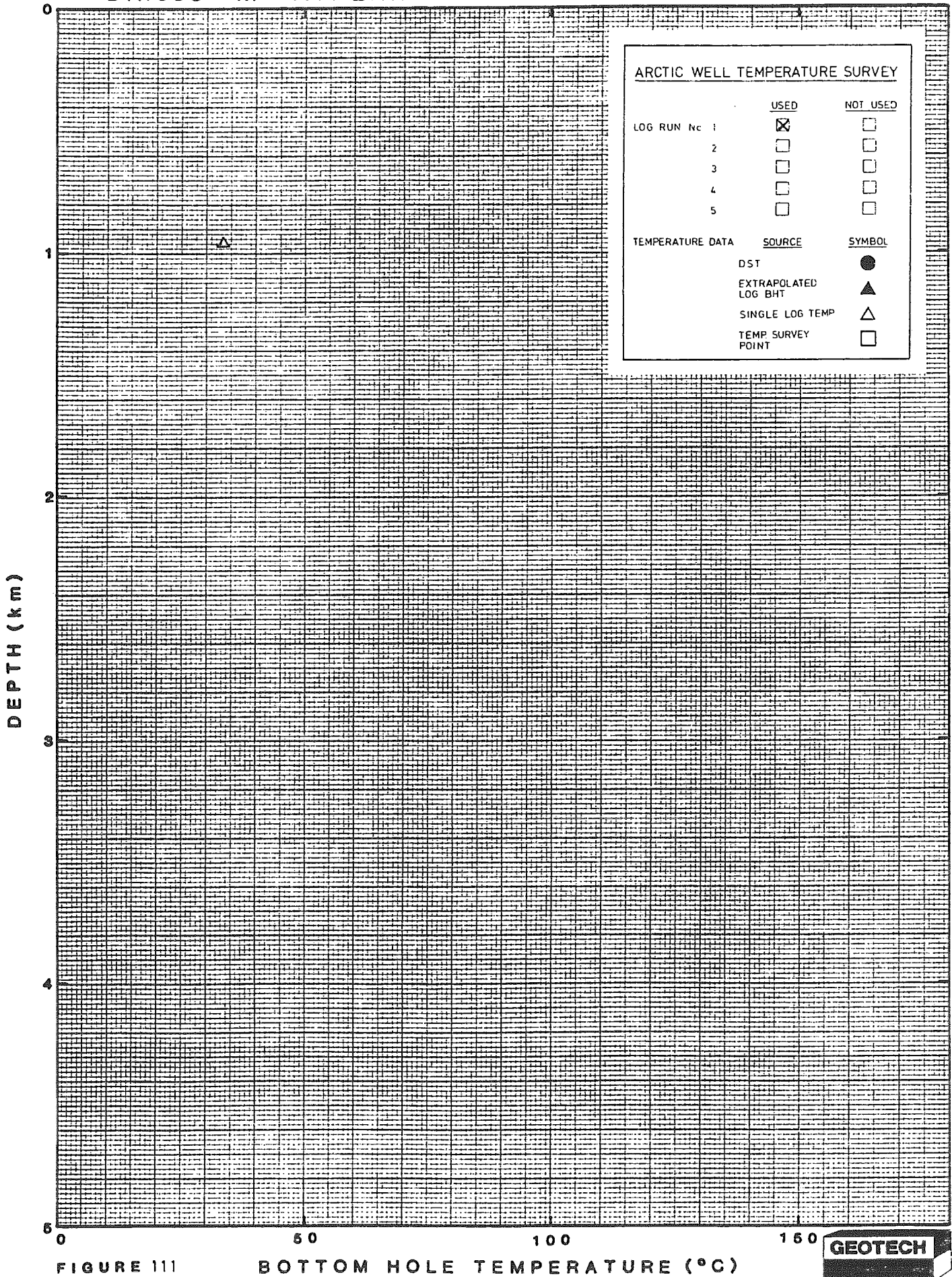


FIGURE 110

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 111

BOTTOM HOLE TEMPERATURE (°C)



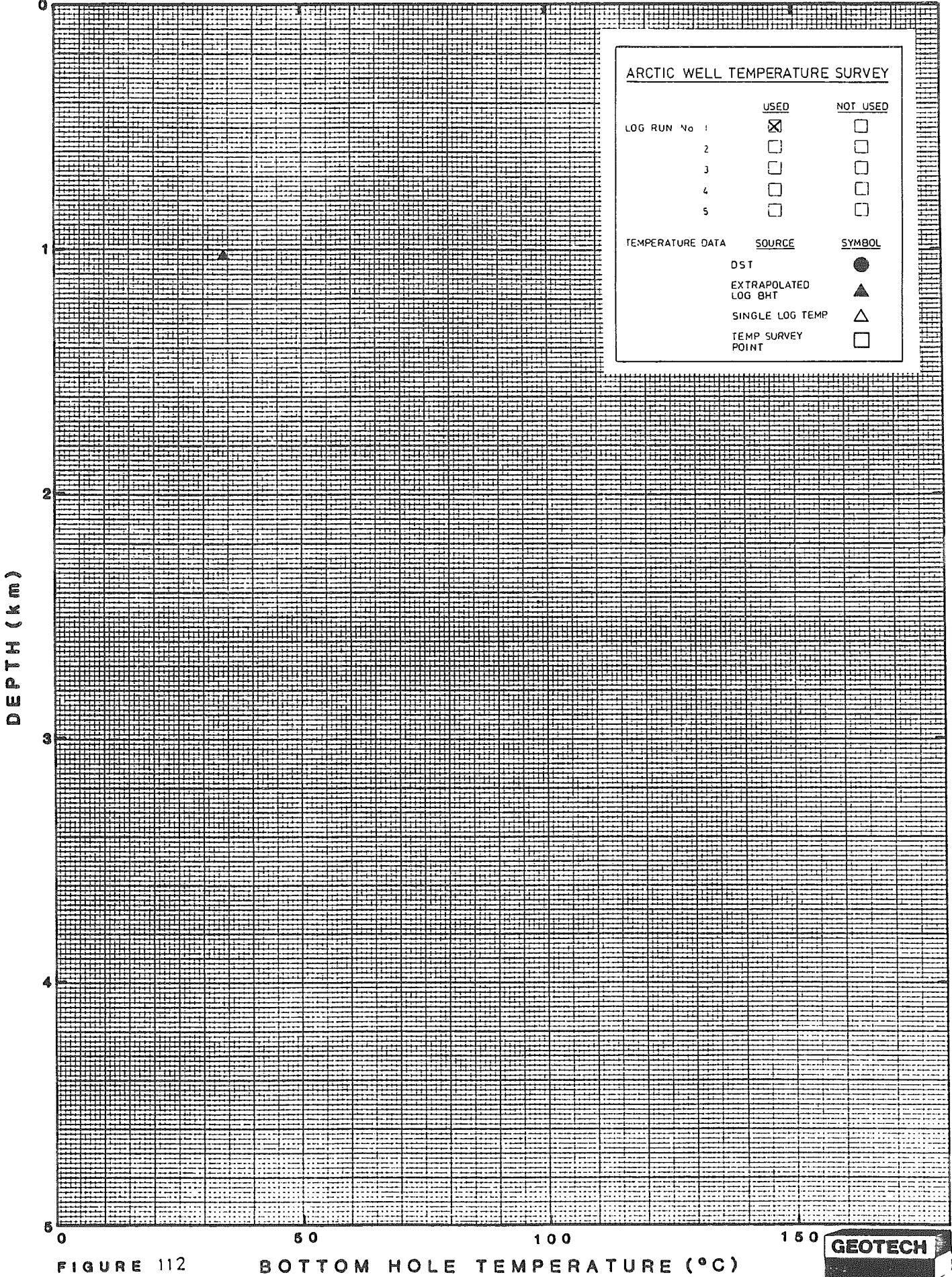


FIGURE 112

BOTTOM HOLE TEMPERATURE (°C)





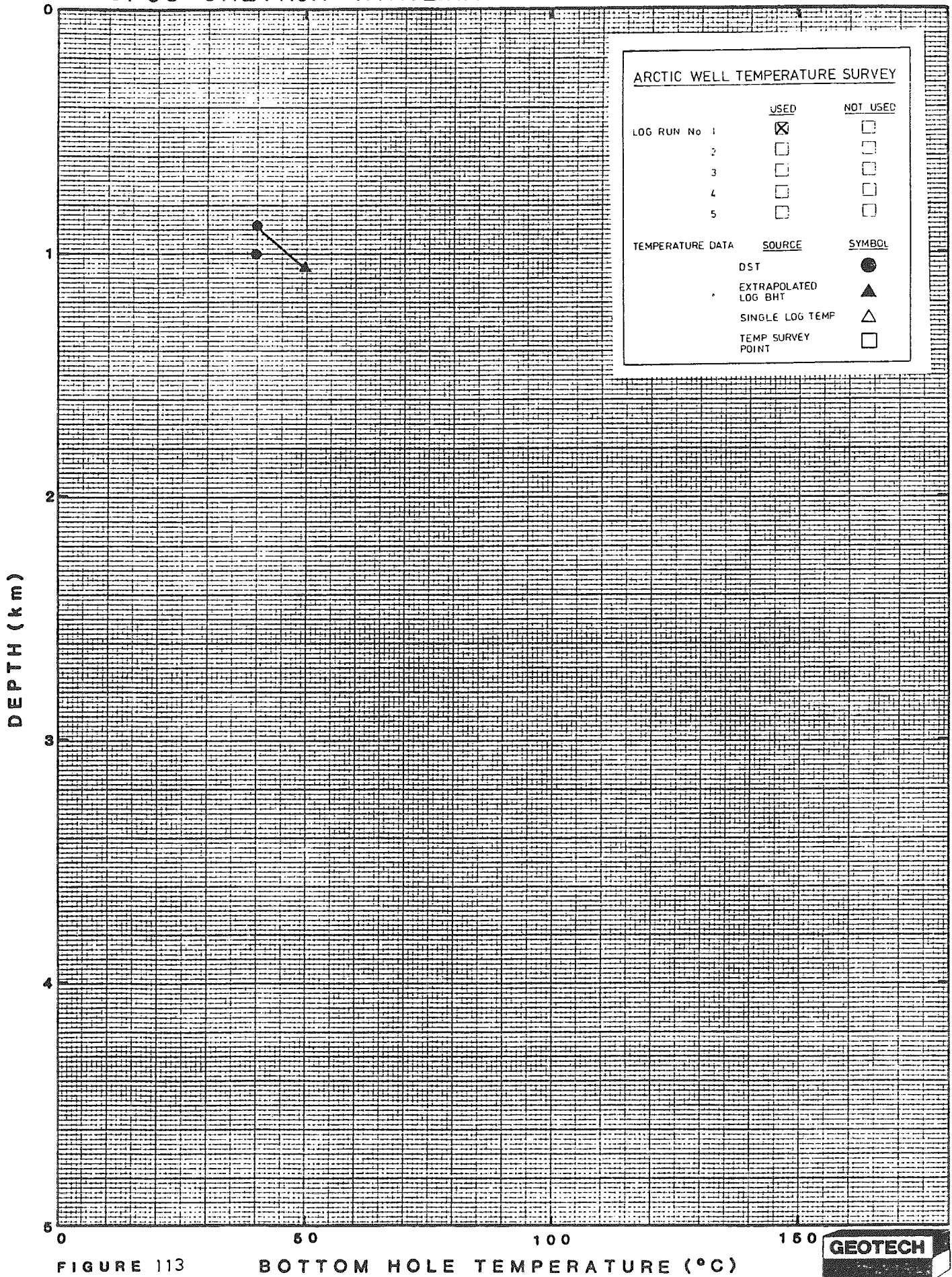
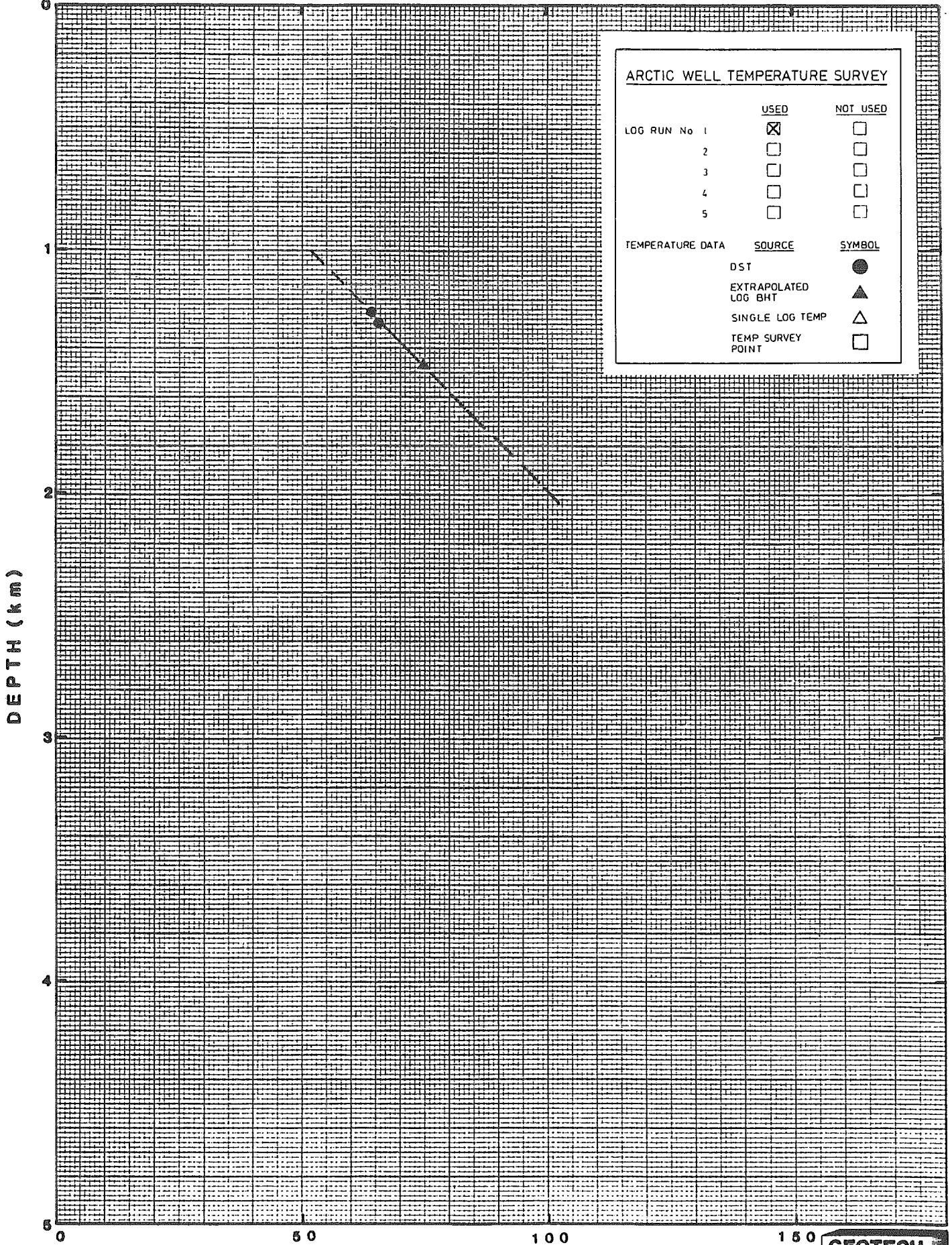


FIGURE 113

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 114

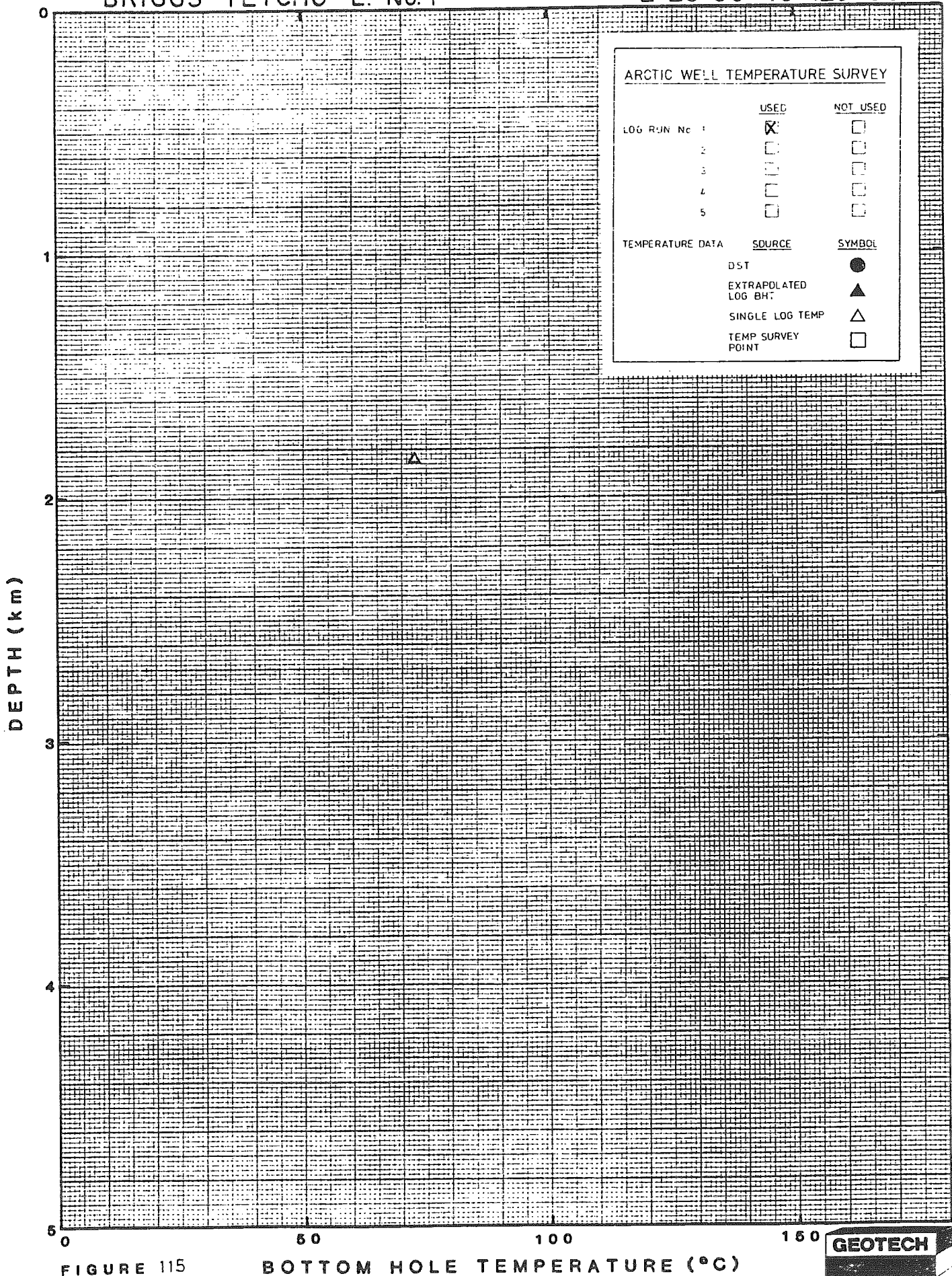
BOTTOM HOLE TEMPERATURE (°C)





BRIGGS TETCHO L. No. 1

L-26 60-40-120-30



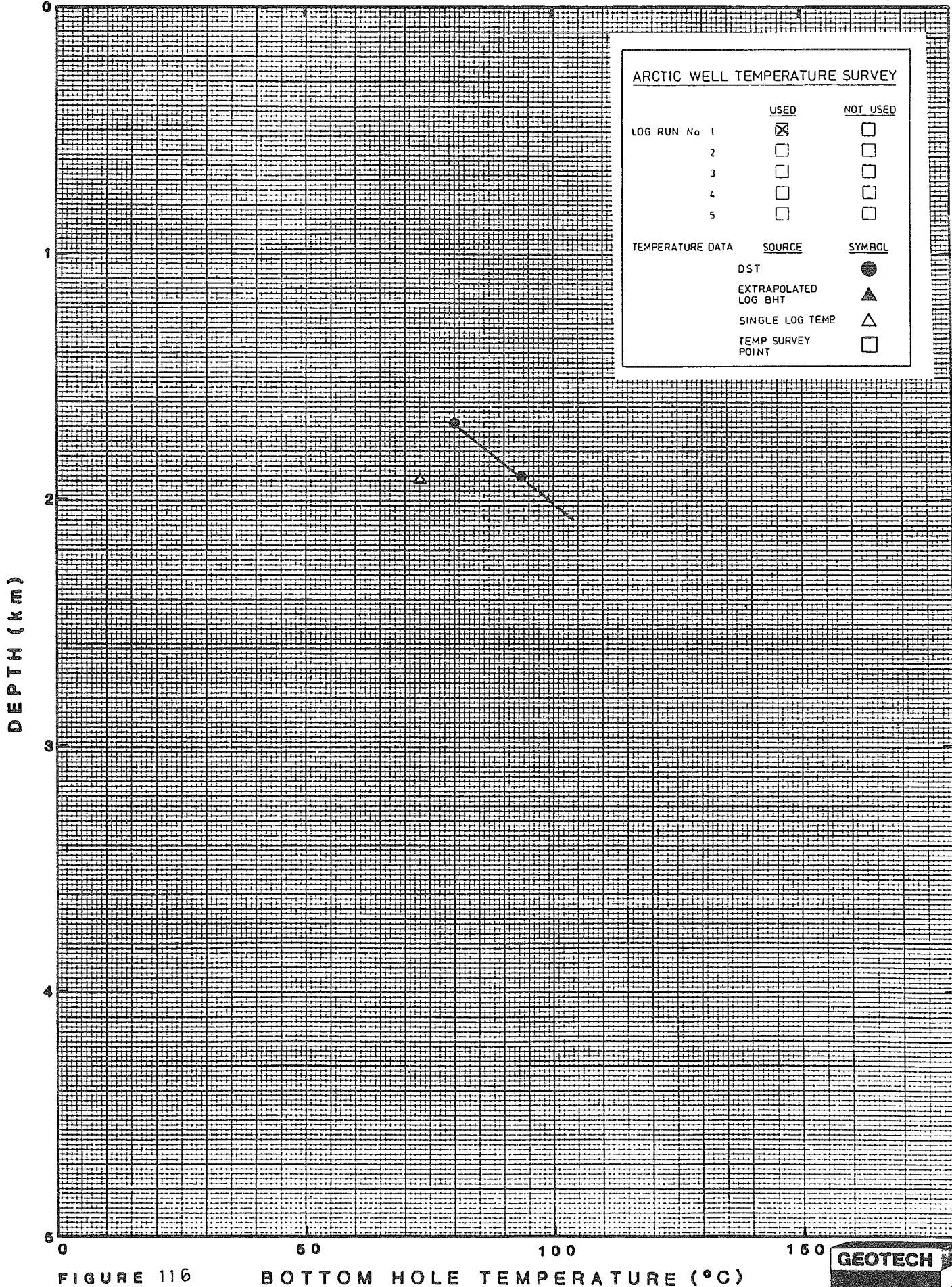


FIGURE 116

BOTTOM HOLE TEMPERATURE (°C)



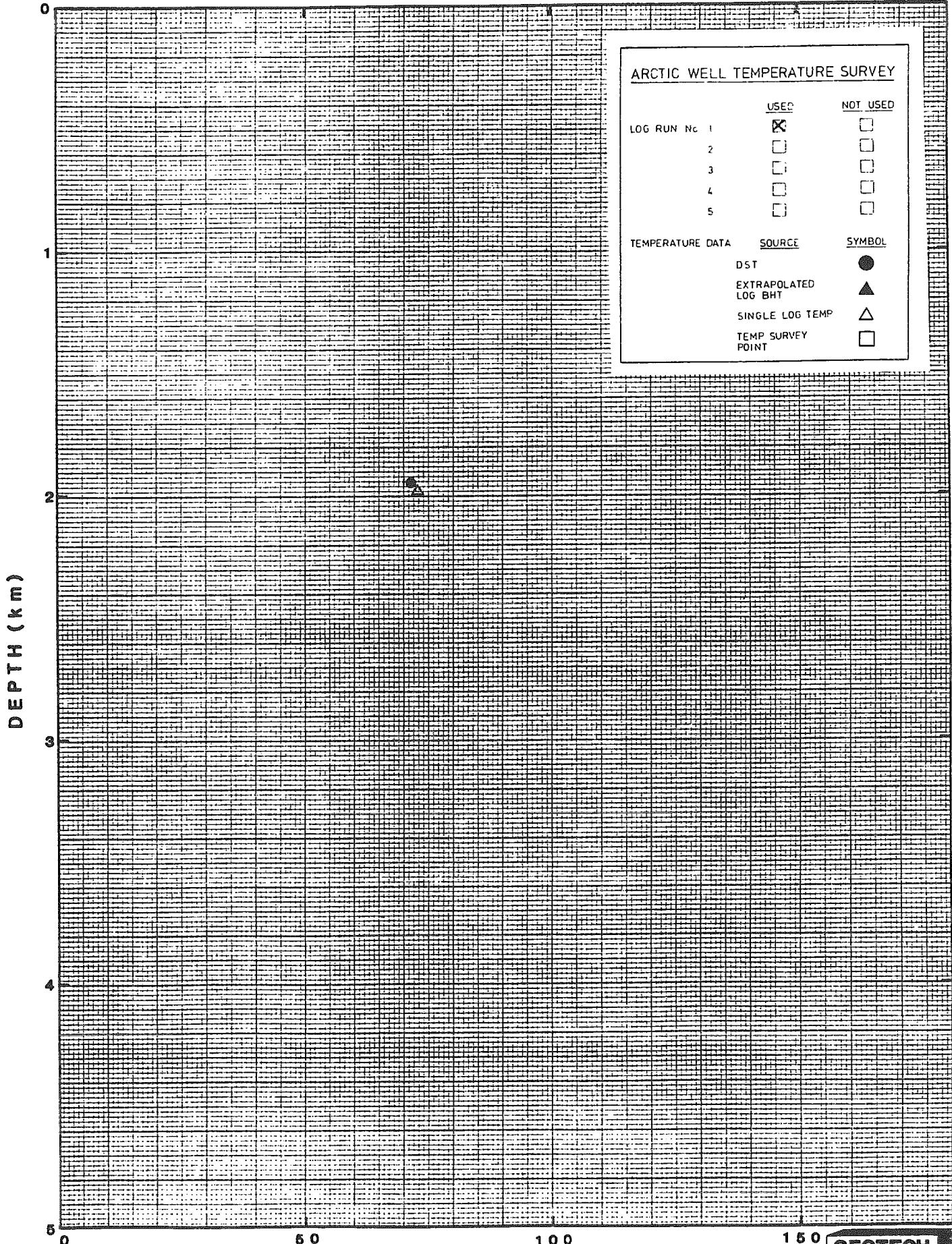


FIGURE 117

BOTTOM HOLE TEMPERATURE (°C)





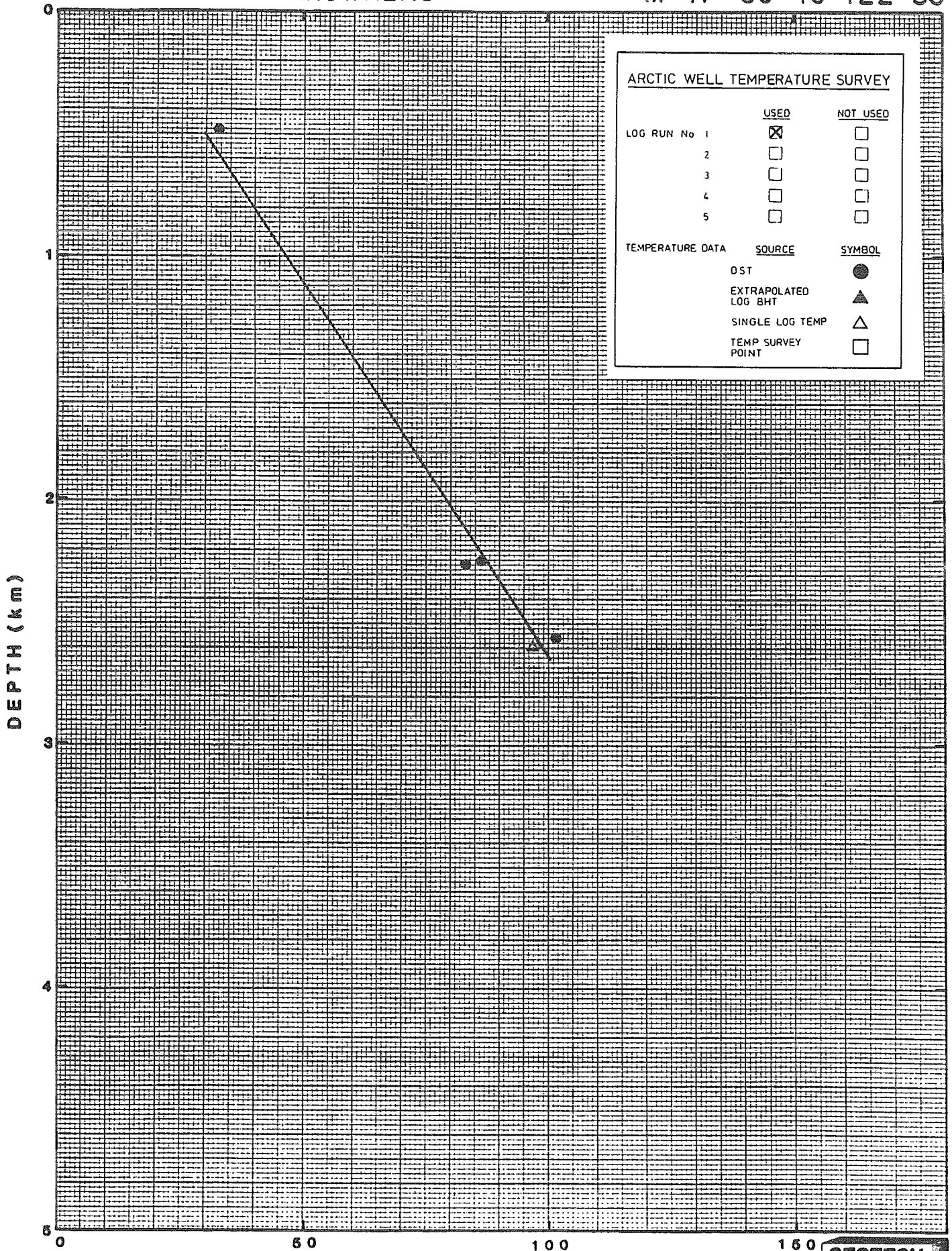


FIGURE 118

BOTTOM HOLE TEMPERATURE (°C)



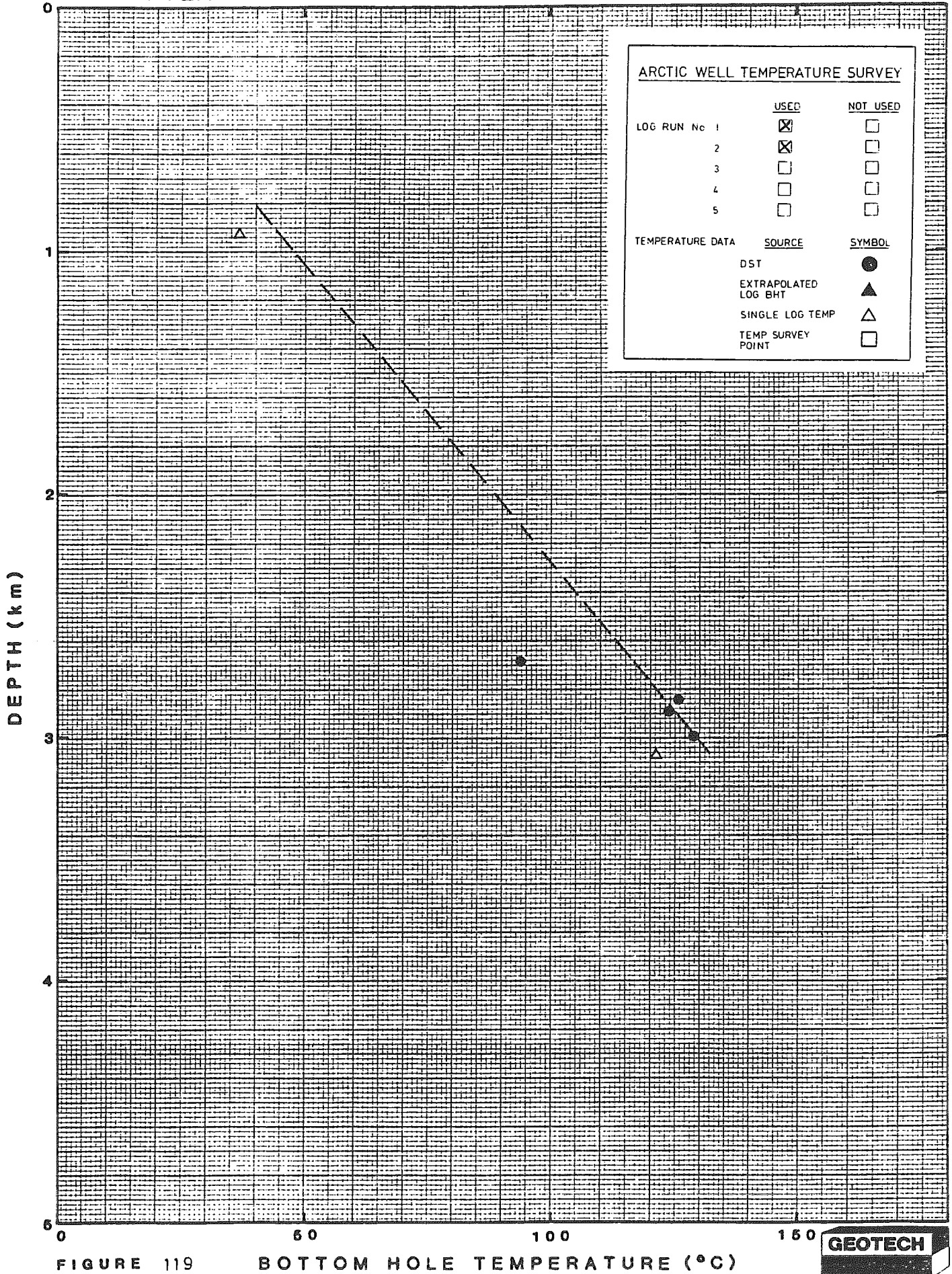


FIGURE 119

BOTTOM HOLE TEMPERATURE (°C)





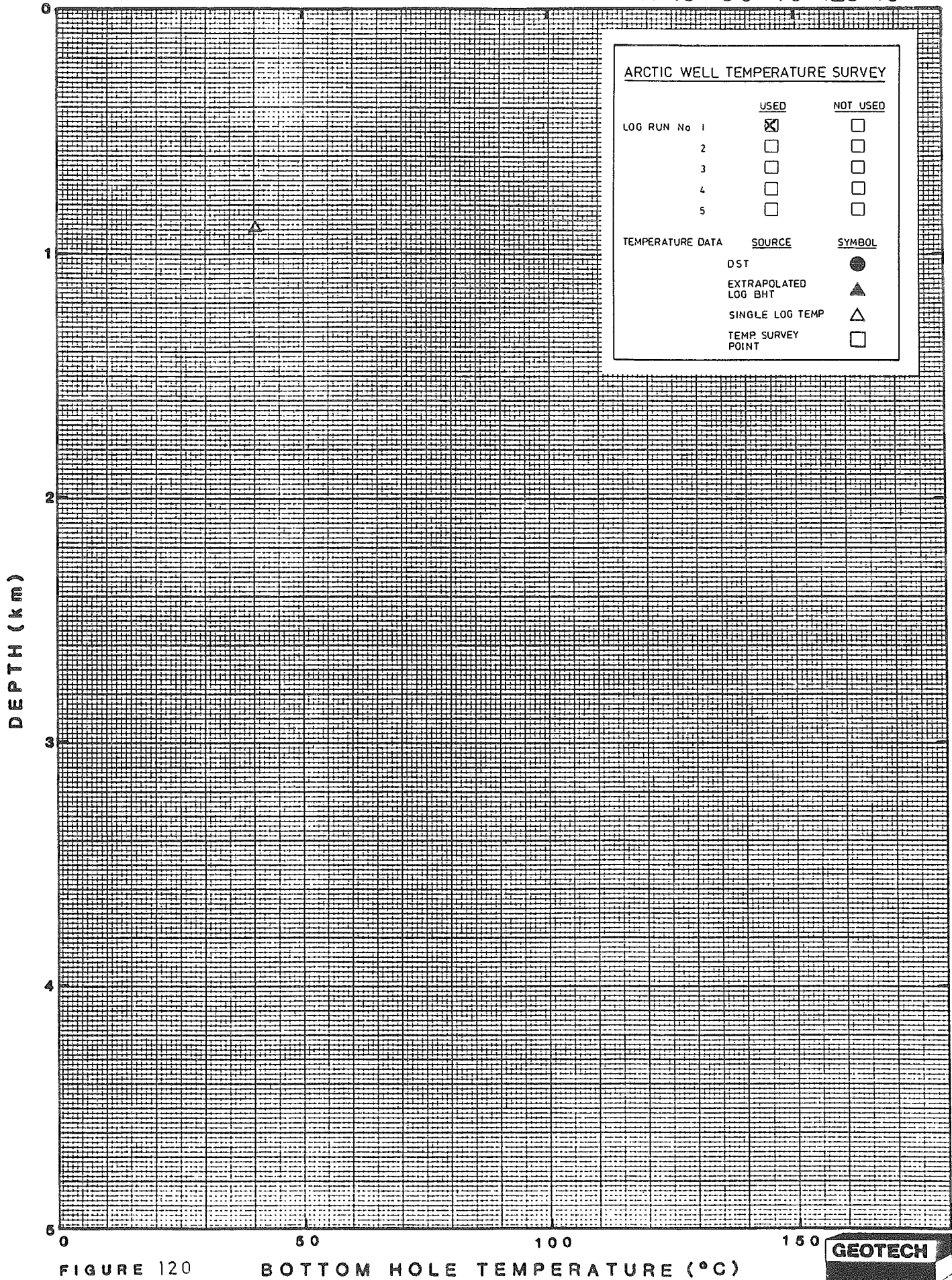


FIGURE 120

BOTTOM HOLE TEMPERATURE (°C)



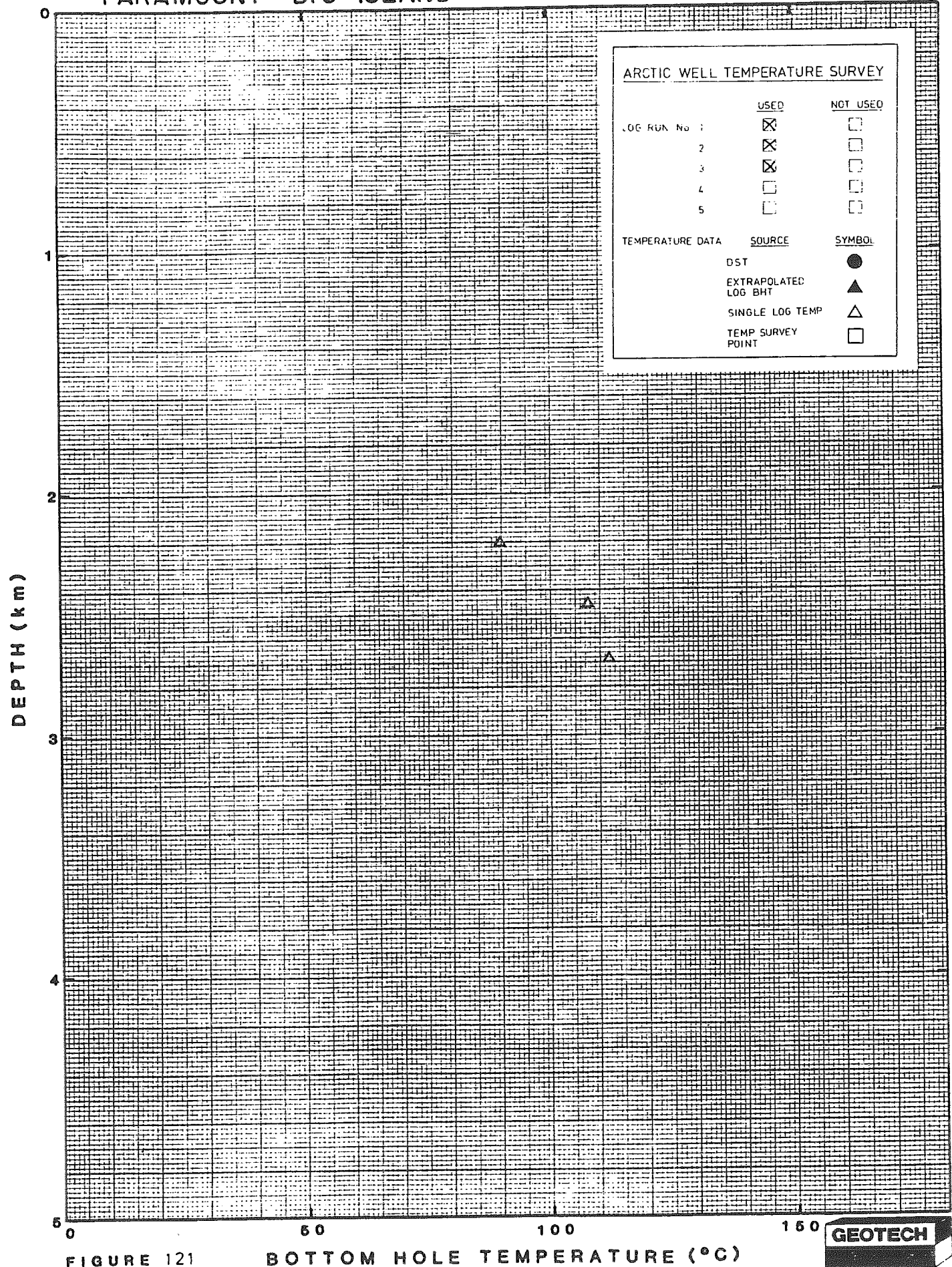
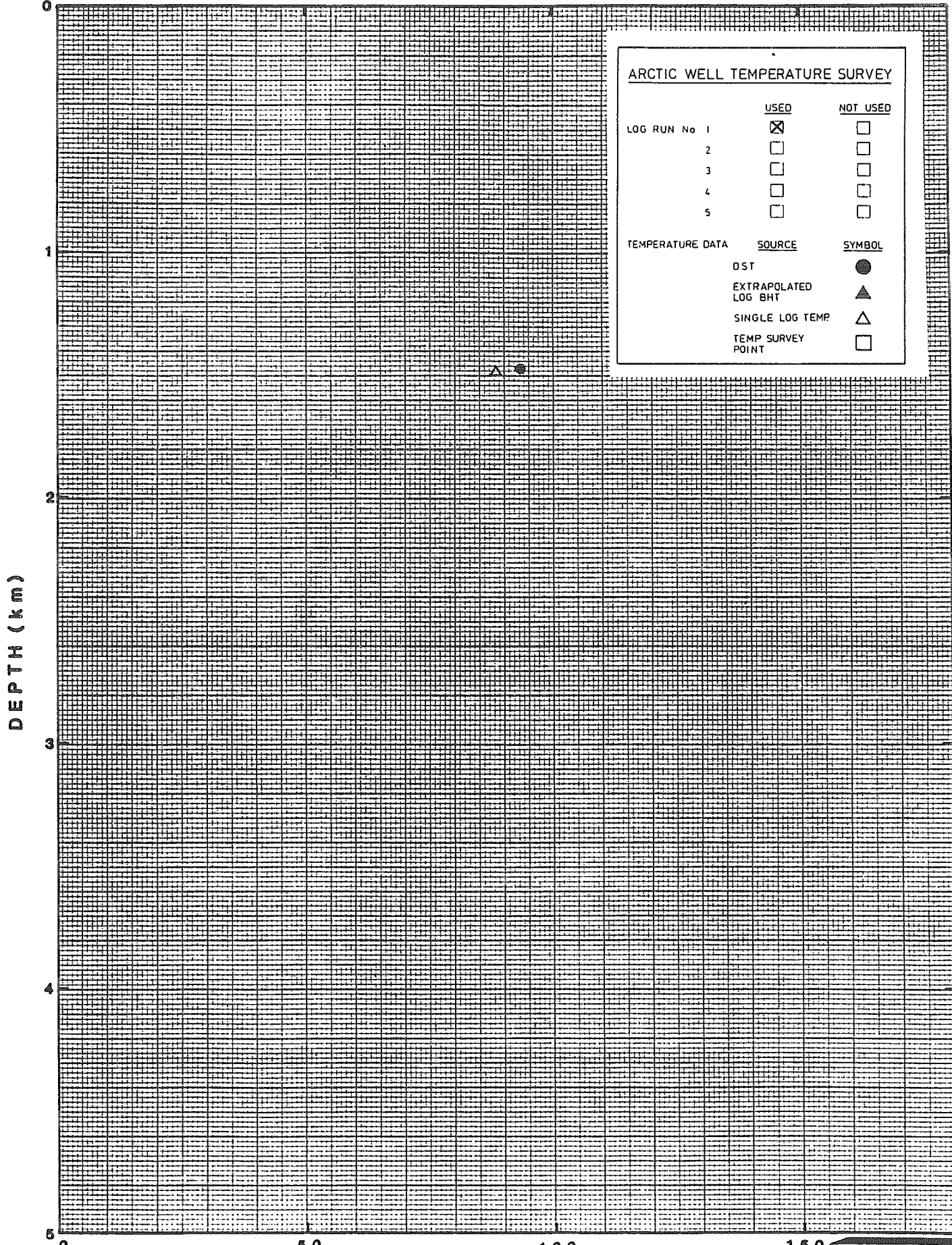


FIGURE 121





6.7 F

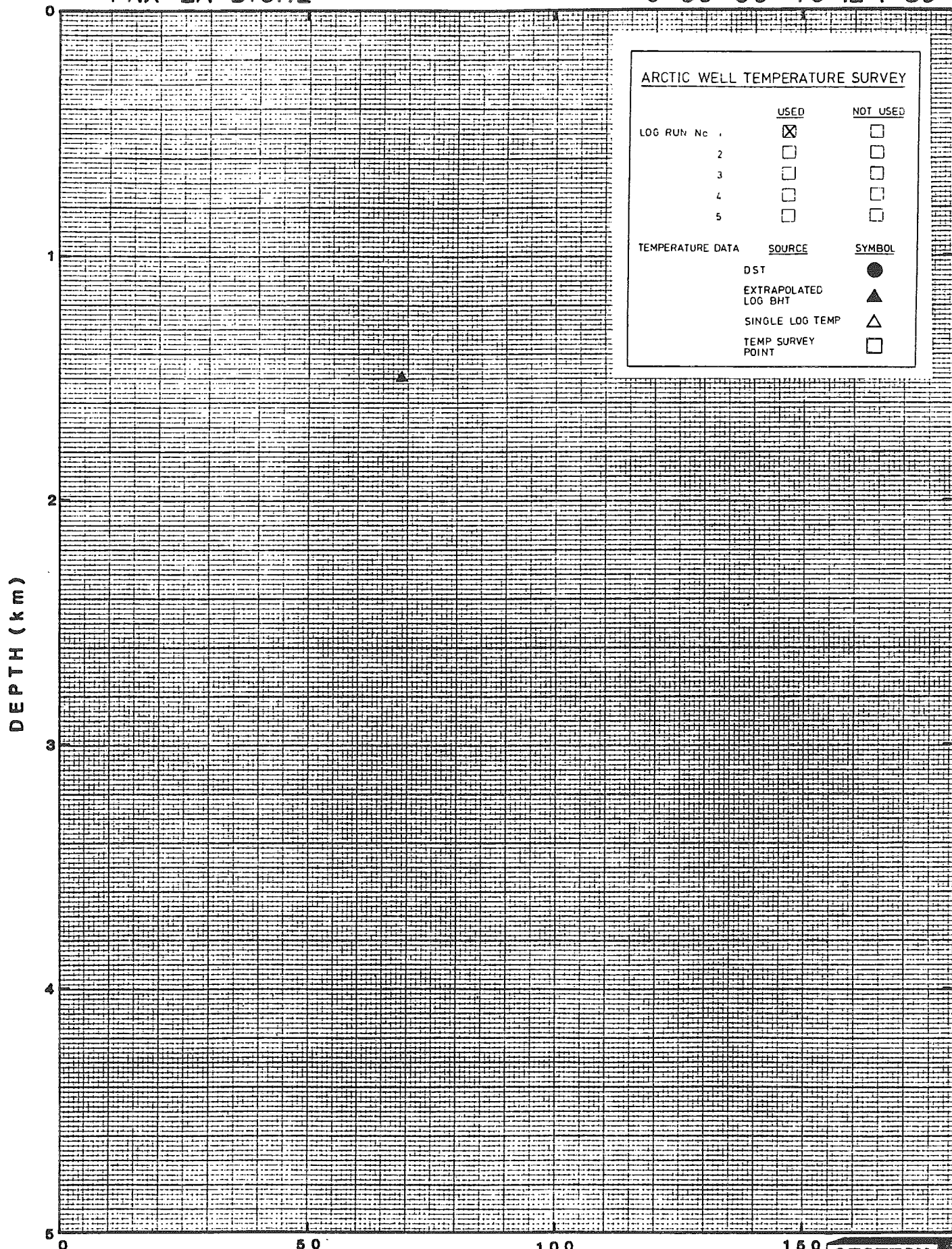
DEPTH (km)

FIGURE 122

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No .	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA		
SOURCE	SYMBOL	
DST	●	
EXTRAPOLATED LOG BHT	▲	
SINGLE LOG TEMP	△	
TEMP SURVEY POINT	□	

DEPTH (km)

0

1

2

3

4

5

50

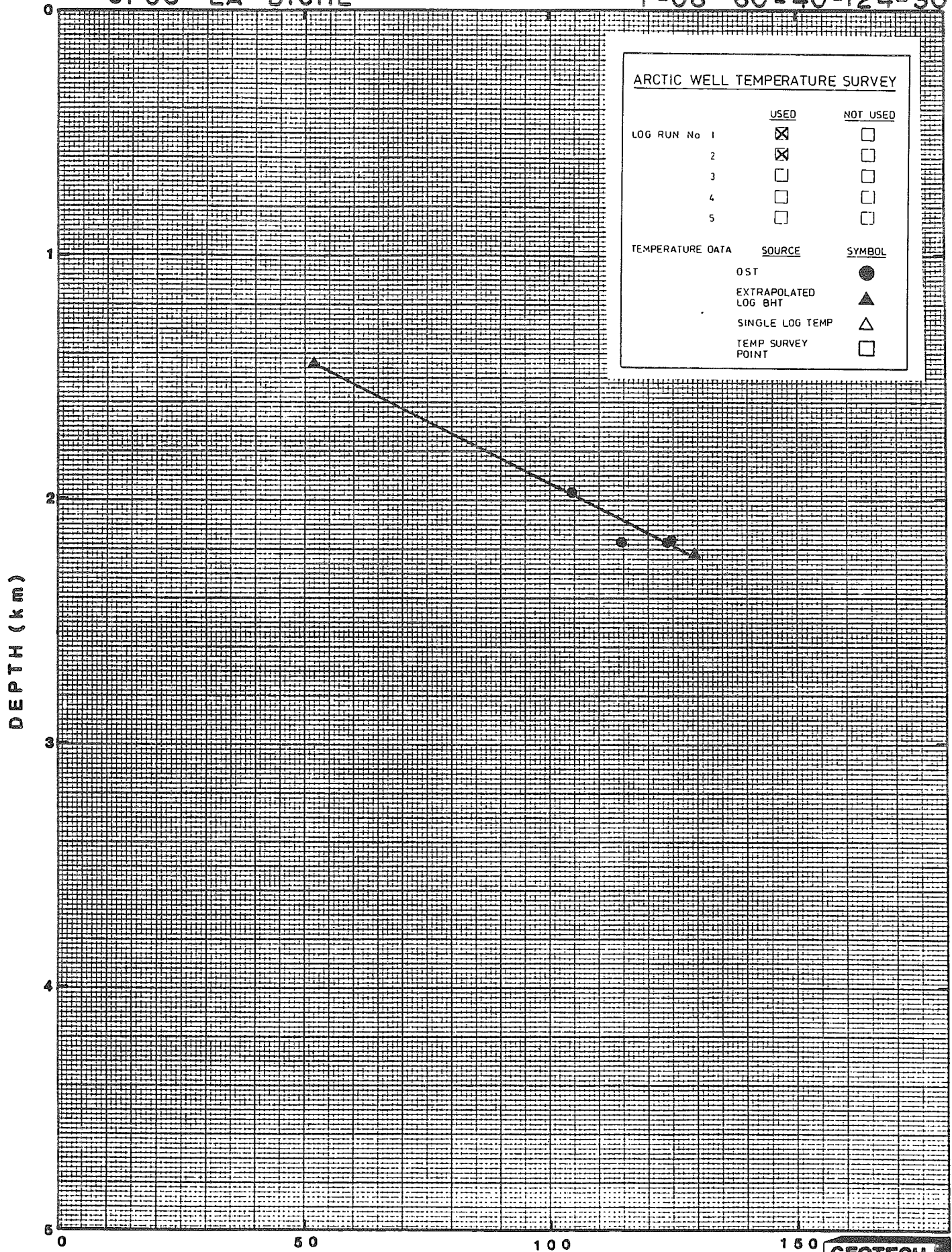
100

160

FIGURE 123

BOTTOM HOLE TEMPERATURE (°C)





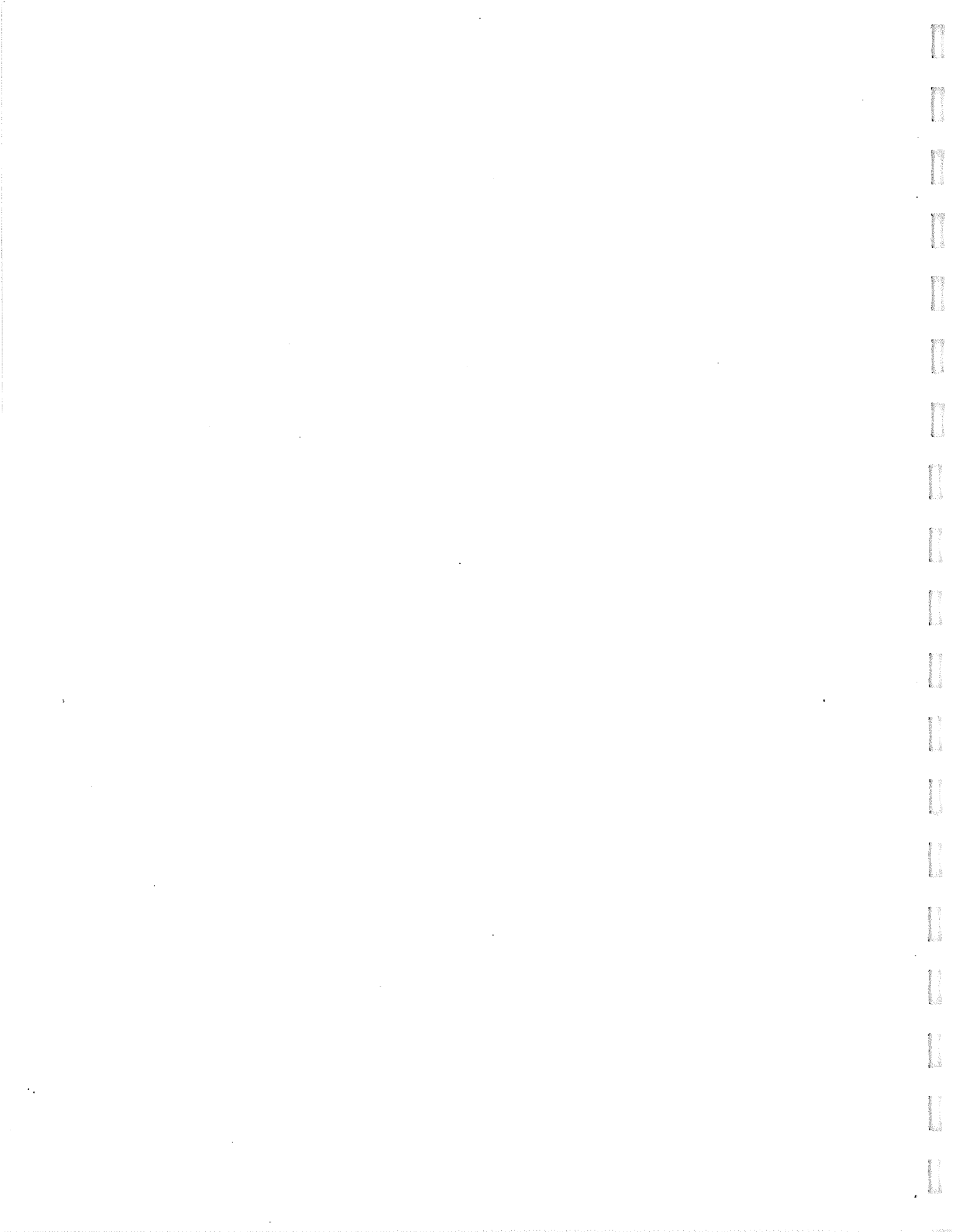
DEPTH (km)

FIGURE 124

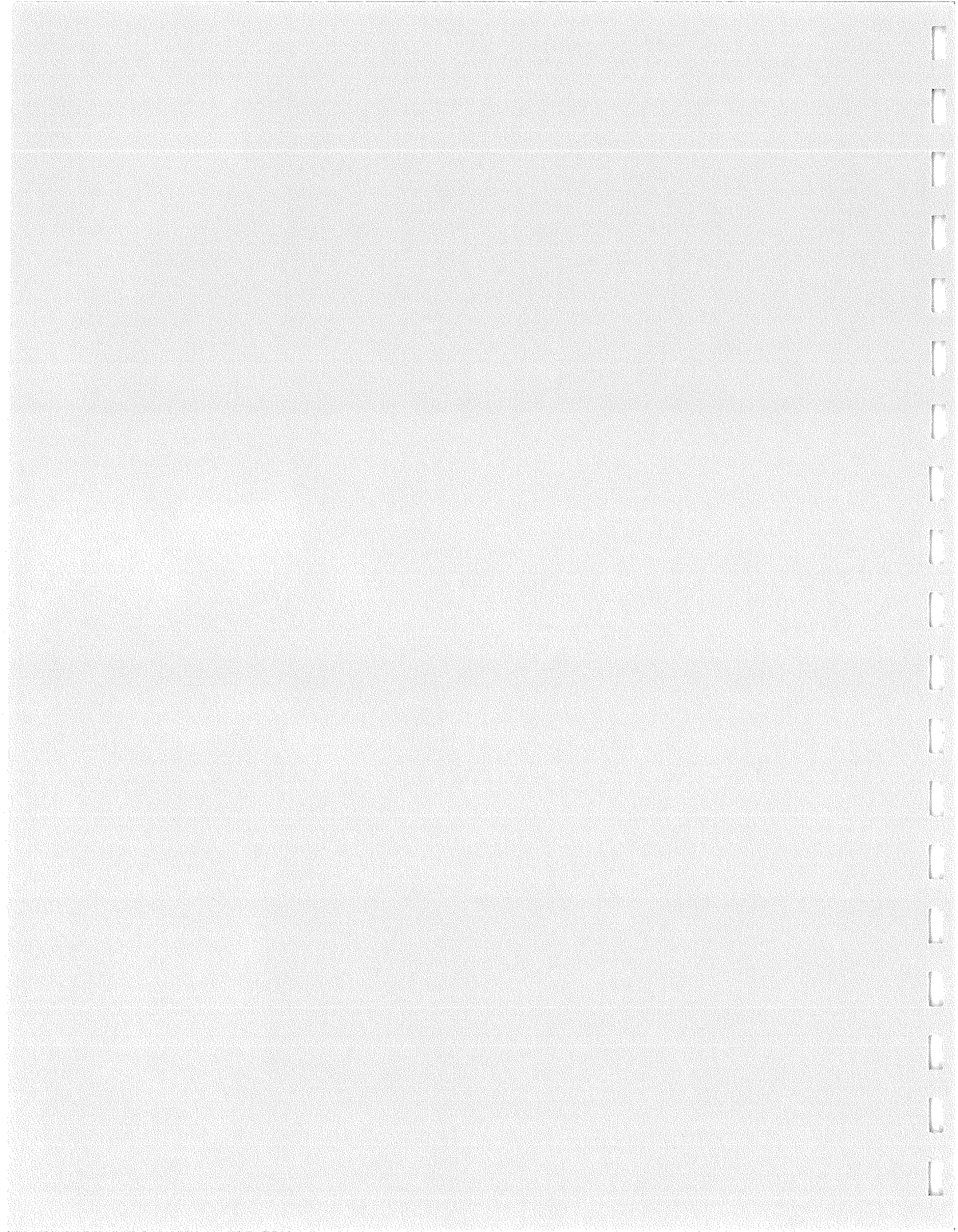
BOTTOM HOLE TEMPERATURE (°C)













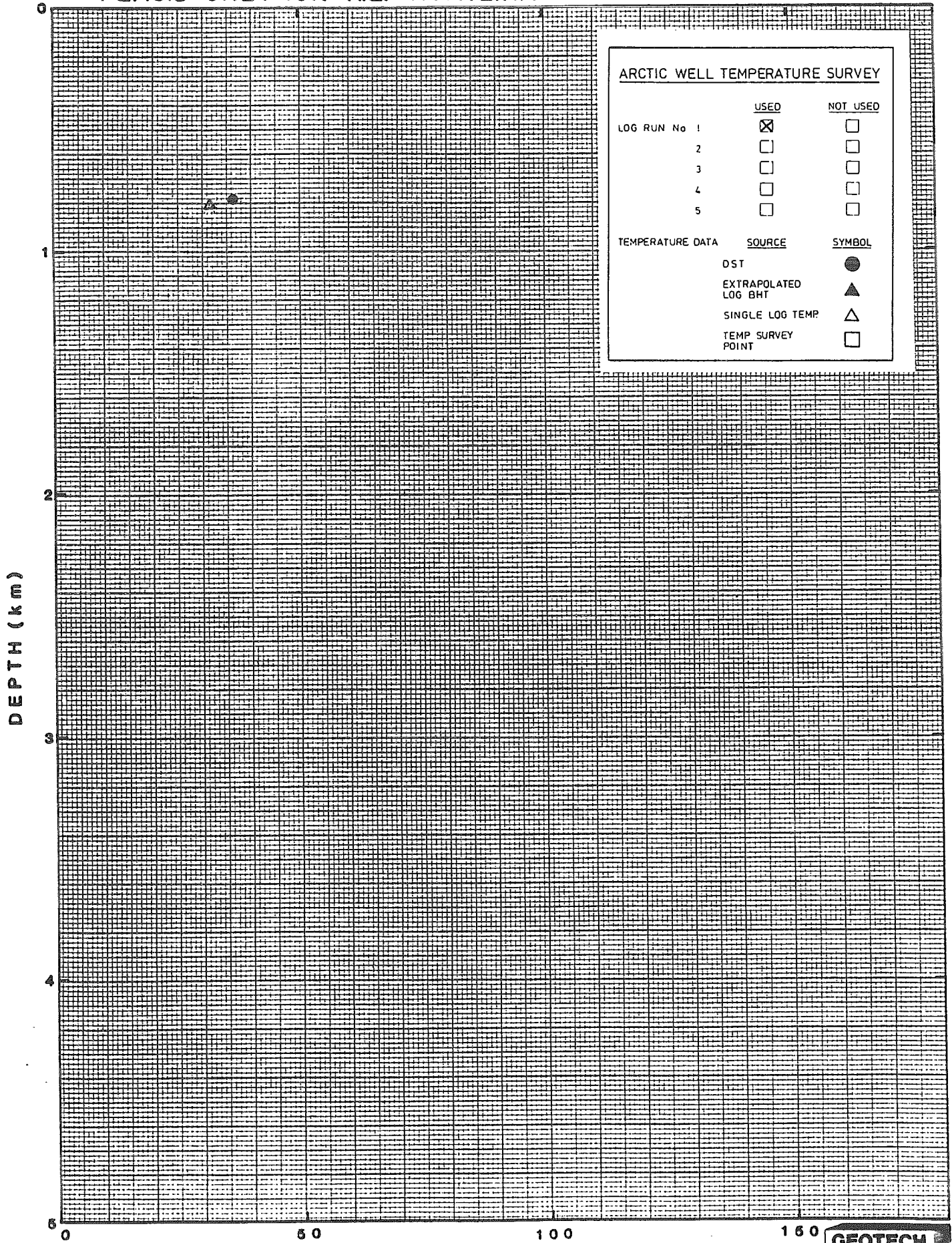


FIGURE 125

BOTTOM HOLE TEMPERATURE (°C)





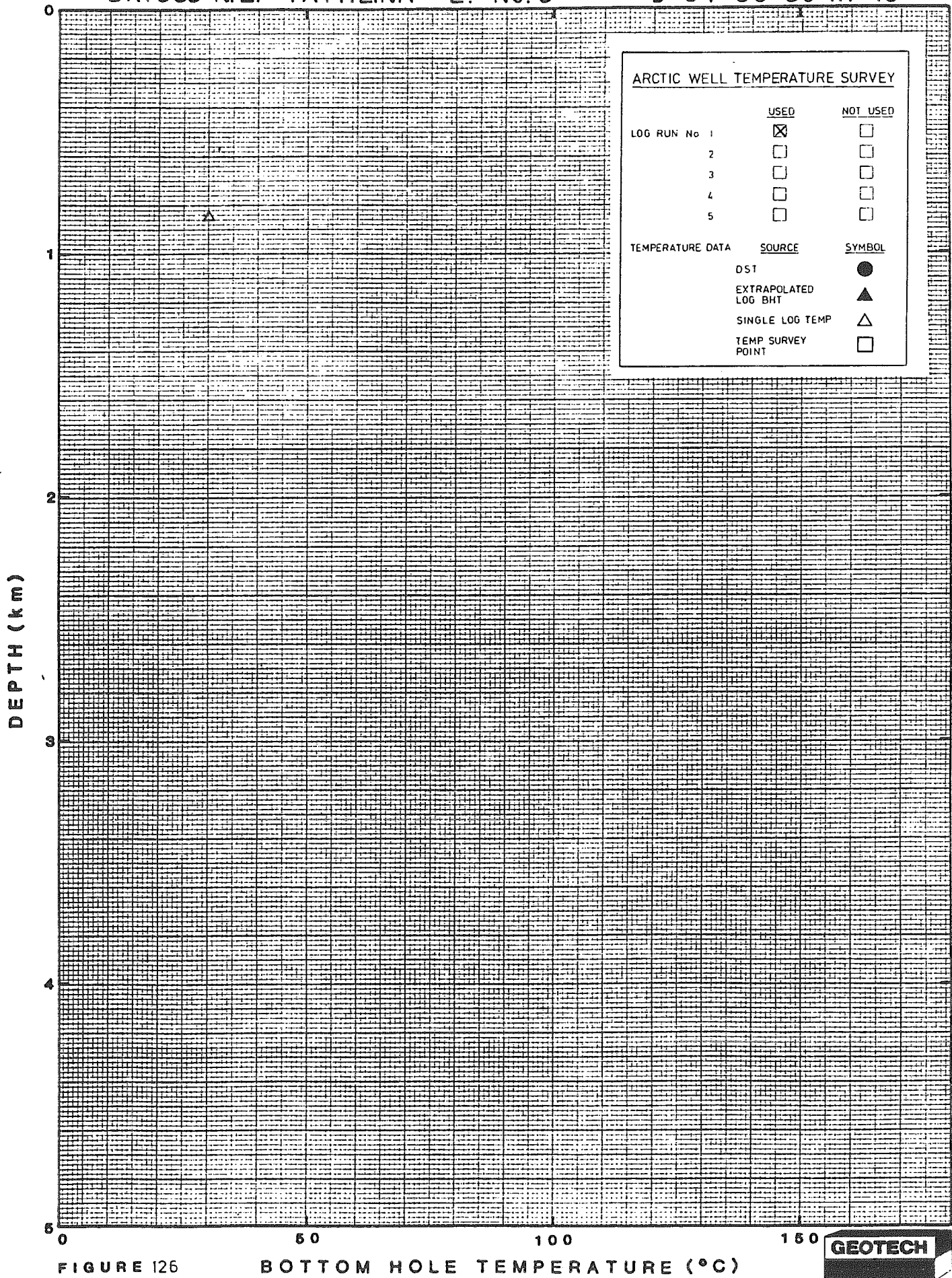


FIGURE 126

BOTTOM HOLE TEMPERATURE (°C)



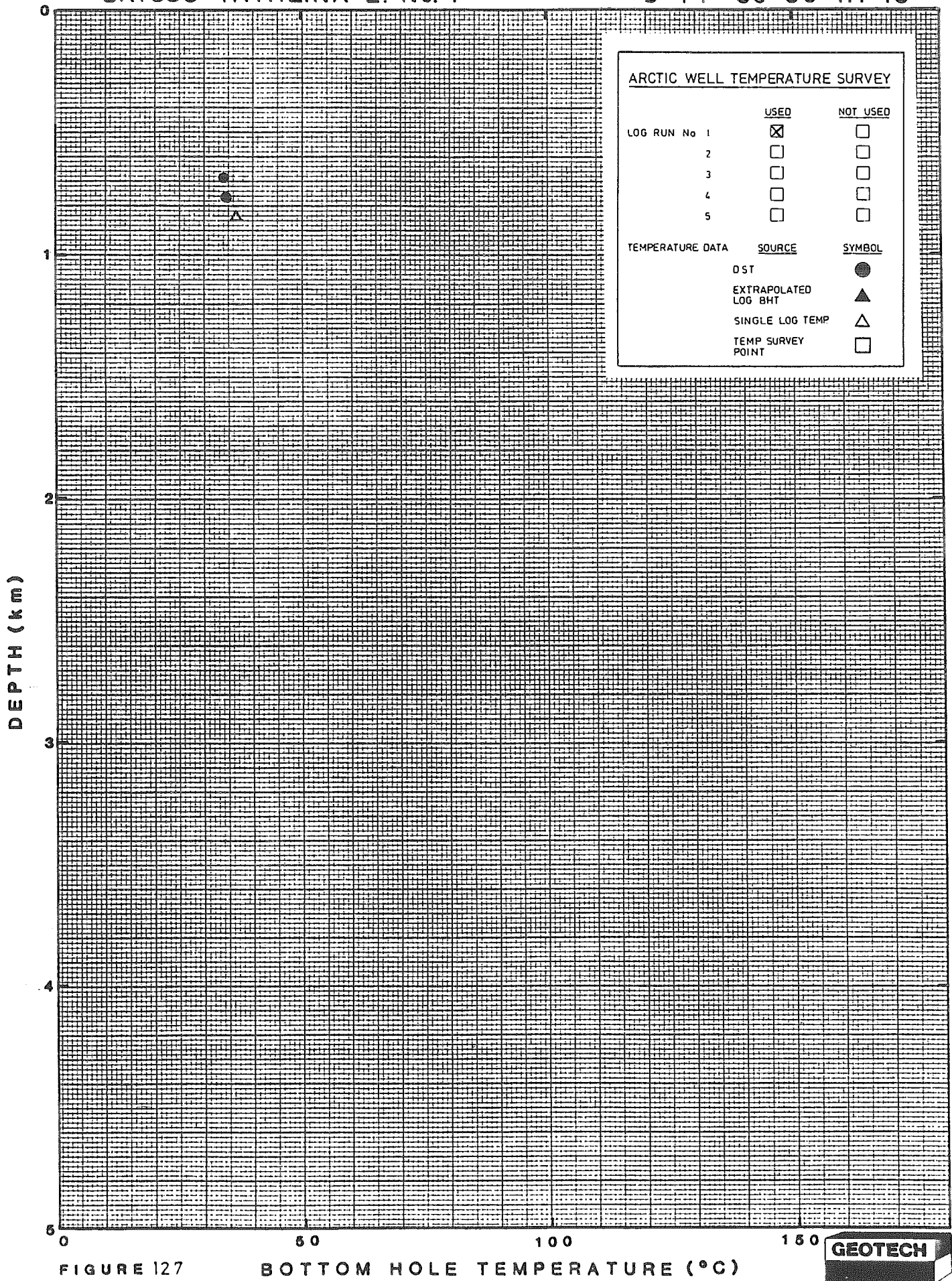


FIGURE 127

BOTTOM HOLE TEMPERATURE (°C)



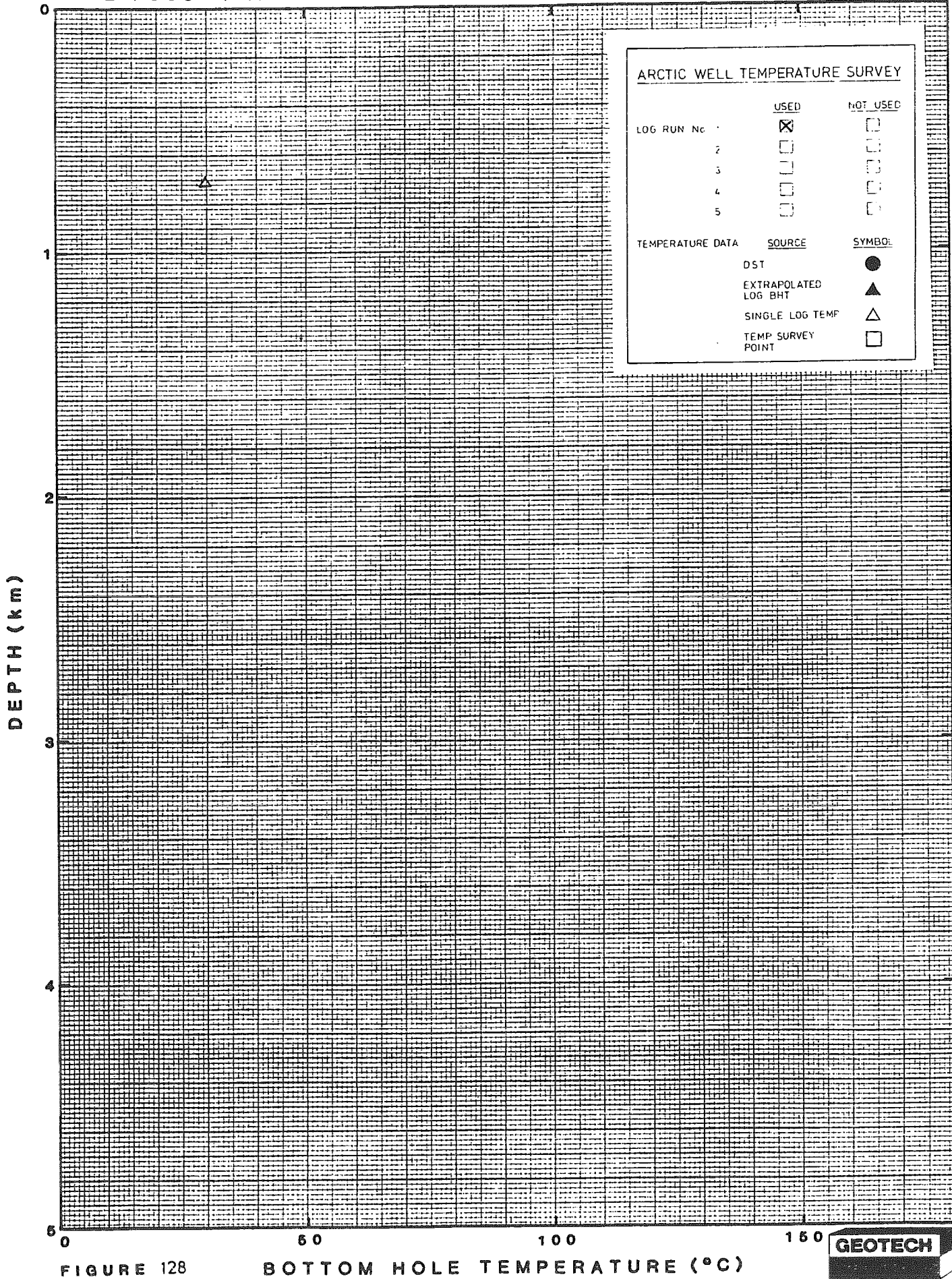


FIGURE 128

BOTTOM HOLE TEMPERATURE (°C)





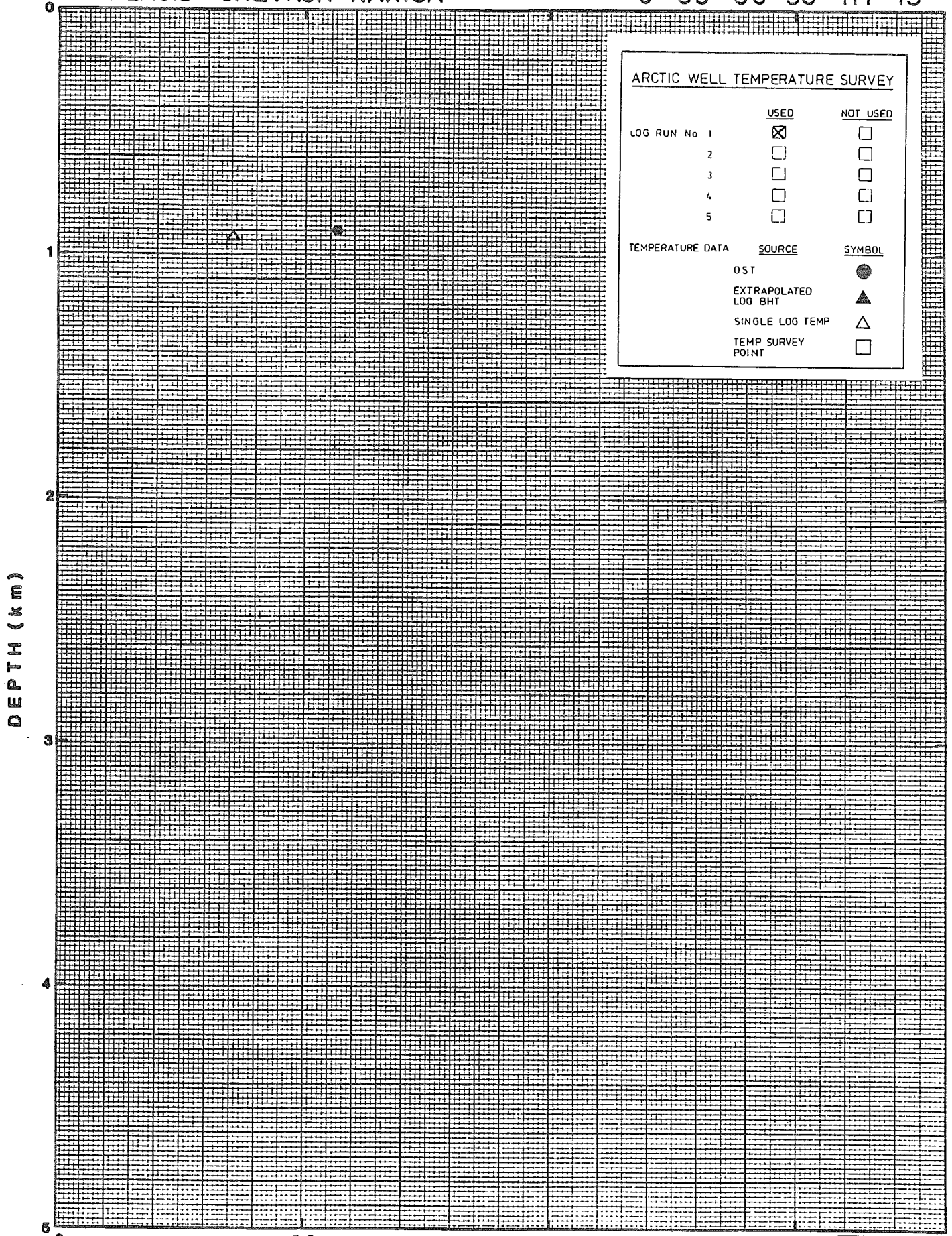


FIGURE 129

BOTTOM HOLE TEMPERATURE (°C)





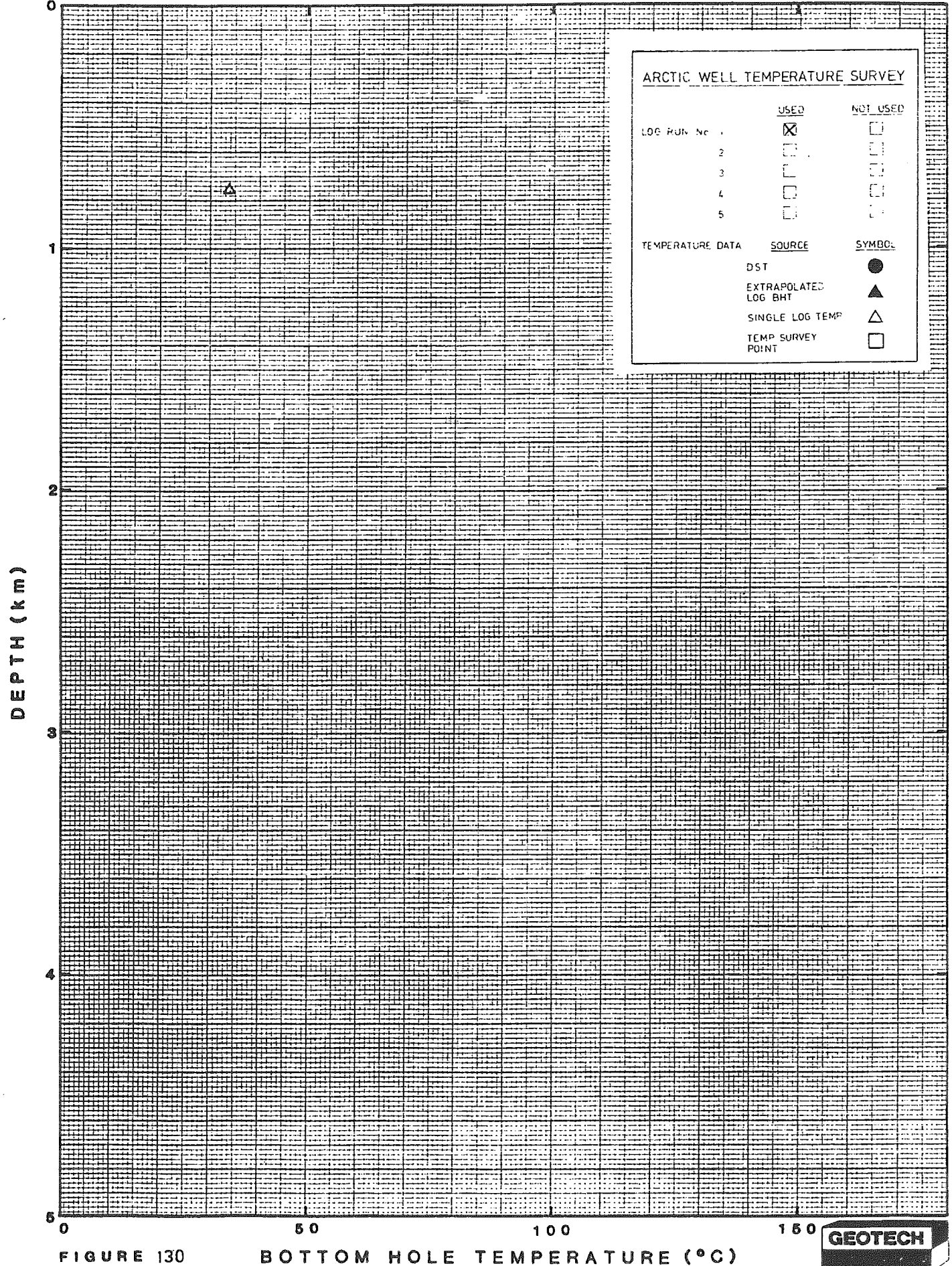


FIGURE 130

BOTTOM HOLE TEMPERATURE (°C)

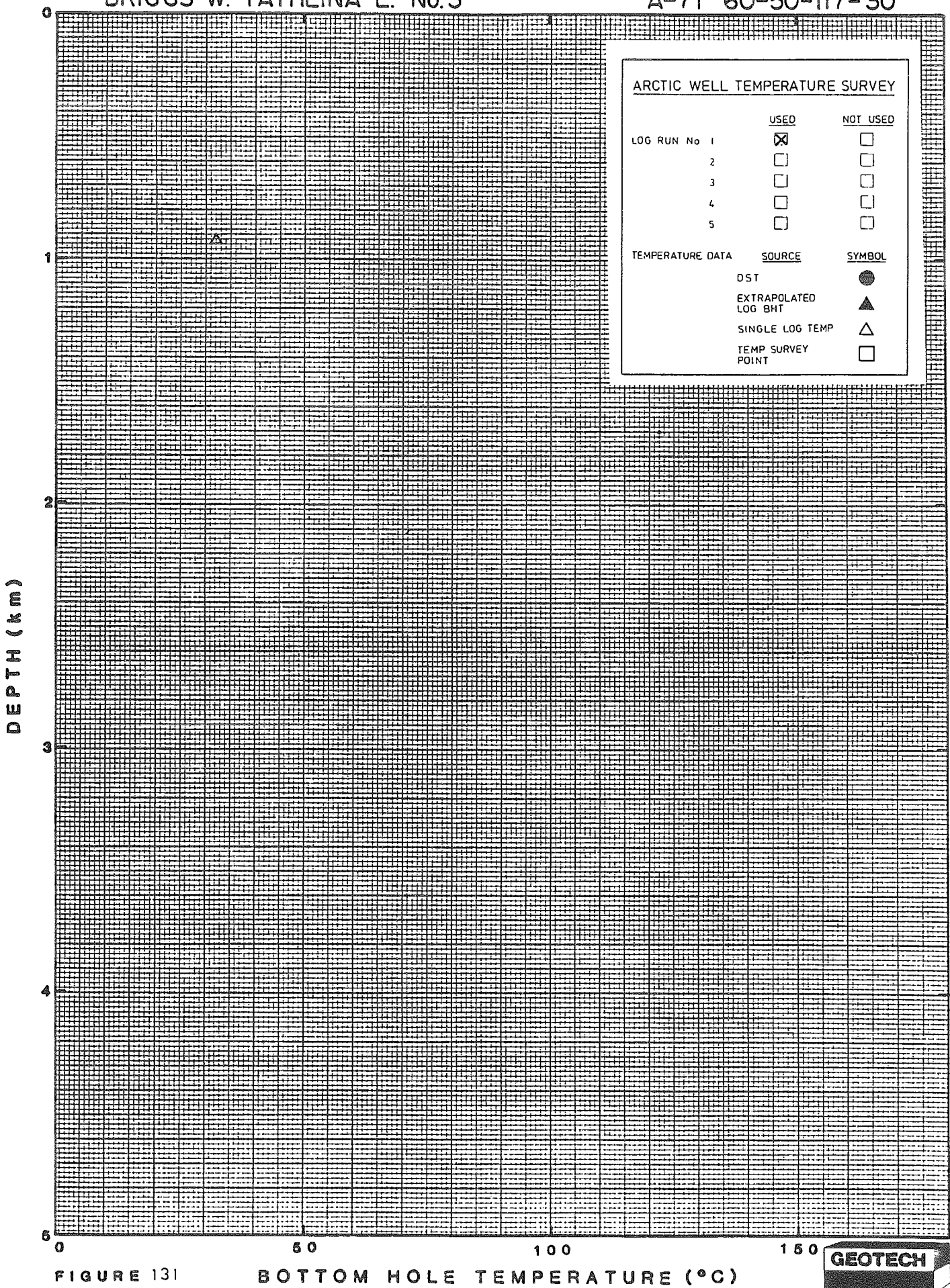
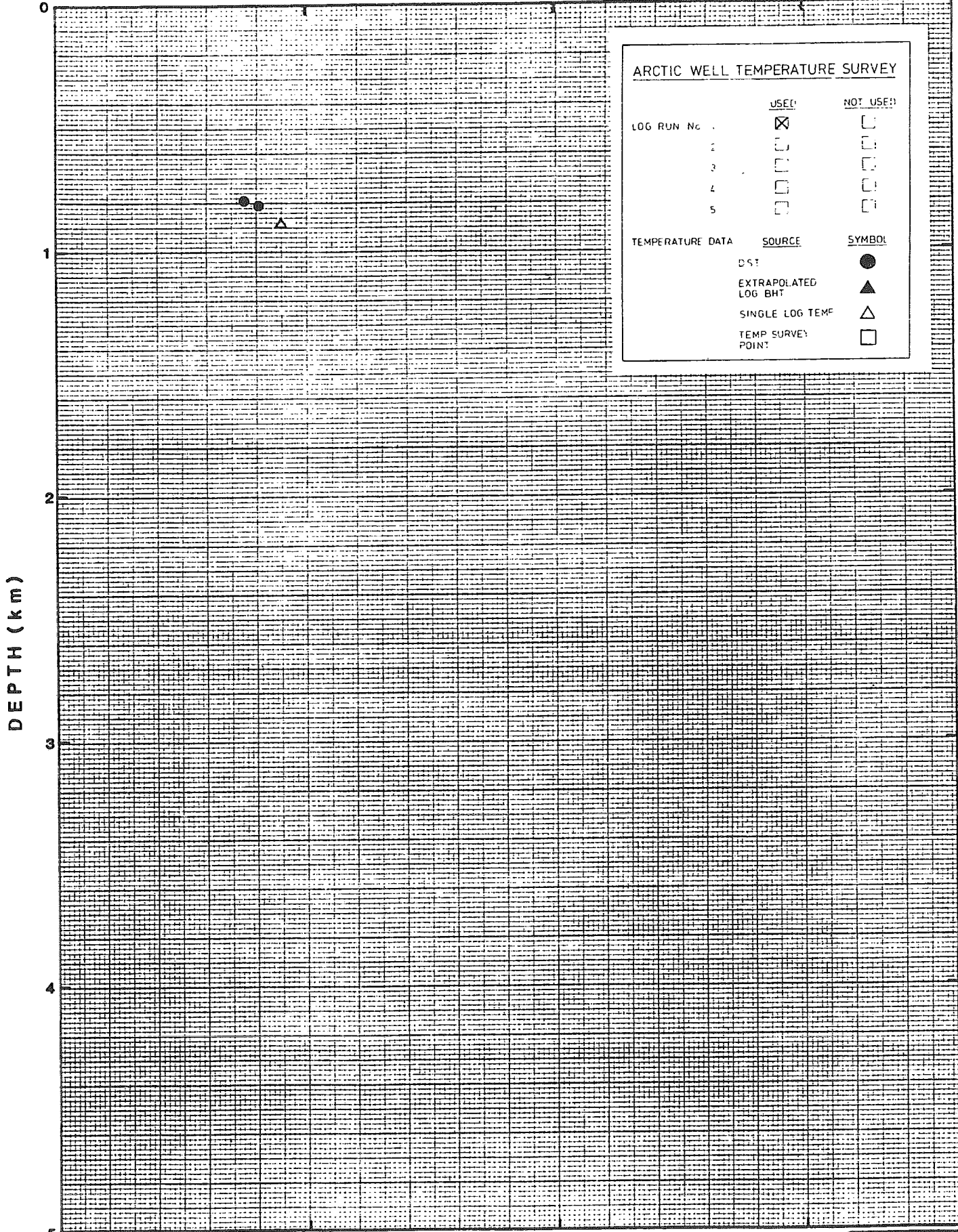


FIGURE 131

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 132

BOTTOM HOLE TEMPERATURE (°C)





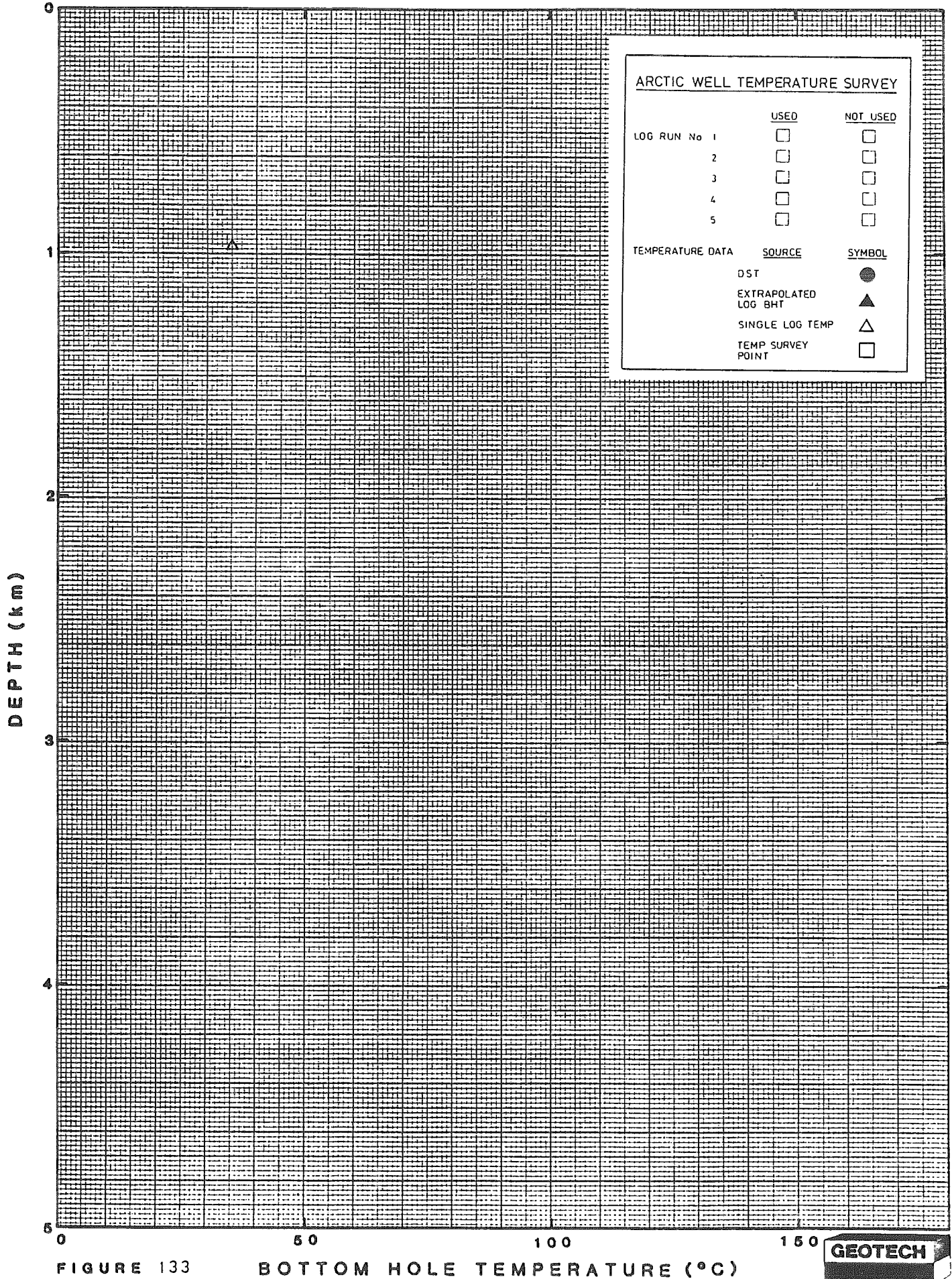
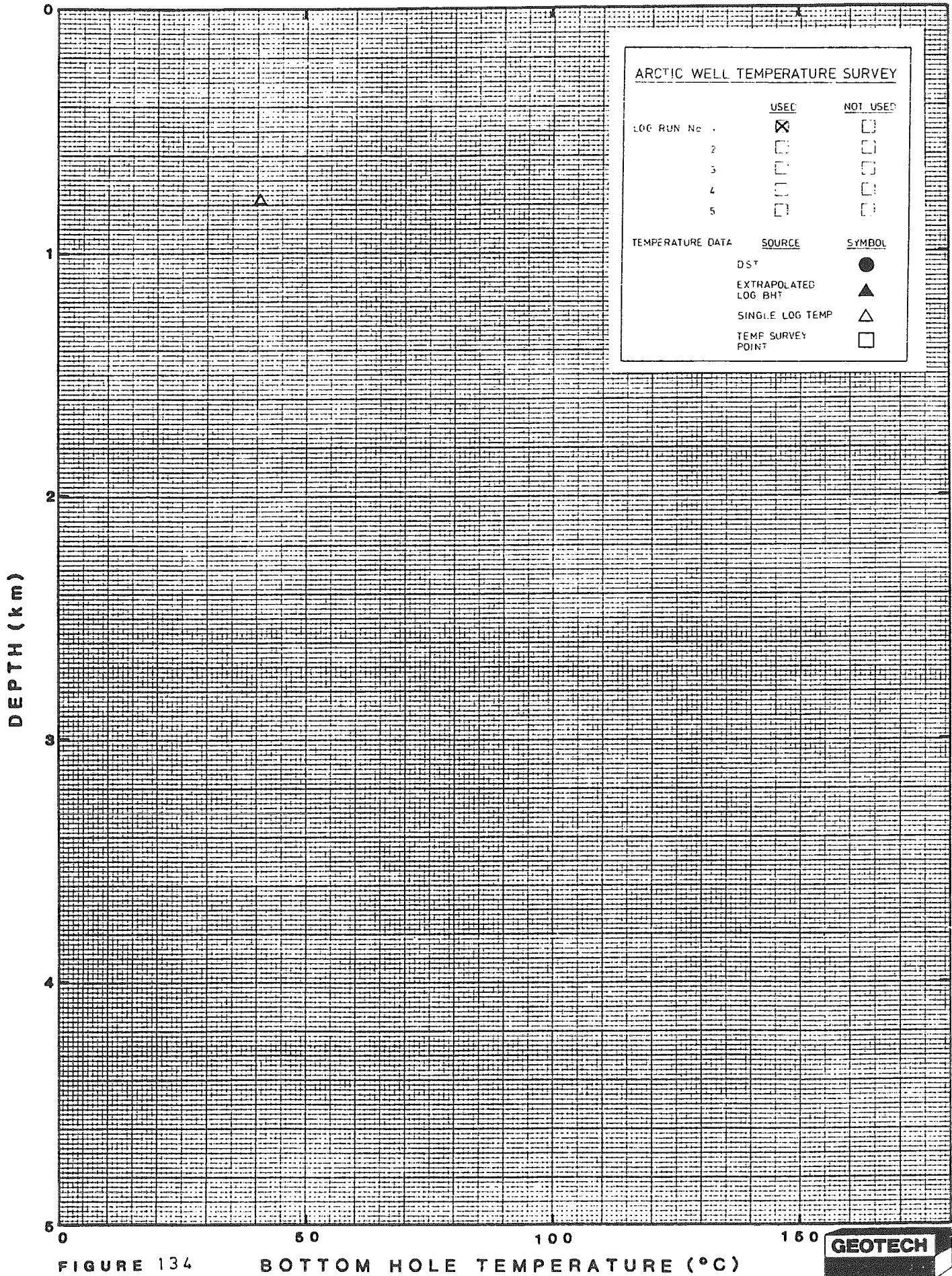


FIGURE 133

BOTTOM HOLE TEMPERATURE (°C)







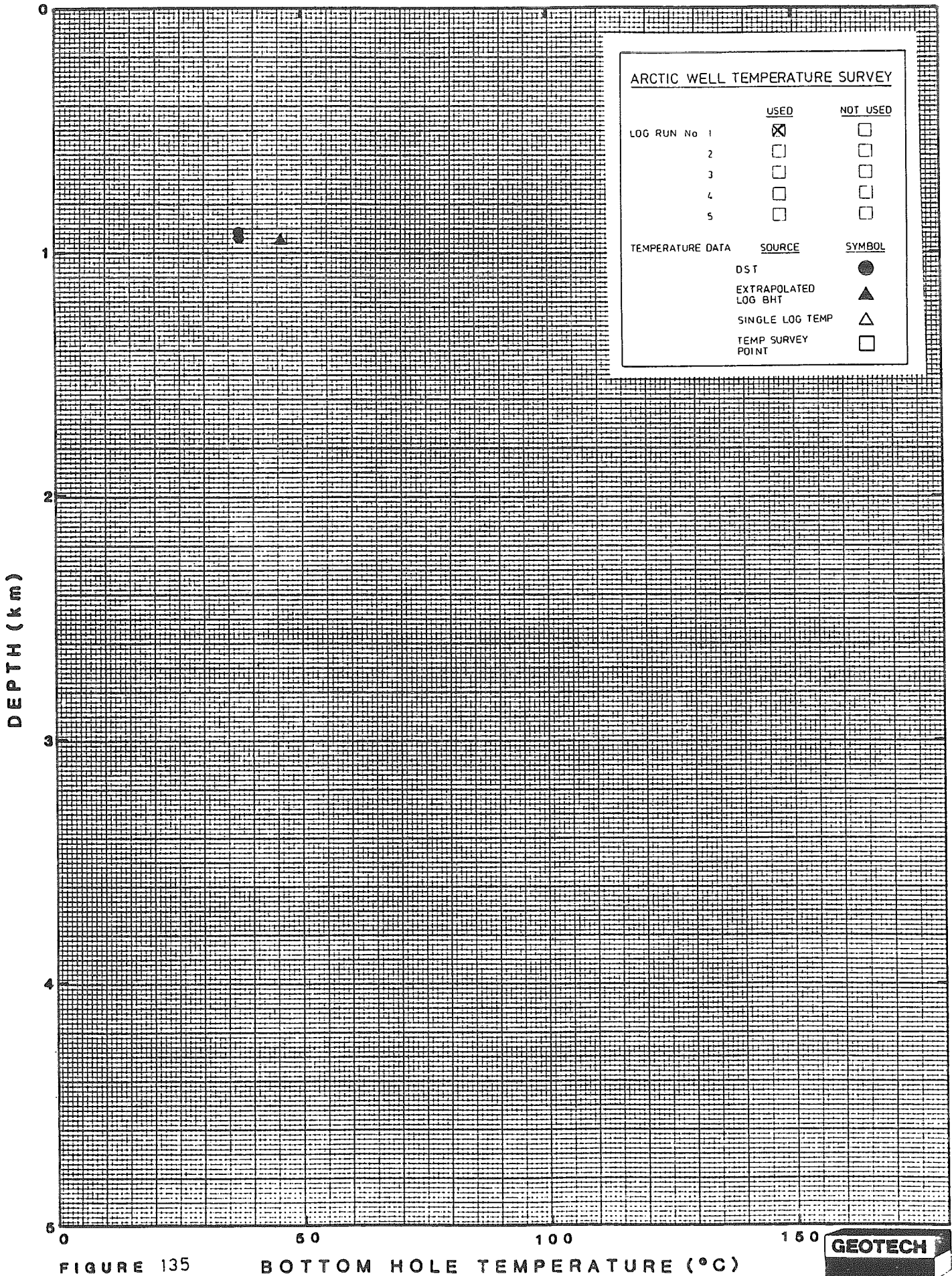


FIGURE 135

BOTTOM HOLE TEMPERATURE (°C)



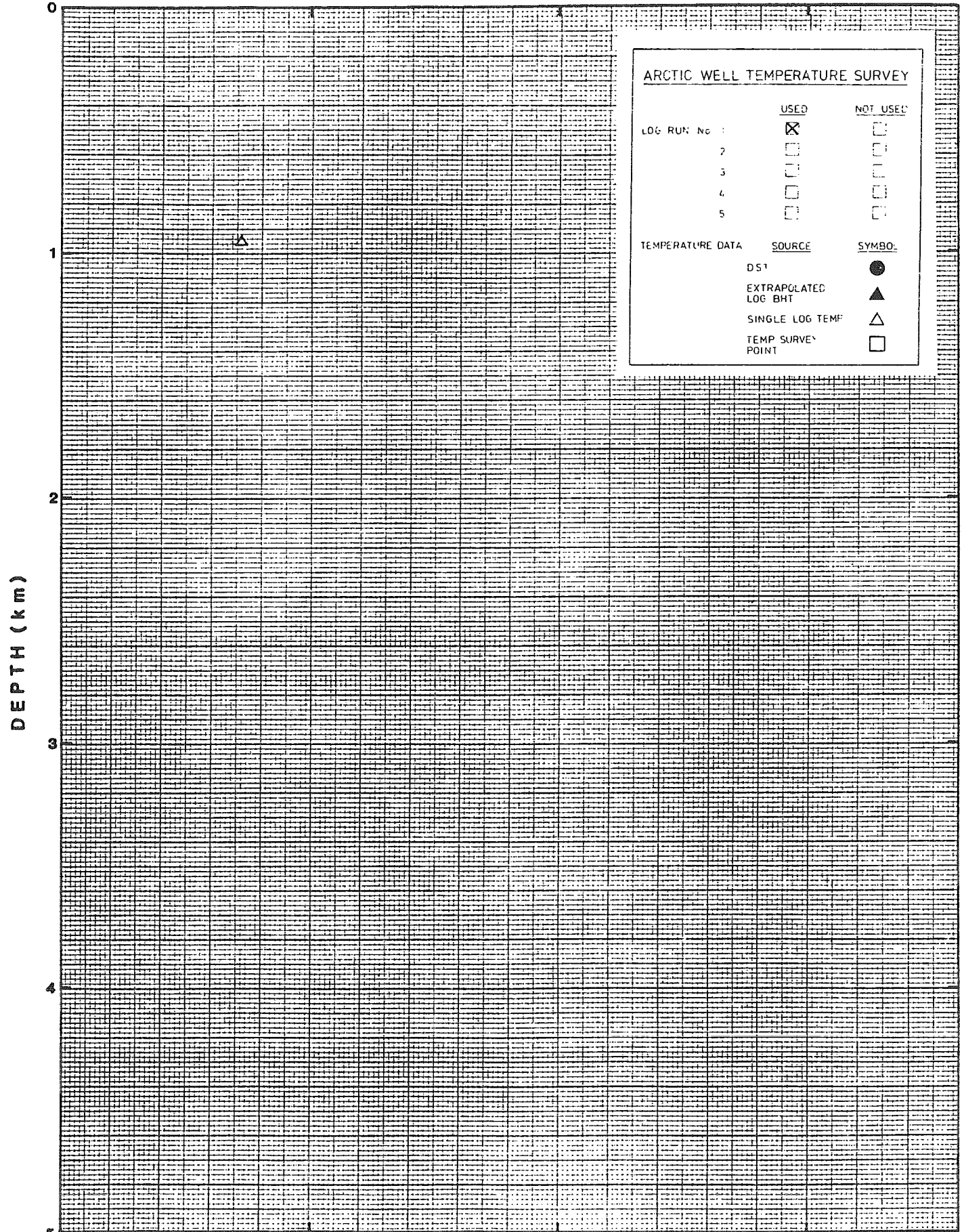


FIGURE 136

BOTTOM HOLE TEMPERATURE (°C)





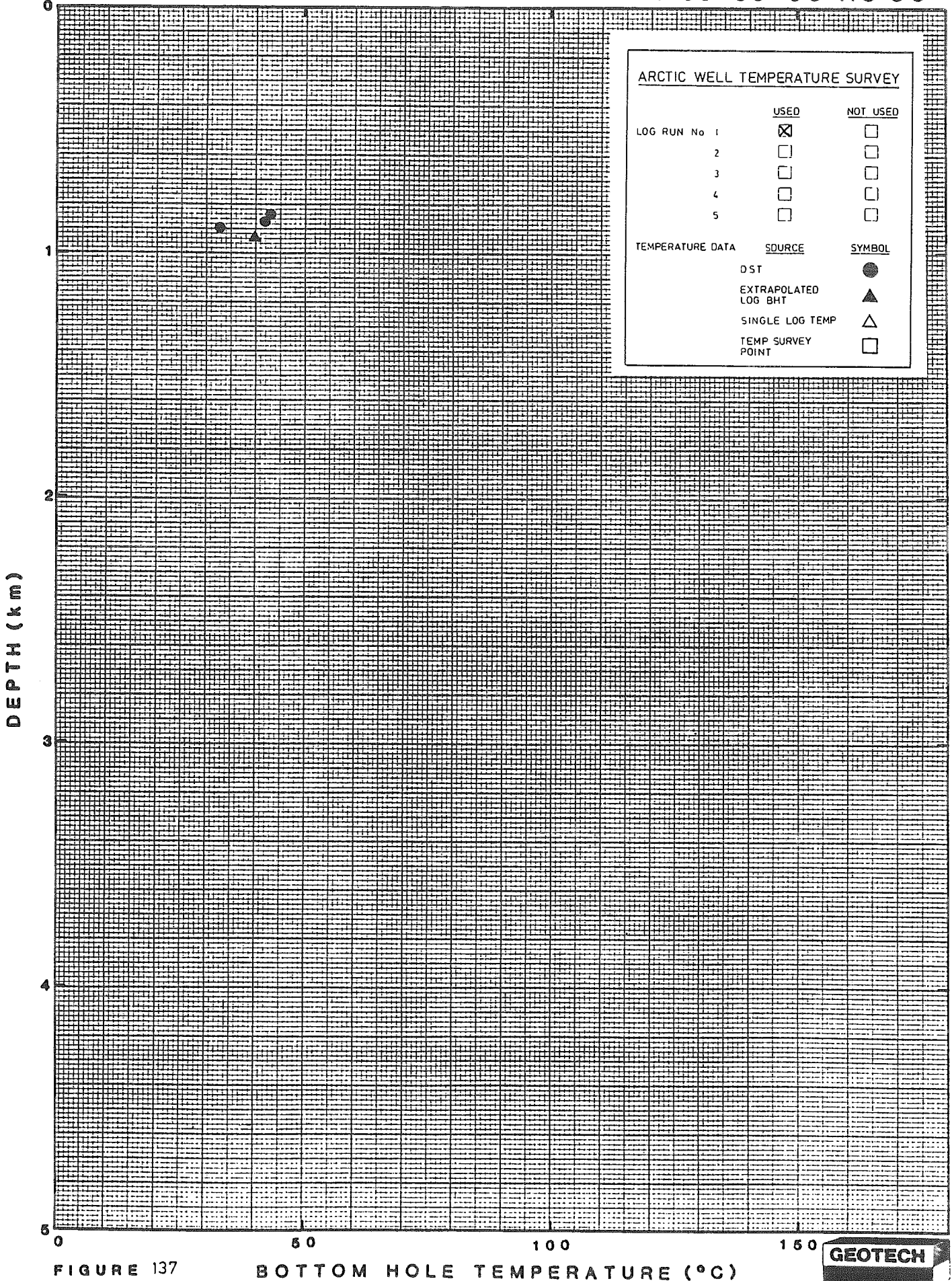


FIGURE 137

BOTTOM HOLE TEMPERATURE (°C)





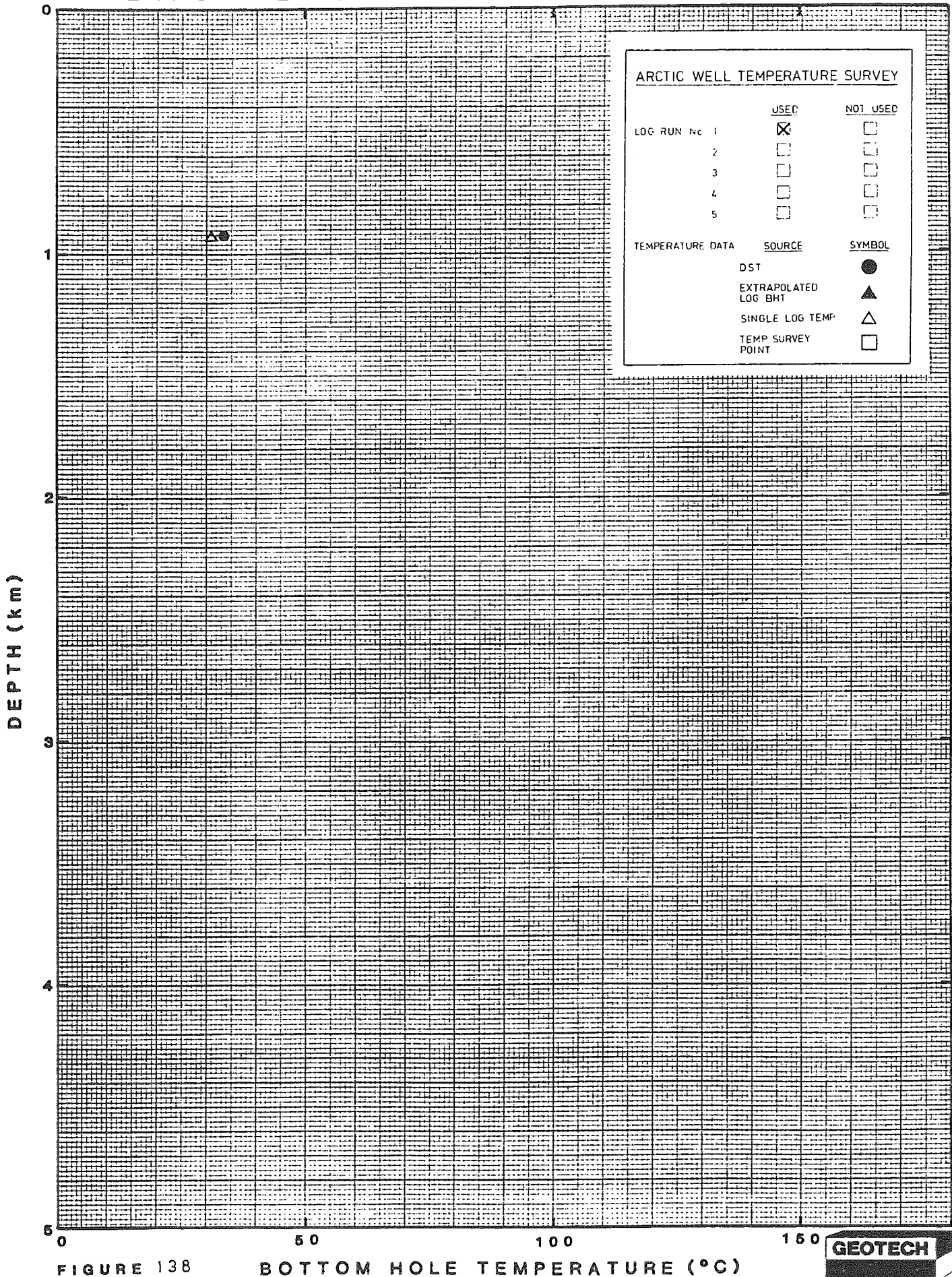
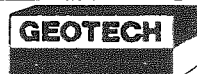


FIGURE 138

BOTTOM HOLE TEMPERATURE (°C)



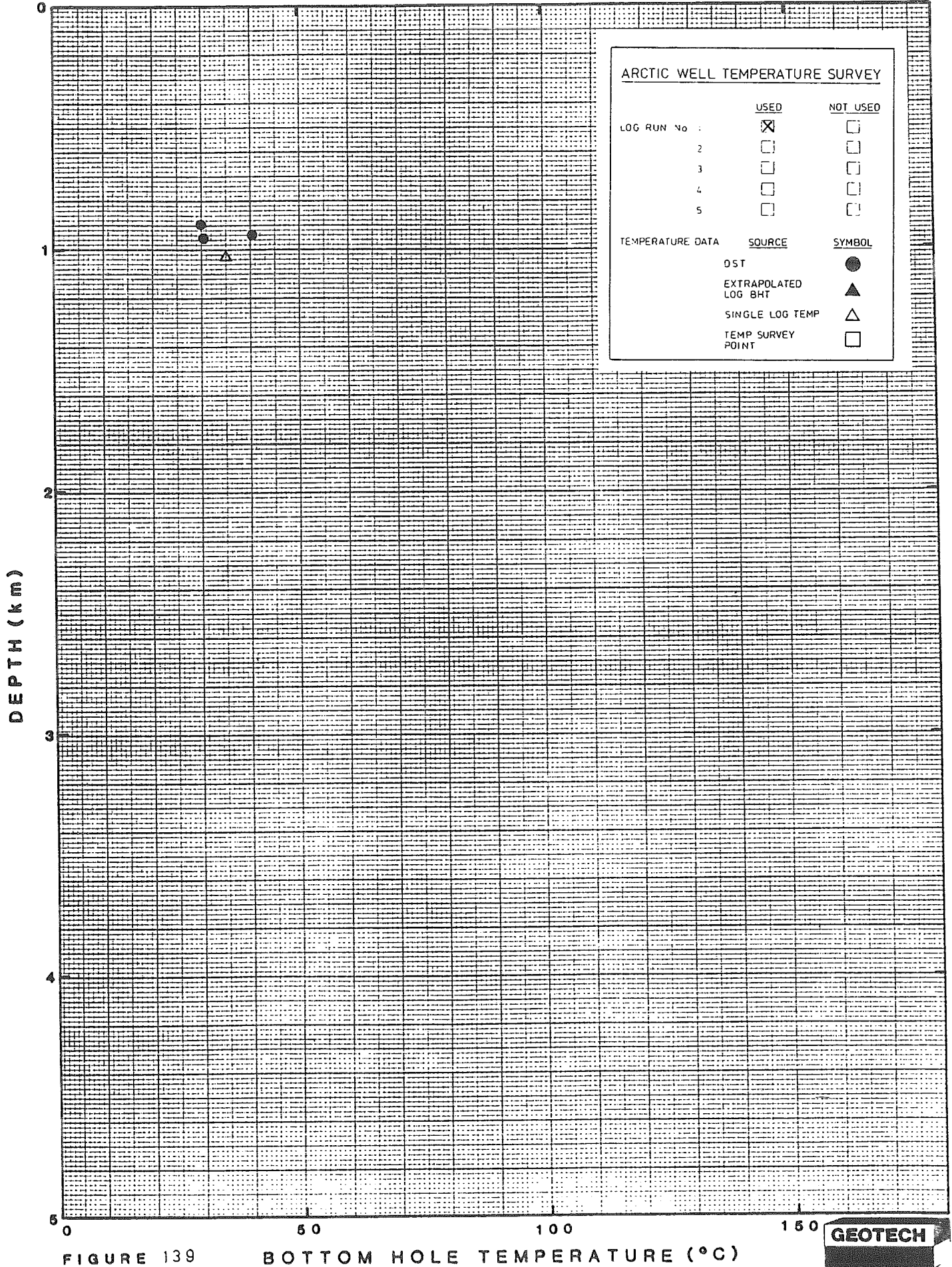


FIGURE 139

BOTTOM HOLE TEMPERATURE (°C)



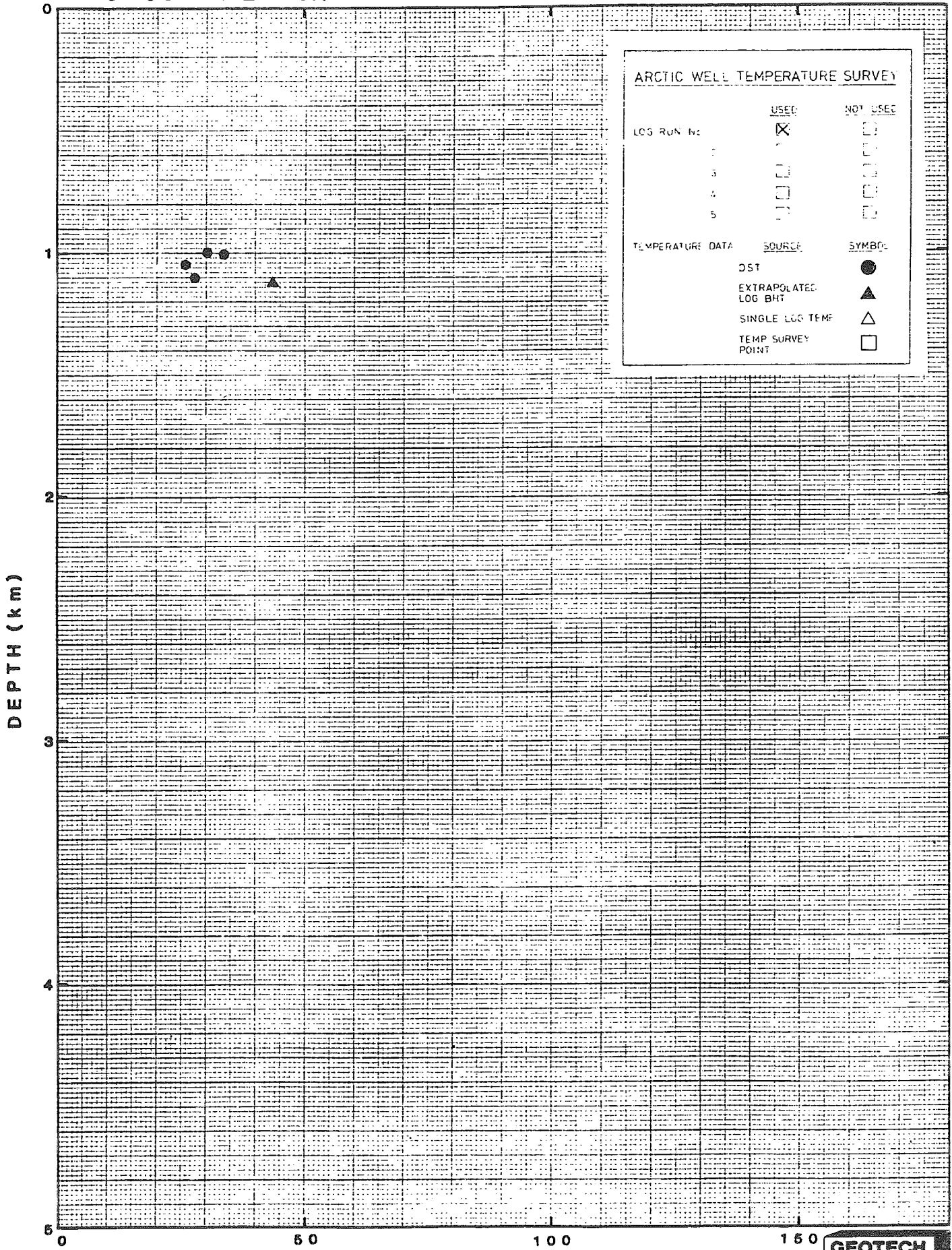
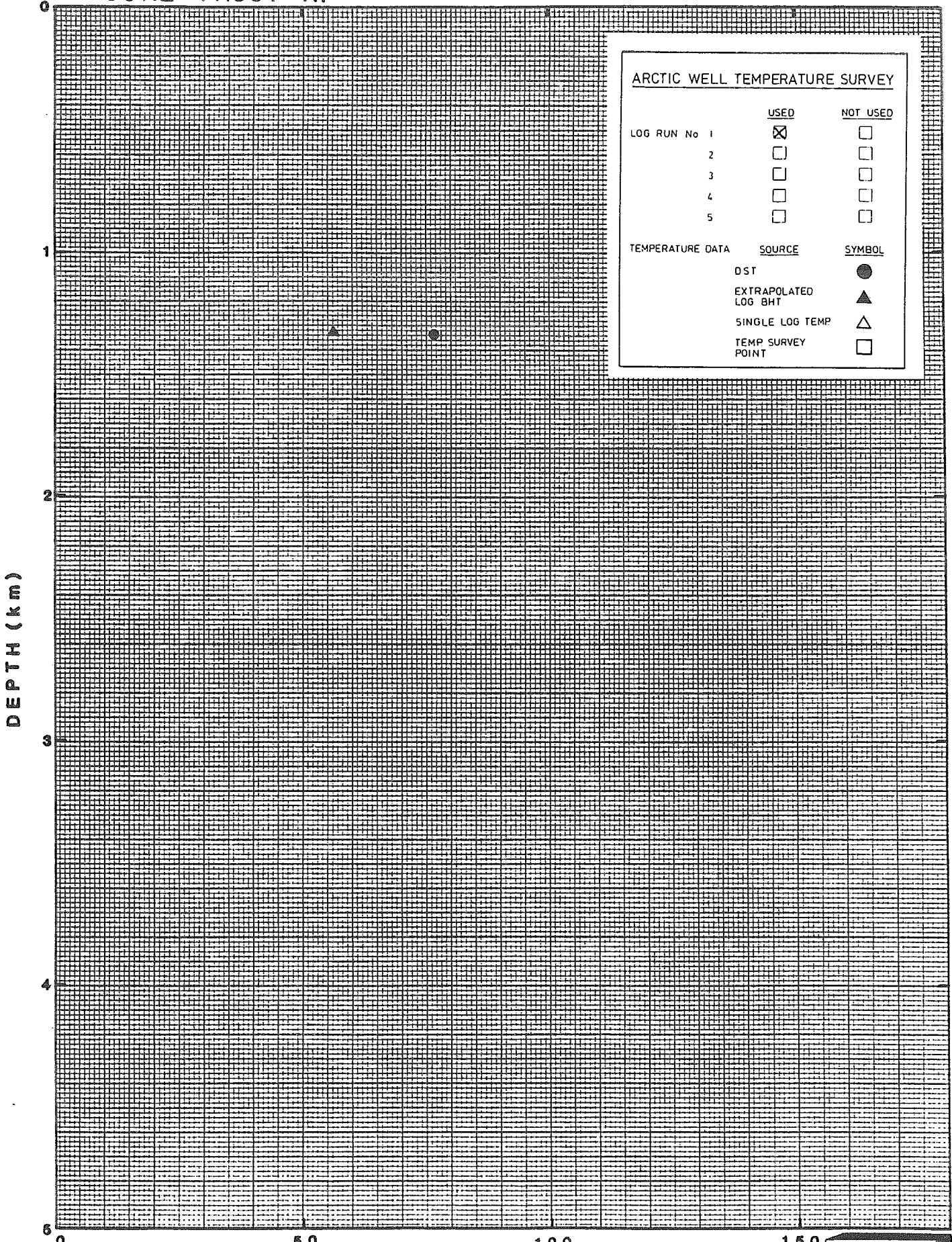


FIGURE 140

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

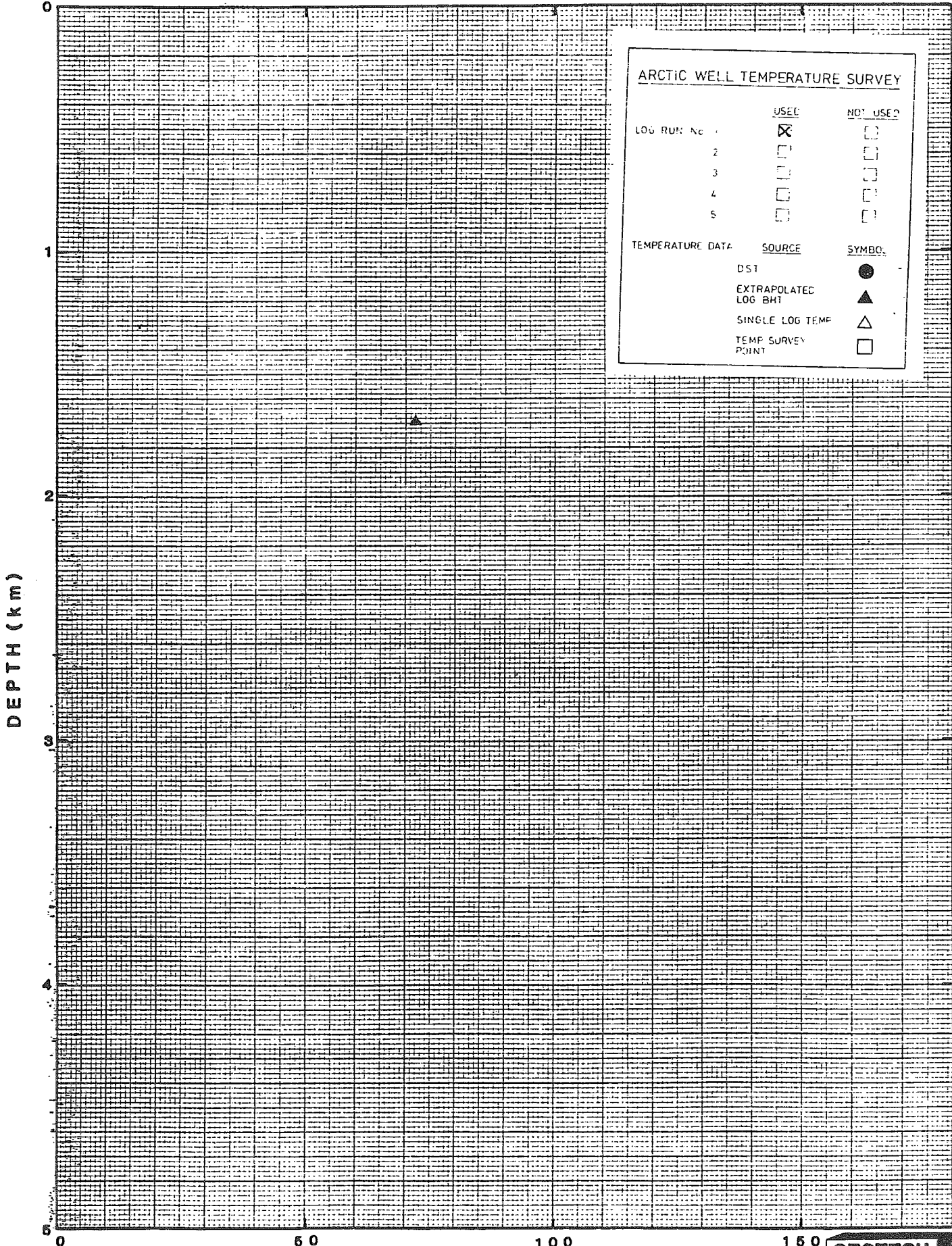
DEPTH (km)

FIGURE 141

BOTTOM HOLE TEMPERATURE (°C)







**ARCTIC WELL TEMPERATURE SURVEY**

LOG RUN No.	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150

FIGURE 142 BOTTOM HOLE TEMPERATURE (°C)



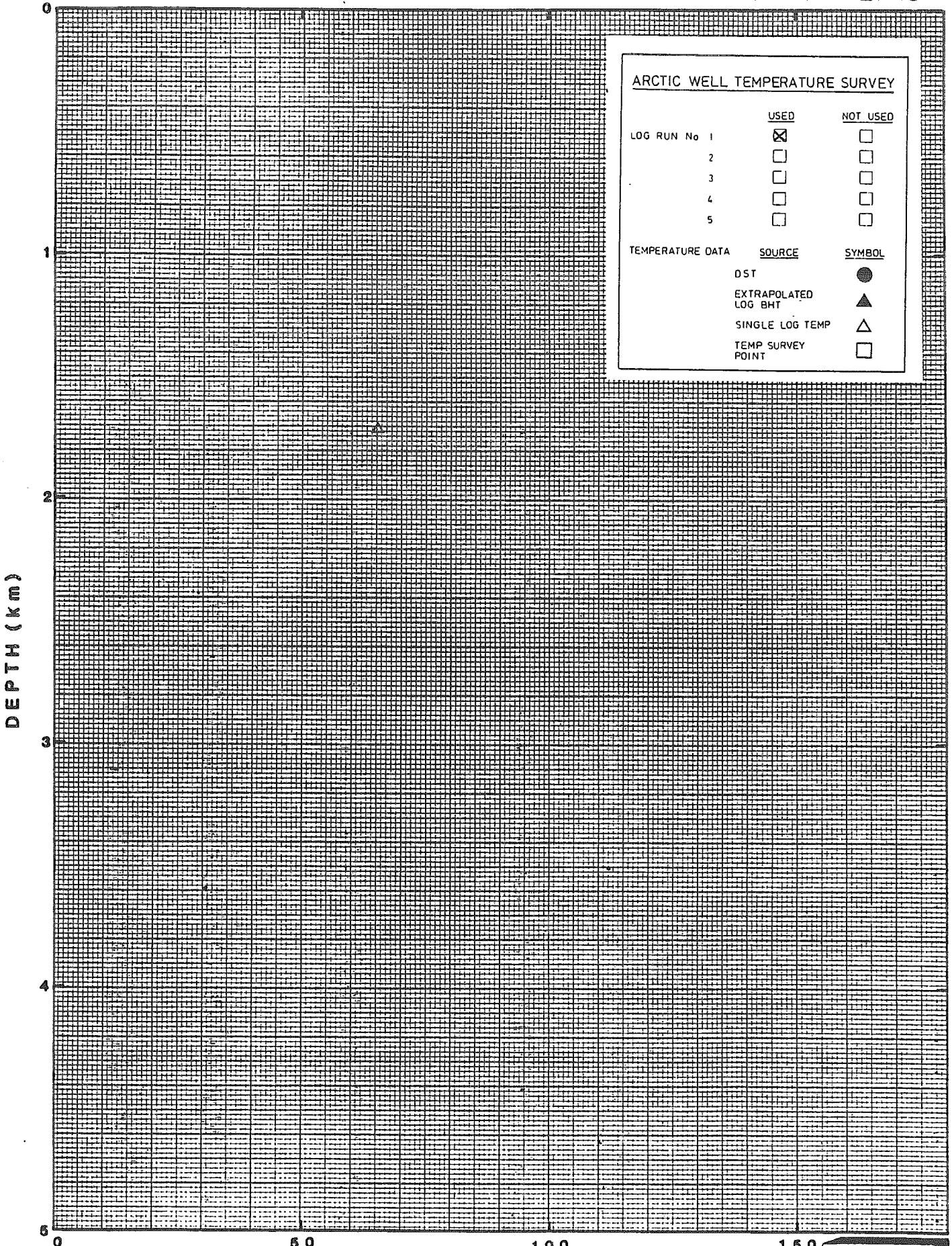
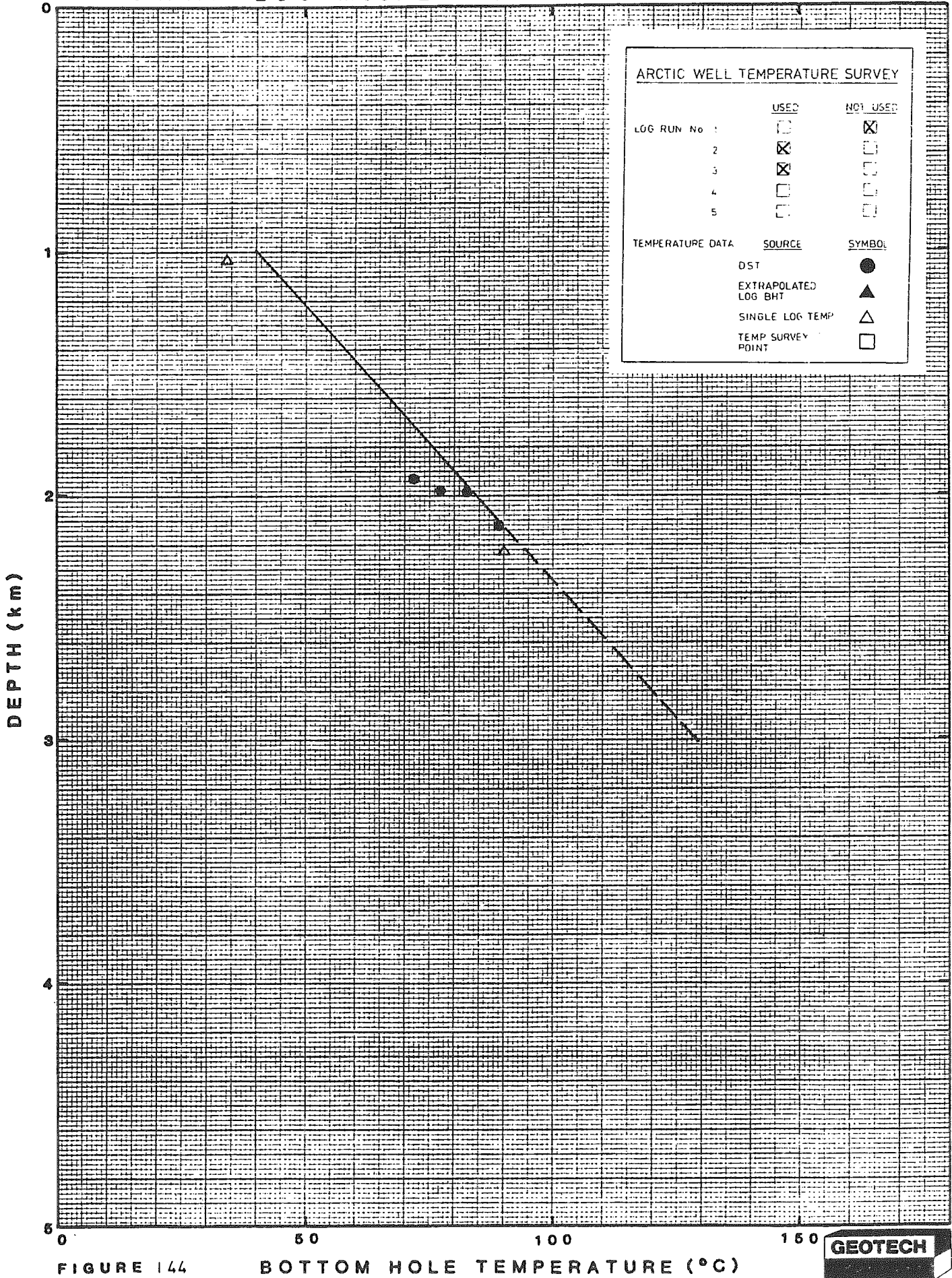


FIGURE 143

BOTTOM HOLE TEMPERATURE (°C)







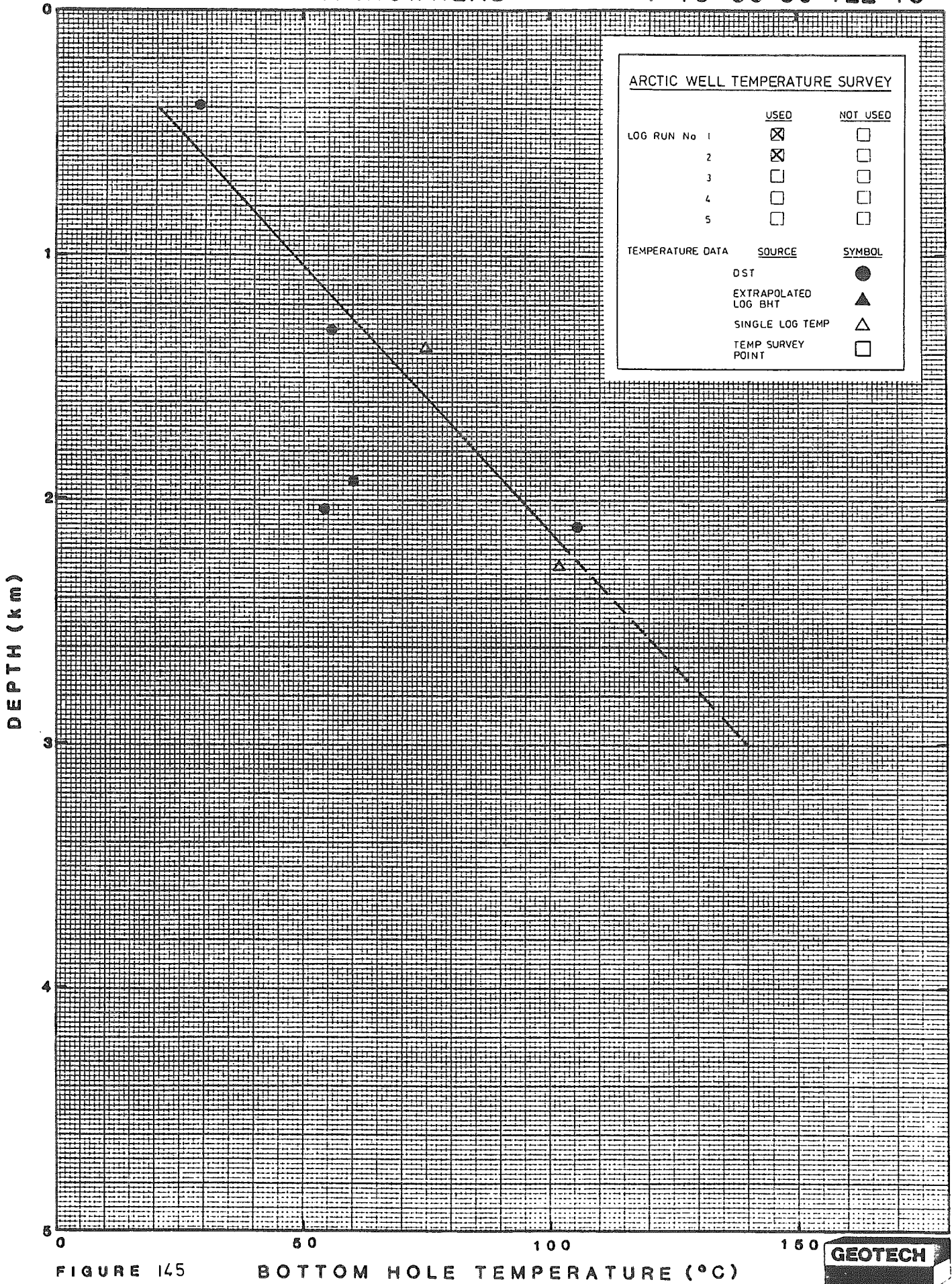


FIGURE 145

BOTTOM HOLE TEMPERATURE (°C)





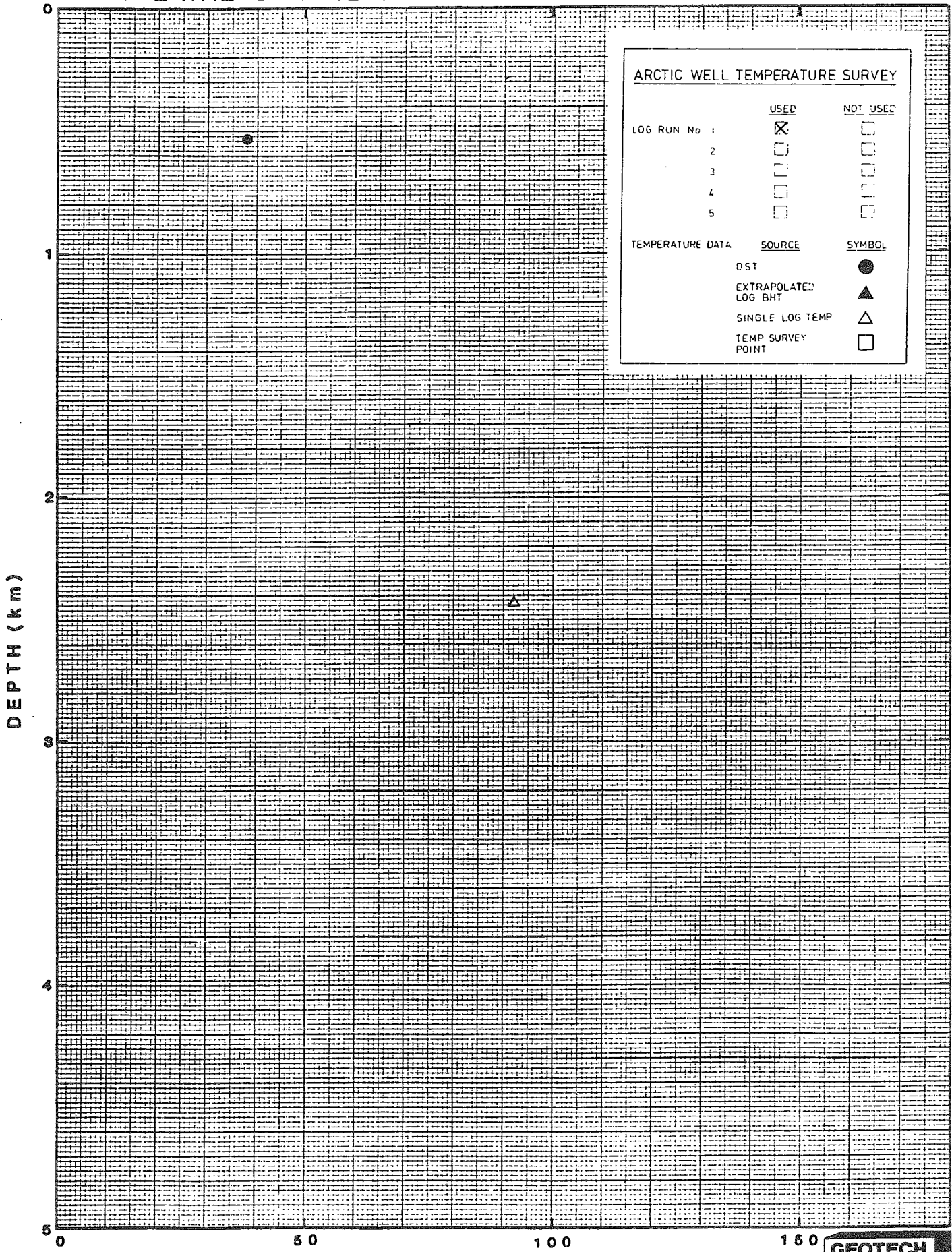


FIGURE 146

BOTTOM HOLE TEMPERATURE (°C)



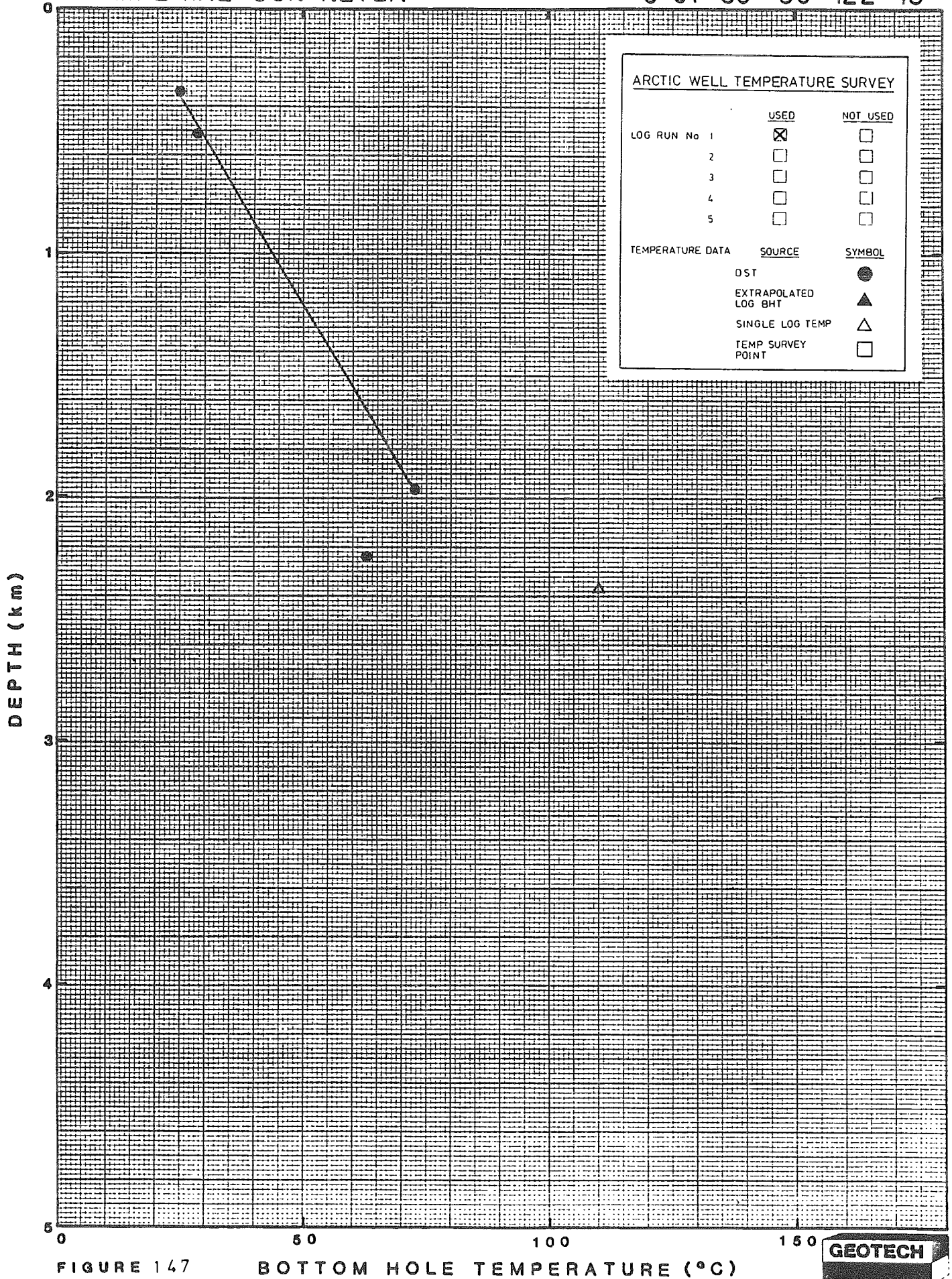
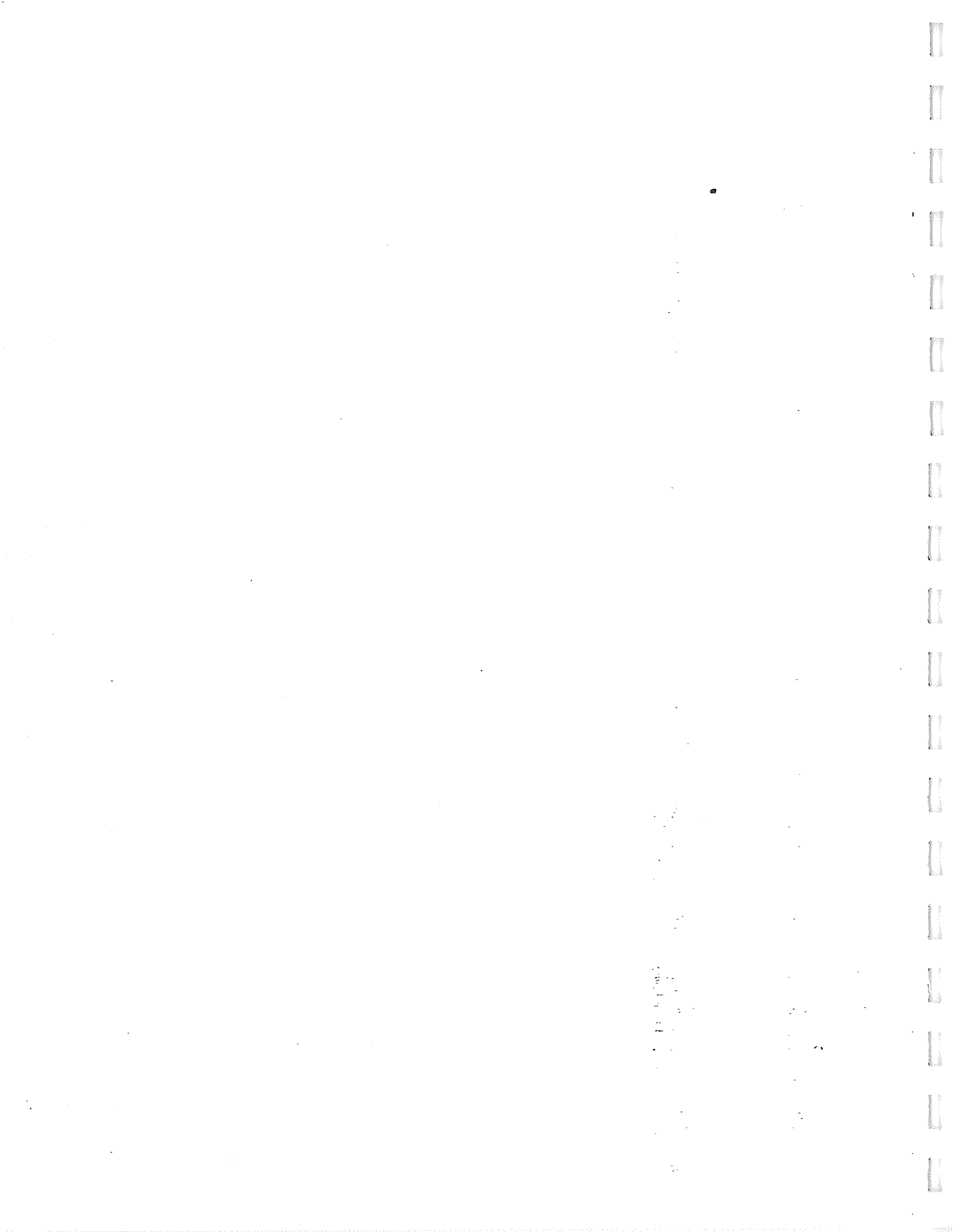


FIGURE 147

BOTTOM HOLE TEMPERATURE (°C)

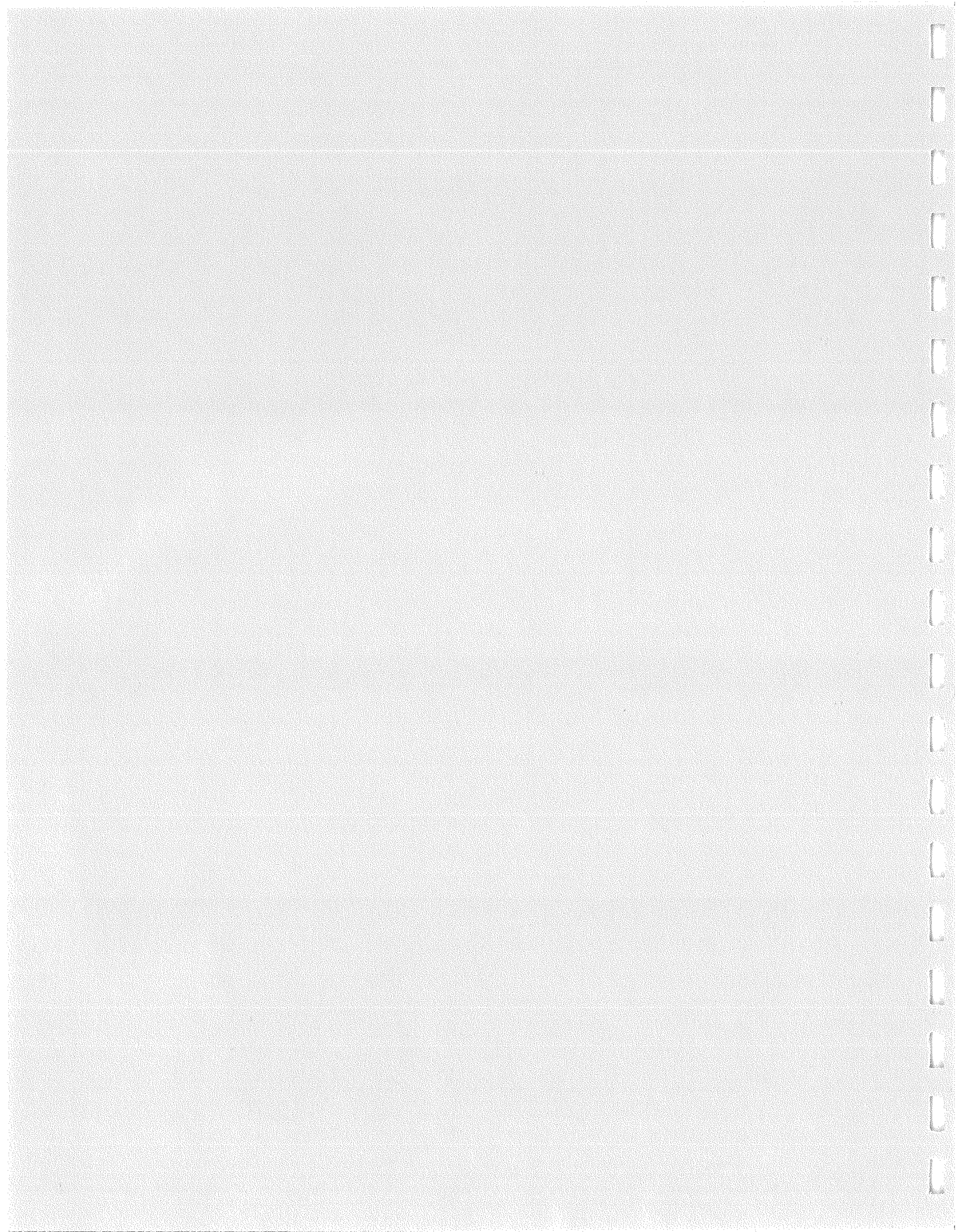






61-00





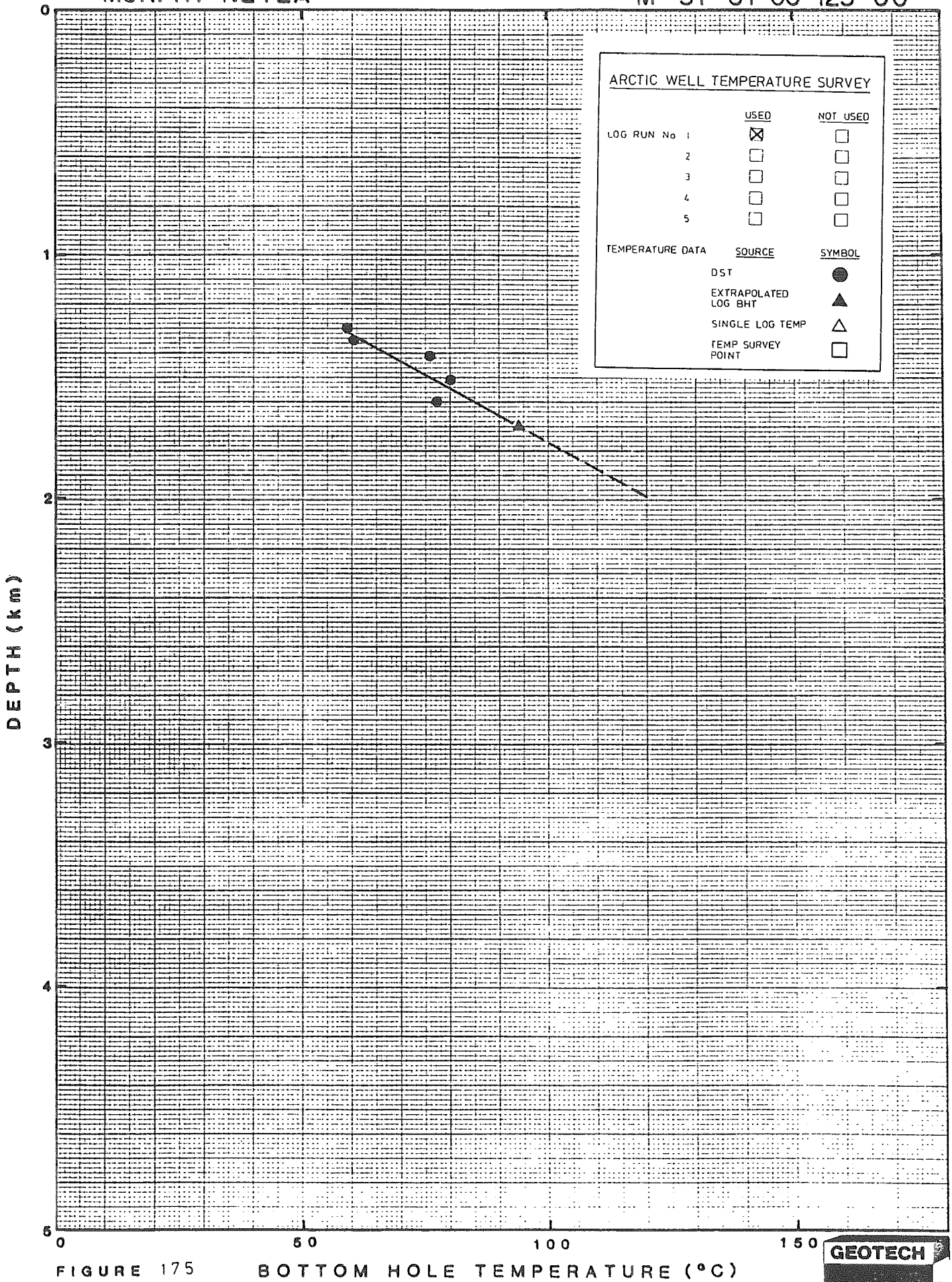


FIGURE 175

BOTTOM HOLE TEMPERATURE (°C)



MESA NAHANNI BUTTE

L-20 61-00-123-30

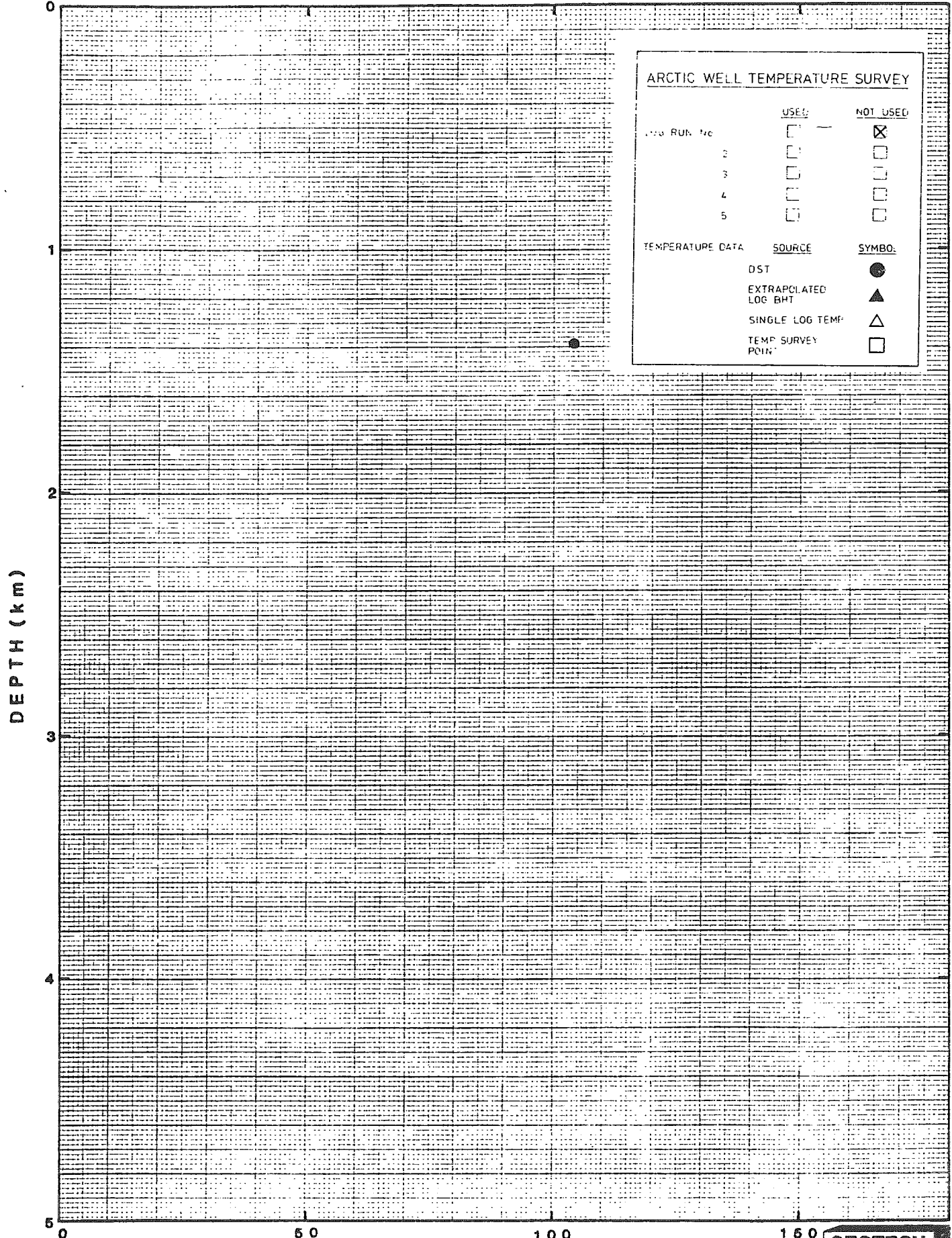
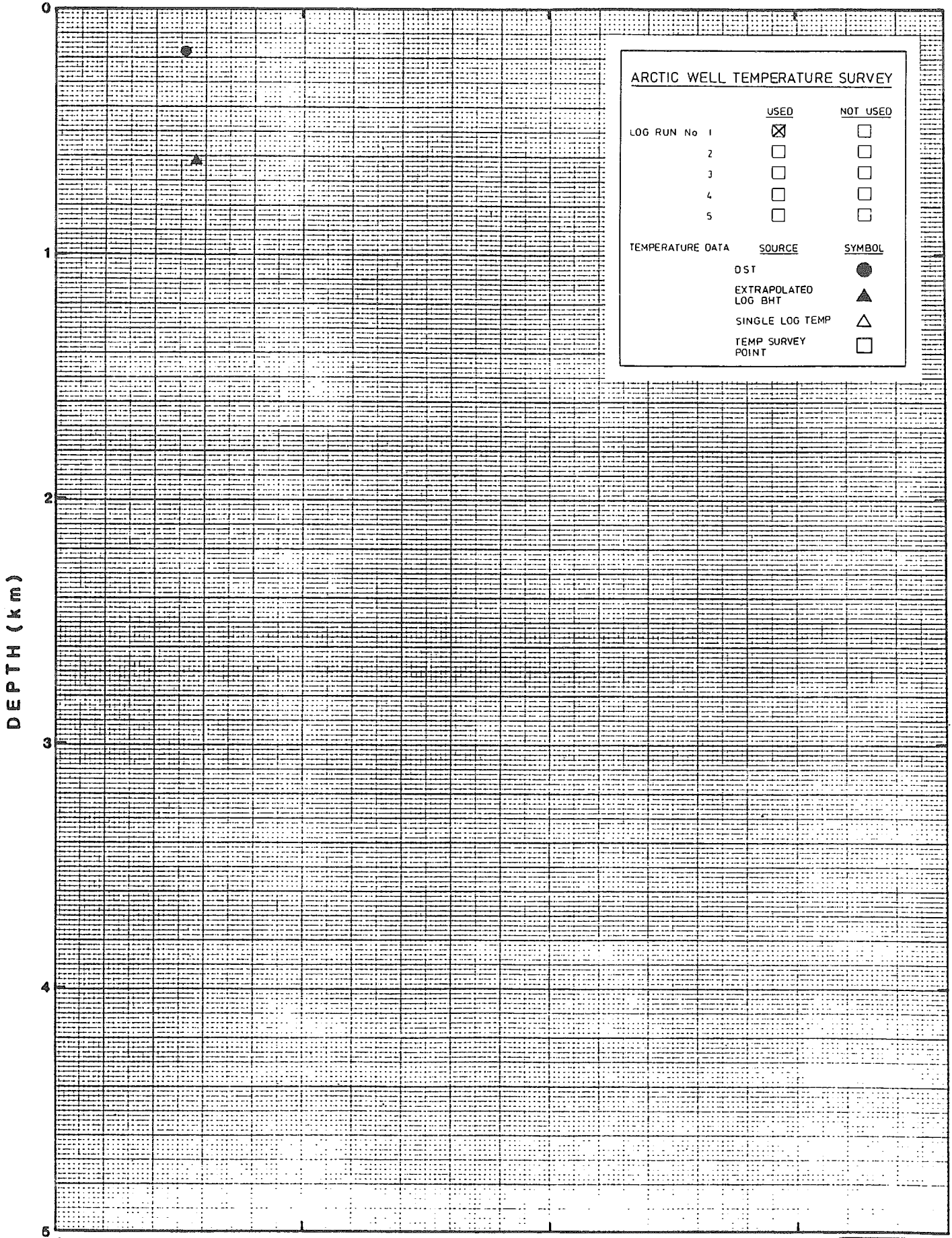


FIGURE 176

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

0 50 100 150

FIGURE 148

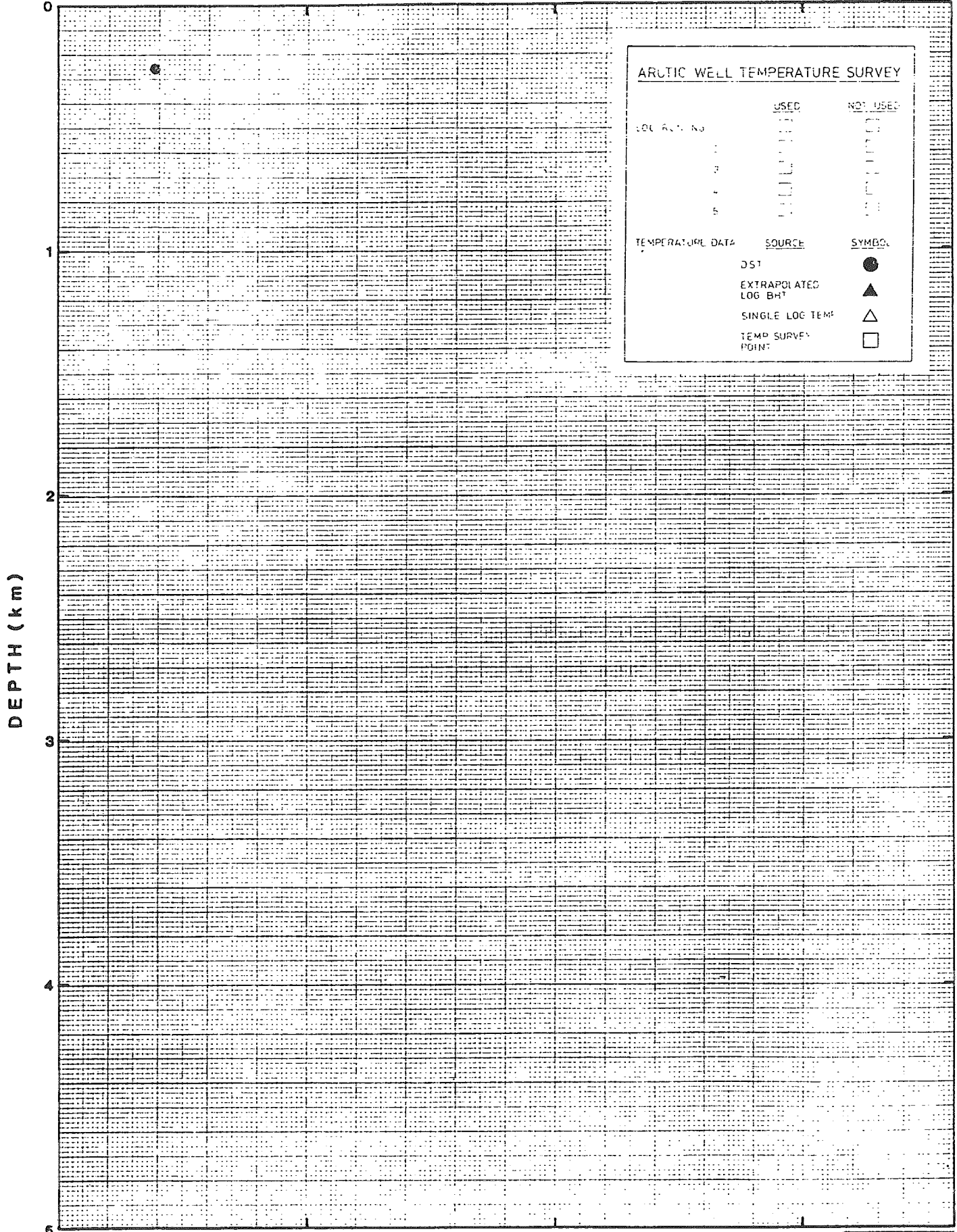
BOTTOM HOLE TEMPERATURE (°C)





GENERAL CRUDE REEF CK.

G-15 61-00-116-15



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
WELL NO.		
1	☐	☐
2	☐	☐
4	☐	☐
5	☐	☐

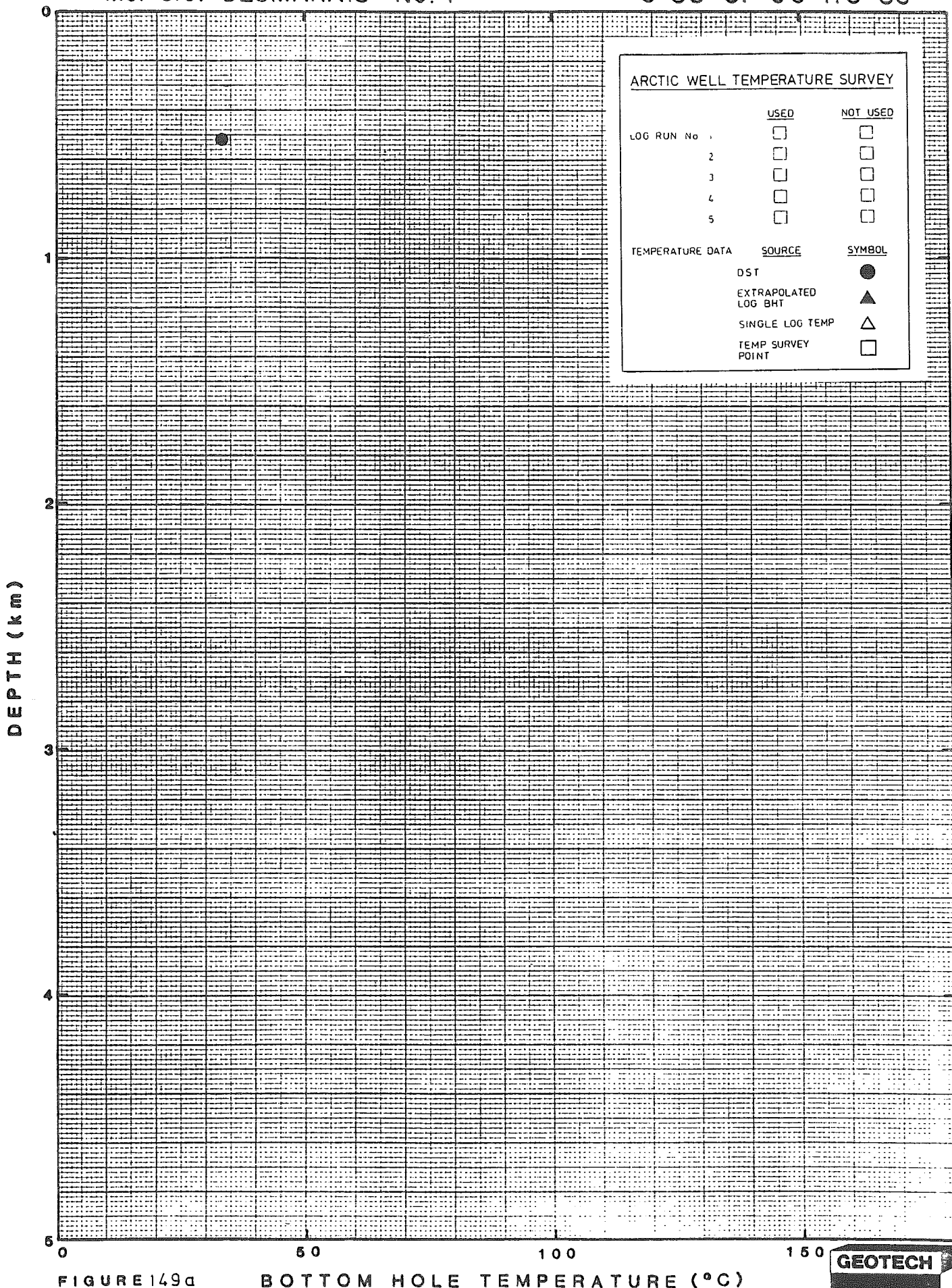
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		☐

FIGURE 149

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No	<input type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 149a

BOTTOM HOLE TEMPERATURE (°C)



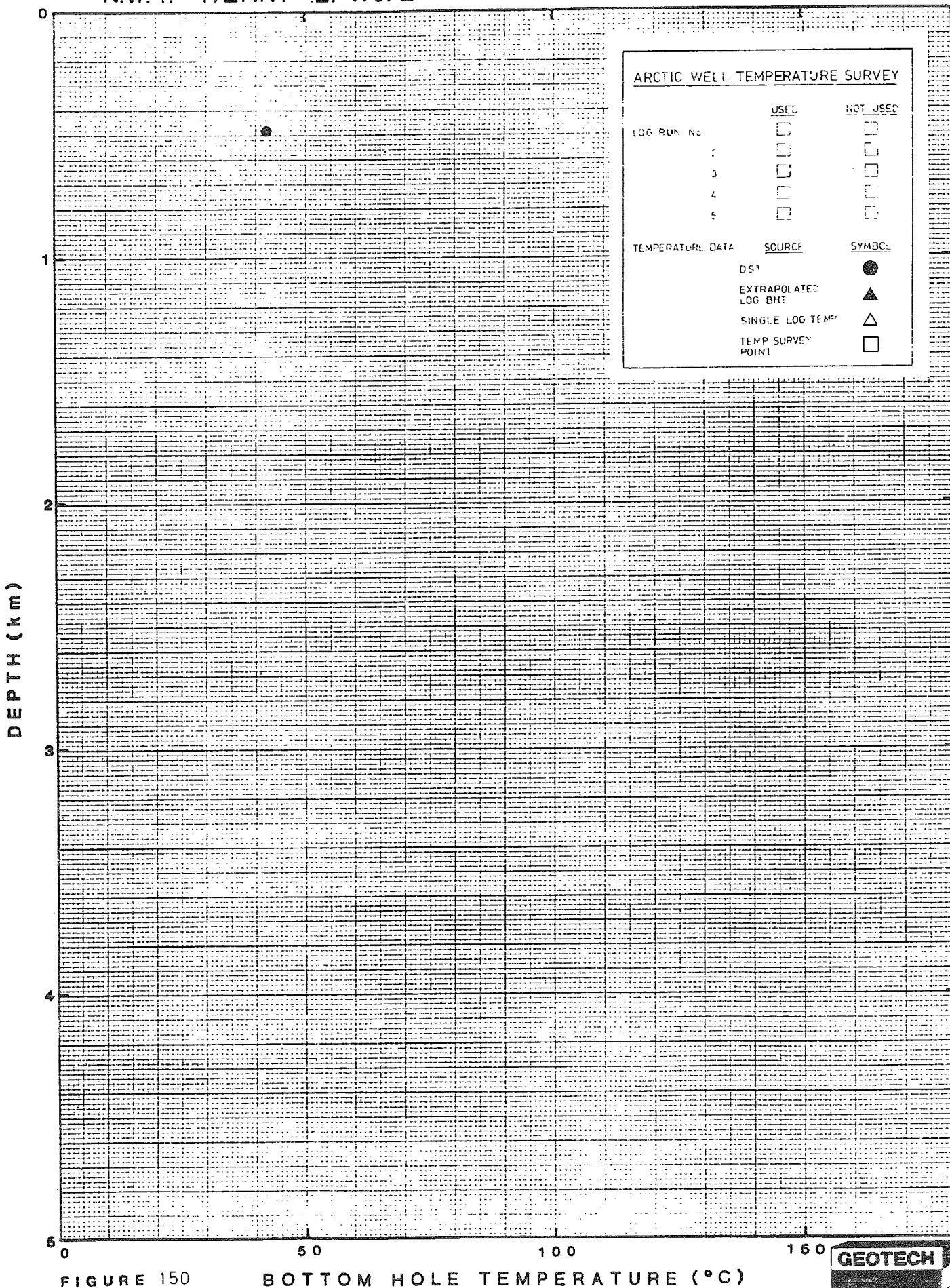


FIGURE 150

BOTTOM HOLE TEMPERATURE (°C)

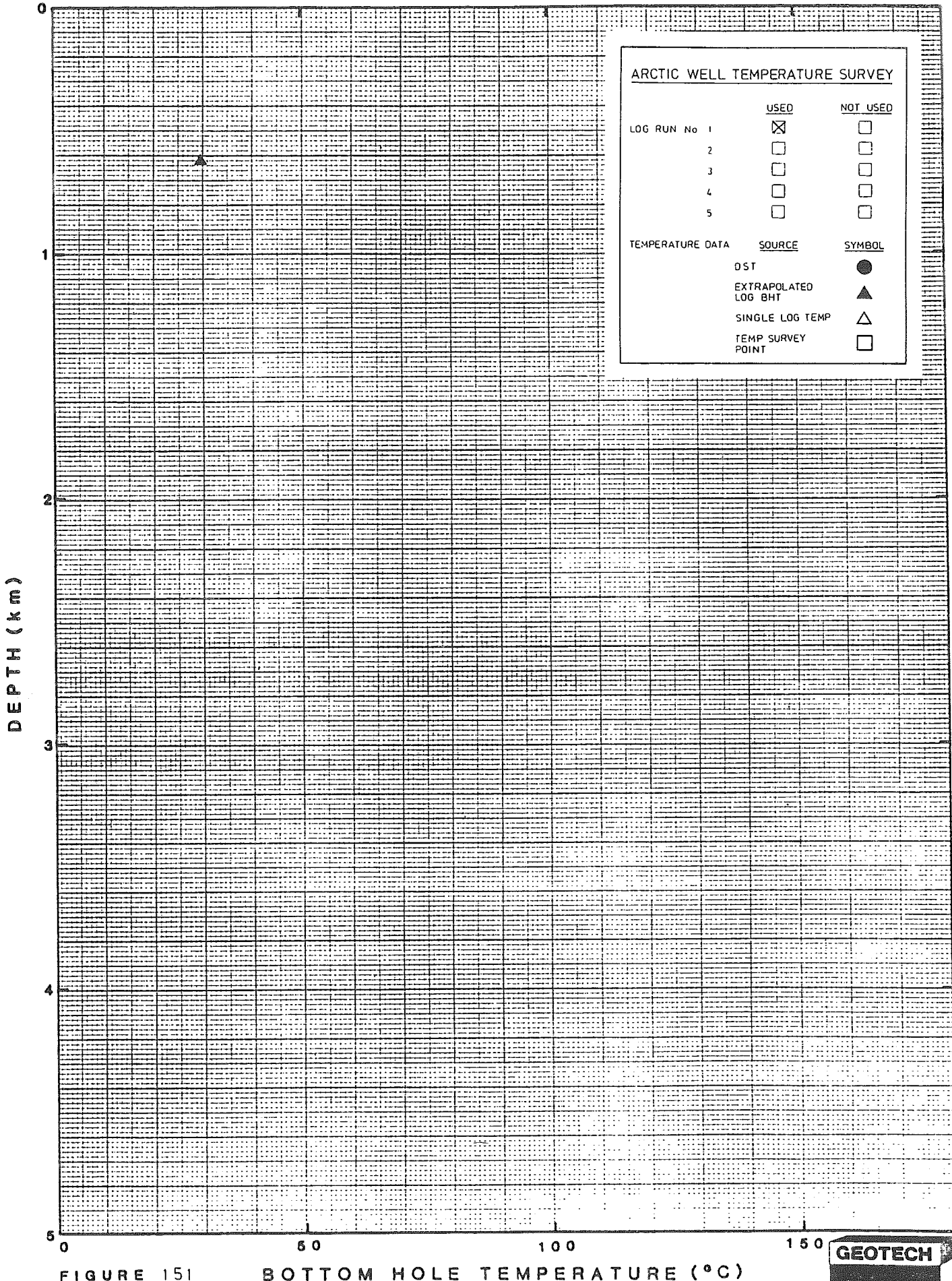


FIGURE 151

BOTTOM HOLE TEMPERATURE (°C)





SHELL DESMARAIS

K-29 61-00-116-45

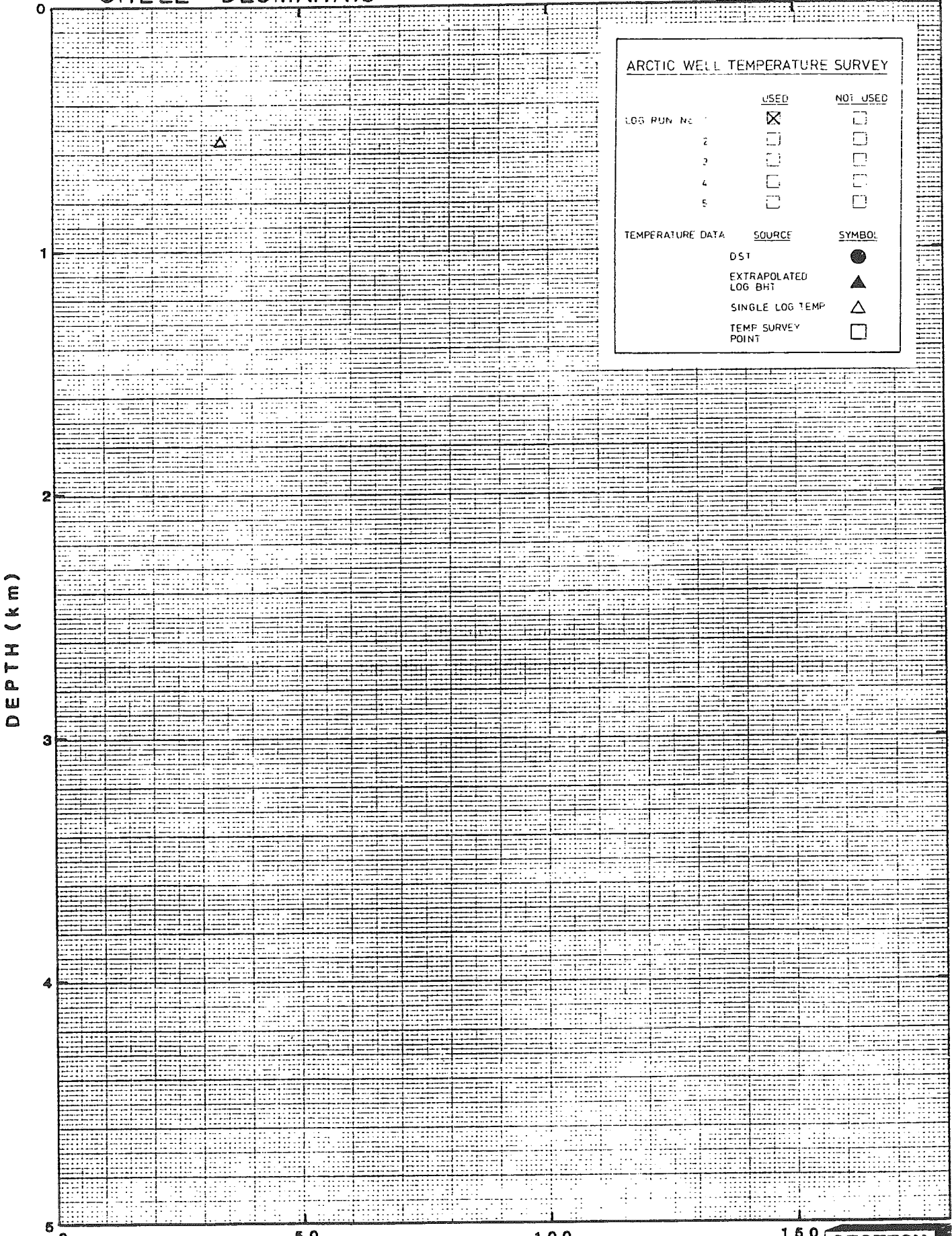


FIGURE 152

BOTTOM HOLE TEMPERATURE (°C)



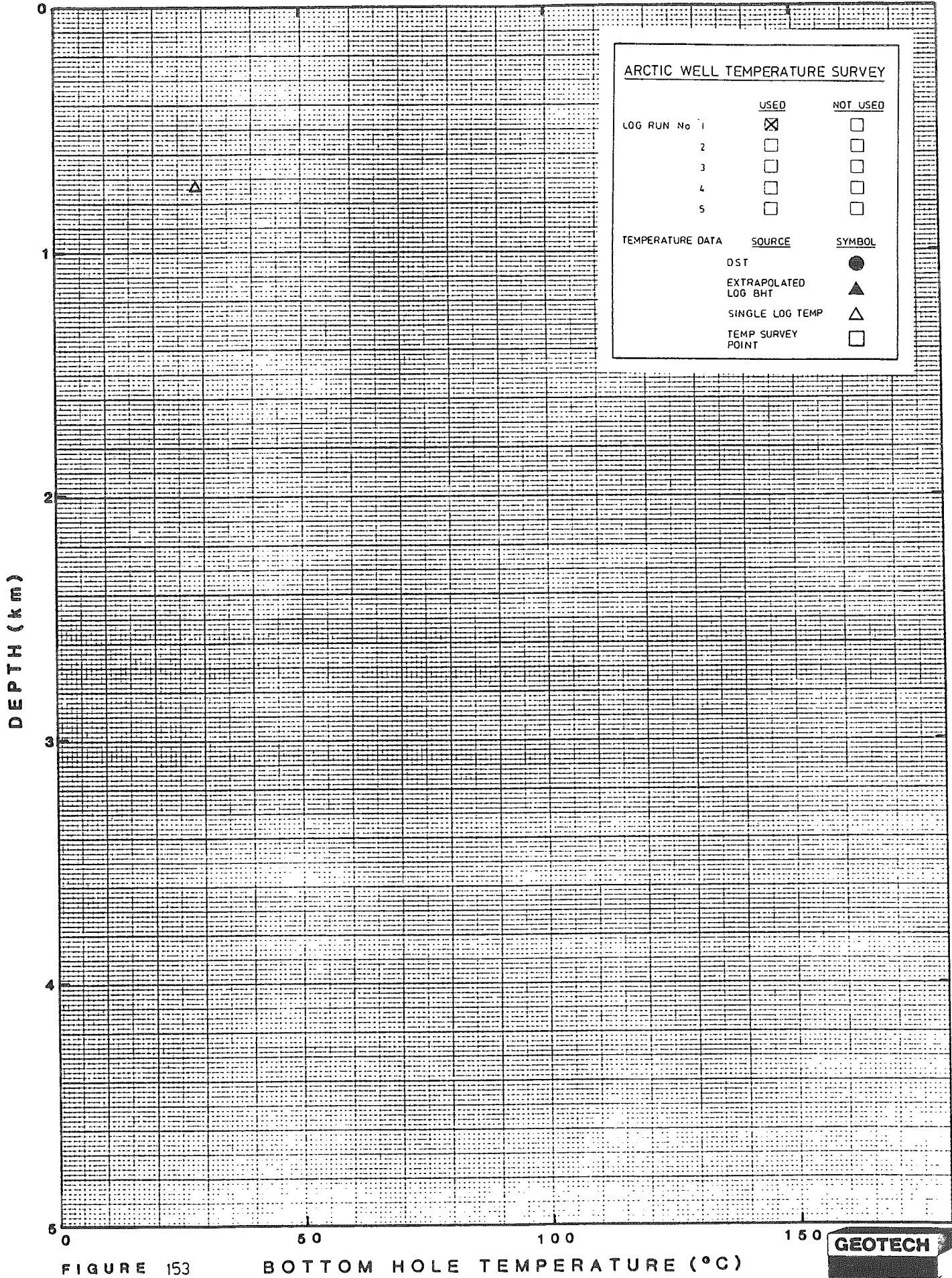


FIGURE 153

BOTTOM HOLE TEMPERATURE (°C)

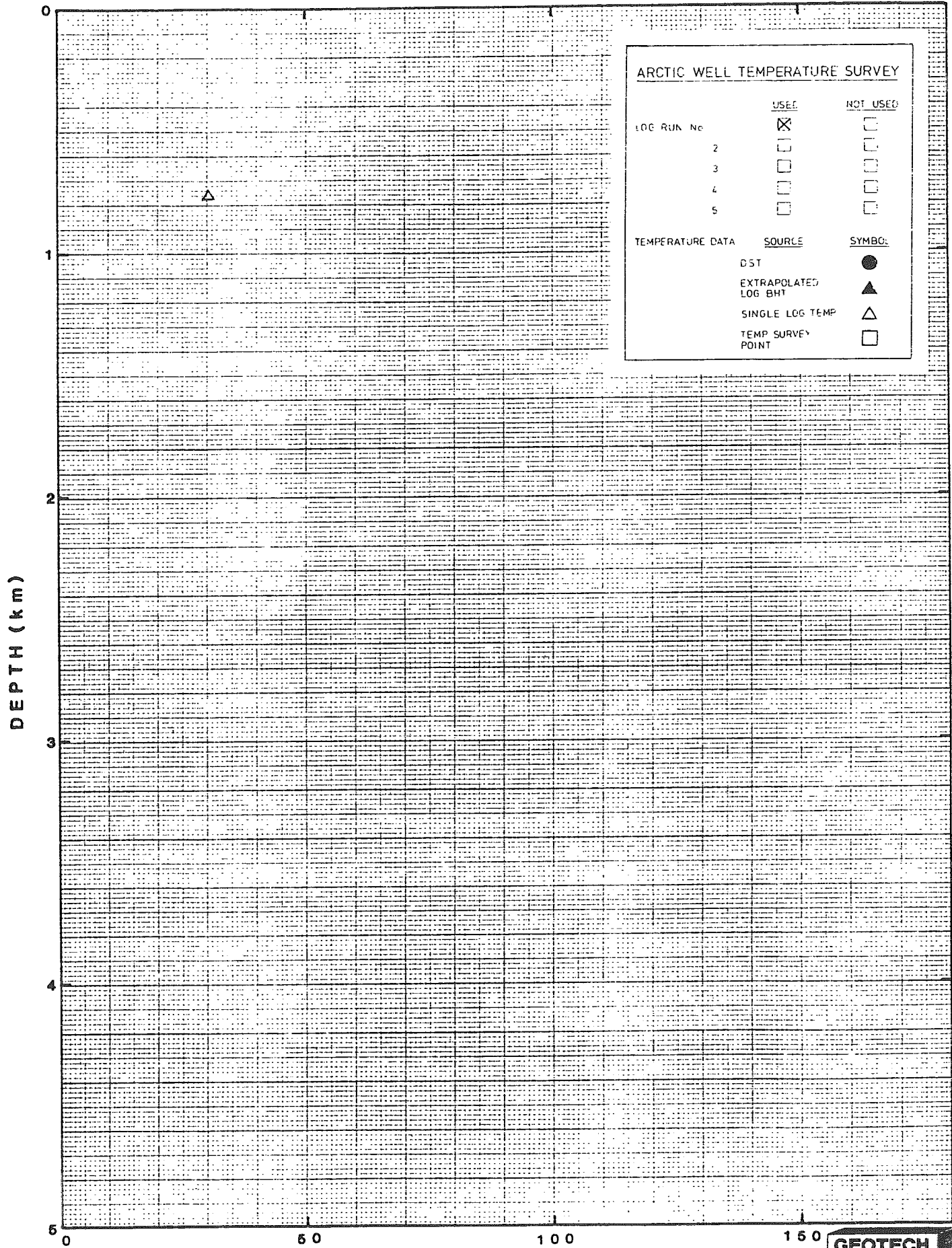


FIGURE 154

BOTTOM HOLE TEMPERATURE (°C)

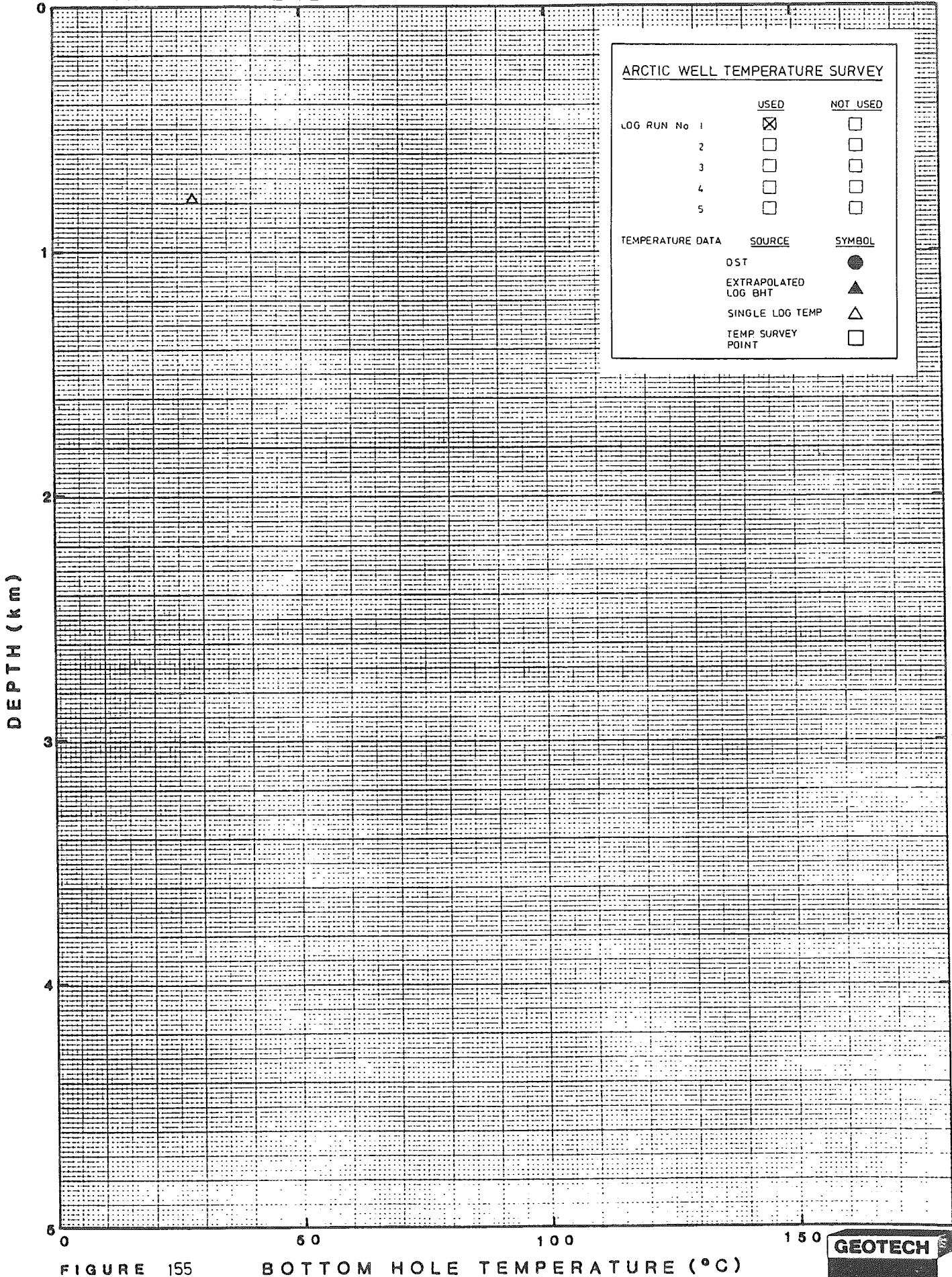


FIGURE 155

BOTTOM HOLE TEMPERATURE (°C)





SHELL KAKISA L.

C-04 61-00-117-45

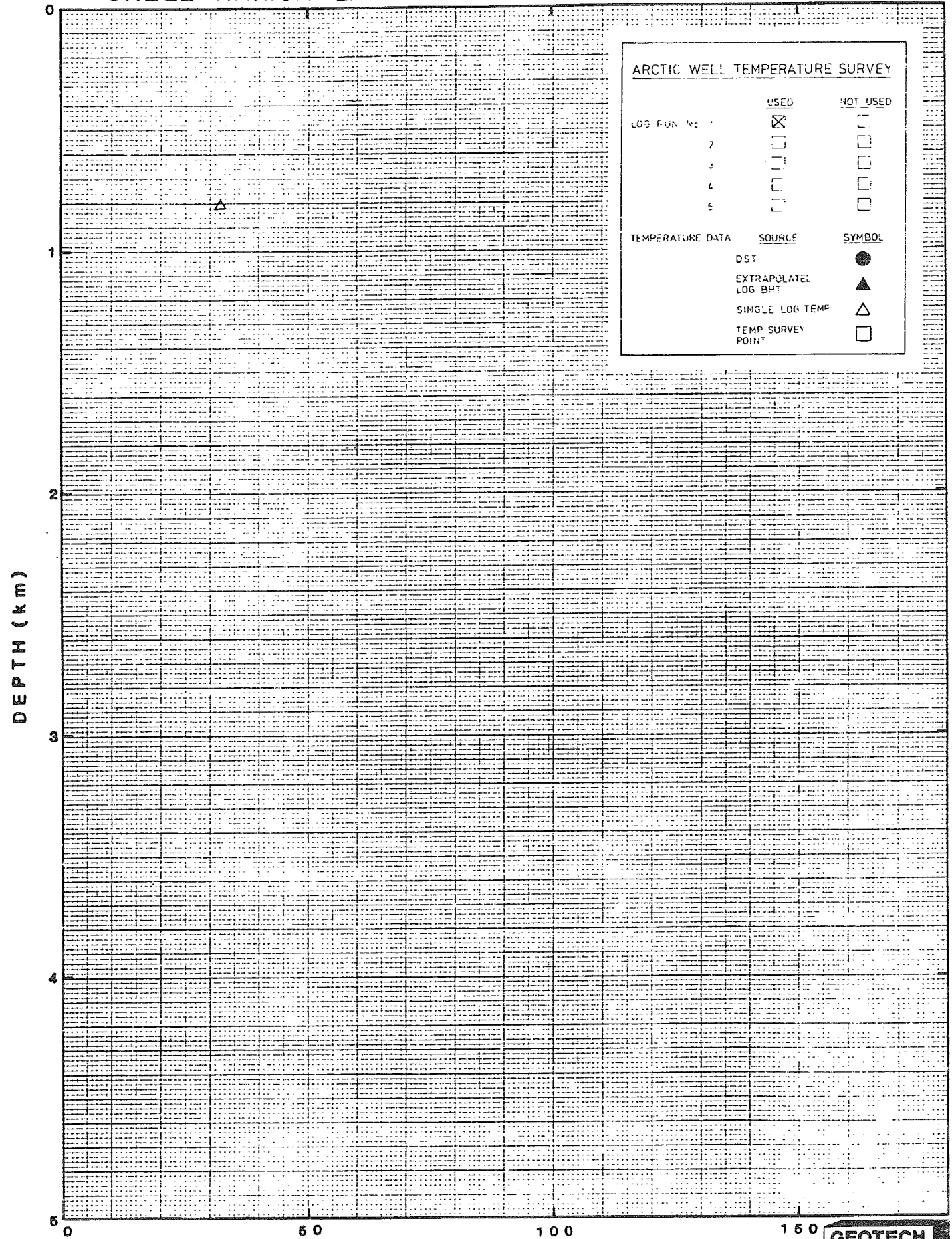


FIGURE 156

BOTTOM HOLE TEMPERATURE (°C)

GEOTECH

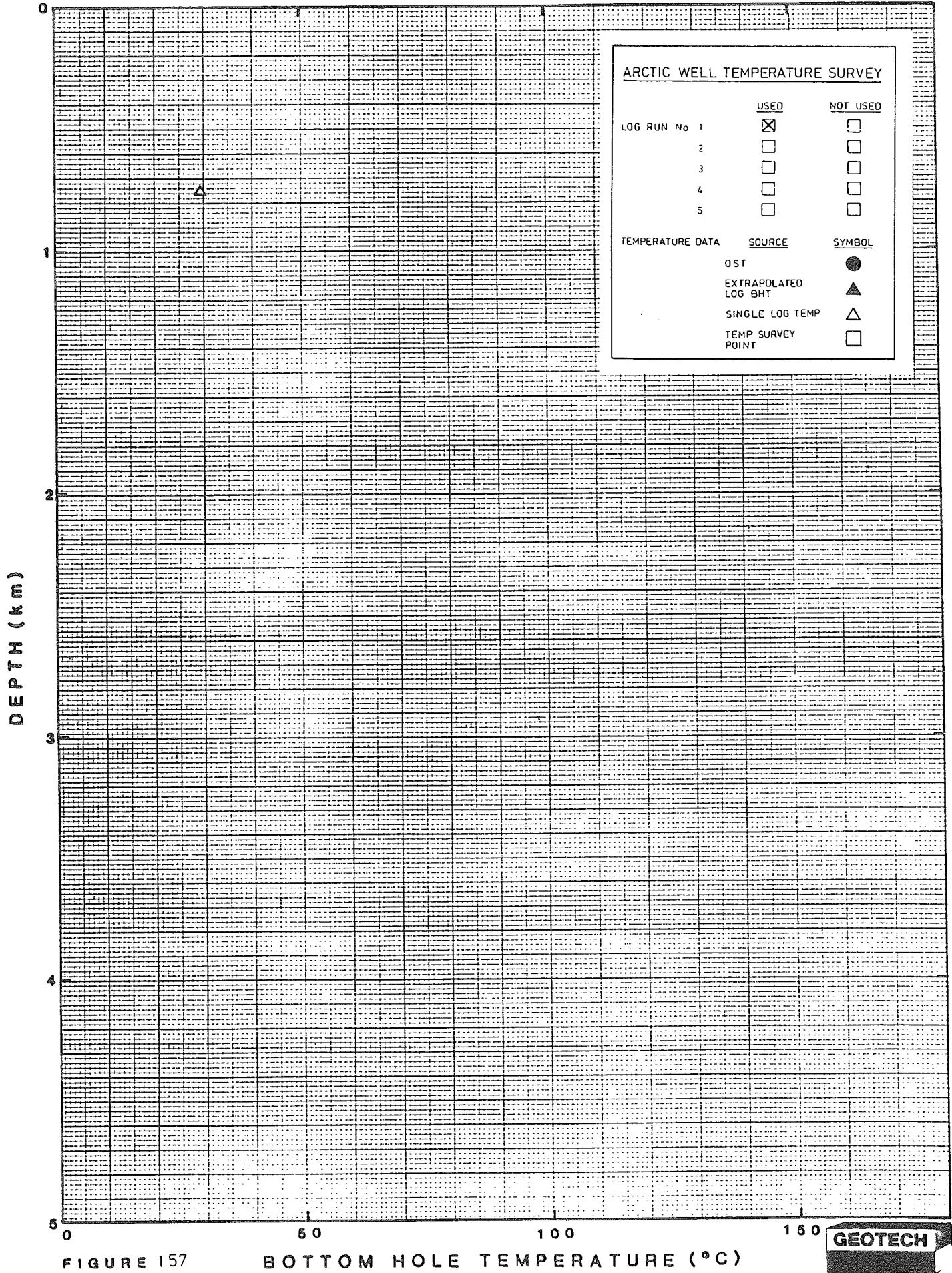


FIGURE 157

BOTTOM HOLE TEMPERATURE (°C)



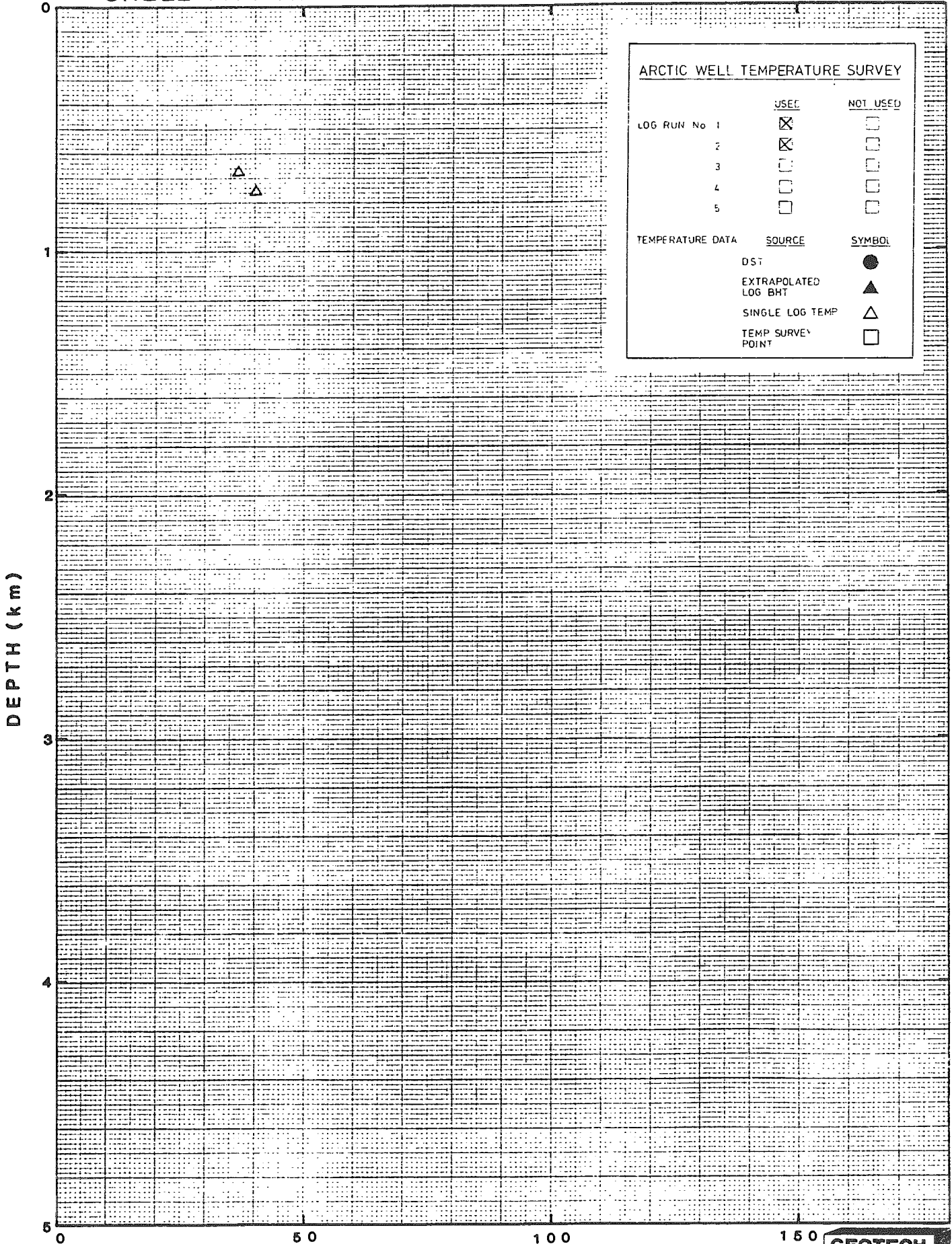
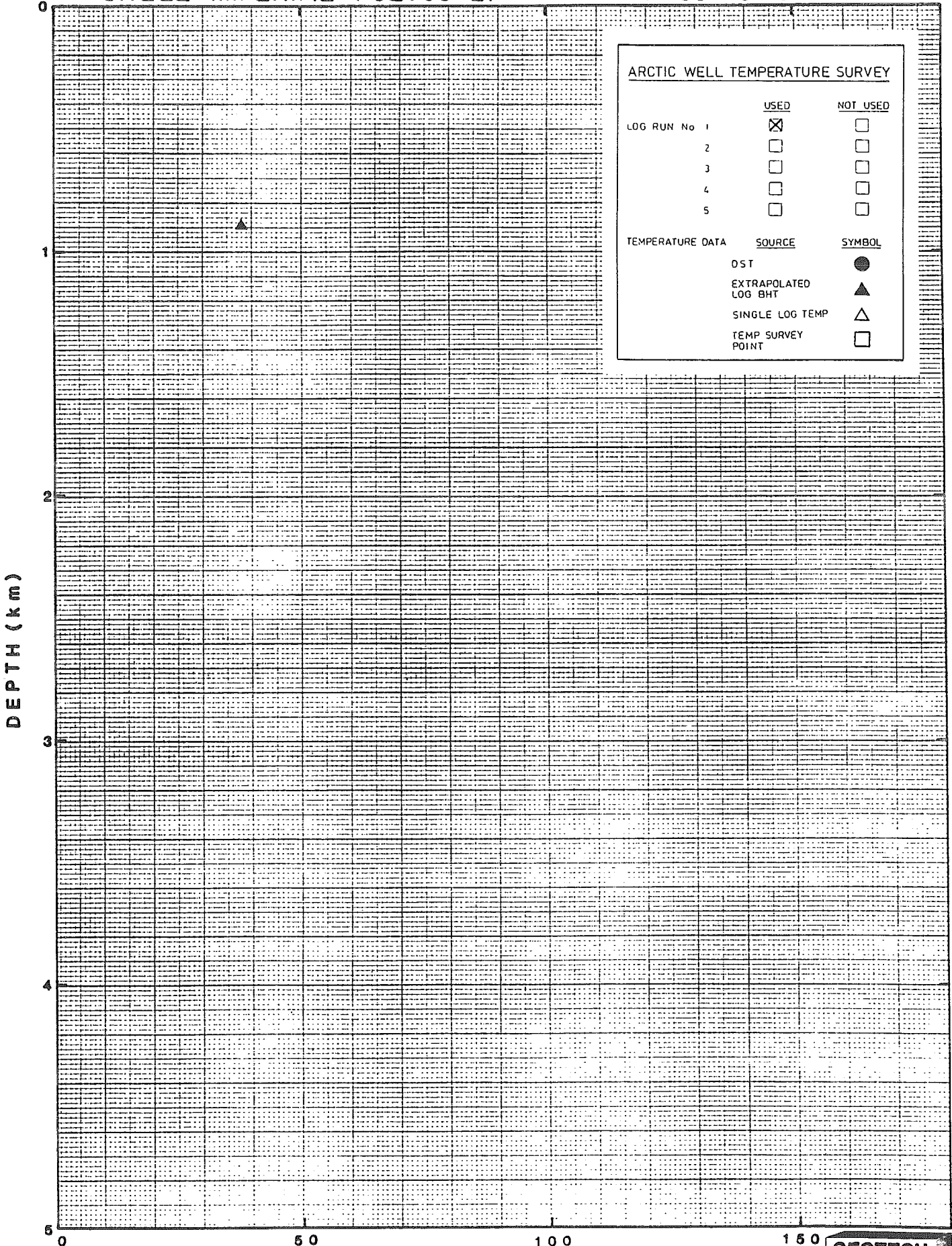


FIGURE 158

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY			
	<u>USED</u>	<u>NOT USED</u>	
LOG RUN No	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	2	<input type="checkbox"/>	<input type="checkbox"/>
	3	<input type="checkbox"/>	<input type="checkbox"/>
	4	<input type="checkbox"/>	<input type="checkbox"/>
	5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>	
	DST	●	
	EXTRAPOLATED LOG BHT	▲	
	SINGLE LOG TEMP	△	
	TEMP SURVEY POINT	□	

DEPTH (km)

FIGURE 159

BOTTOM HOLE TEMPERATURE (°C)





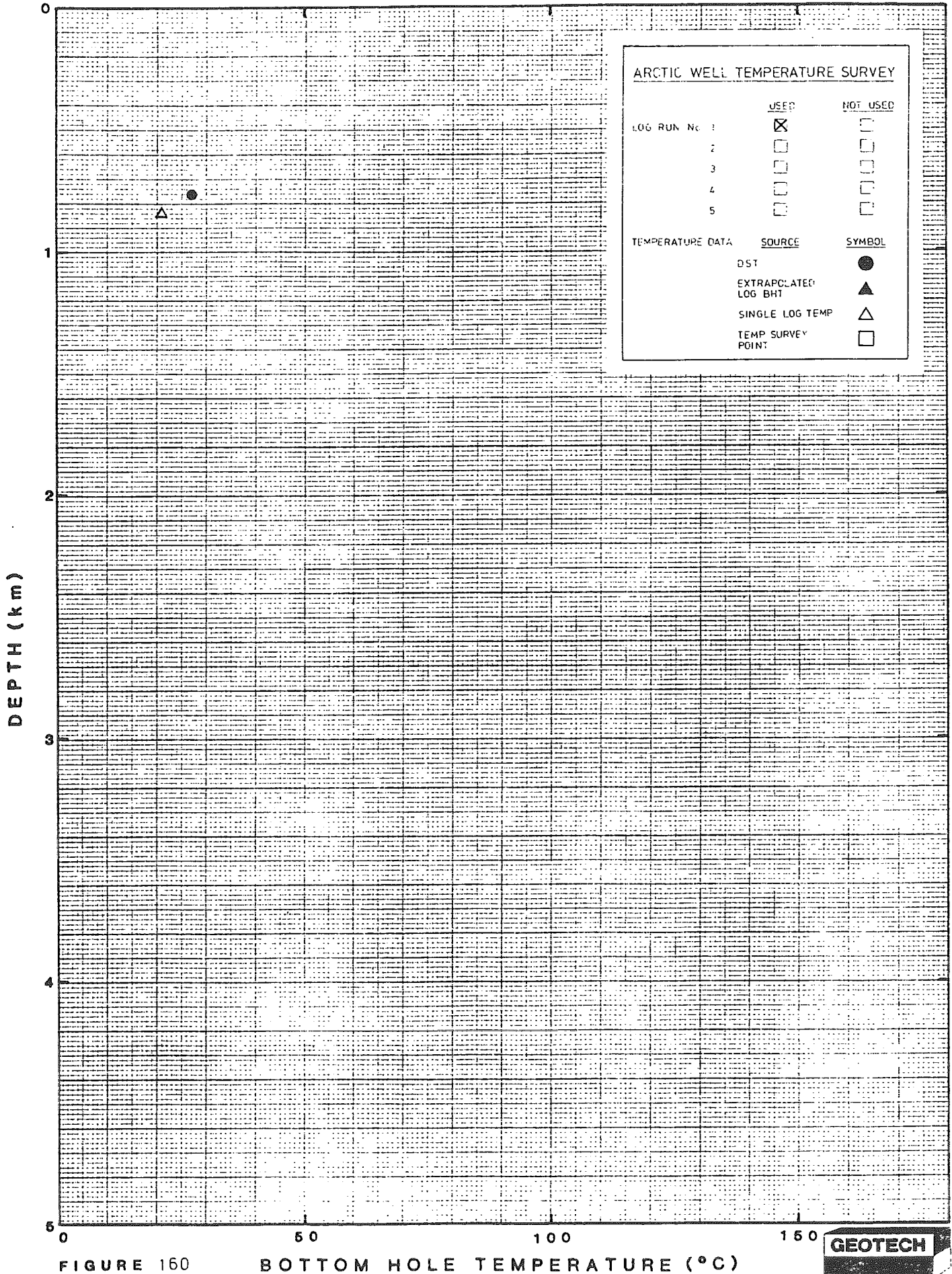
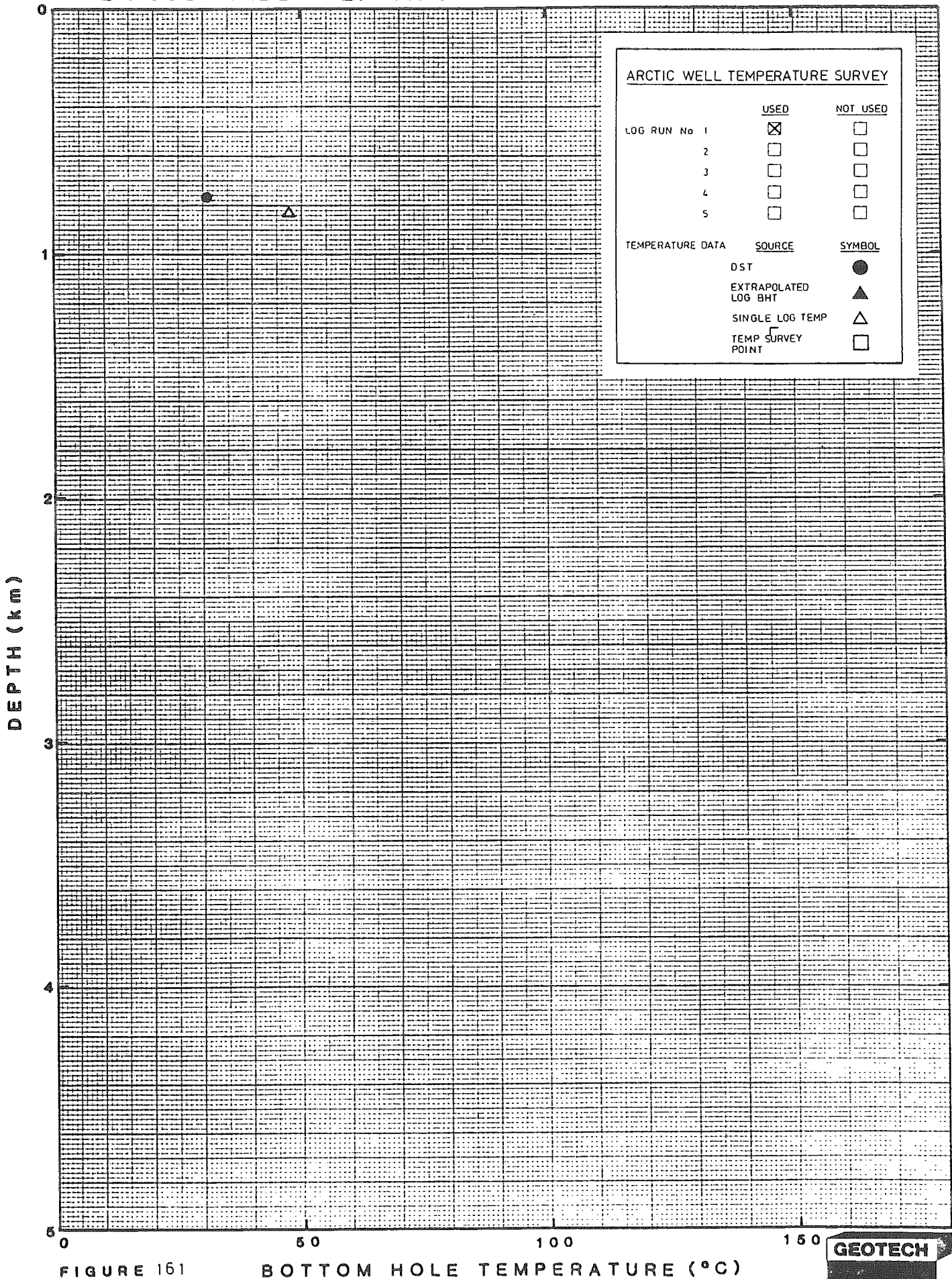


FIGURE 160

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 161

BOTTOM HOLE TEMPERATURE (°C)



BRIGGS RABBIT L. No. 1

0-16 61-00-118-45

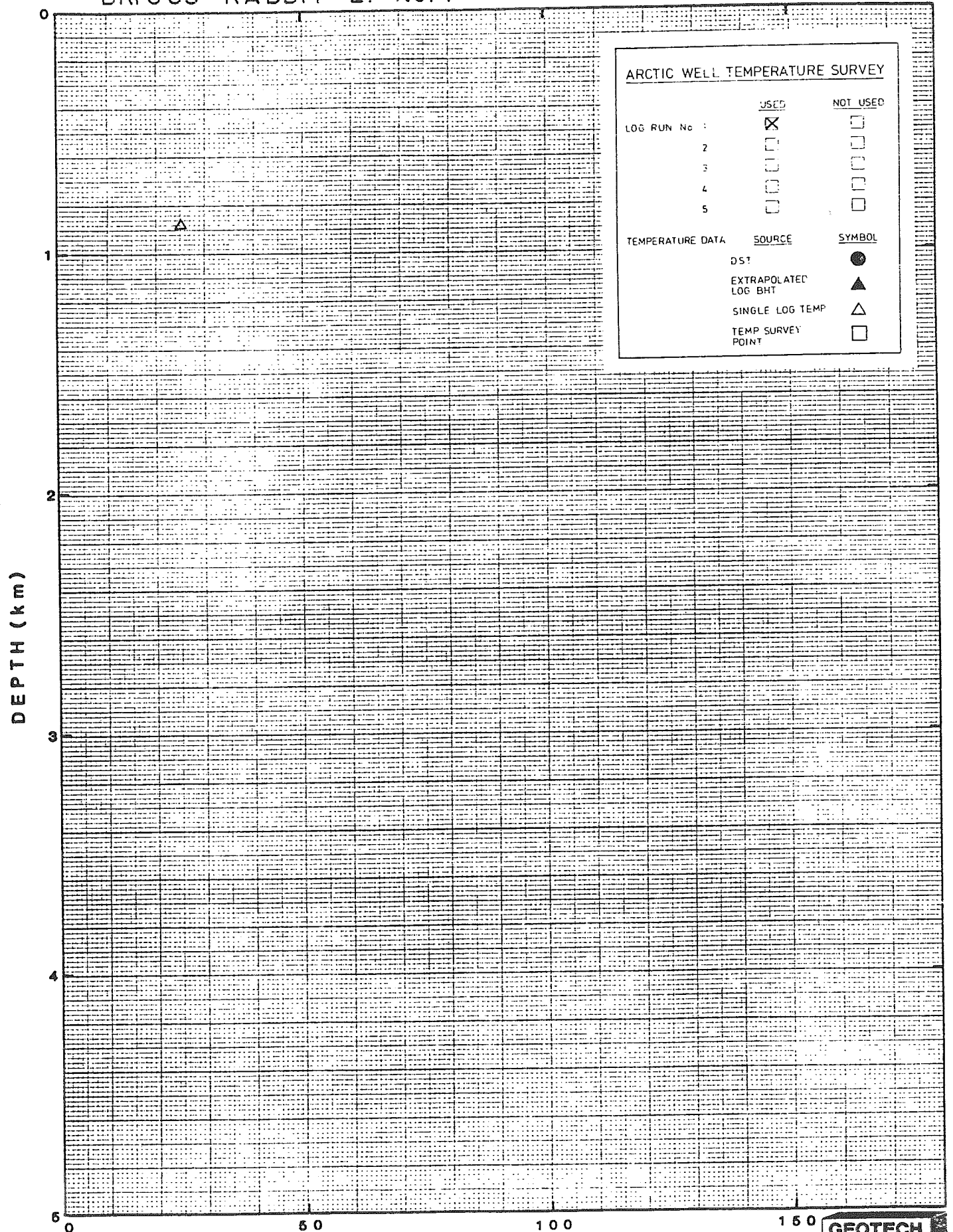


FIGURE 162

BOTTOM HOLE TEMPERATURE (°C)



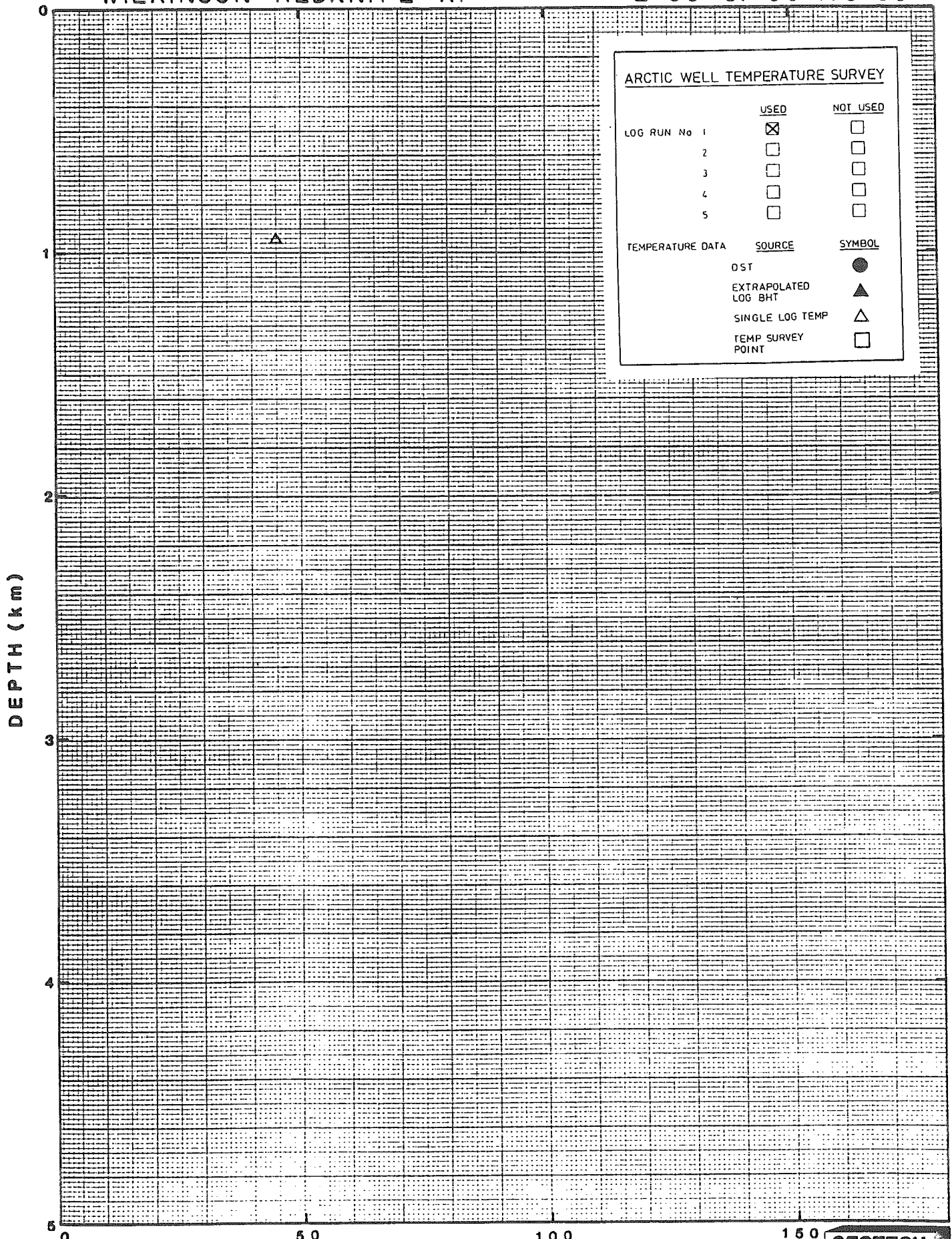


FIGURE 163

BOTTOM HOLE TEMPERATURE (°C)





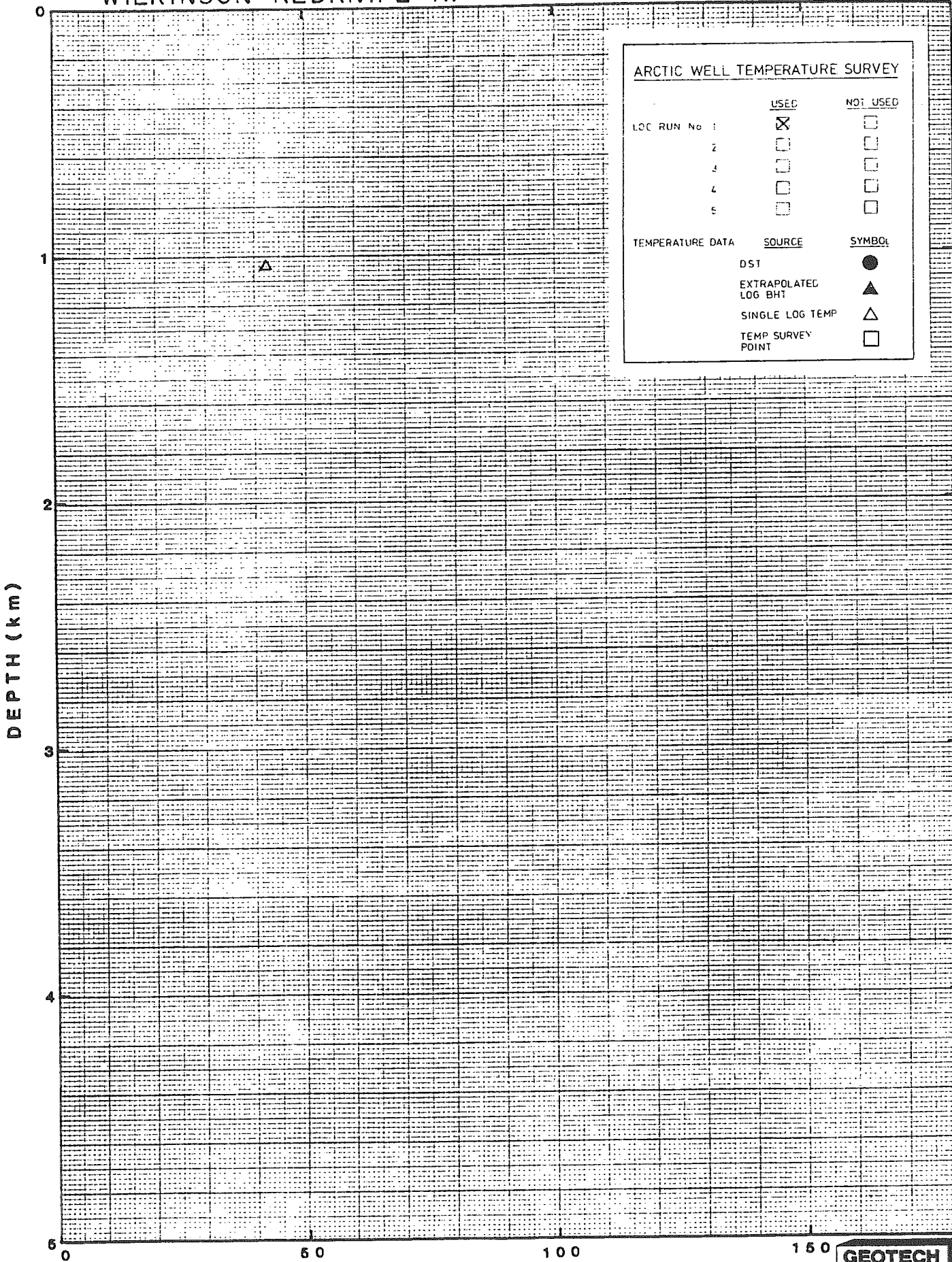
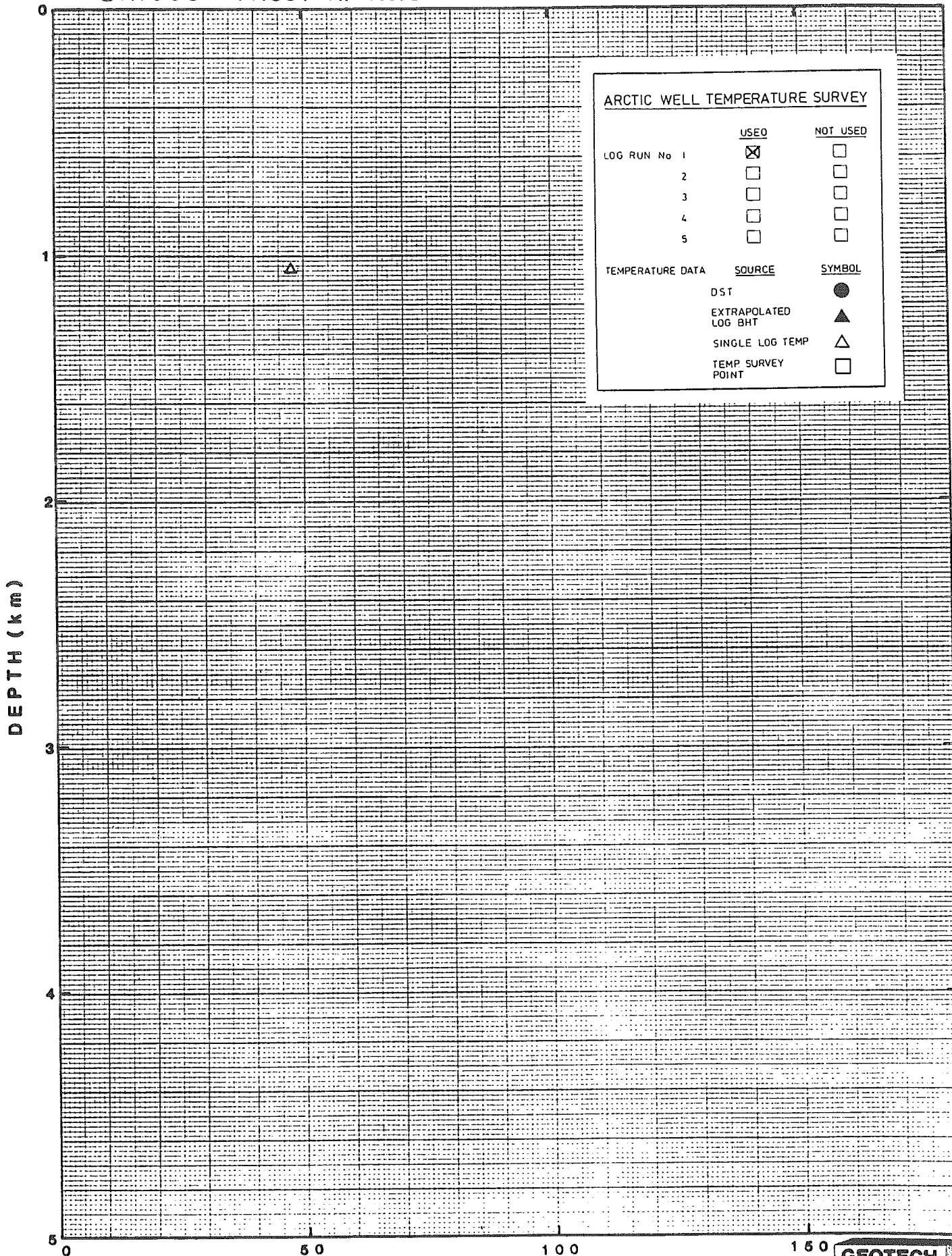


FIGURE 164

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA SOURCE SYMBOL		
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 165

BOTTOM HOLE TEMPERATURE (°C)



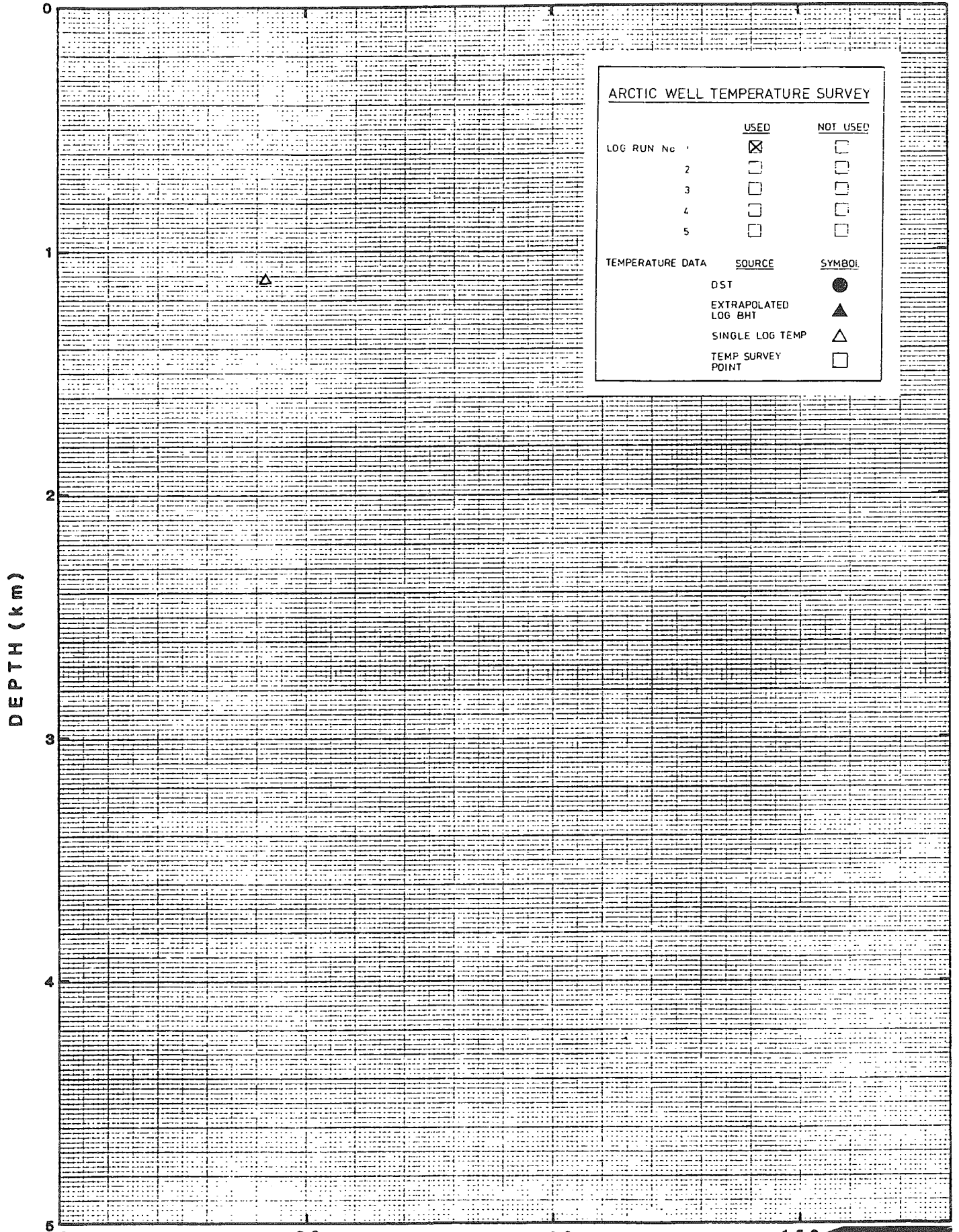
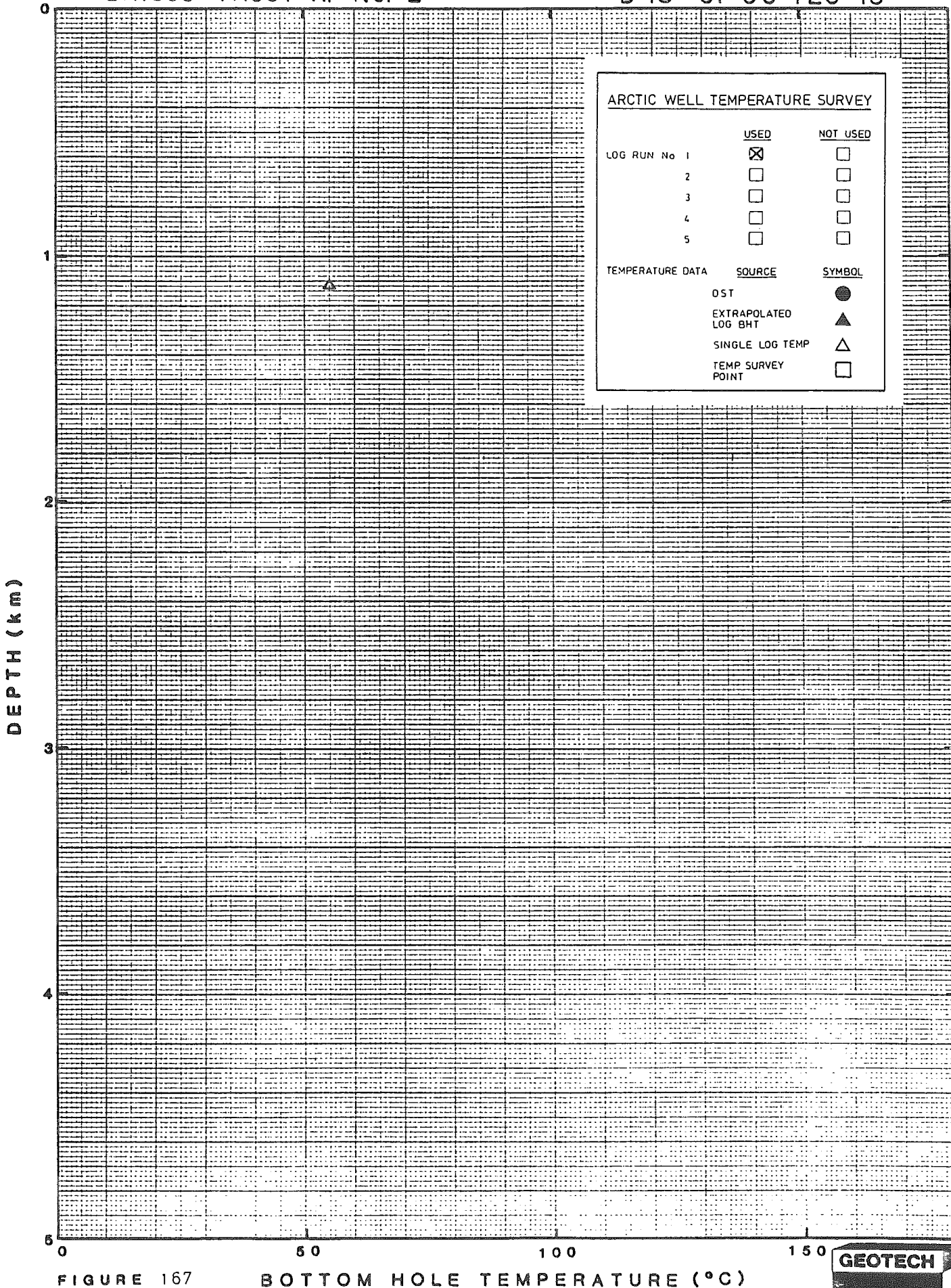


FIGURE 166

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 167

BOTTOM HOLE TEMPERATURE (°C)





BRIGGS TROUT R. No. 6

K-18 61-00-120-15

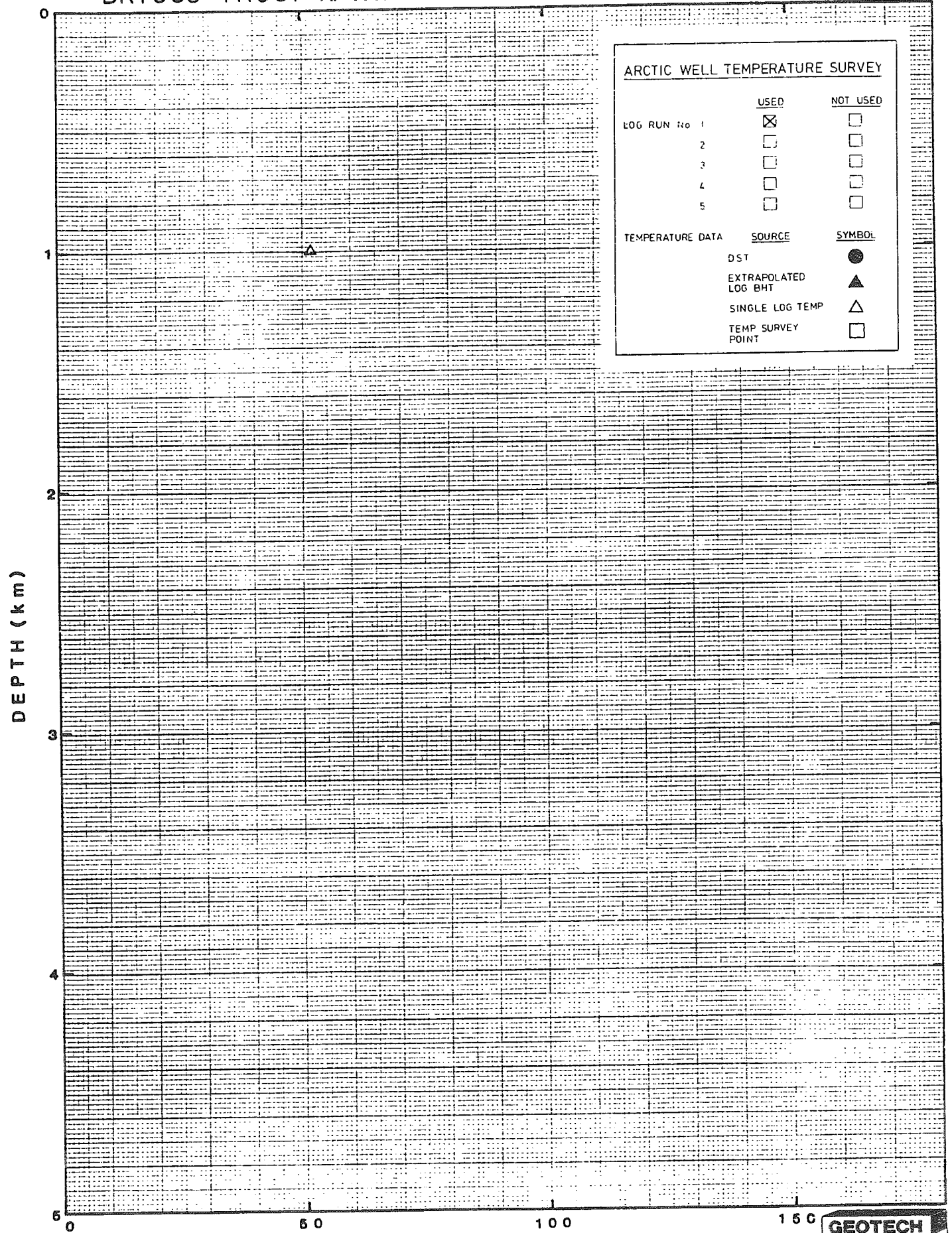


FIGURE 168

BOTTOM HOLE TEMPERATURE (°C)

GEOTECH

ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

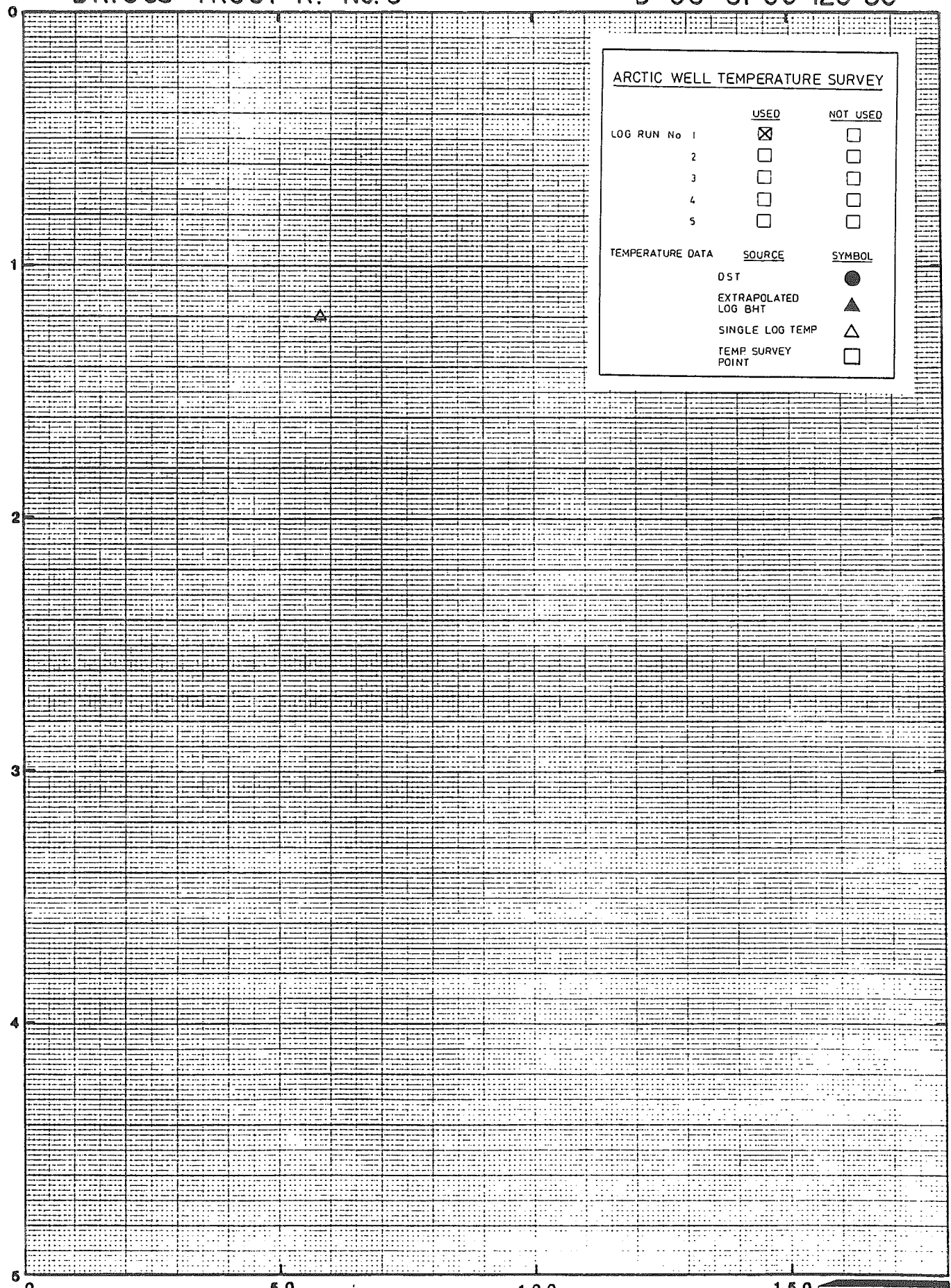


FIGURE 169

BOTTOM HOLE TEMPERATURE (°C)



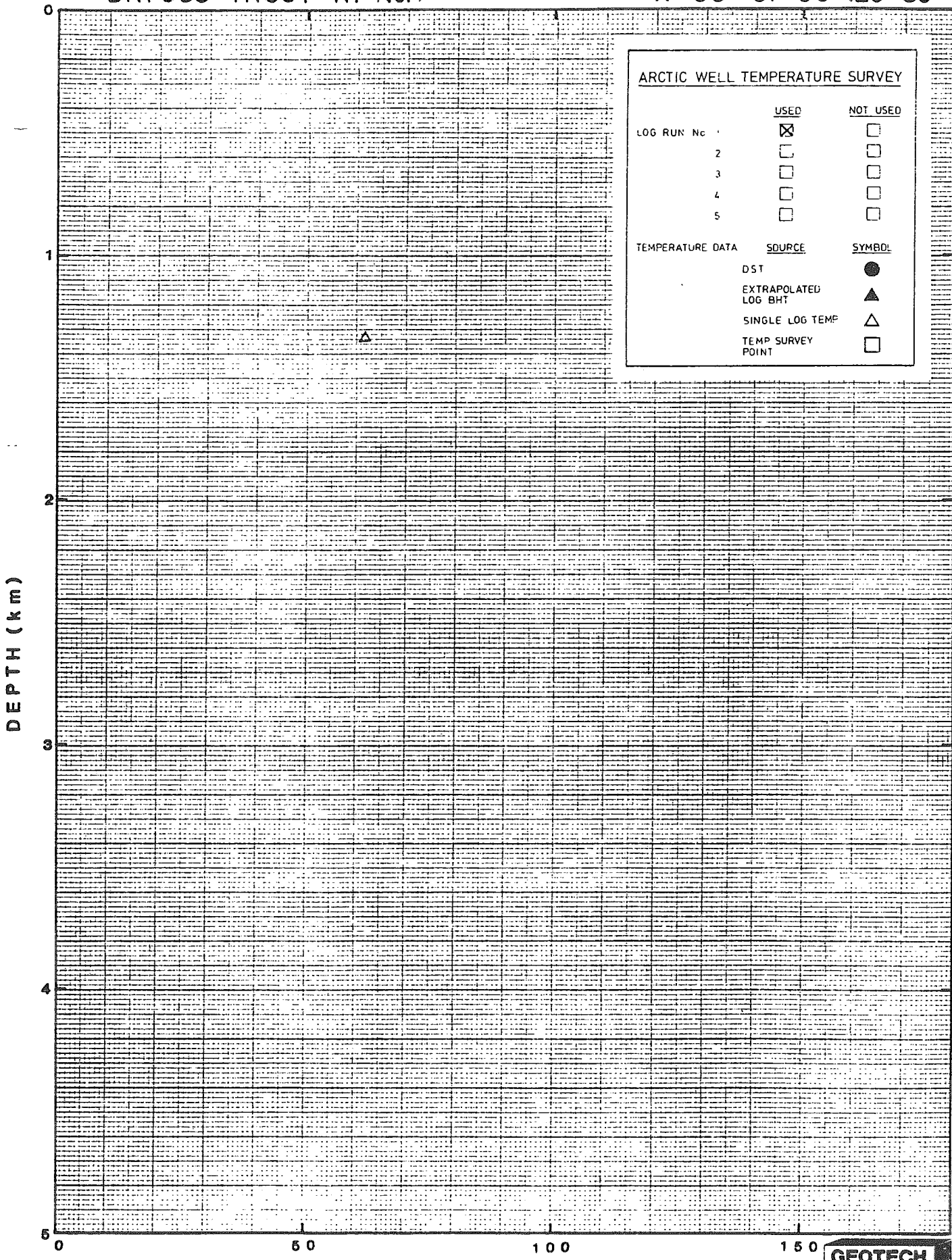


FIGURE 170

BOTTOM HOLE TEMPERATURE (°C)



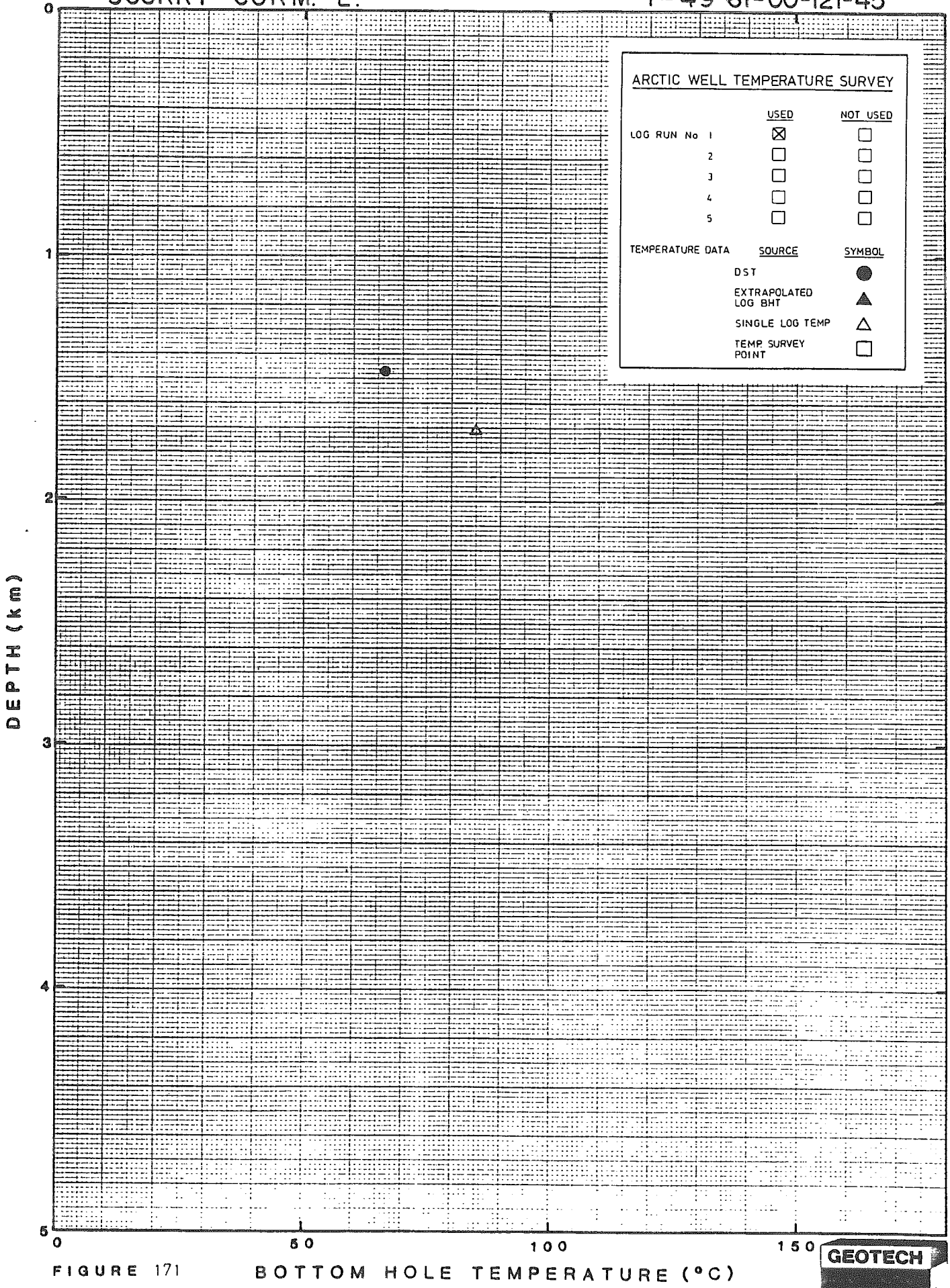
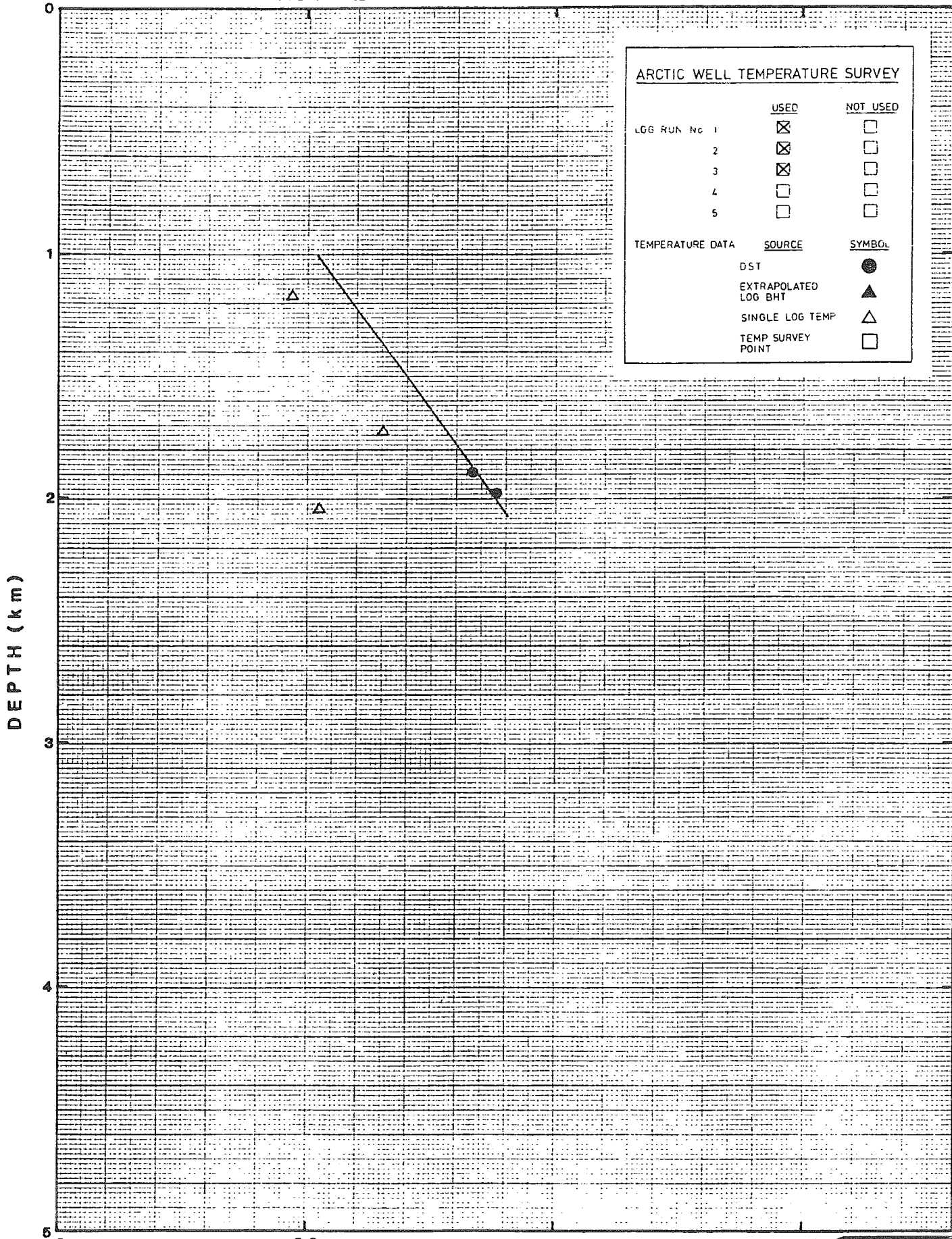


FIGURE 171

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 172

BOTTOM HOLE TEMPERATURE (°C)



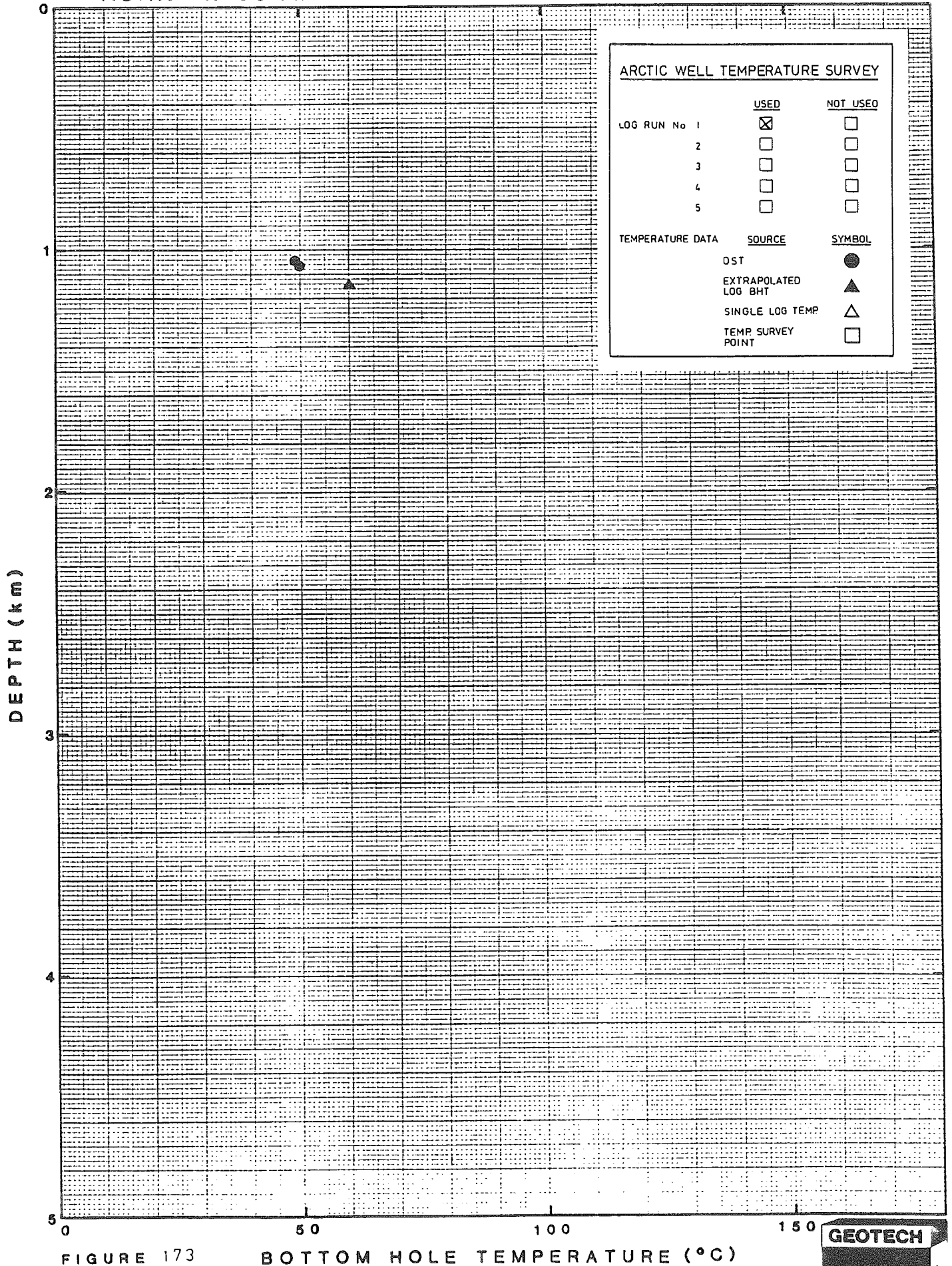


FIGURE 173

BOTTOM HOLE TEMPERATURE (°C)



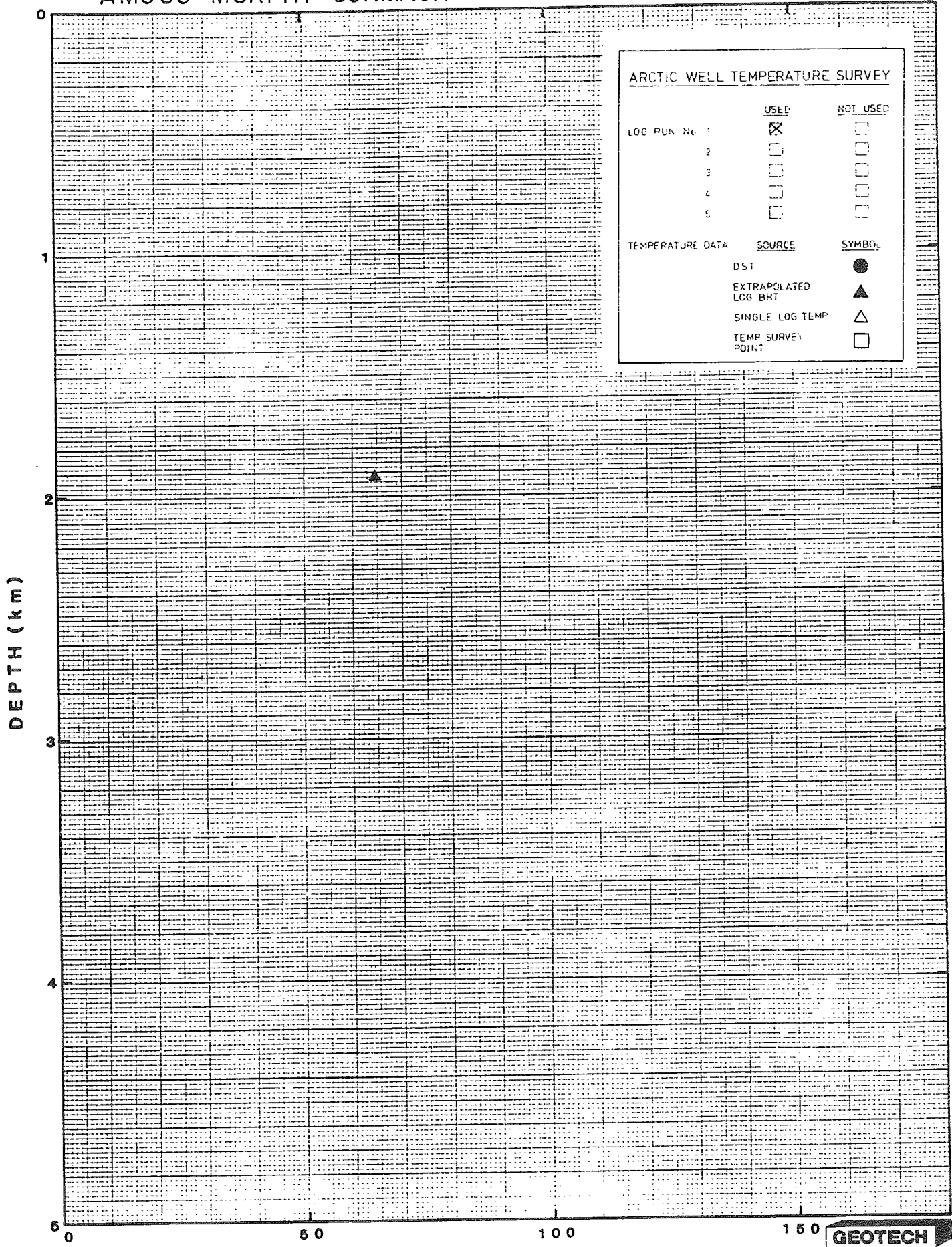


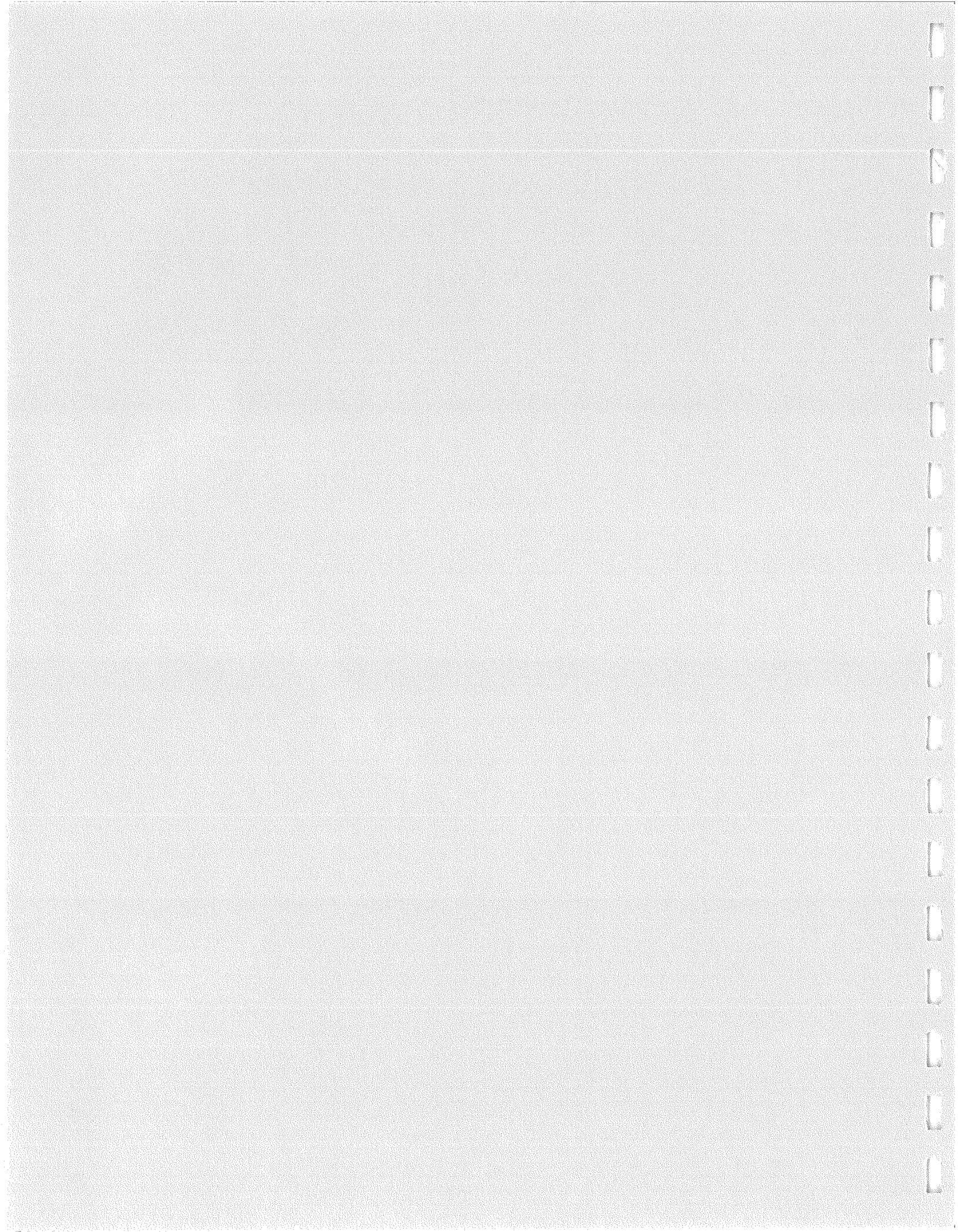
FIGURE 174

BOTTOM HOLE TEMPERATURE (°C)



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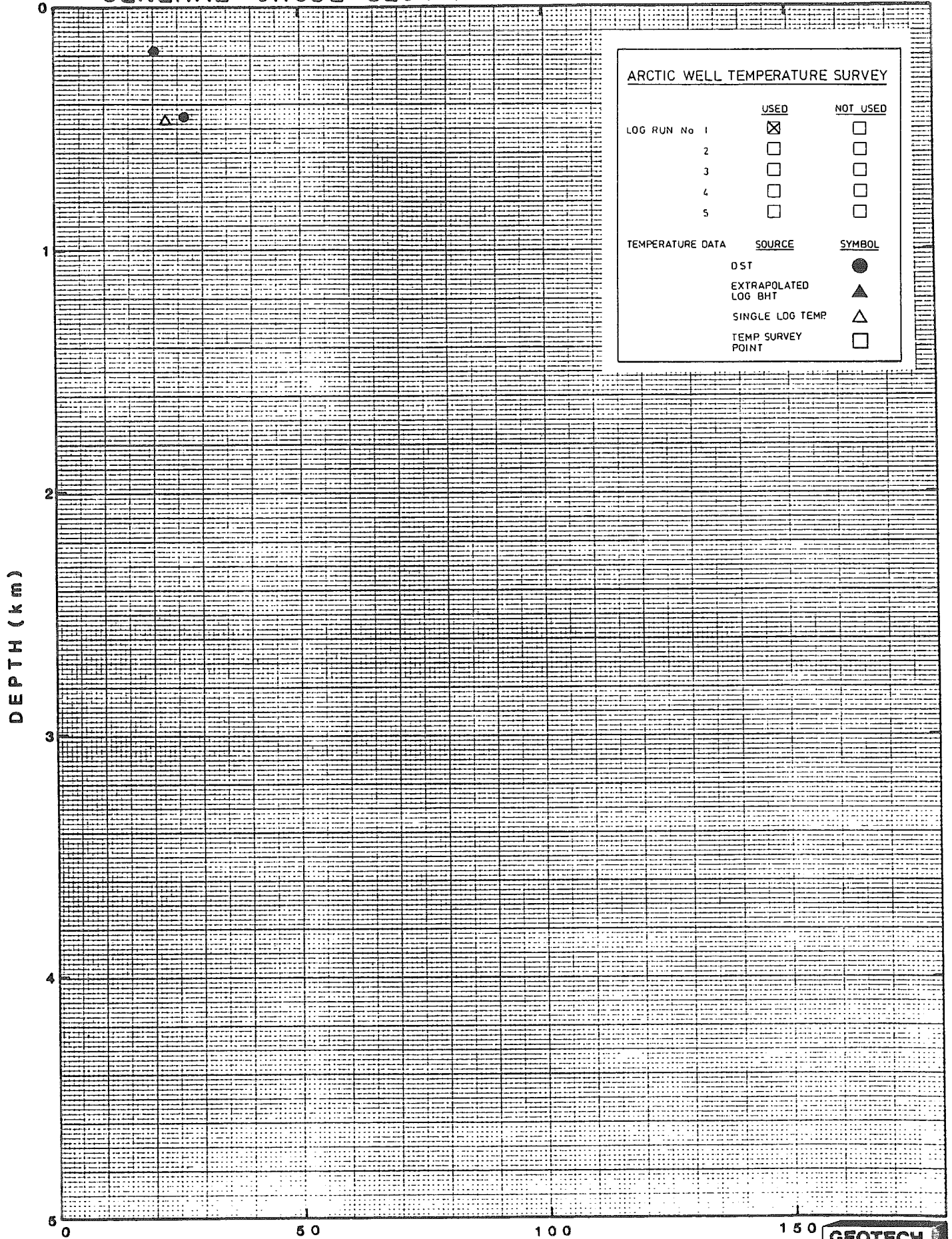


FIGURE 177

BOTTOM HOLE TEMPERATURE (°C)



# HORN R. BIG ISLAND

0-78 61-10-116-15

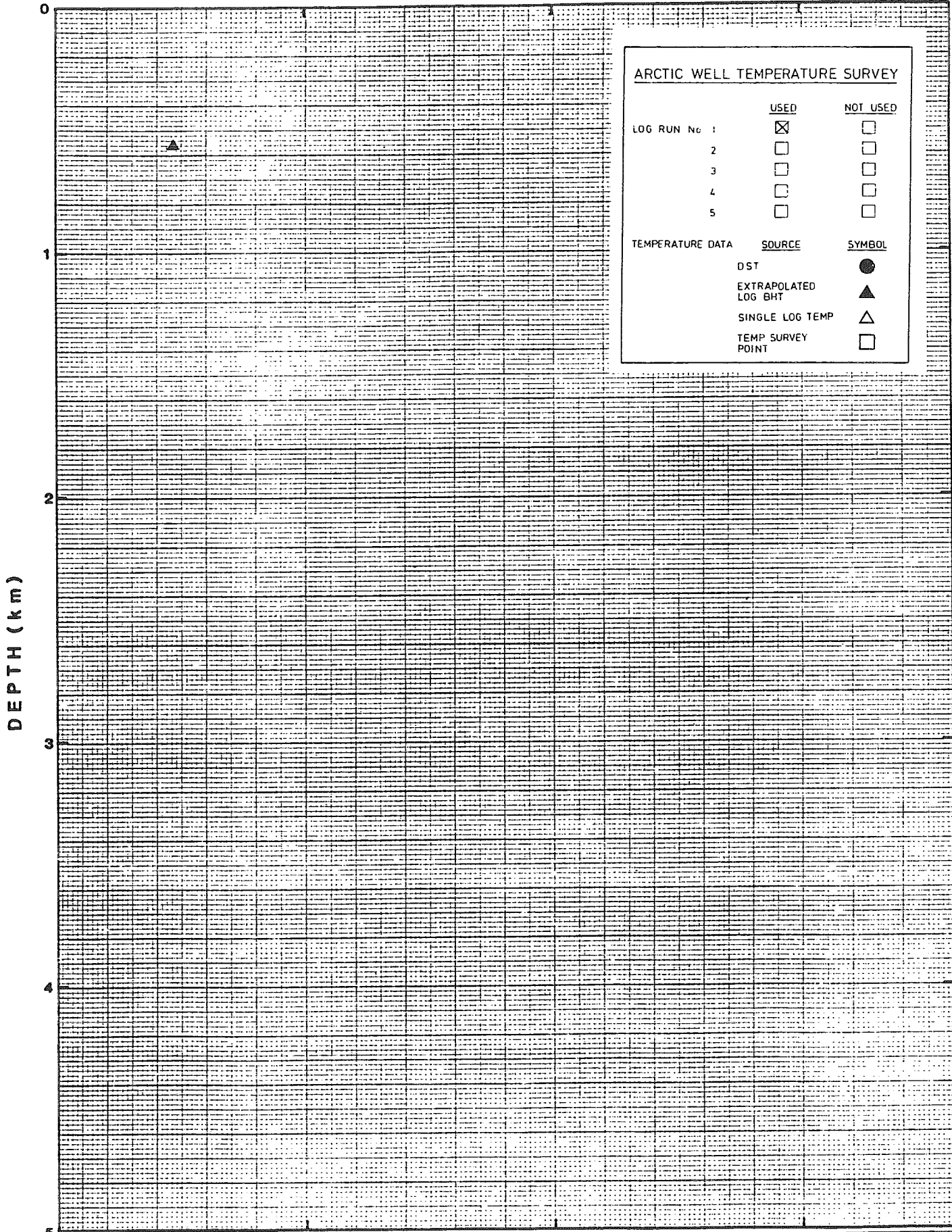


FIGURE 178

BOTTOM HOLE TEMPERATURE (°C)



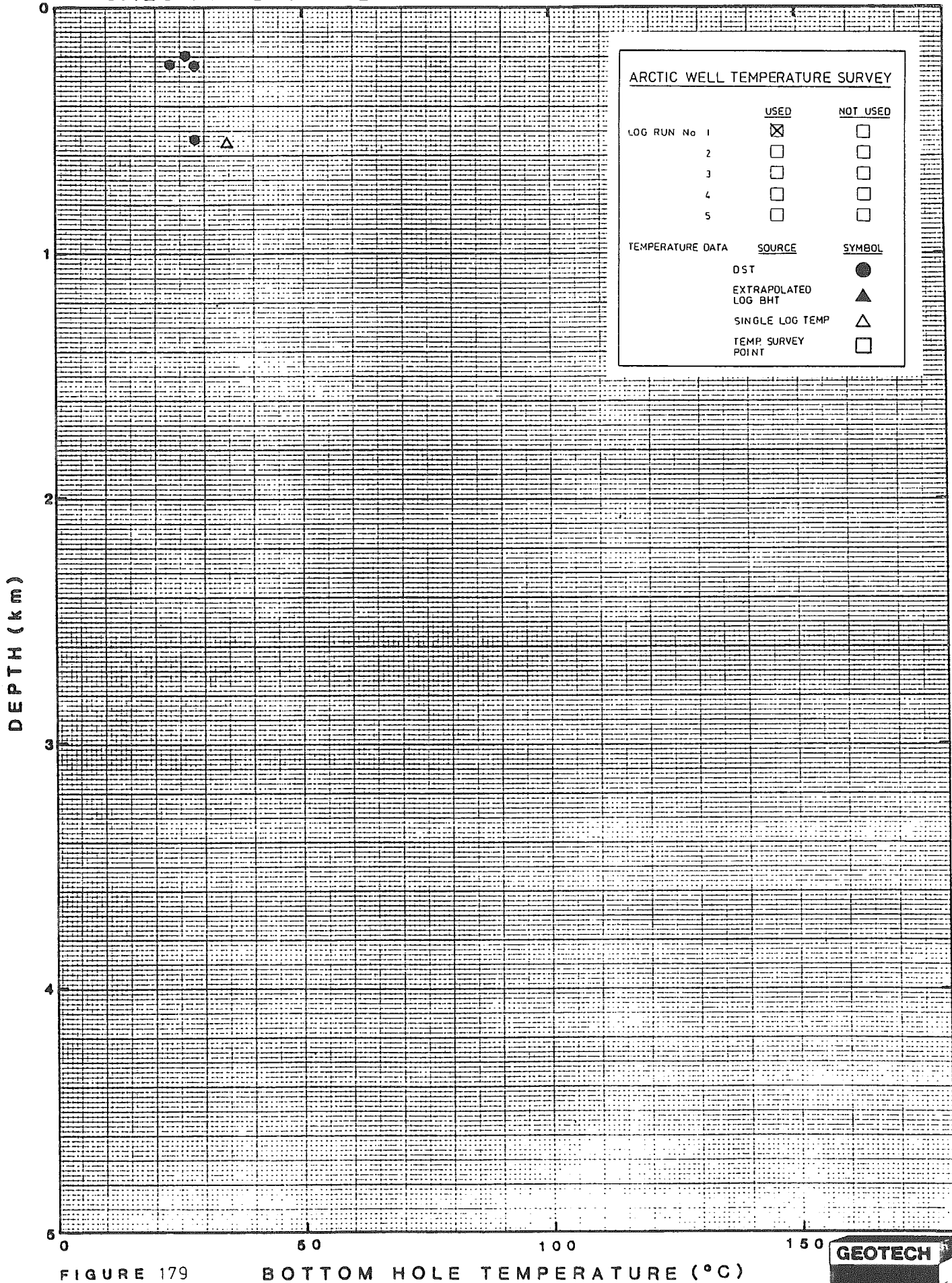


FIGURE 179

BOTTOM HOLE TEMPERATURE (°C)





SHELL BEAVER L.

M-29 61-10-117-00

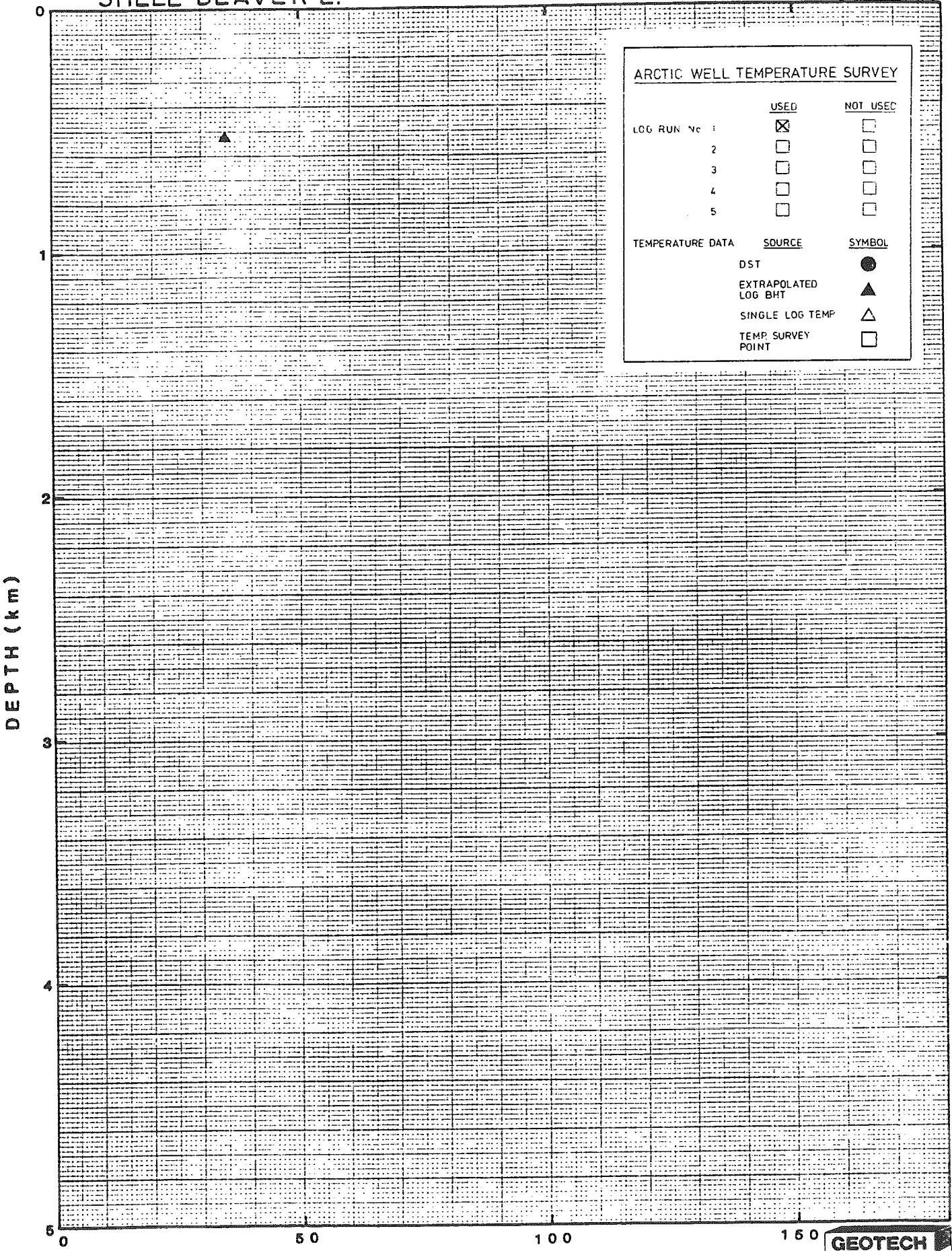
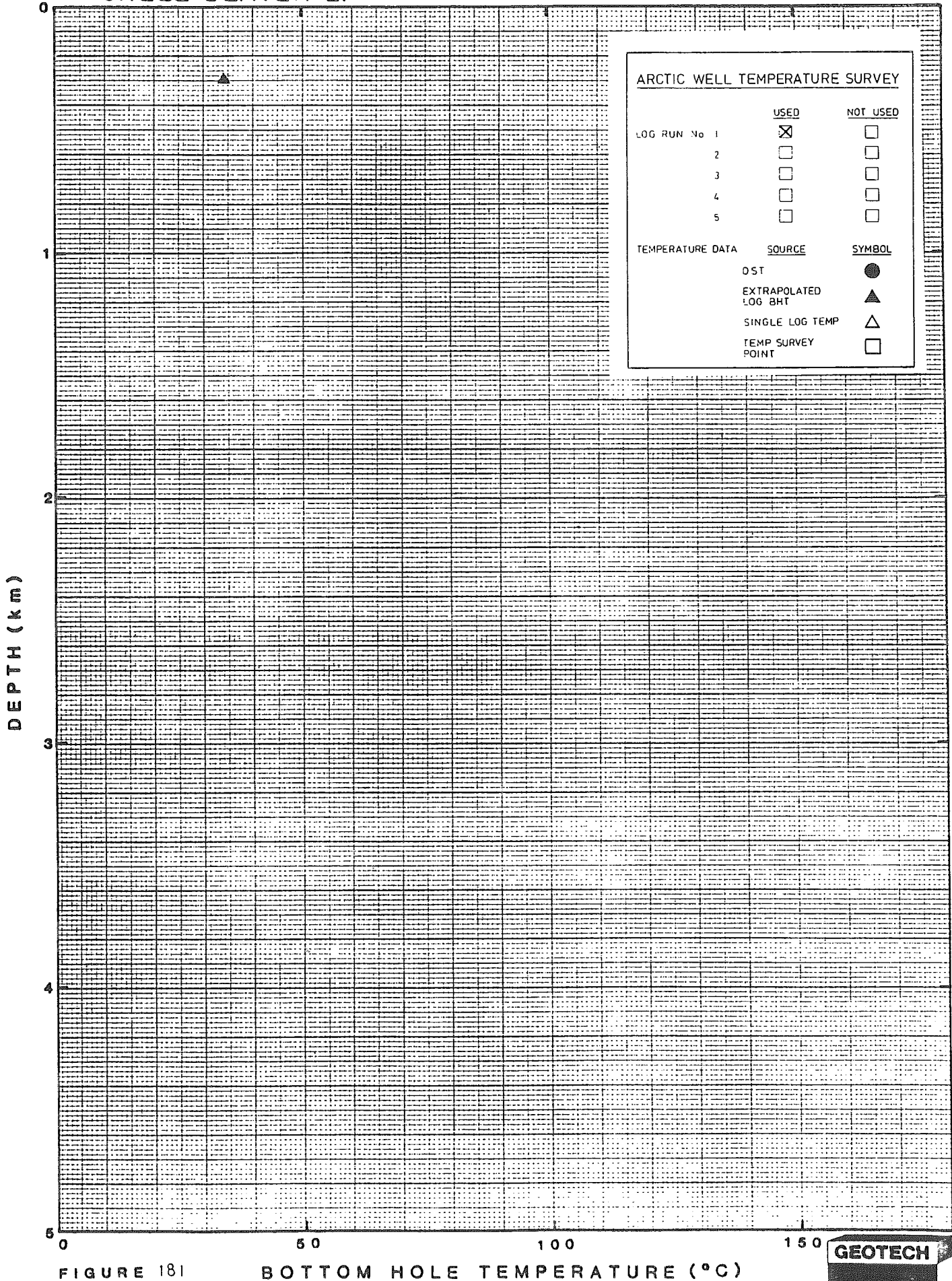


FIGURE 180

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

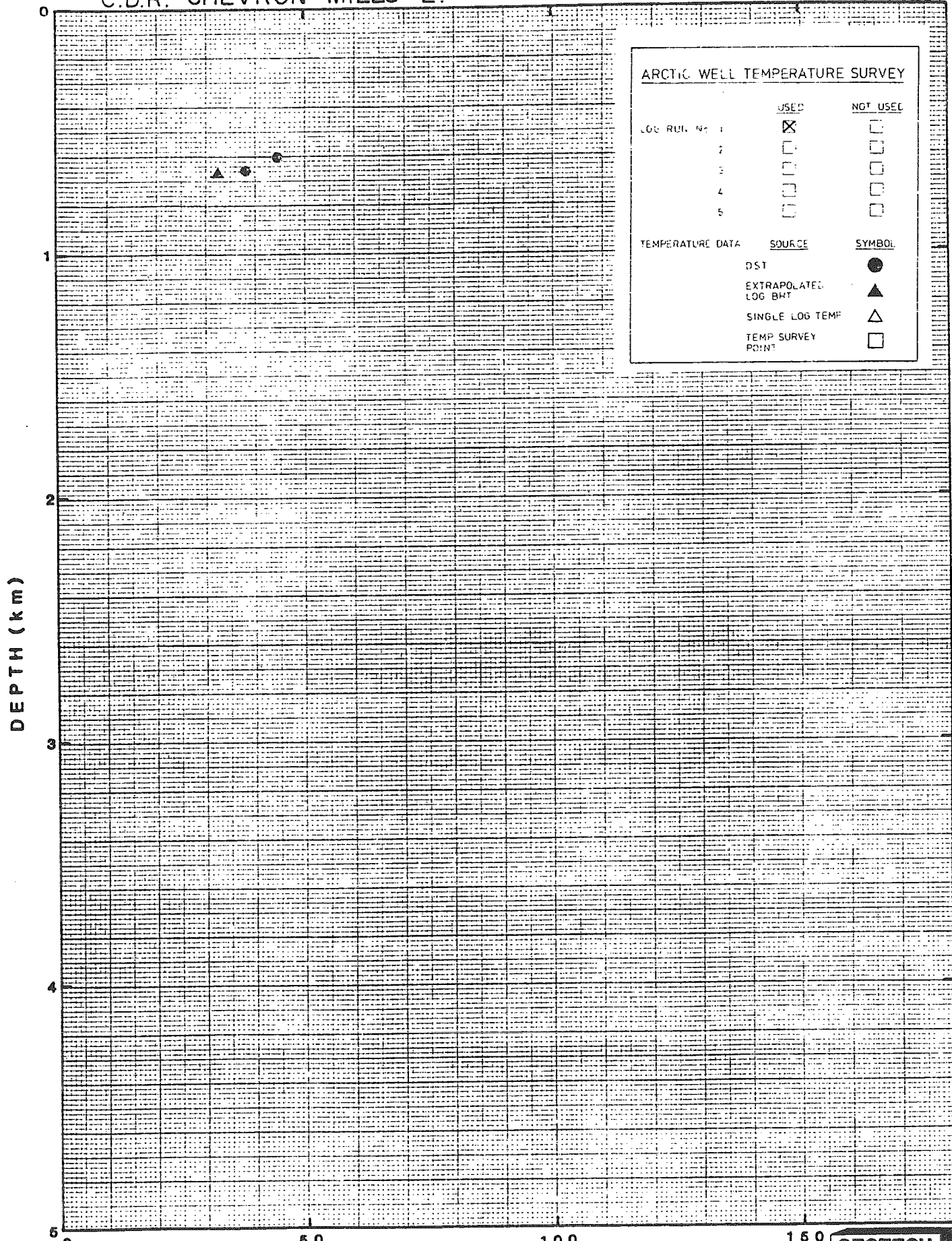
  

TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 181

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No.	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 182

BOTTOM HOLE TEMPERATURE (°C)



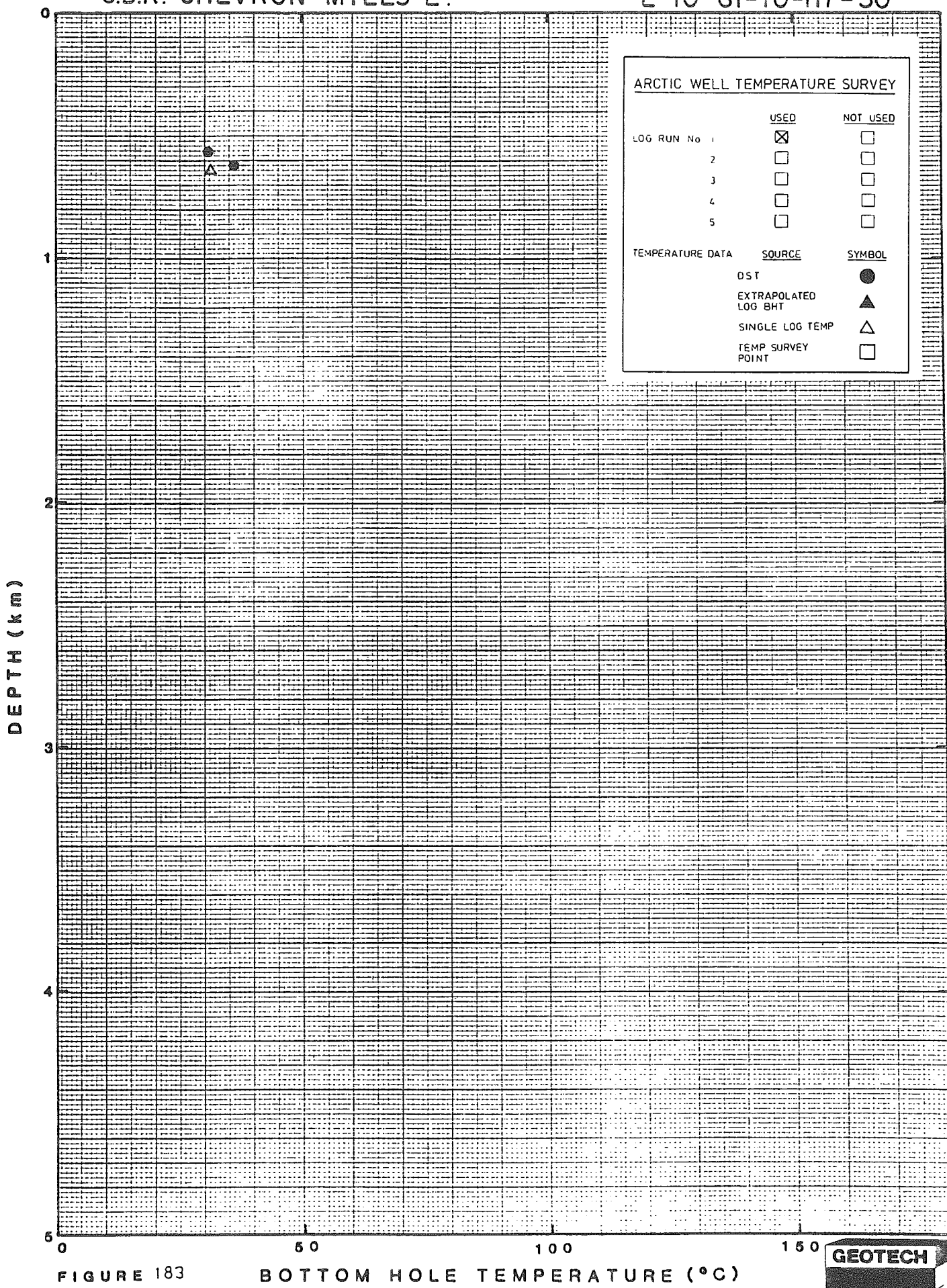


FIGURE 183

BOTTOM HOLE TEMPERATURE (°C)





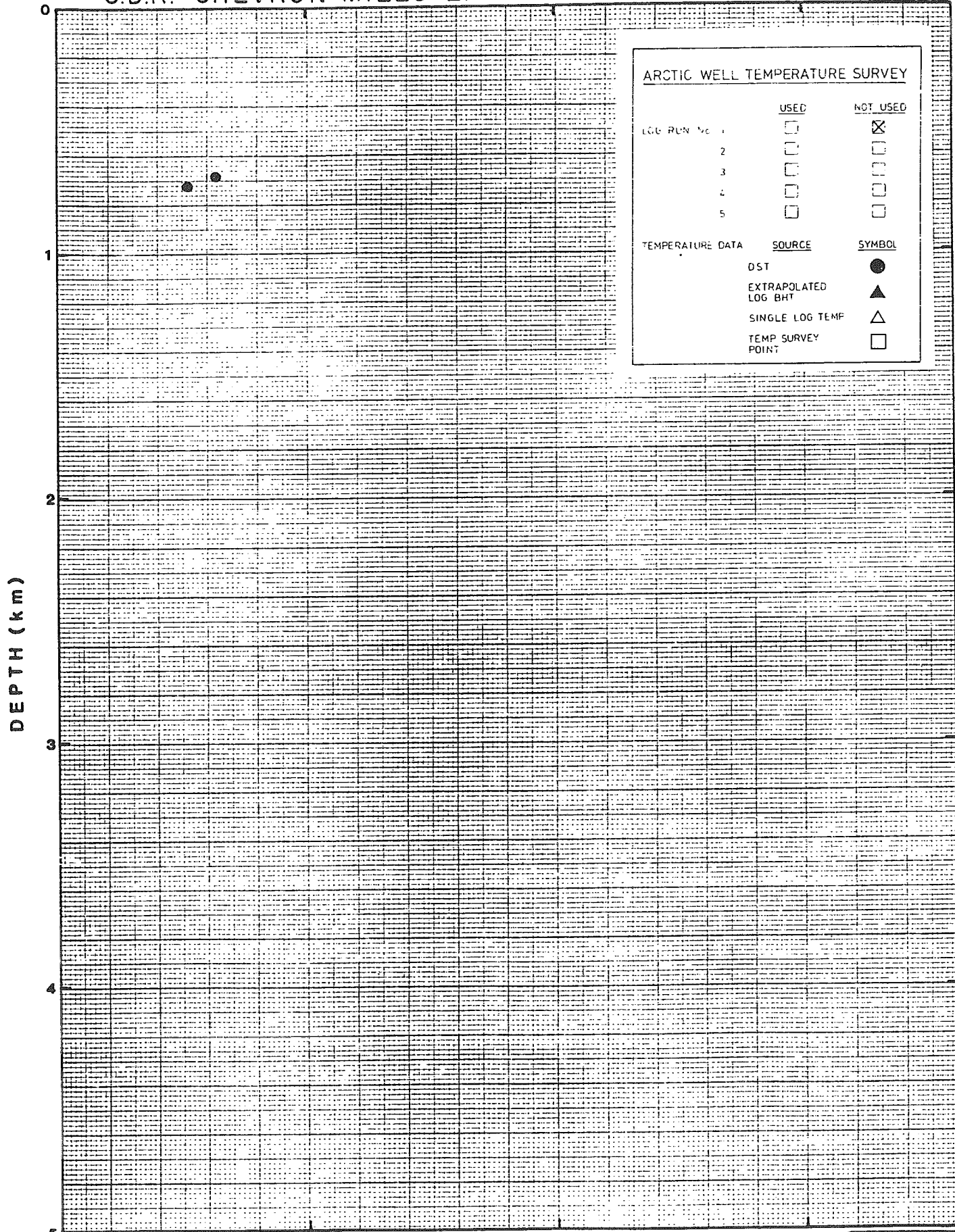


FIGURE 184

BOTTOM HOLE TEMPERATURE (°C)



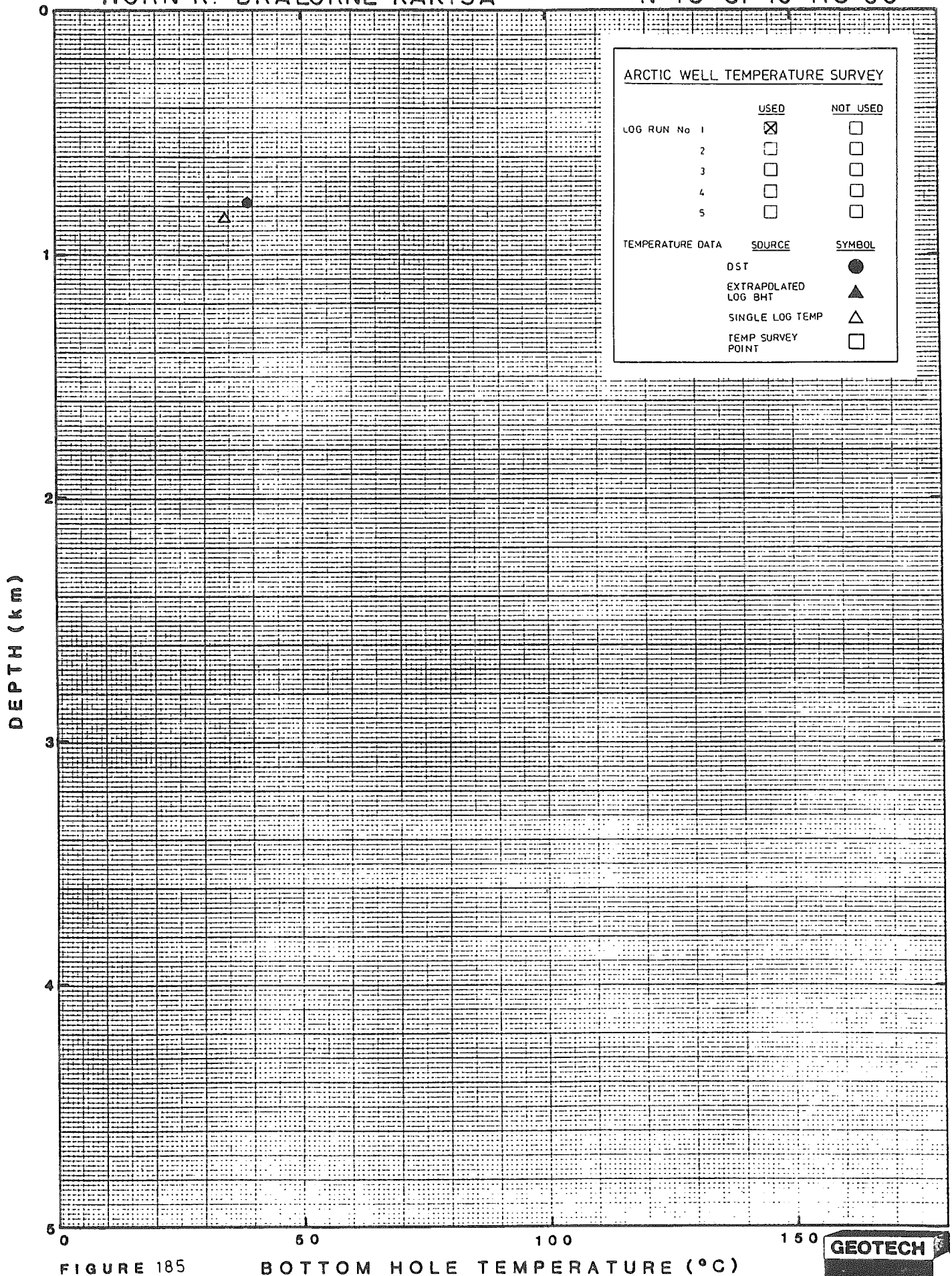


FIGURE 185

BOTTOM HOLE TEMPERATURE (°C)



PLACID CHEVRON FOETUS L.

C-49 61-10-118-30

ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

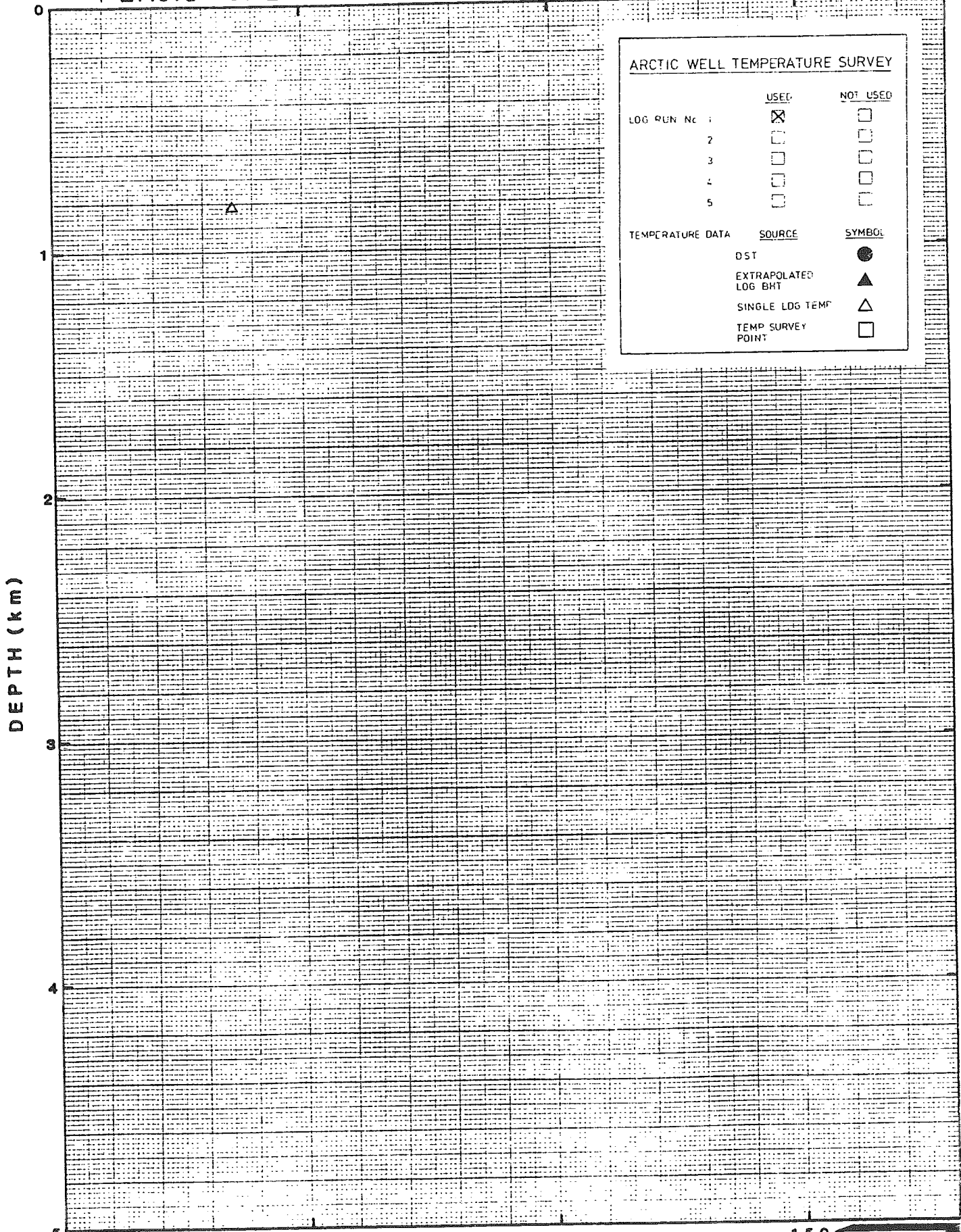


FIGURE 186

BOTTOM HOLE TEMPERATURE (°C)



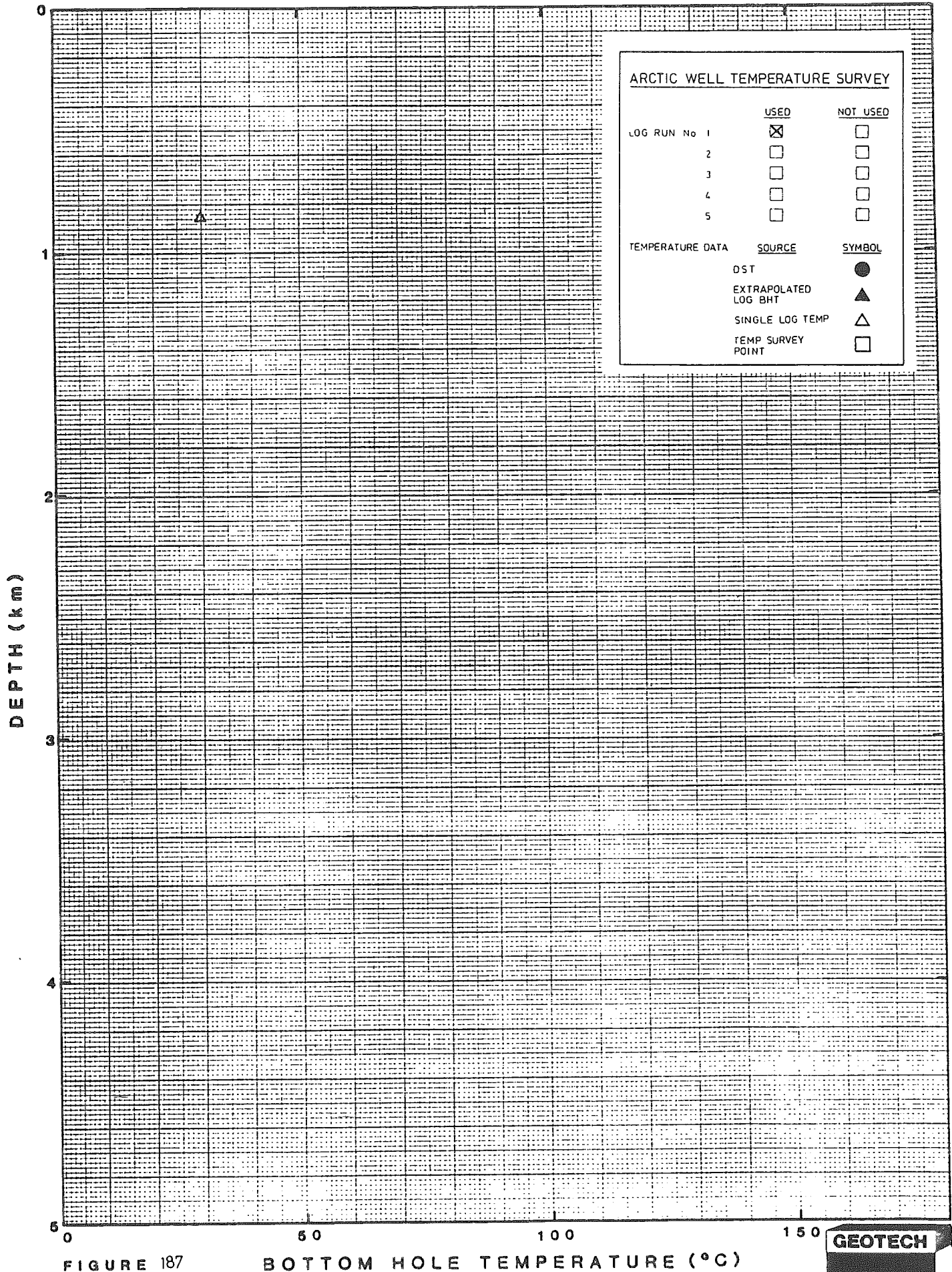


FIGURE 187

BOTTOM HOLE TEMPERATURE (°C)





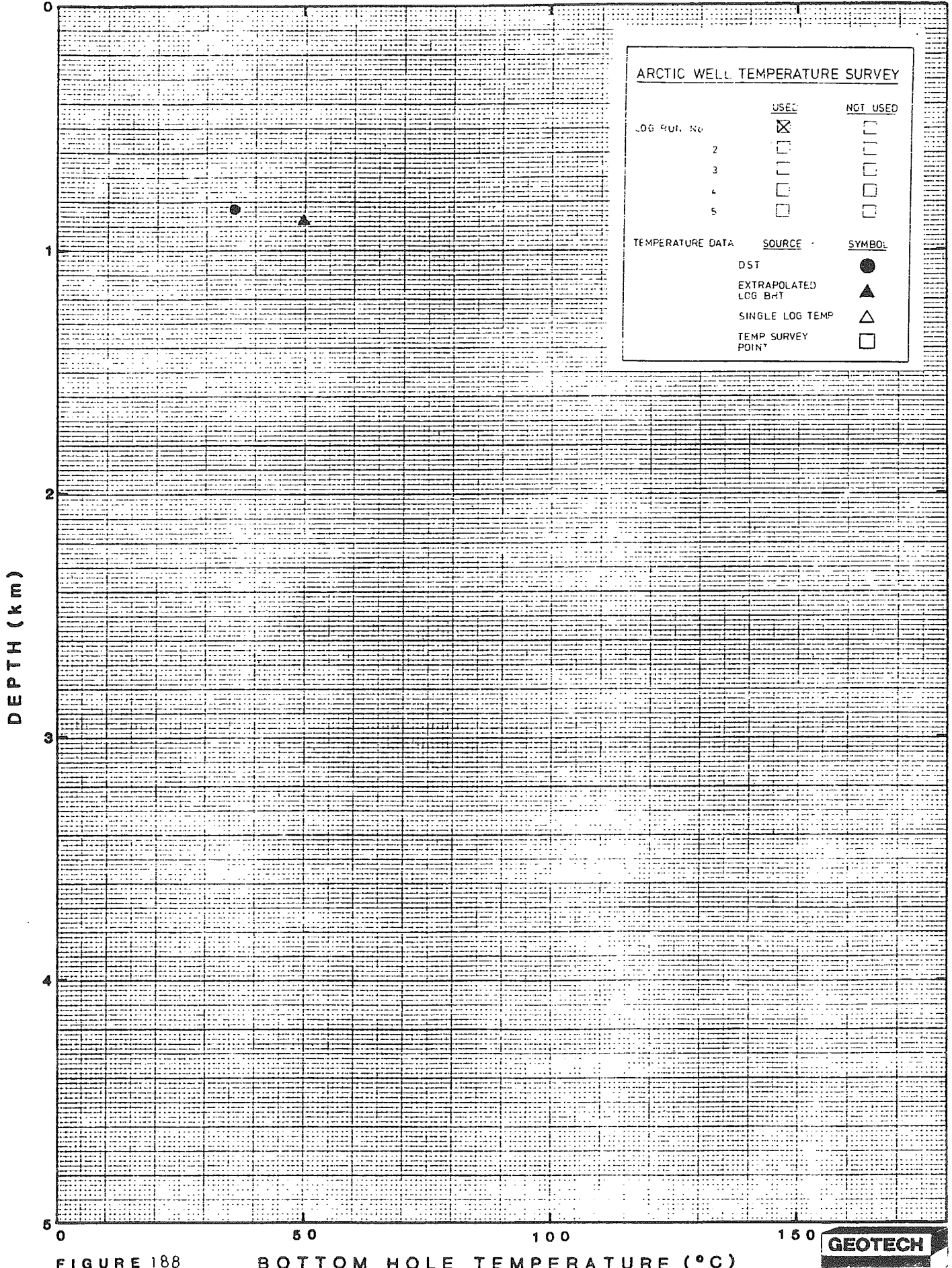
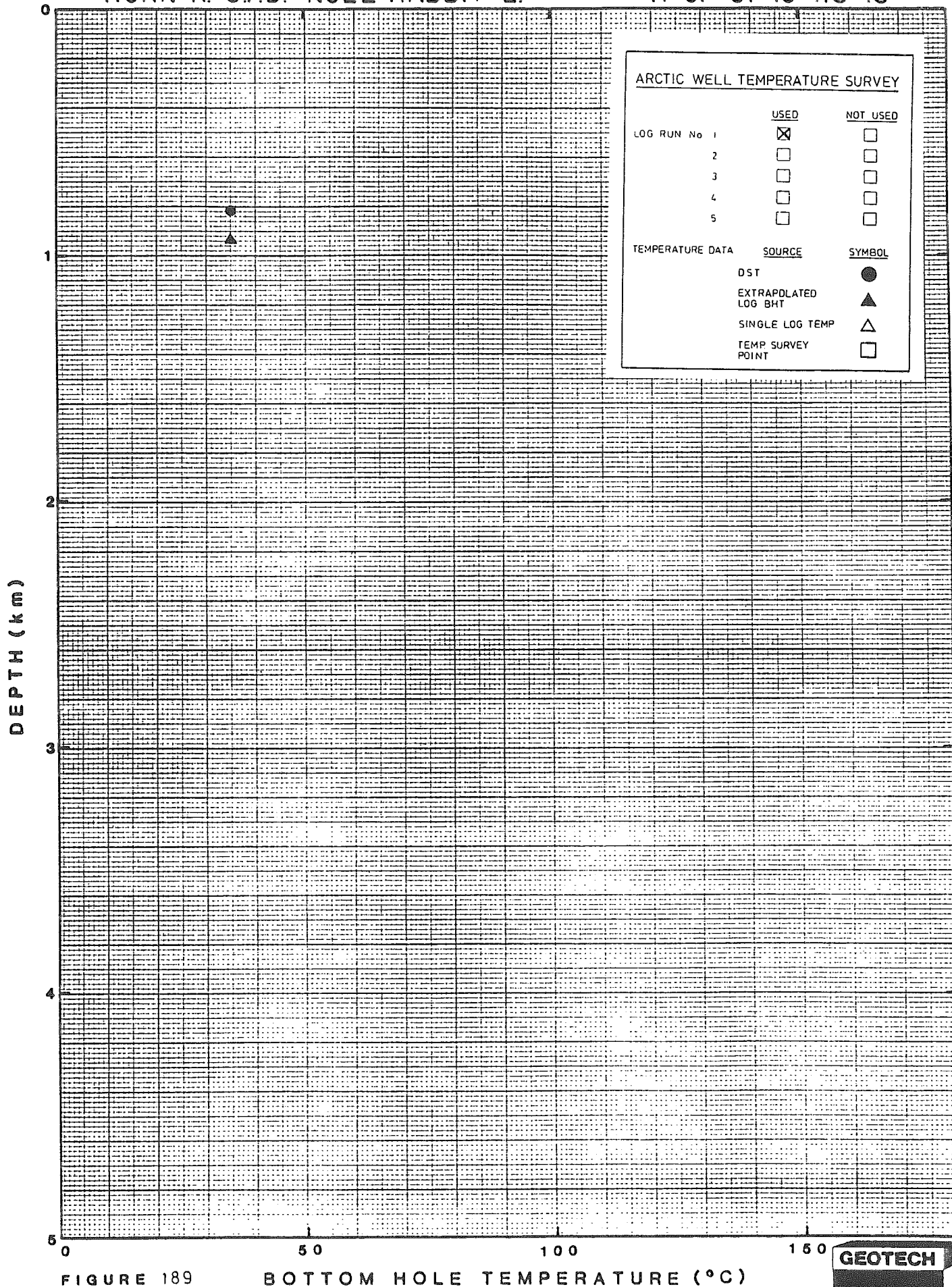


FIGURE 188

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

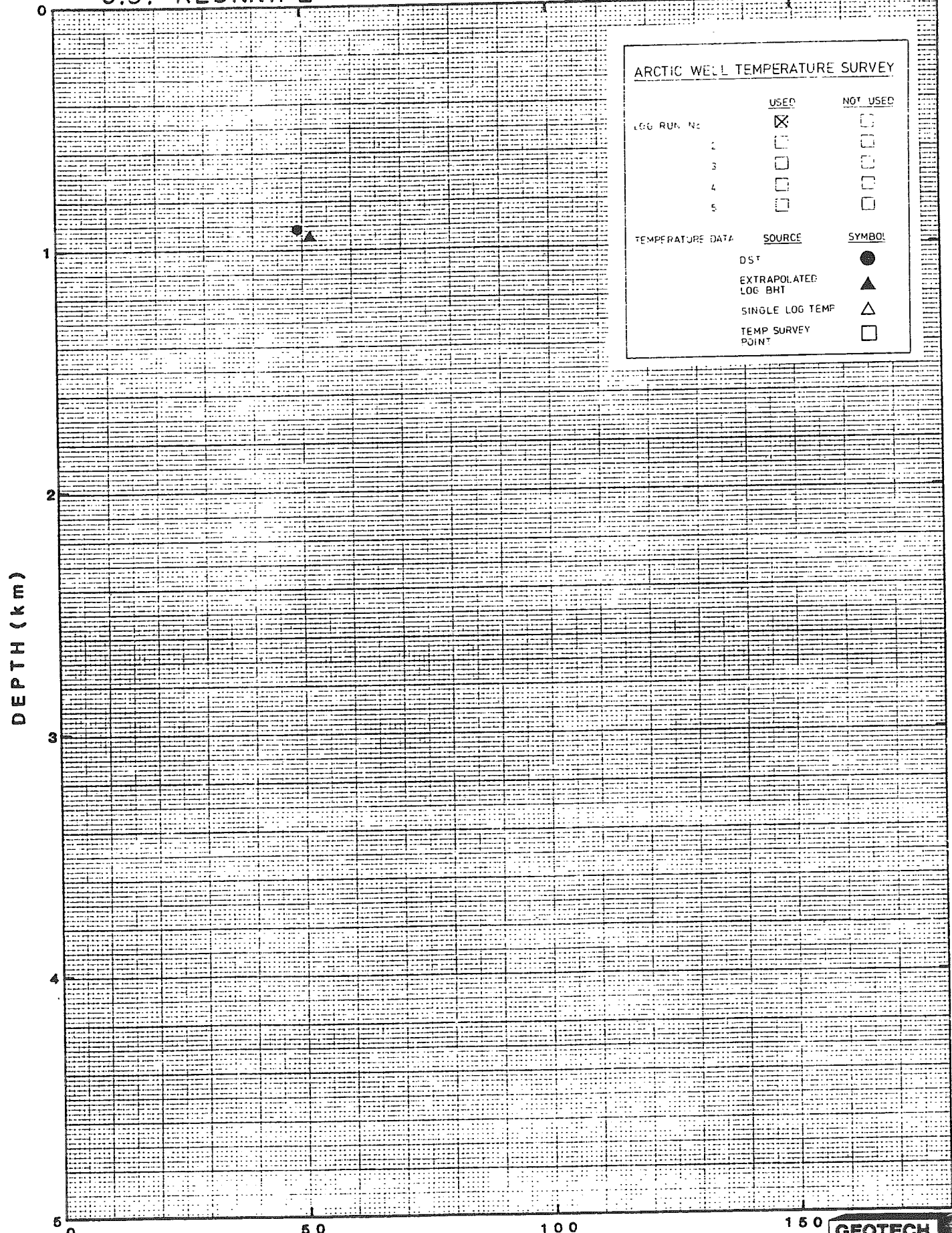
FIGURE 189

BOTTOM HOLE TEMPERATURE (°C)



C.S. REDKNIFE

I-24 61-10-119-15



ARCTIC WELL TEMPERATURE SURVEY				
LOG RUN No	USED		NOT USED	
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE		SYMBOL	
	DST		<input checked="" type="checkbox"/>	<input type="checkbox"/>
EXTRAPOLATED LOG BHT		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
SINGLE LOG TEMP		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TEMP SURVEY POINT		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

DEPTH (km)

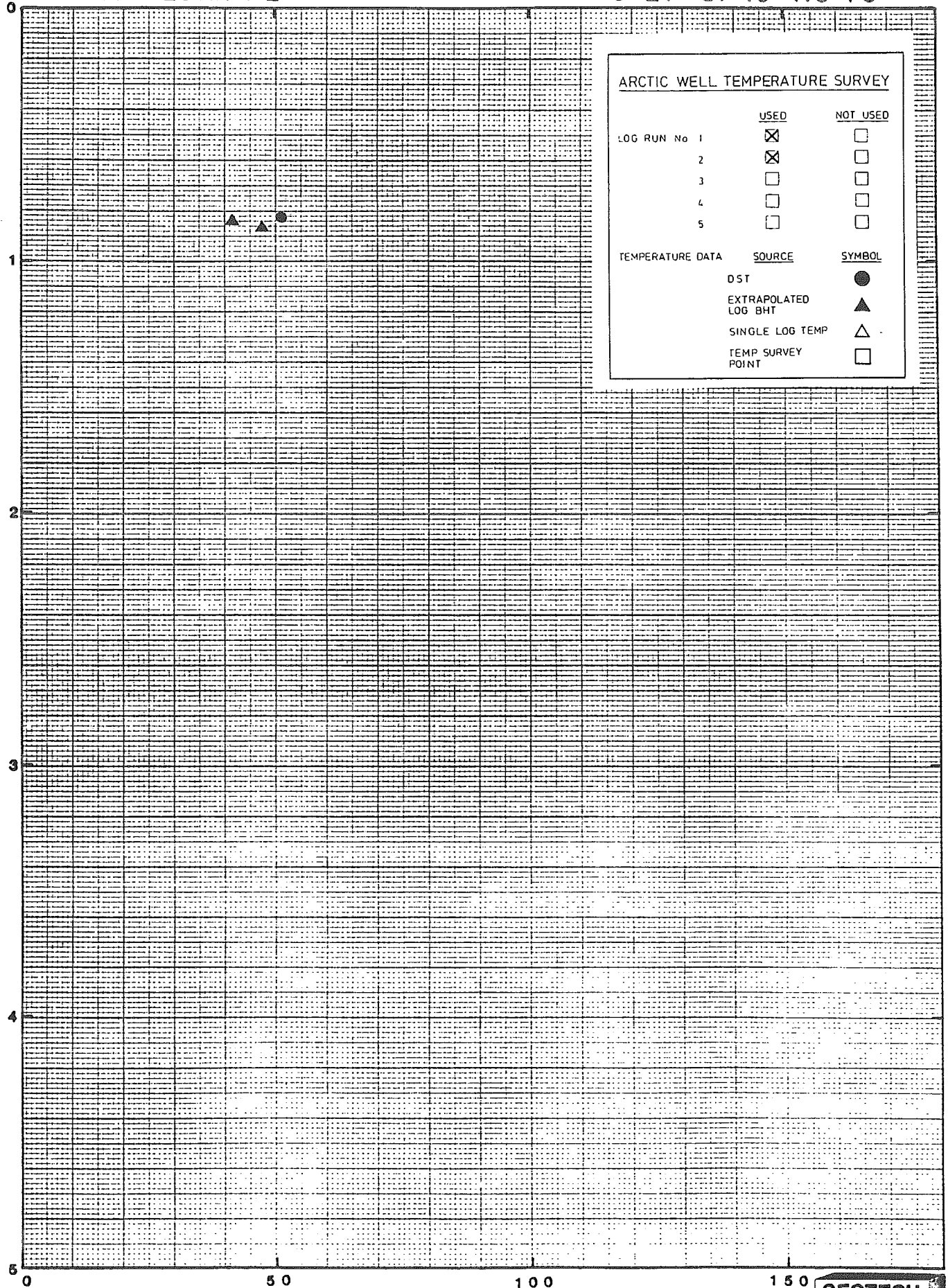
FIGURE 190

BOTTOM HOLE TEMPERATURE (°C)



100

DEPTH (km)



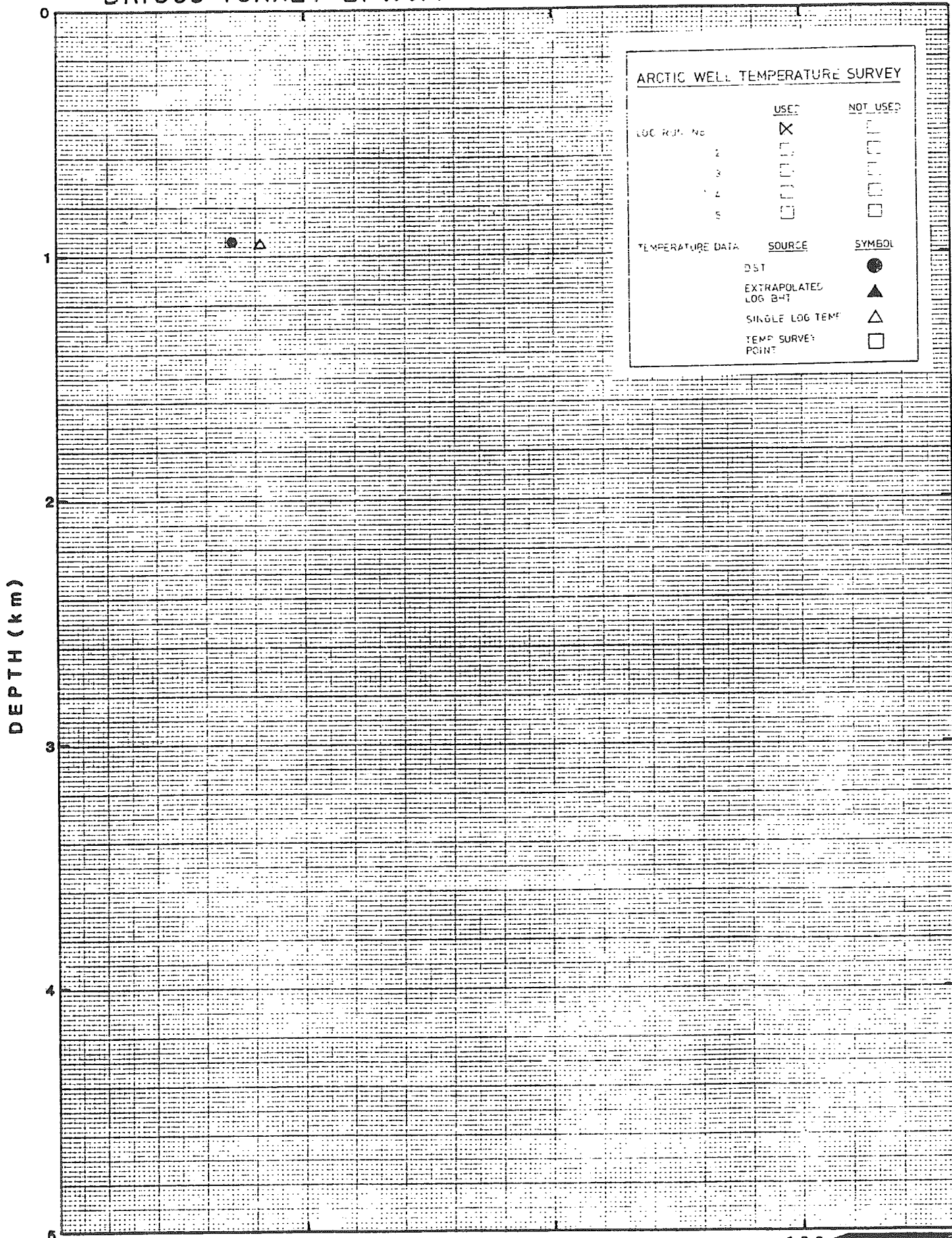
ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA		
SOURCE	SYMBOL	
DST	<input checked="" type="checkbox"/>	
EXTRAPOLATED LOG BHT	<input checked="" type="checkbox"/>	
SINGLE LOG TEMP	<input checked="" type="checkbox"/>	
TEMP SURVEY POINT	<input type="checkbox"/>	

FIGURE 191

BOTTOM HOLE TEMPERATURE (°C)





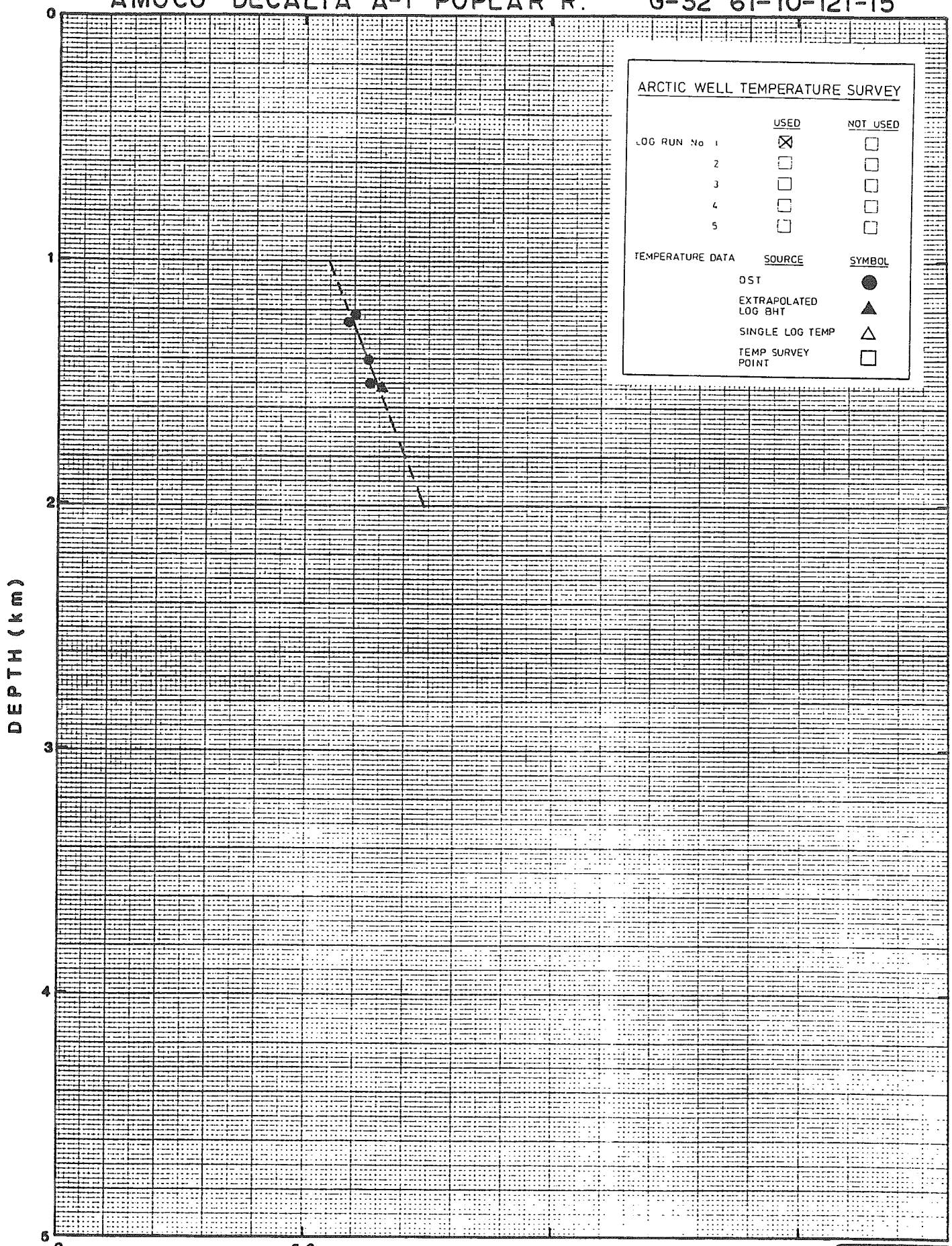


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG REP. No.	☒	☐
1	☐	☐
2	☐	☐
3	☐	☐
4	☐	☐
5	☐	☐
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	☐

FIGURE 192

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
O/S		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 193

BOTTOM HOLE TEMPERATURE (°C)



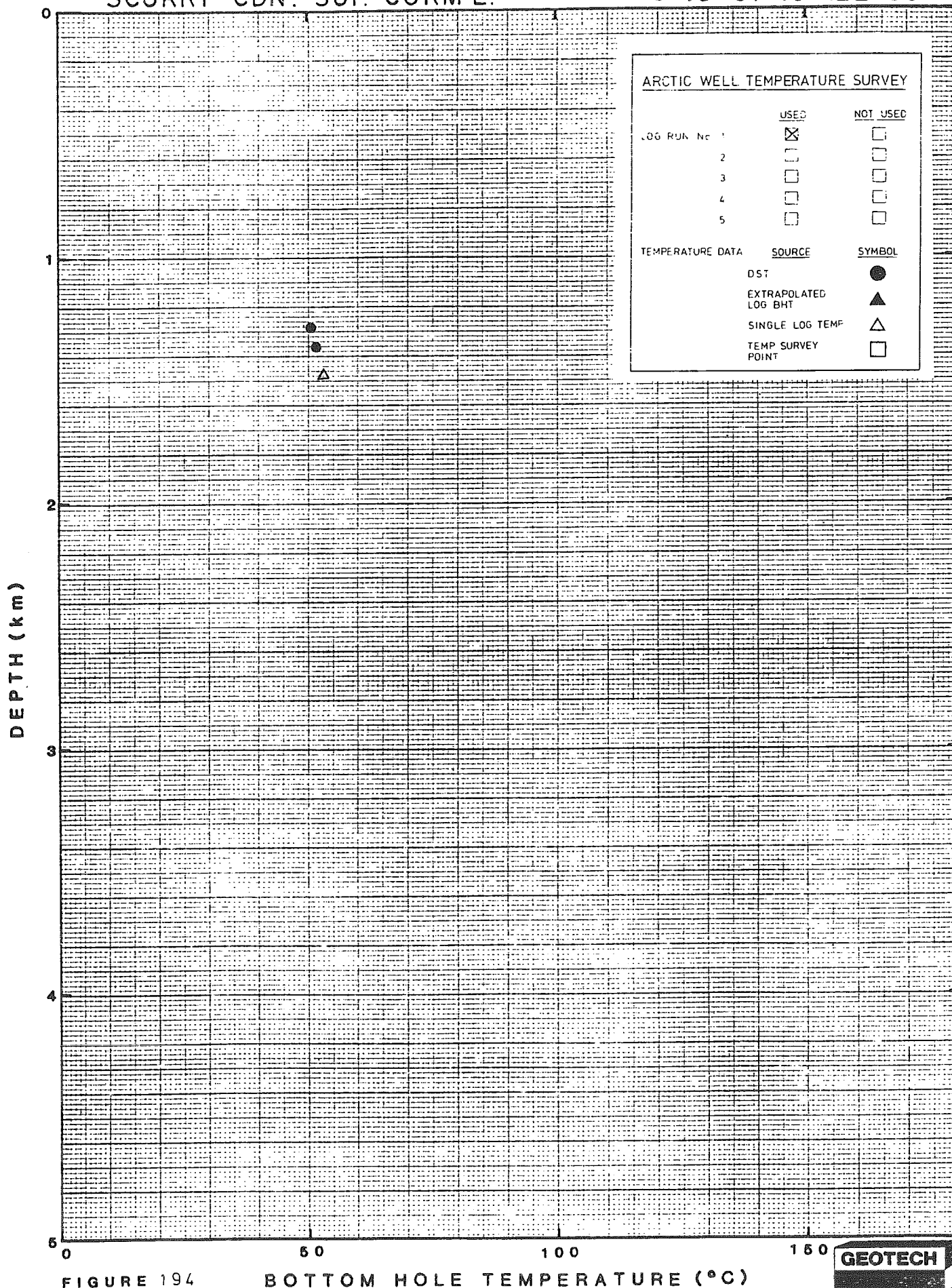


FIGURE 194

BOTTOM HOLE TEMPERATURE (°C)



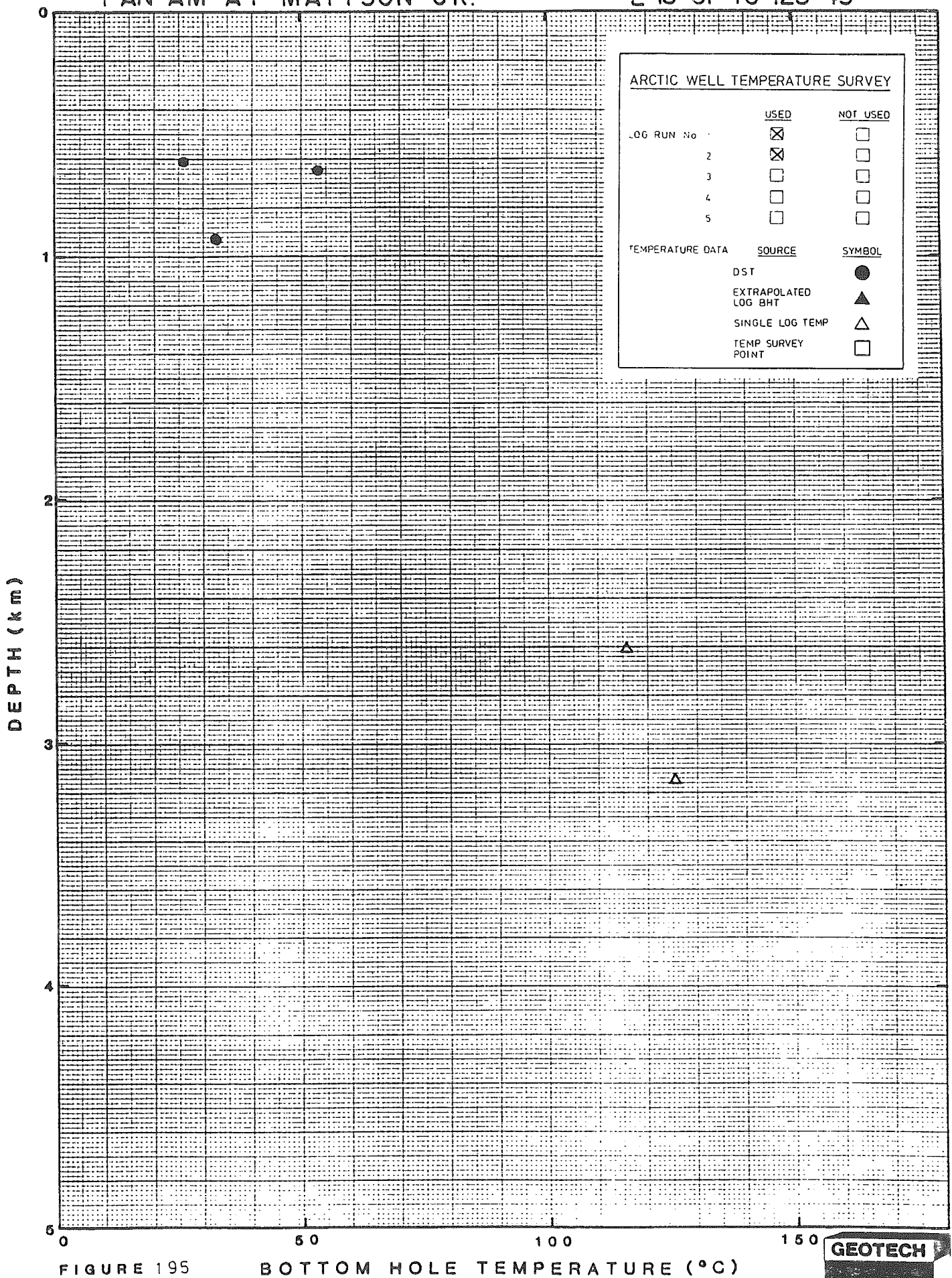
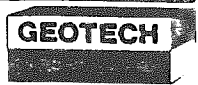


FIGURE 195

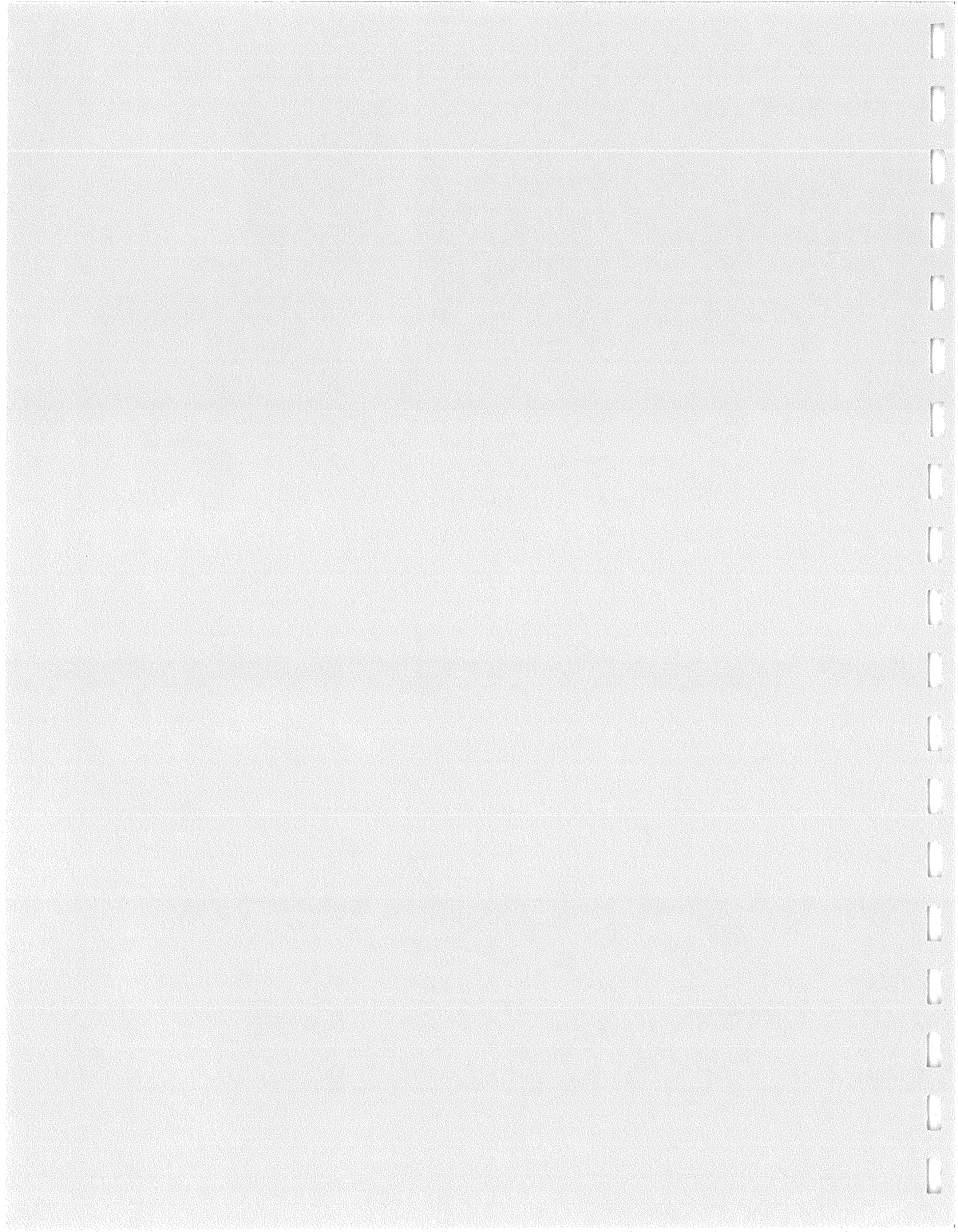
BOTTOM HOLE TEMPERATURE (°C)







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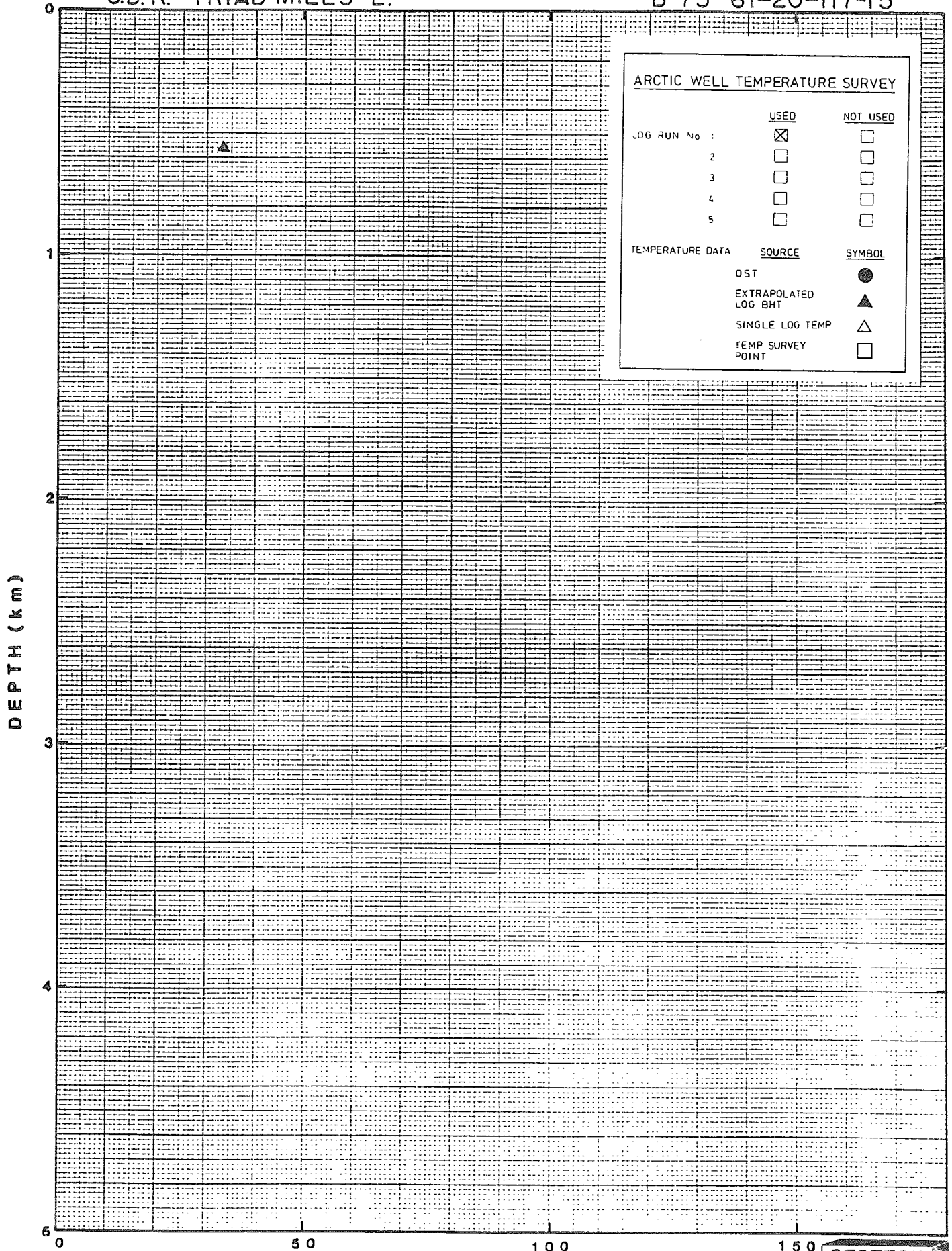


FIGURE 196

BOTTOM HOLE TEMPERATURE (°C)





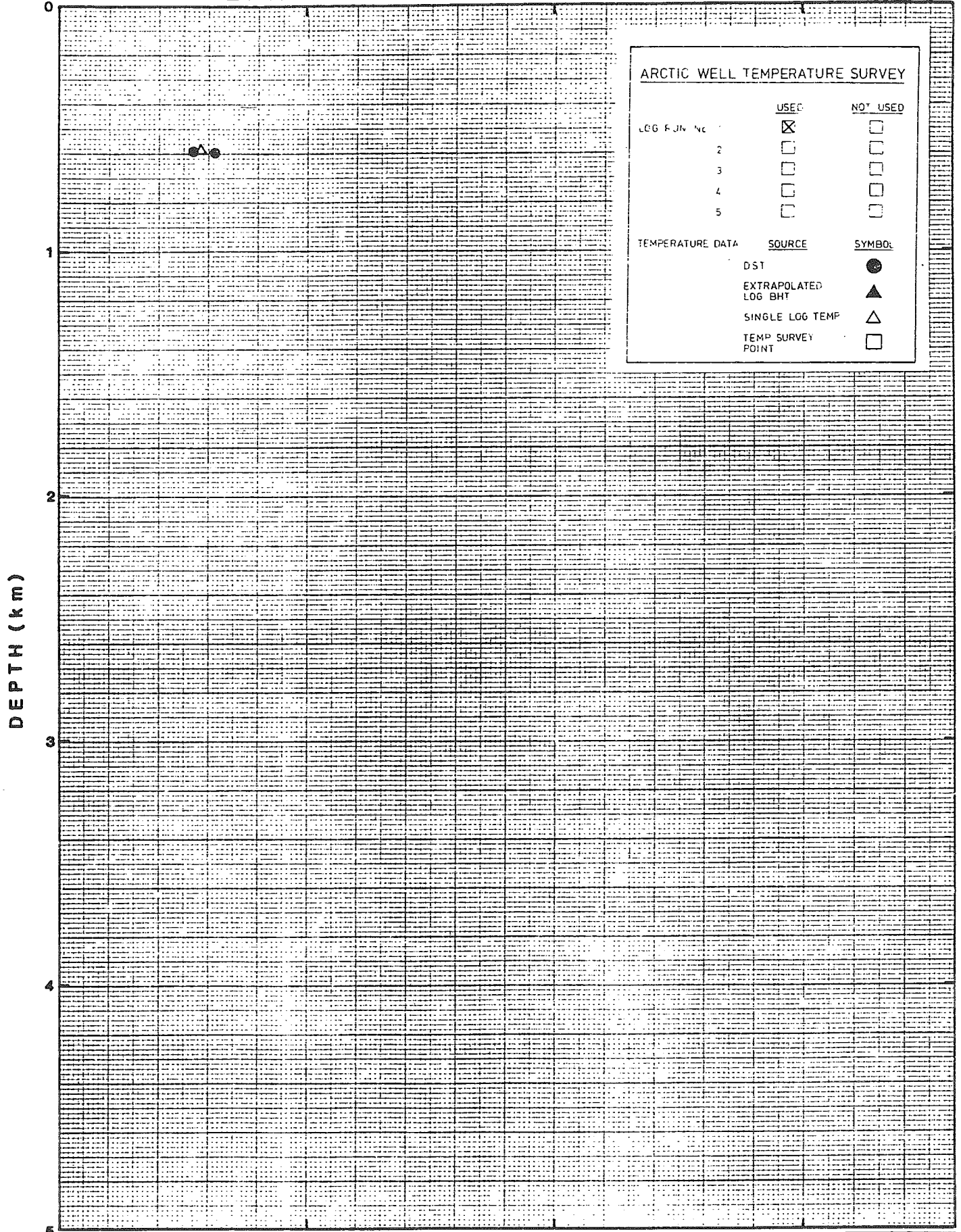


FIGURE 197

BOTTOM HOLE TEMPERATURE (°C)



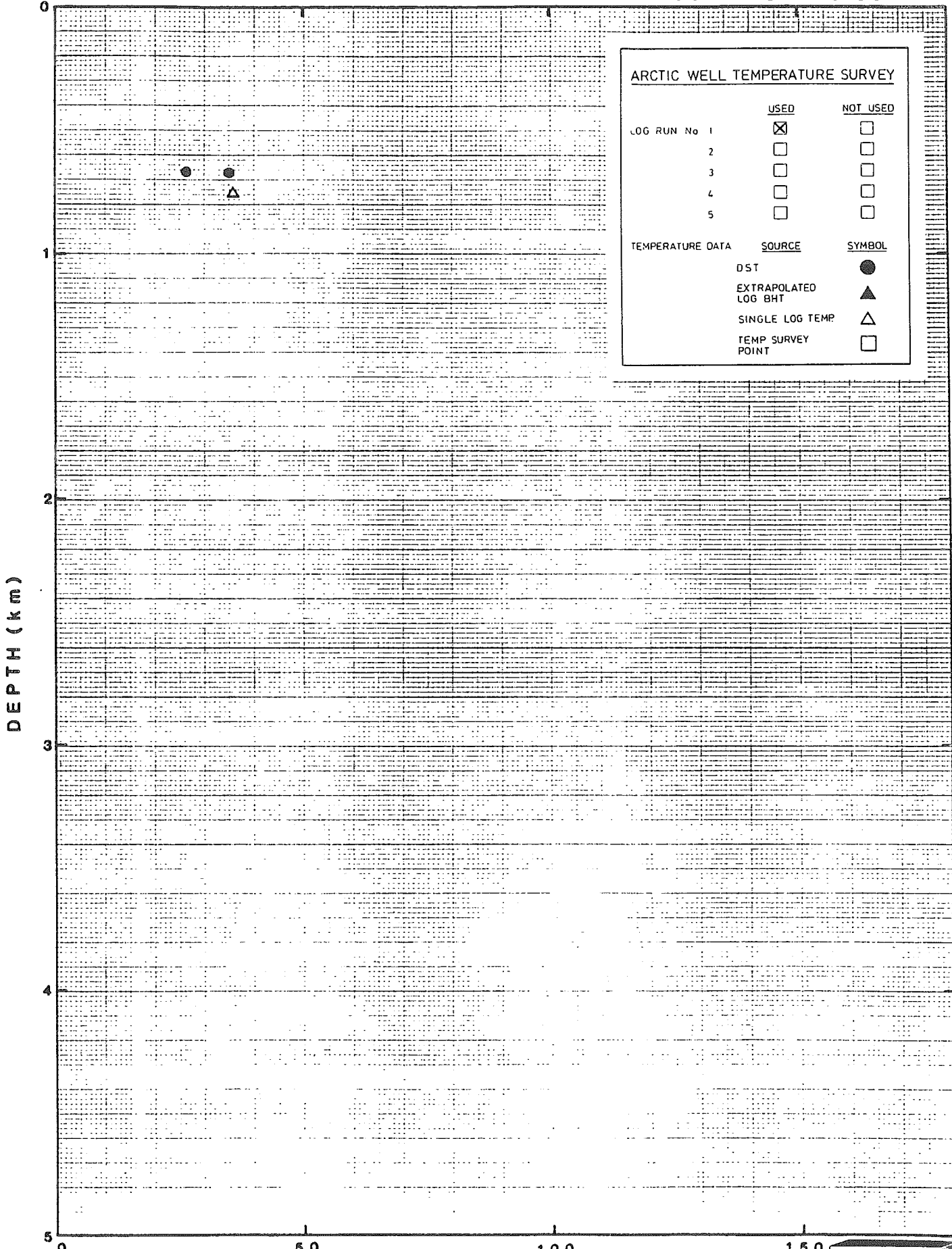


FIGURE 198

BOTTOM HOLE TEMPERATURE (°C)



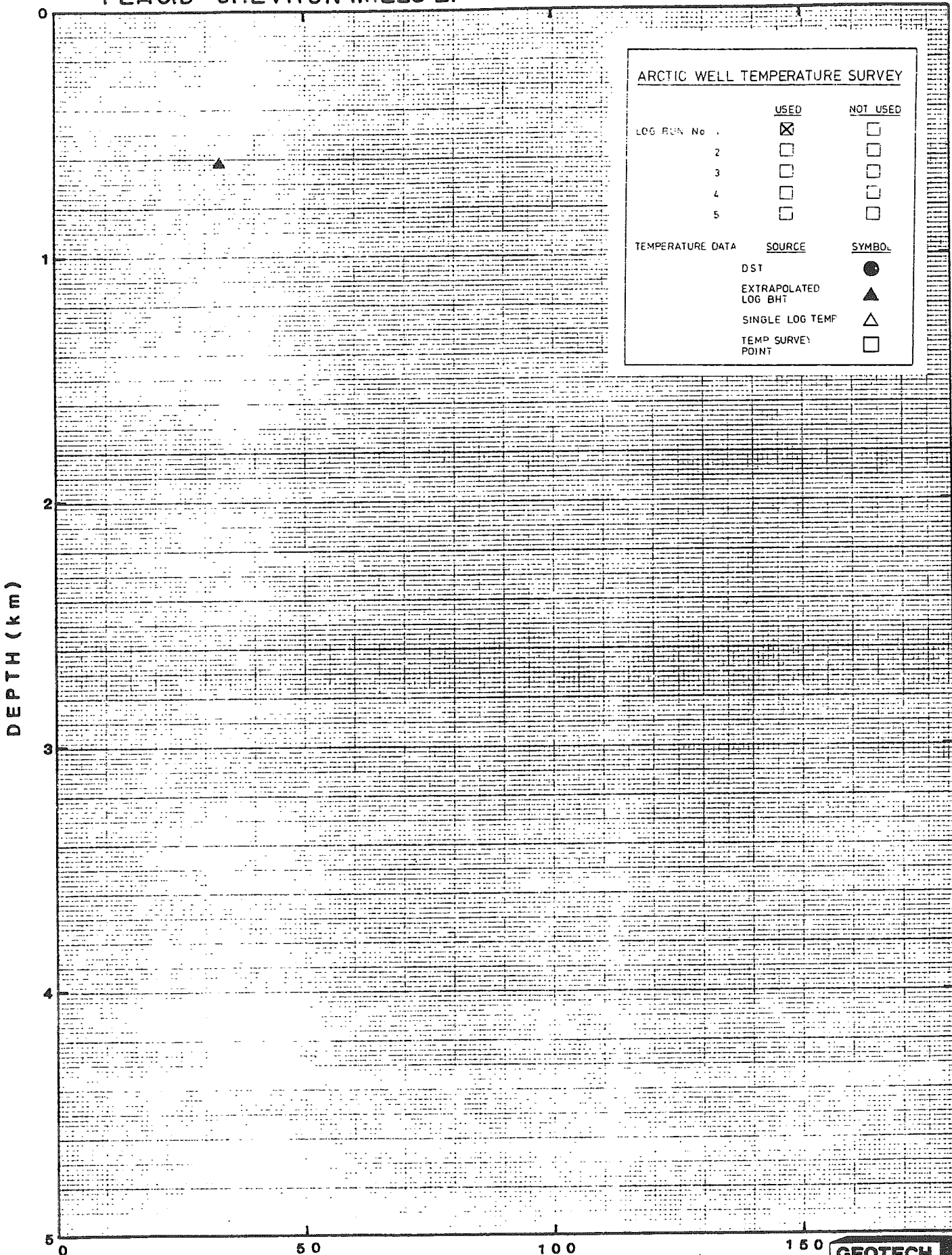


FIGURE 199

BOTTOM HOLE TEMPERATURE (°C)

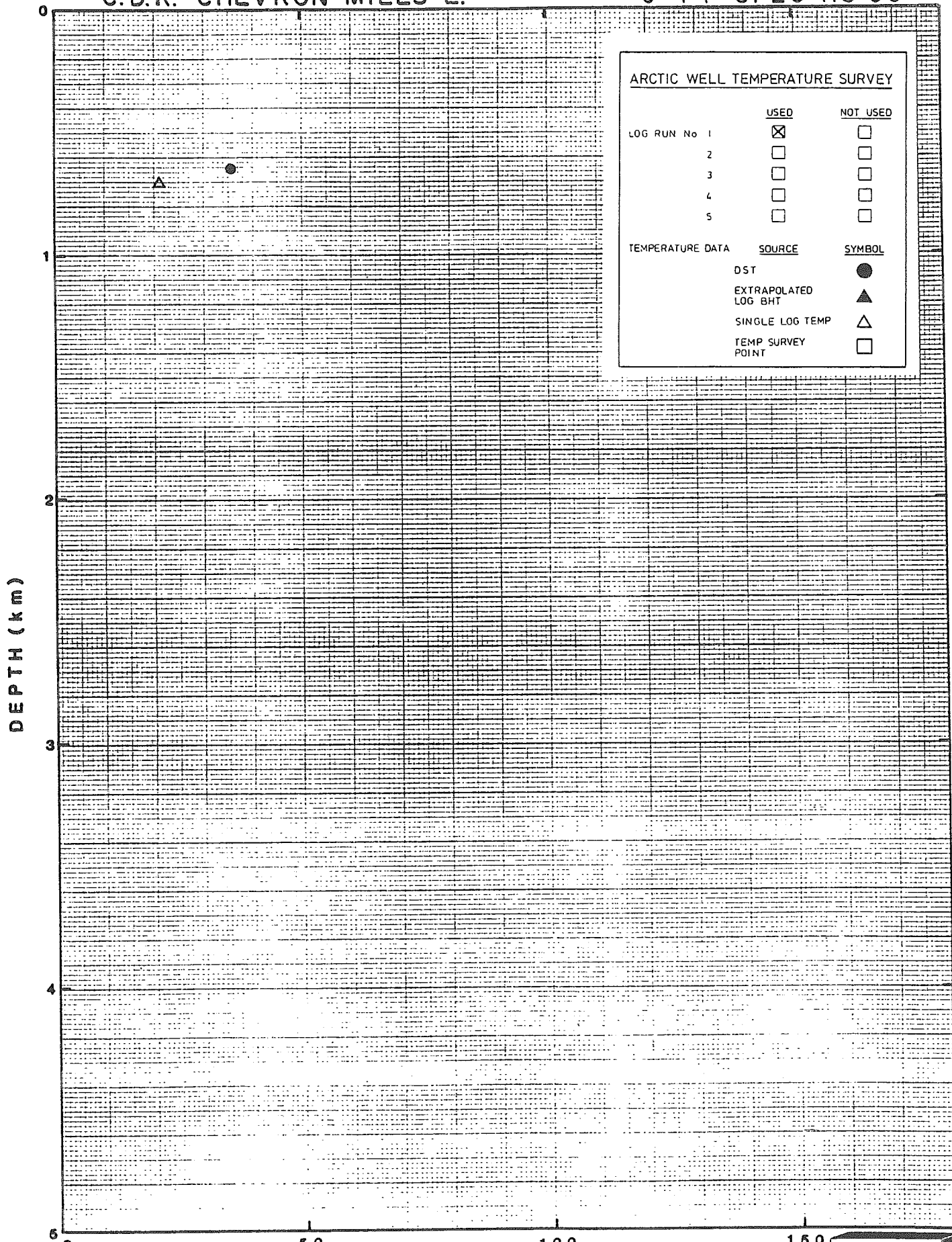


FIGURE 200

BOTTOM HOLE TEMPERATURE (°C)





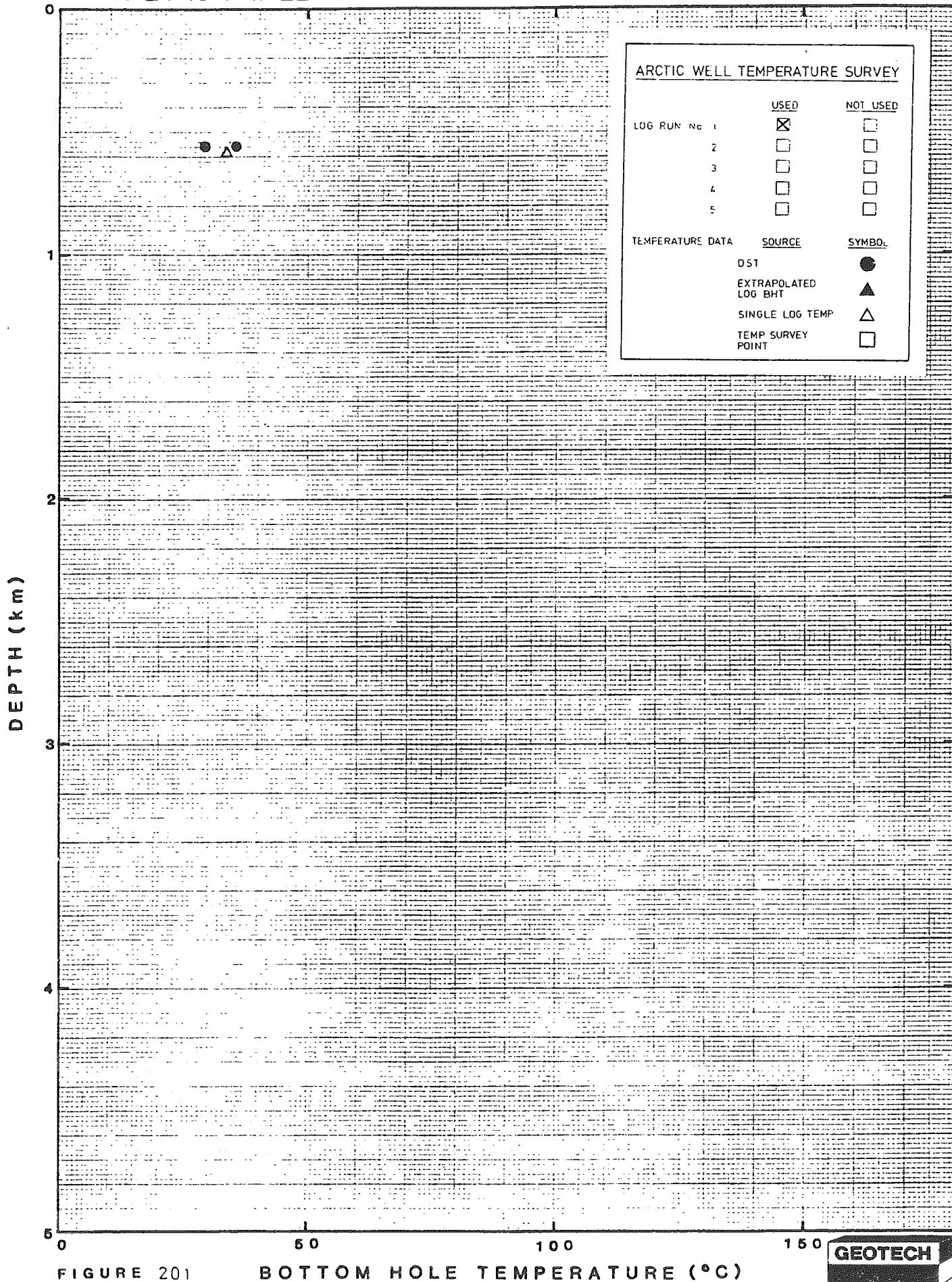


FIGURE 201

BOTTOM HOLE TEMPERATURE (°C)



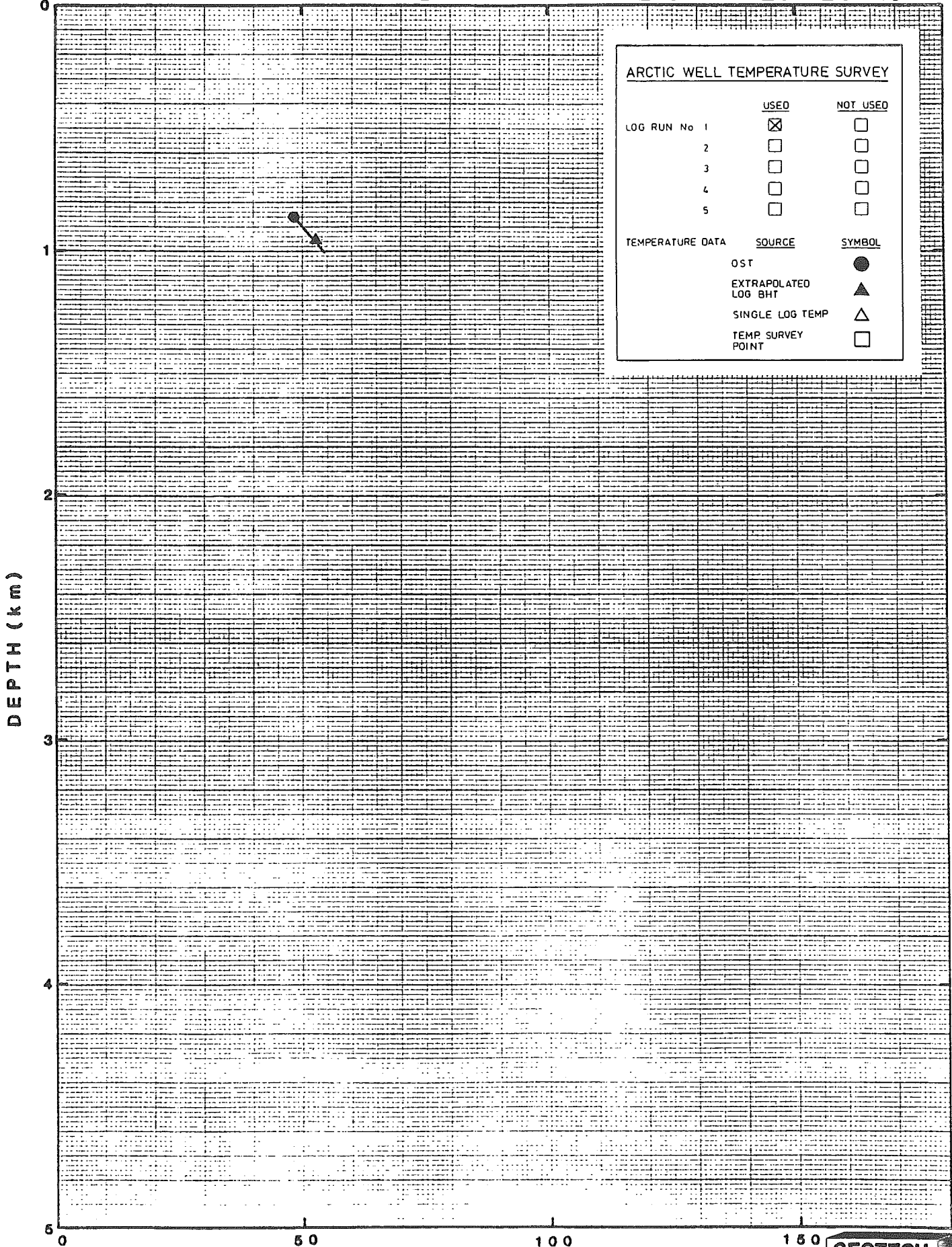


FIGURE 202

BOTTOM HOLE TEMPERATURE (°C)



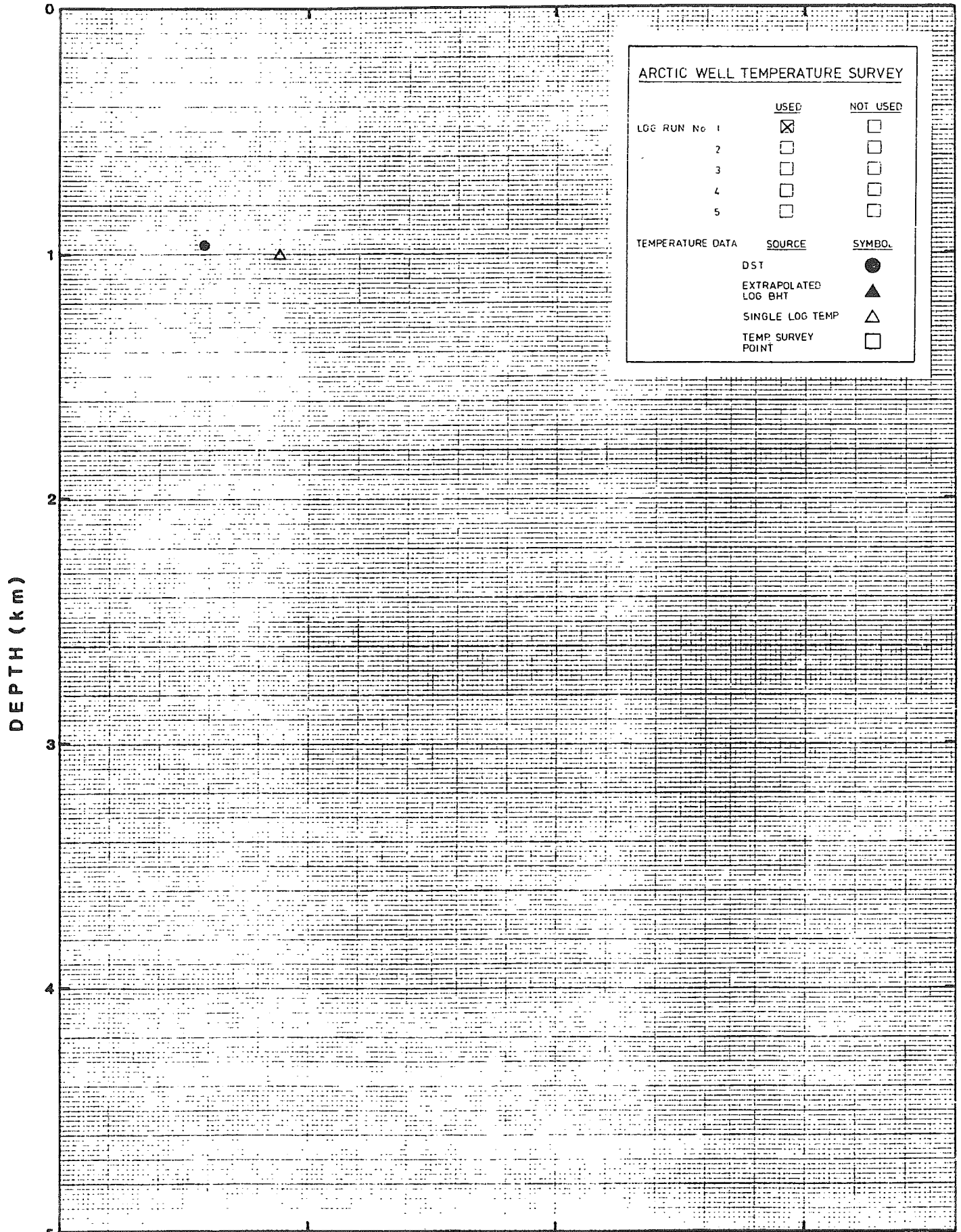


FIGURE 203

BOTTOM HOLE TEMPERATURE (°C)



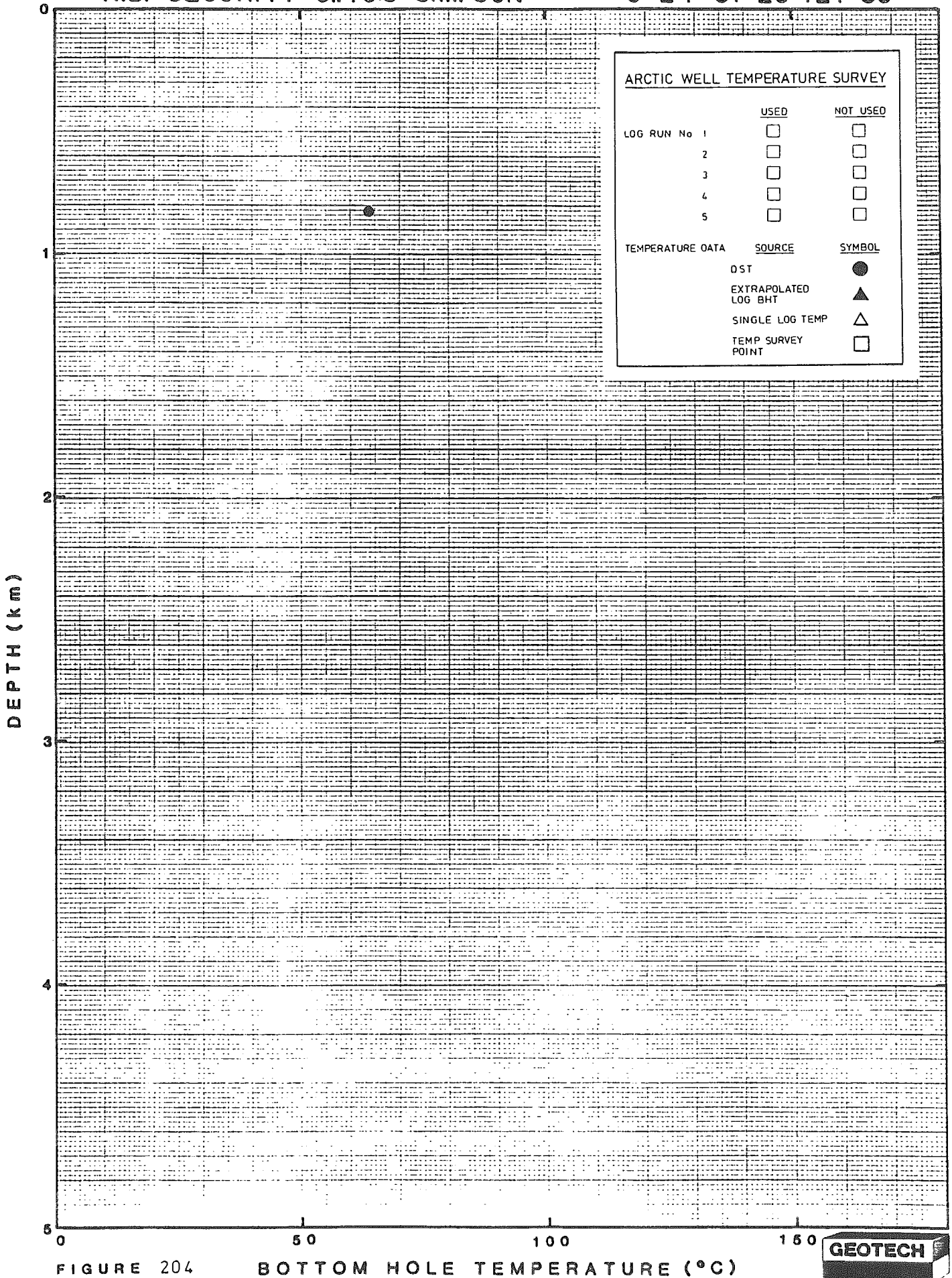


FIGURE 204

BOTTOM HOLE TEMPERATURE (°C)





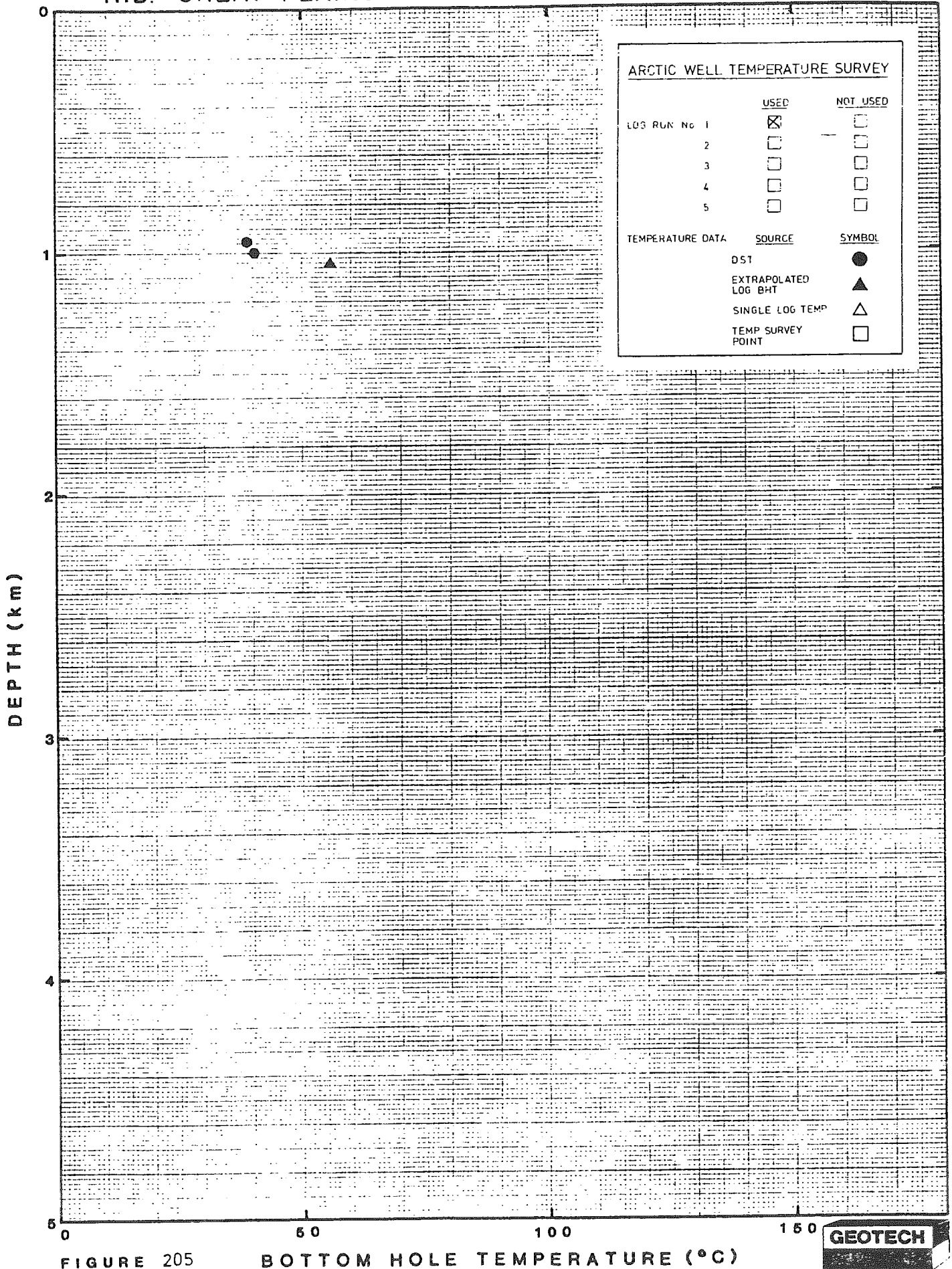


FIGURE 205

BOTTOM HOLE TEMPERATURE (°C)

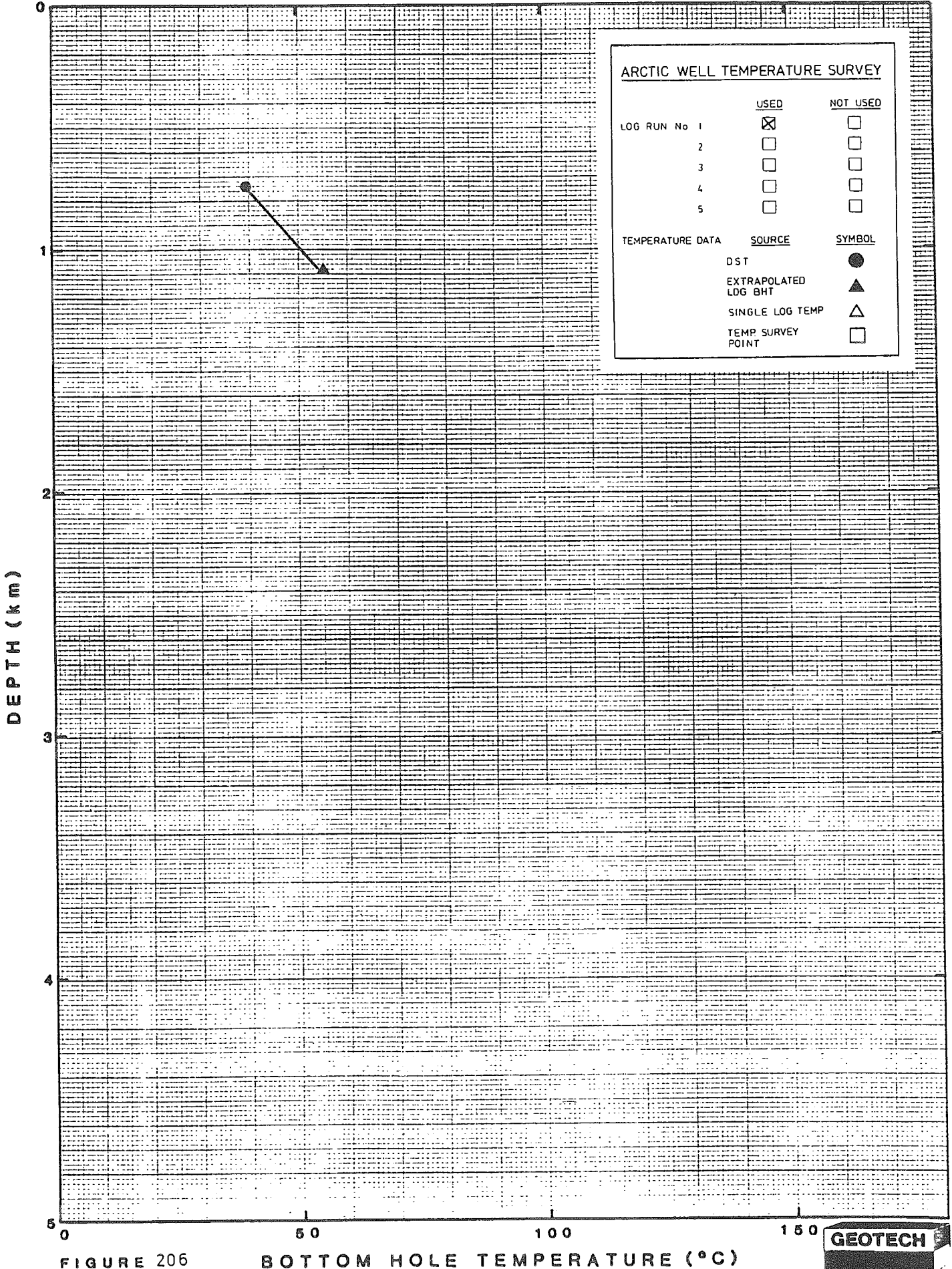
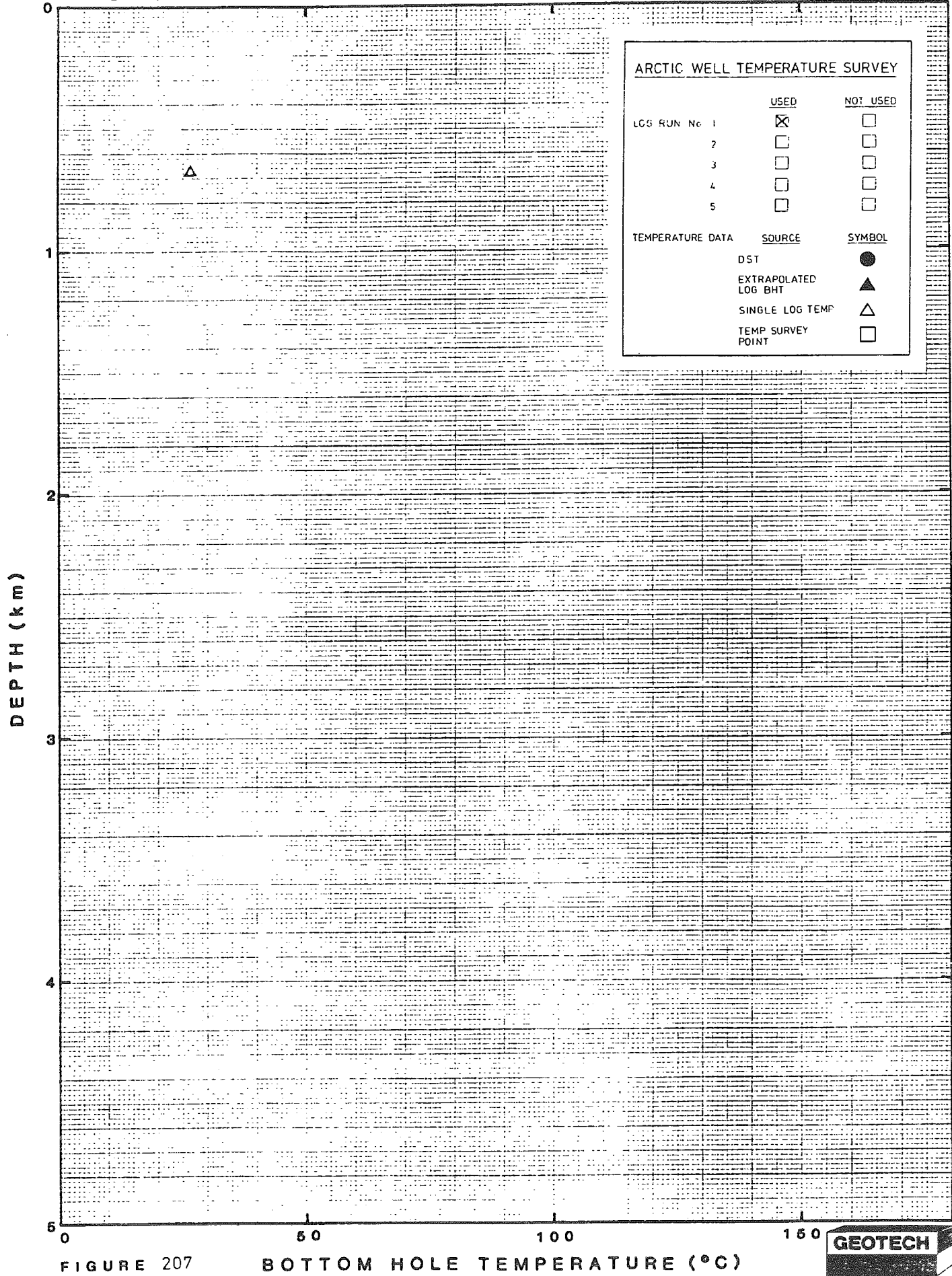


FIGURE 206

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 207

BOTTOM HOLE TEMPERATURE (°C)



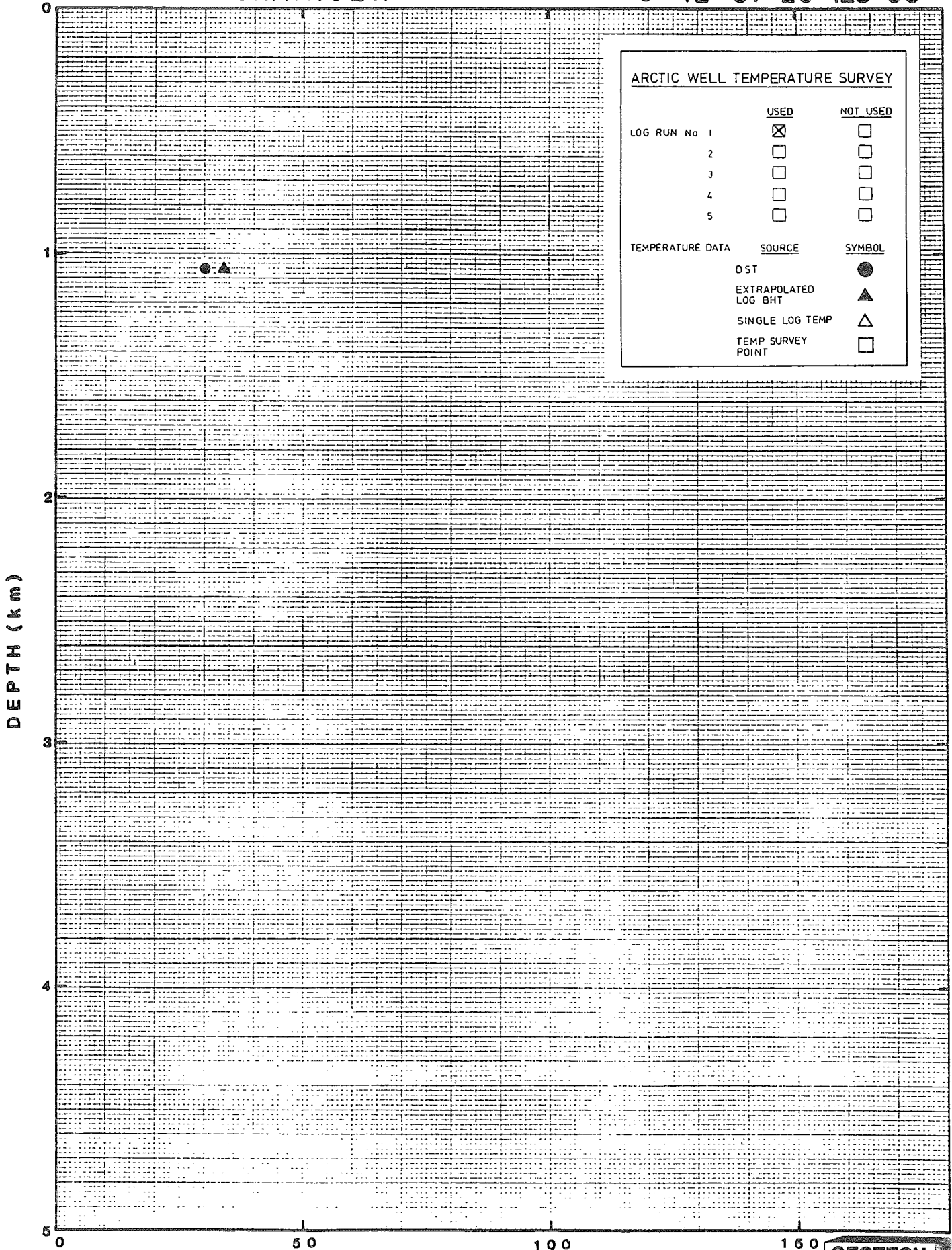


FIGURE 208

BOTTOM HOLE TEMPERATURE (°C)





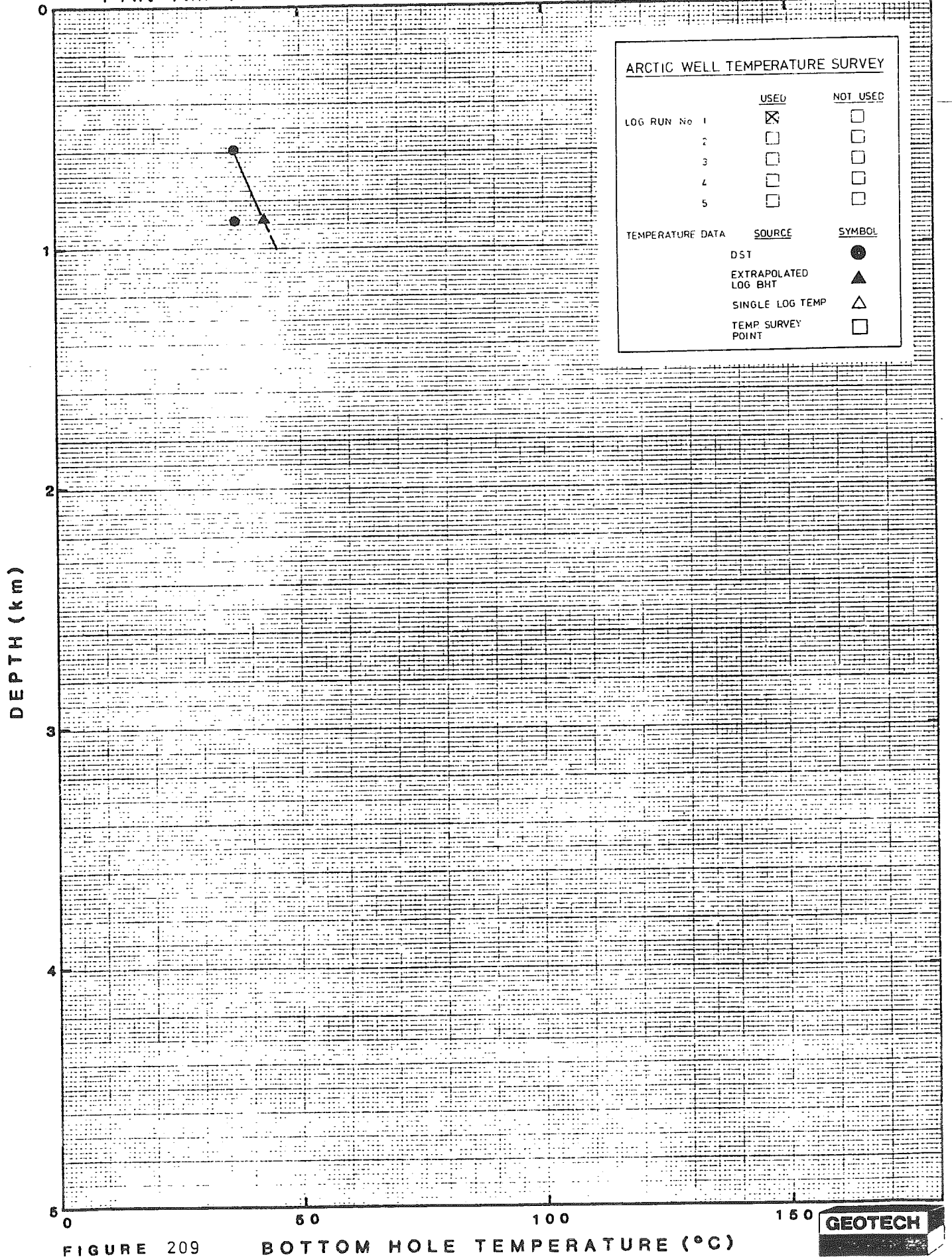


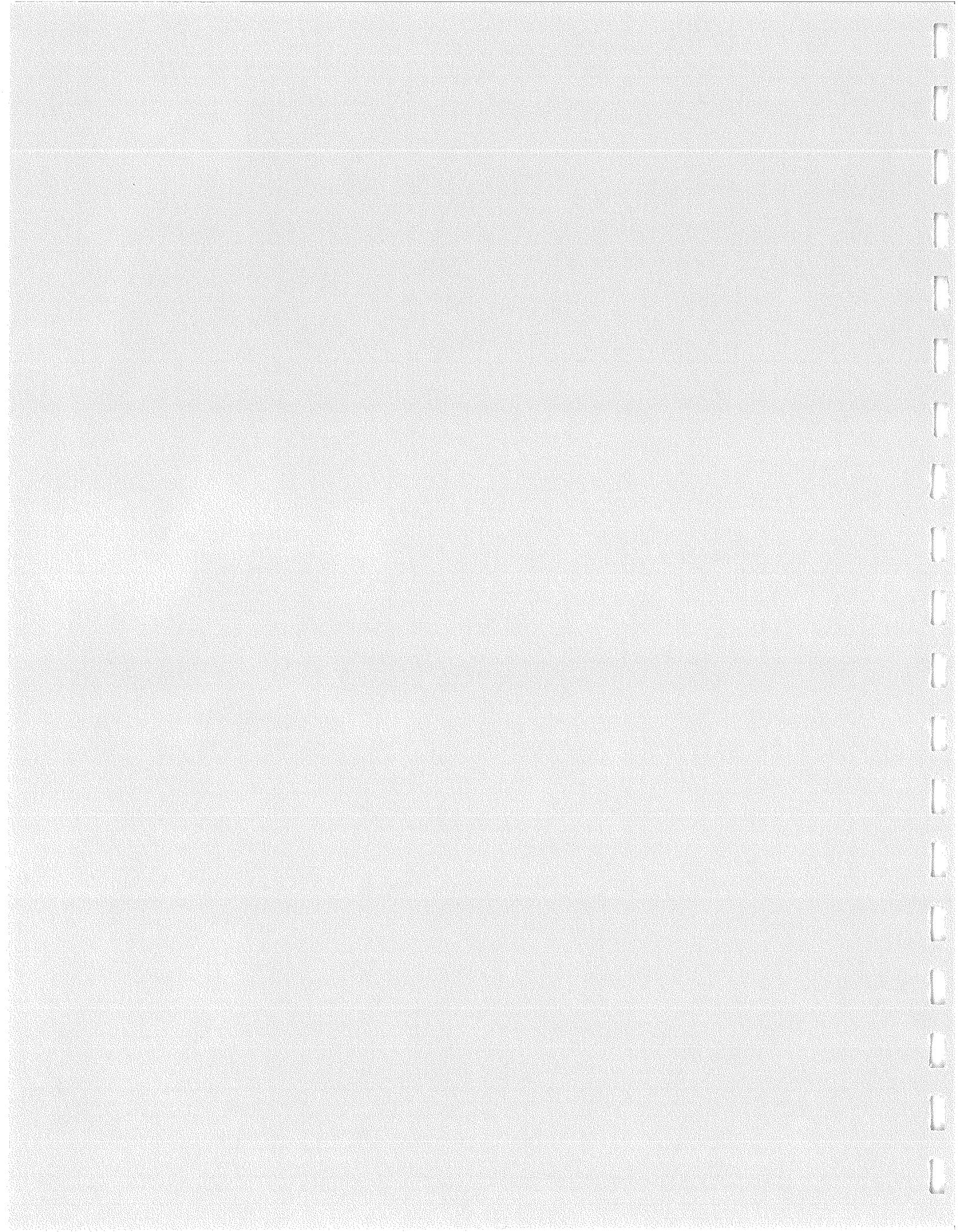
FIGURE 209

BOTTOM HOLE TEMPERATURE (°C)



61-30





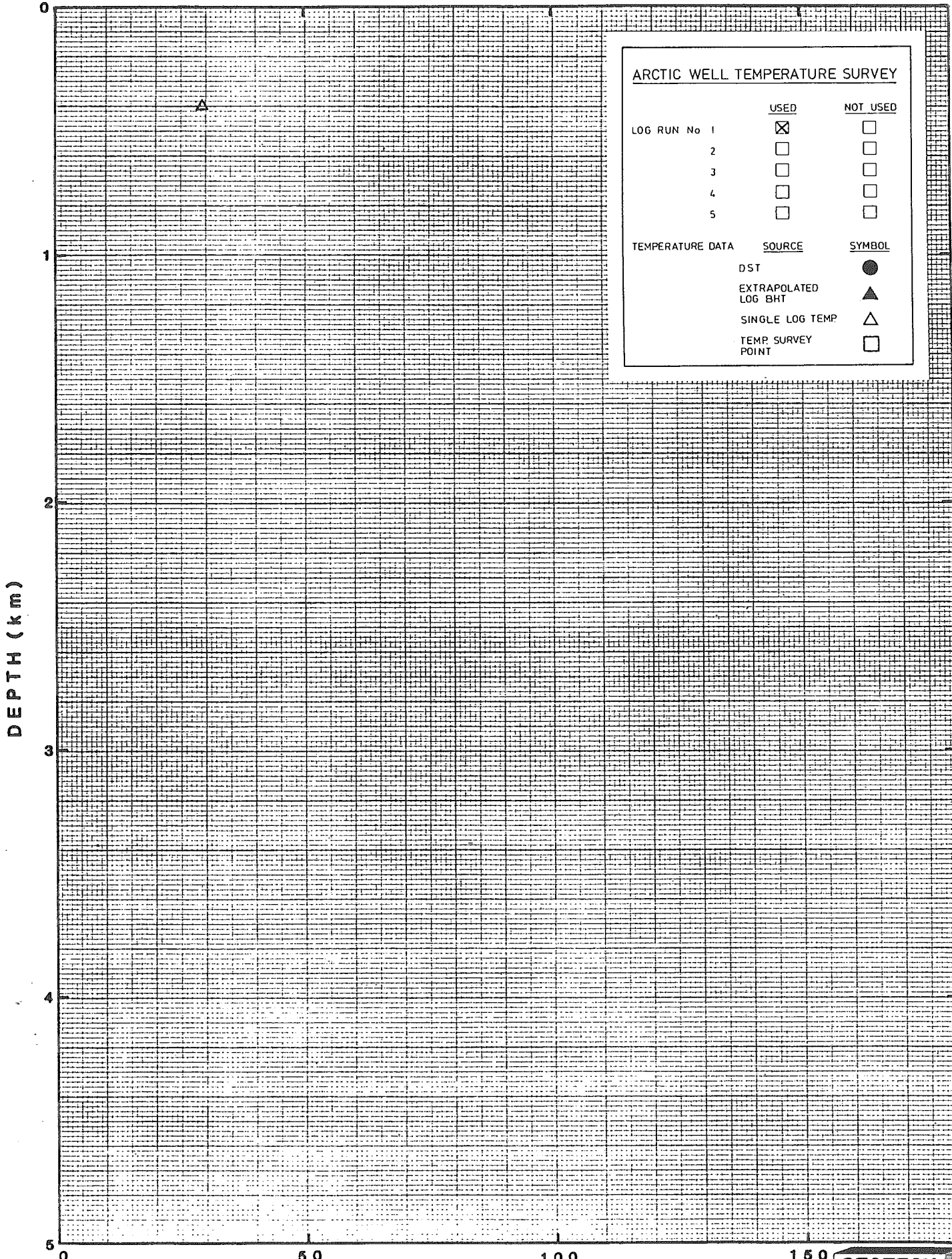
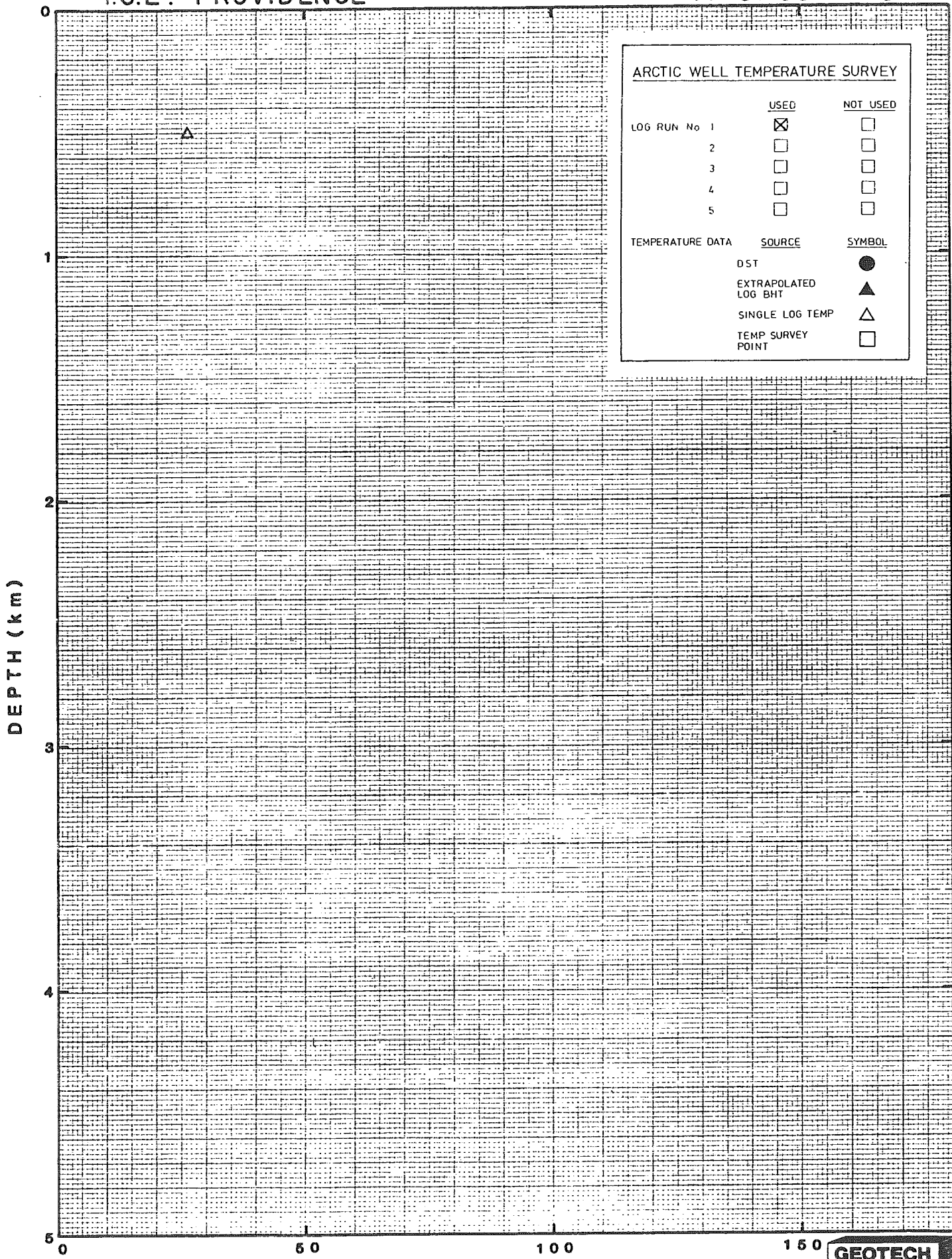


FIGURE 210

BOTTOM HOLE TEMPERATURE (°C)







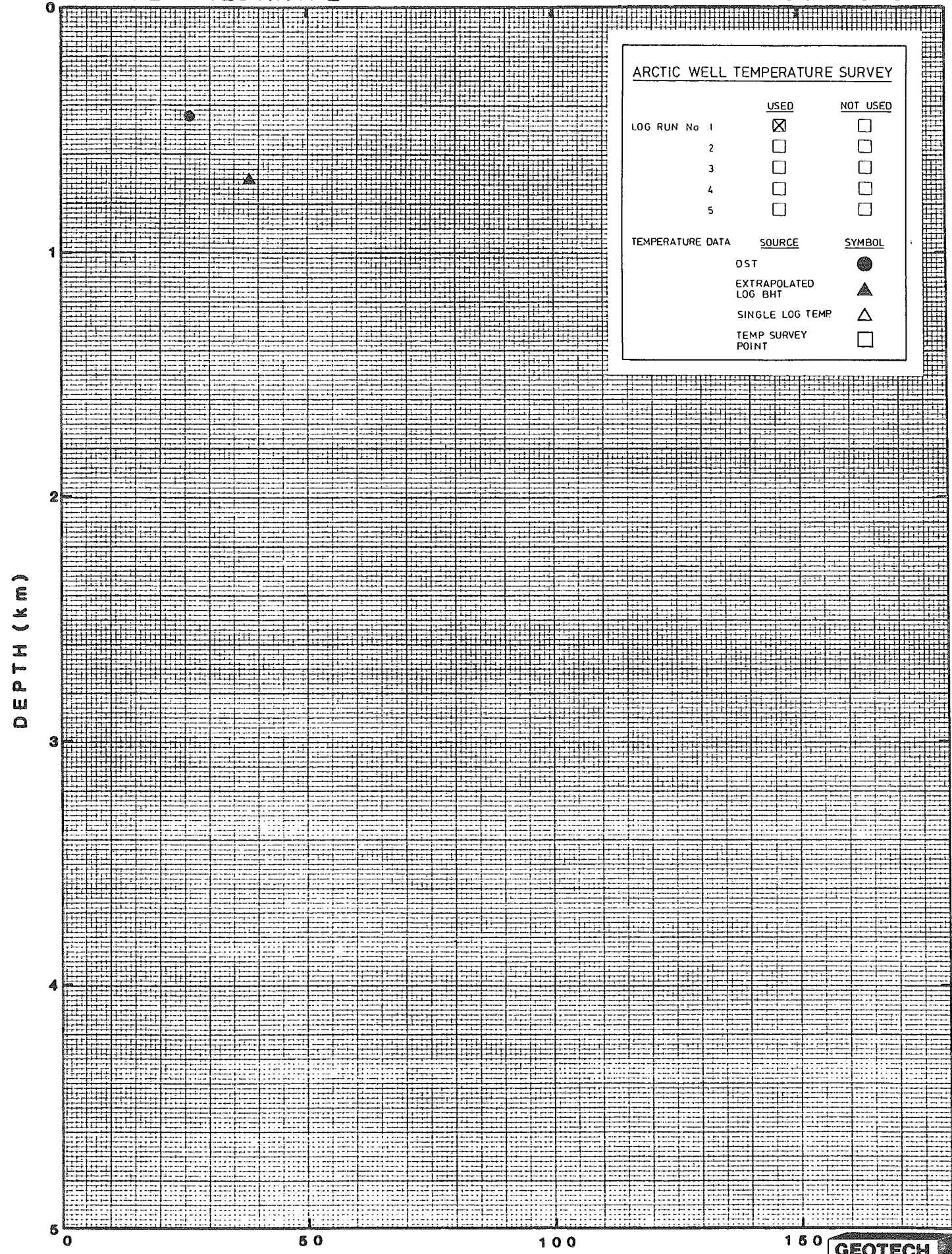
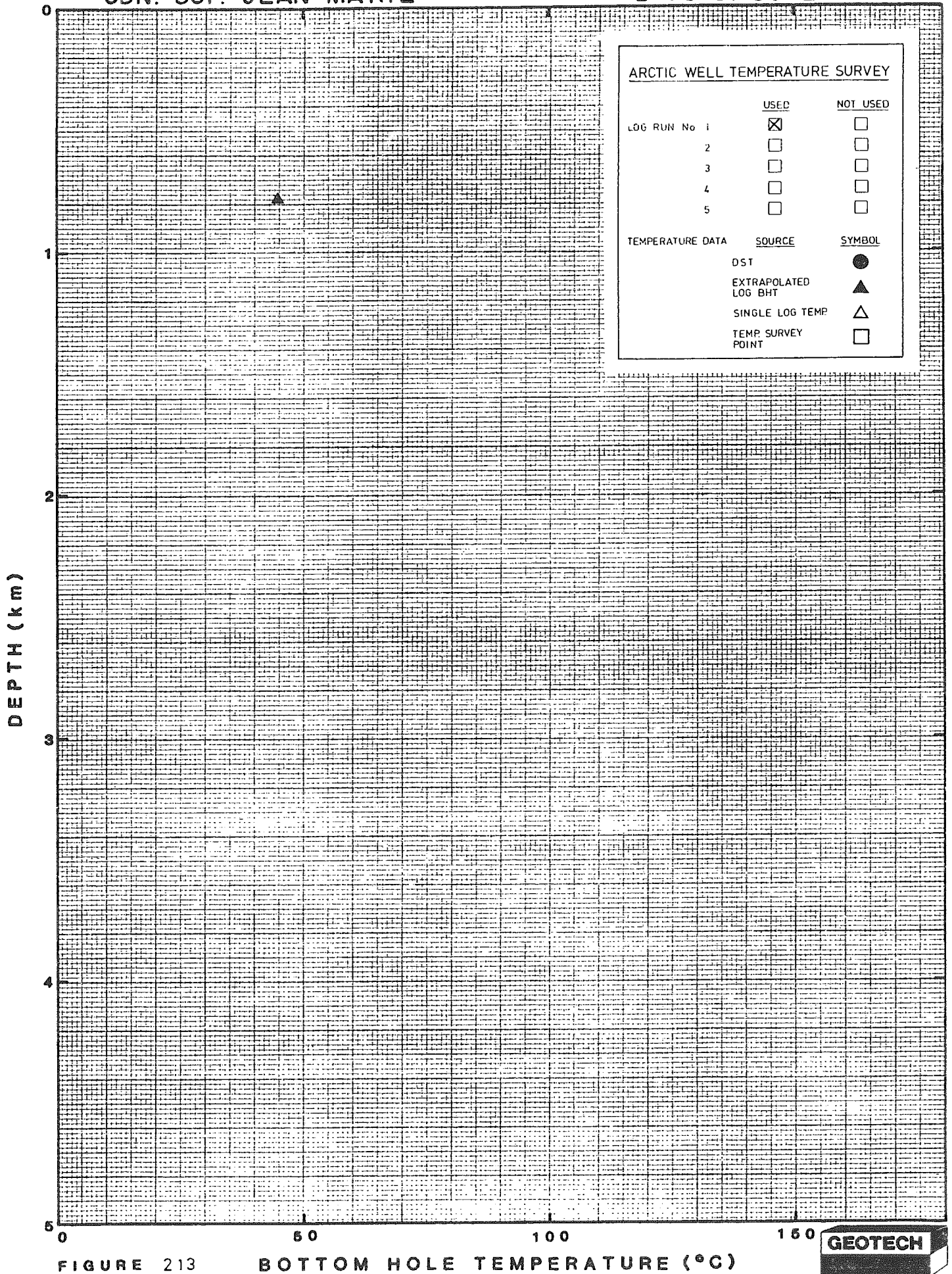


FIGURE 212

BOTTOM HOLE TEMPERATURE (°C)







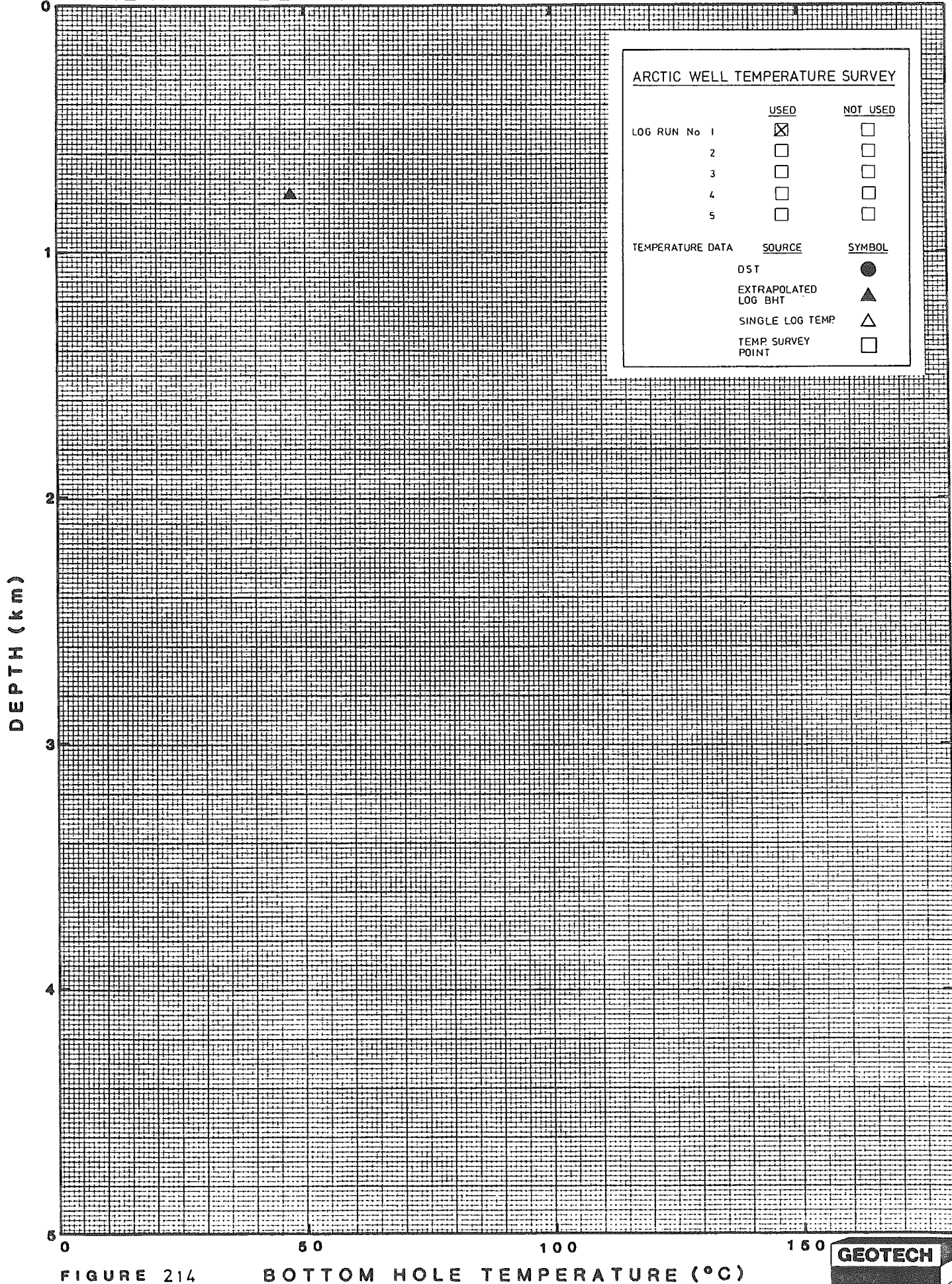


FIGURE 214

BOTTOM HOLE TEMPERATURE (°C)





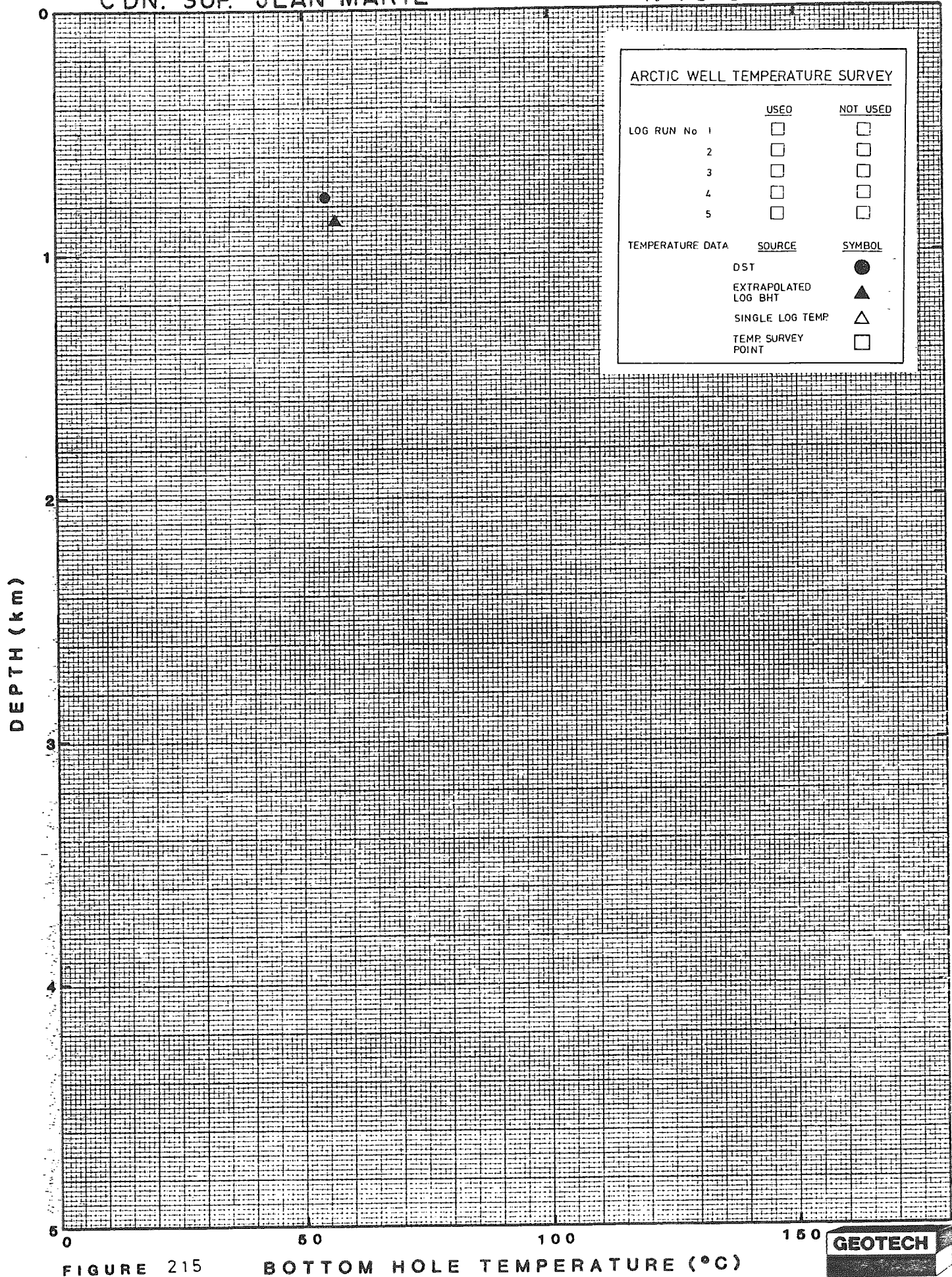
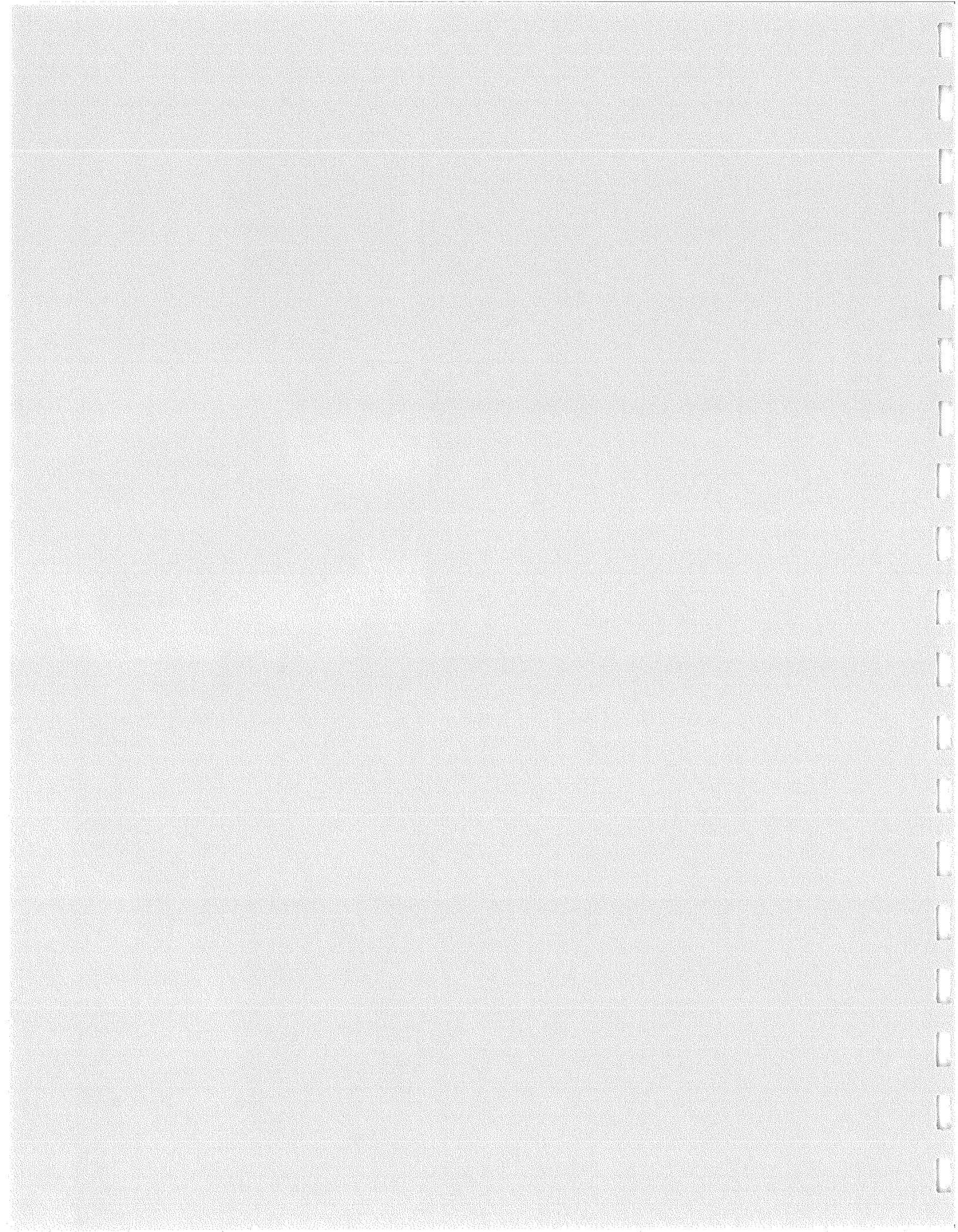


FIGURE 215

BOTTOM HOLE TEMPERATURE (°C)



61-40





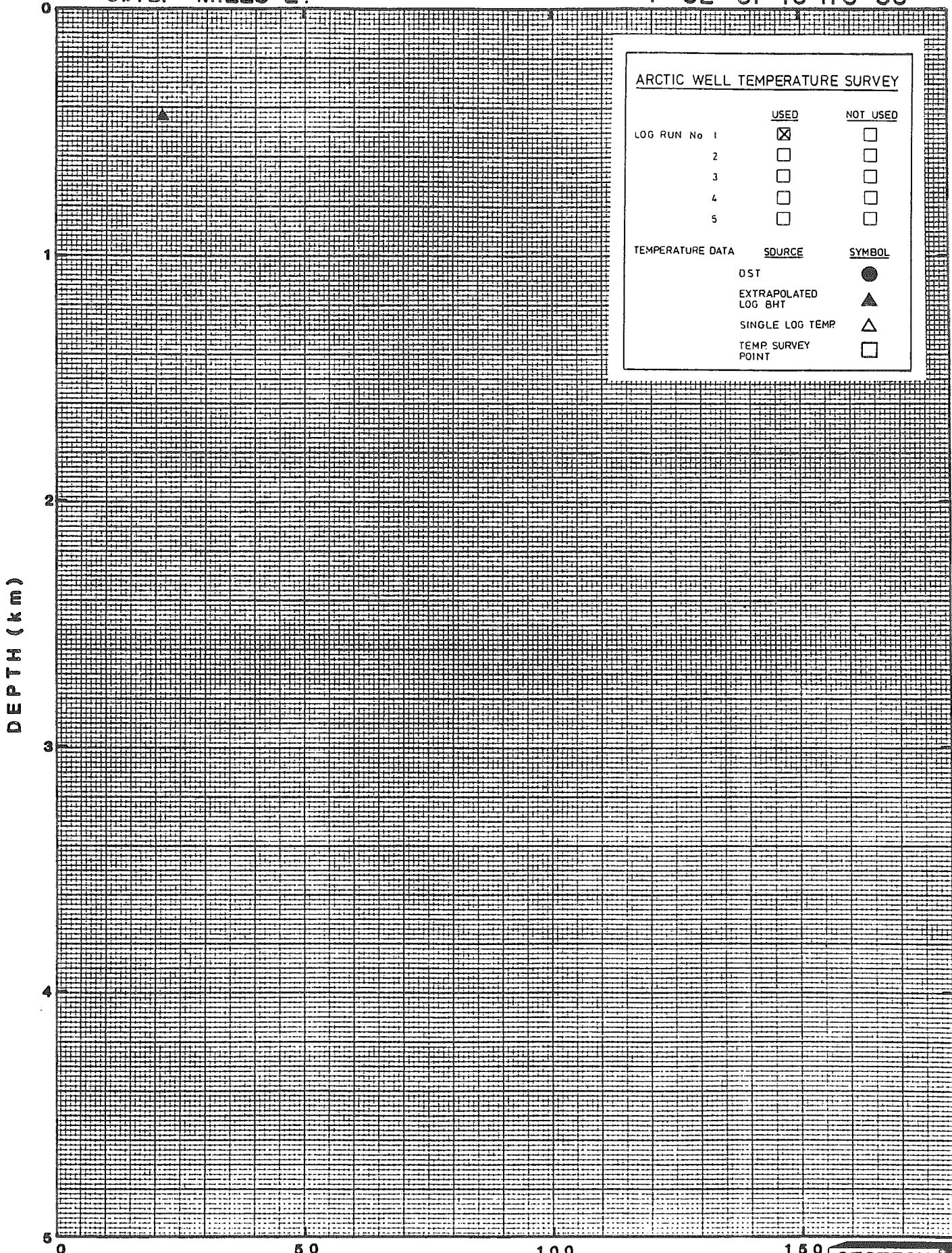


FIGURE 216

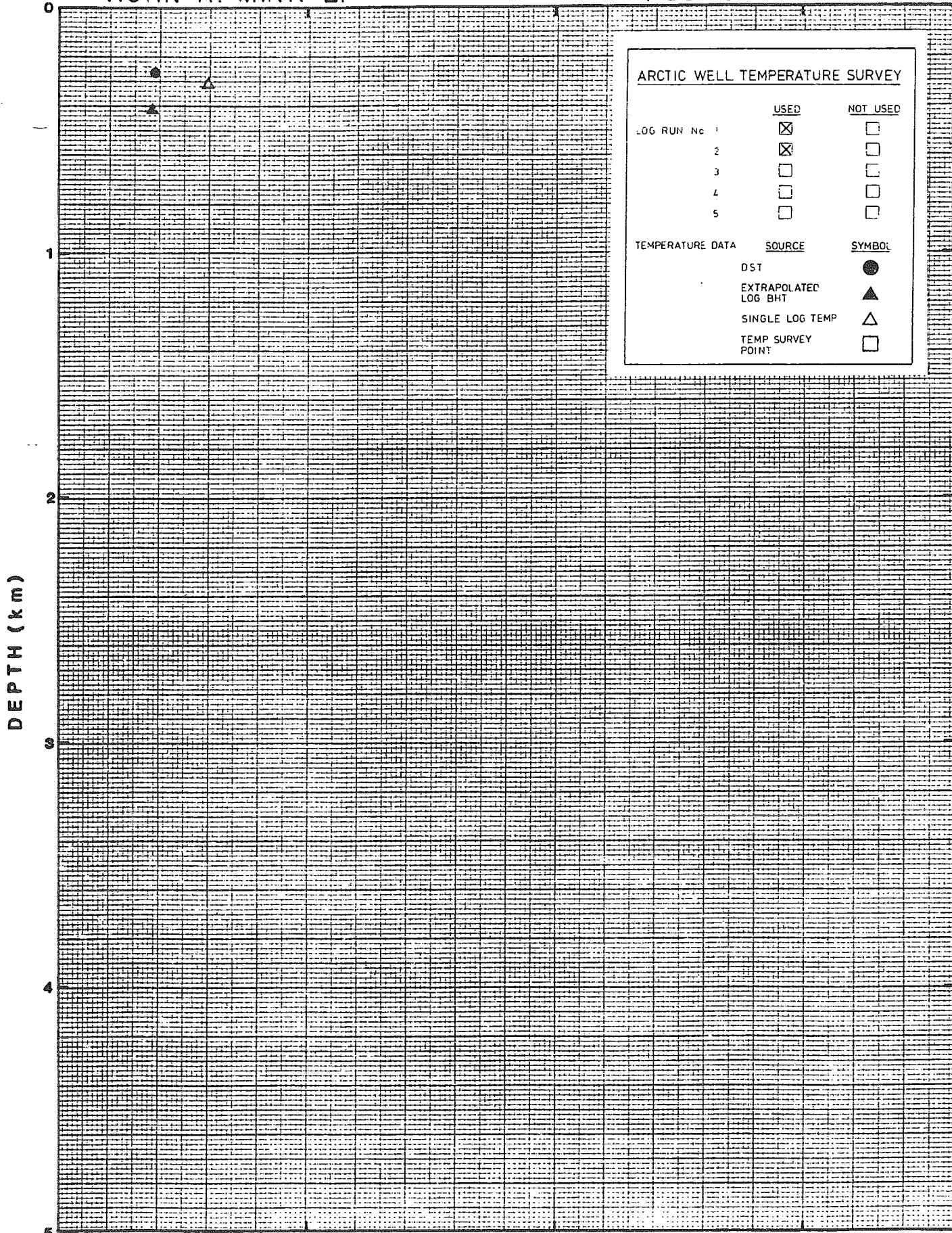
BOTTOM HOLE TEMPERATURE (°C)





HORN R. MINK L.

I-38 61-40-117-30



DEPTH (km)

0

50

100

150

FIGURE 217

BOTTOM HOLE TEMPERATURE (°C)



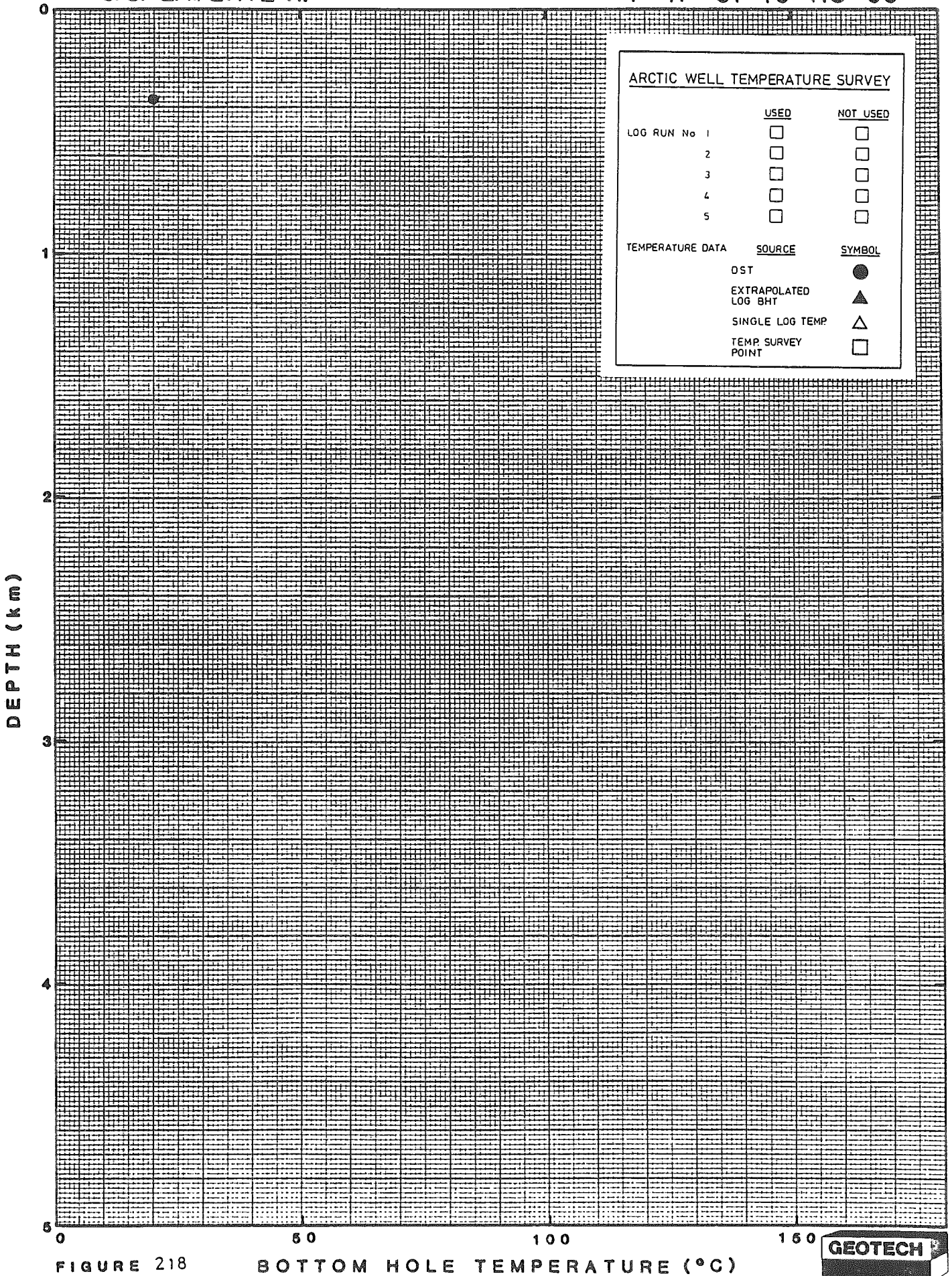


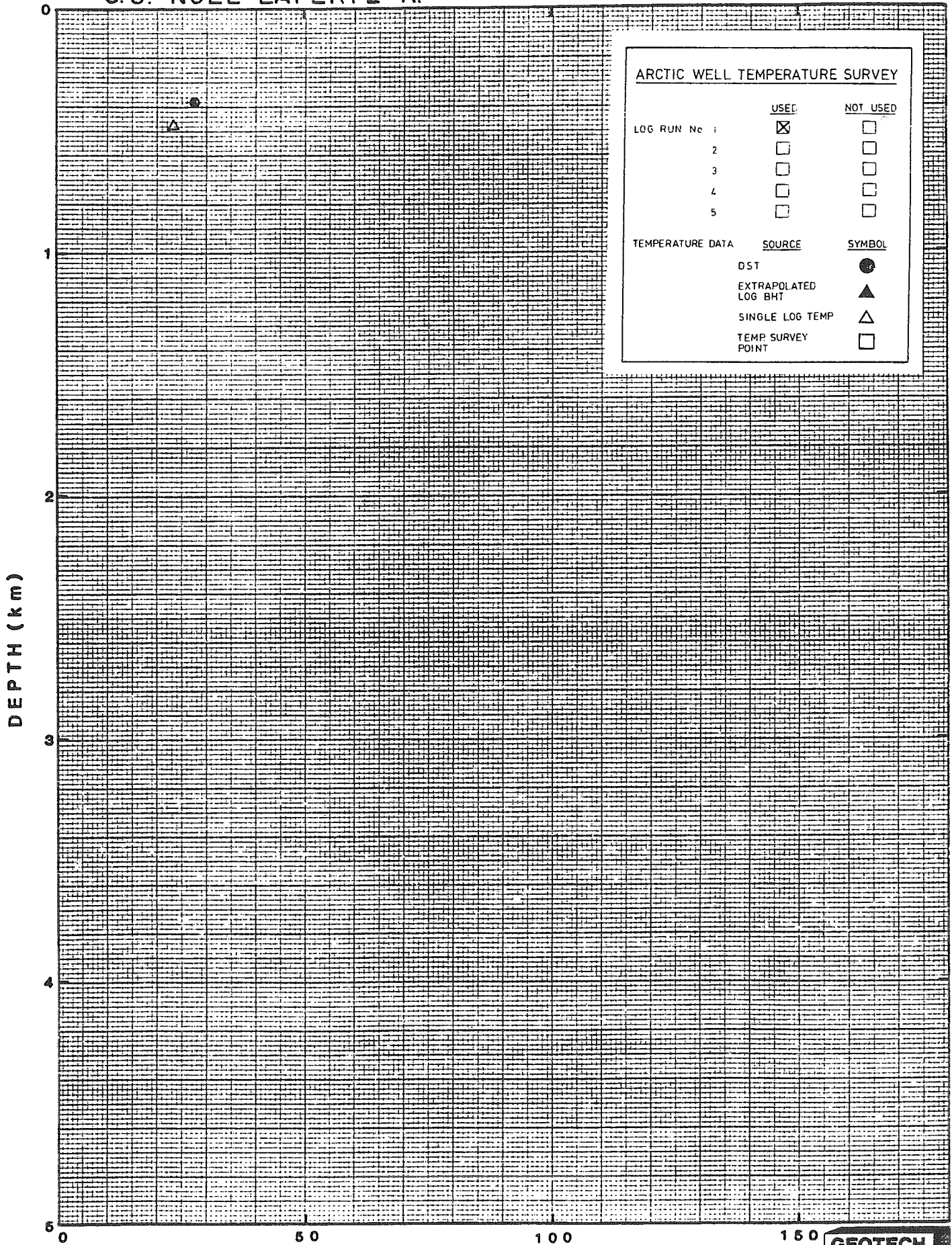
FIGURE 218

BOTTOM HOLE TEMPERATURE (°C)



C.S. NOEL LAFERTE R.

J-03 61-40-118-00

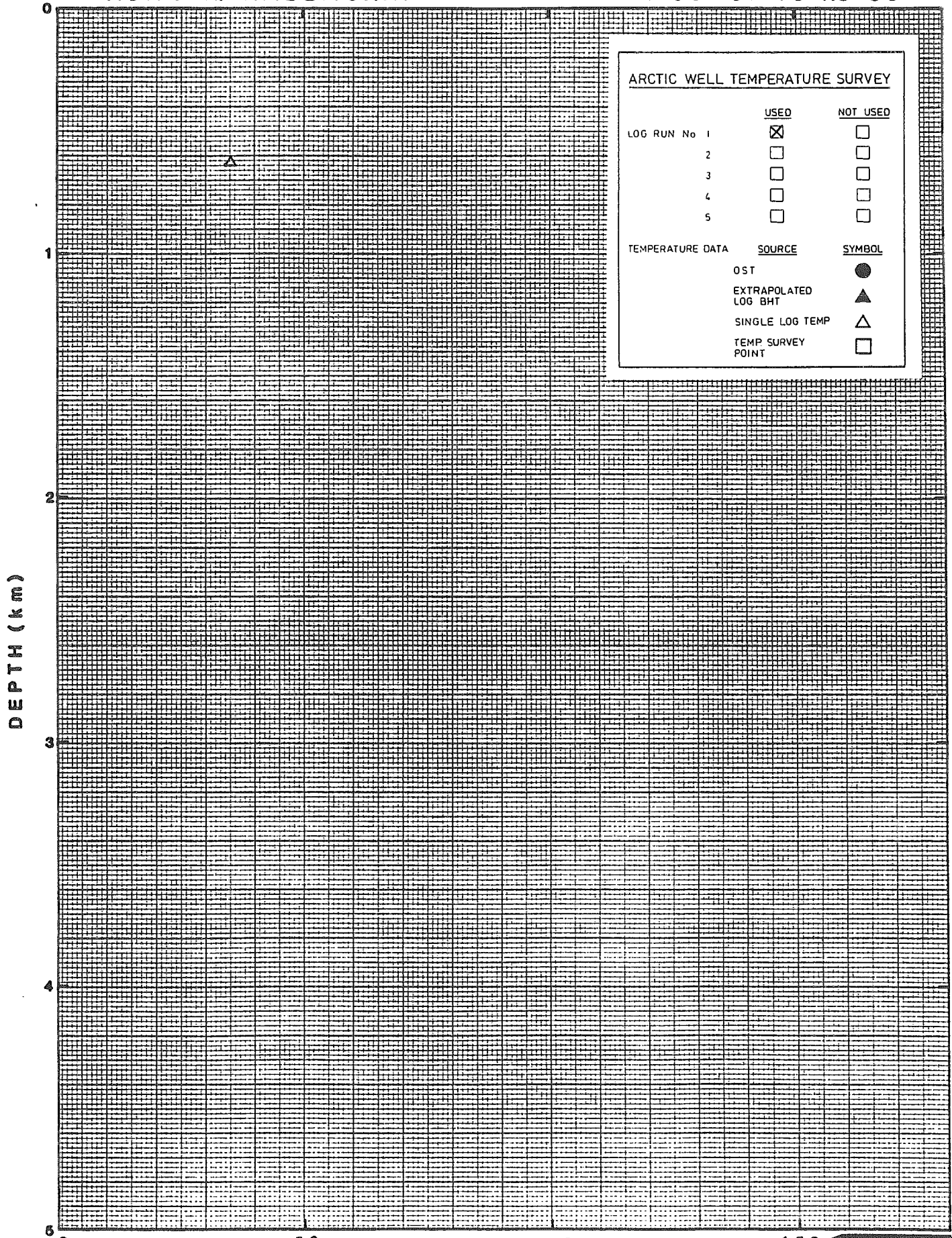


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 219

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 220

BOTTOM HOLE TEMPERATURE (°C)





HORN R. TROUT

D-66 61-40-119-45

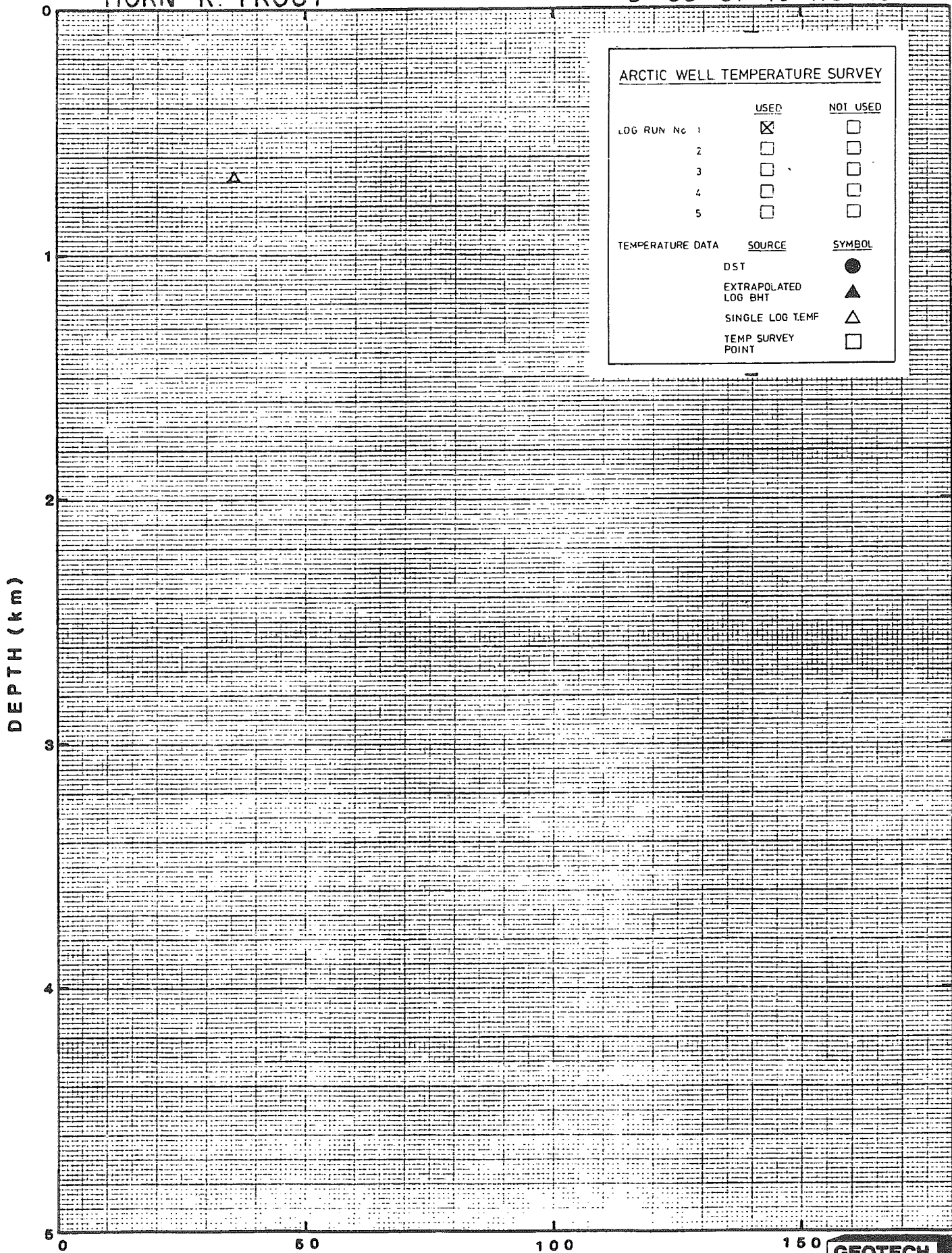


FIGURE 221

BOTTOM HOLE TEMPERATURE (°C)



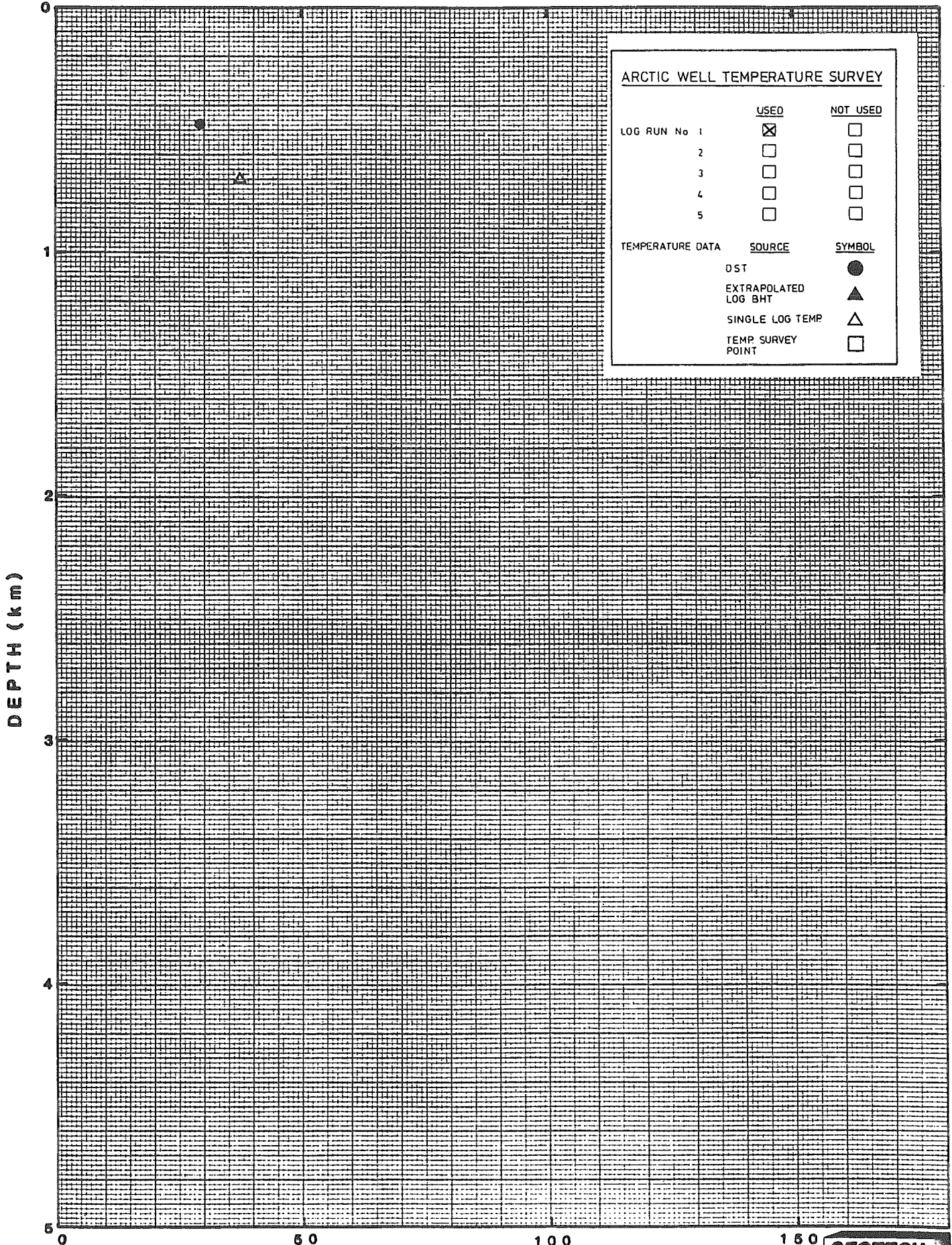


FIGURE 222

BOTTOM HOLE TEMPERATURE (°C)



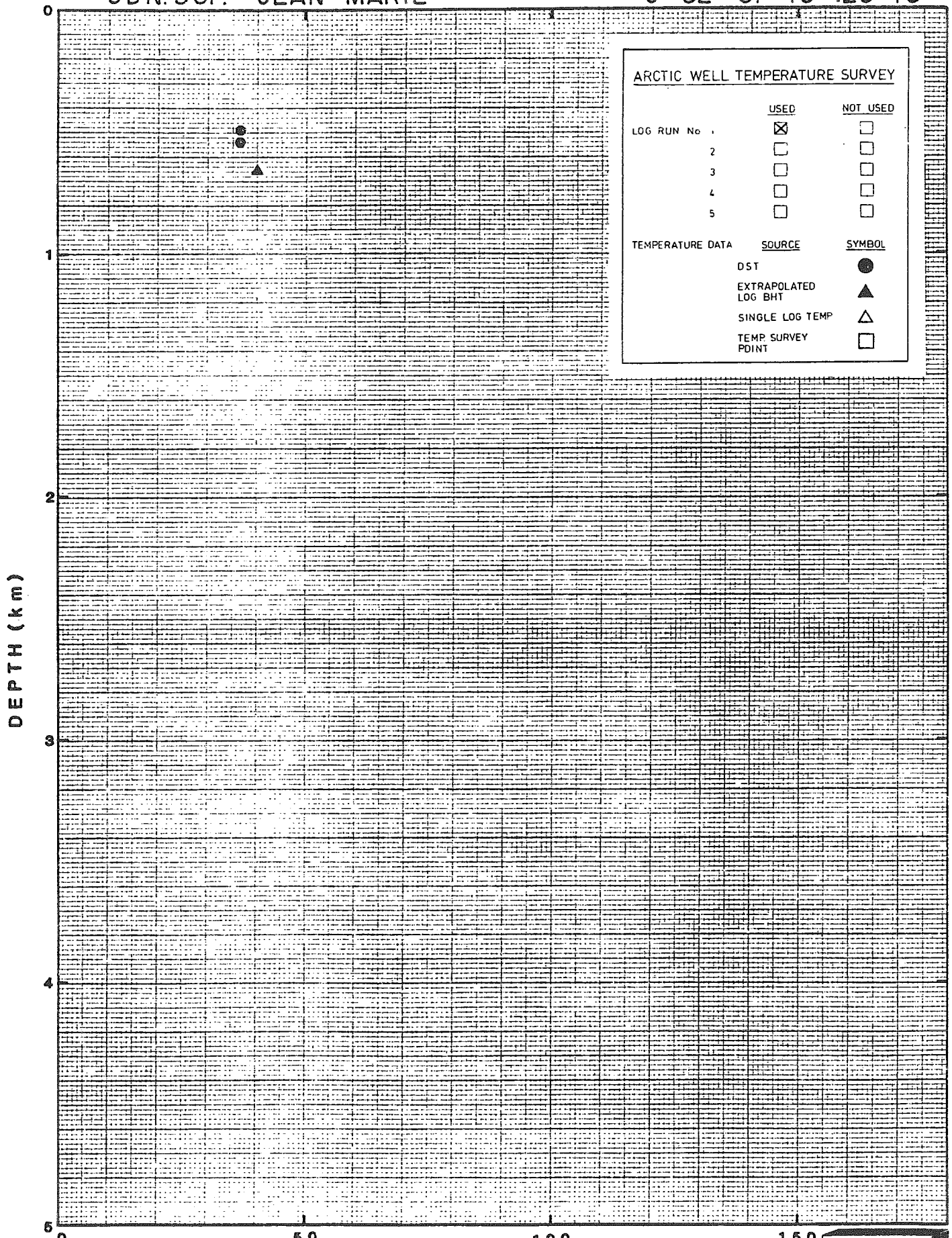
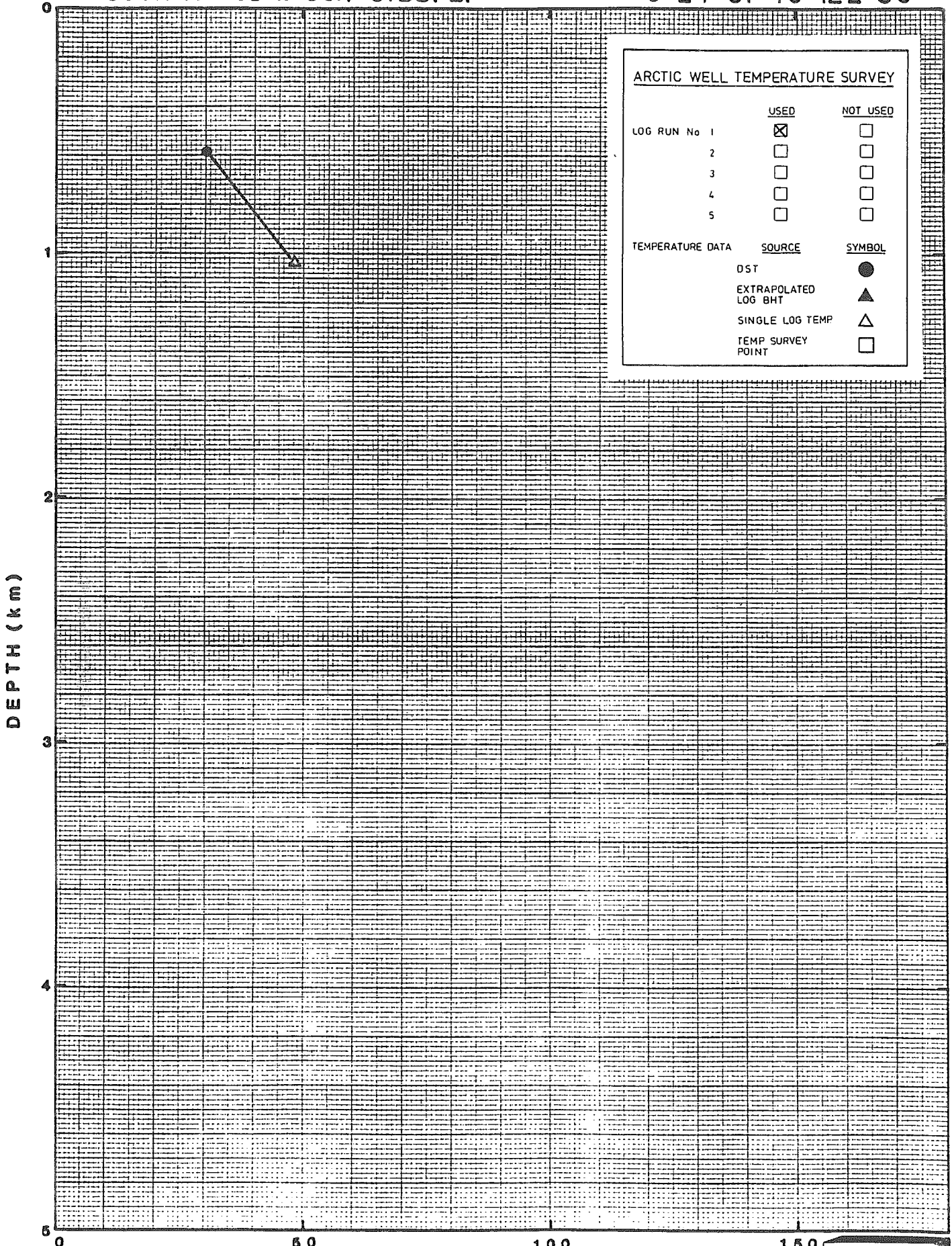


FIGURE 223

BOTTOM HOLE TEMPERATURE (°C)

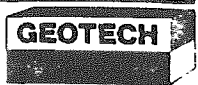




DEPTH (km)

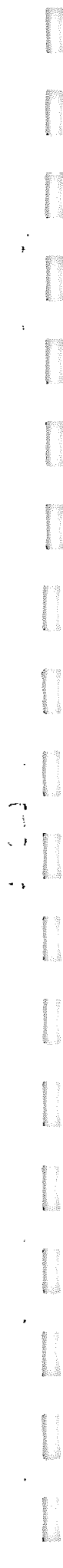
FIGURE 224

BOTTOM HOLE TEMPERATURE (°C)

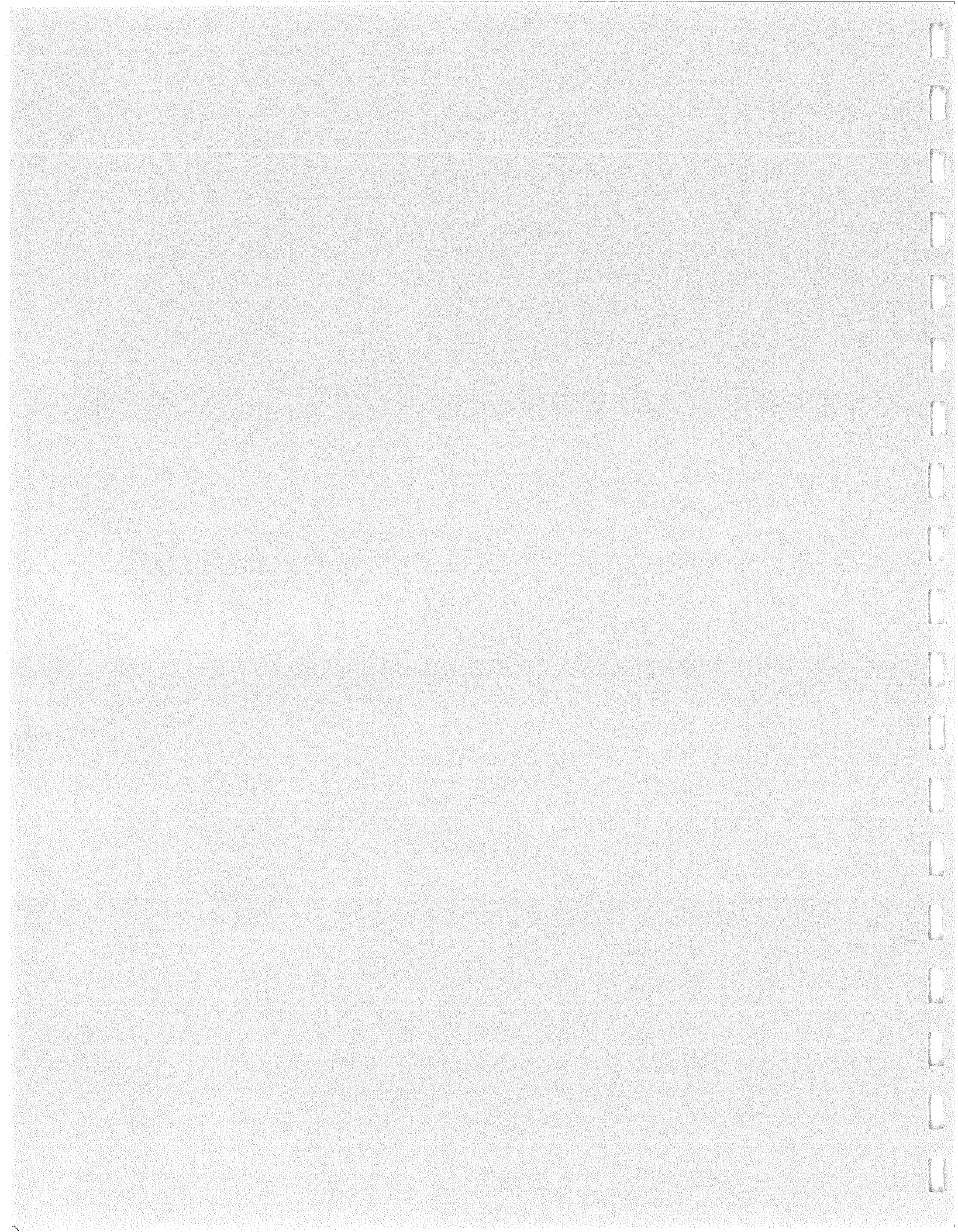




Vertical text or markings on the left side of the page, possibly bleed-through or a margin note.



61-50



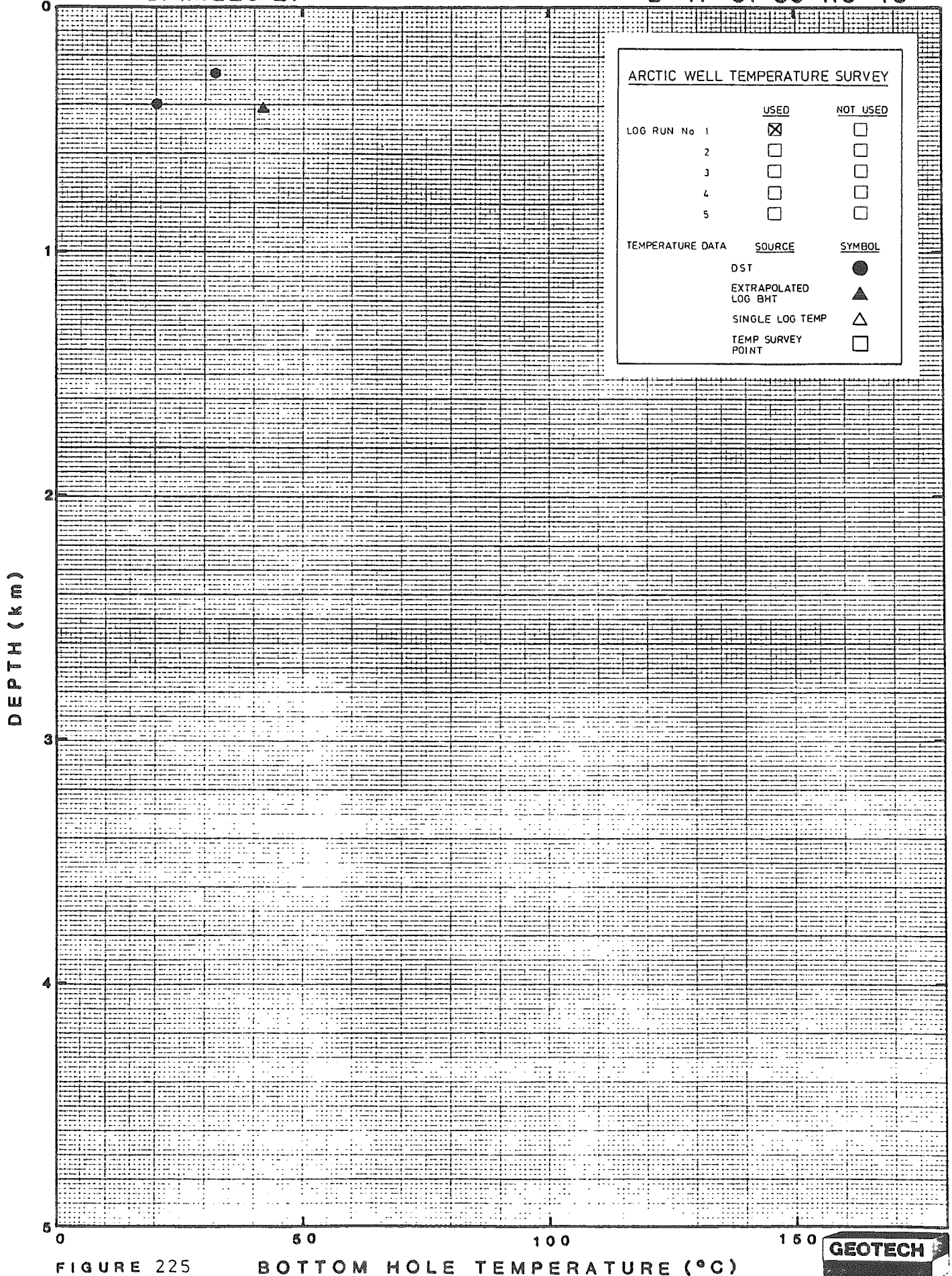


FIGURE 225

BOTTOM HOLE TEMPERATURE (°C)





G.P.D. MILLS L.

L-41 61-50-117-00

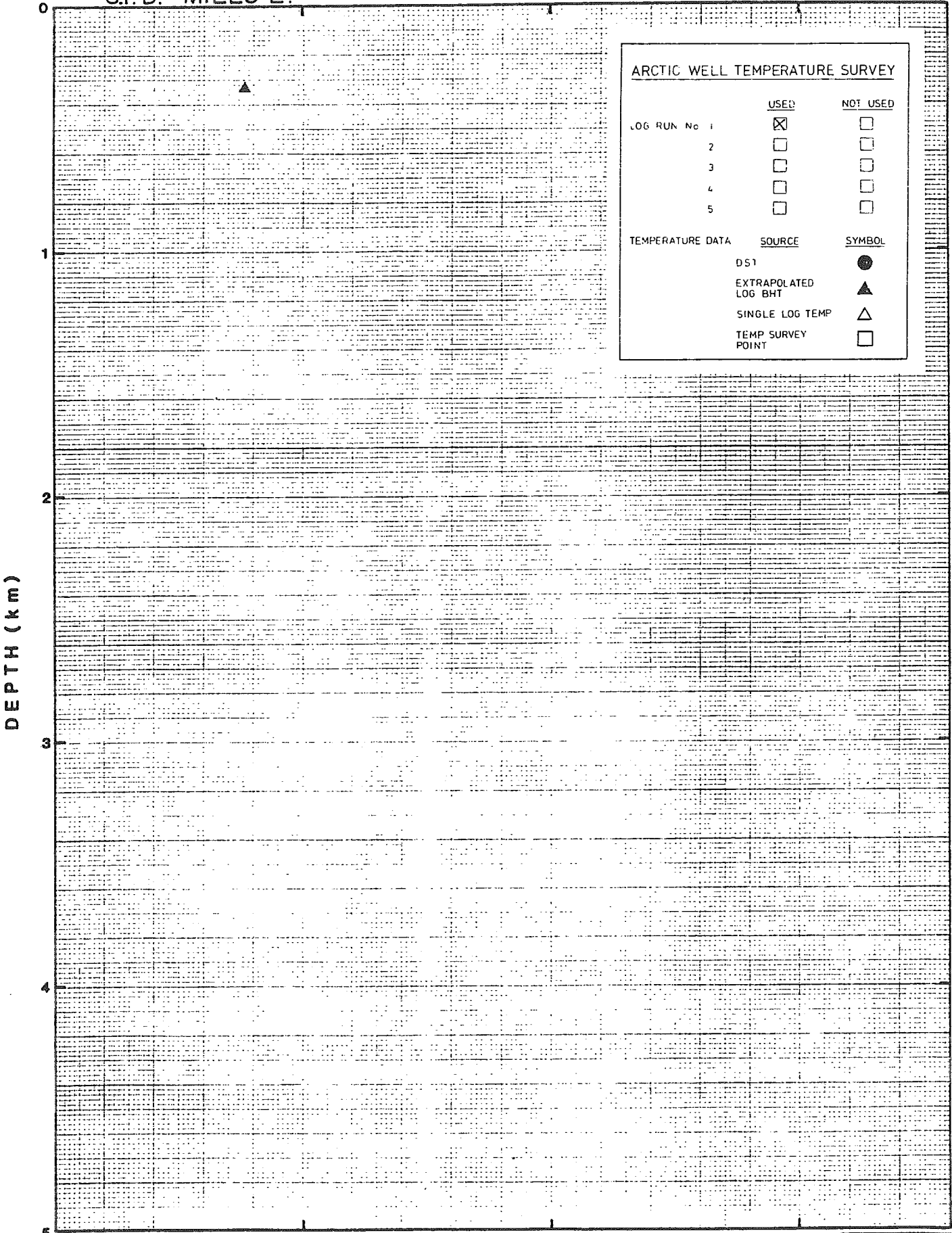


FIGURE 226

BOTTOM HOLE TEMPERATURE (°C)



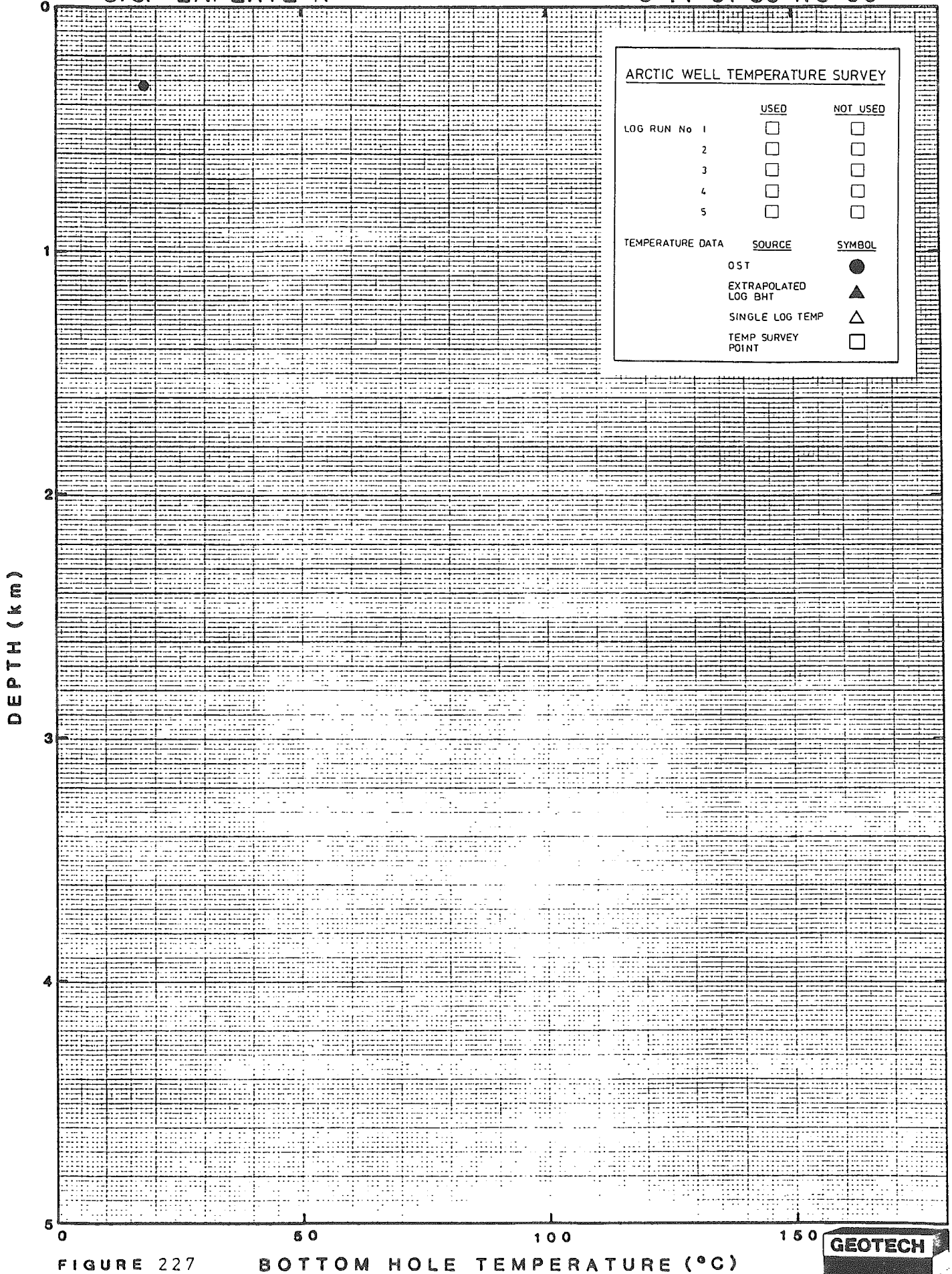


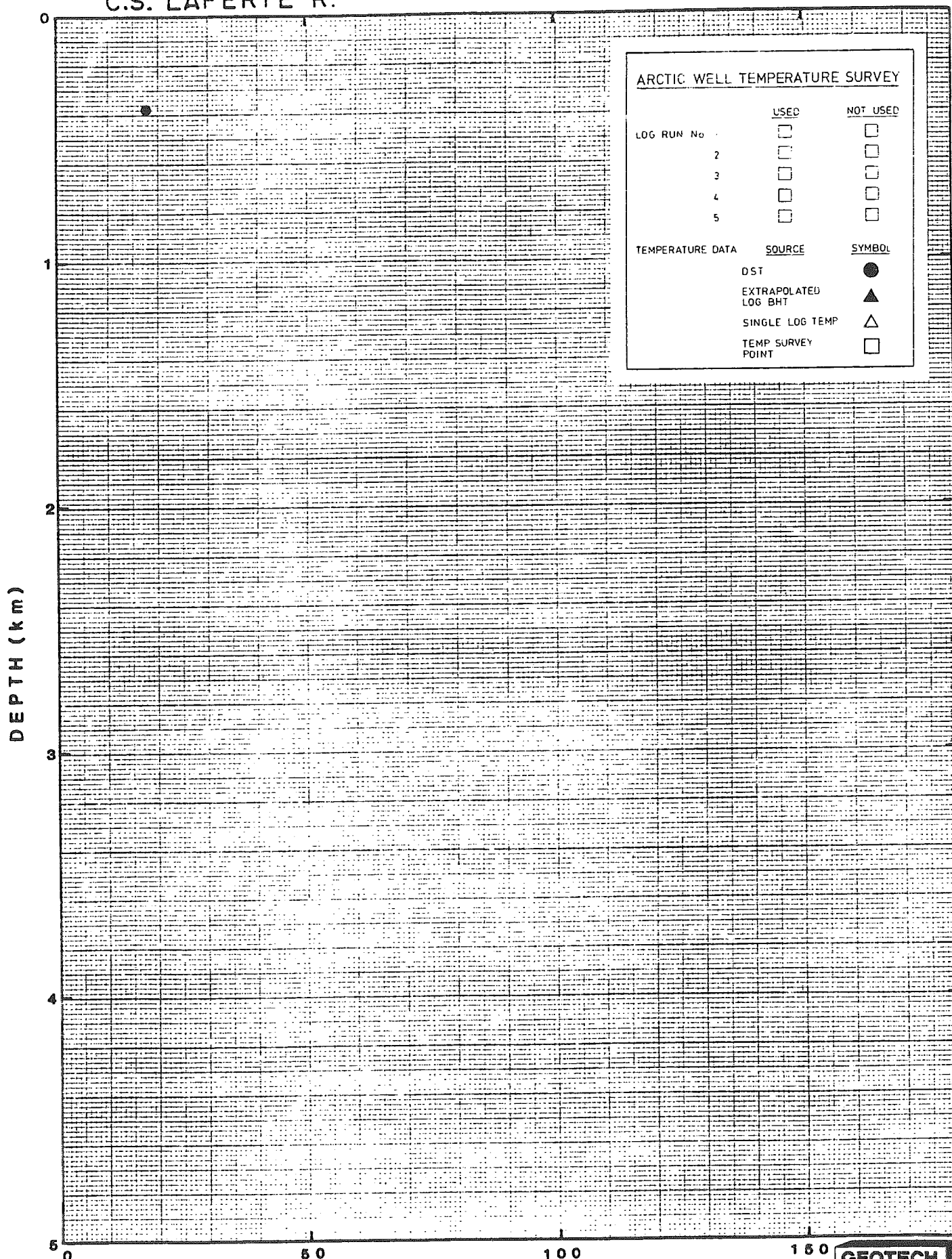
FIGURE 227

BOTTOM HOLE TEMPERATURE (°C)



C.S. LAFERTE R.

C-25 61-50-118-15



ARCTIC WELL TEMPERATURE SURVEY

LOG RUN No.	USED	NOT USED
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

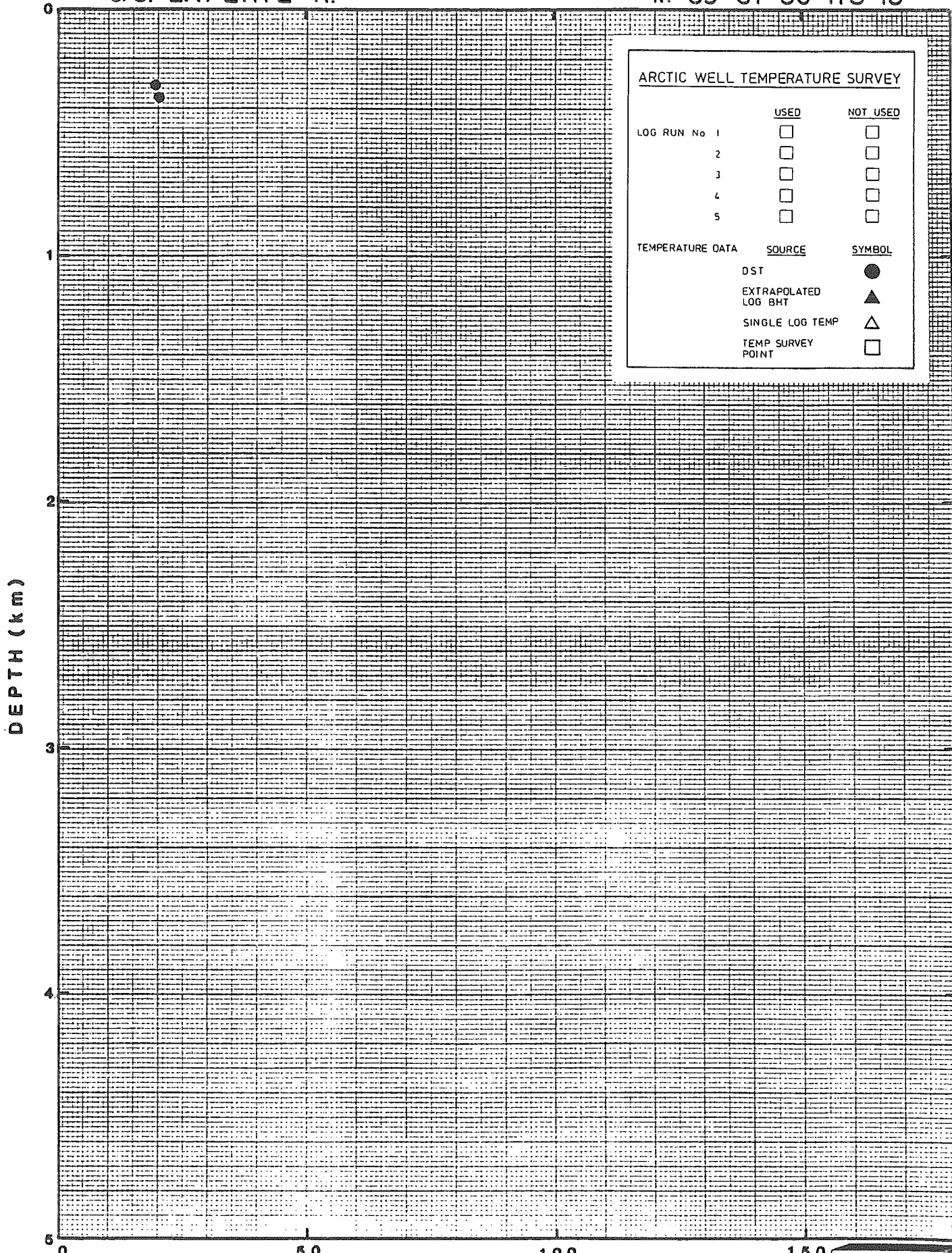
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 228

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 229

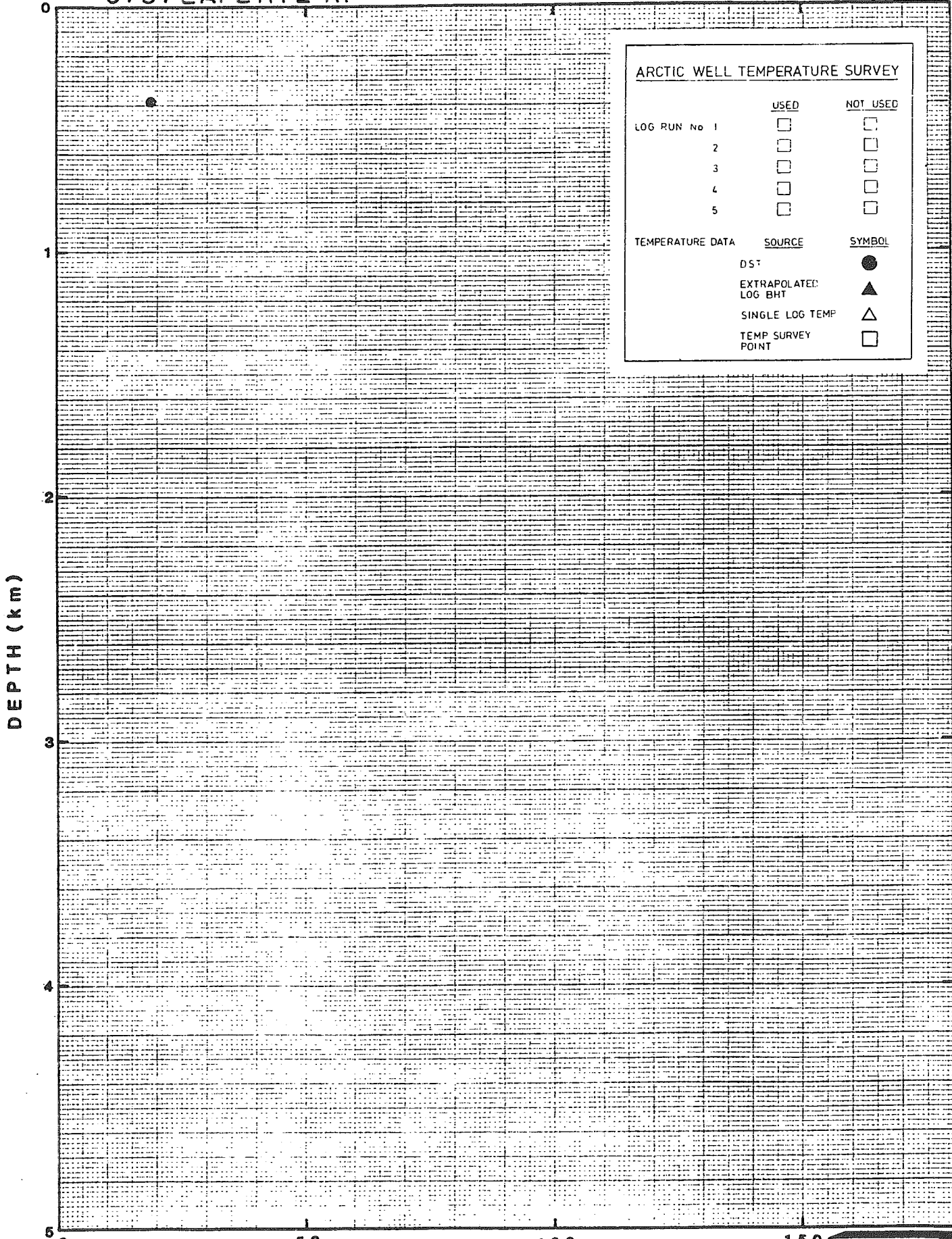
BOTTOM HOLE TEMPERATURE (°C)





C. S. LAFERTE R.

M-16 61-50-118-30



ARCTIC WELL TEMPERATURE SURVEY			
	USED	NOT USED	
LOG RUN No 1	<input type="checkbox"/>	<input type="checkbox"/>	
2	<input type="checkbox"/>	<input type="checkbox"/>	
3	<input type="checkbox"/>	<input type="checkbox"/>	
4	<input type="checkbox"/>	<input type="checkbox"/>	
5	<input type="checkbox"/>	<input type="checkbox"/>	
TEMPERATURE DATA	SOURCE	SYMBOL	
	DST	●	
	EXTRAPOLATED LOG BHT	▲	
	SINGLE LOG TEMP	△	
	TEMP SURVEY POINT	□	

DEPTH (km)

0 50 100 150

FIGURE 230 BOTTOM HOLE TEMPERATURE (°C)



C.S. NOEL LAFERTE R.

N

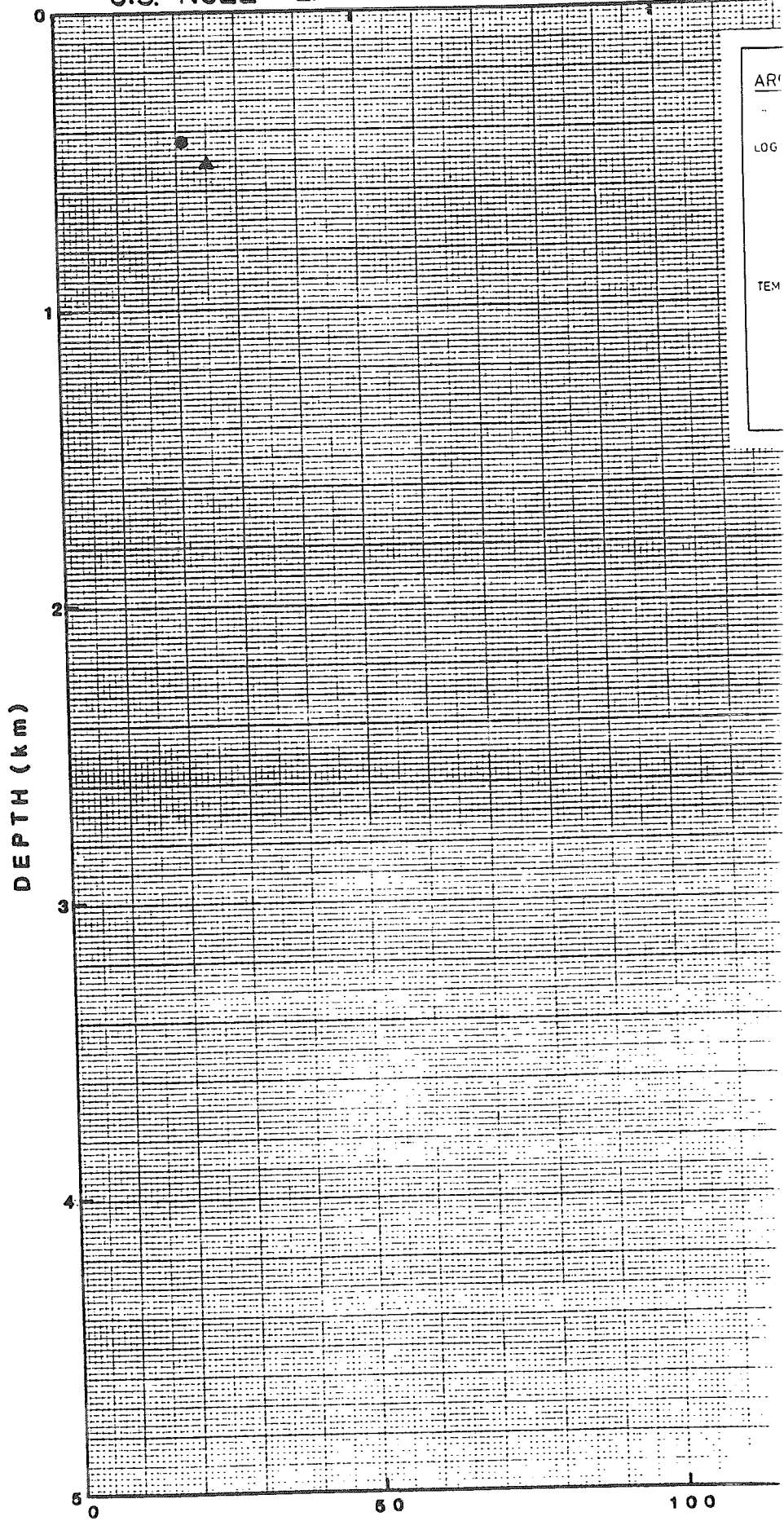
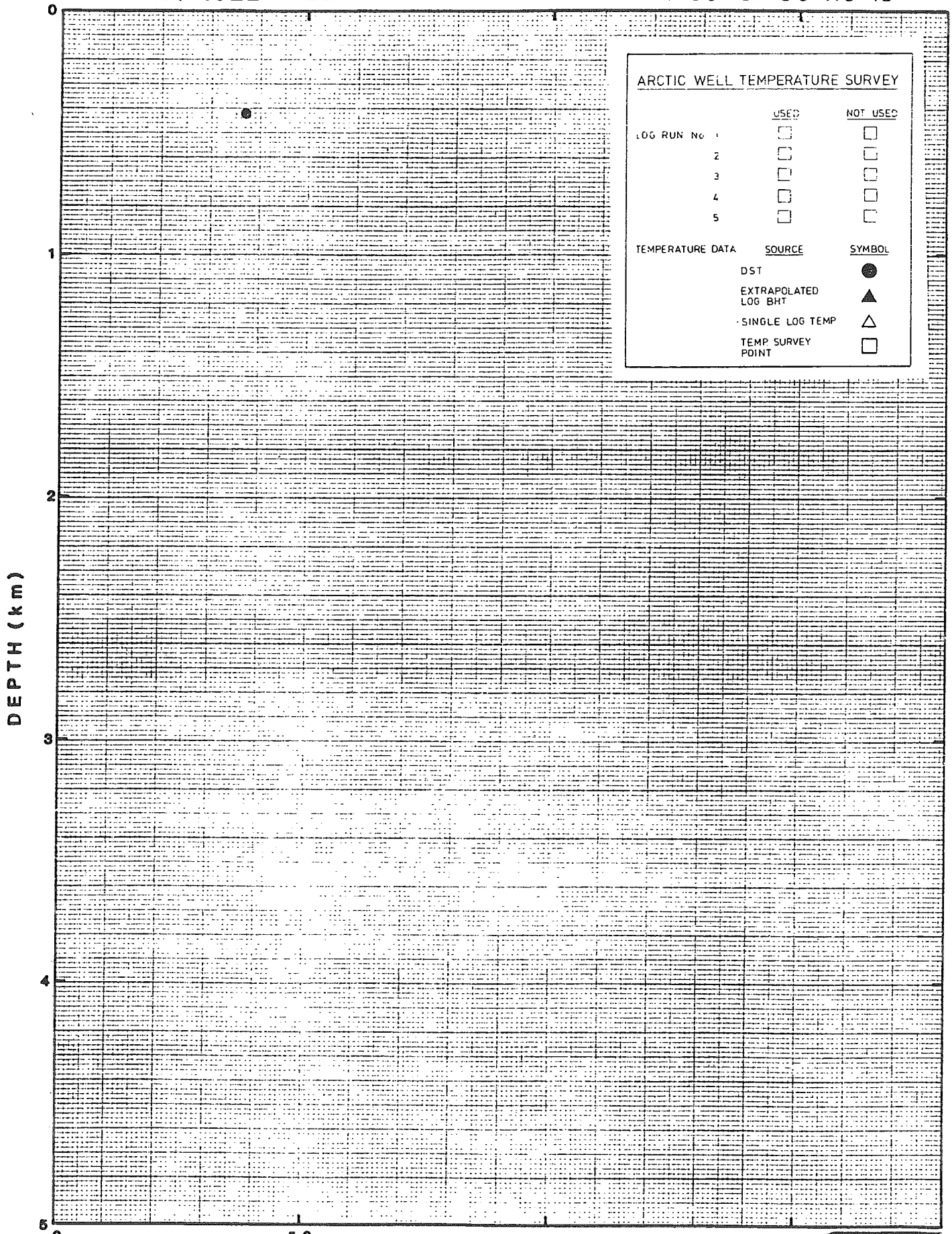


FIGURE 231

BOTTOM HOLE TEMPERAT



ARCTIC WELL TEMPERATURE SURVEY

LOG RUN No	USED	NOT USED
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 232

BOTTOM HOLE TEMPERATURE (°C)



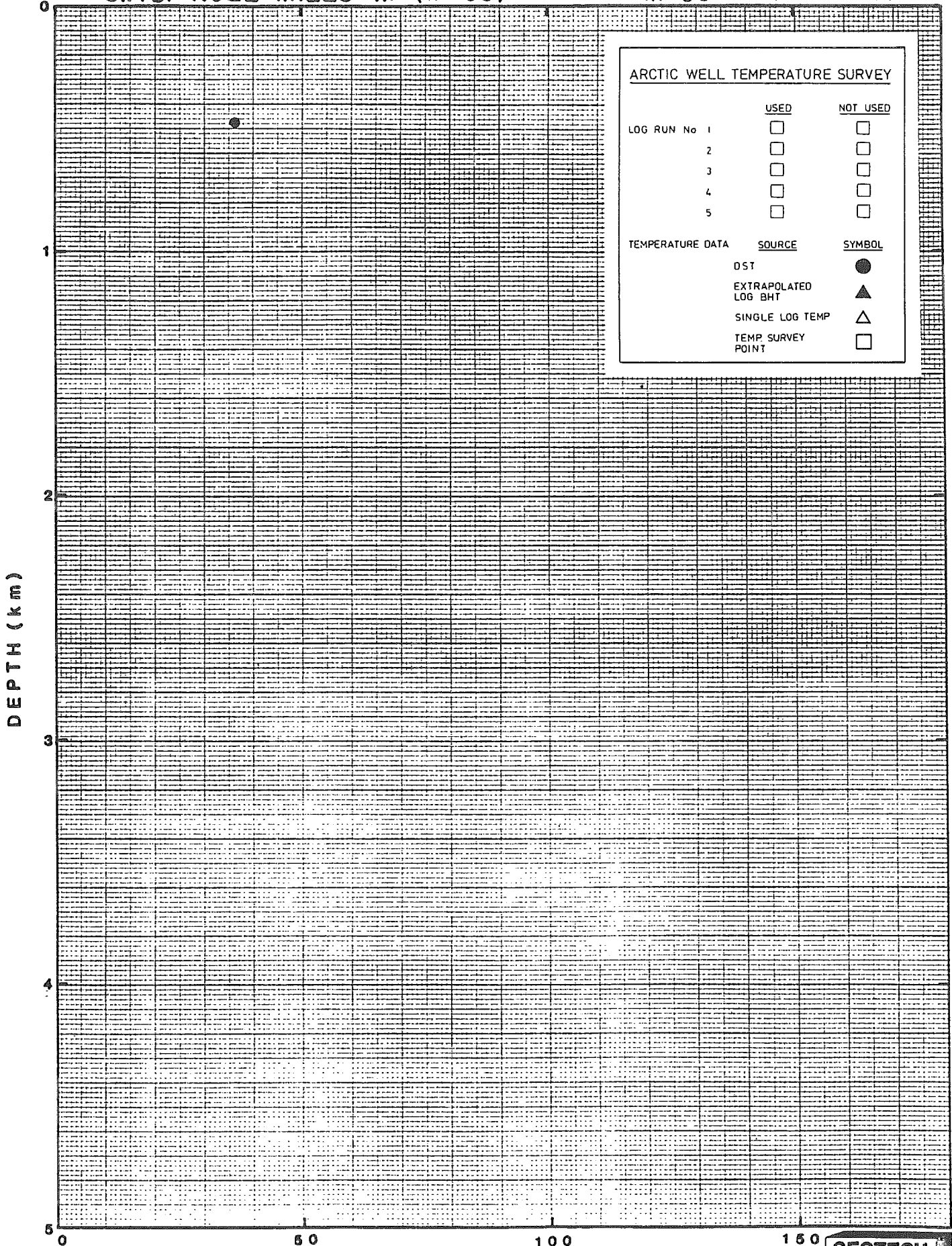


FIGURE 232 a

BOTTOM HOLE TEMPERATURE (°C)





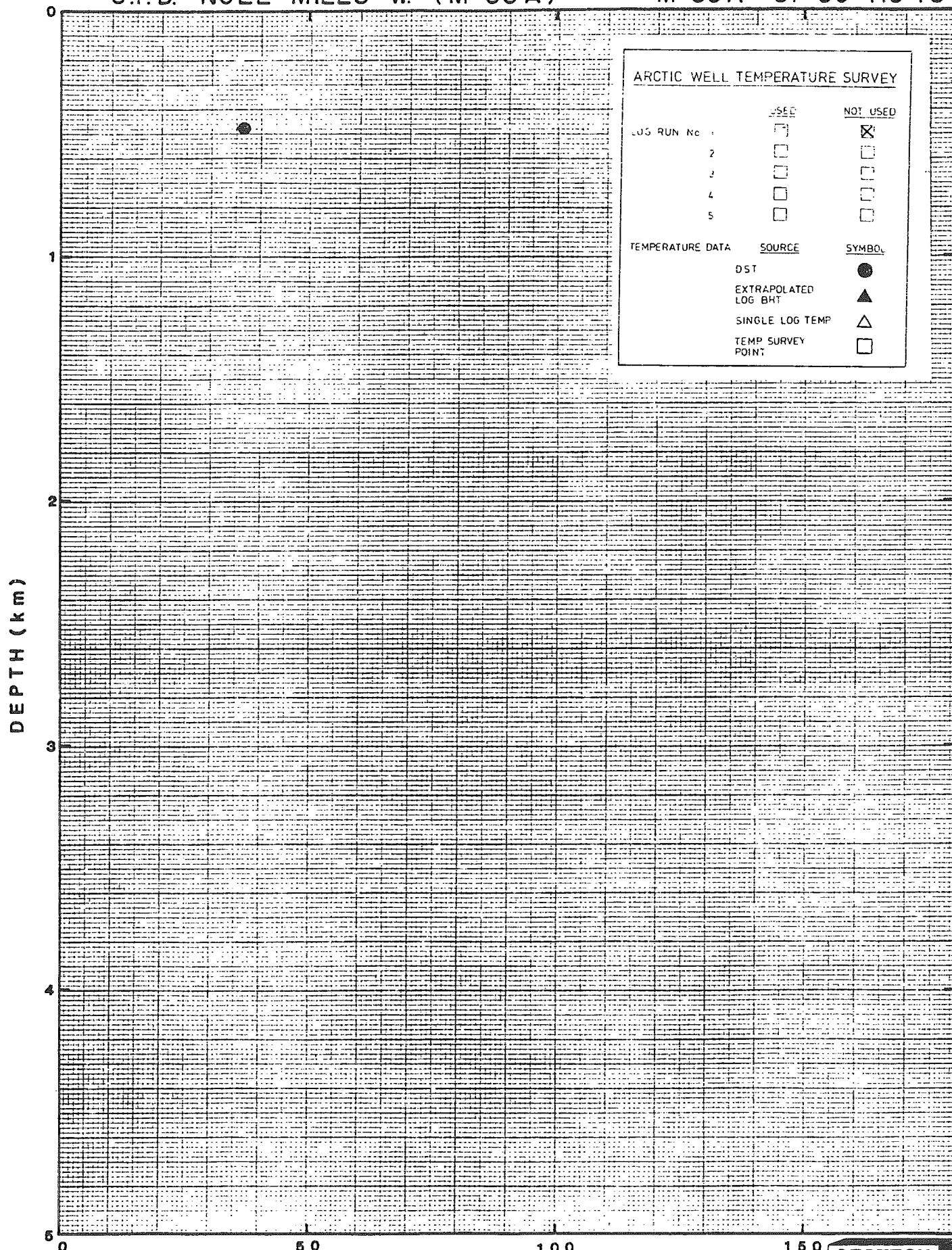


FIGURE 233

BOTTOM HOLE TEMPERATURE (°C)



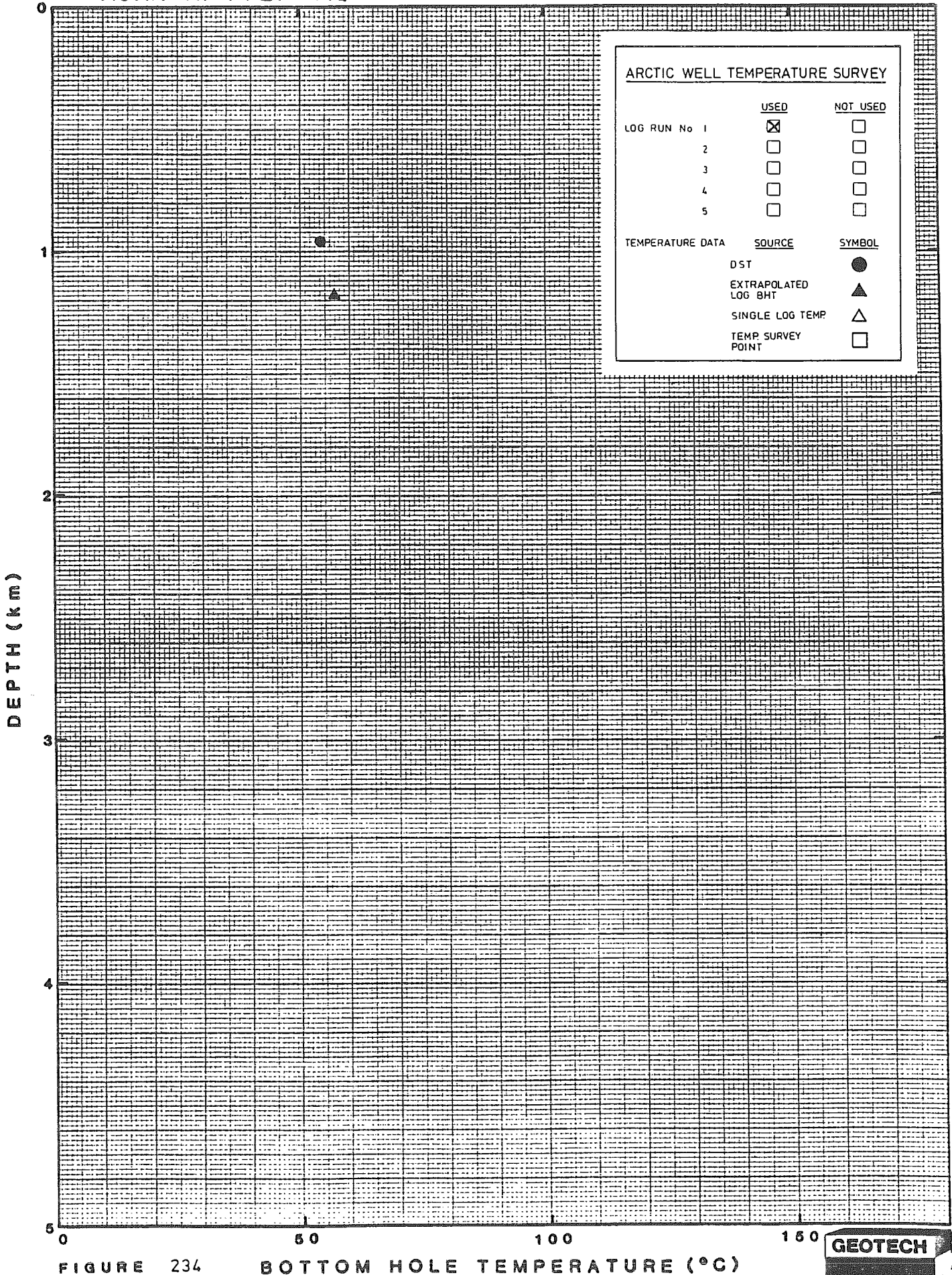
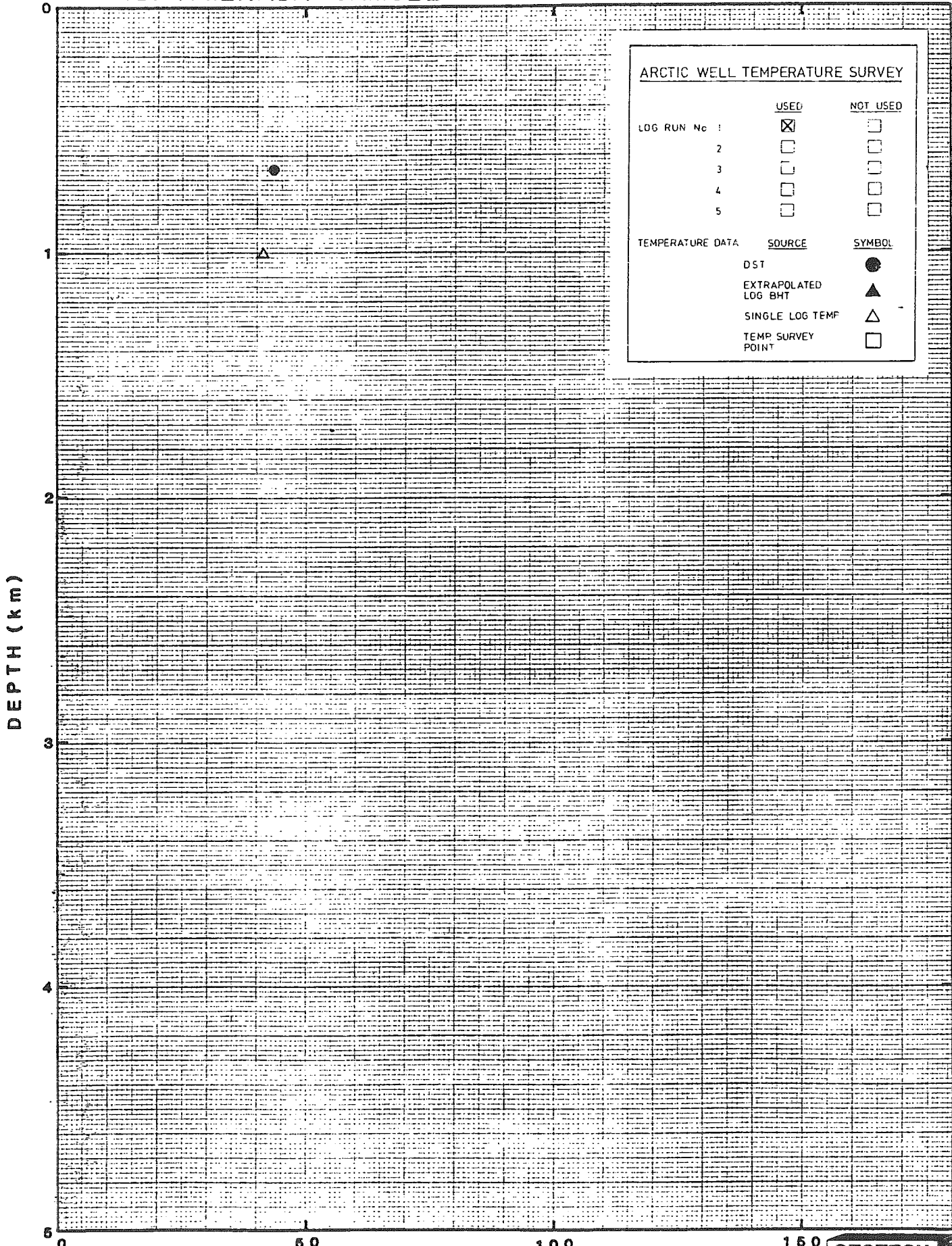


FIGURE 234

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No :	USED	NOT USED
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

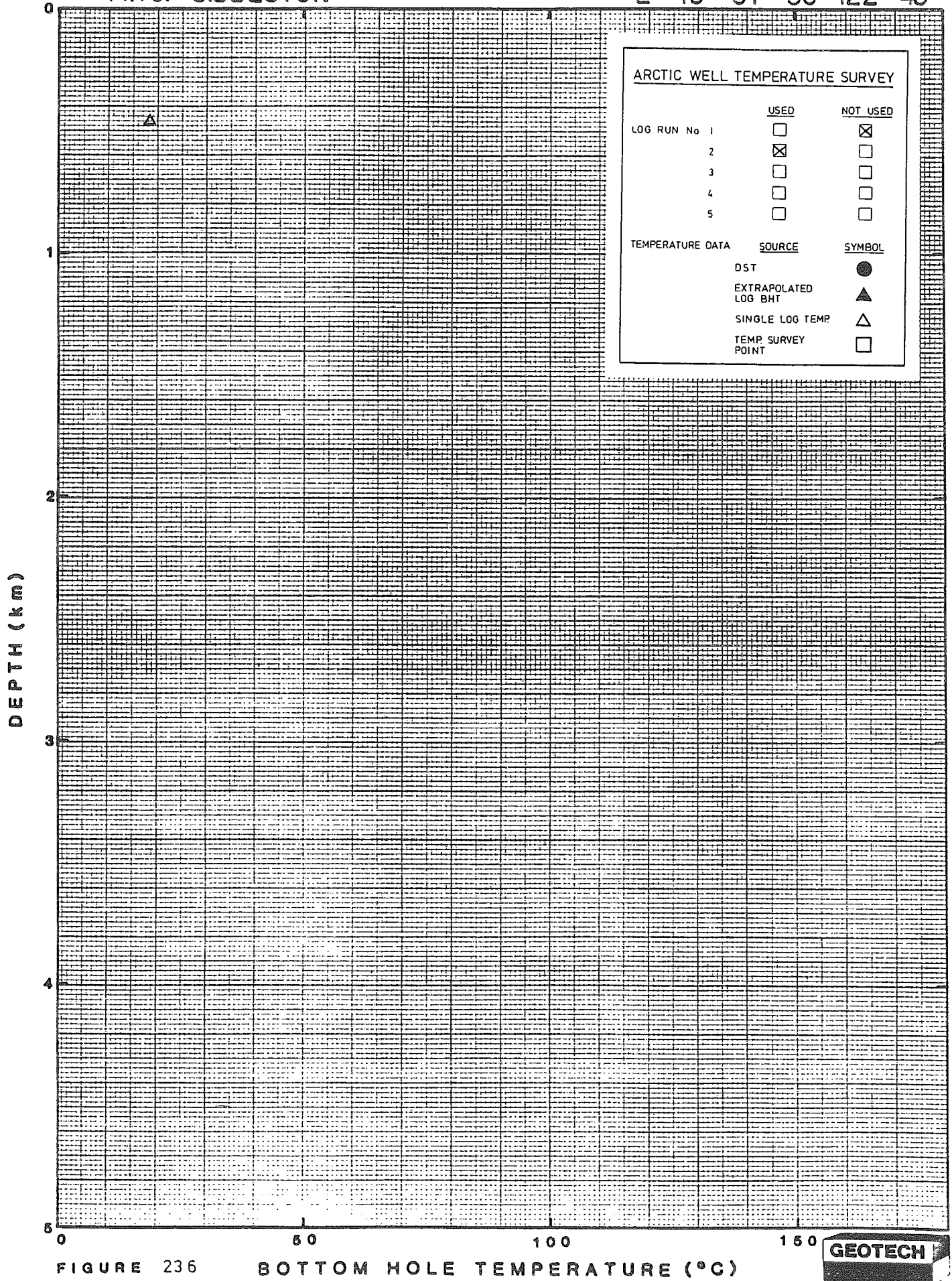
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 235

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

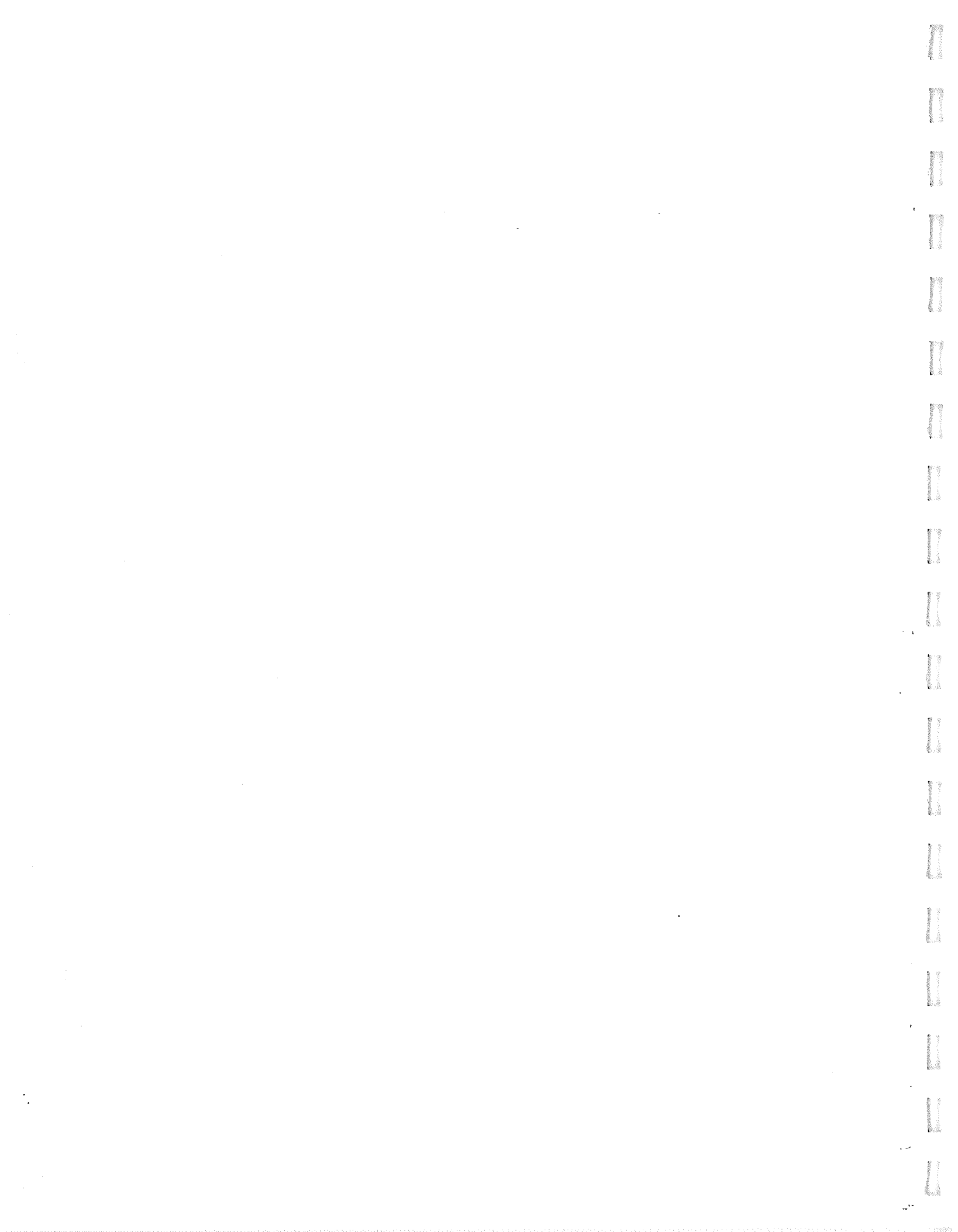
(1-7)

FIGURE 236

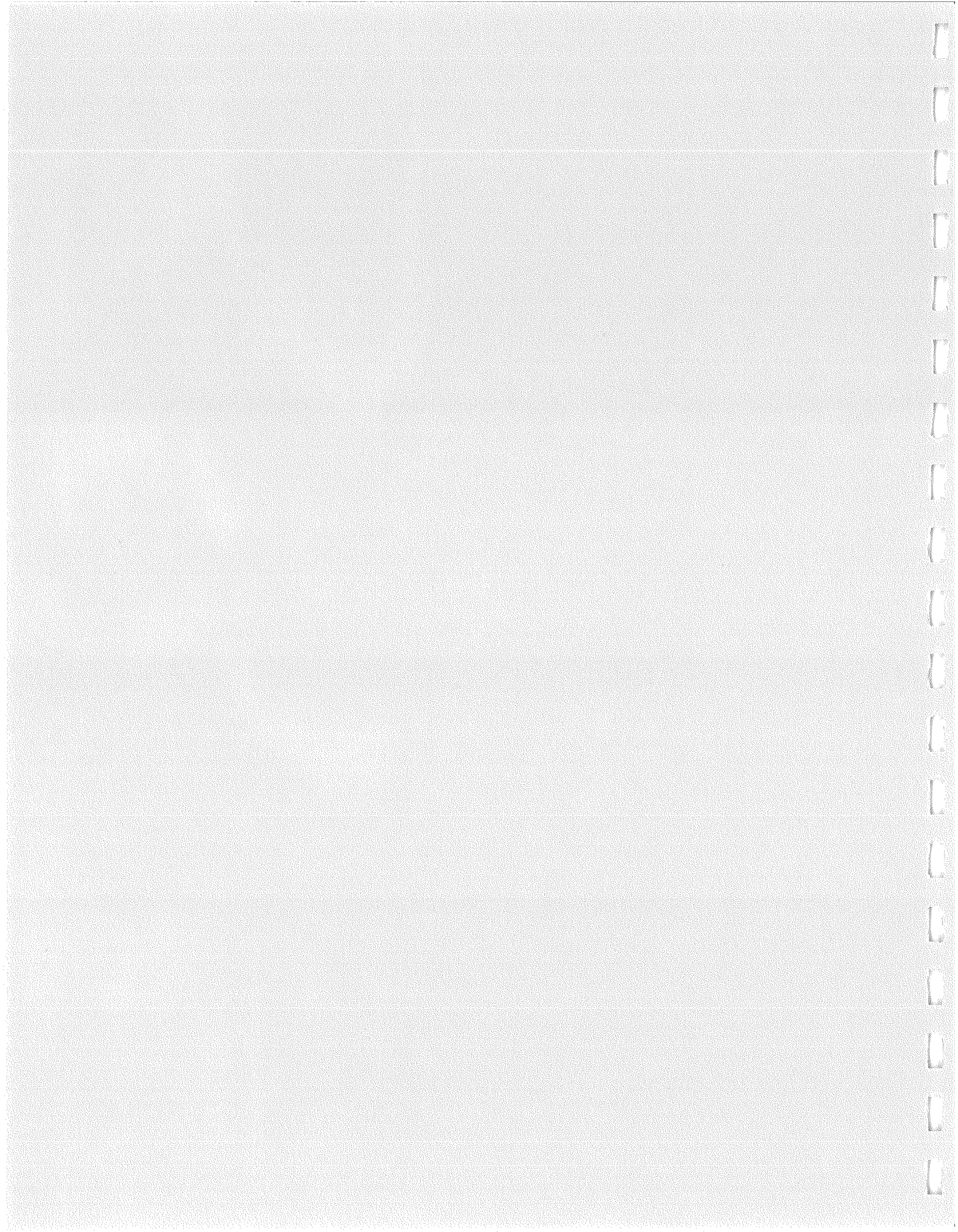
BOTTOM HOLE TEMPERATURE (°C)







62-00





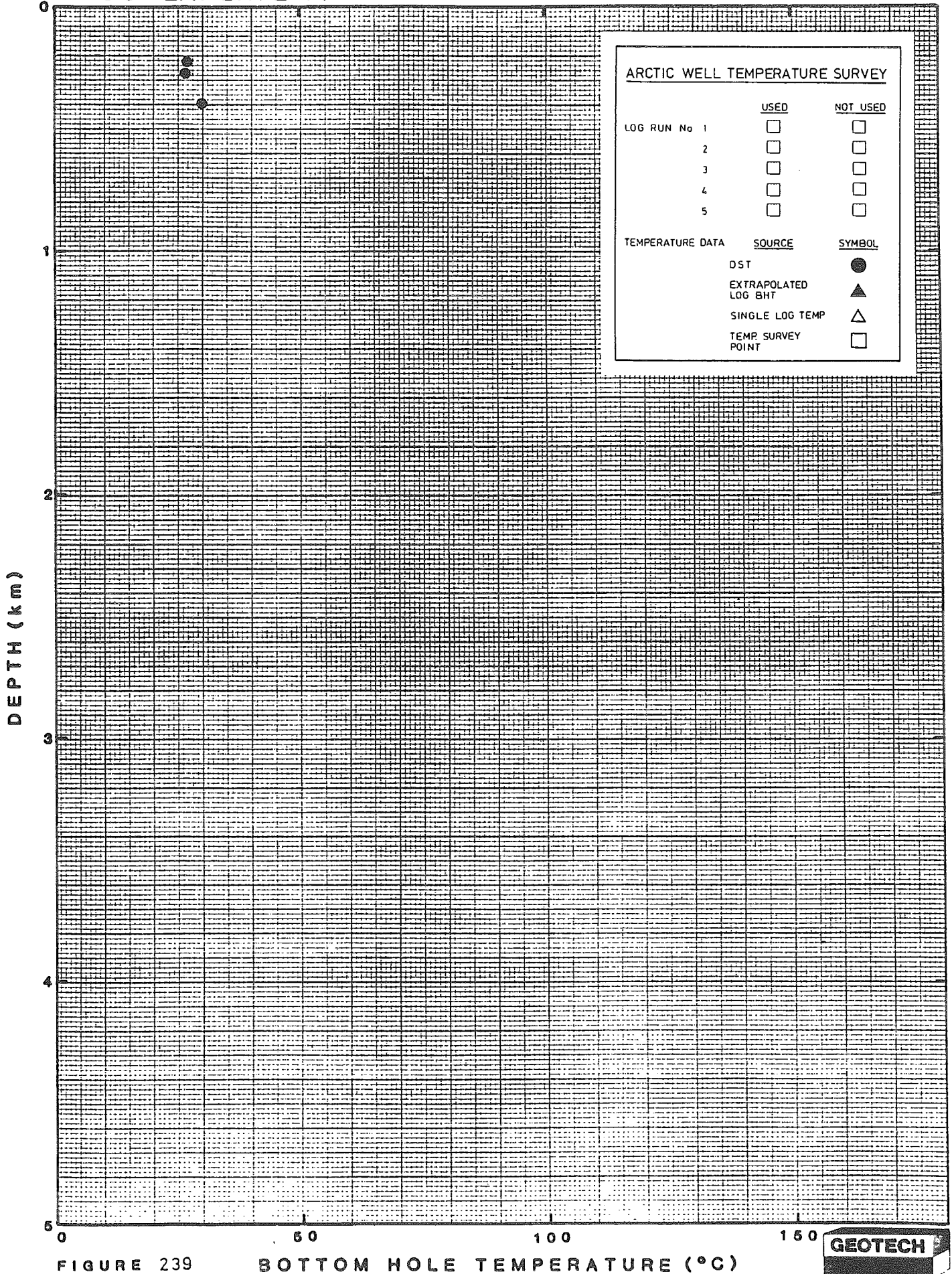


FIGURE 239

BOTTOM HOLE TEMPERATURE (°C)





C. S. LAFERTE R.

A-36 62-00-117-45

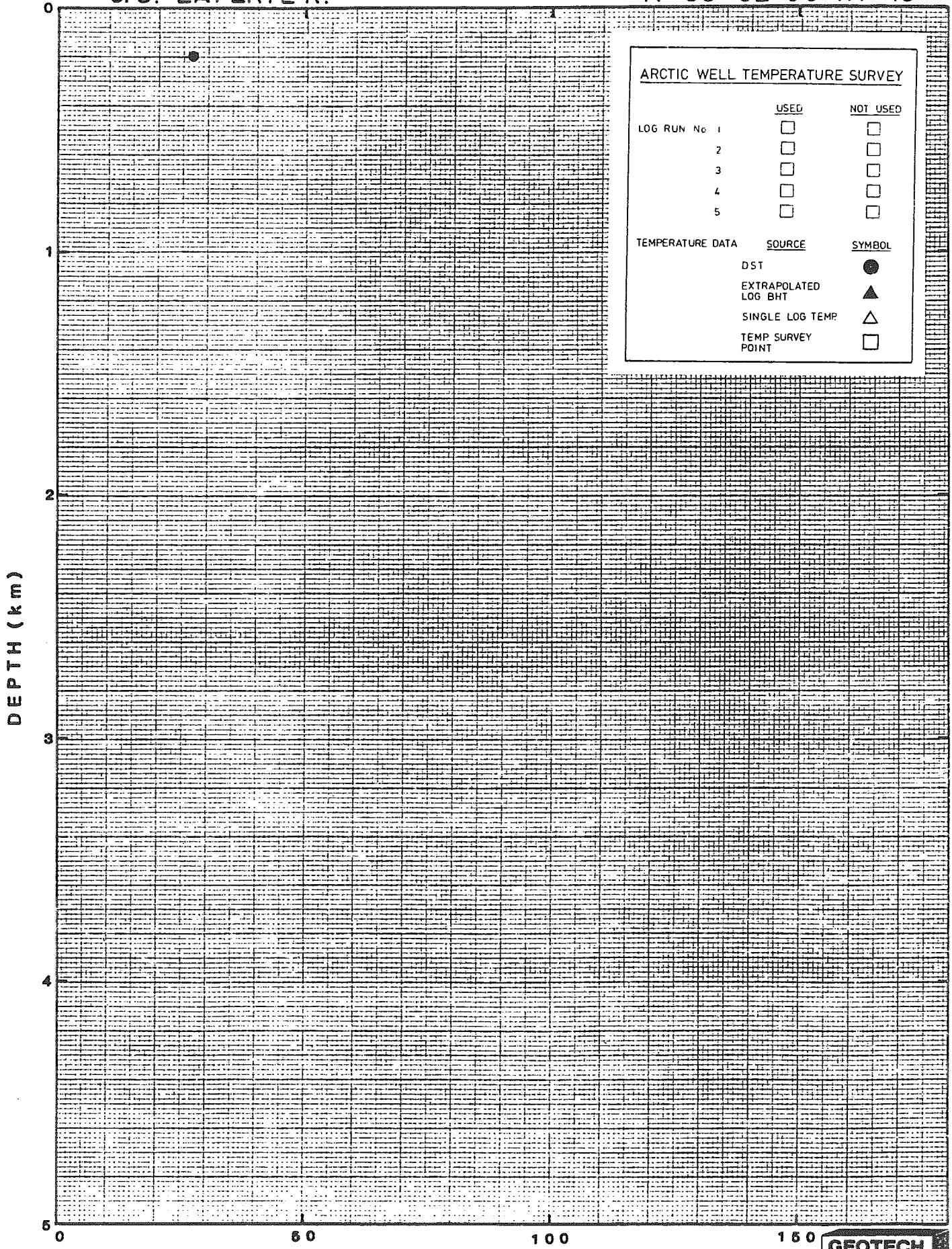


FIGURE 240

BOTTOM HOLE TEMPERATURE (°C)



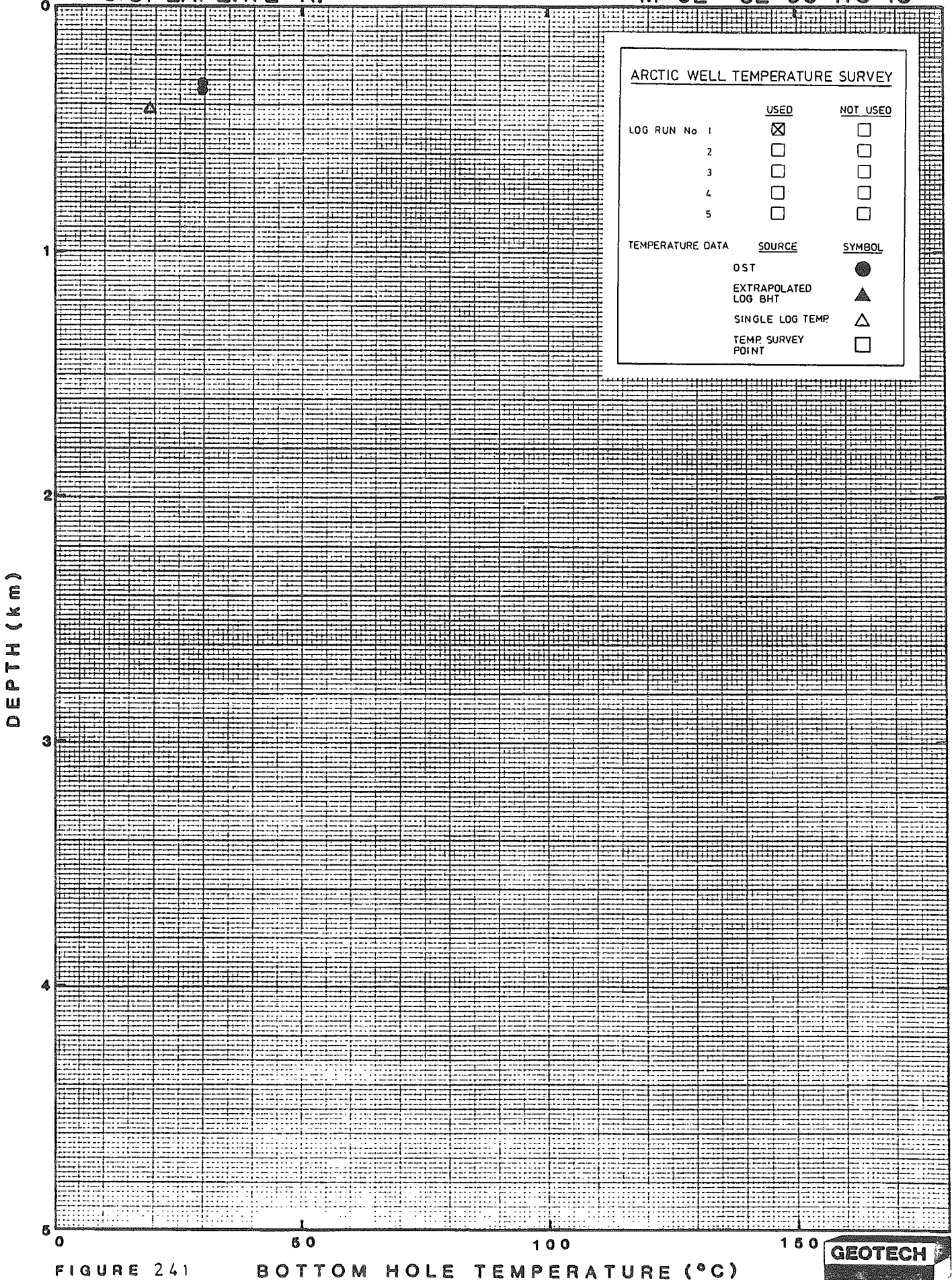


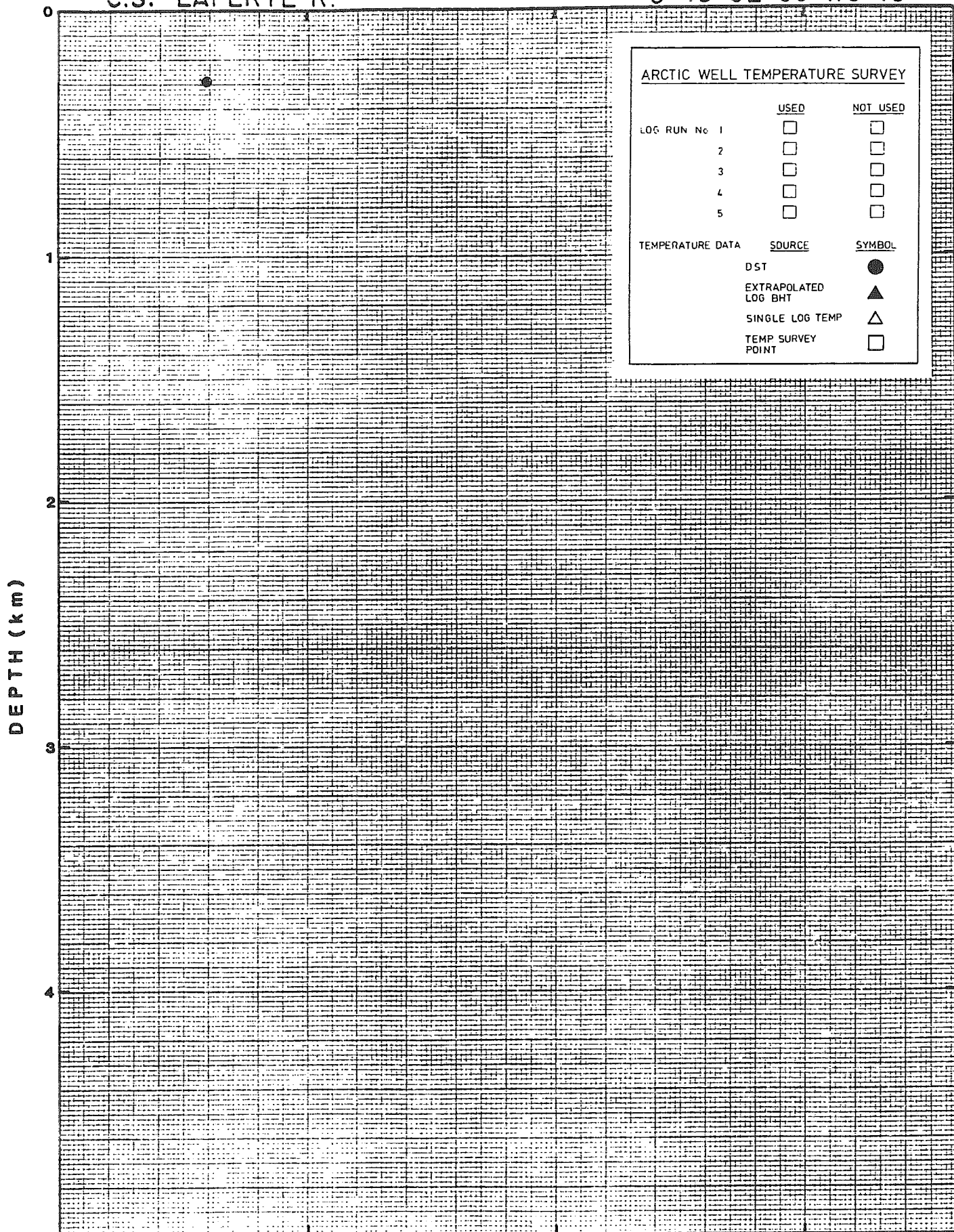
FIGURE 241

BOTTOM HOLE TEMPERATURE (°C)



C.S. LAFERTE R.

0-16 62-00-118-15



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA		SYMBOL
	SOURCE	
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150  
FIGURE 242 BOTTOM HOLE TEMPERATURE (°C)



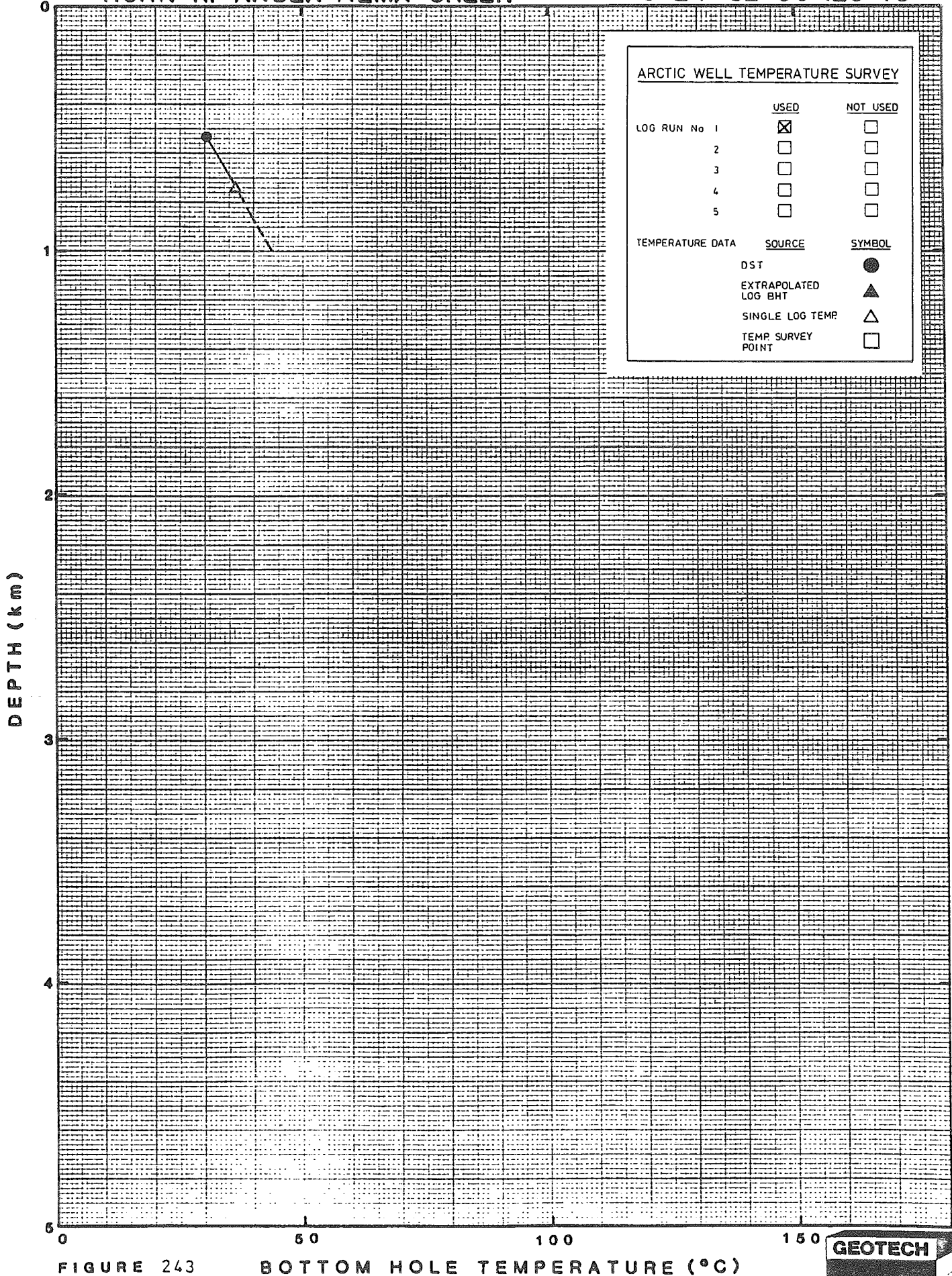
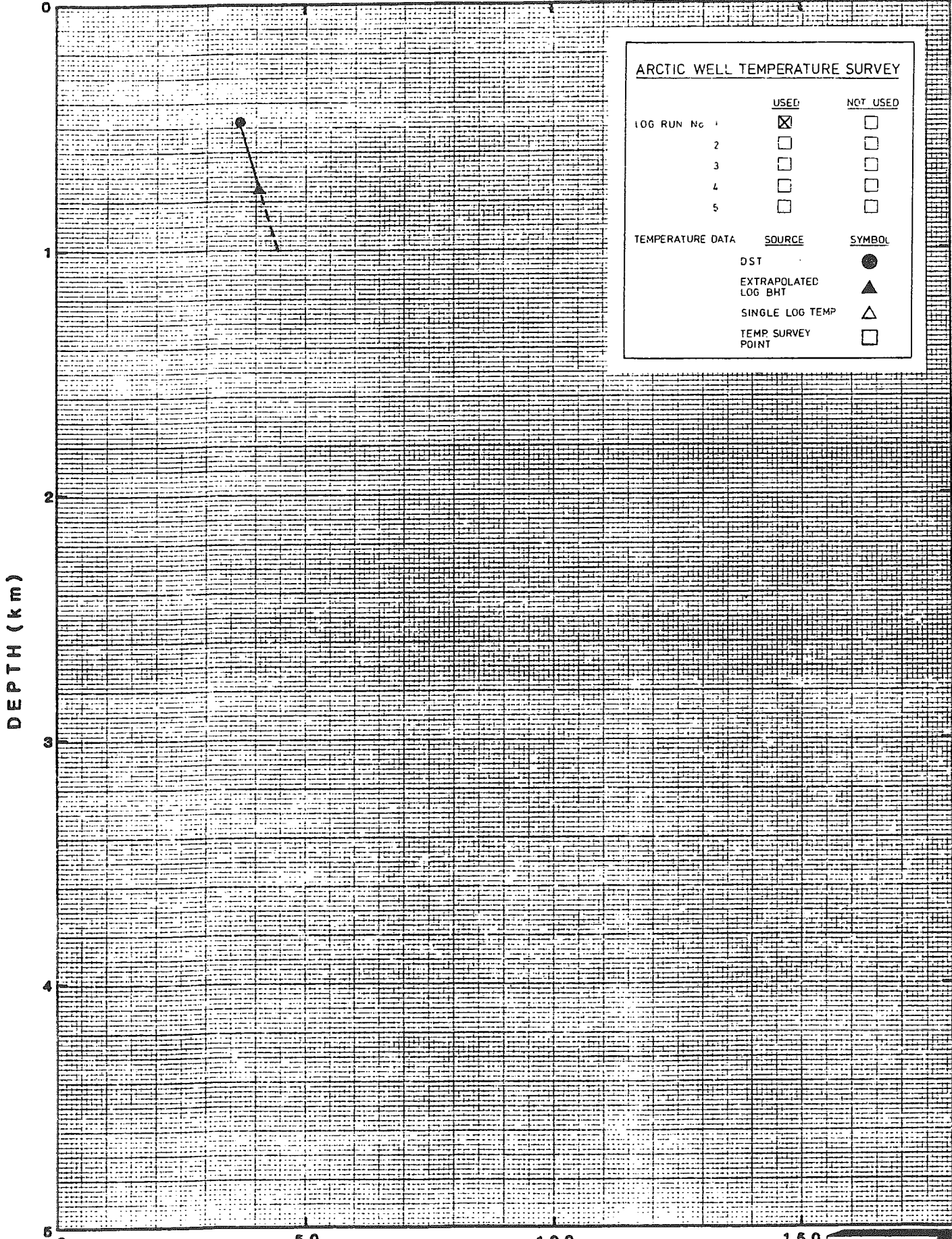


FIGURE 243

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

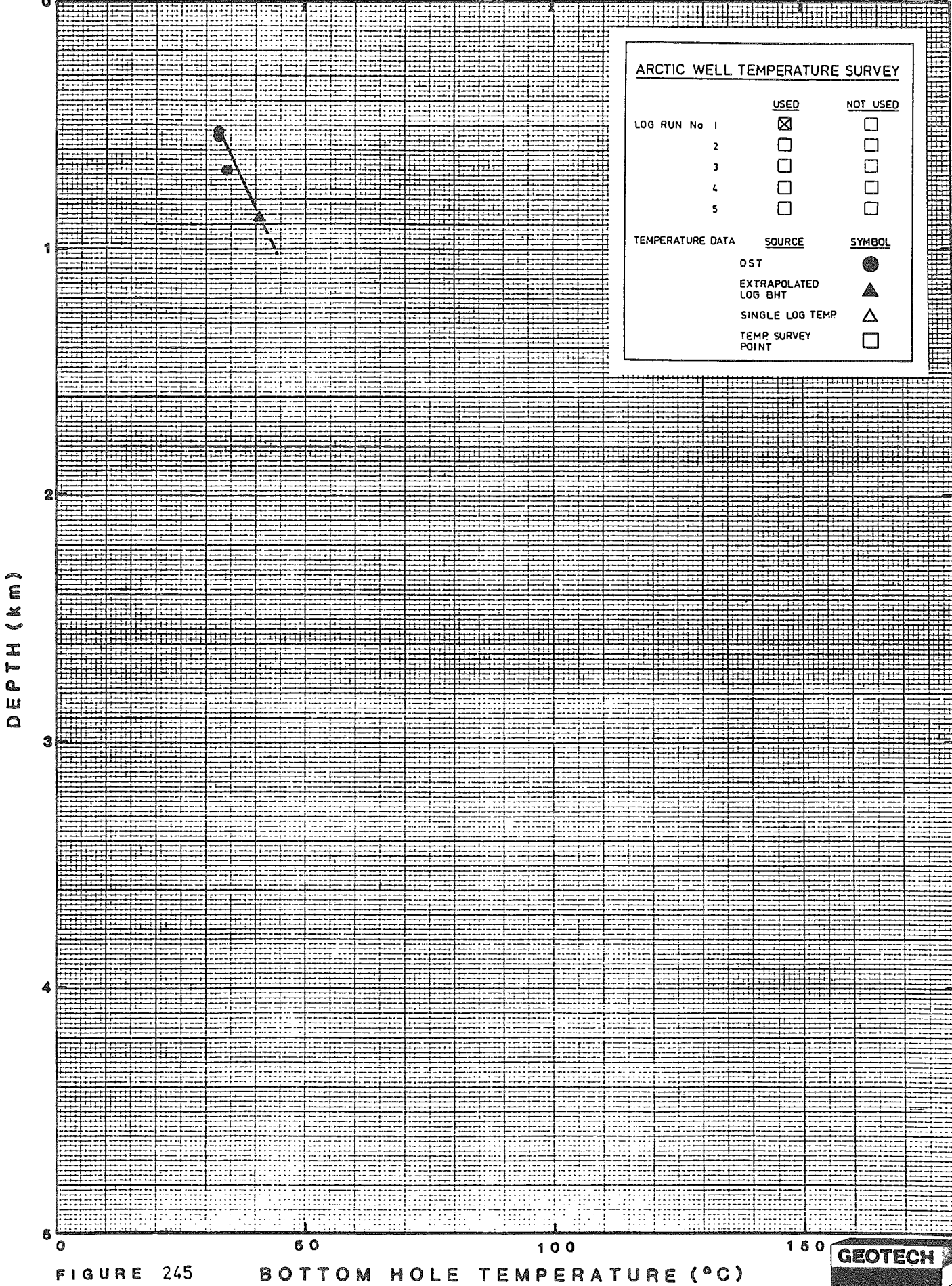
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150

FIGURE 244 BOTTOM HOLE TEMPERATURE (°C)



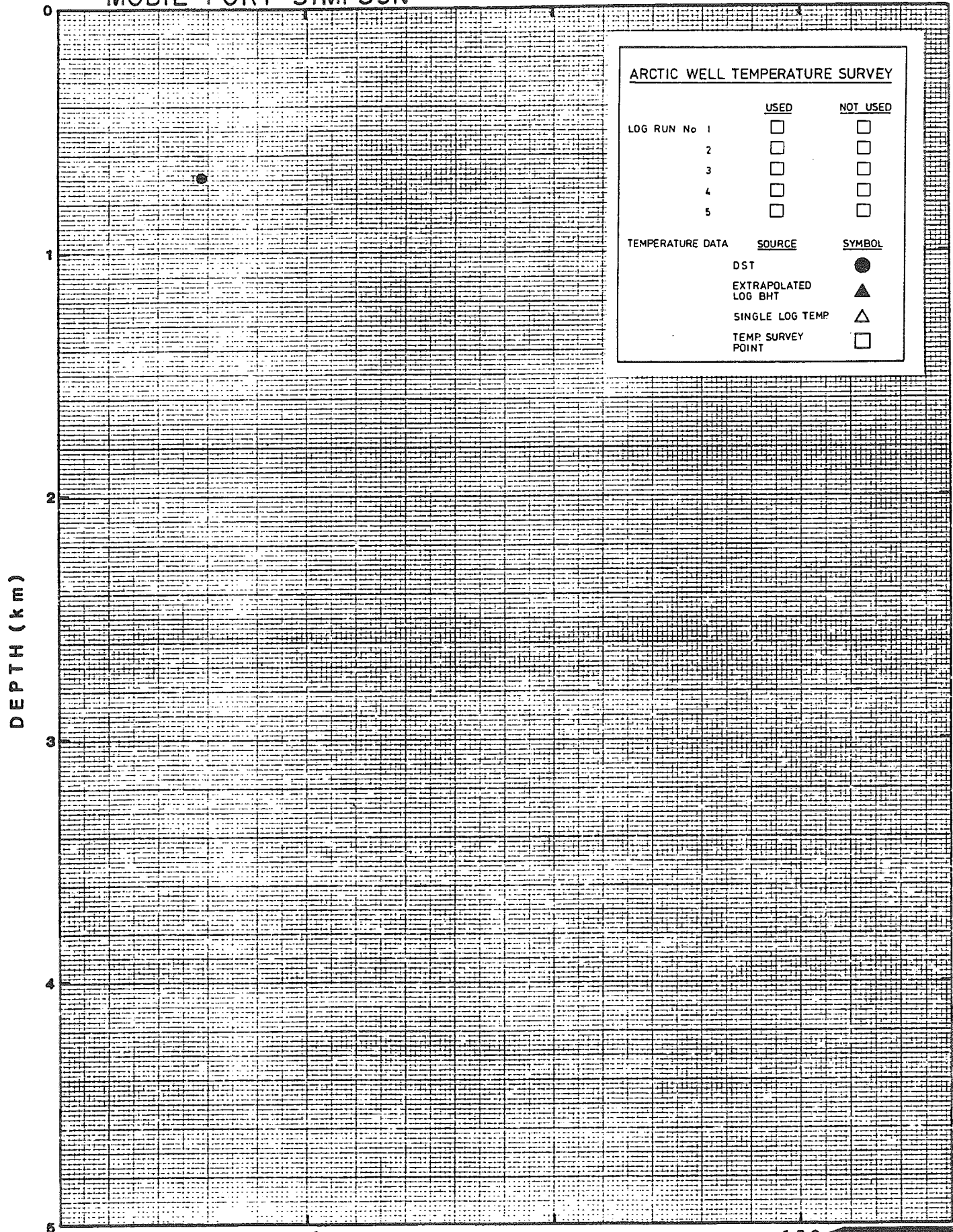


P-9 P

FIGURE 245

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 246

BOTTOM HOLE TEMPERATURE (°C)



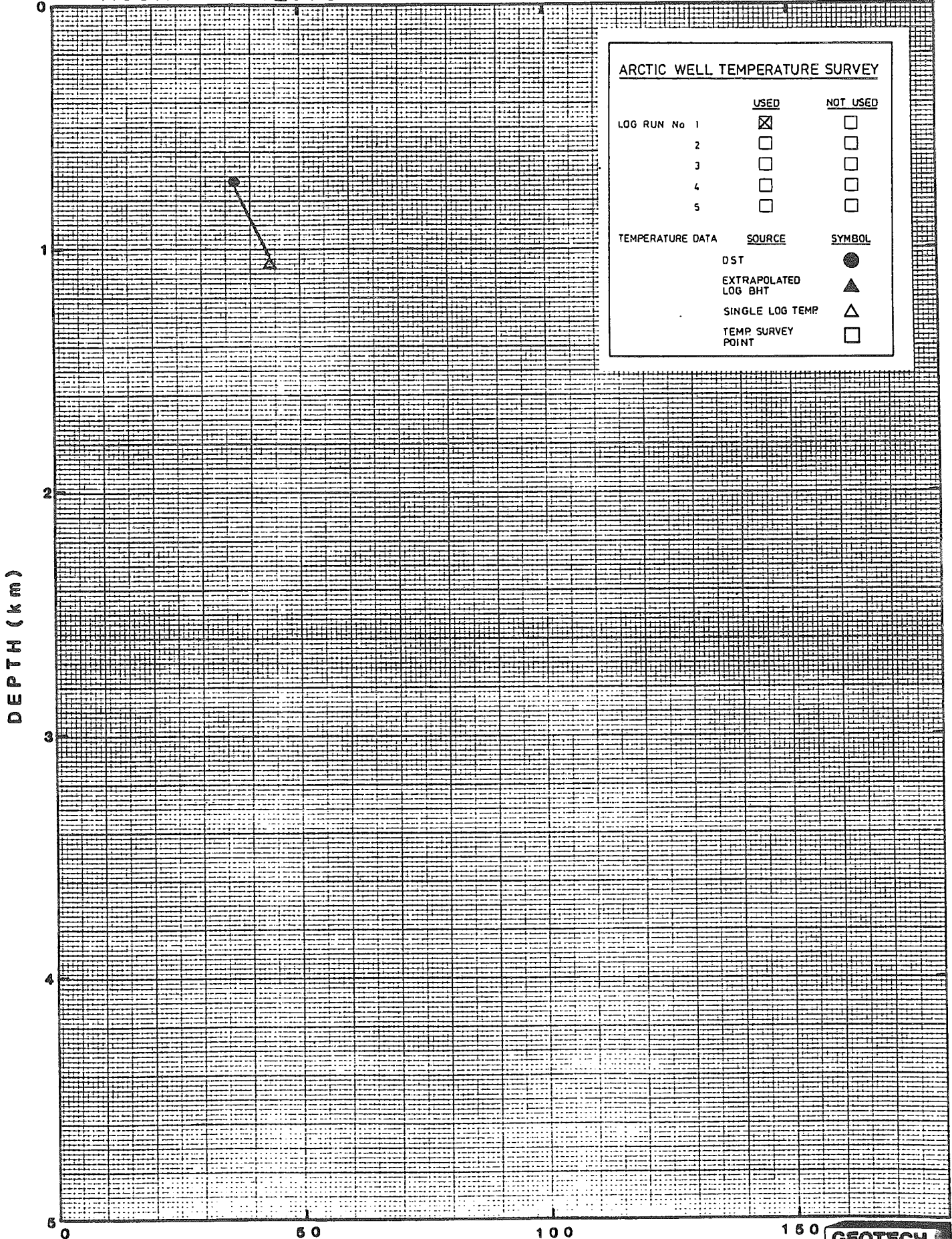
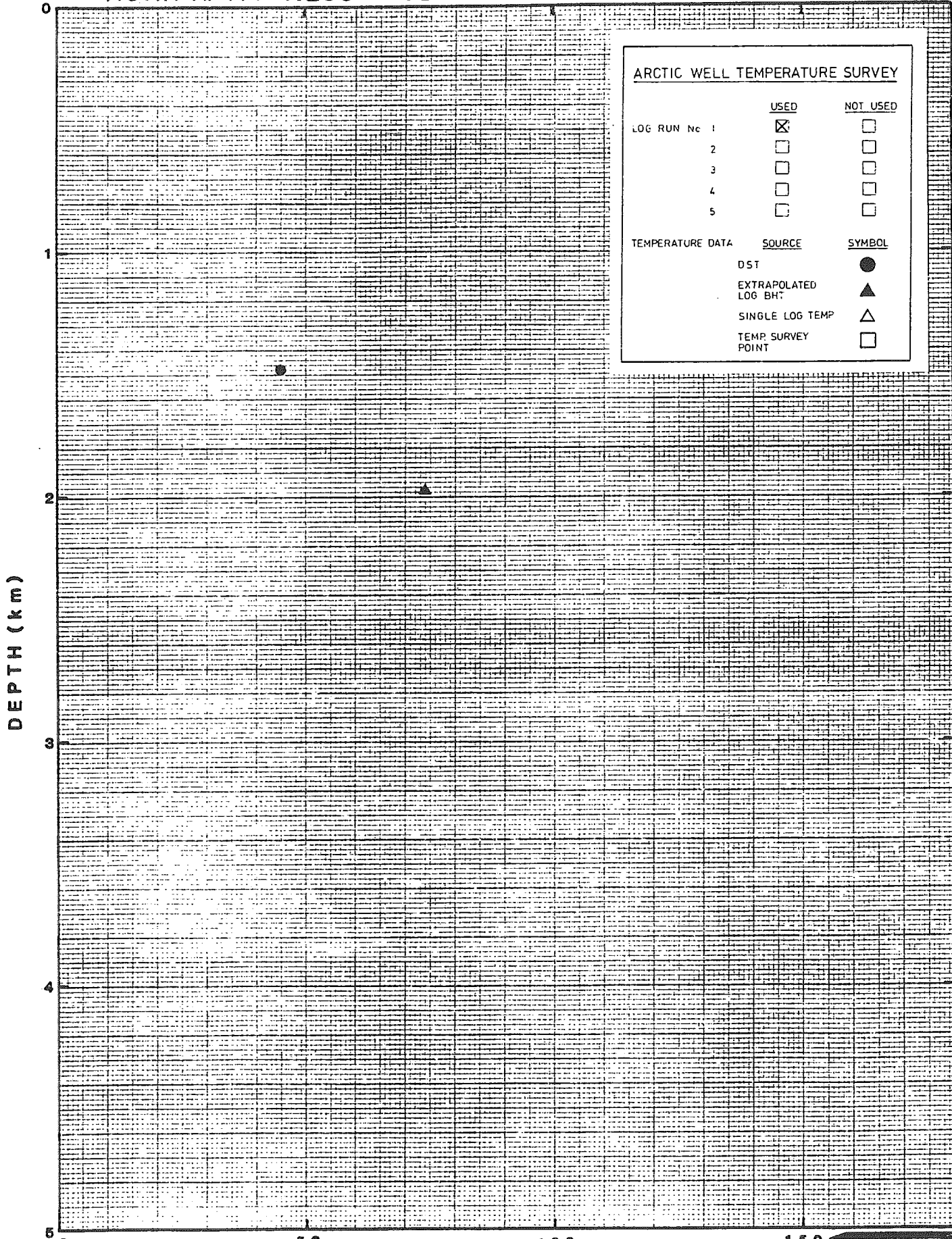


FIGURE 247

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

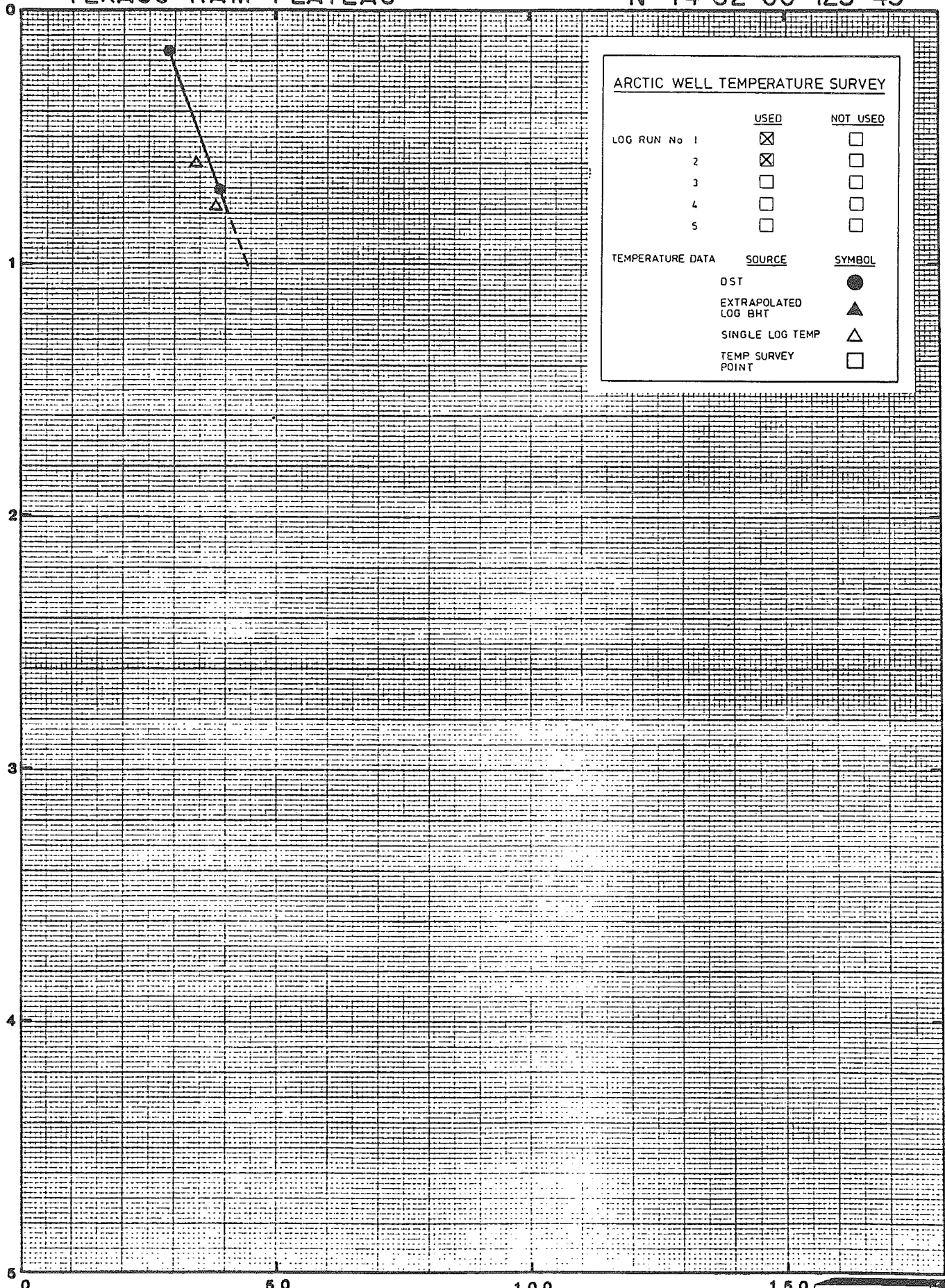
0 50 100 150

FIGURE 248 BOTTOM HOLE TEMPERATURE (°C)



6-7 f

DEPTH (km)



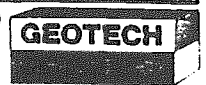
ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

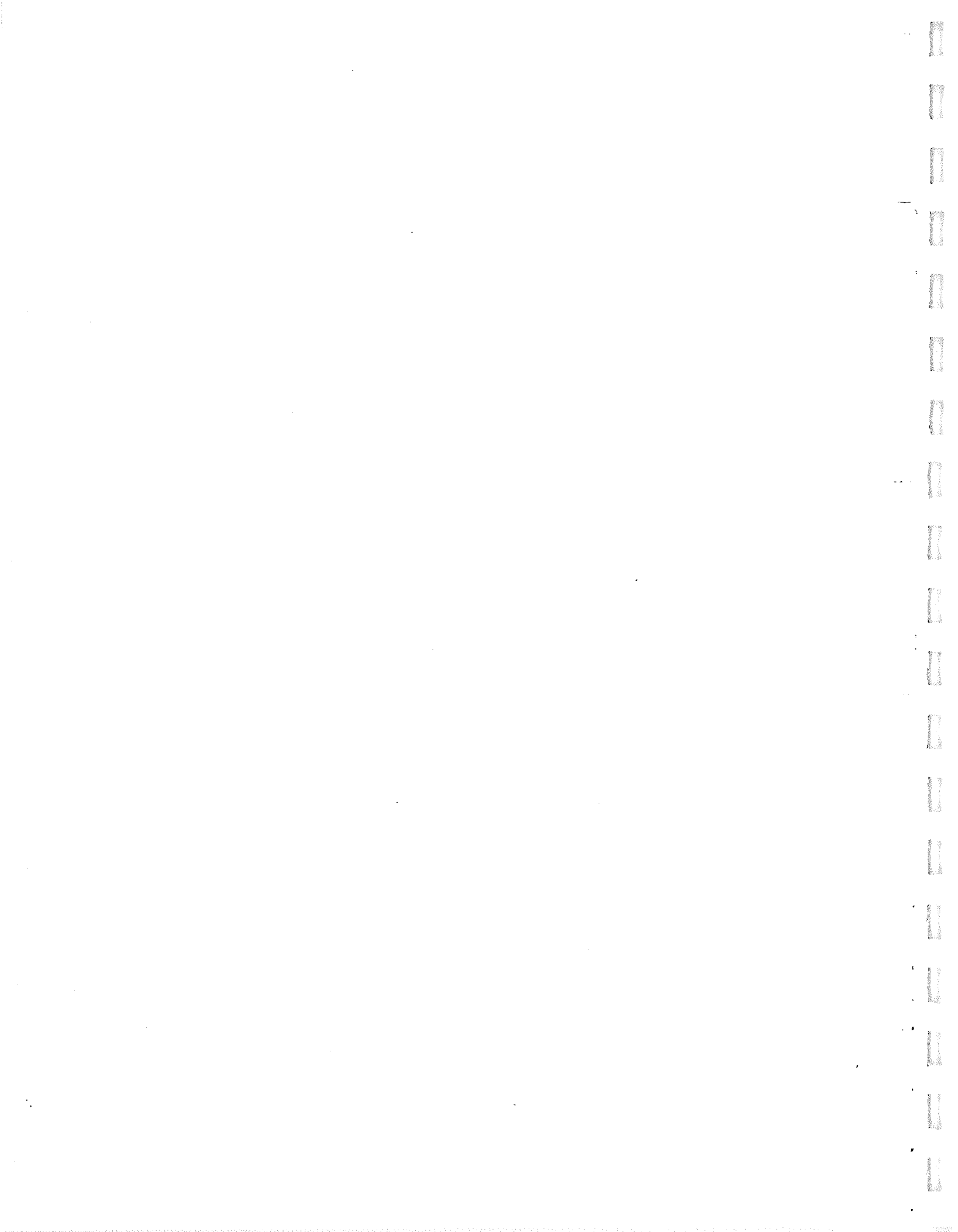
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 249

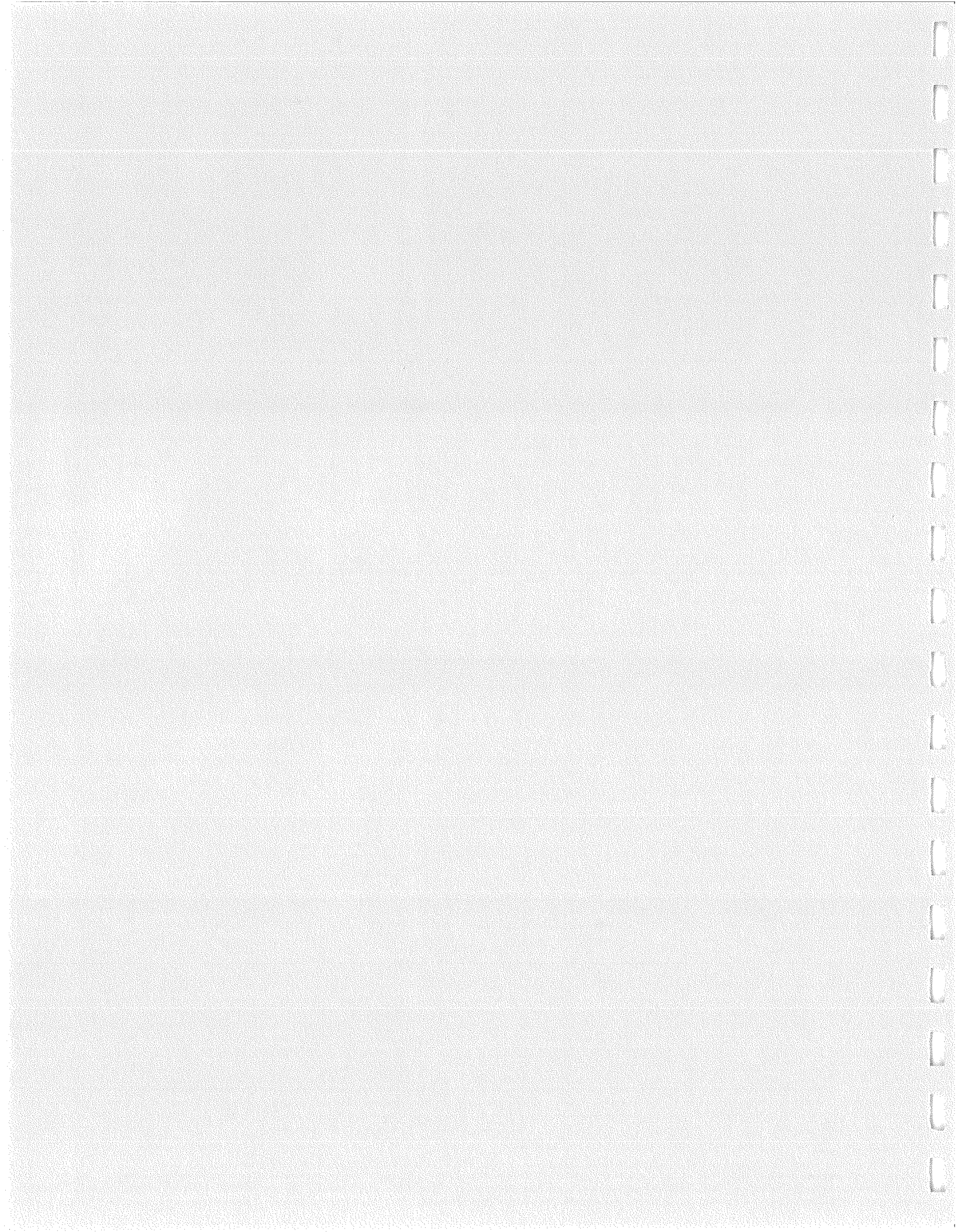
BOTTOM HOLE TEMPERATURE (°C)





62-10





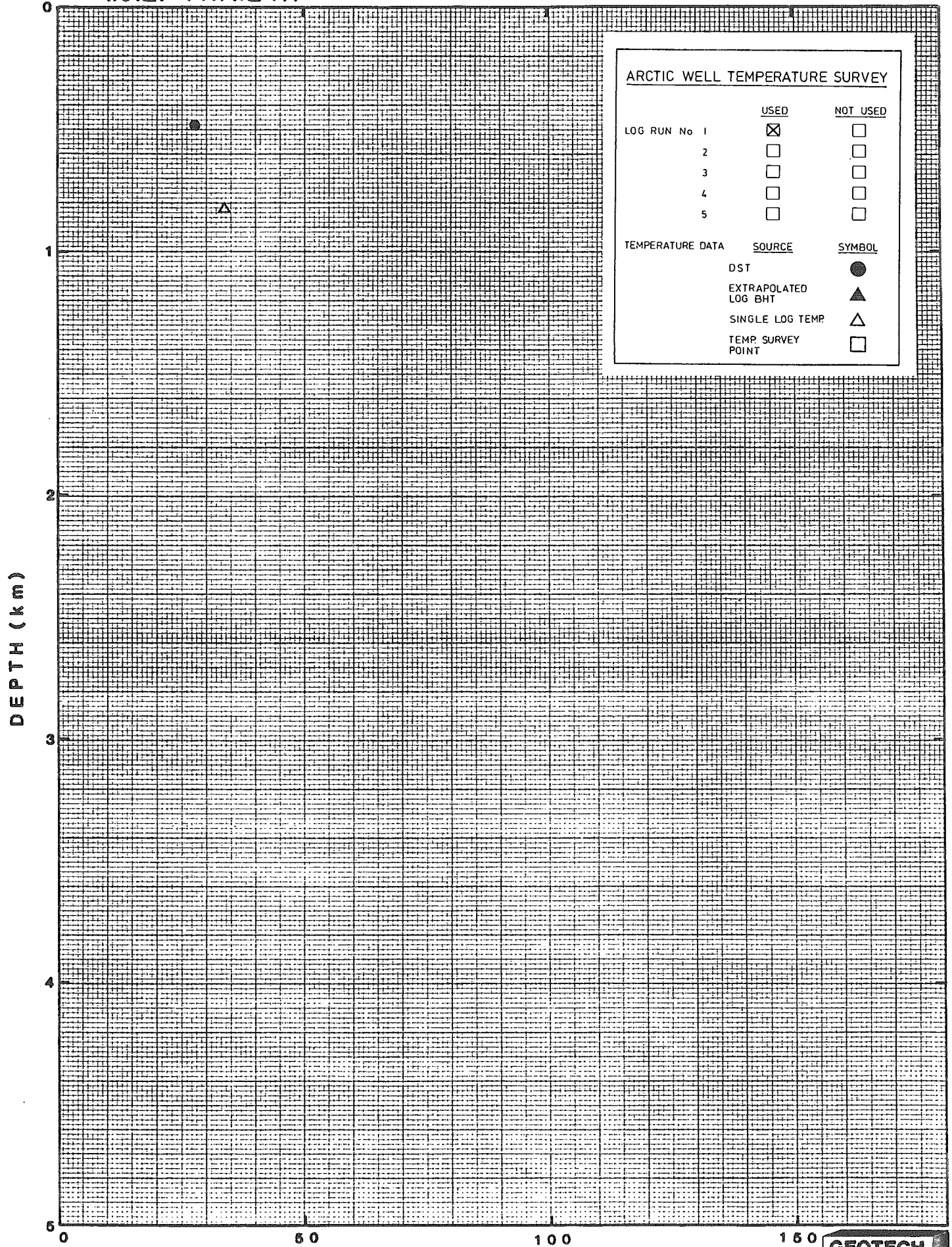


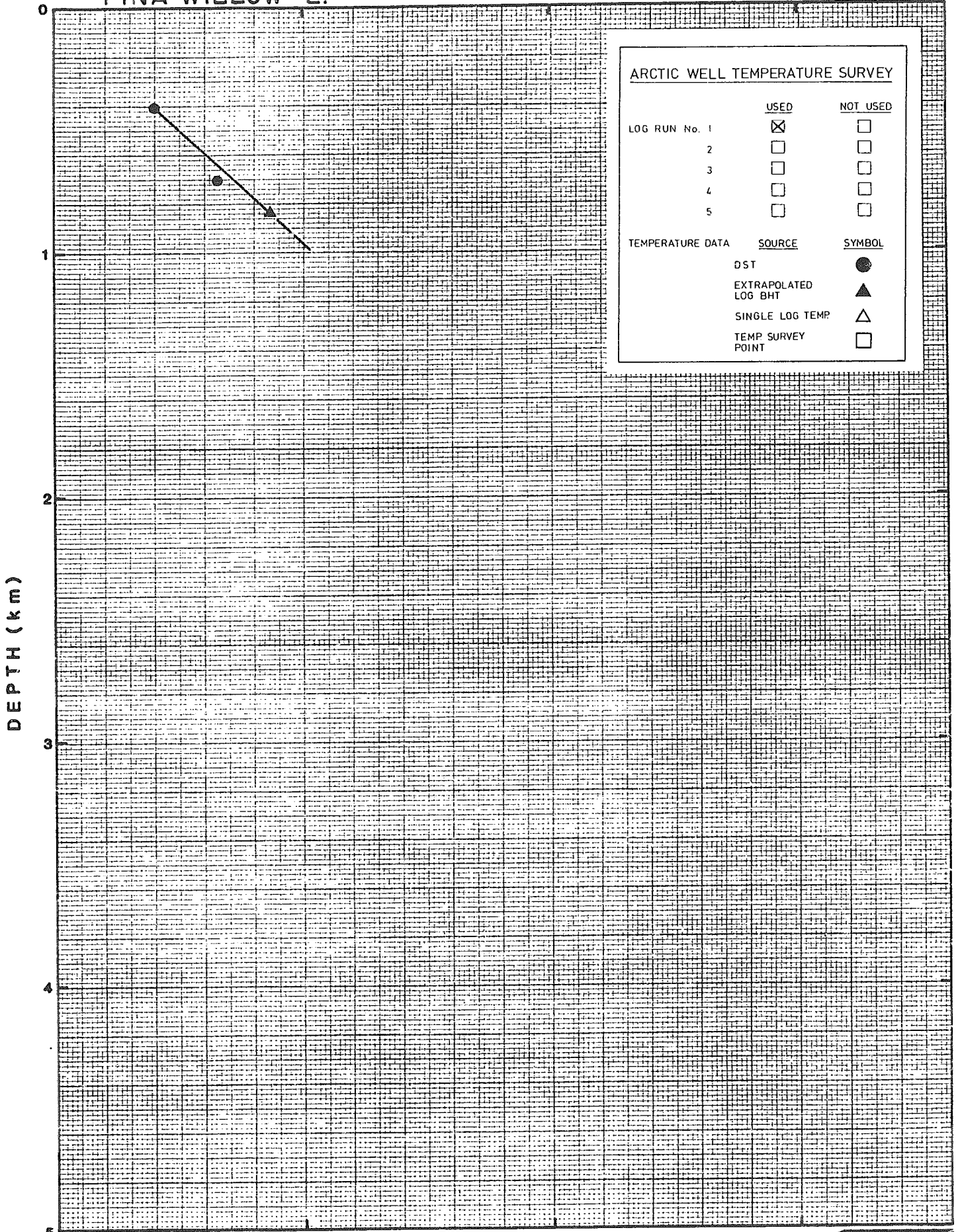
FIGURE 250

BOTTOM HOLE TEMPERATURE (°C)



FINA WILLOW L.

L-59 62-10-121-45



ARCTIC WELL TEMPERATURE SURVEY

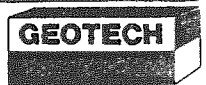
LOG RUN No.	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

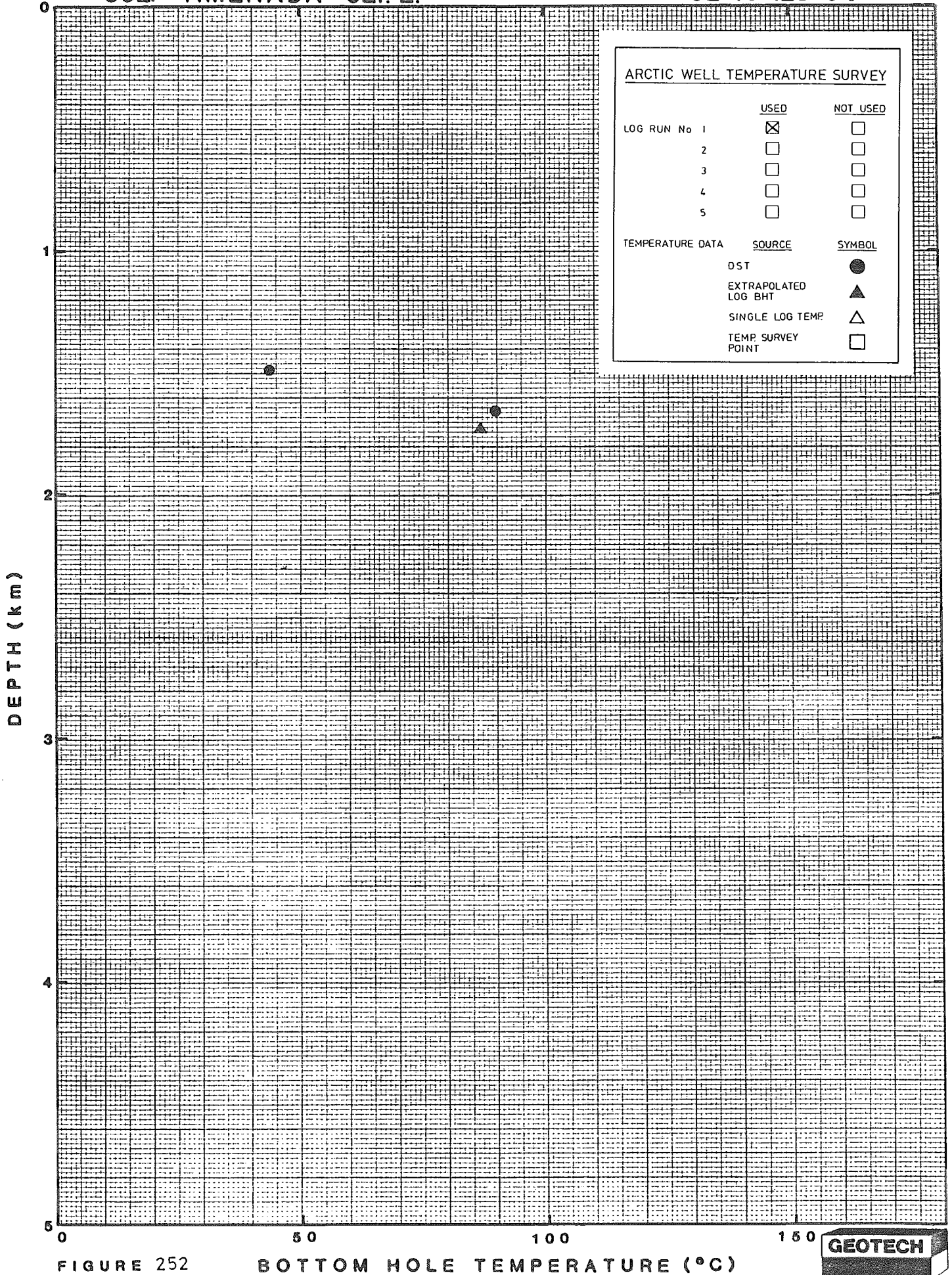
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 251

BOTTOM HOLE TEMPERATURE (°C)









ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP.	△
	TEMP SURVEY POINT	□

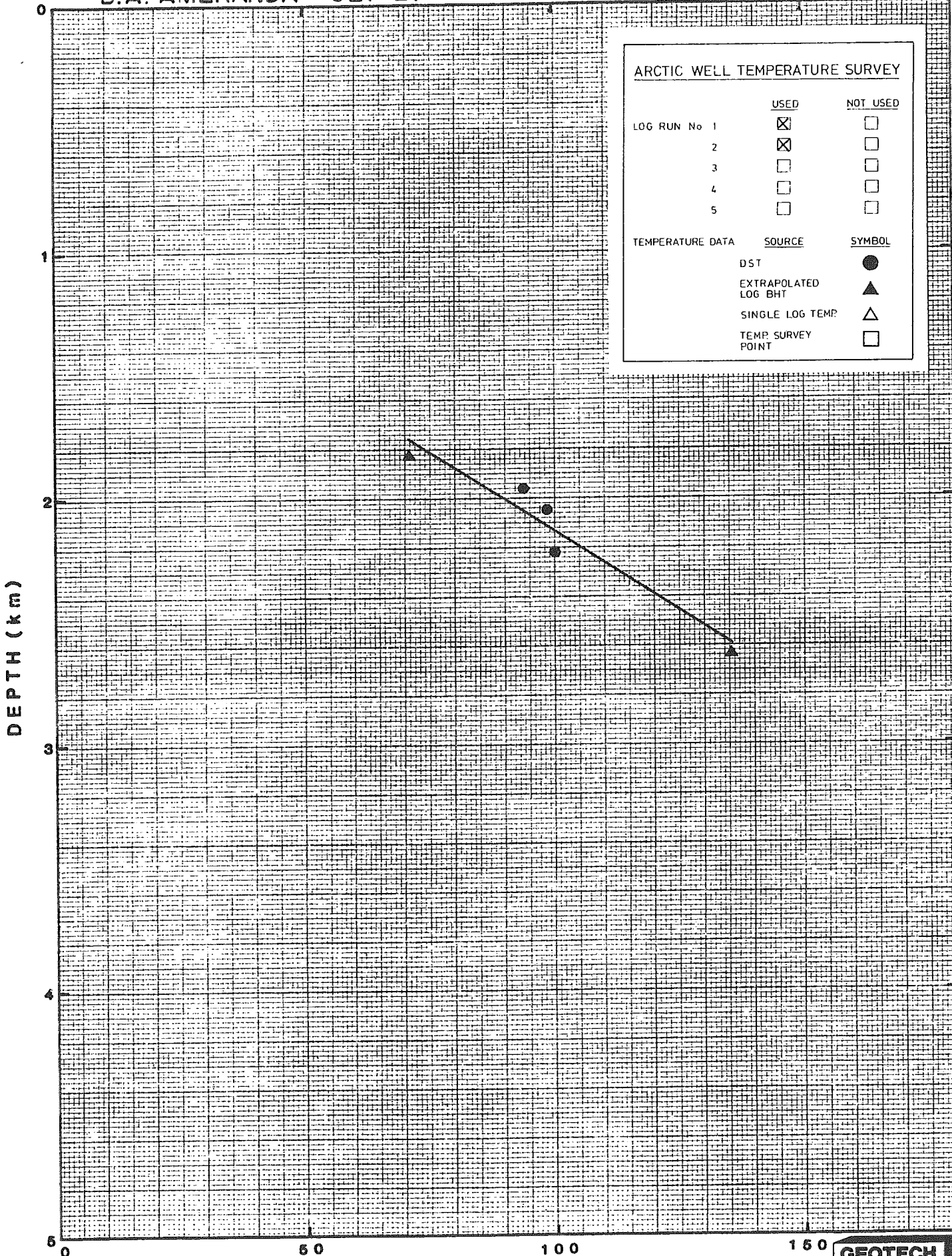
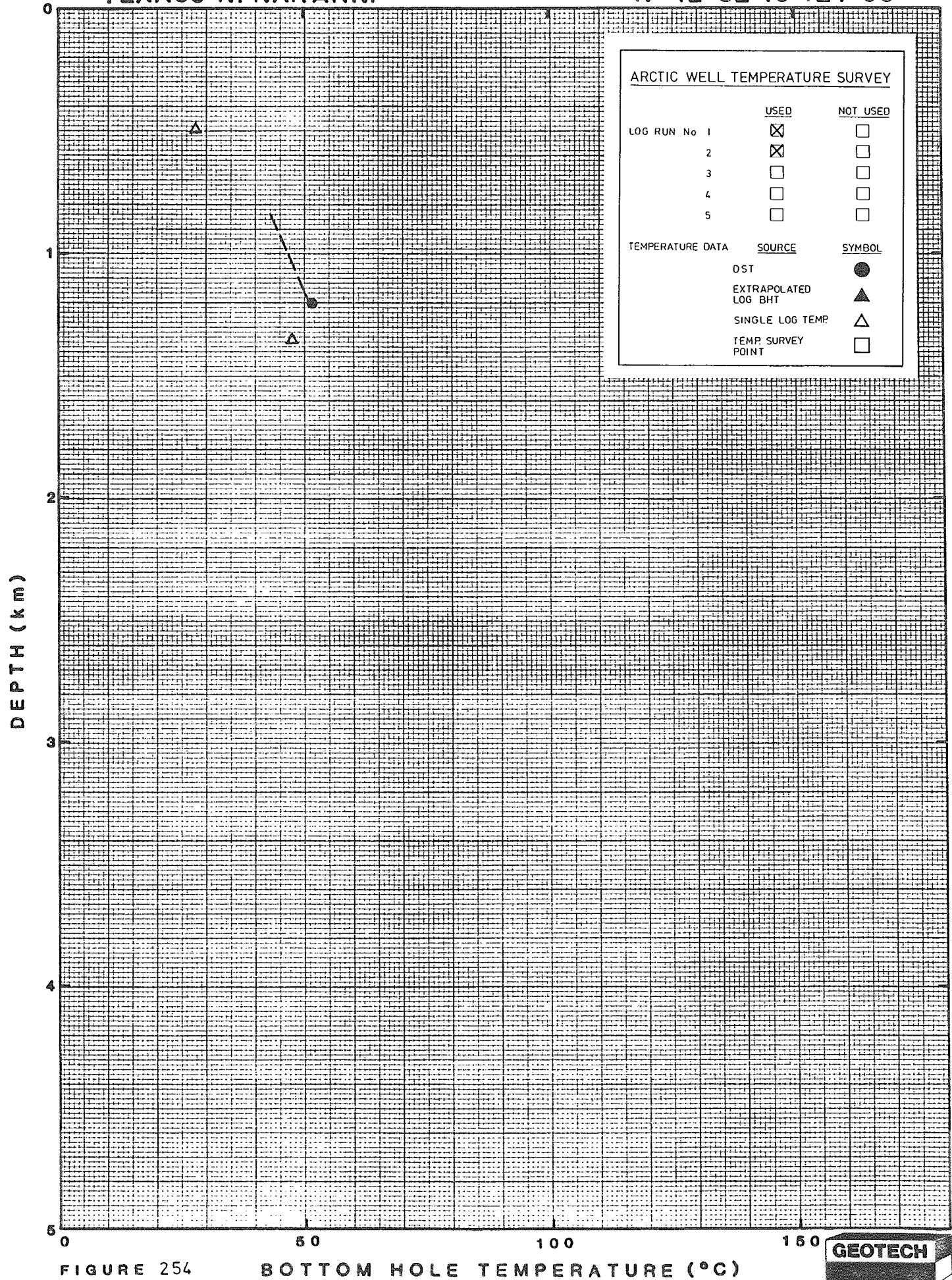


FIGURE 253

BOTTOM HOLE TEMPERATURE (°C)



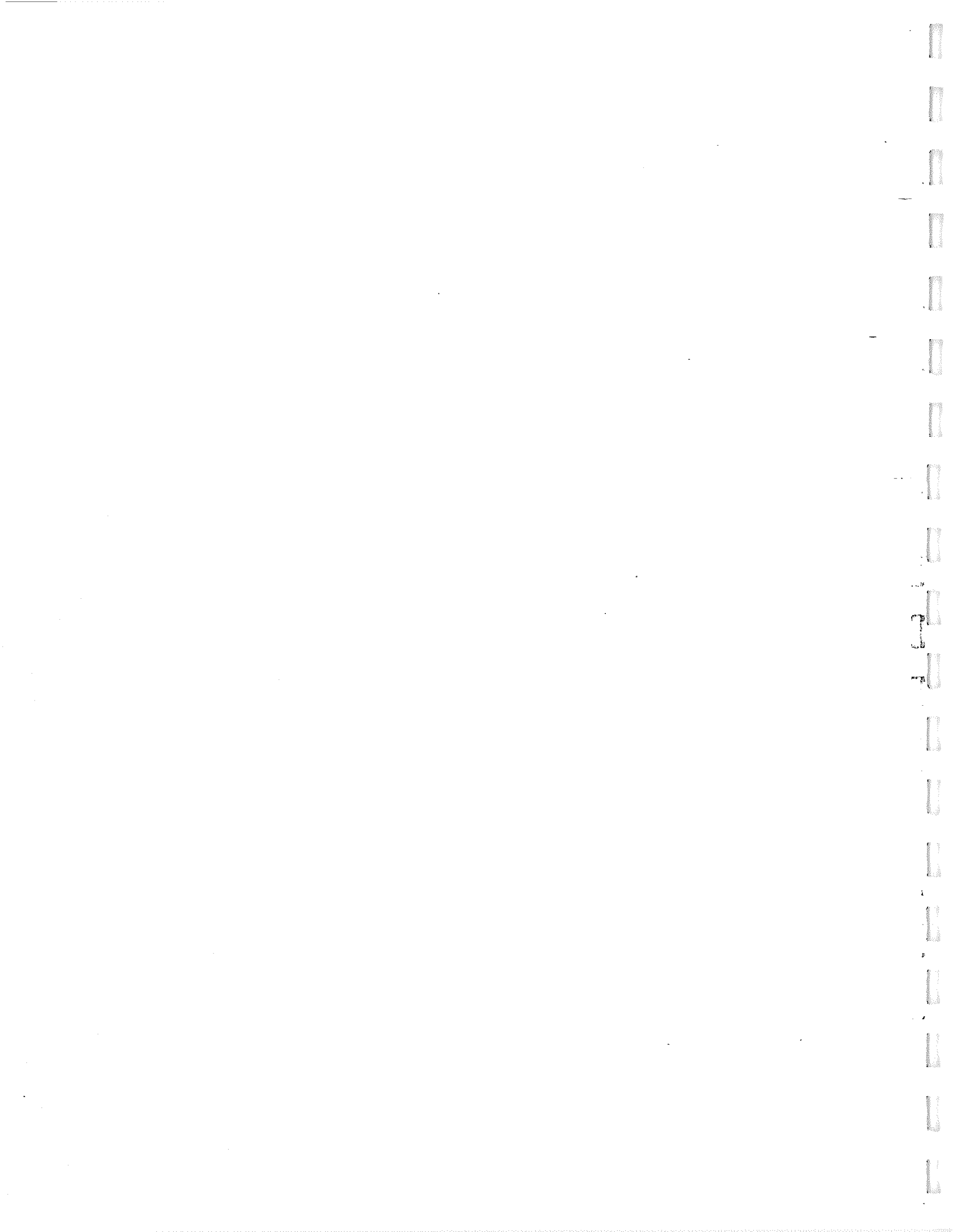


DEPTH (km)

FIGURE 254

BOTTOM HOLE TEMPERATURE (°C)

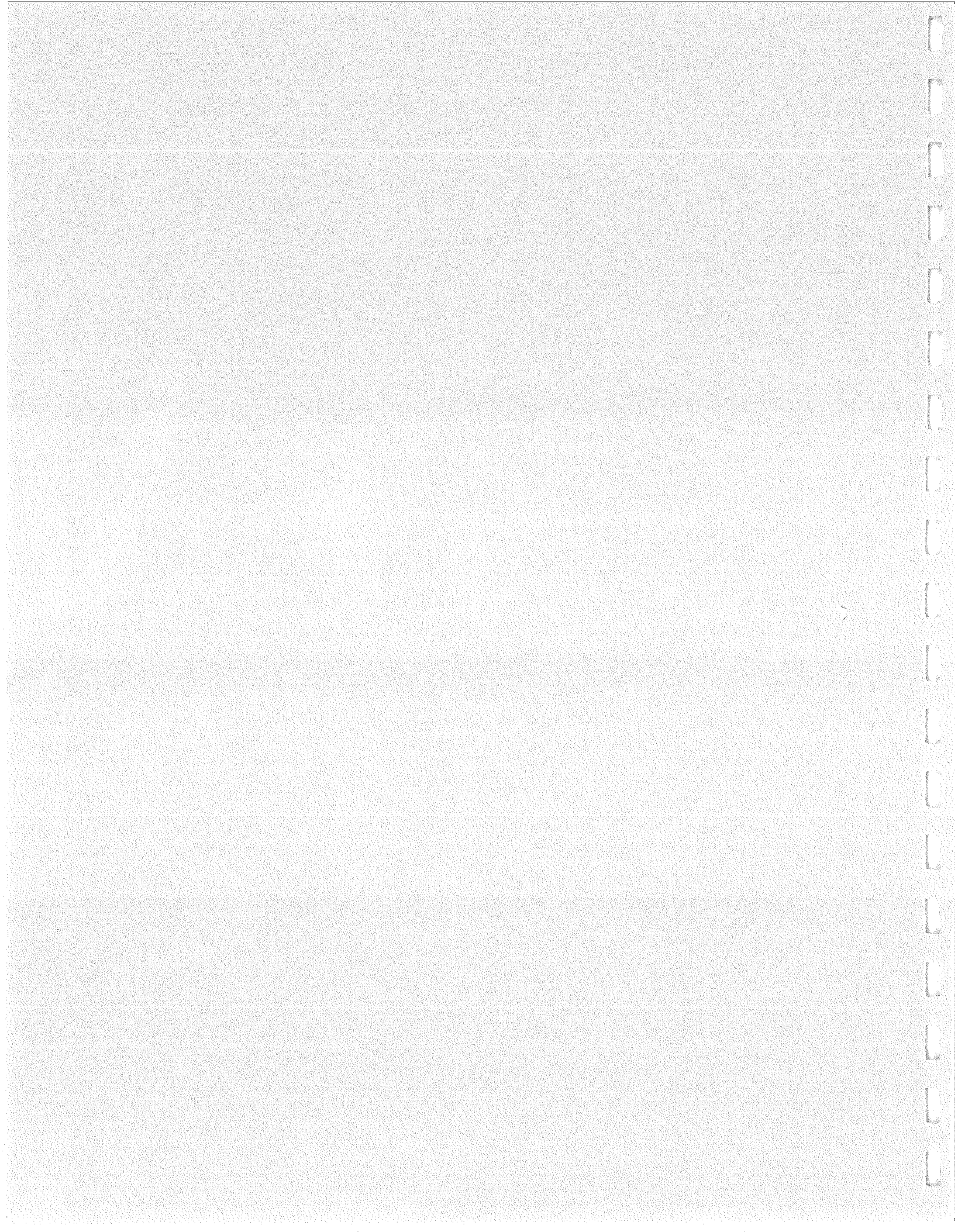






62-20





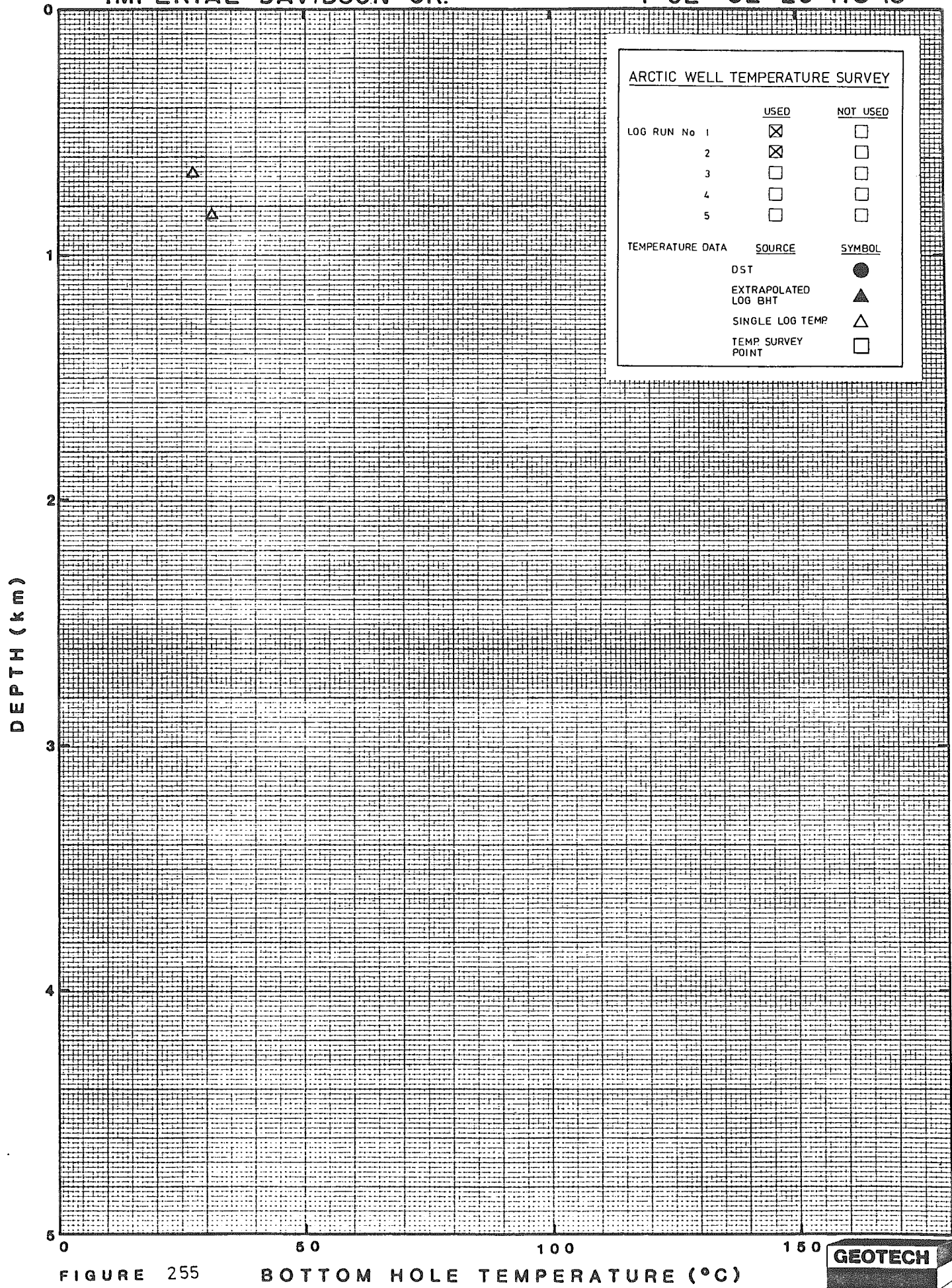
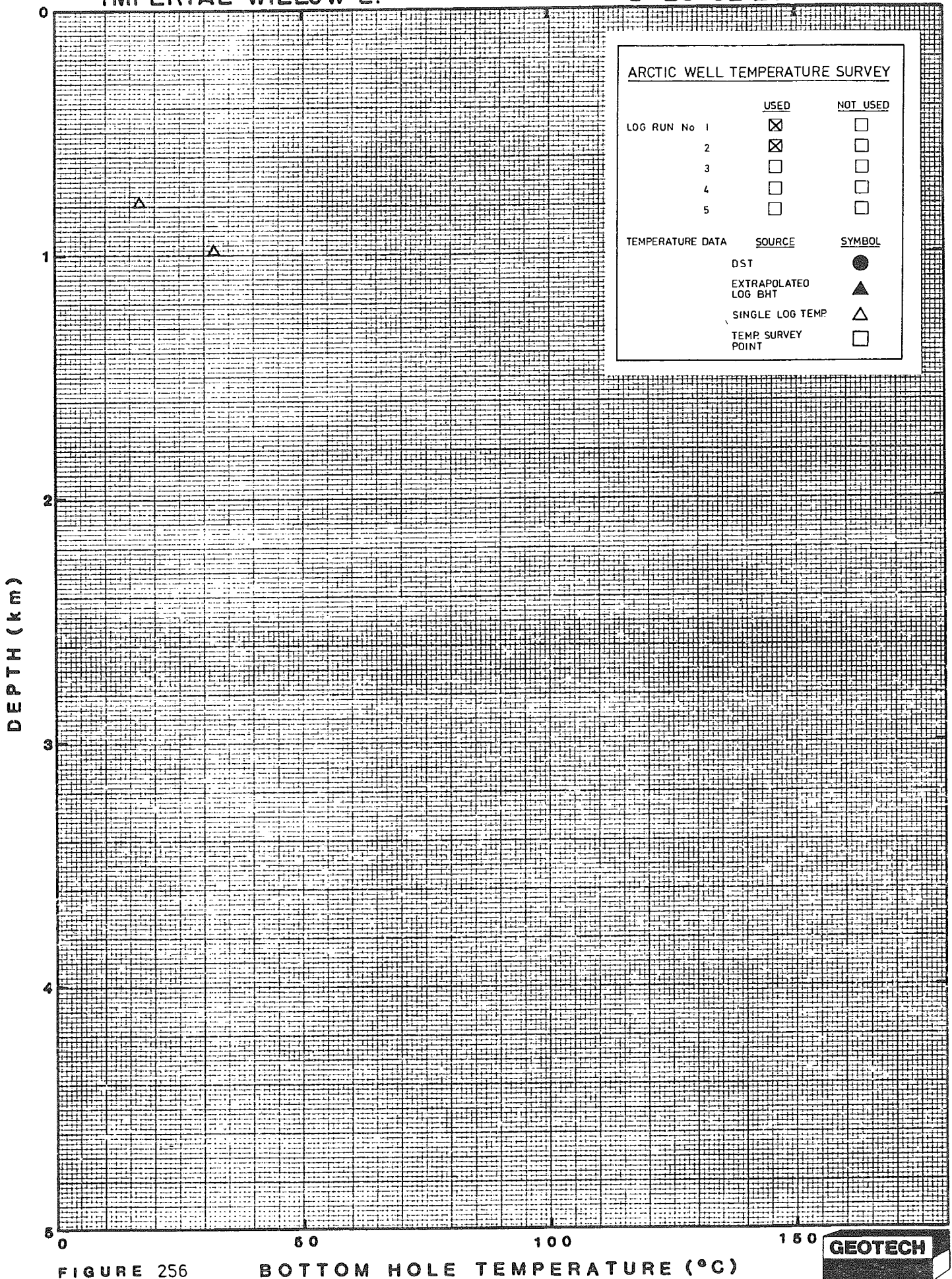


FIGURE 255

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0 50 100 150

FIGURE 256 BOTTOM HOLE TEMPERATURE (°C)





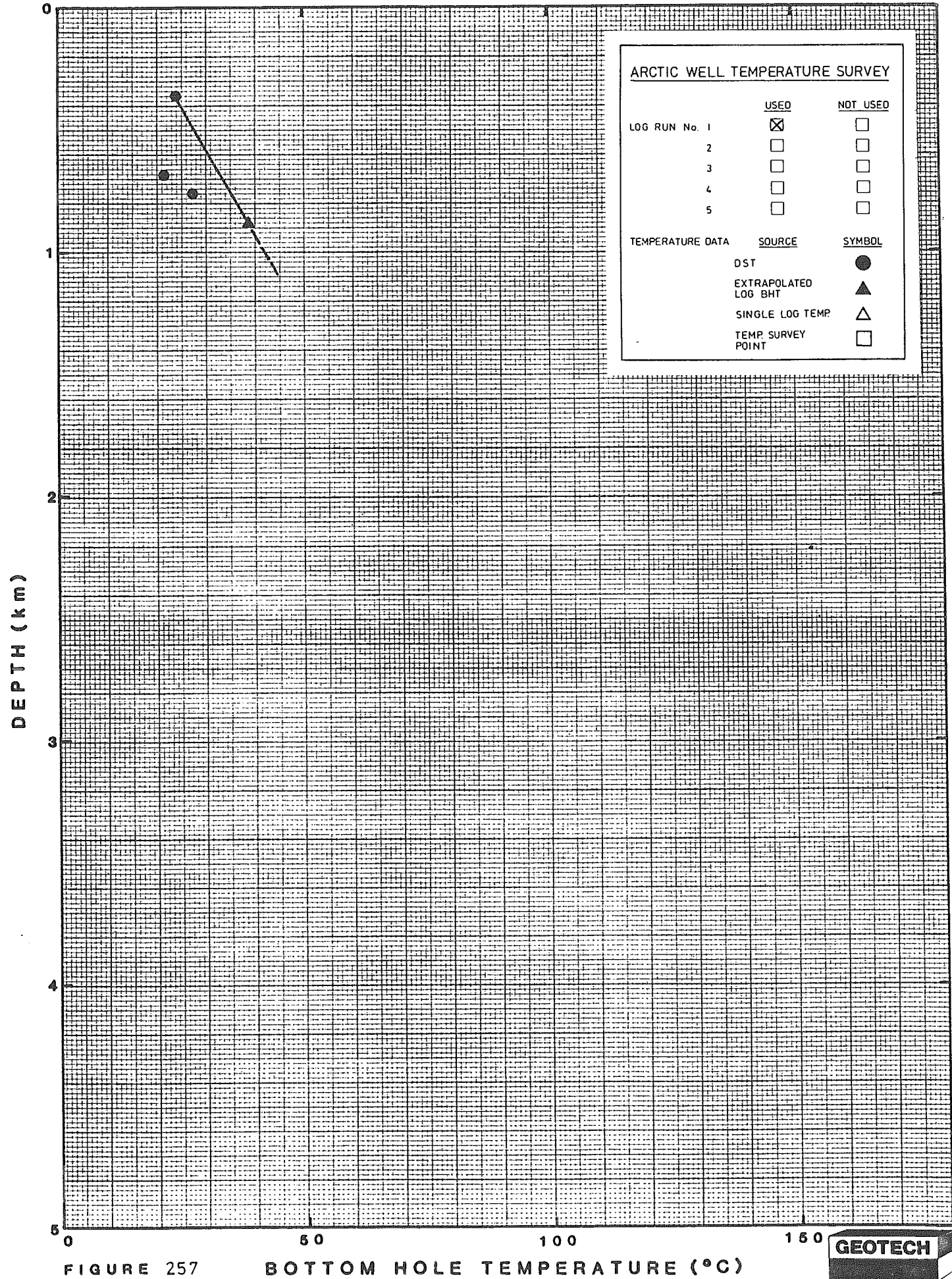


FIGURE 257

BOTTOM HOLE TEMPERATURE (°C)





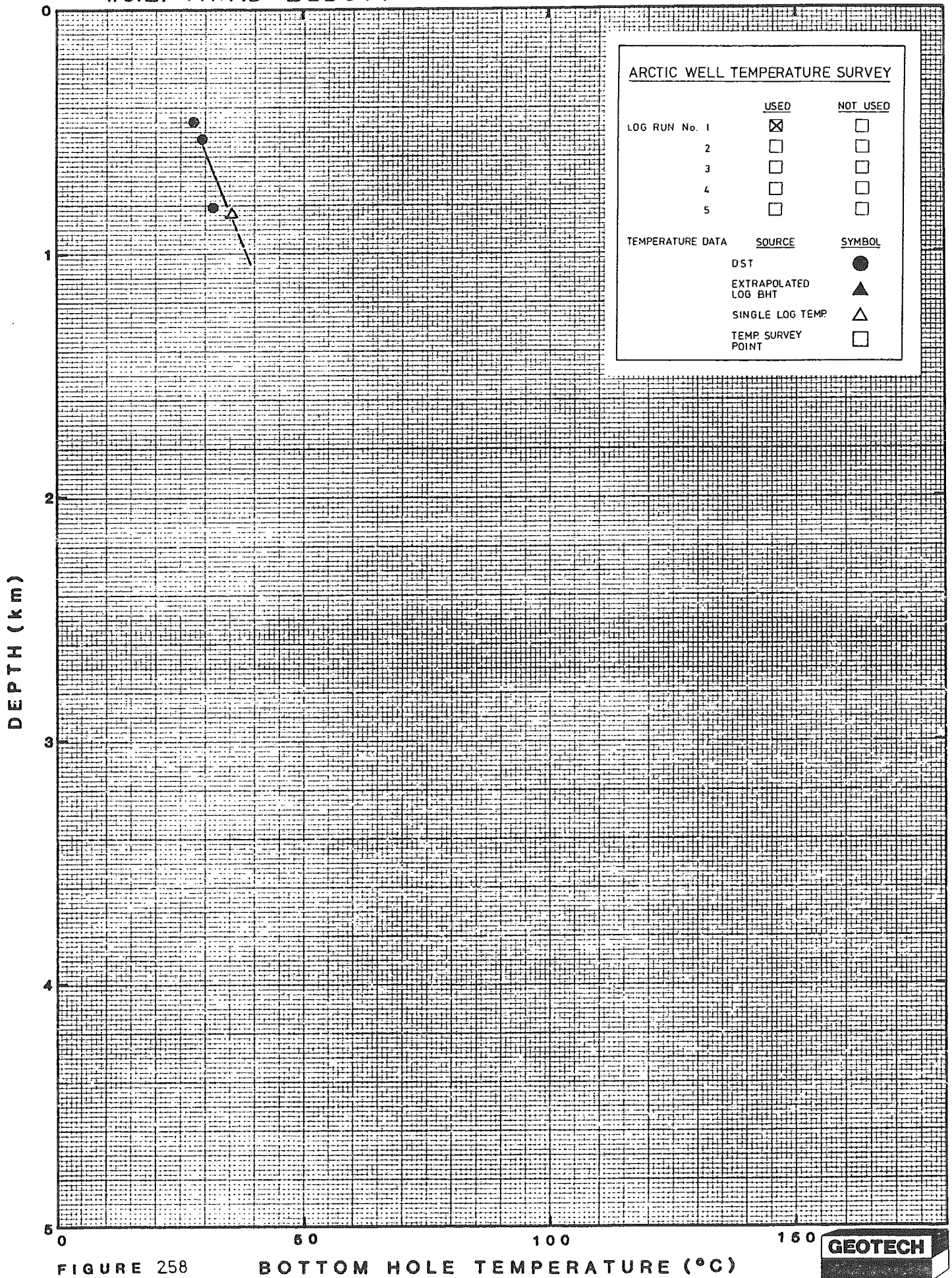


FIGURE 258

BOTTOM HOLE TEMPERATURE (°C)



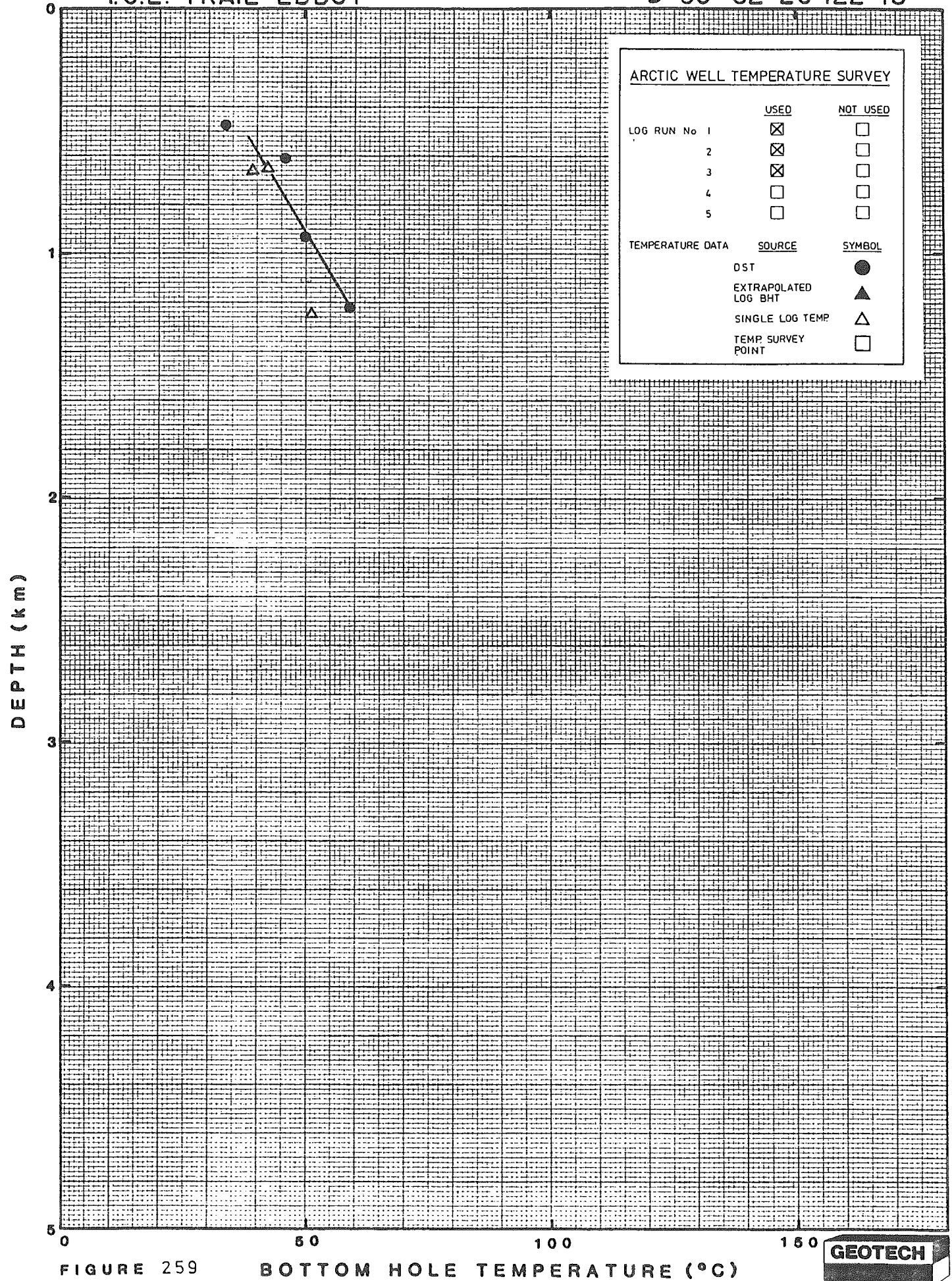
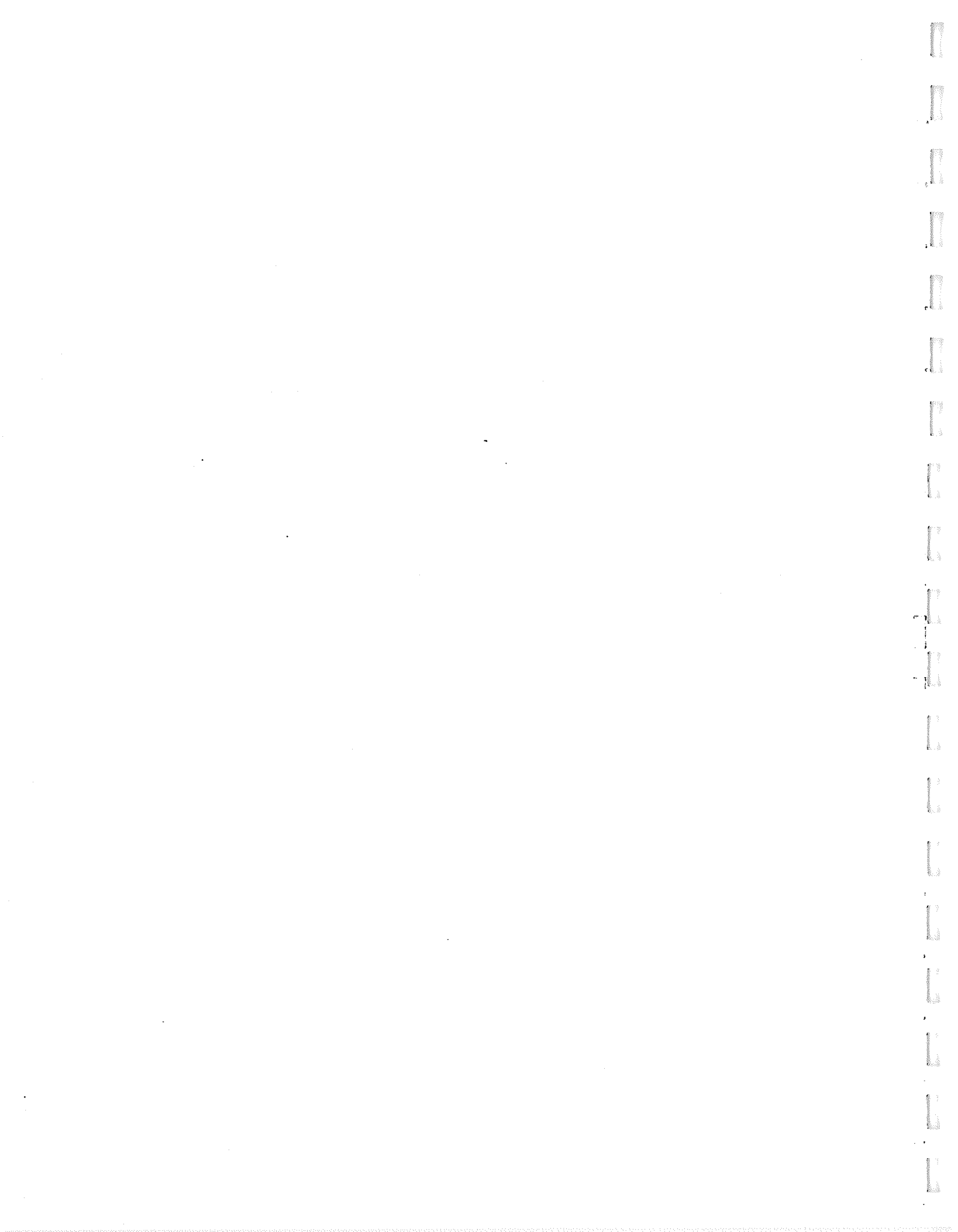


FIGURE 259

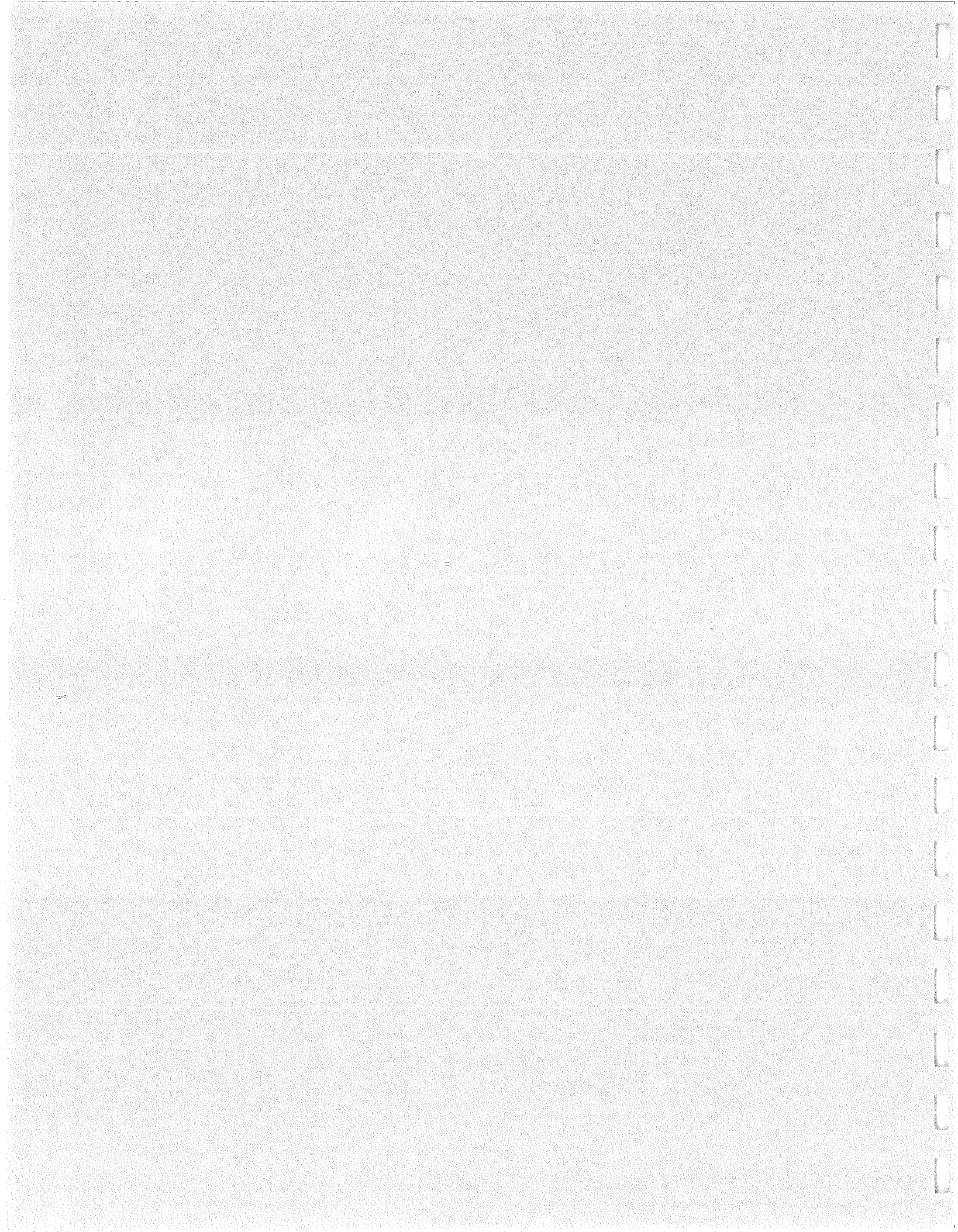
BOTTOM HOLE TEMPERATURE (°C)

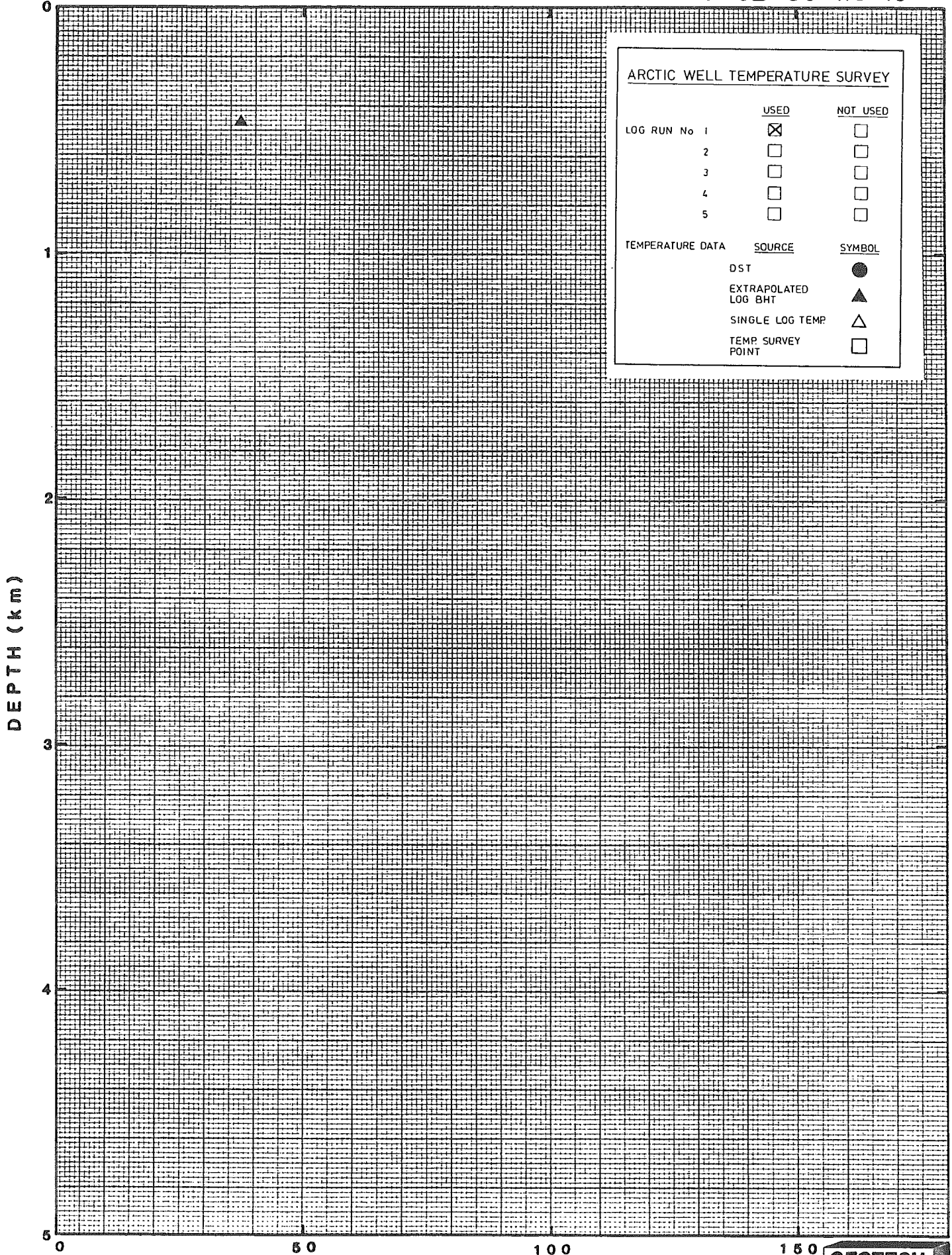




62-30







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 260

BOTTOM HOLE TEMPERATURE (°C)



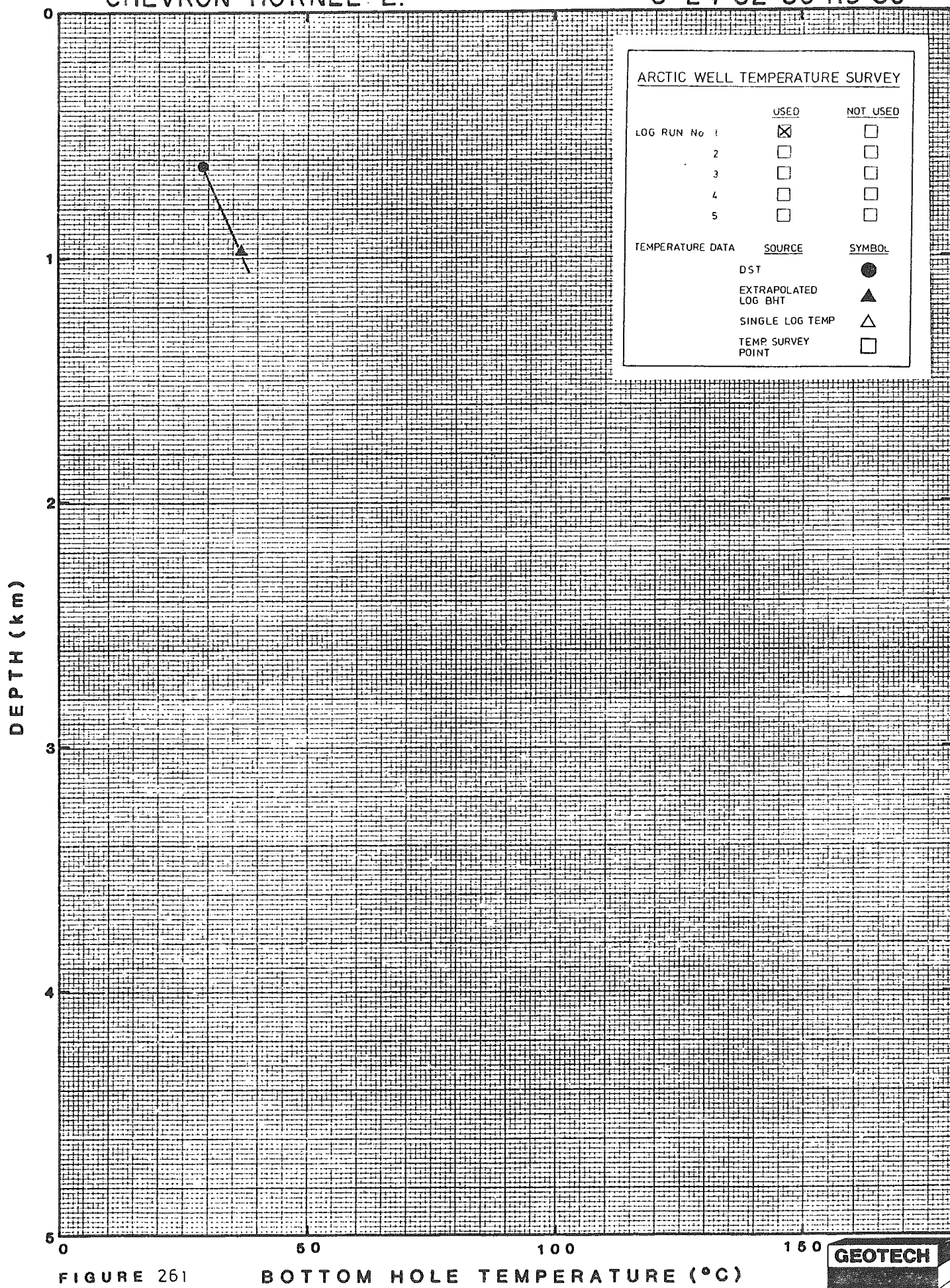


FIGURE 261

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

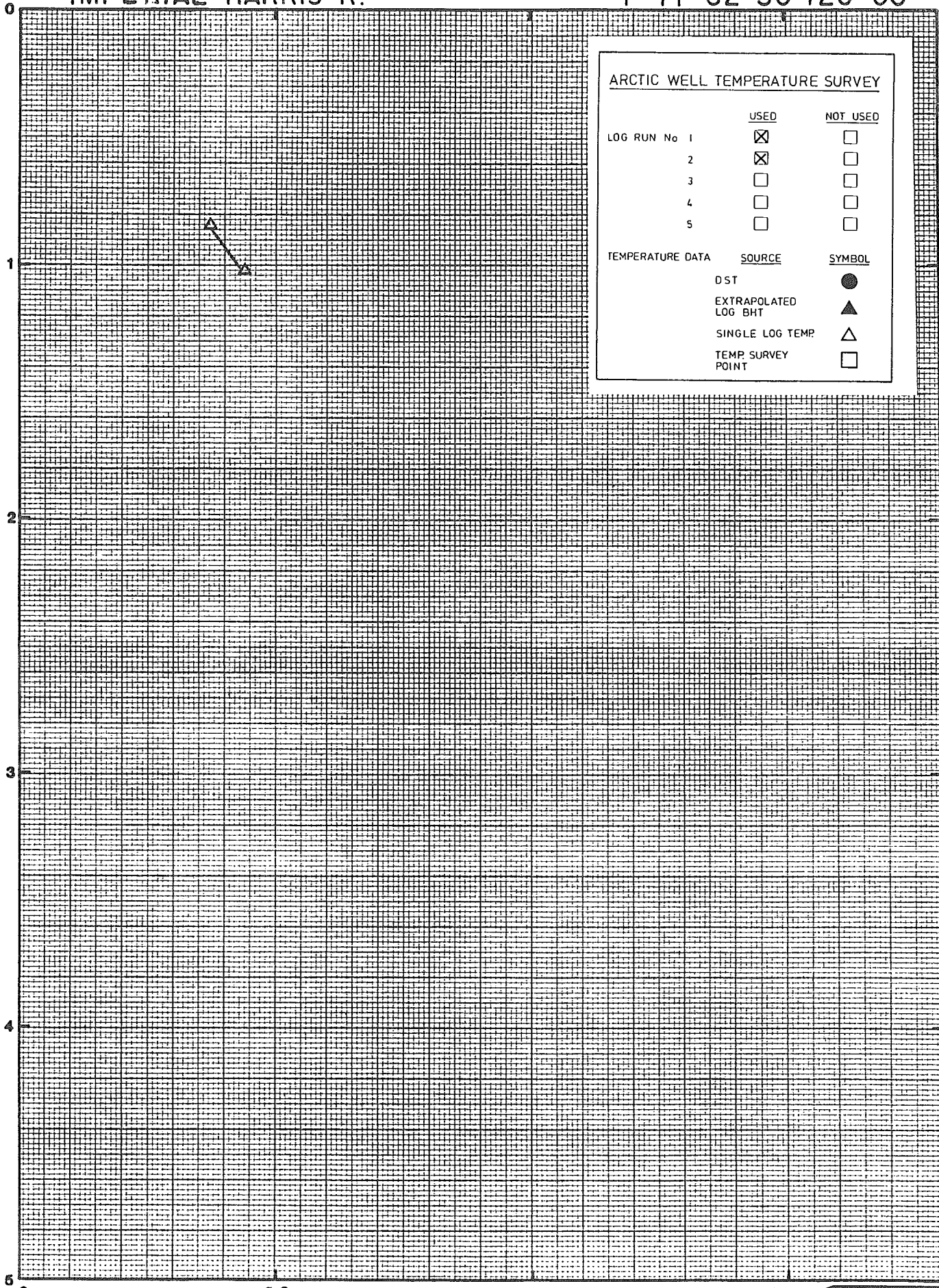


FIGURE 262

BOTTOM HOLE TEMPERATURE (°C)





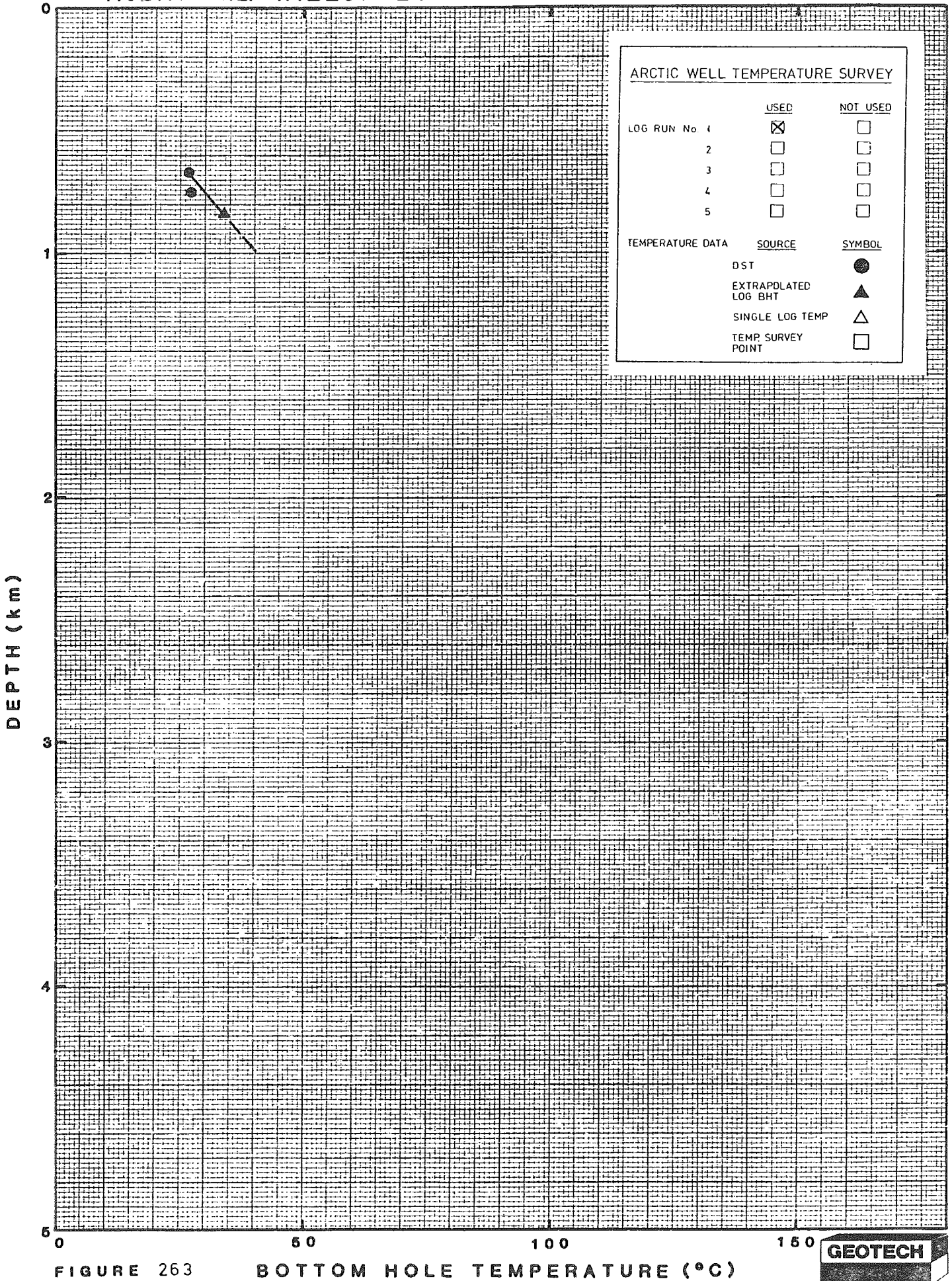


FIGURE 263

BOTTOM HOLE TEMPERATURE (°C)



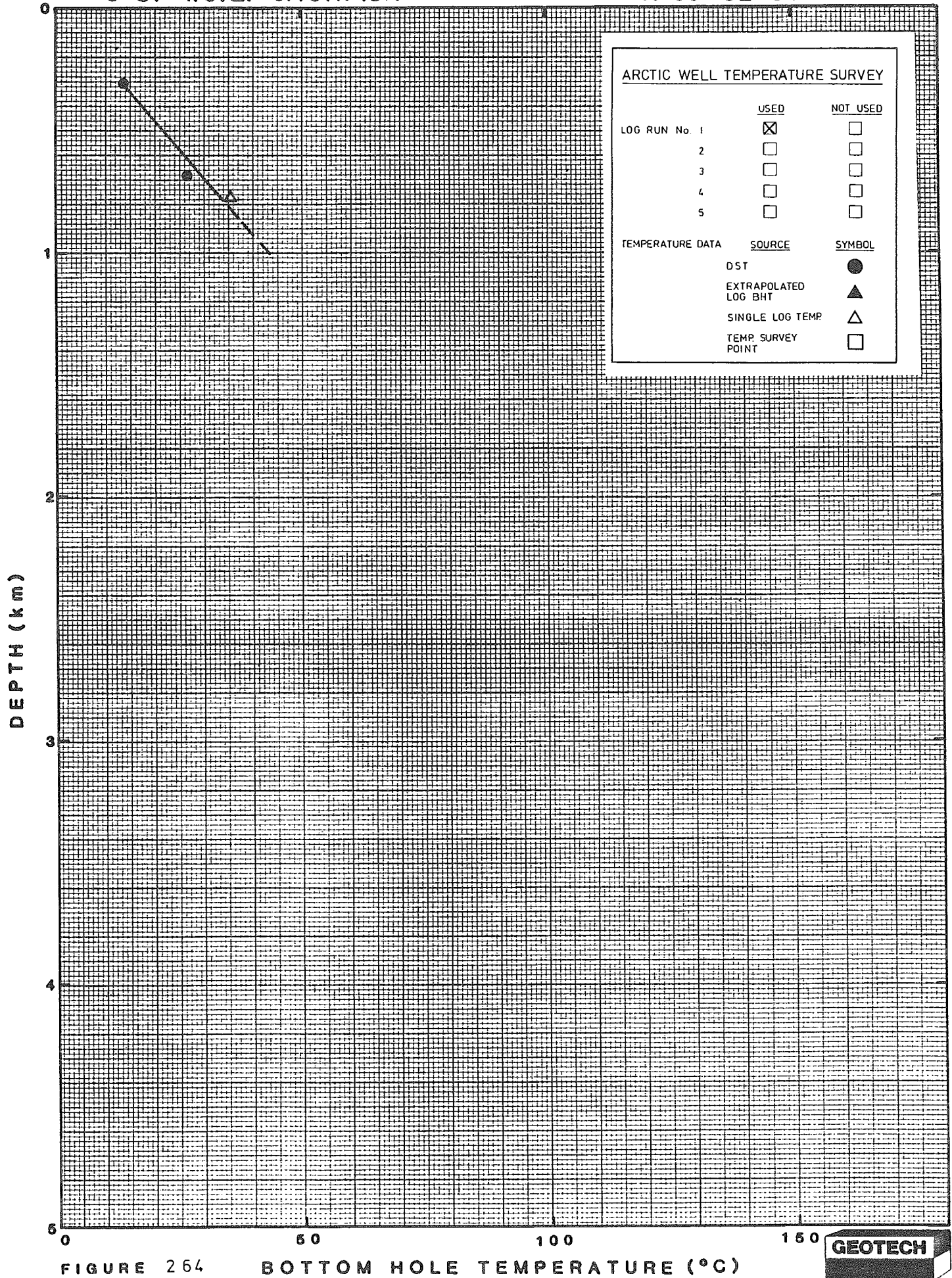
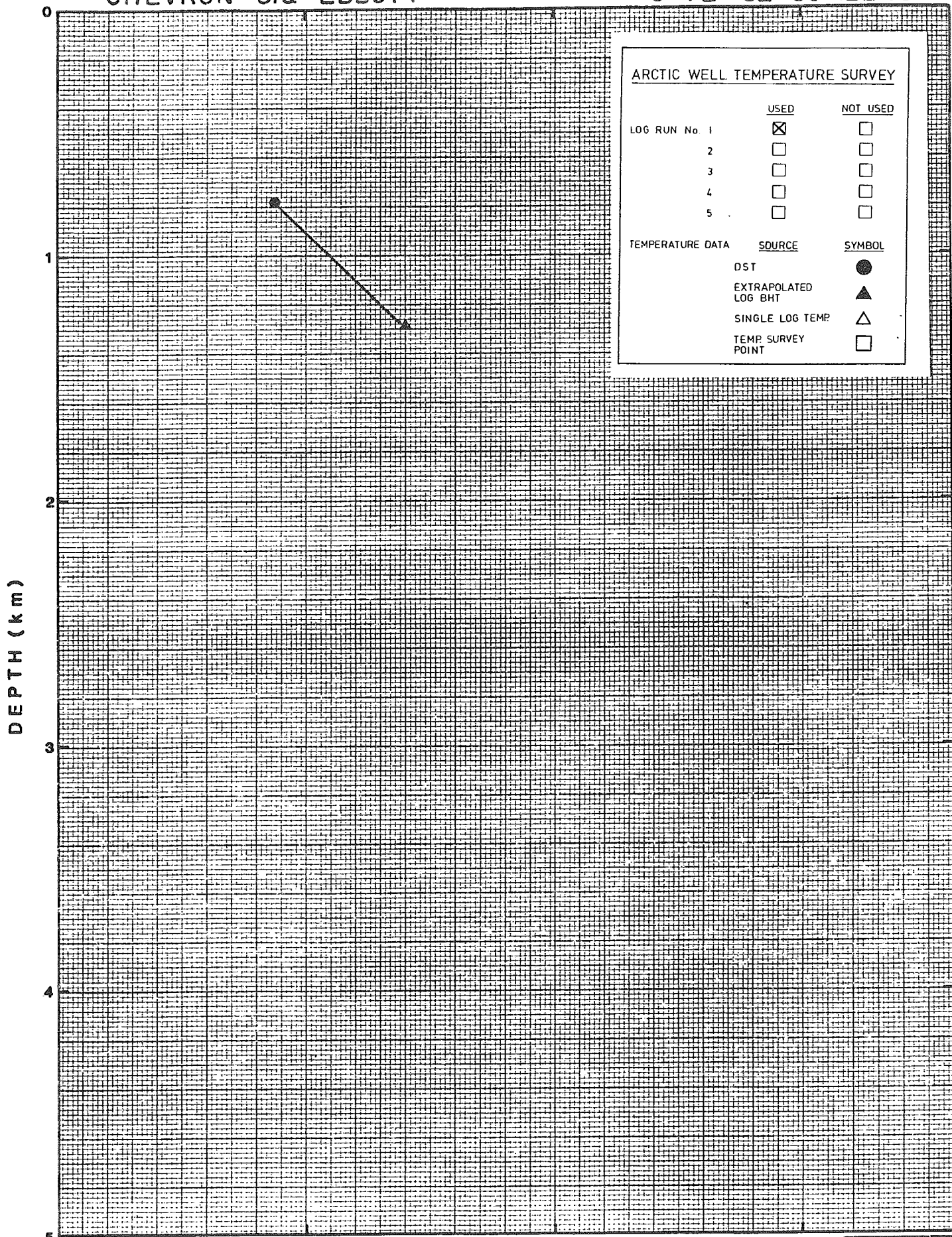


FIGURE 264

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
<u>TEMPERATURE DATA</u>	<u>SOURCE</u>	<u>SYMBOL</u>
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150

FIGURE 265 BOTTOM HOLE TEMPERATURE (°C)





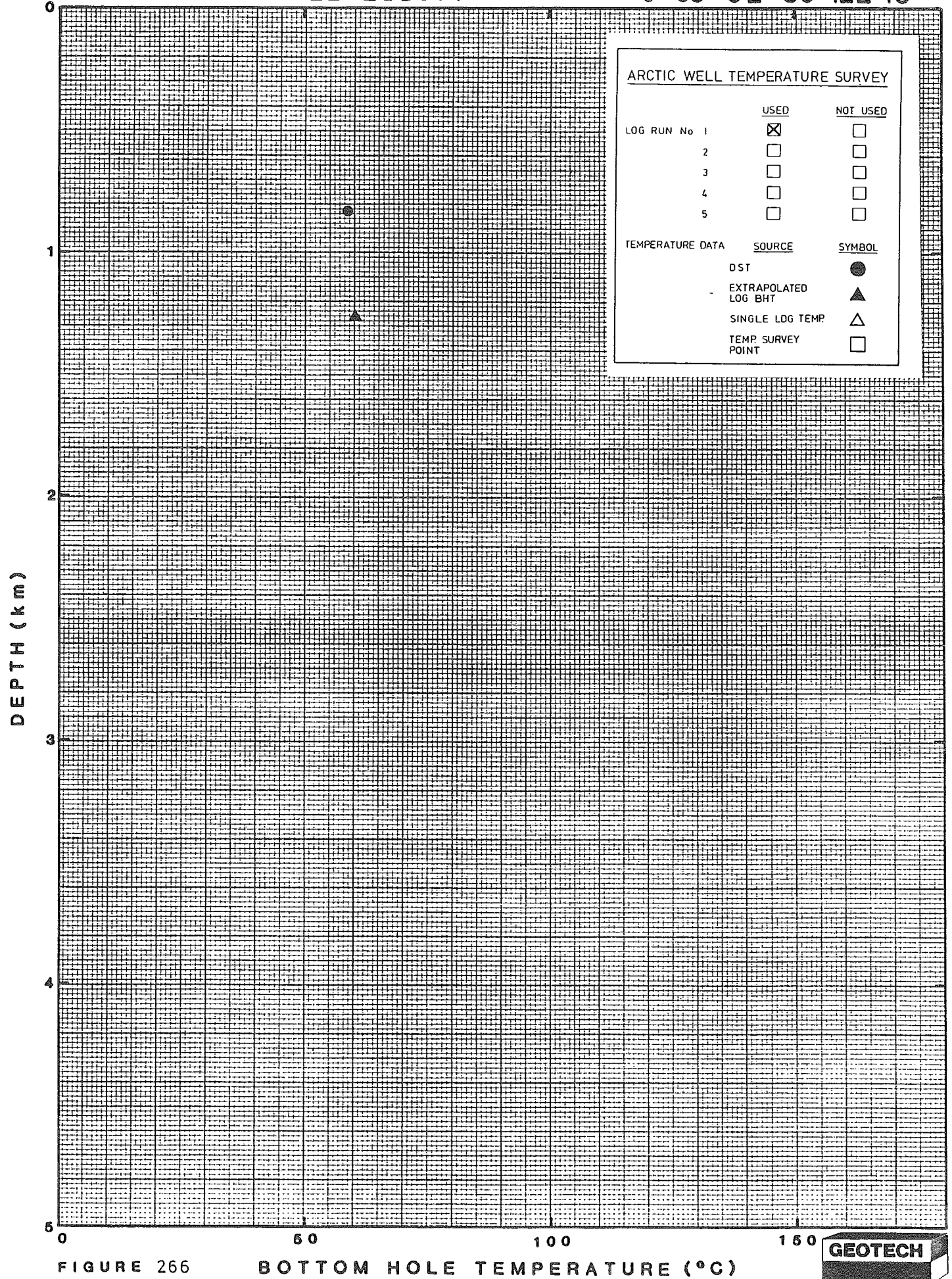


FIGURE 266

BOTTOM HOLE TEMPERATURE (°C)





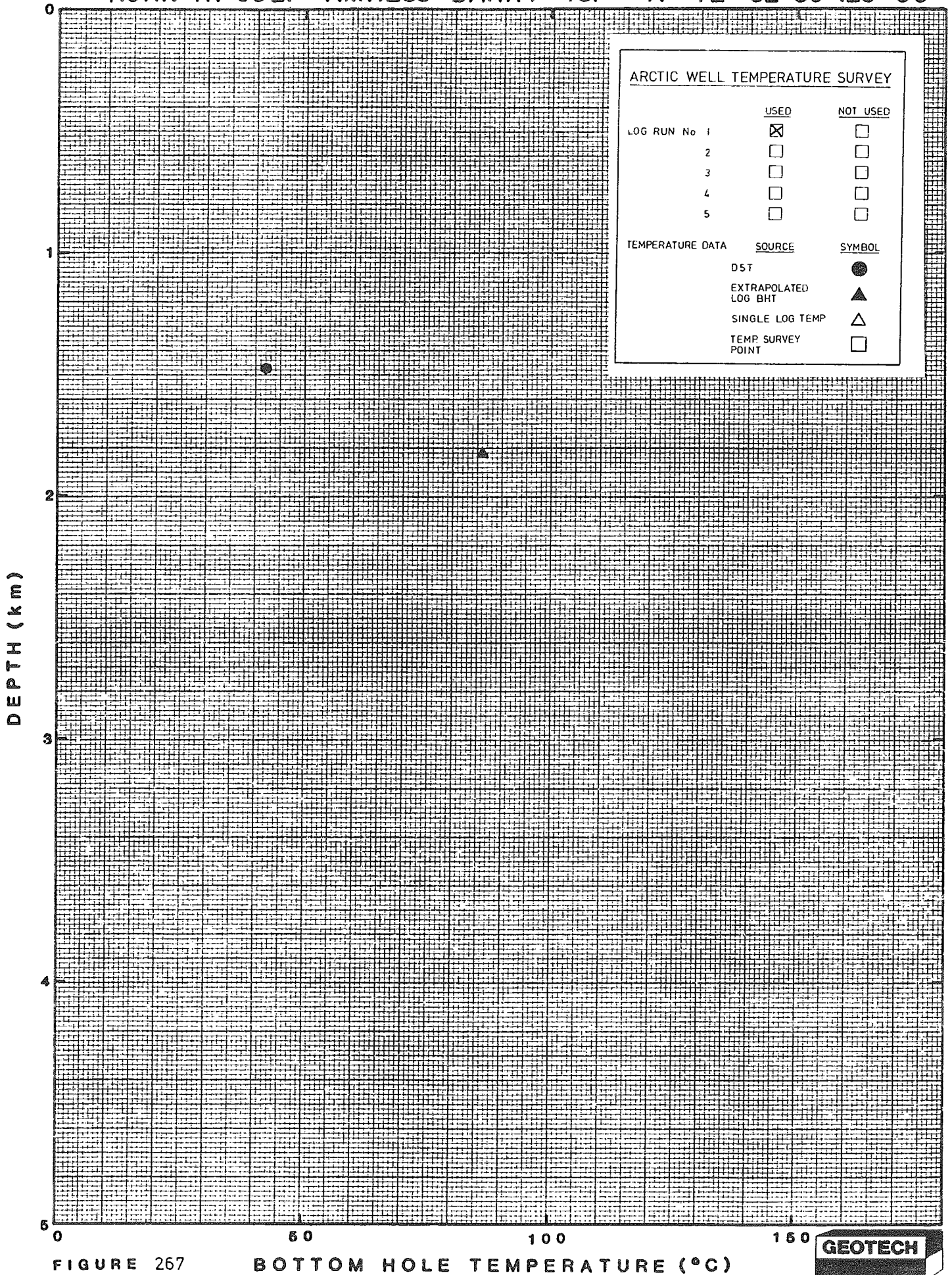
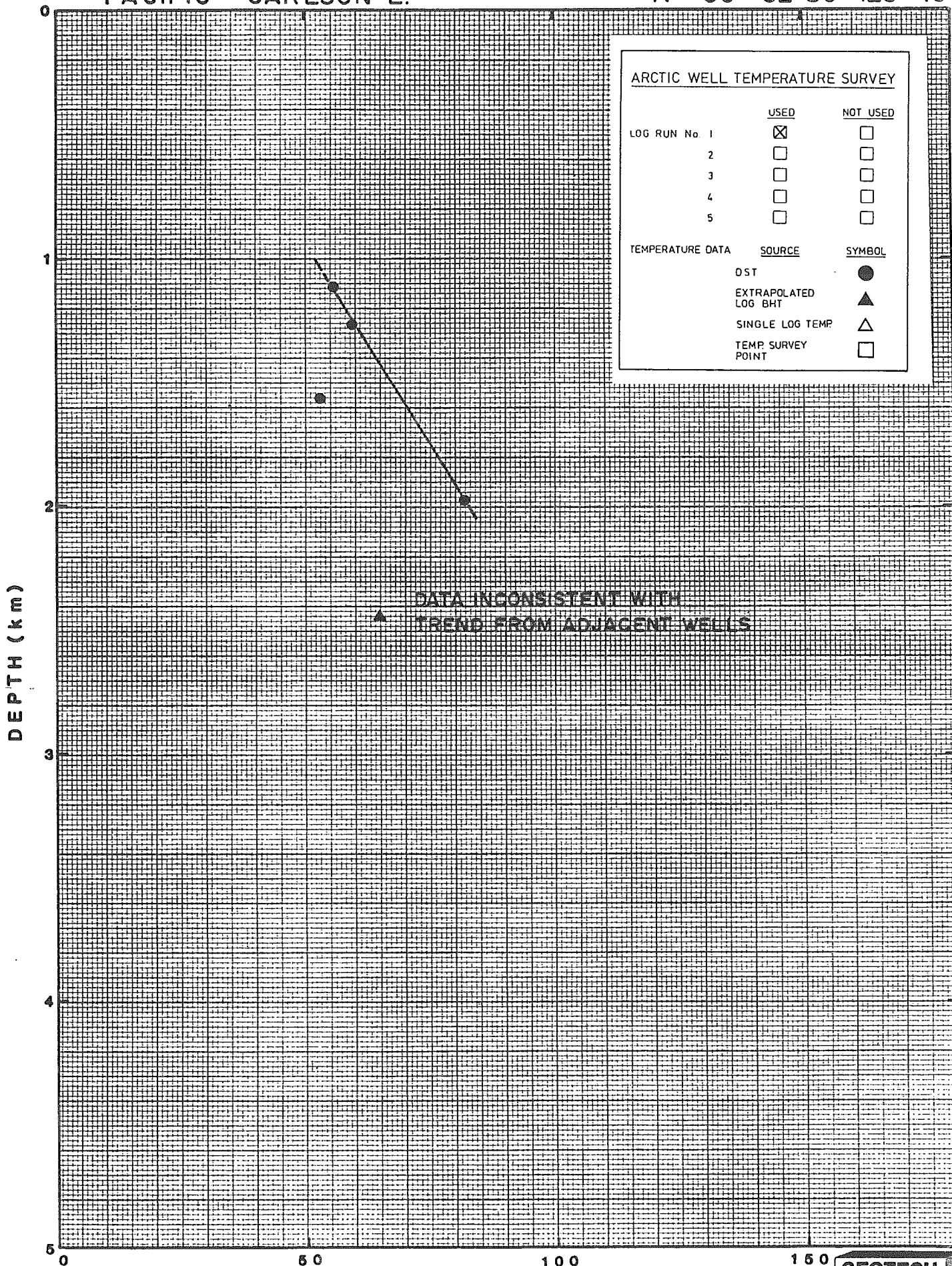


FIGURE 267

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□



DATA INCONSISTENT WITH  
TREND FROM ADJACENT WELLS

FIGURE 268

BOTTOM HOLE TEMPERATURE (°C)



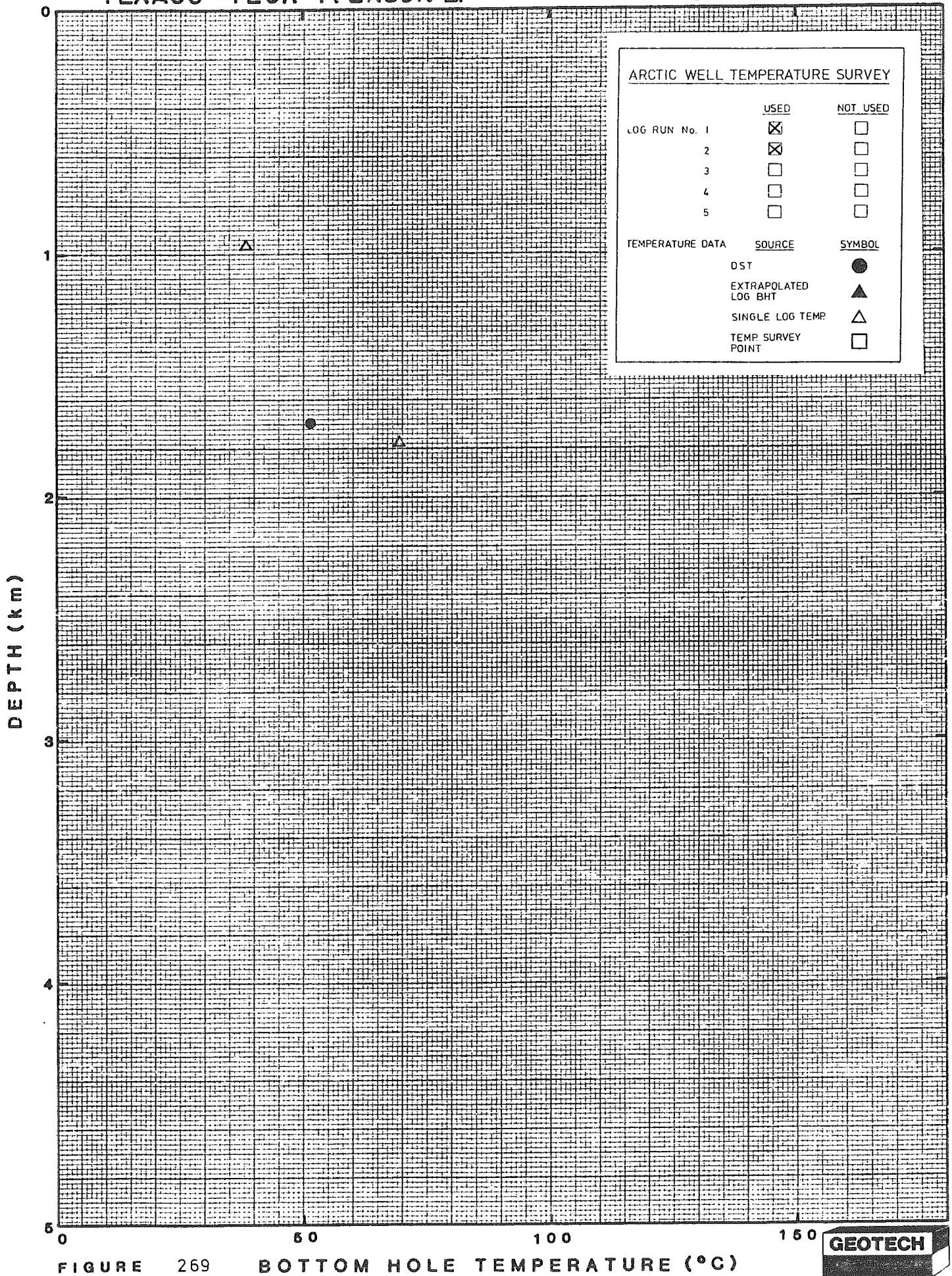


FIGURE 269

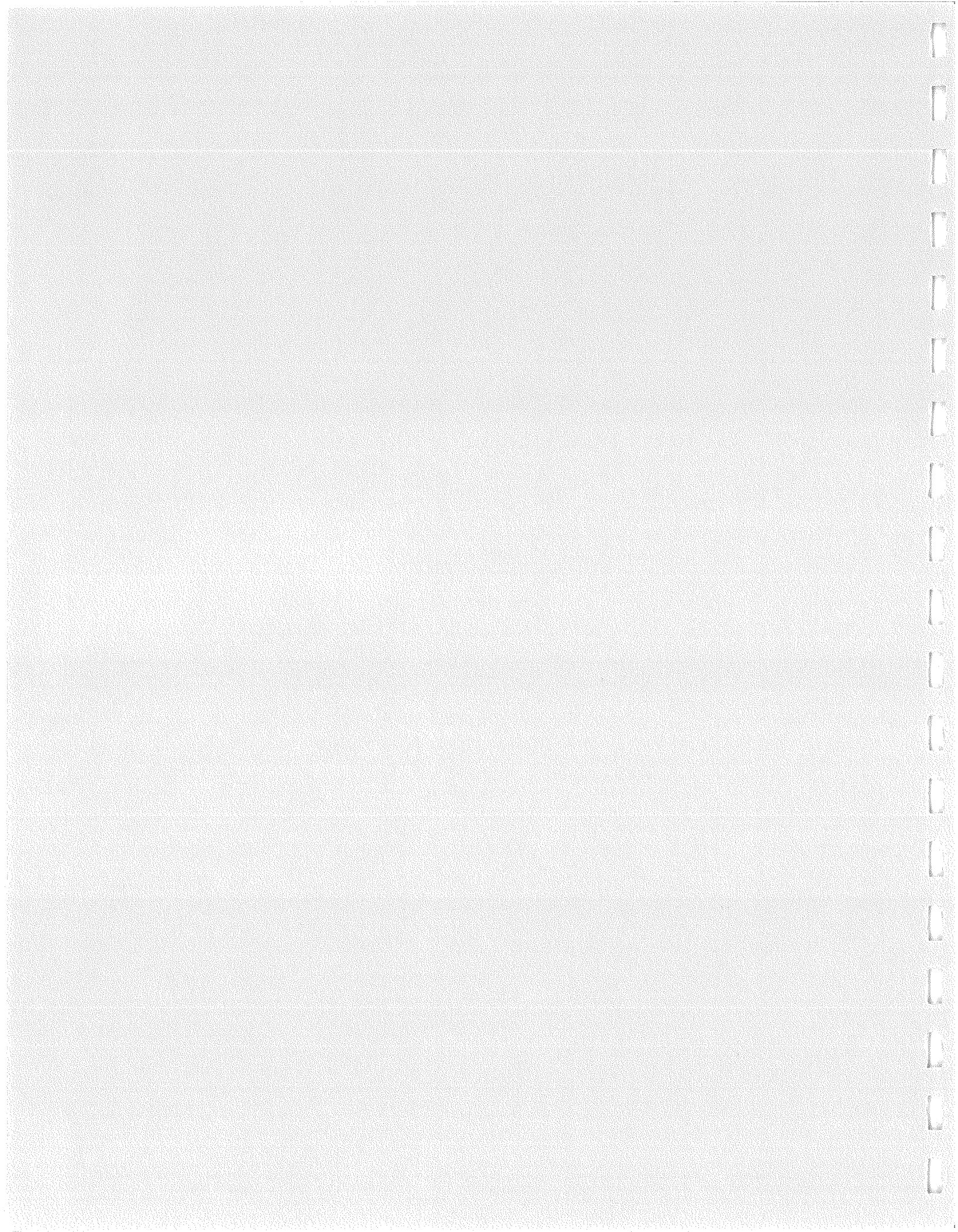
BOTTOM HOLE TEMPERATURE (°C)

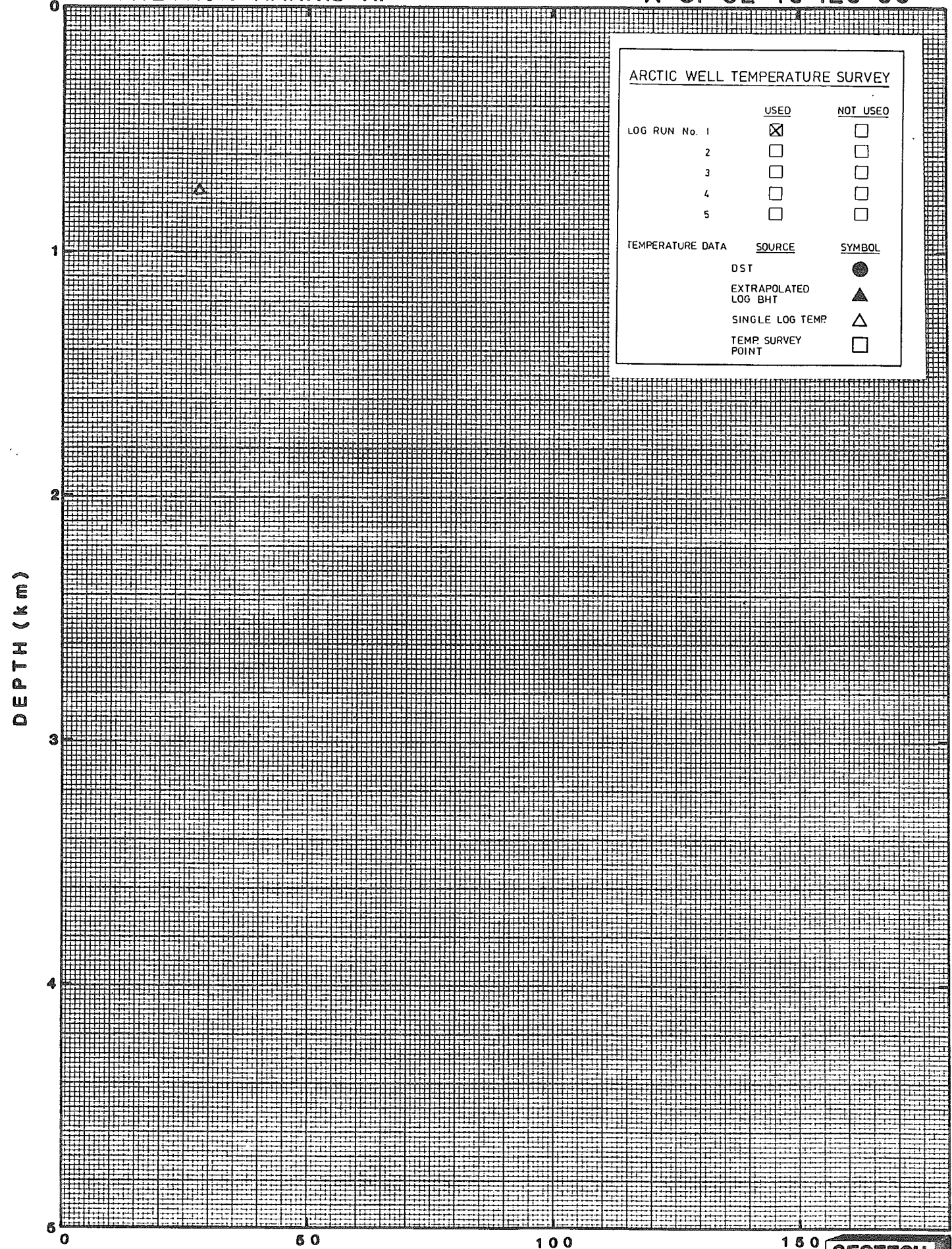




62-40







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 270

BOTTOM HOLE TEMPERATURE (°C)





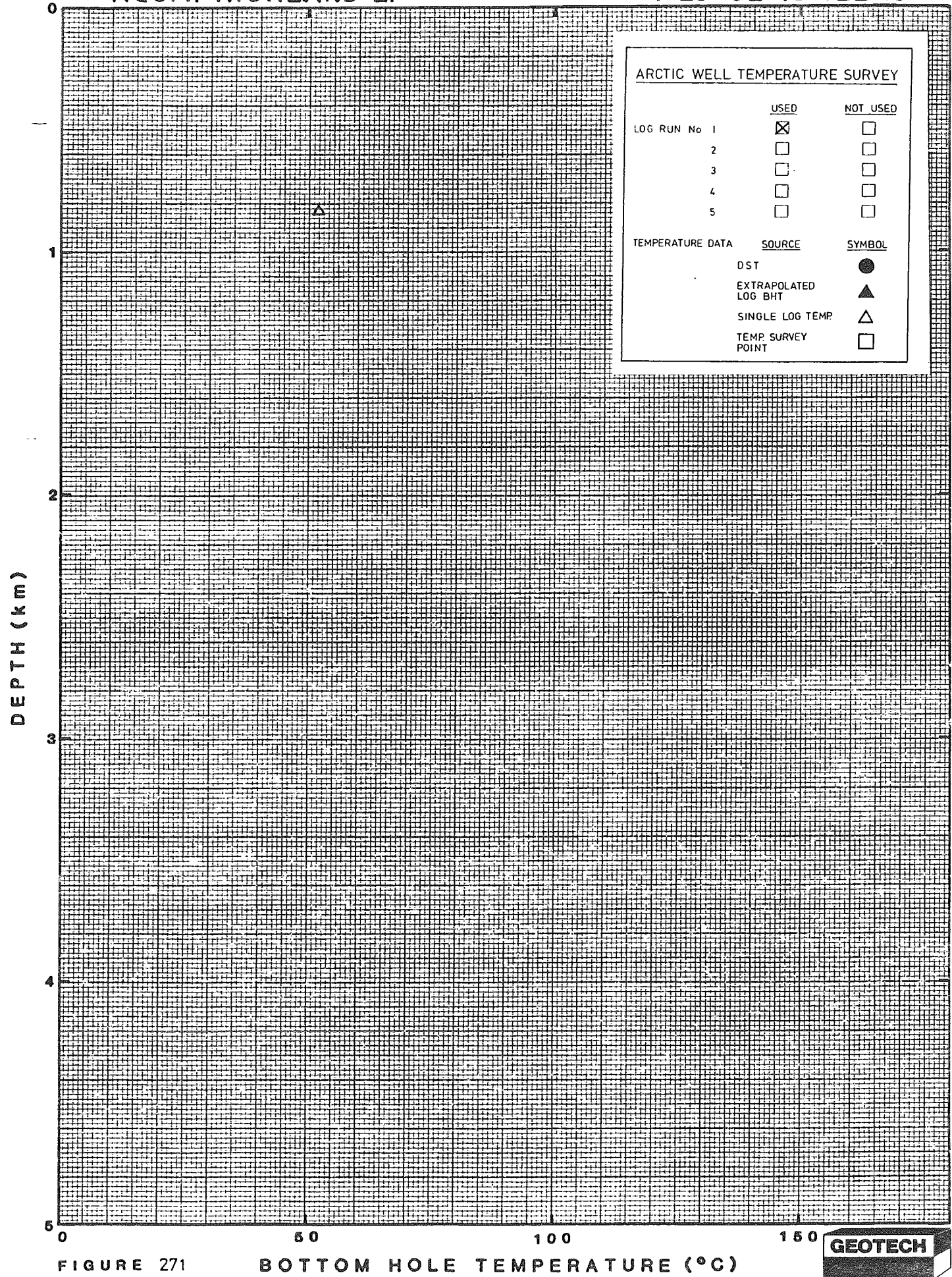


FIGURE 271

BOTTOM HOLE TEMPERATURE (°C)



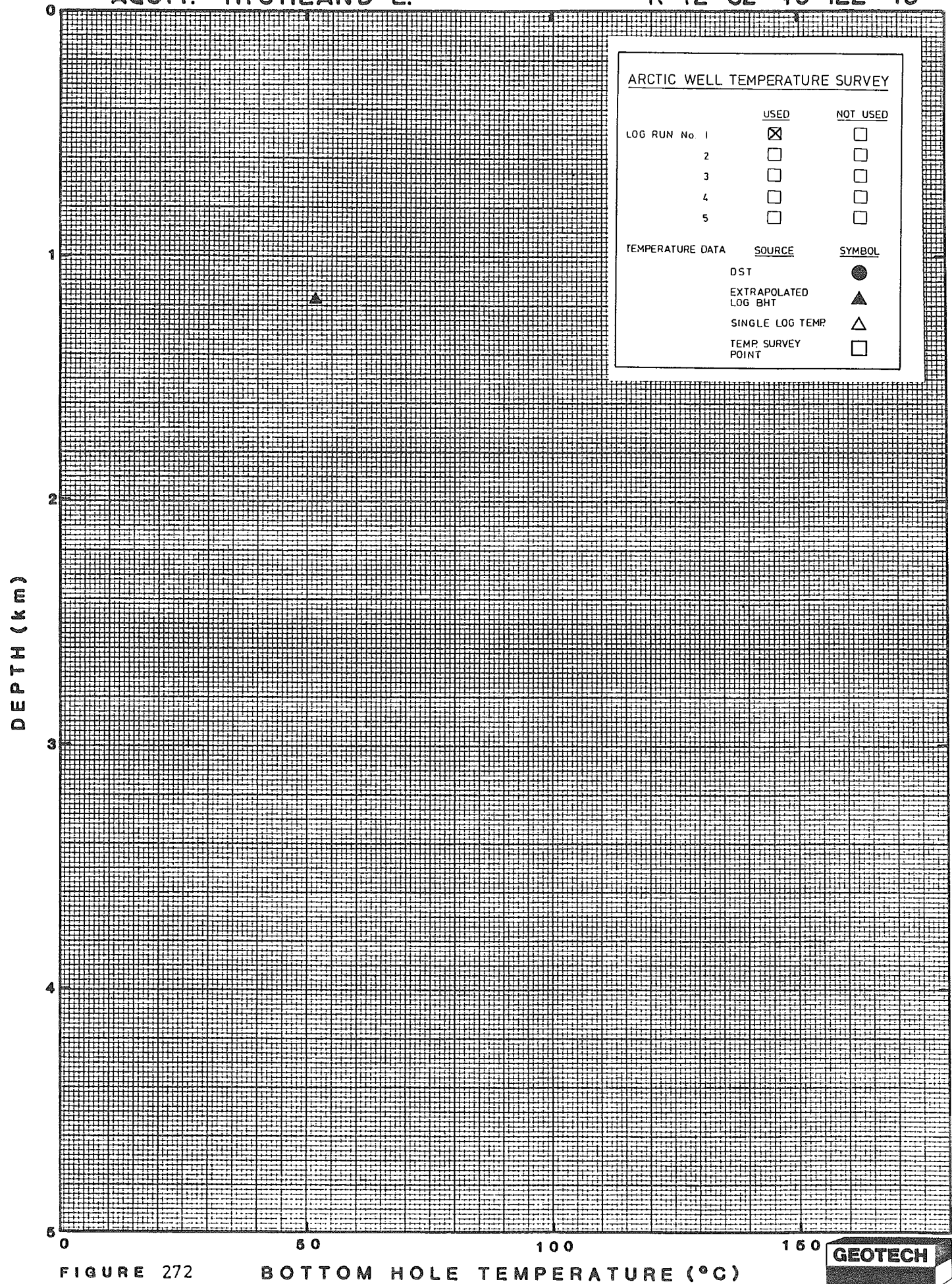
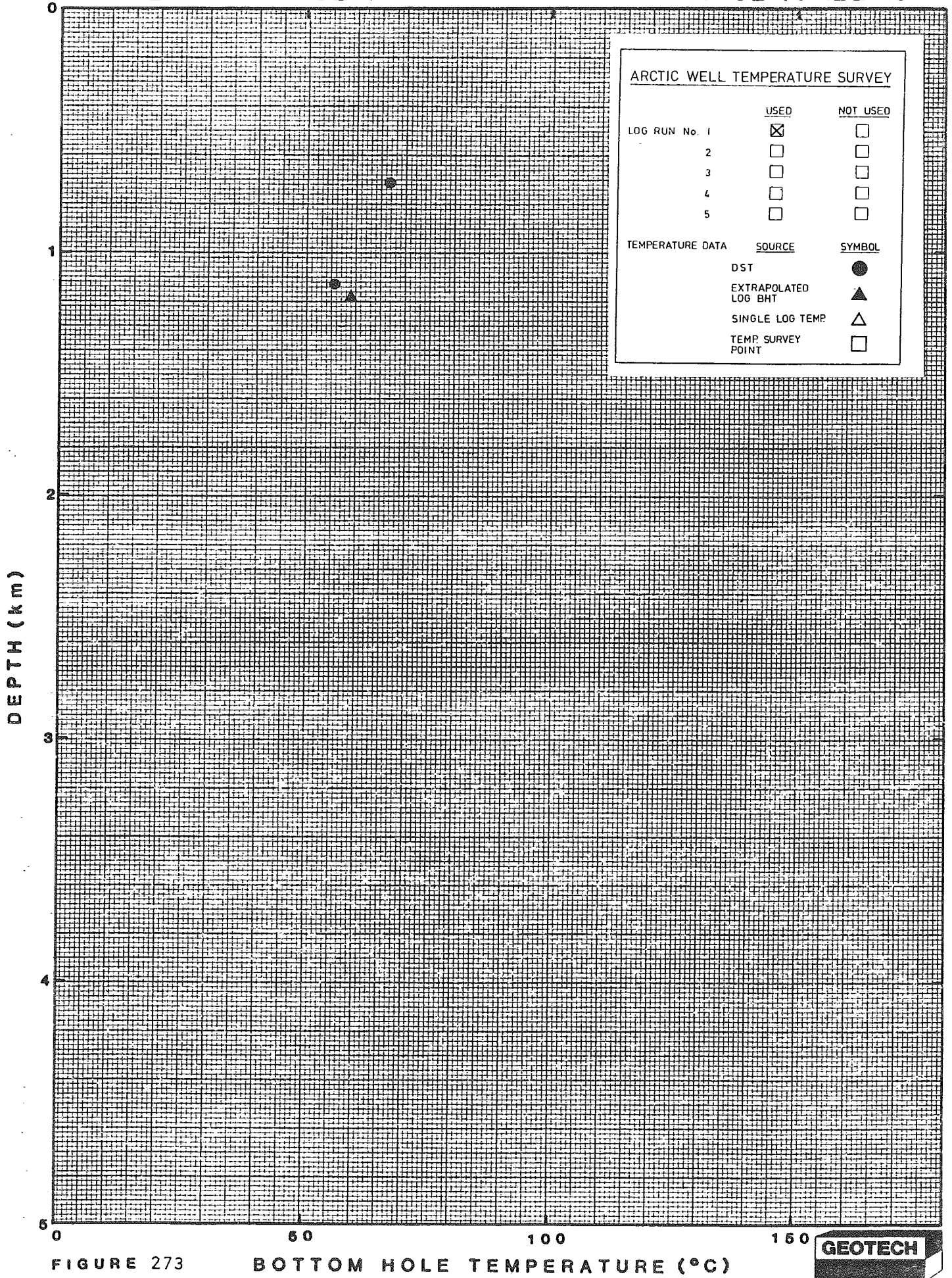


FIGURE 272

BOTTOM HOLE TEMPERATURE (°C)







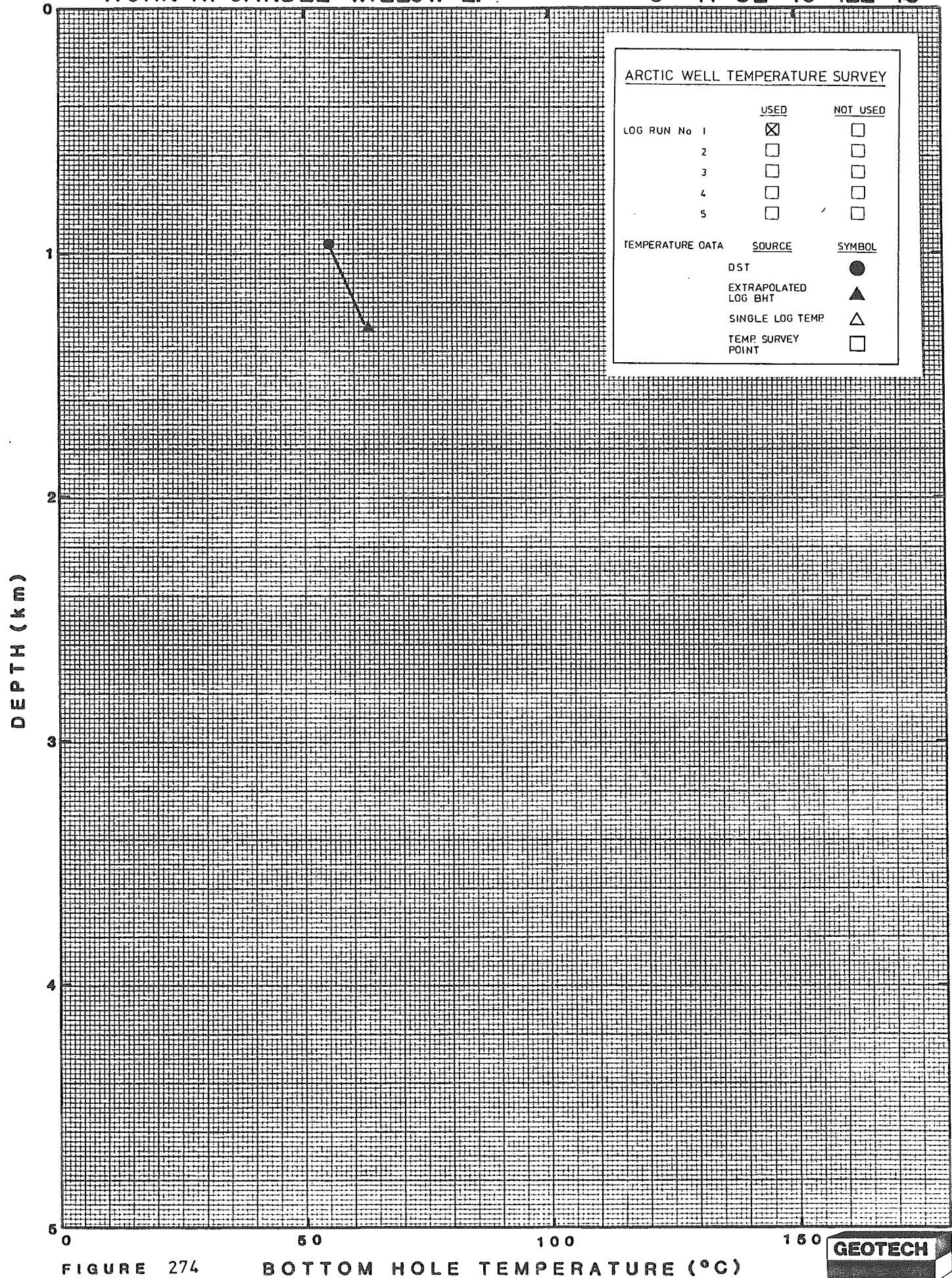


FIGURE 274

BOTTOM HOLE TEMPERATURE (°C)



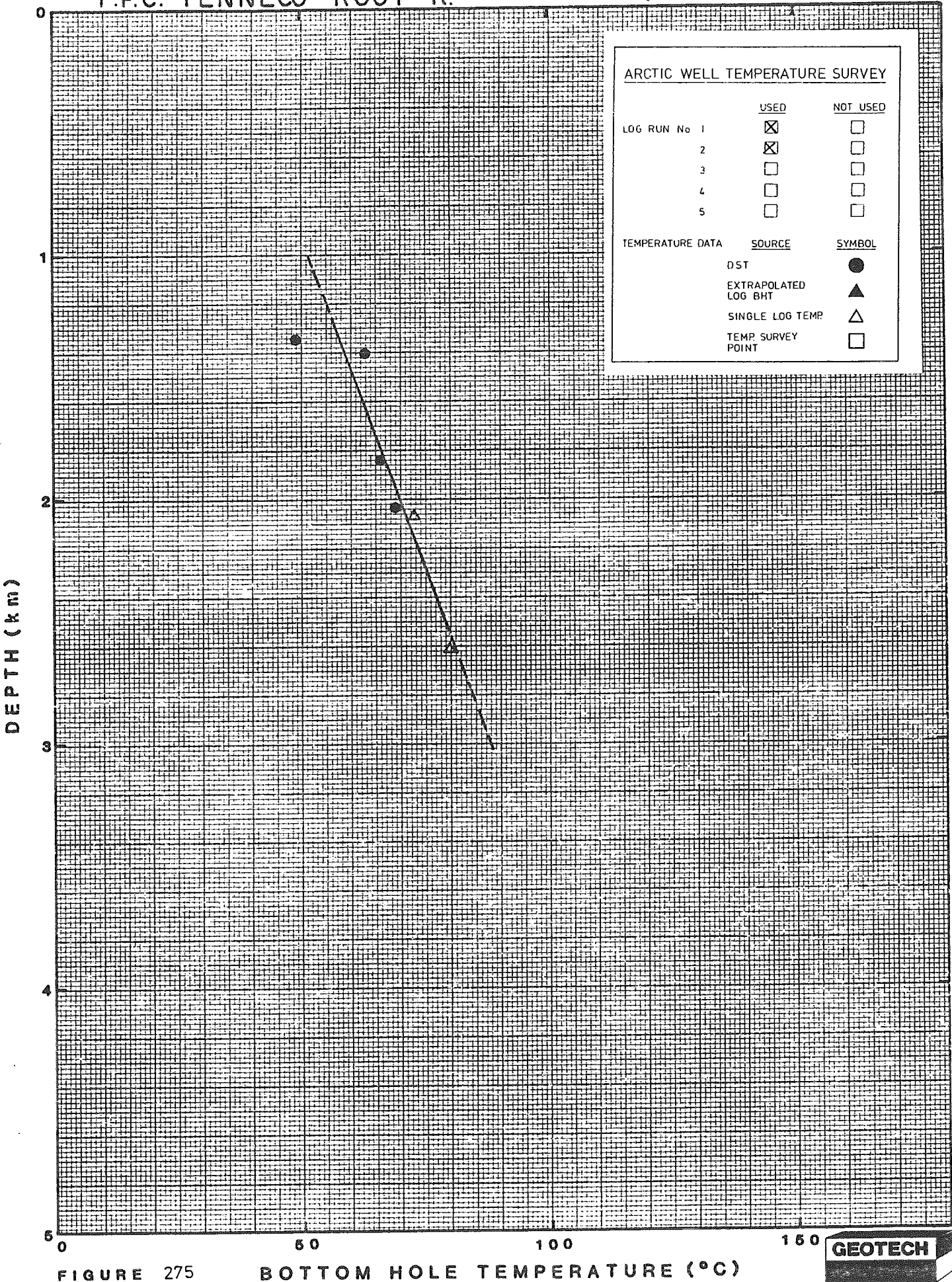


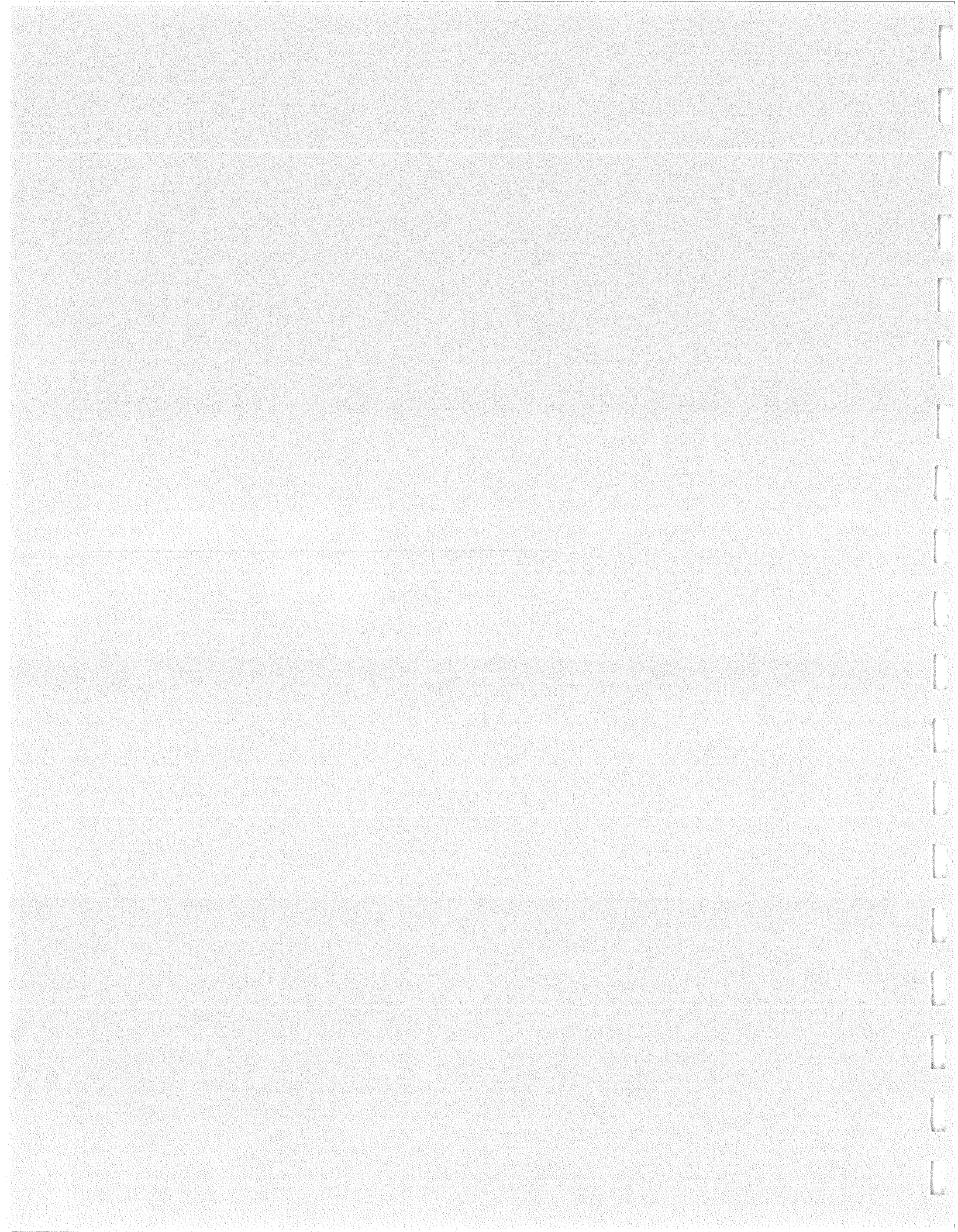
FIGURE 275

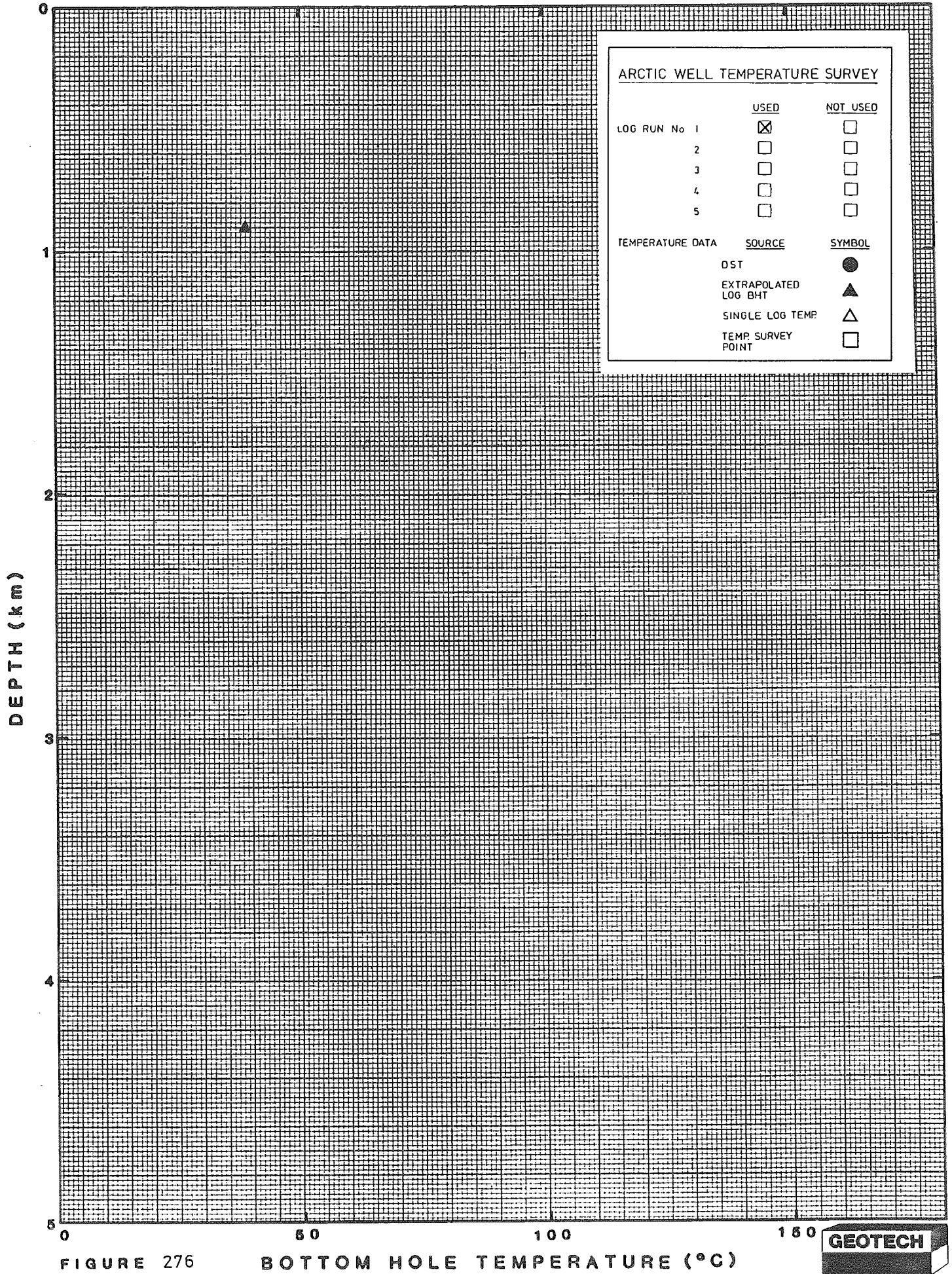
BOTTOM HOLE TEMPERATURE (°C)



62-50







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

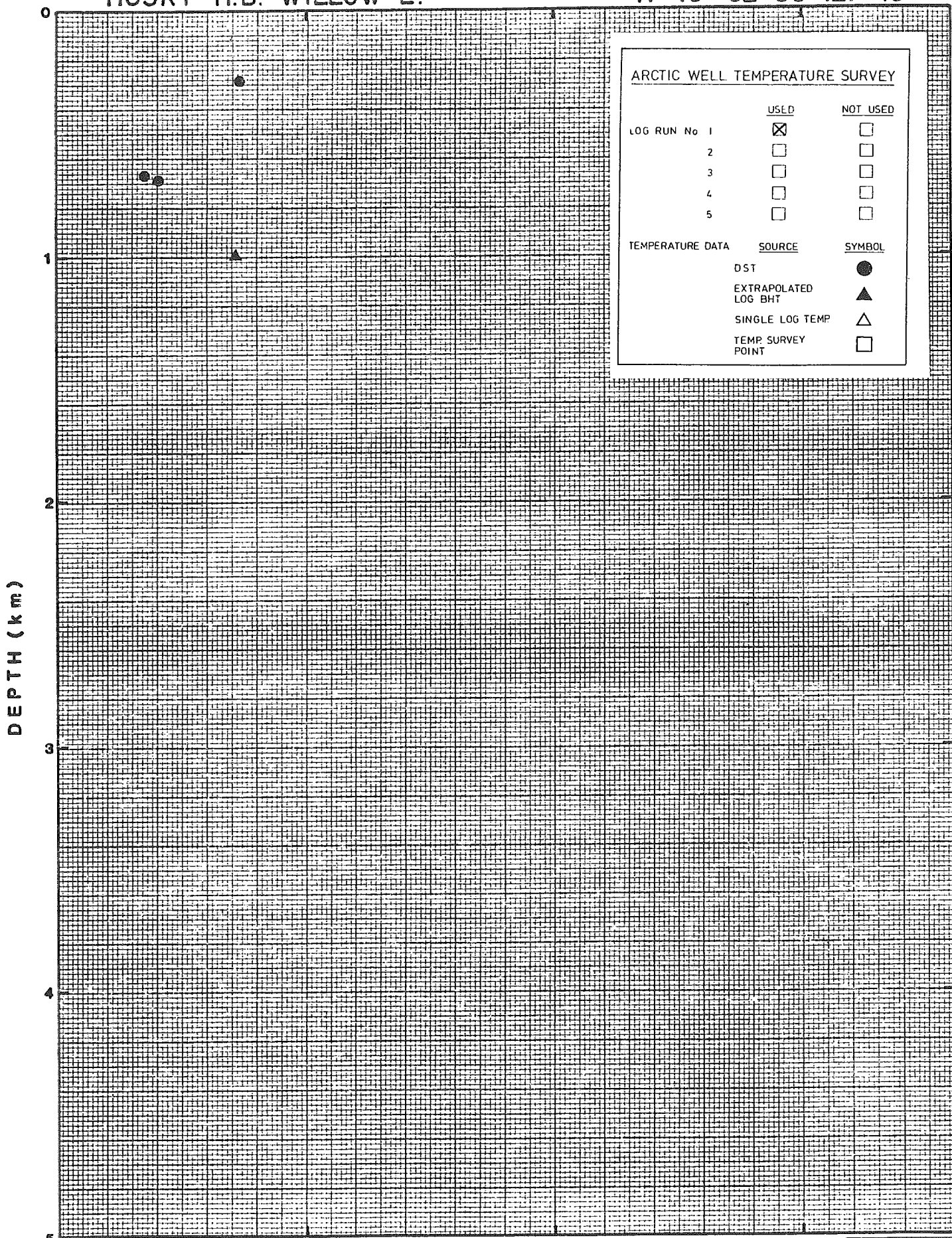
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 276

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP. SURVEY POINT	□

DEPTH (km)

0

FIGURE 277

50

BOTTOM HOLE TEMPERATURE (°C)

100

150





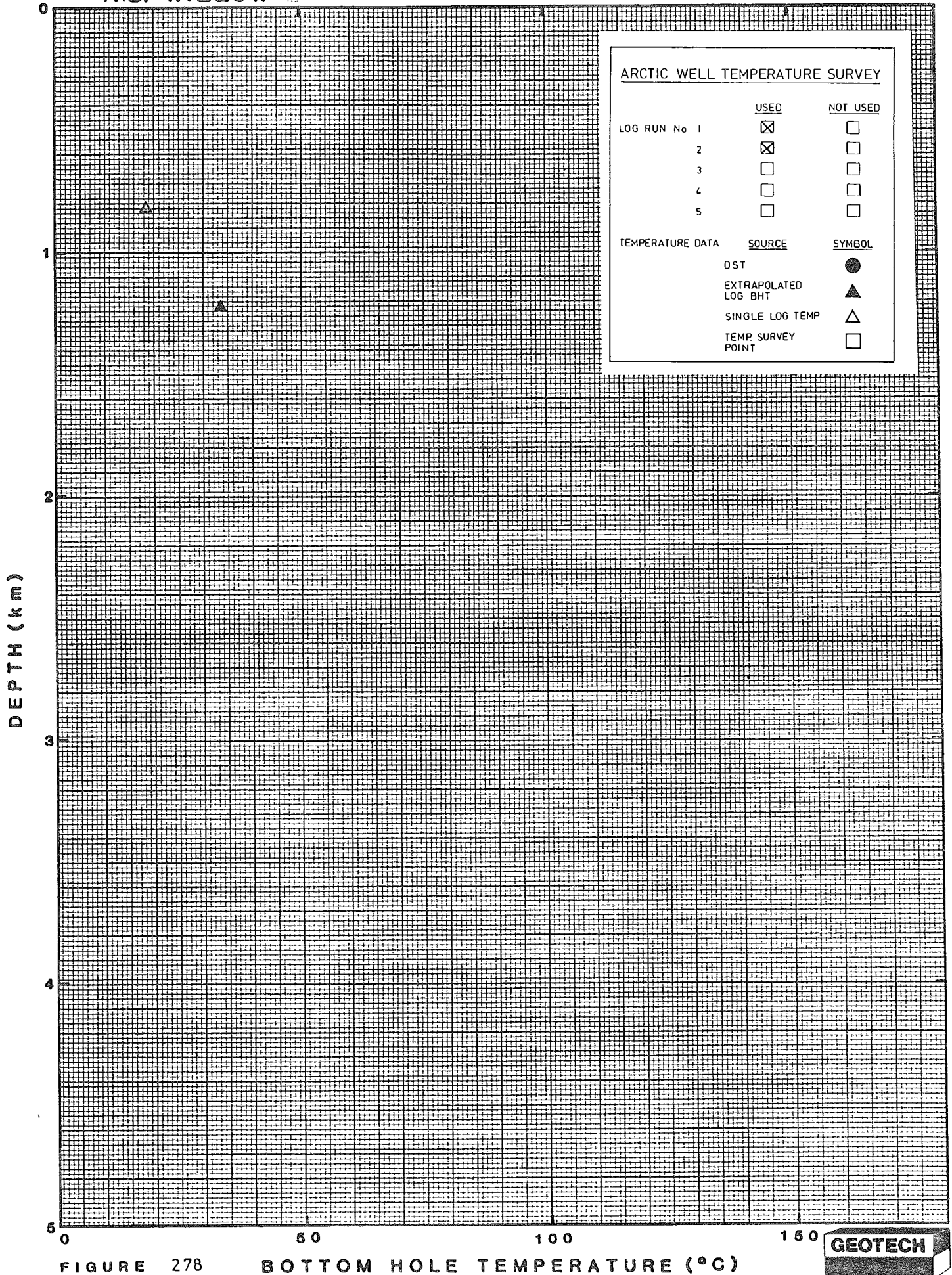


FIGURE 278

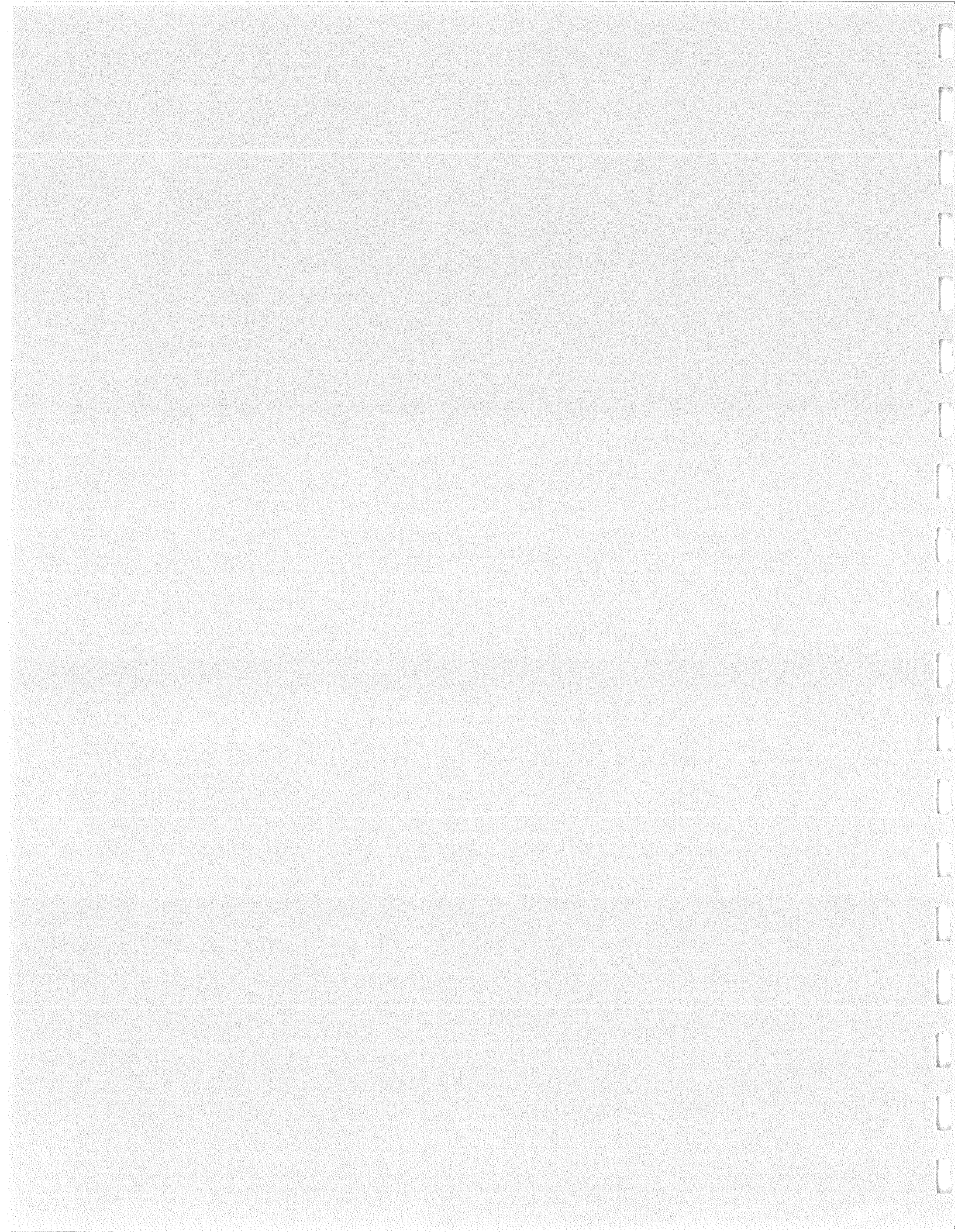
BOTTOM HOLE TEMPERATURE (°C)







63-00



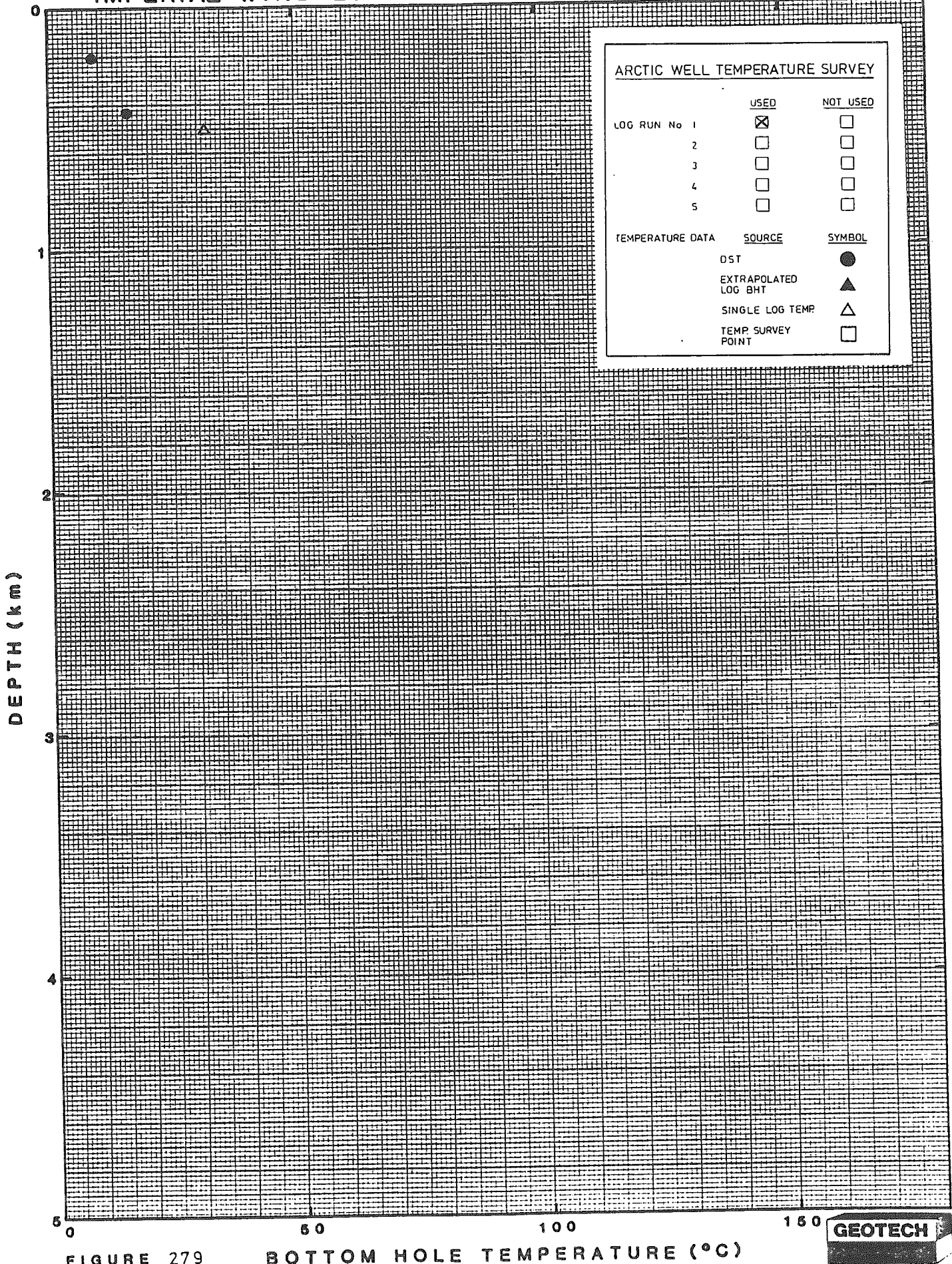


FIGURE 279

BOTTOM HOLE TEMPERATURE (°C)







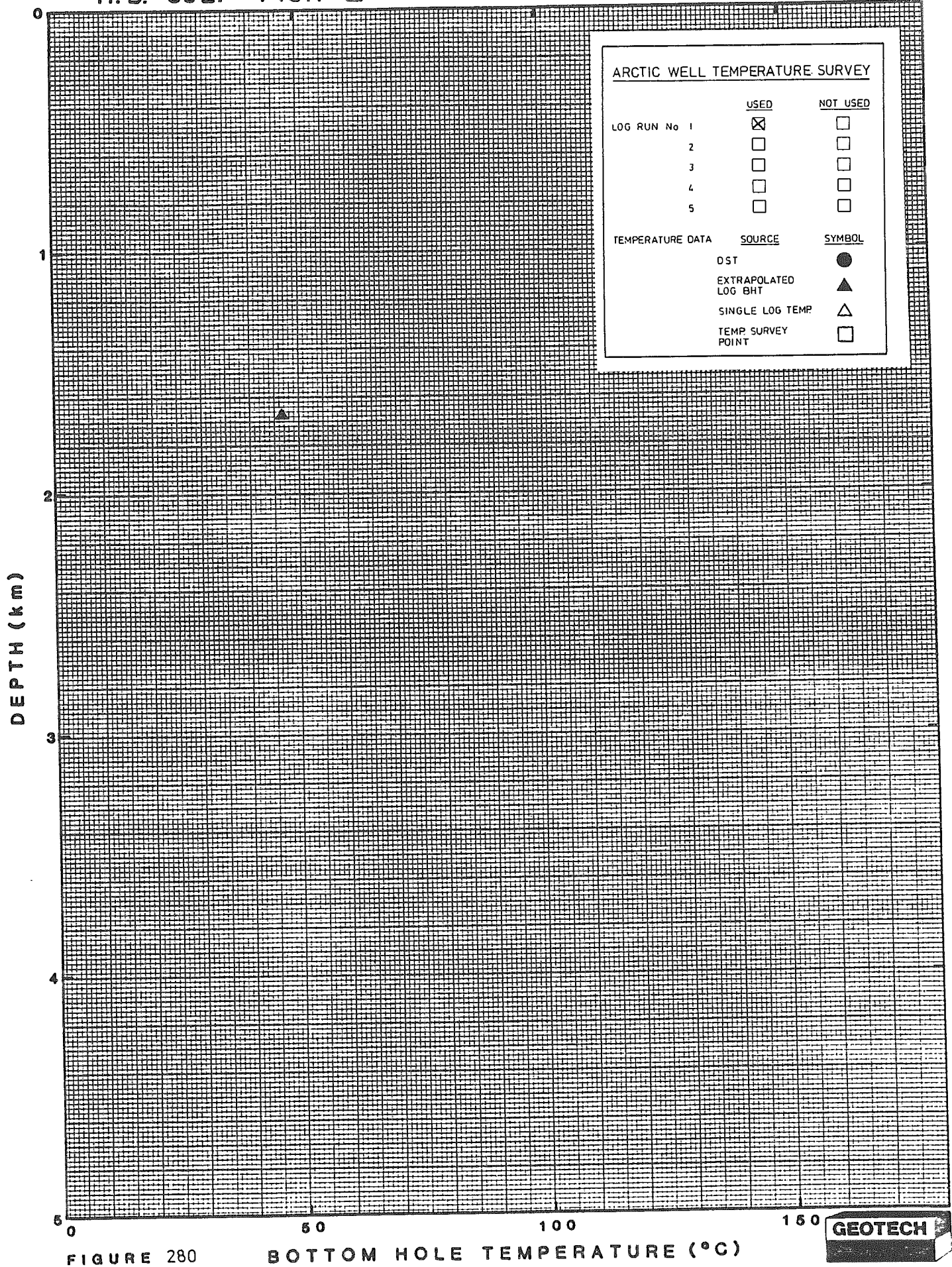
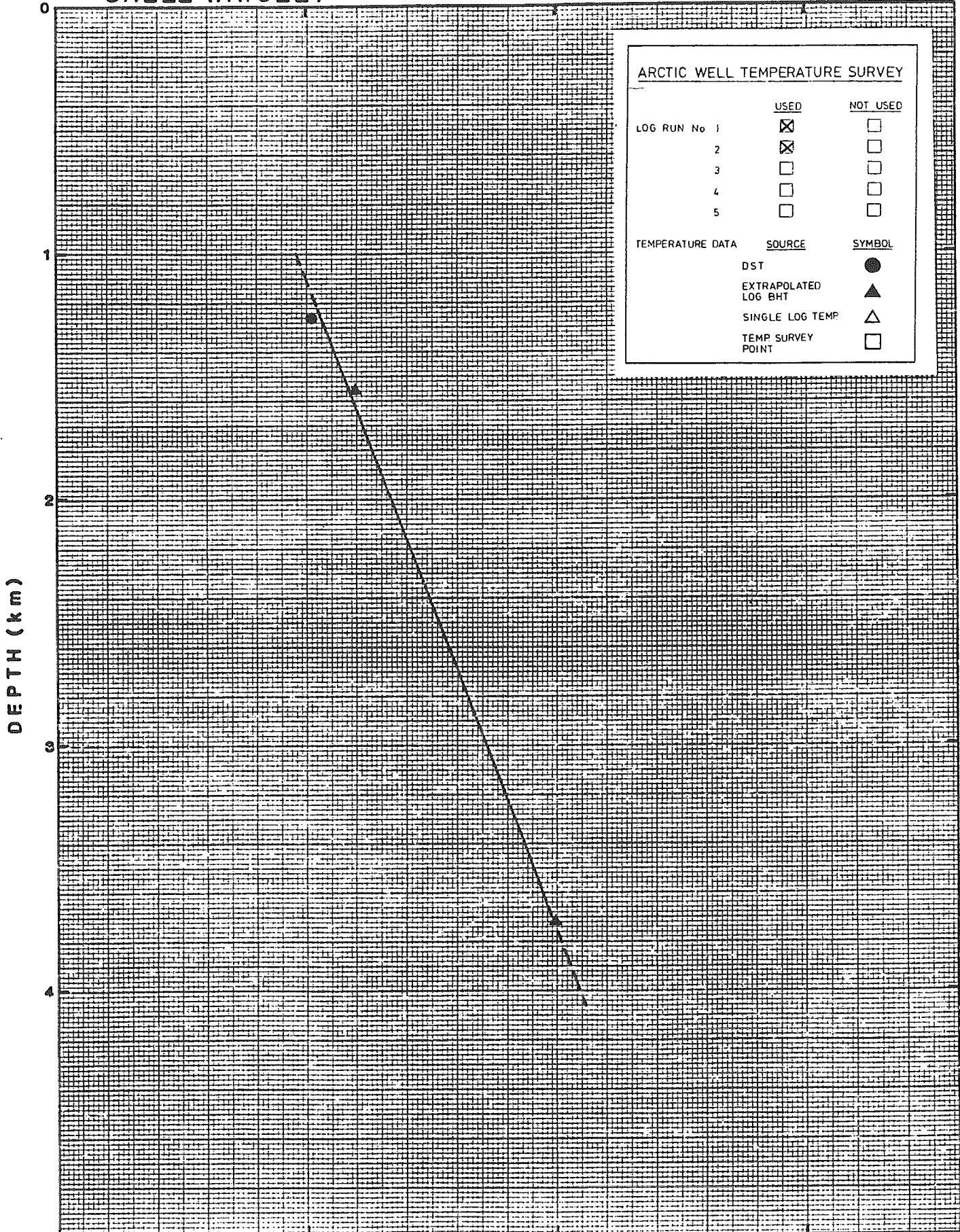


FIGURE 280



# SHELL WRIGLEY

G-70 63-10-124-00



DEPTH (km)

FIGURE 281

BOTTOM HOLE TEMPERATURE (°C)



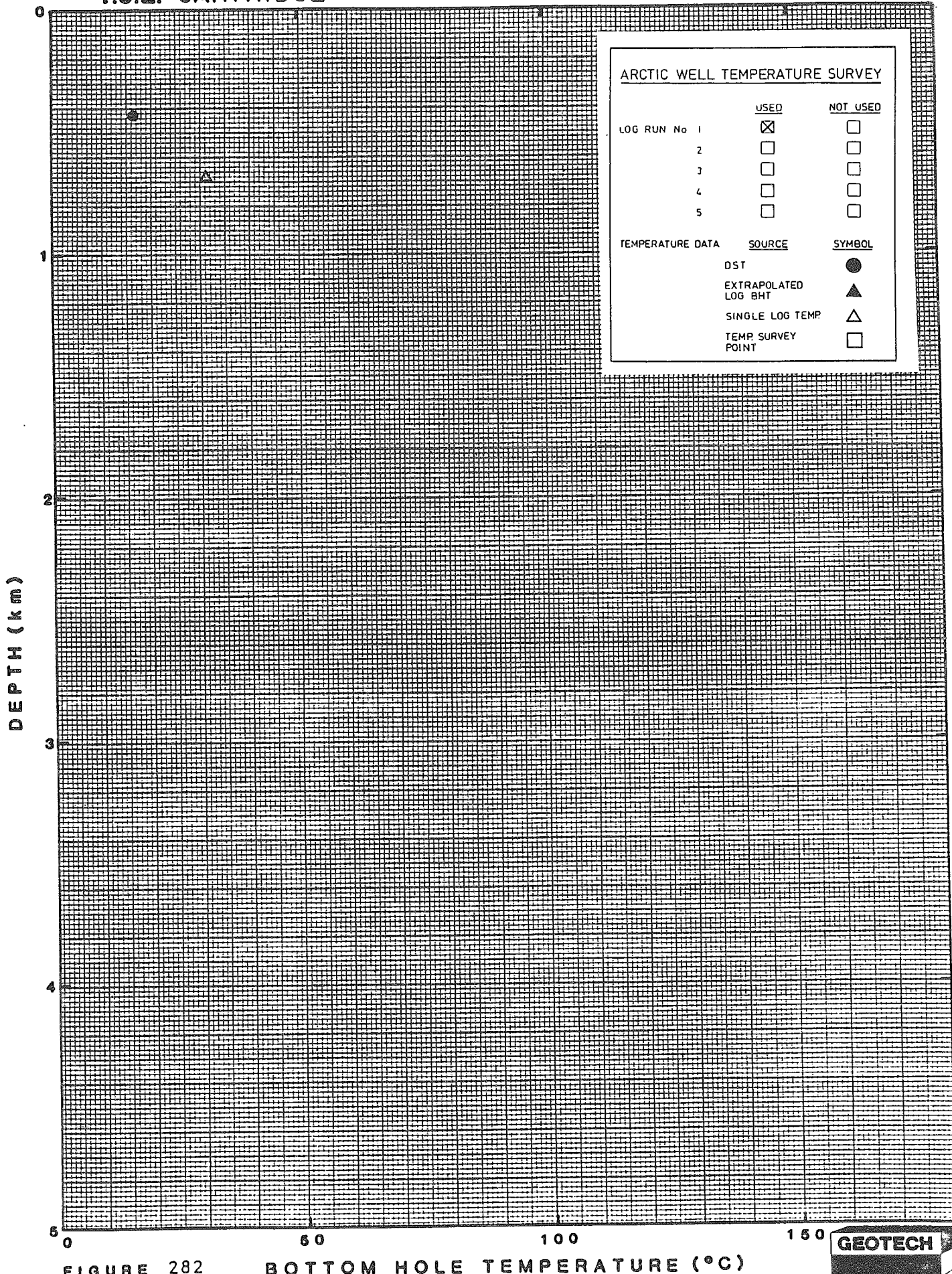


FIGURE 282

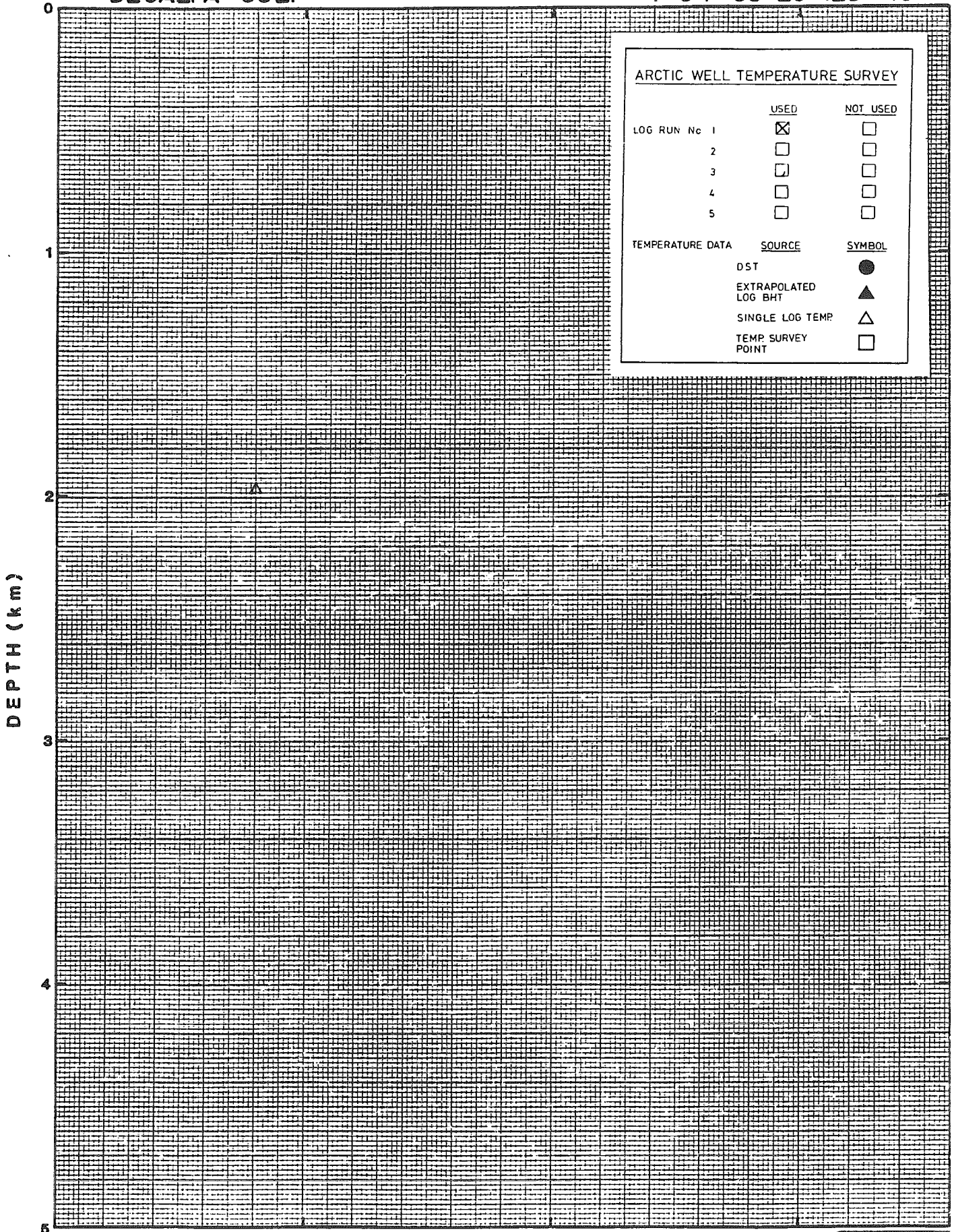
BOTTOM HOLE TEMPERATURE (°C)





DECALTA GULF

1-54 63-20-123-45



ARCTIC WELL TEMPERATURE SURVEY

	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 283

BOTTOM HOLE TEMPERATURE (°C)



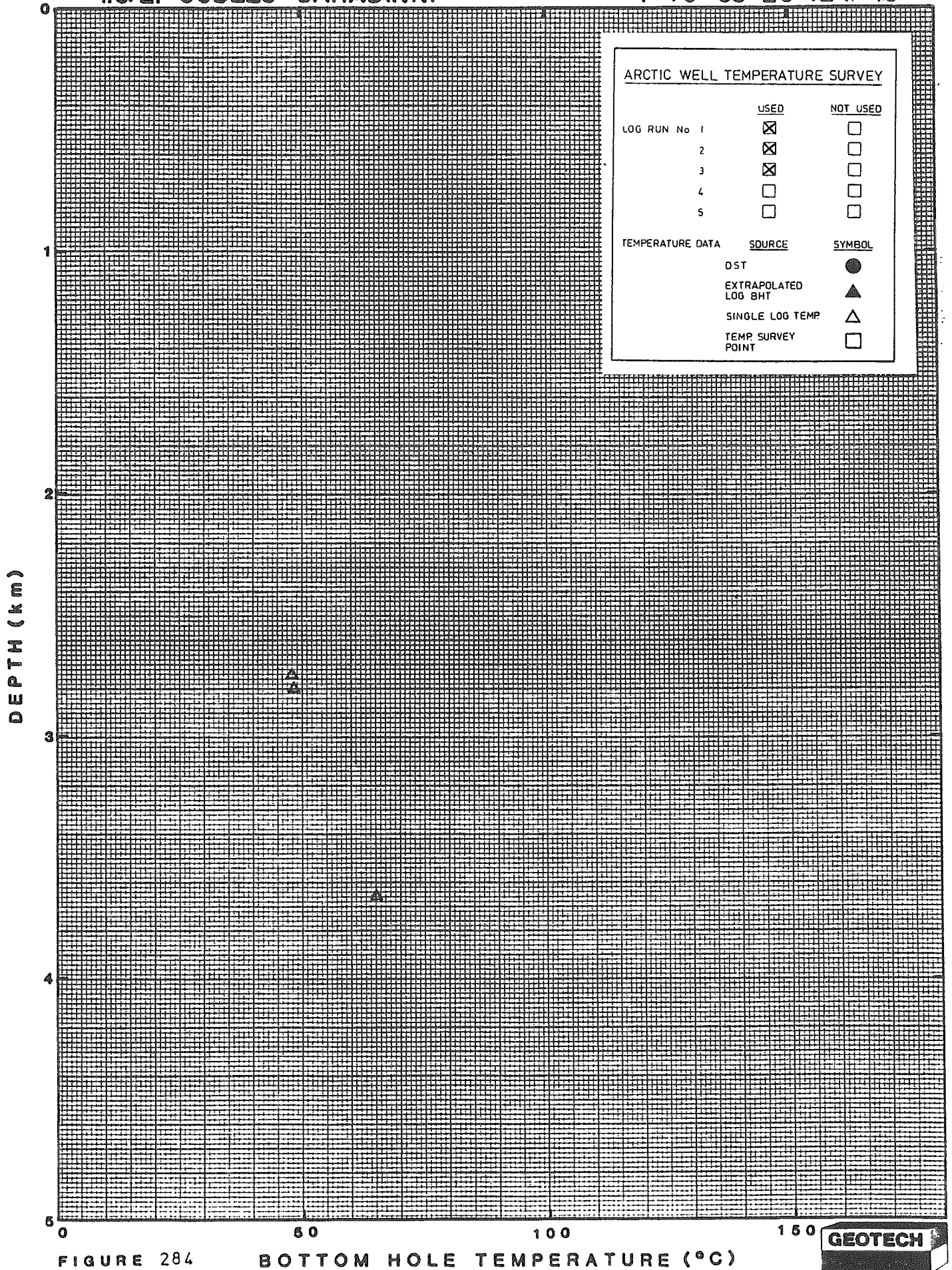


FIGURE 284

BOTTOM HOLE TEMPERATURE (°C)



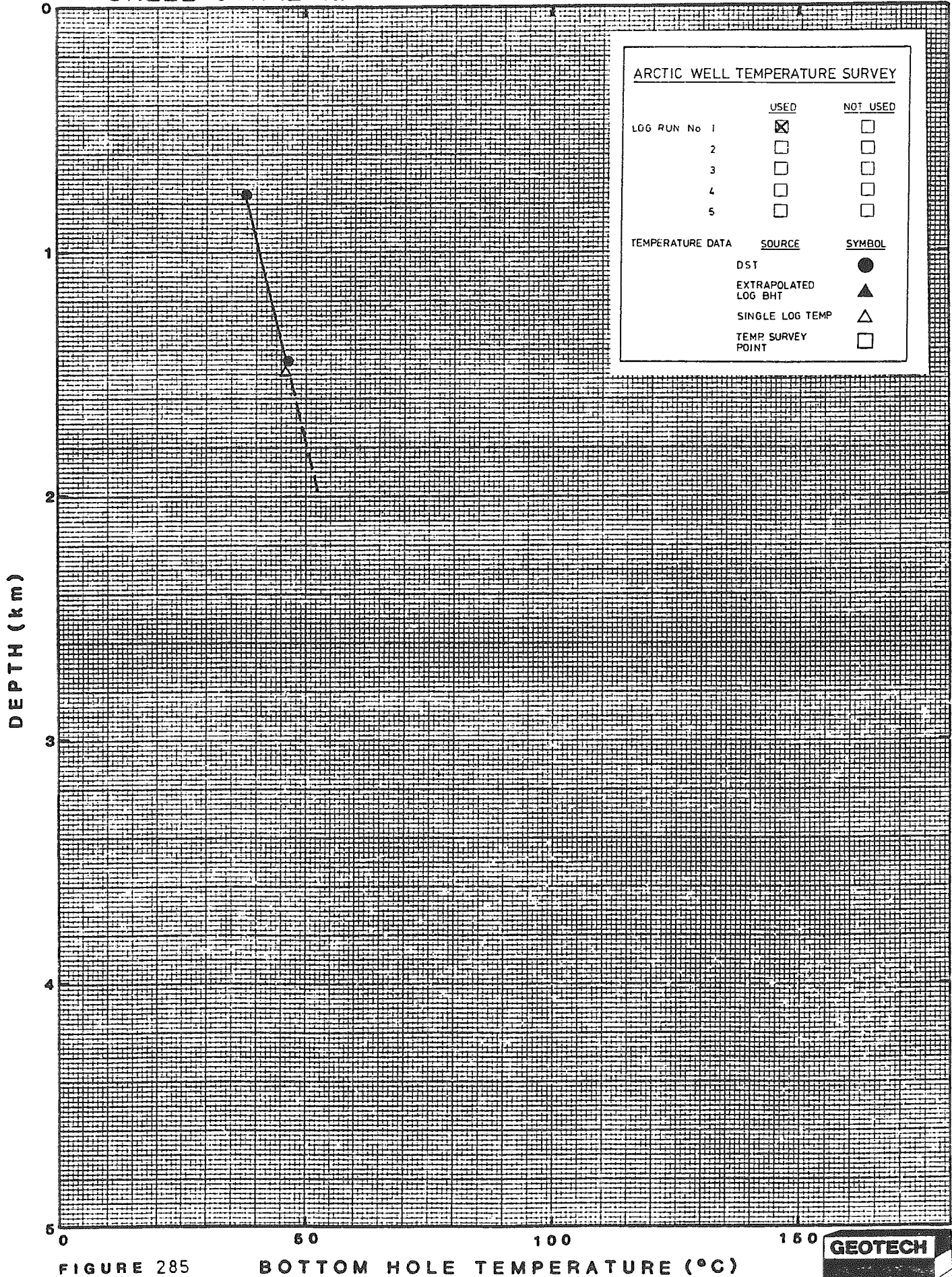
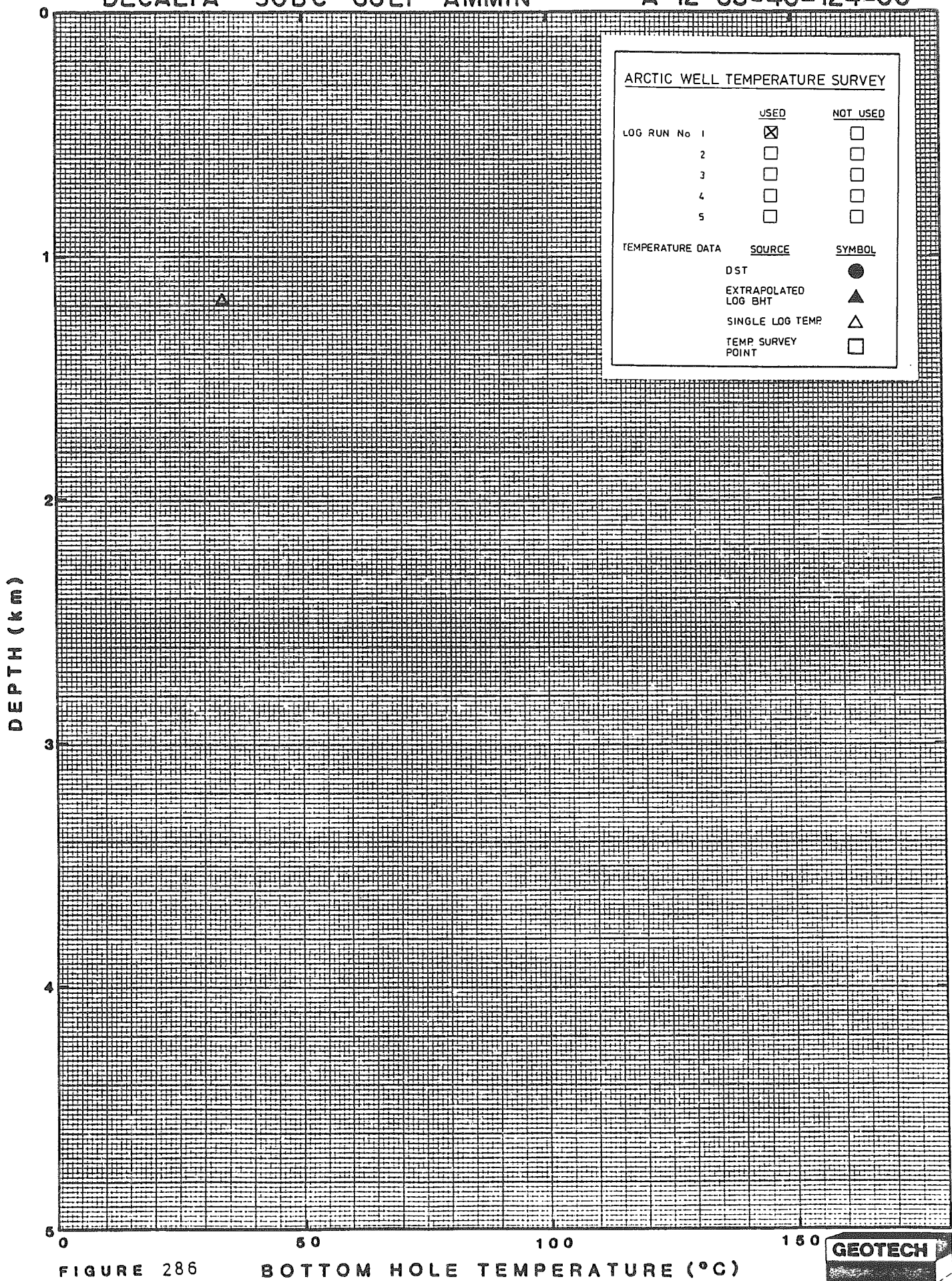


FIGURE 285

BOTTOM HOLE TEMPERATURE (°C)







DEPTH (km)

FIGURE 286

BOTTOM HOLE TEMPERATURE (°C)





I.O.E LAC TACHE

C-35 63-50-120-30

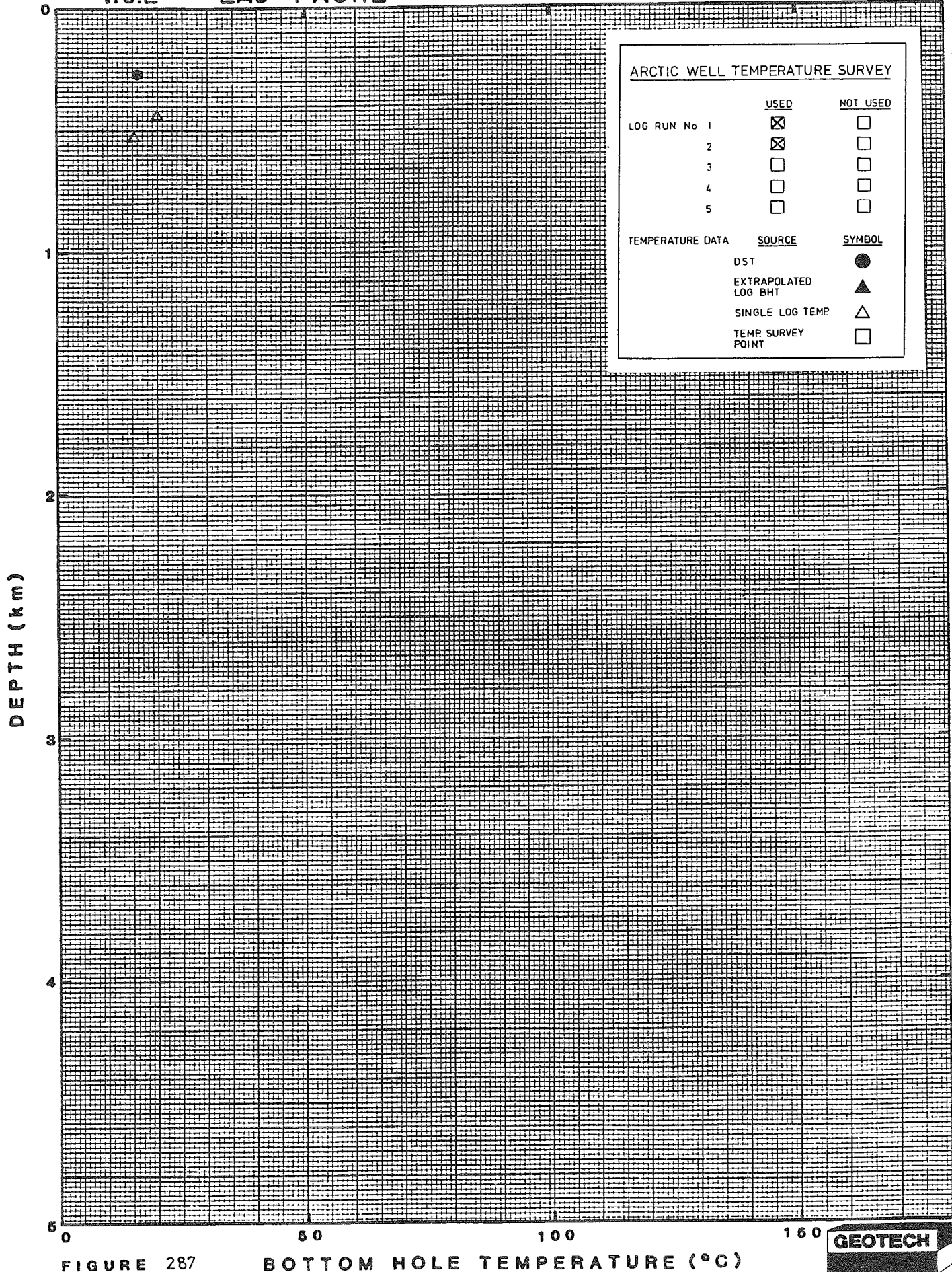


FIGURE 287

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

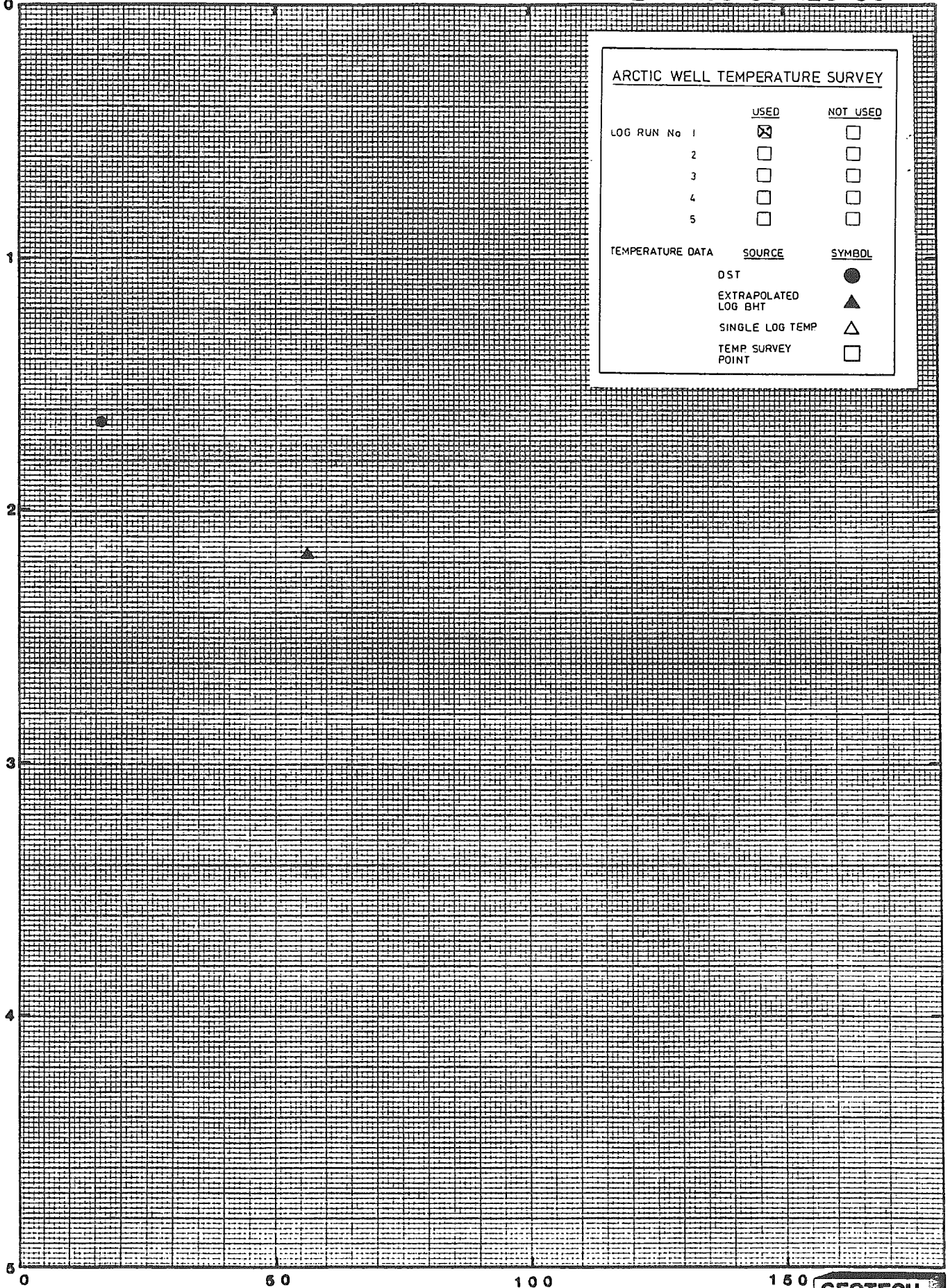


FIGURE 288

BOTTOM HOLE TEMPERATURE (°C)



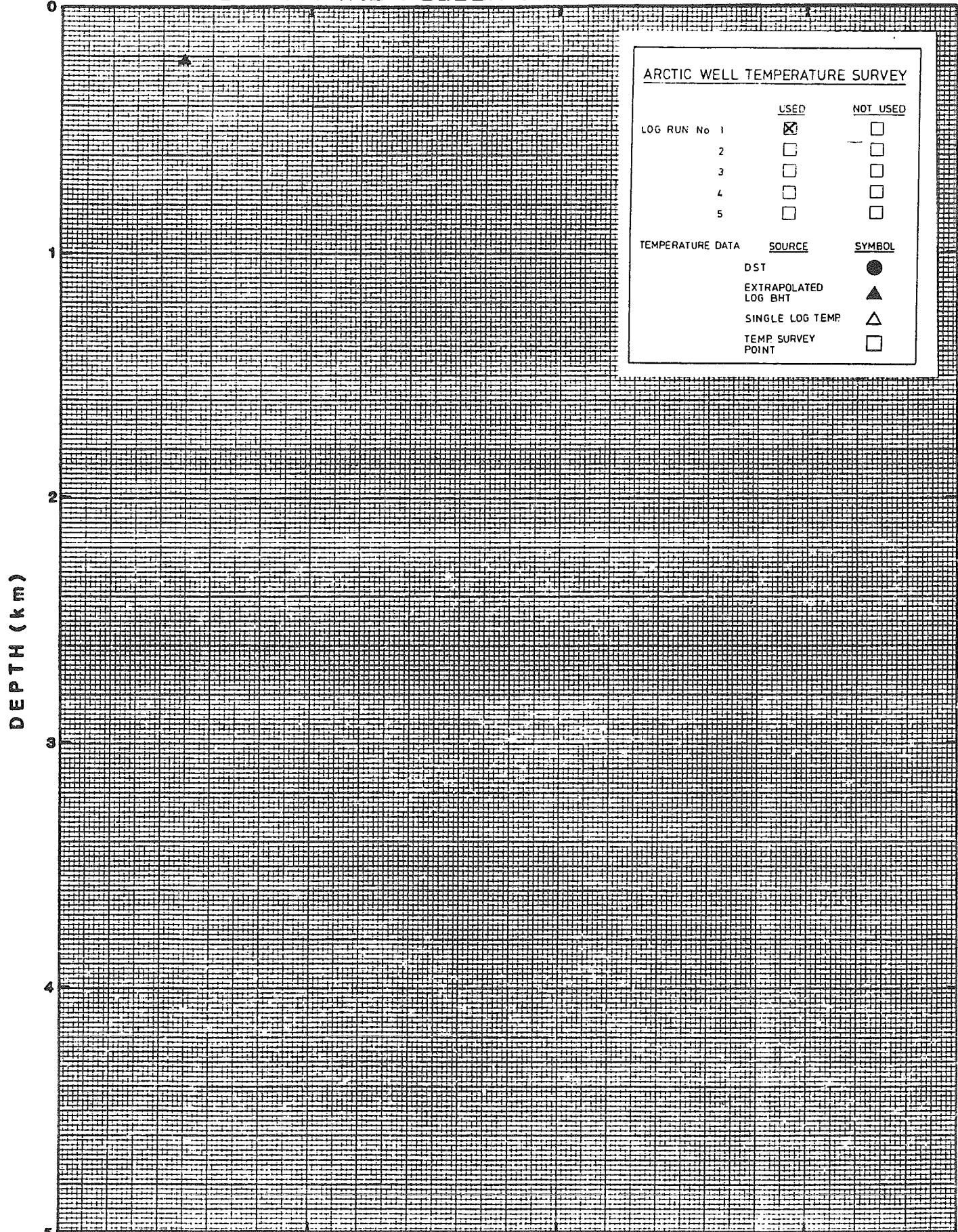


FIGURE 289

BOTTOM HOLE TEMPERATURE (°C)





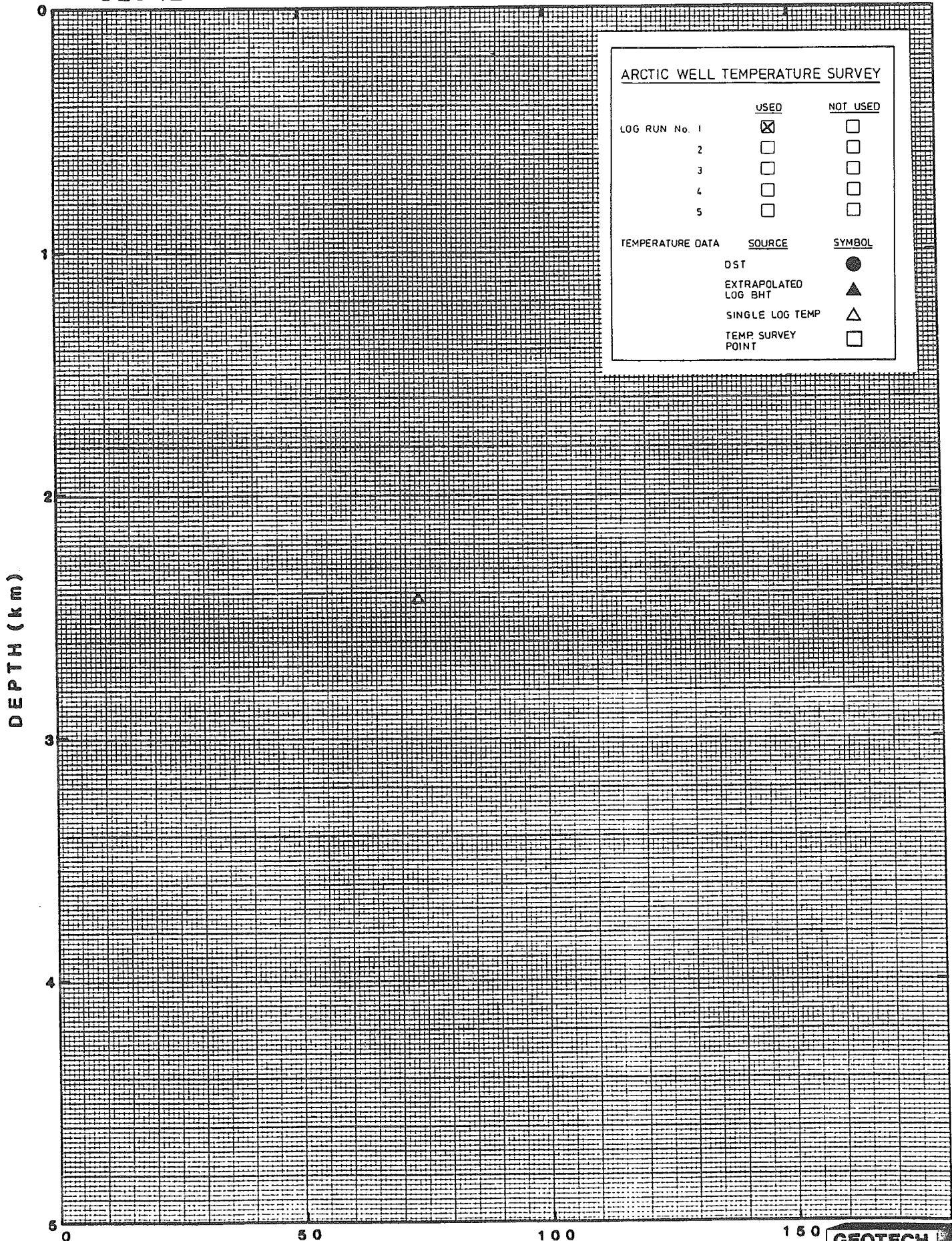


FIGURE 290

BOTTOM HOLE TEMPERATURE (°C)





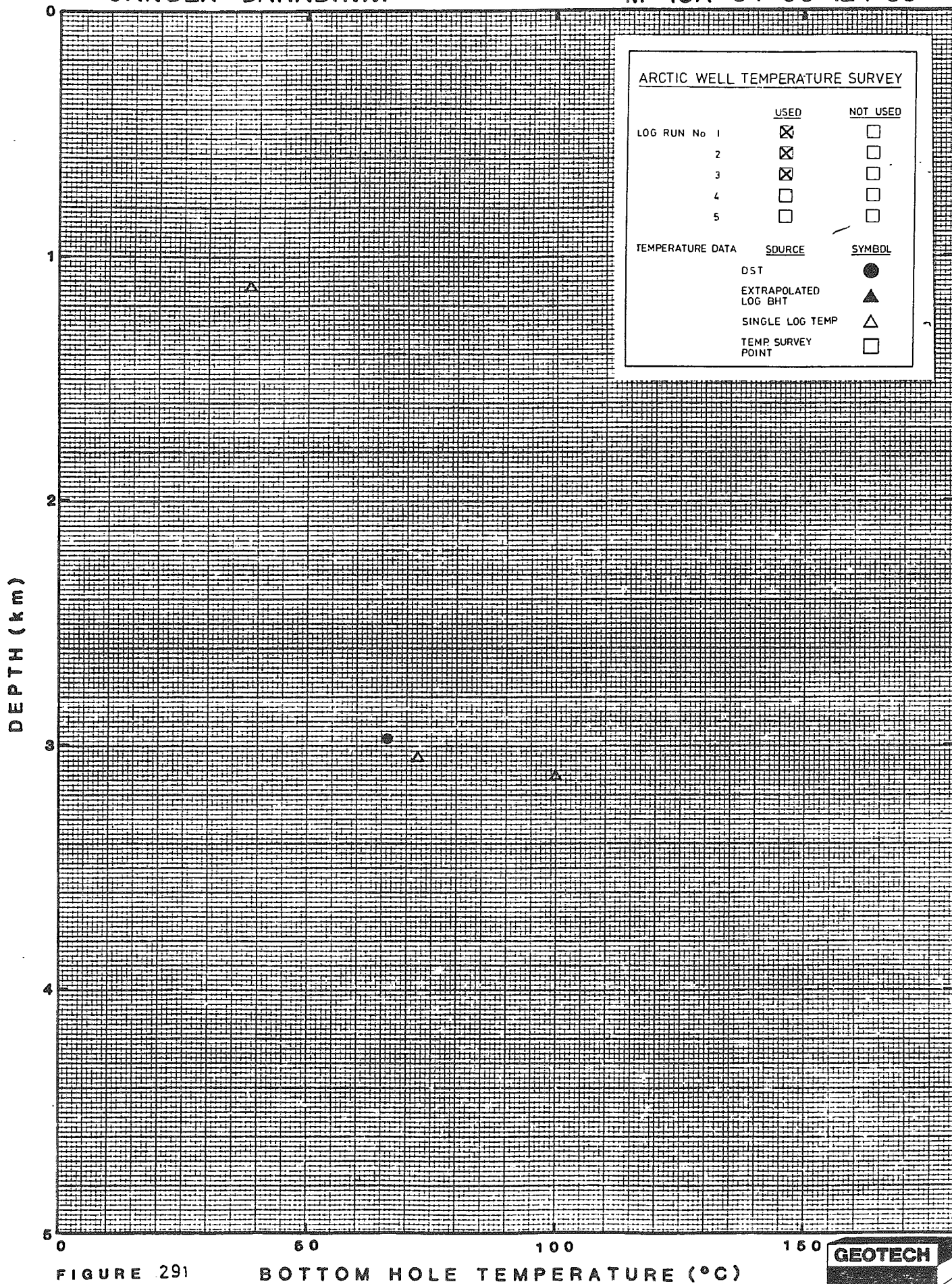


FIGURE 291

BOTTOM HOLE TEMPERATURE (°C)



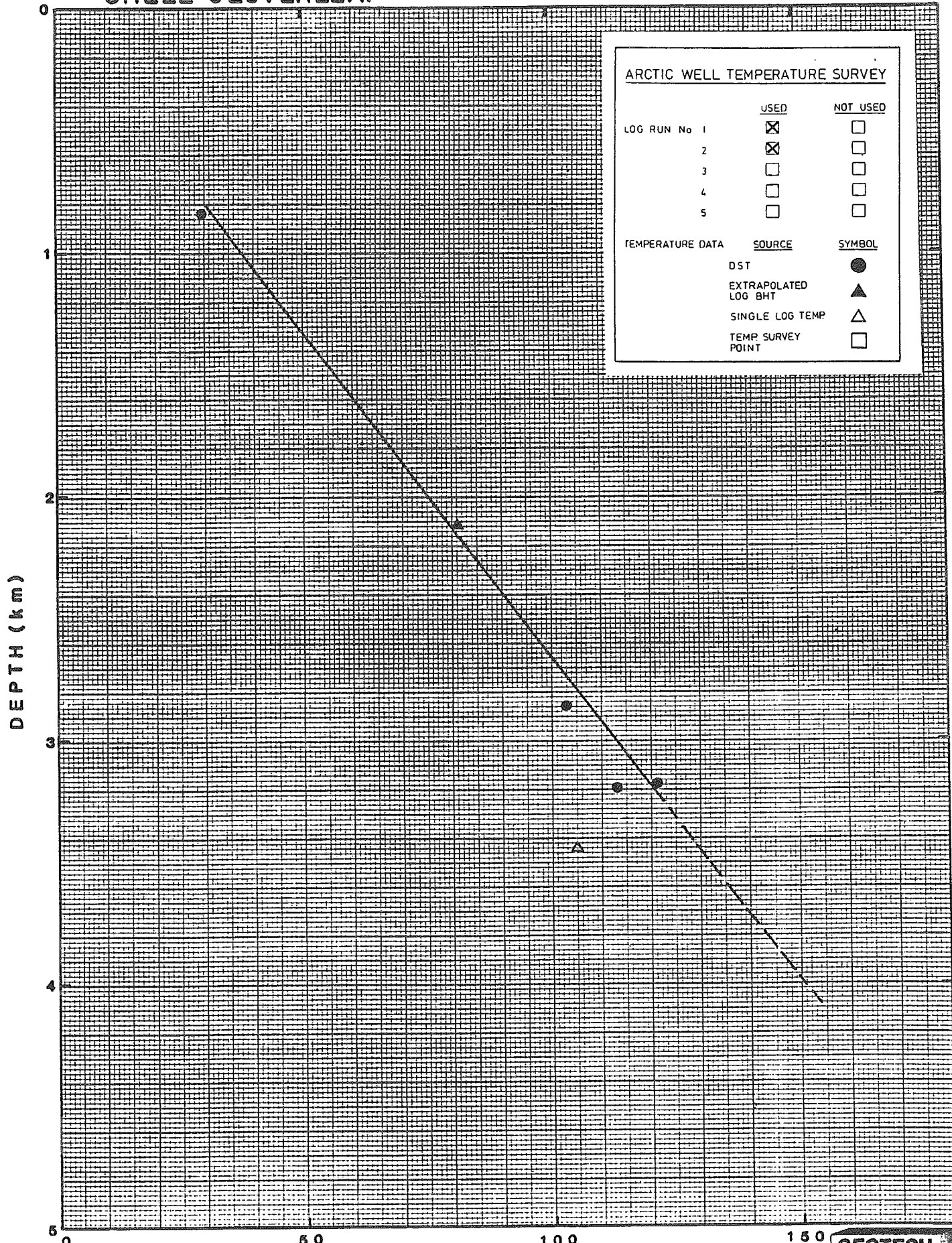


FIGURE 292

BOTTOM HOLE TEMPERATURE (°C)



AQUIT. SILVAN PLATEAU

G-51 64-00-125-15

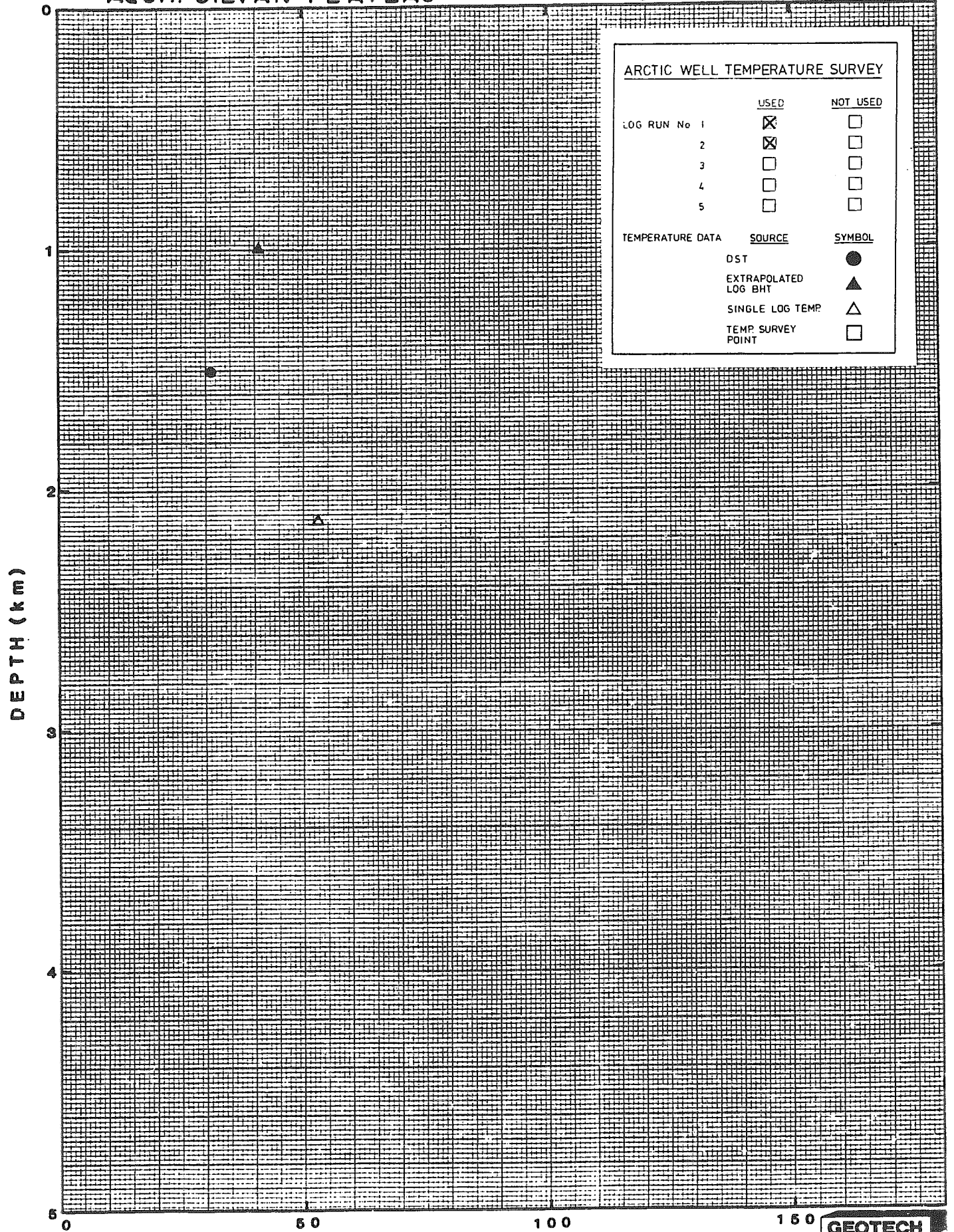


FIGURE 293

BOTTOM HOLE TEMPERATURE (°C)





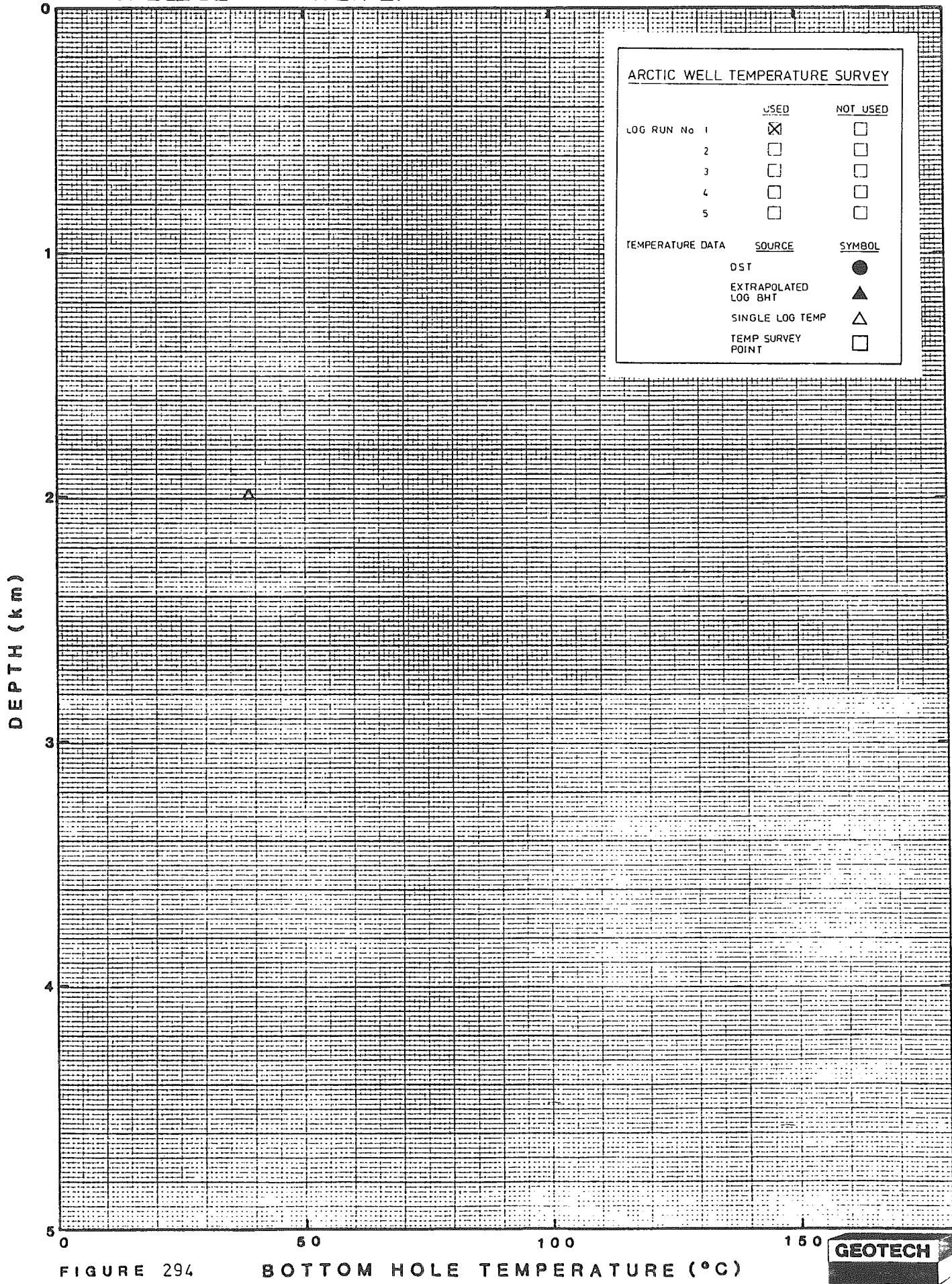


FIGURE 294

BOTTOM HOLE TEMPERATURE (°C)





DECALTA MESA REDSTONE

P-78 64-10-124-15

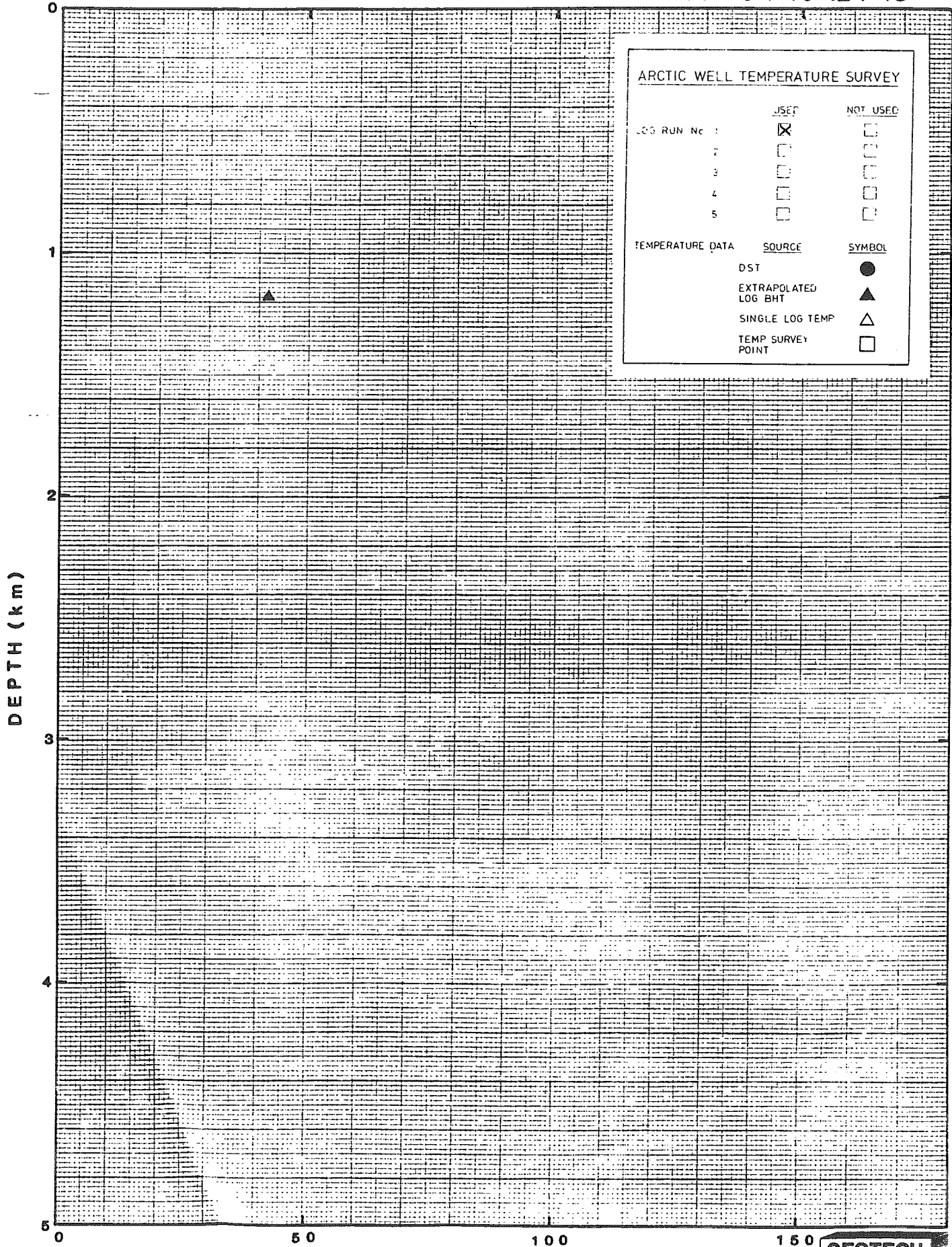


FIGURE 295

BOTTOM HOLE TEMPERATURE (°C)

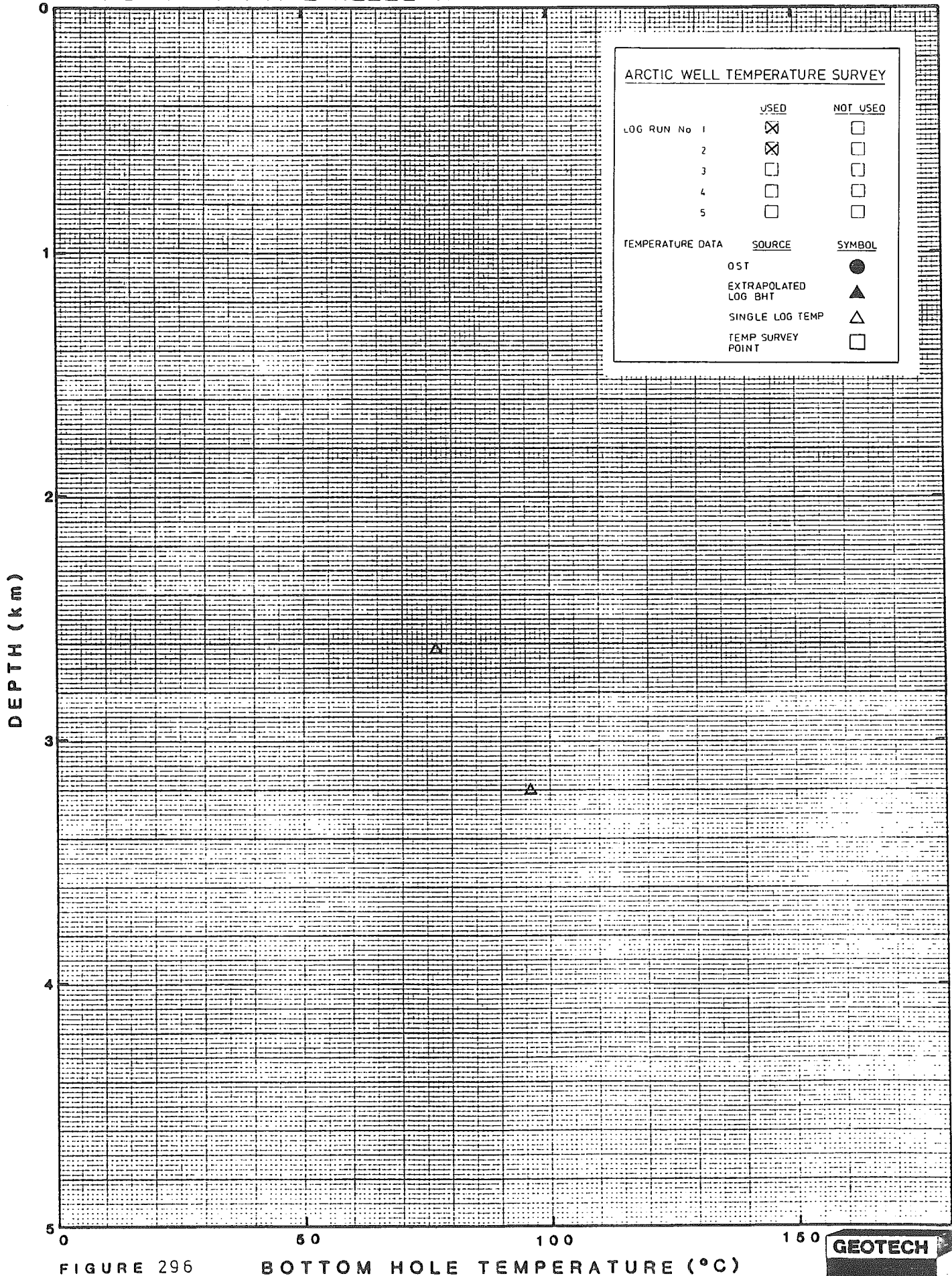


FIGURE 296

BOTTOM HOLE TEMPERATURE (°C)



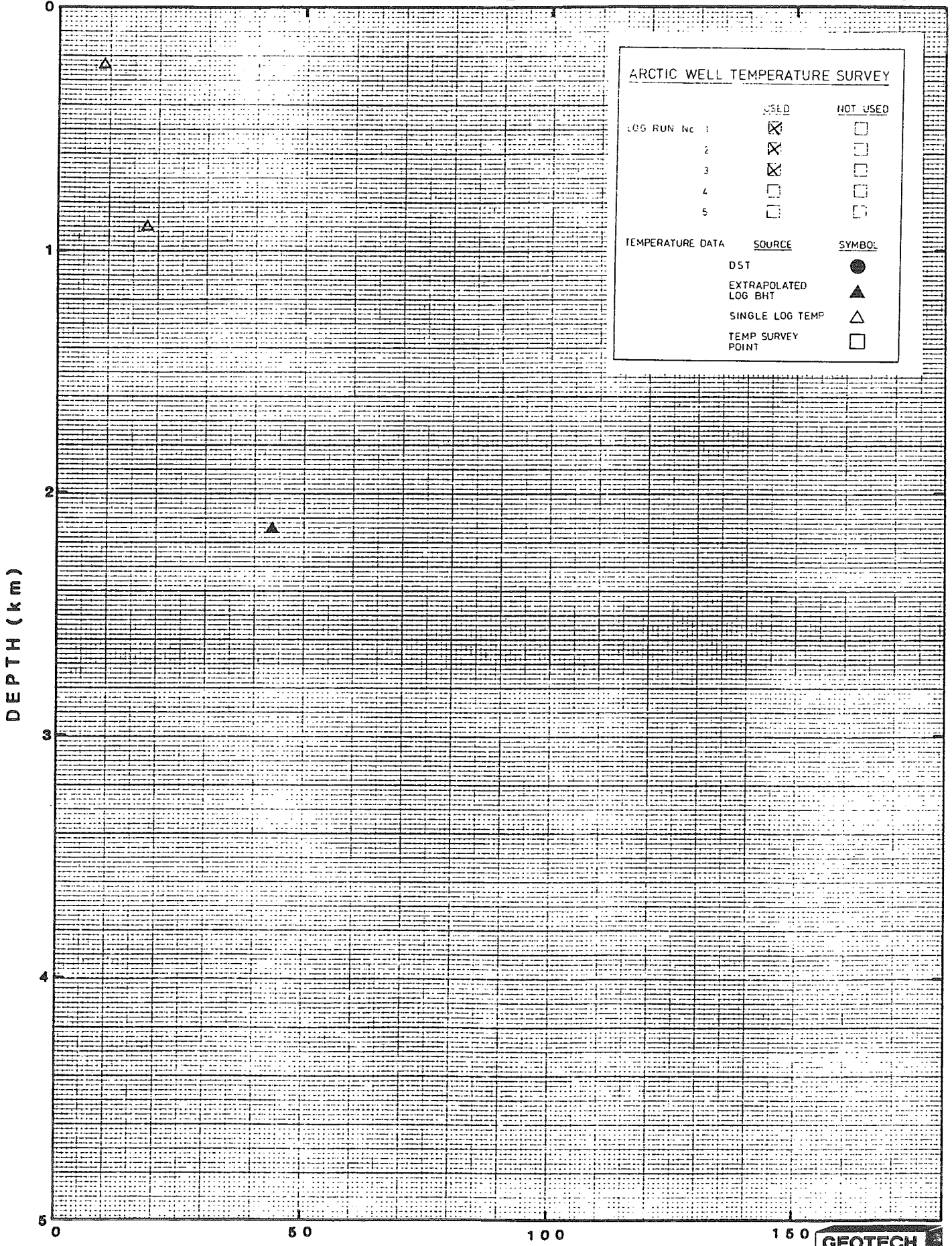


FIGURE 297

BOTTOM HOLE TEMPERATURE (°C)



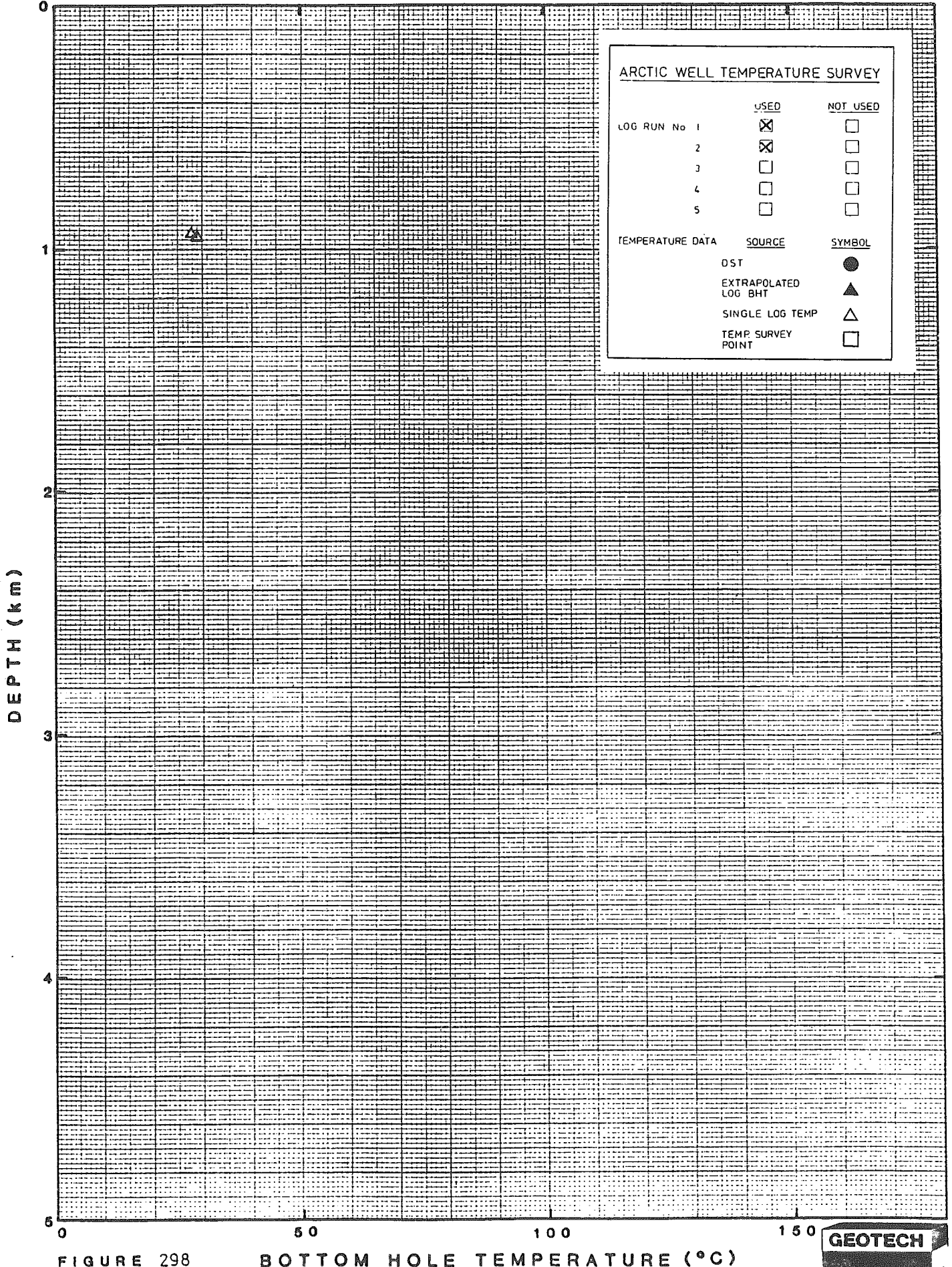


FIGURE 298

BOTTOM HOLE TEMPERATURE (°C)





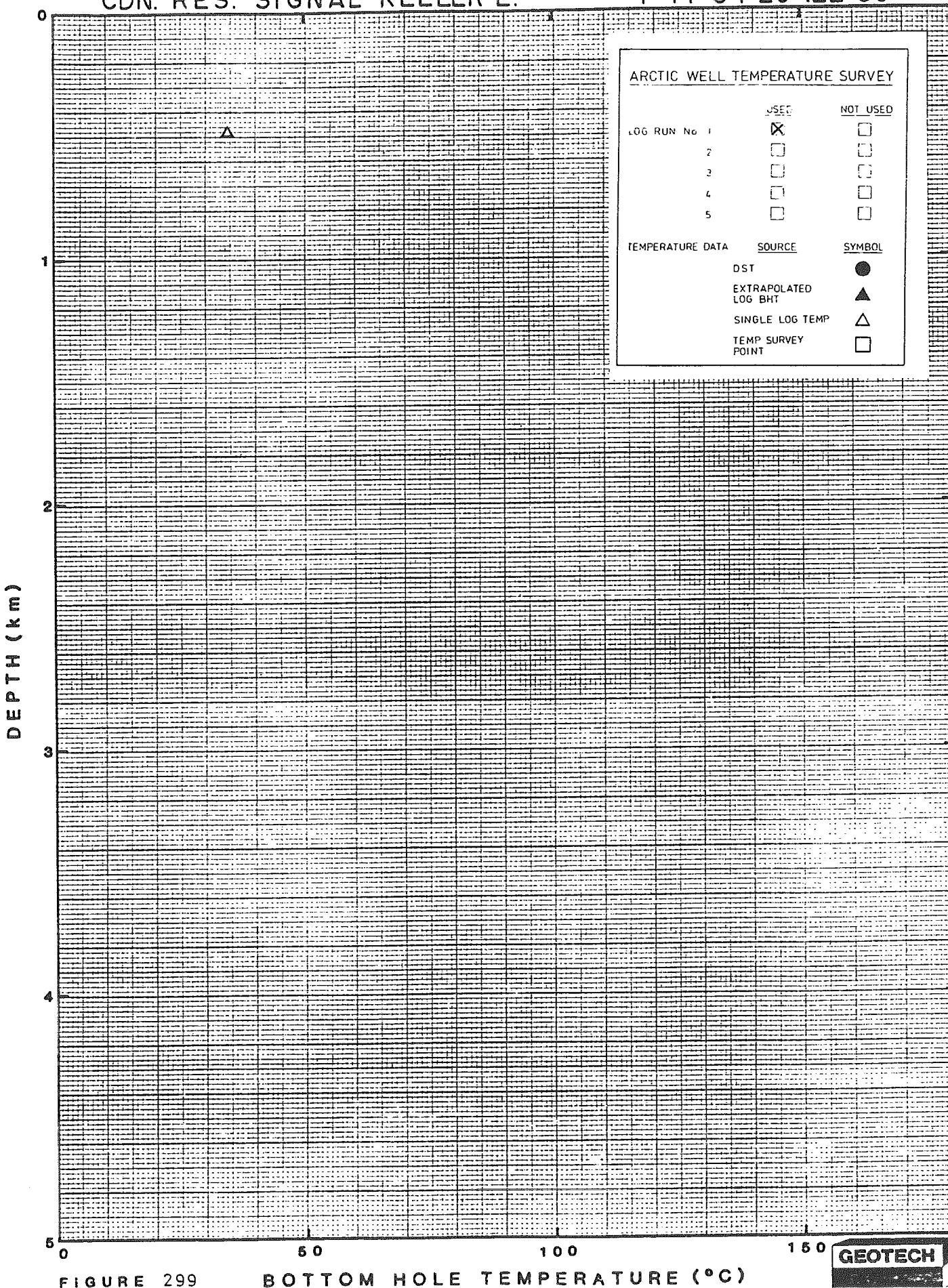


FIGURE 299



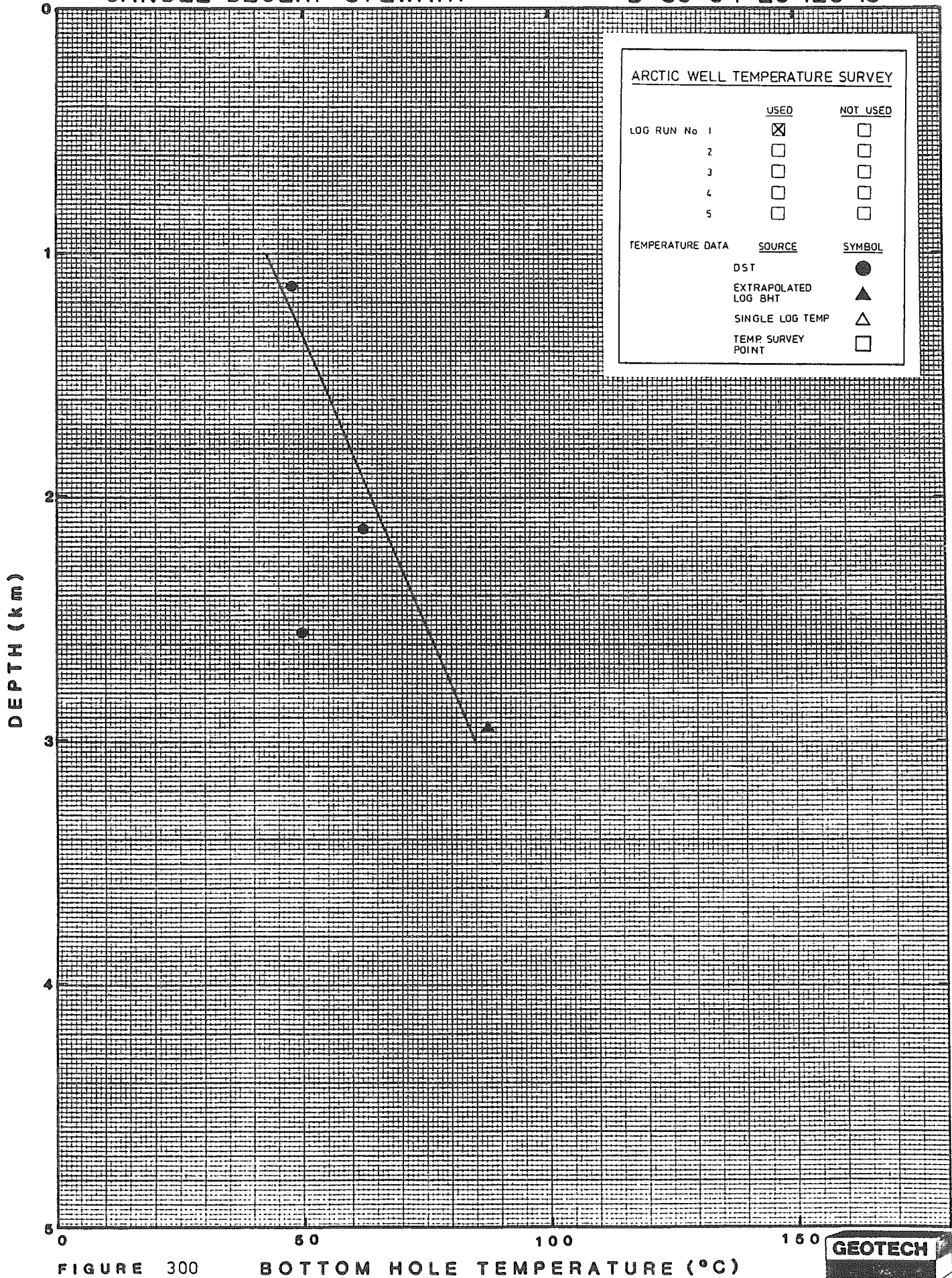


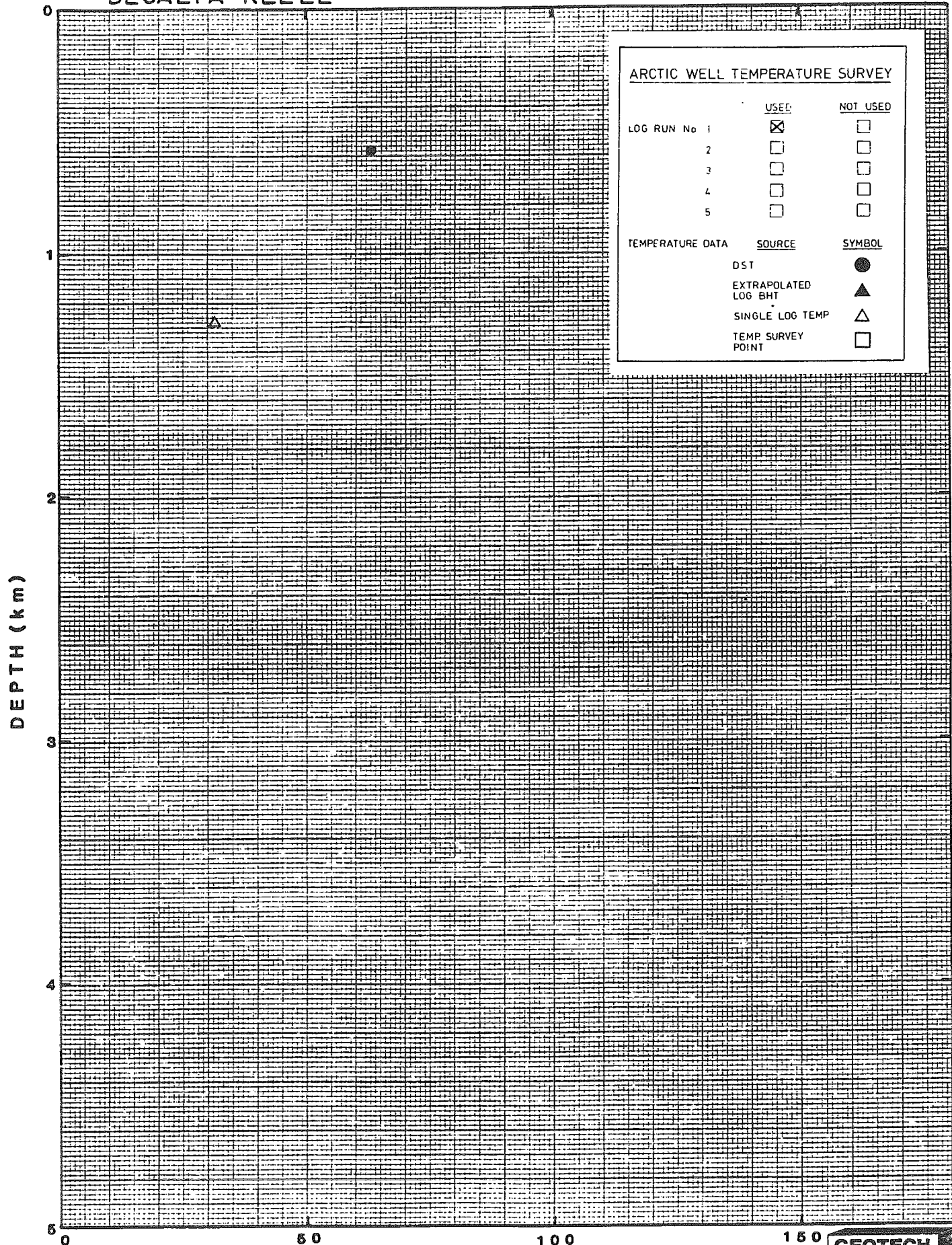
FIGURE 300

BOTTOM HOLE TEMPERATURE (°C)



DECALTA KEELE

N-62 64-30-124-45



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP. SURVEY POINT	□

FIGURE 301

BOTTOM HOLE TEMPERATURE (°C)





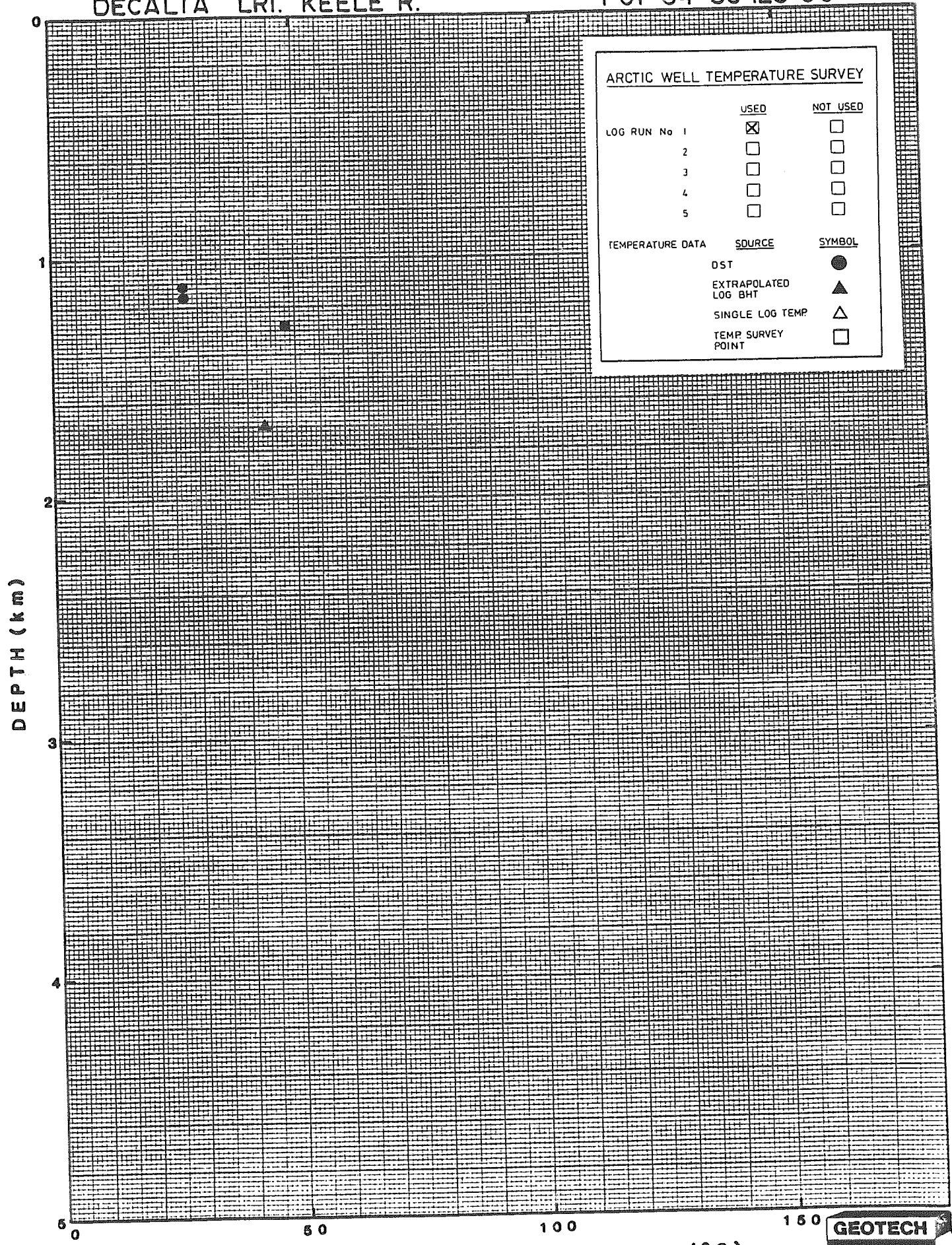


FIGURE 302

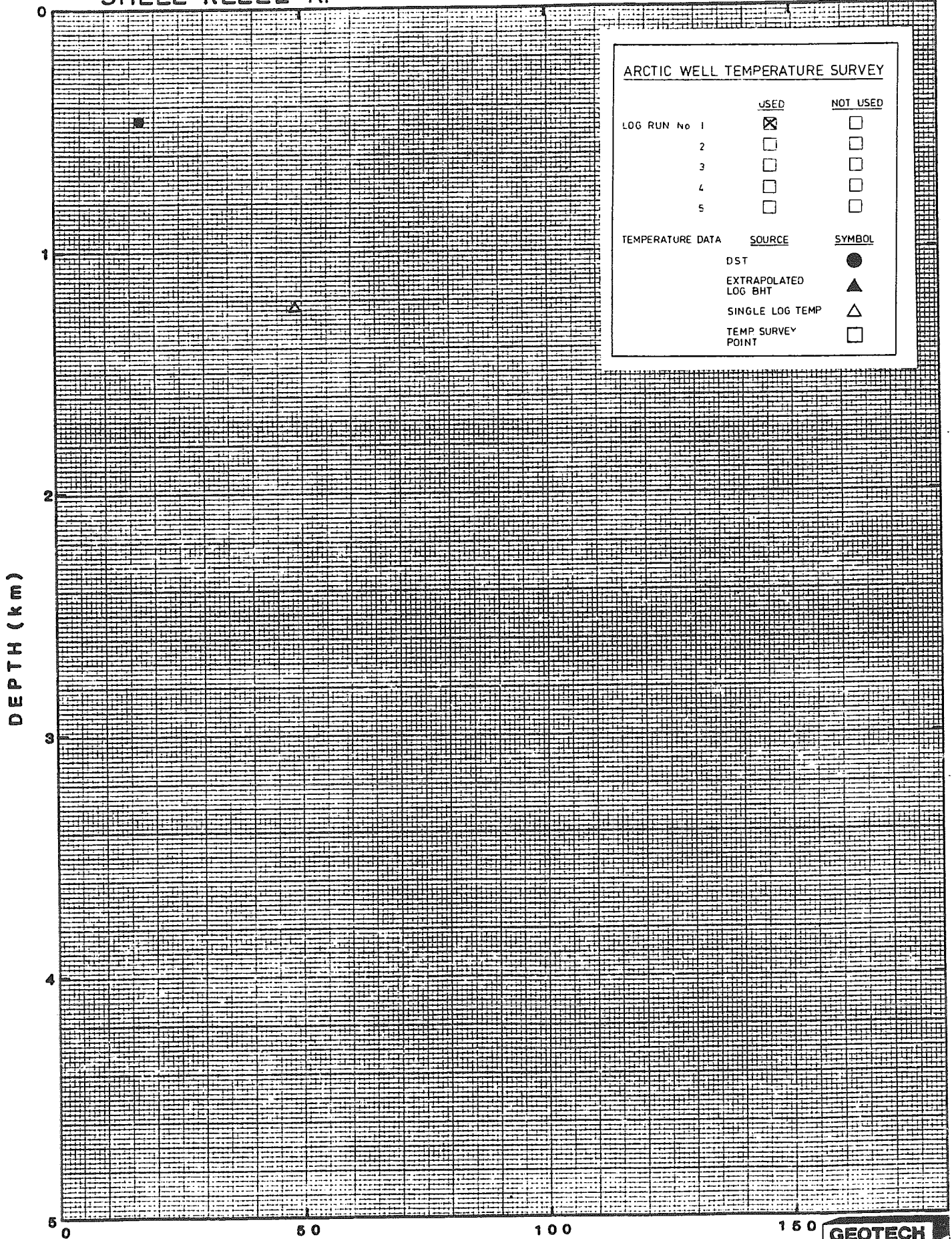
BOTTOM HOLE TEMPERATURE (°C)





SHELL KEELE R.

L-04 64-30-125-00



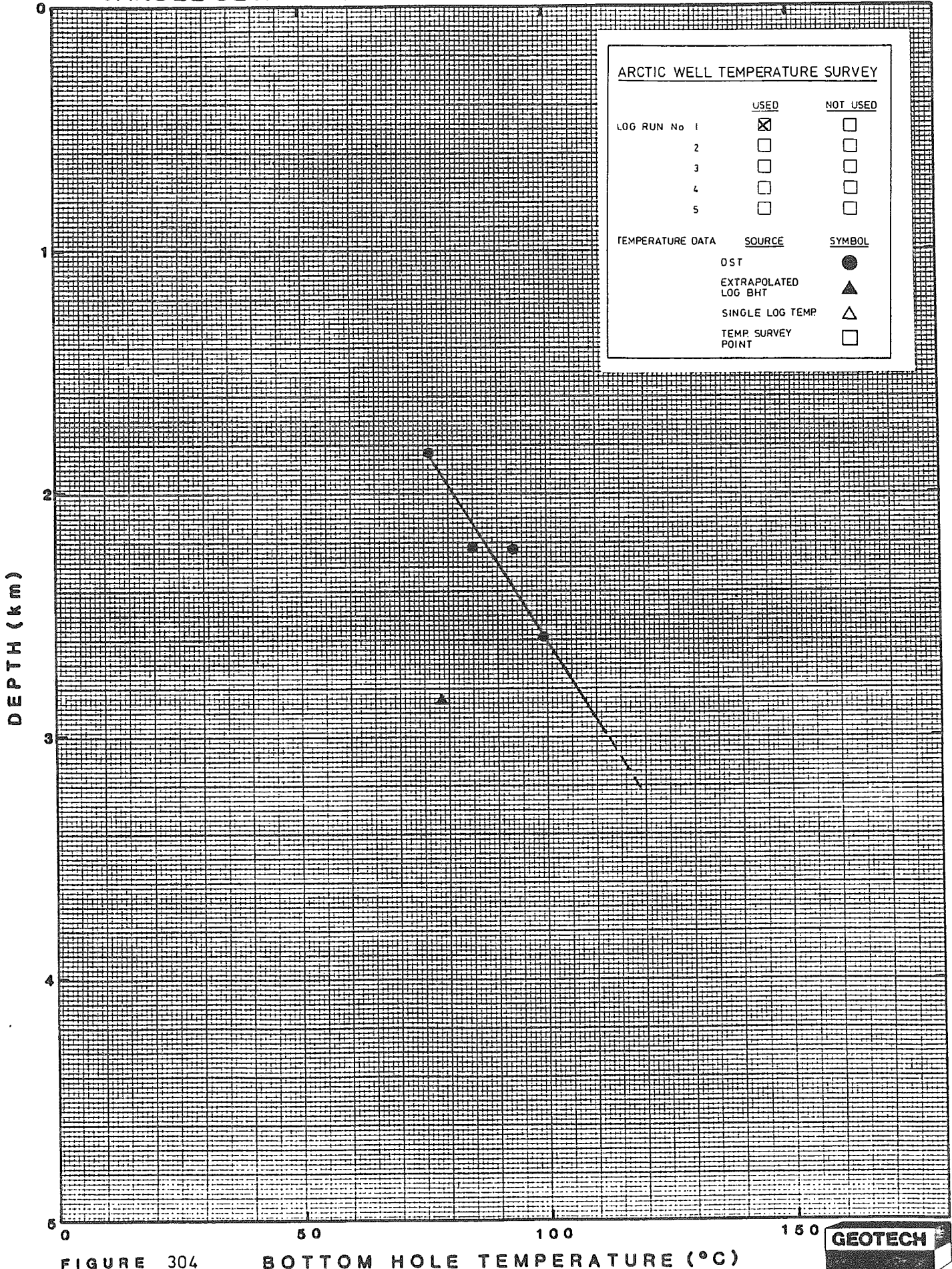


FIGURE 304

BOTTOM HOLE TEMPERATURE (°C)



BTTES BLACKWATER L.

1-54 64-40-122-30

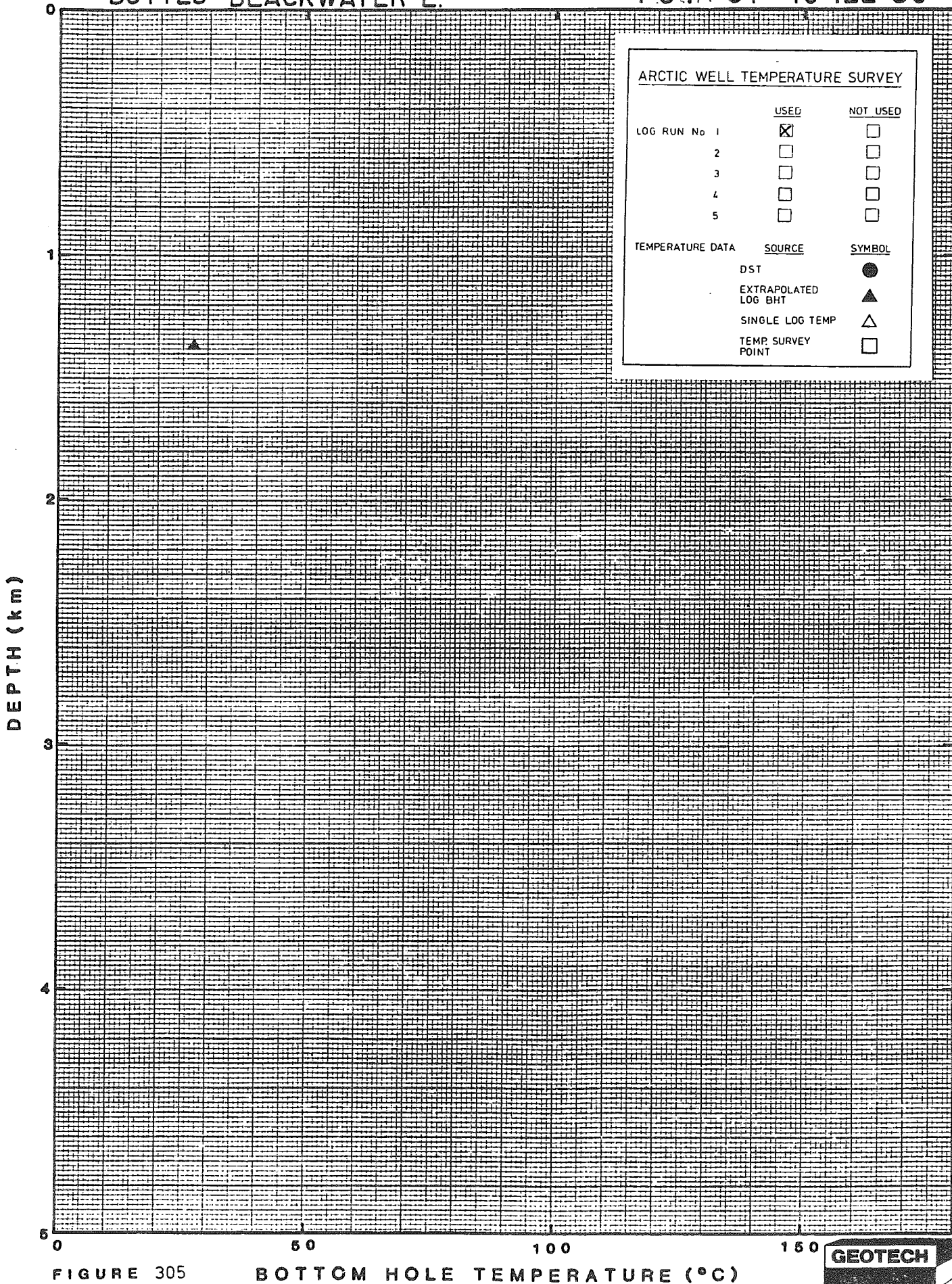
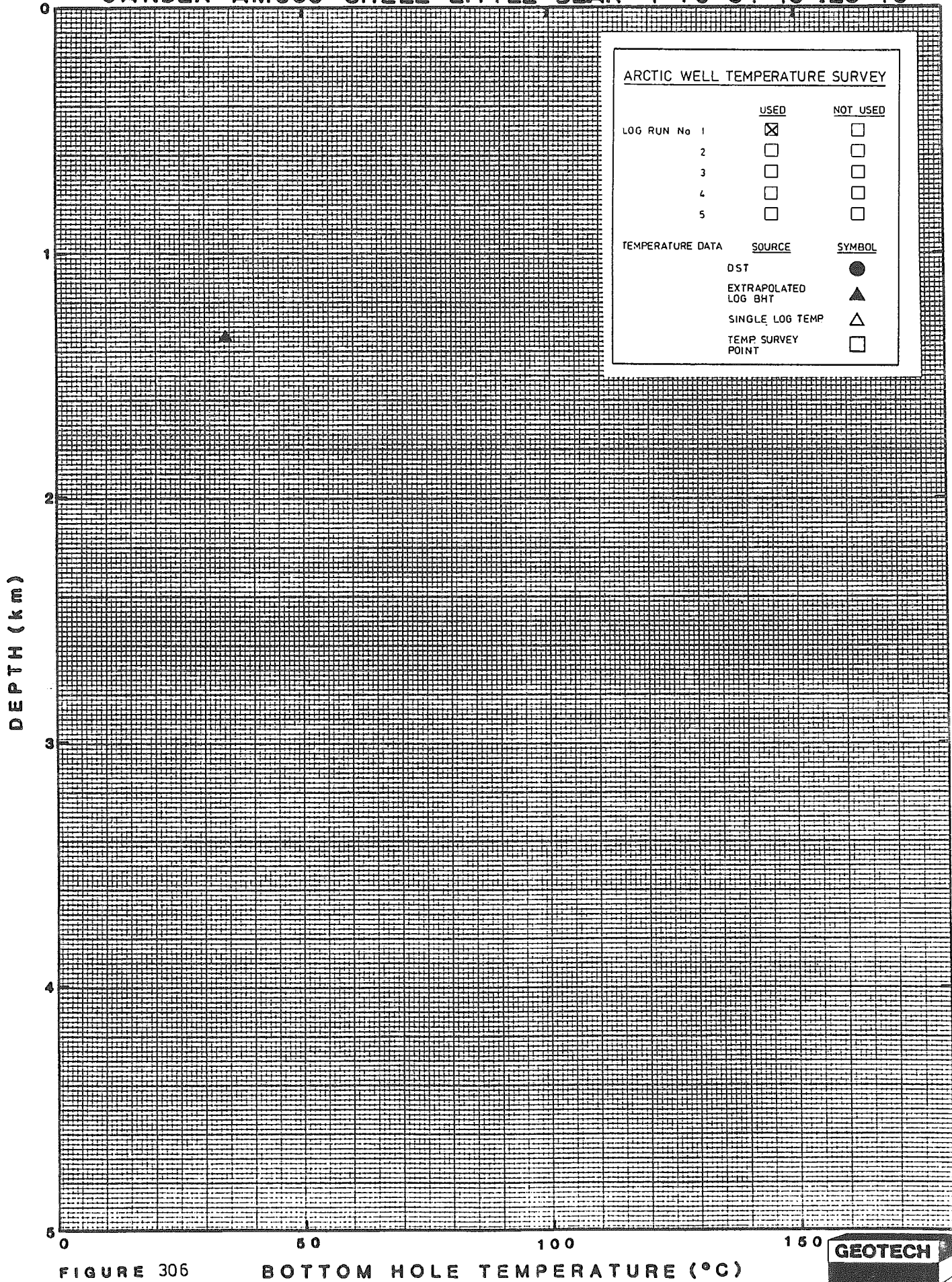


FIGURE 305

BOTTOM HOLE TEMPERATURE (°C)



# CANDEX AMOCO SHELL LITTLE BEAR 1-70 64-40-125-45



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

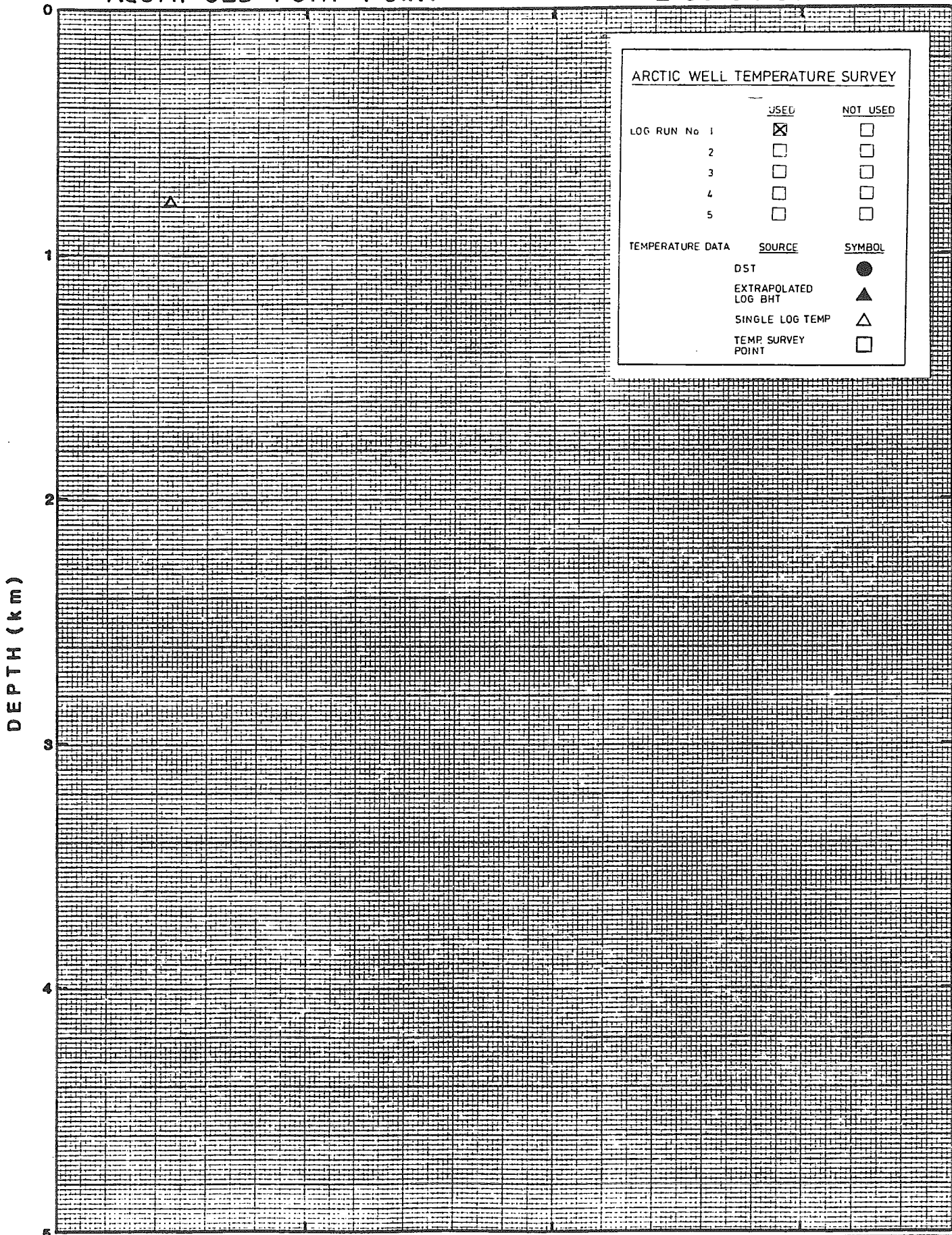
DEPTH (km)

0 50 100 150

FIGURE 306 BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

0 50 100 150

FIGURE 307 BOTTOM HOLE TEMPERATURE (°C)



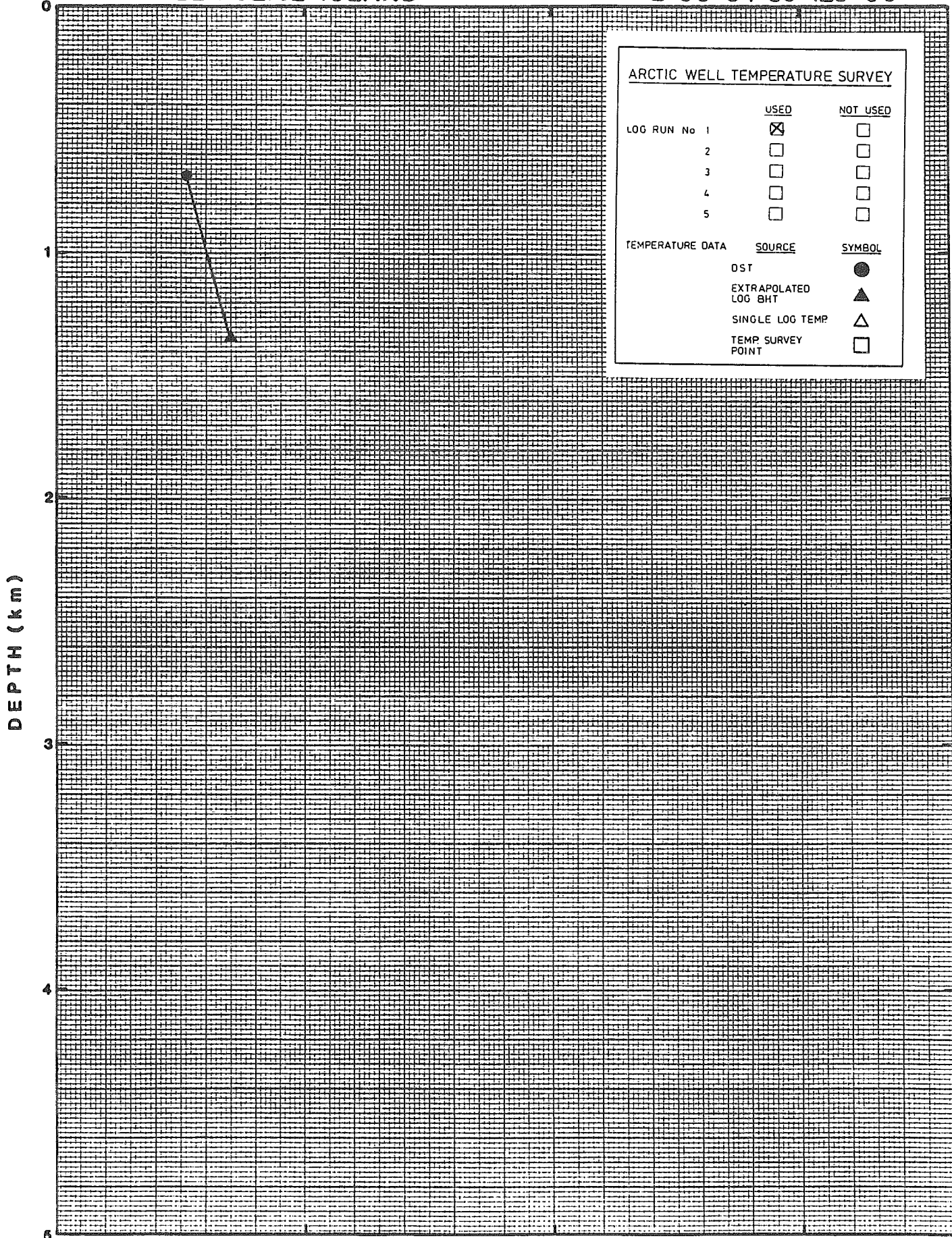


FIGURE 308

BOTTOM HOLE TEMPERATURE (°C)



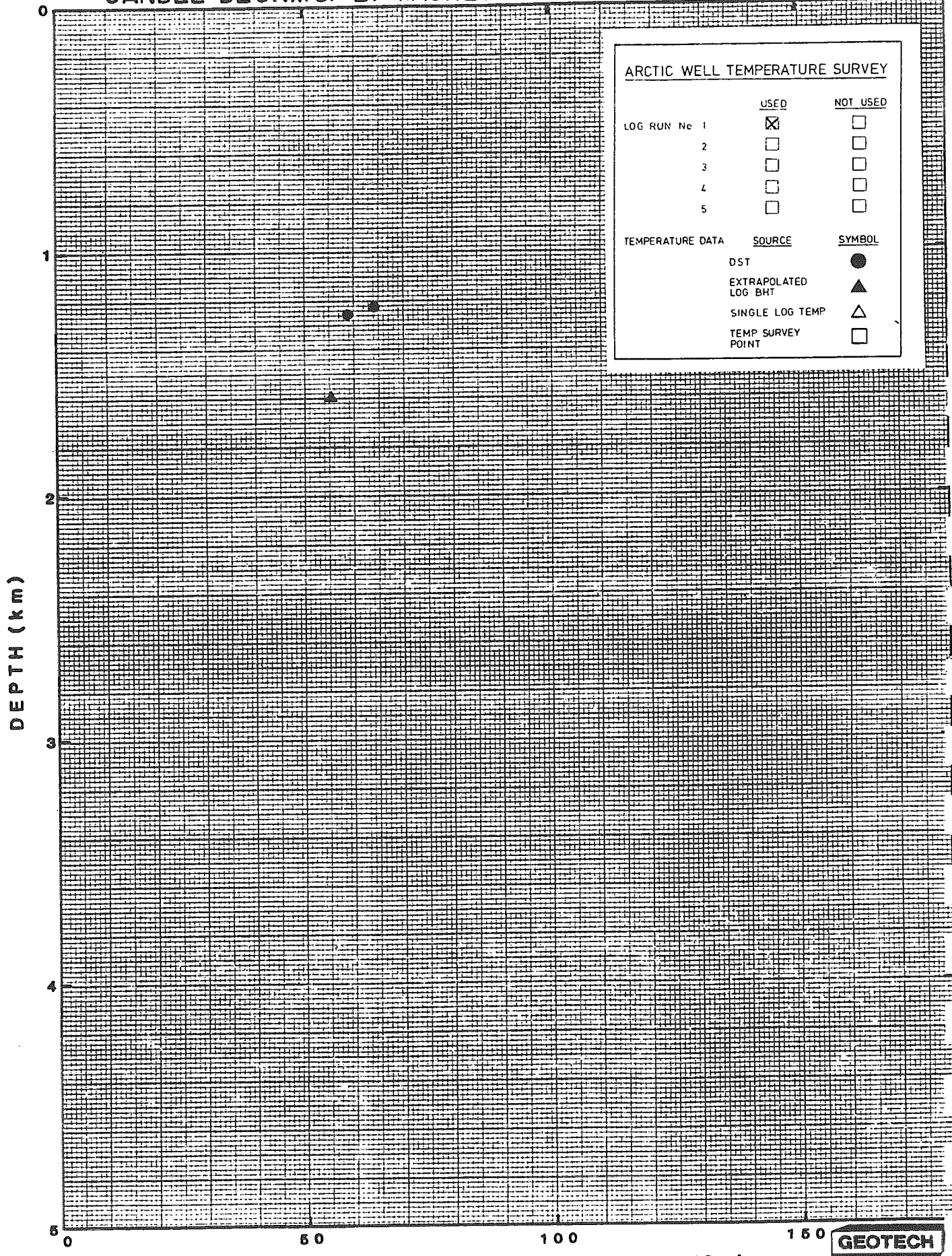


FIGURE 309

BOTTOM HOLE TEMPERATURE (°C)





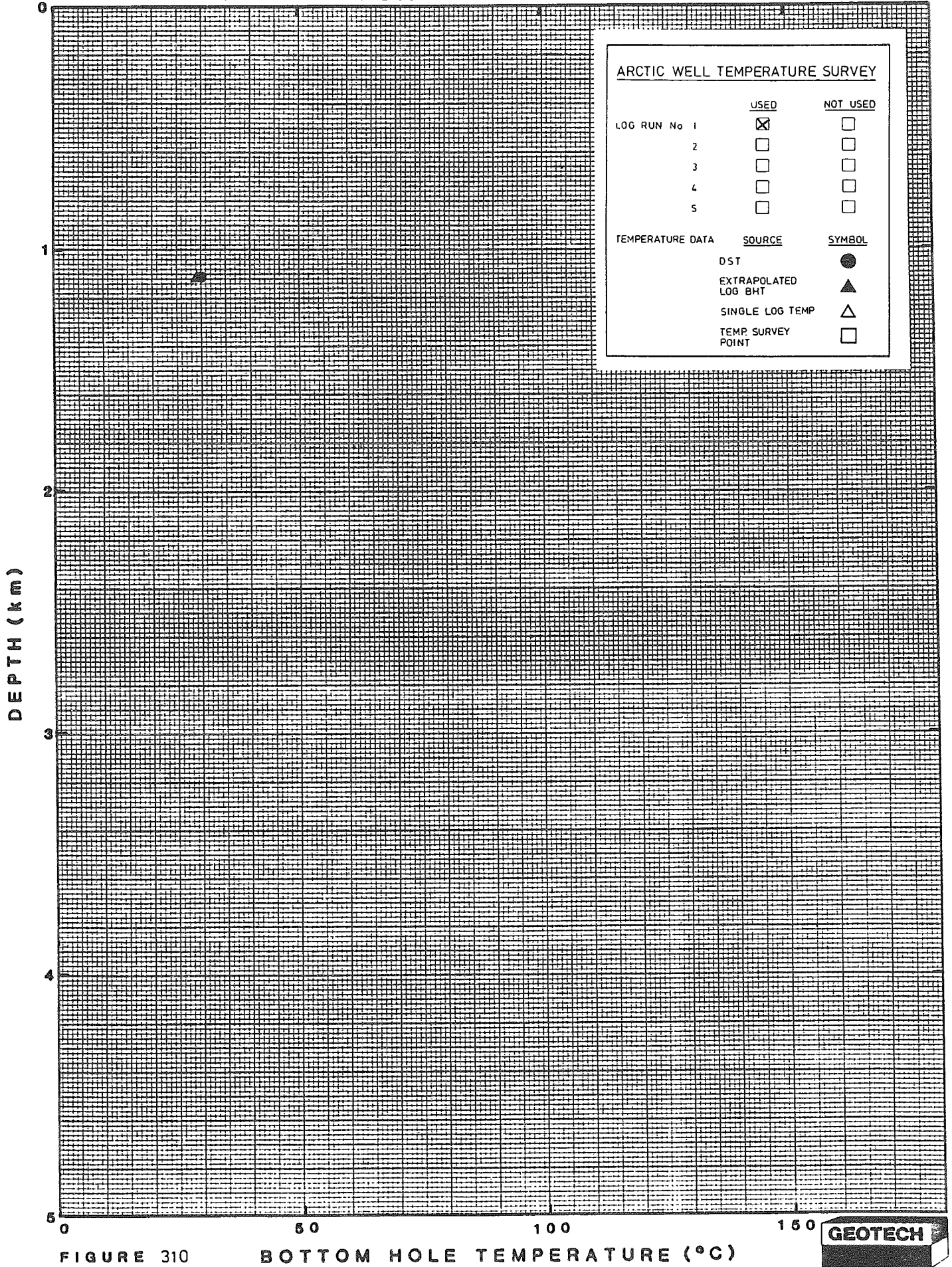


FIGURE 310

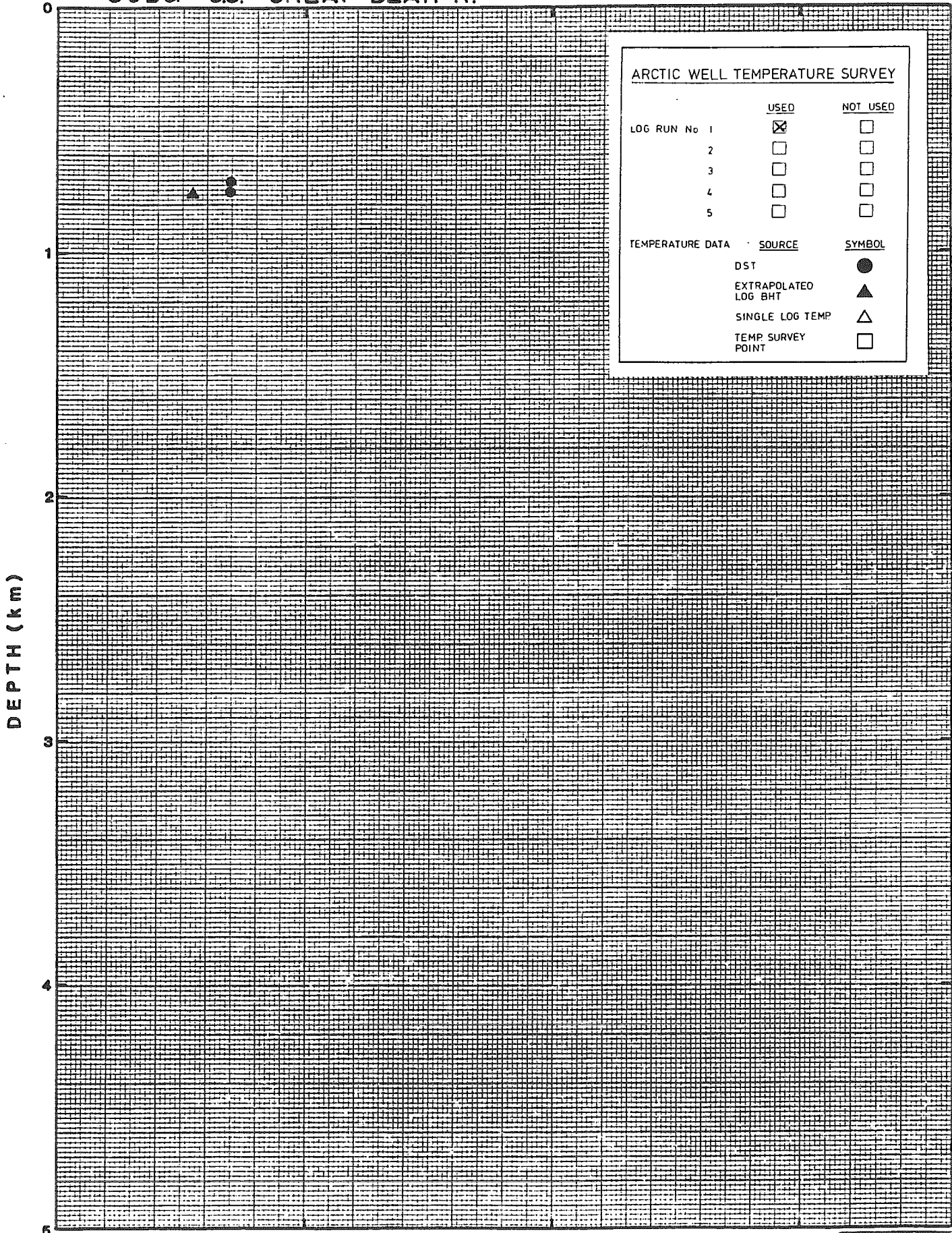
BOTTOM HOLE TEMPERATURE (°C)



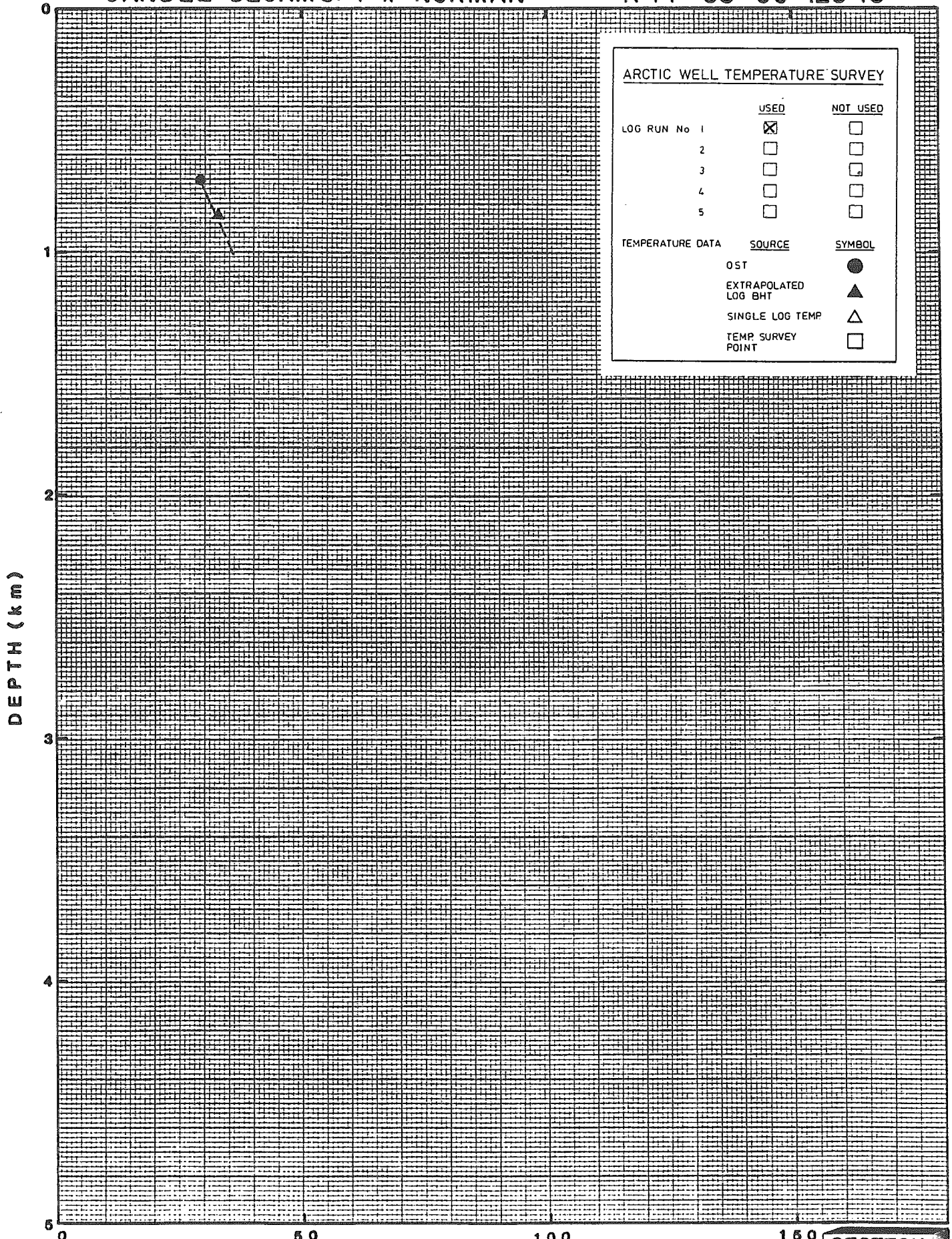


SOBC. CS. GREAT BEAR R.

N-30 65-00-124-00



DEPTH (km)



ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
<u>TEMPERATURE DATA</u>	<u>SOURCE</u>	<u>SYMBOL</u>
	OST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

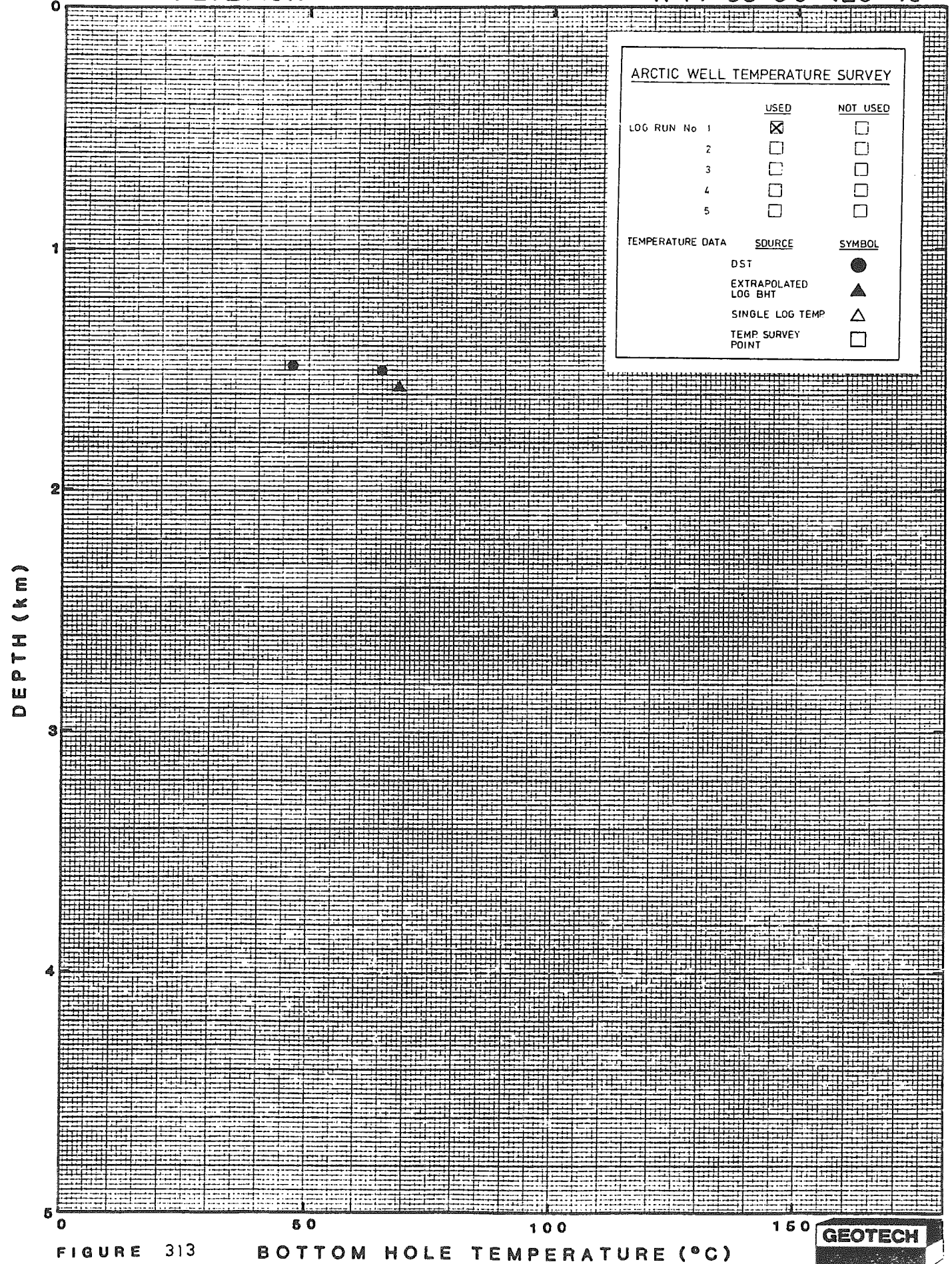
FIGURE 312

BOTTOM HOLE TEMPERATURE (°C)

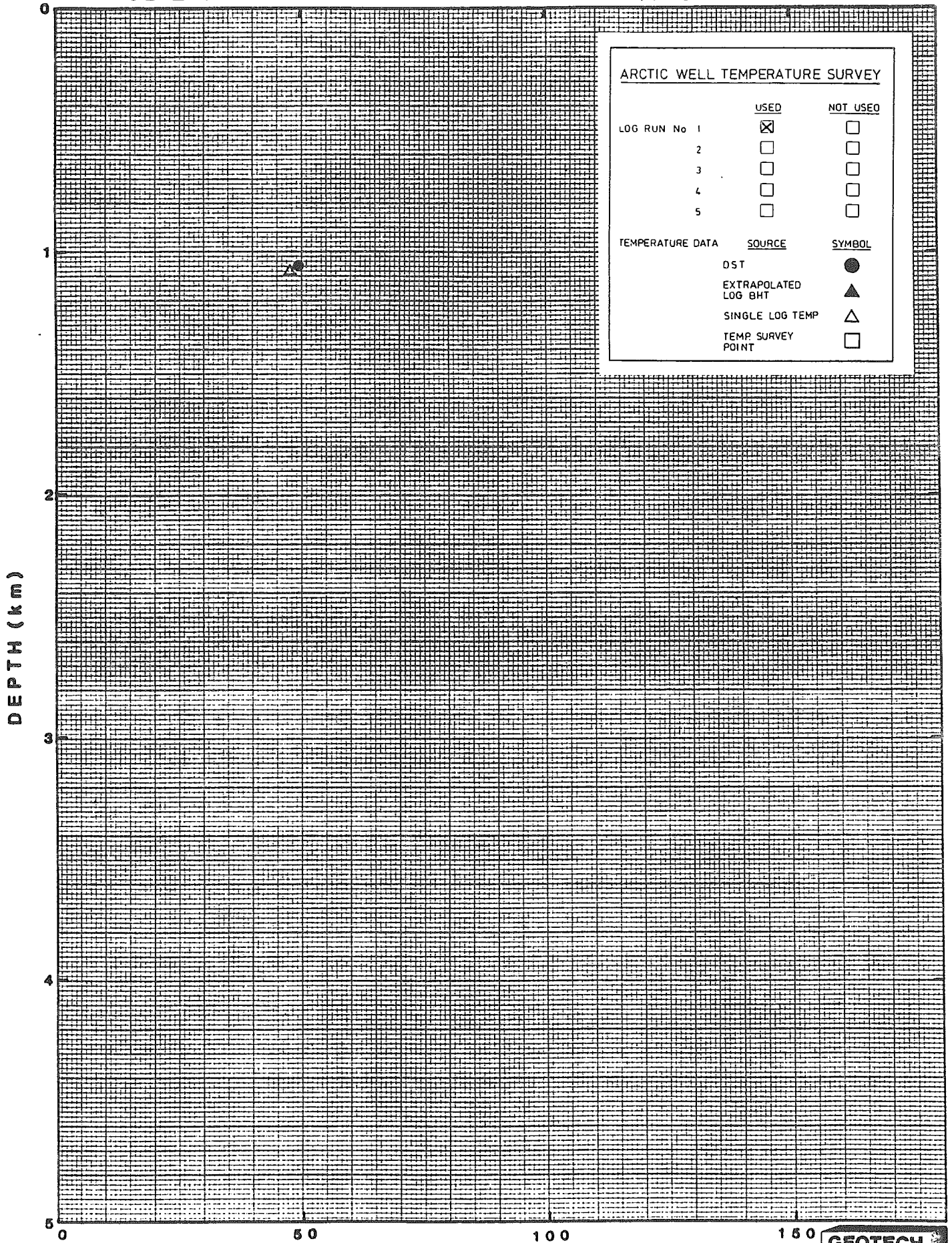


C S BLUEFISH

K-71 65-00-125-45







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 314

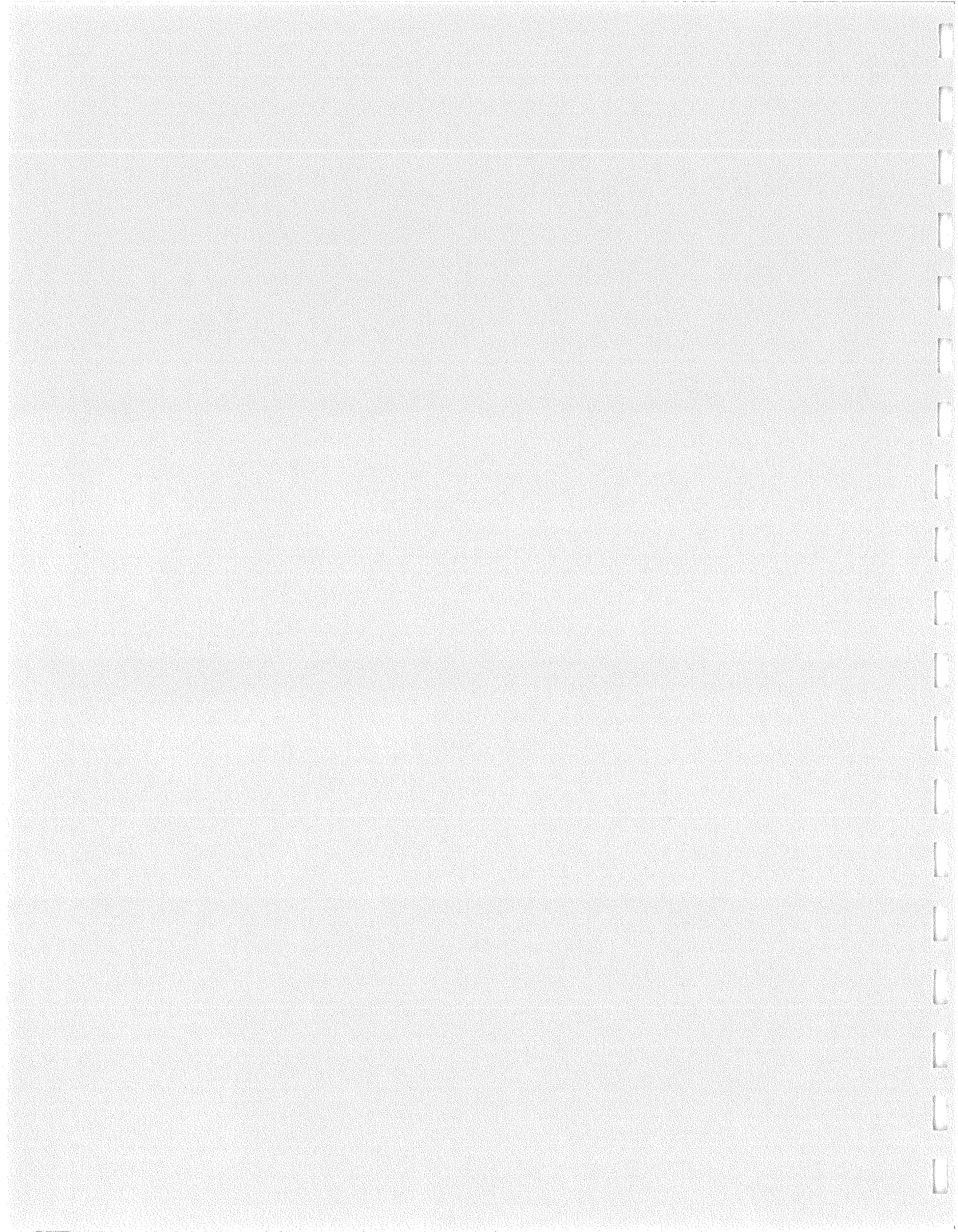
BOTTOM HOLE TEMPERATURE (°C)



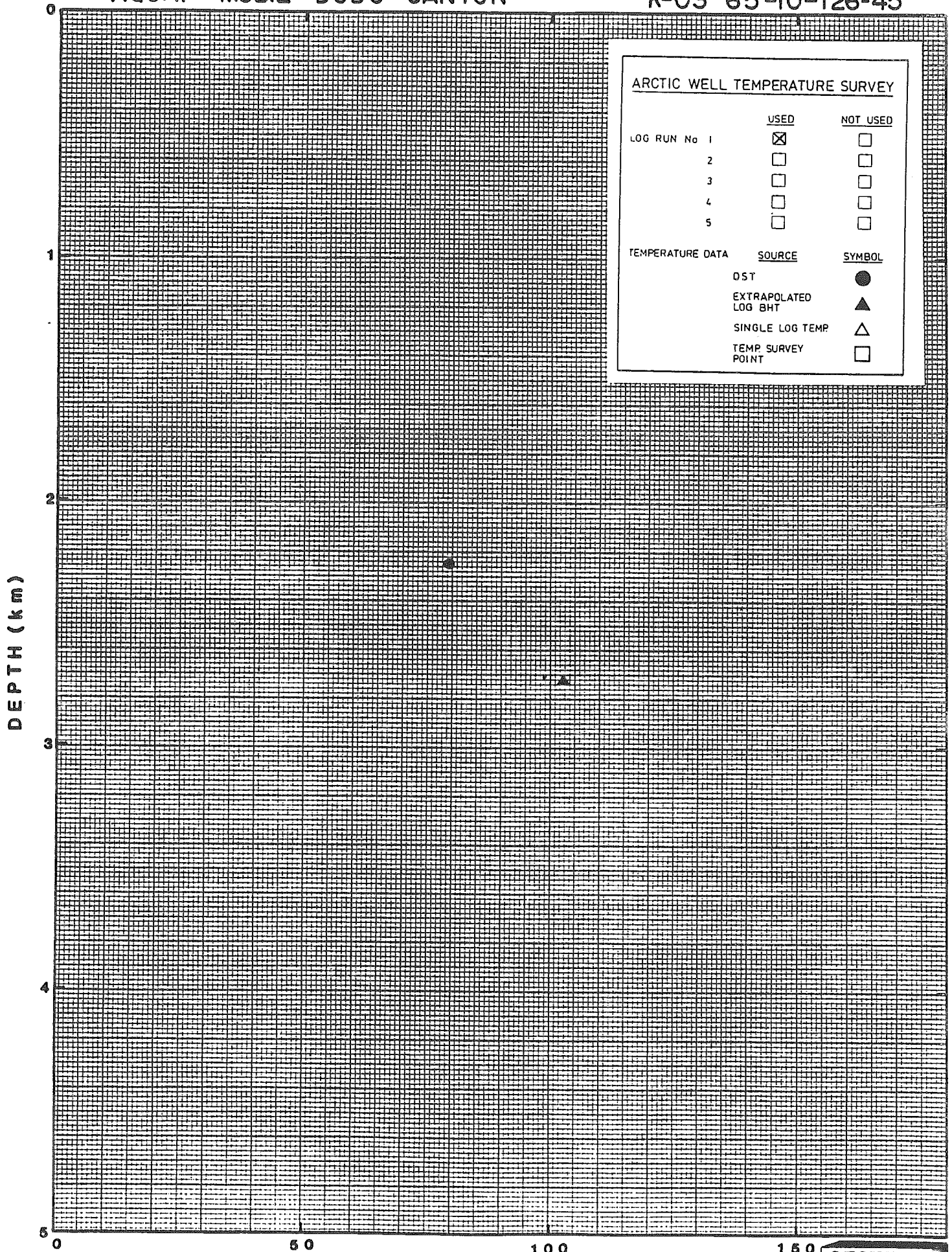




**65-10**







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 315

BOTTOM HOLE TEMPERATURE (°C)





B.P. GREY GOOSE

N-70 65-20-123-30

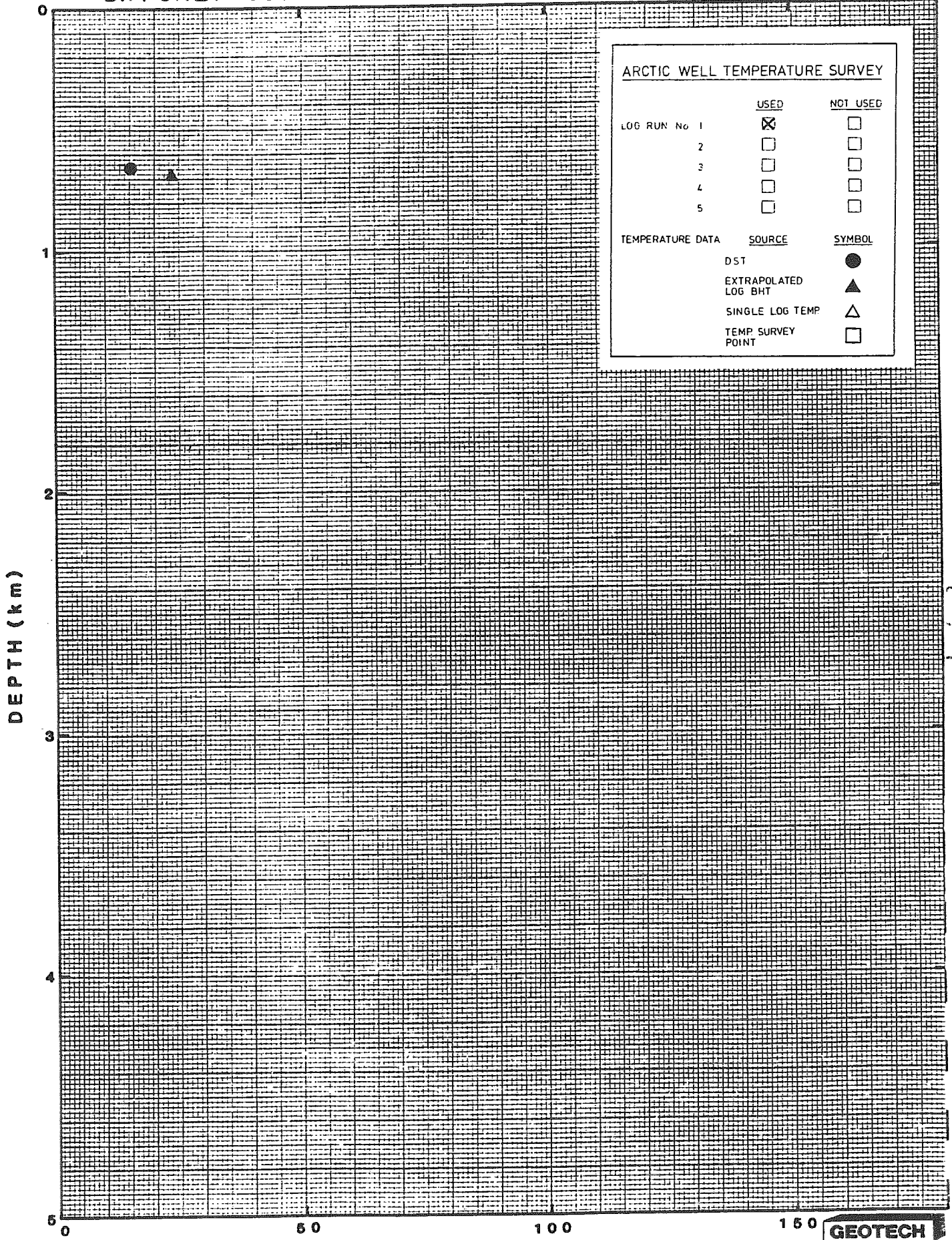


FIGURE 316

BOTTOM HOLE TEMPERATURE (°C)



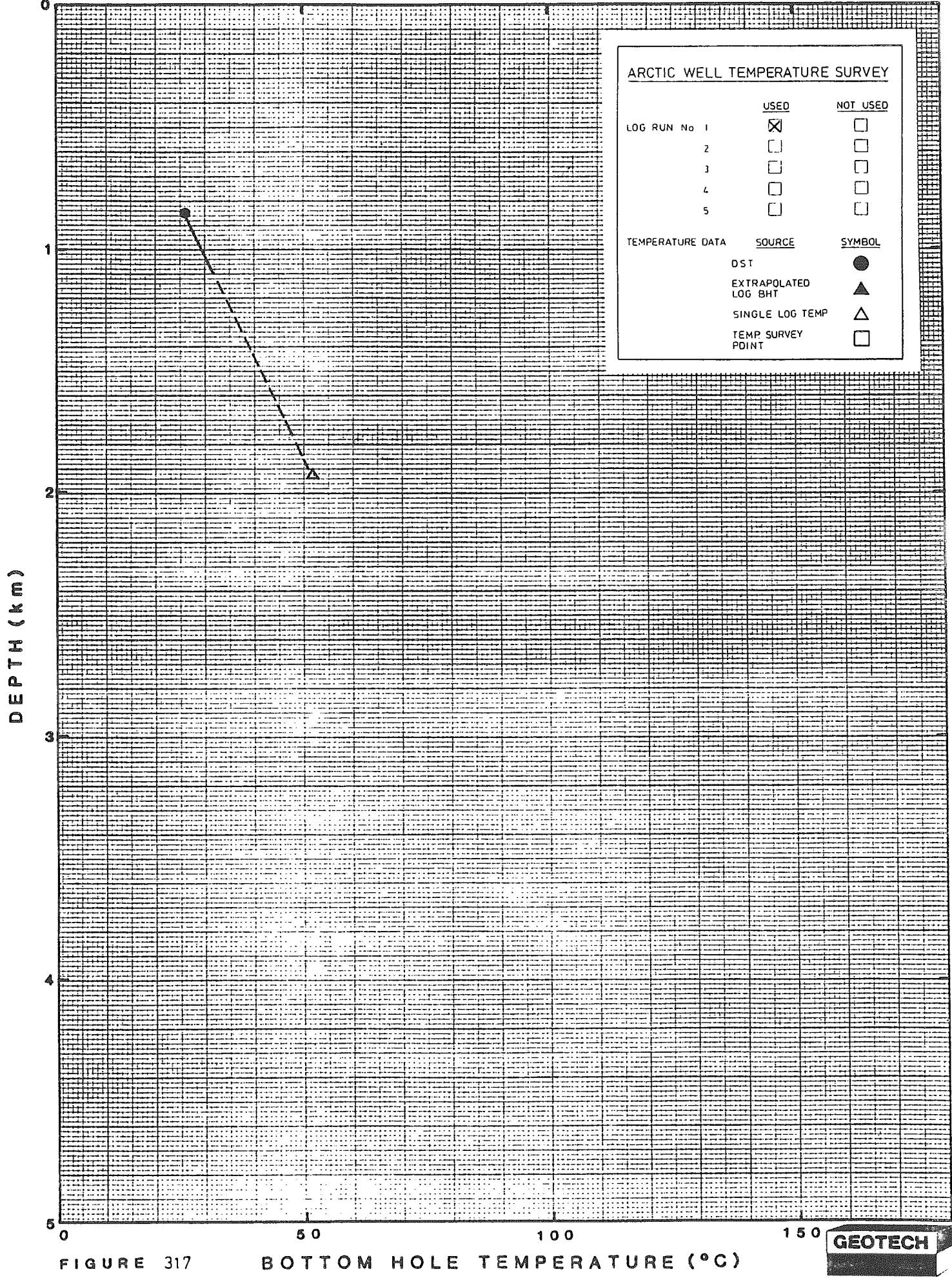


FIGURE 317

BOTTOM HOLE TEMPERATURE (°C)



AQUIT. BRACKETT L.

C-21 65-20-125-00

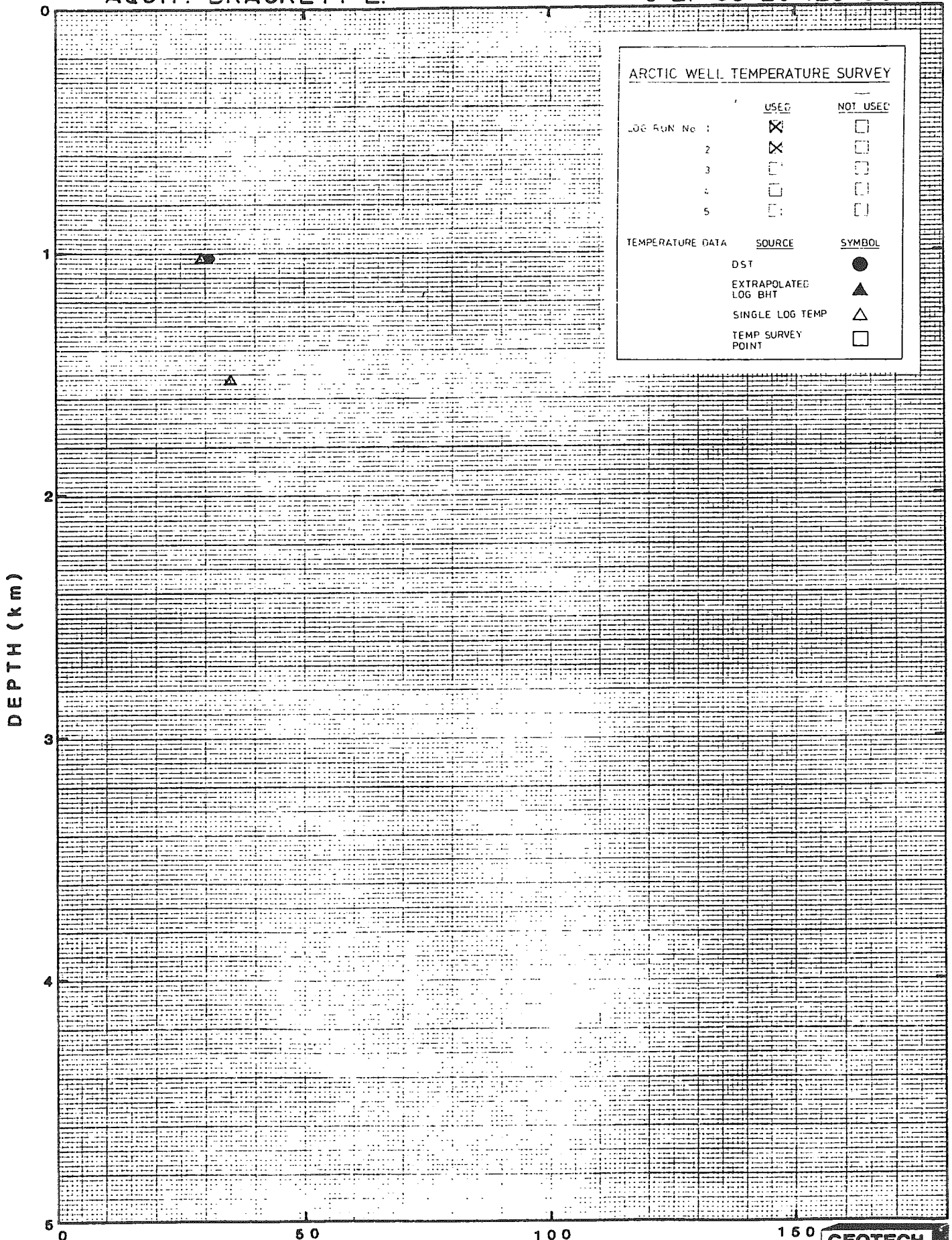


FIGURE 318

BOTTOM HOLE TEMPERATURE (°C)



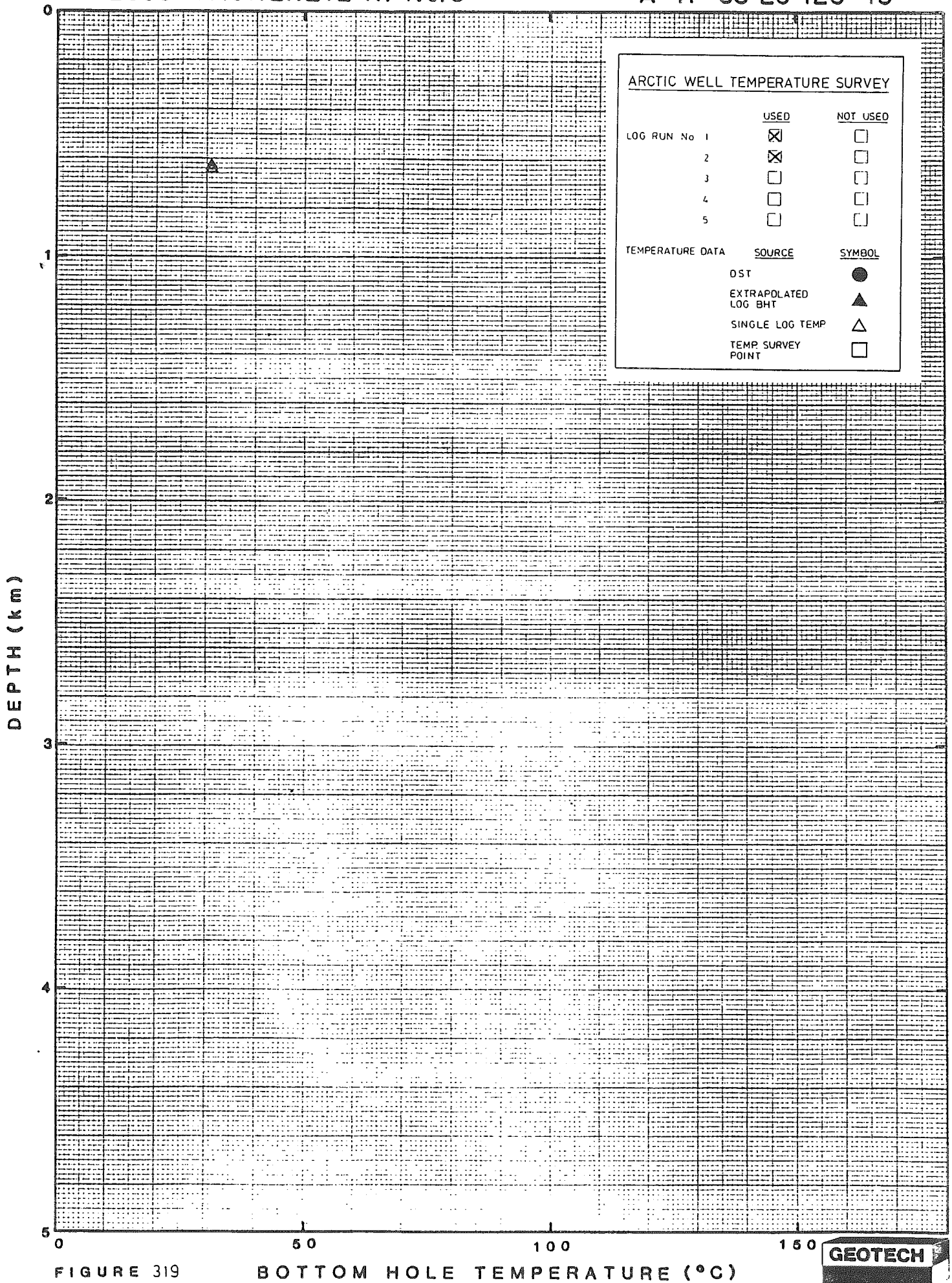
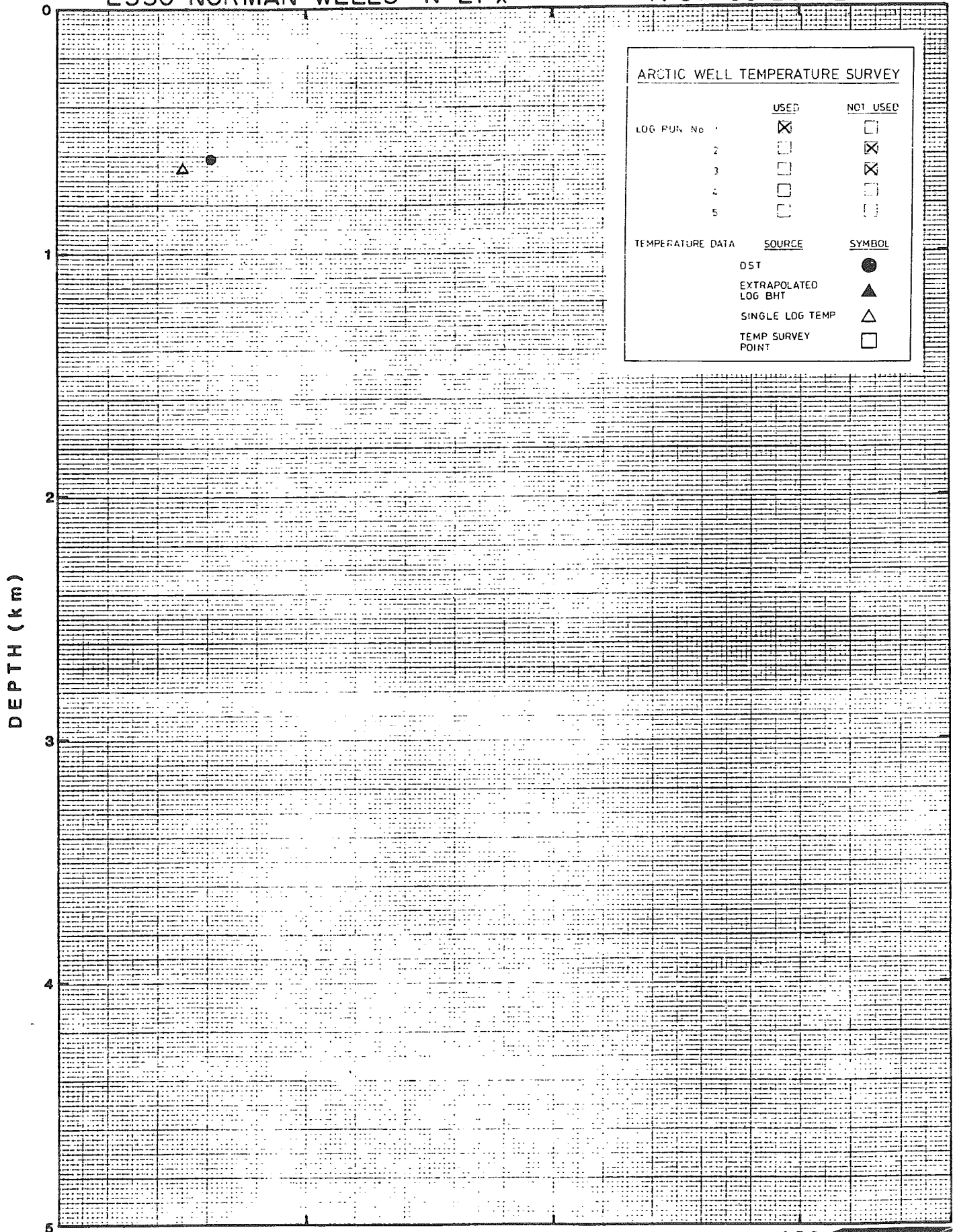


FIGURE 319

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	☒	☐
2	☐	☒
3	☐	☒
4	☐	☐
5	☐	☐

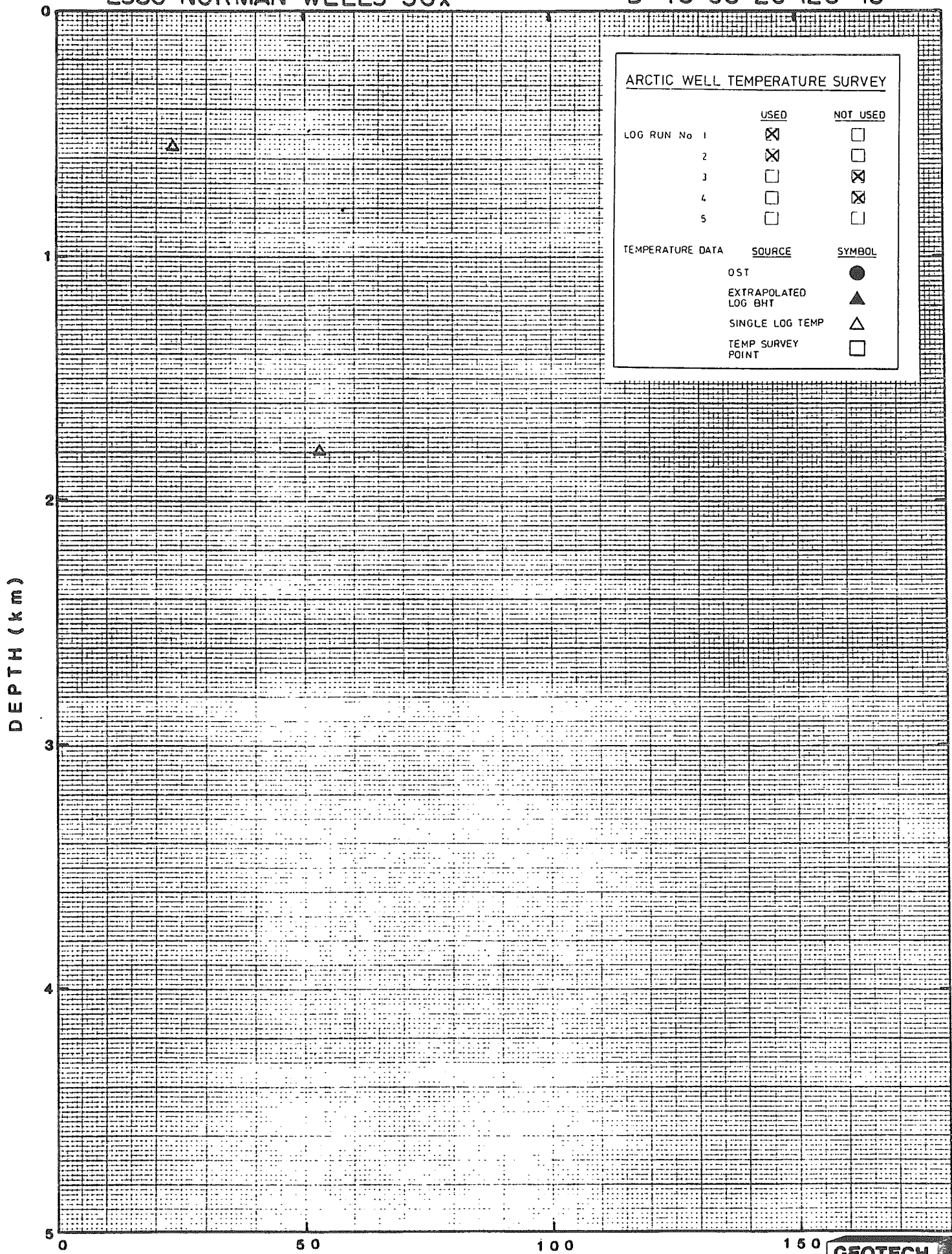
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		☐

FIGURE 320

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	OST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0 50 100 150

FIGURE 321 BOTTOM HOLE TEMPERATURE (°C)



ESSO NORMAN WELLS 44x

B-48\* 65-20-126-45

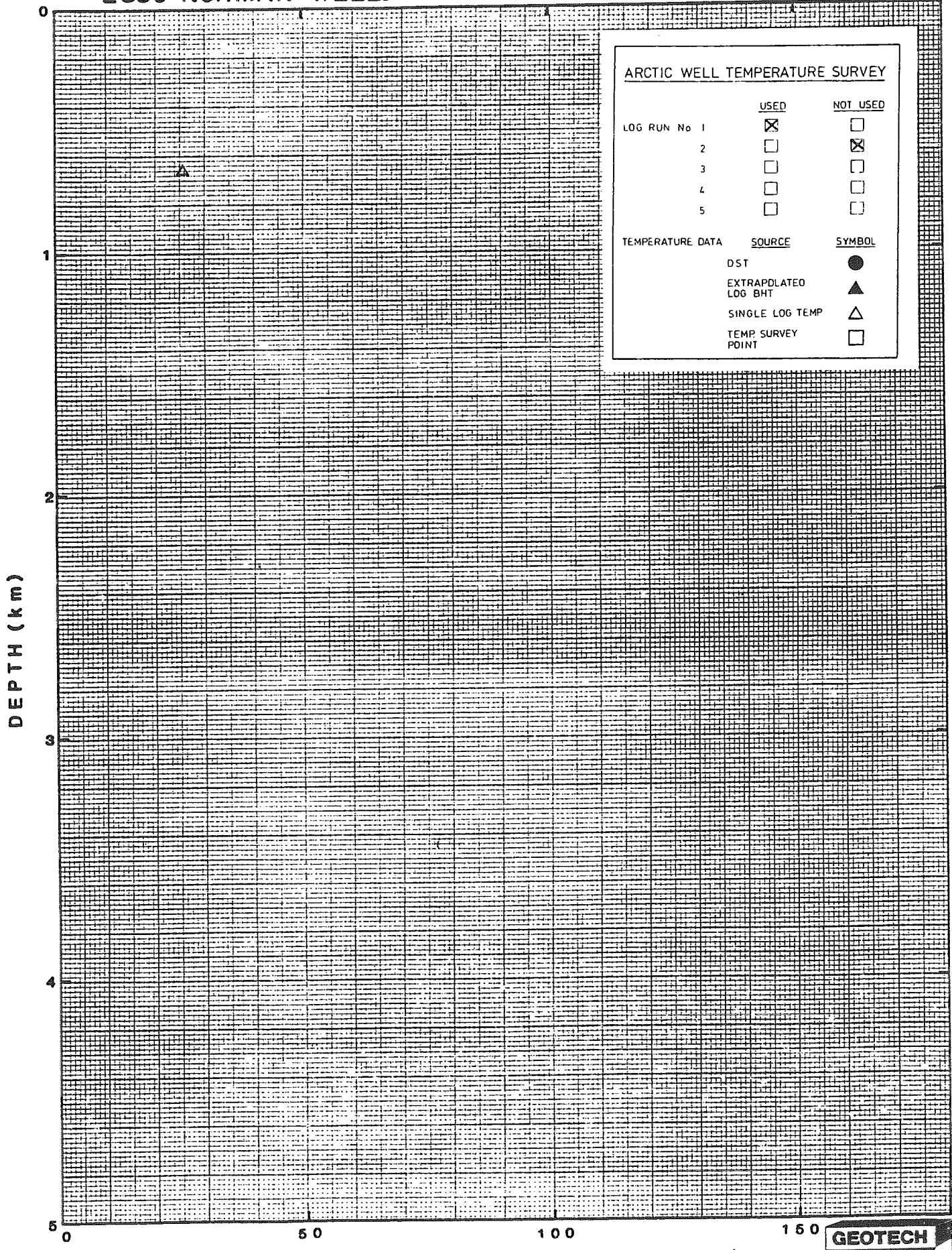
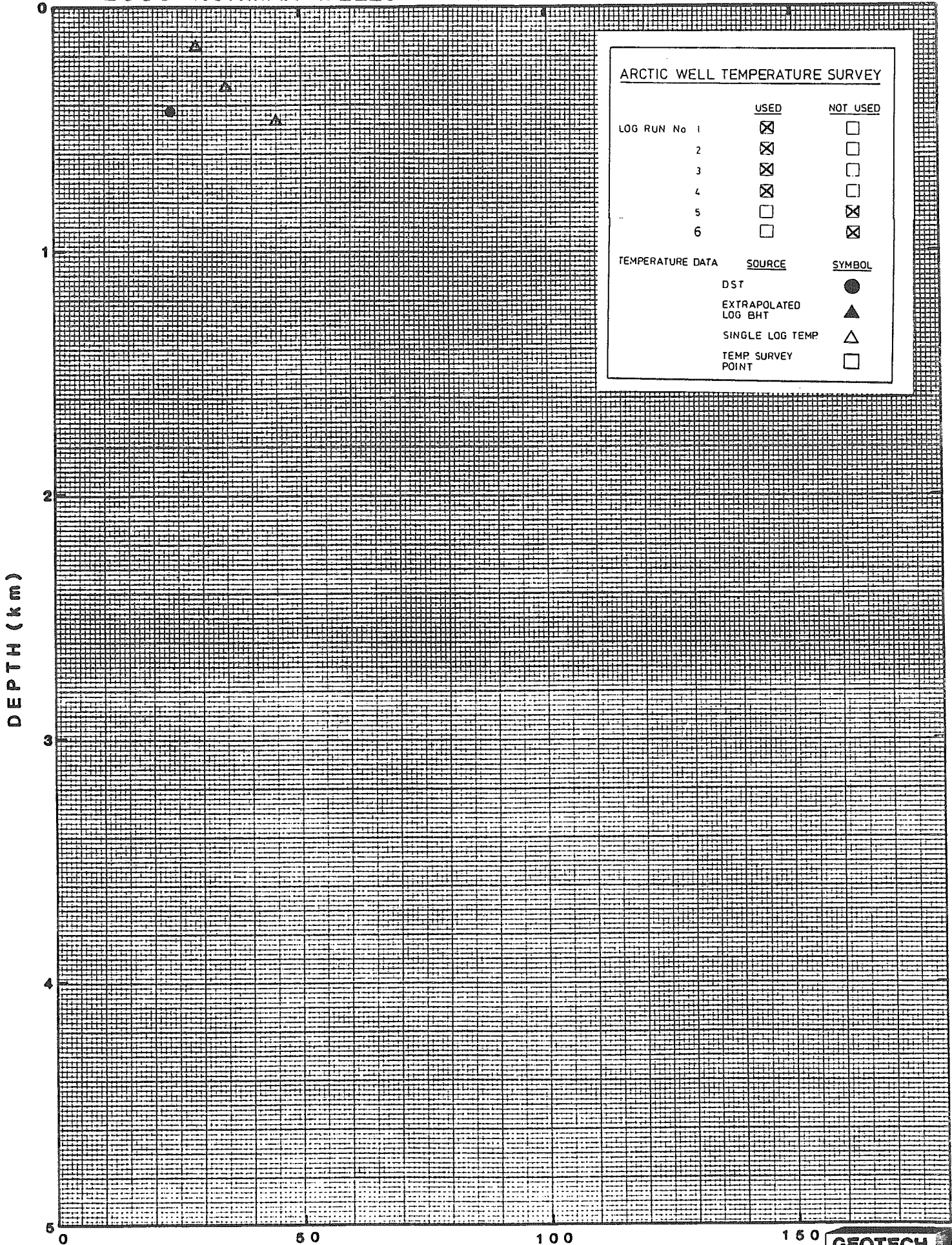


FIGURE 321a

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 322

BOTTOM HOLE TEMPERATURE (°C)





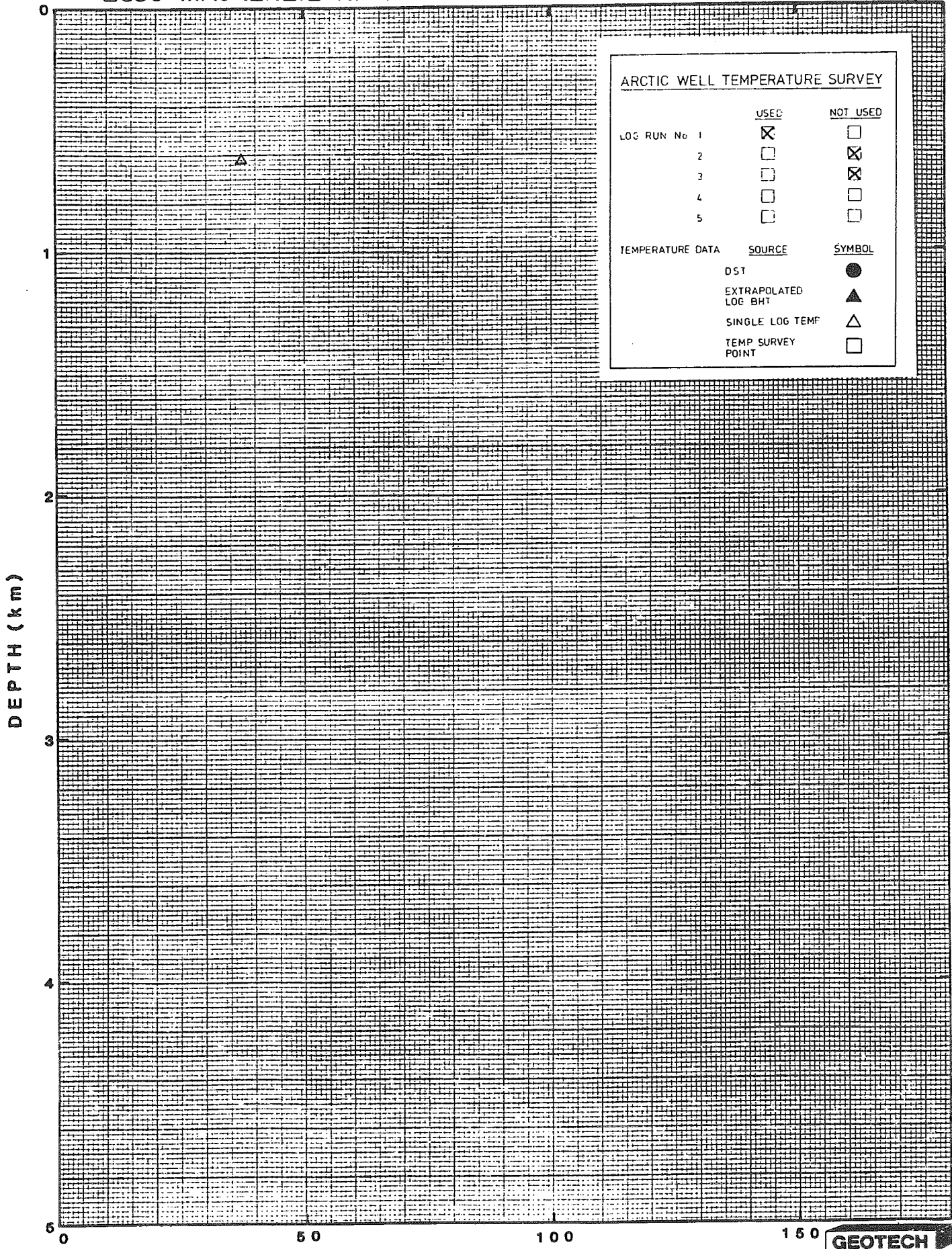


FIGURE 323

BOTTOM HOLE TEMPERATURE (°C)



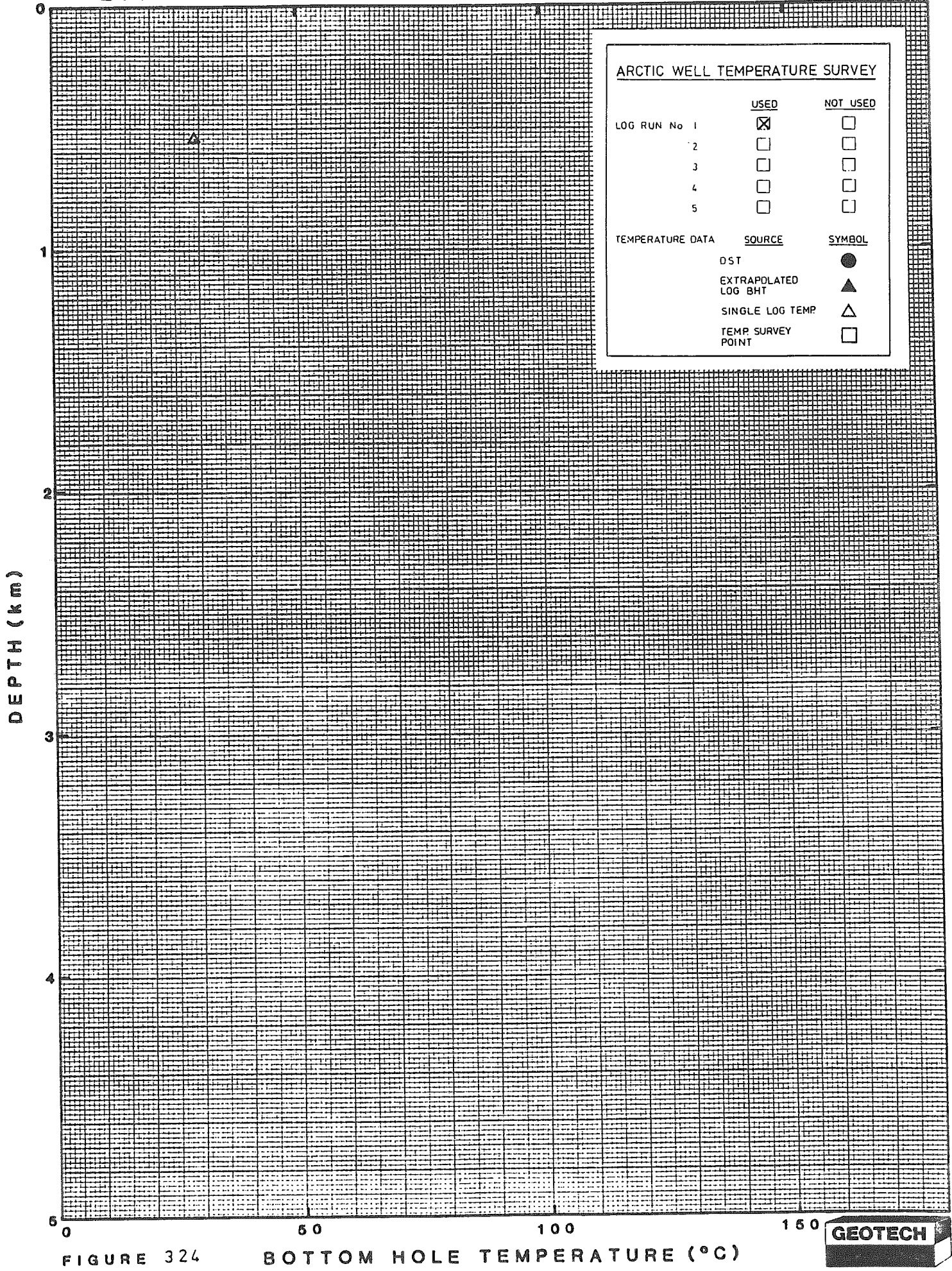


FIGURE 324

BOTTOM HOLE TEMPERATURE (°C)



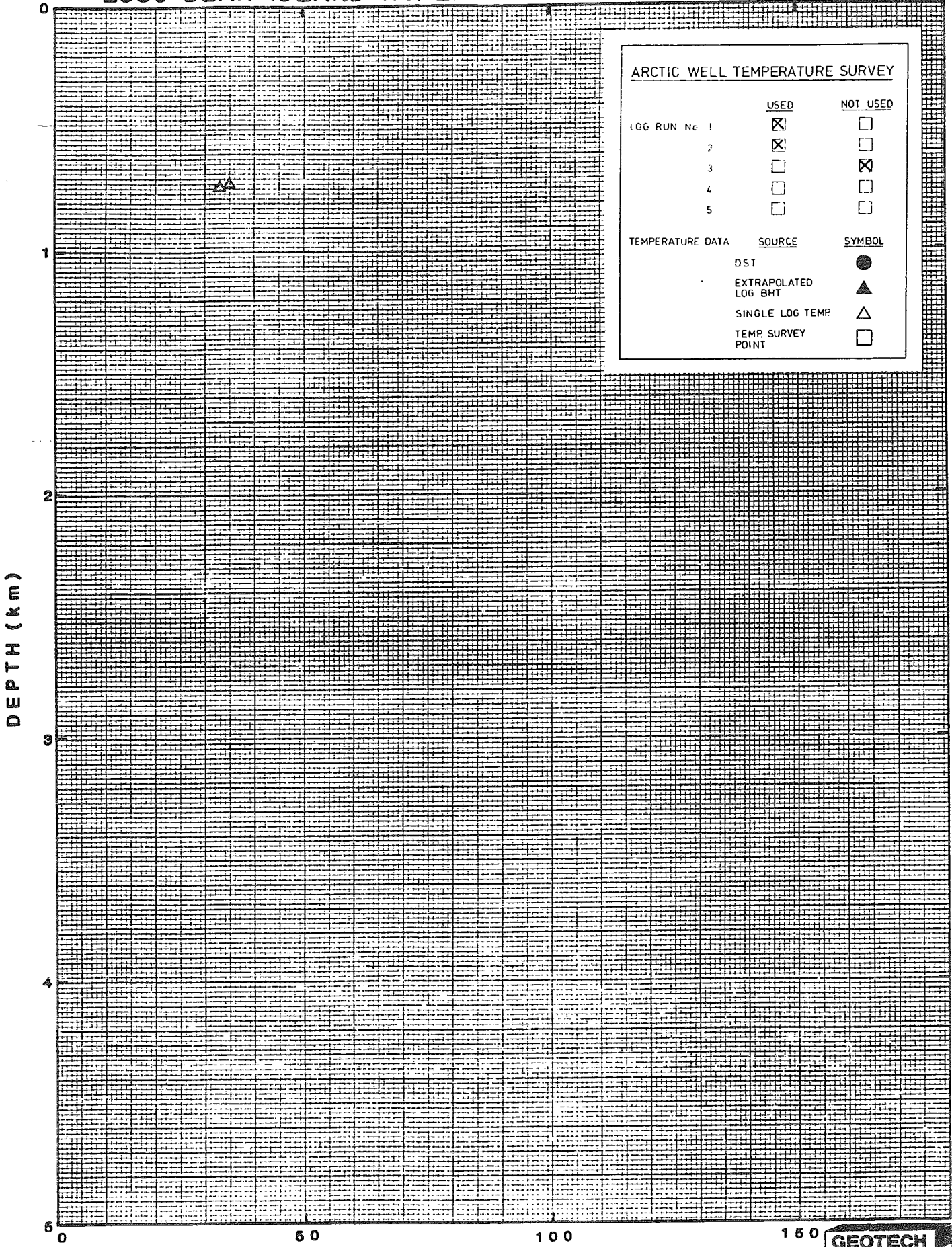


FIGURE 325

BOTTOM HOLE TEMPERATURE (°C)





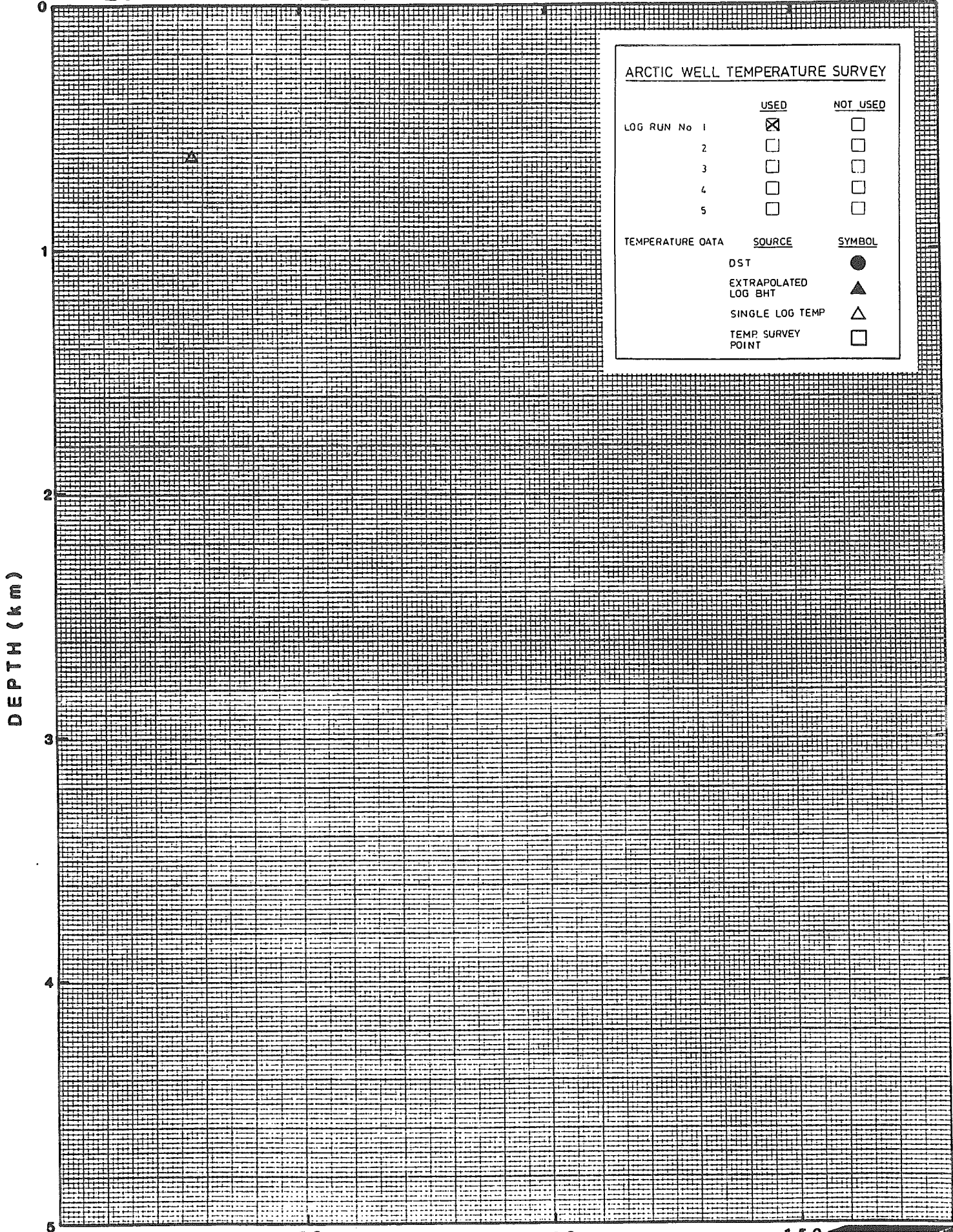


FIGURE 326

BOTTOM HOLE TEMPERATURE (°C)





ESSO BEAR ISLAND No. 22

K-36 65-20-126-45

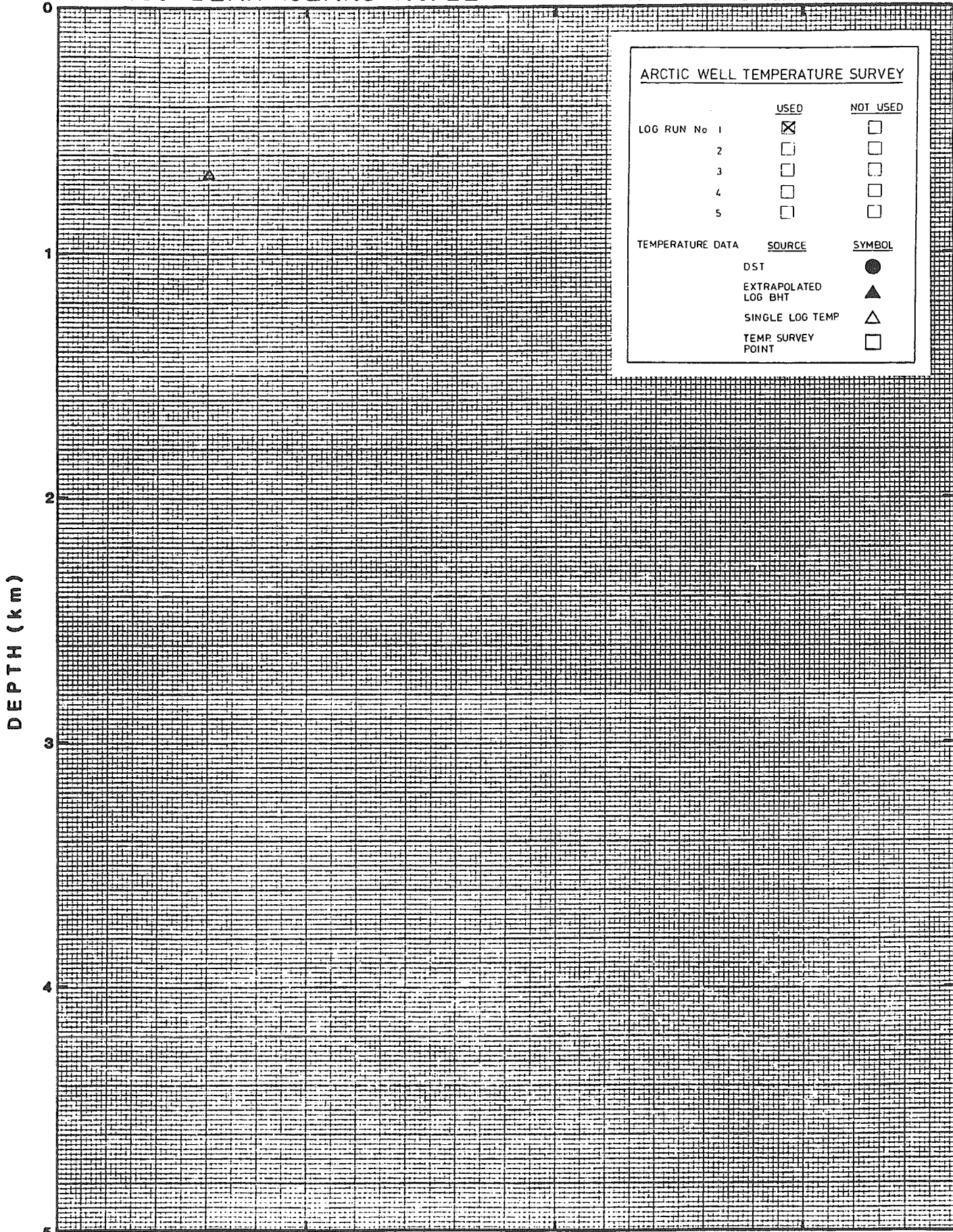
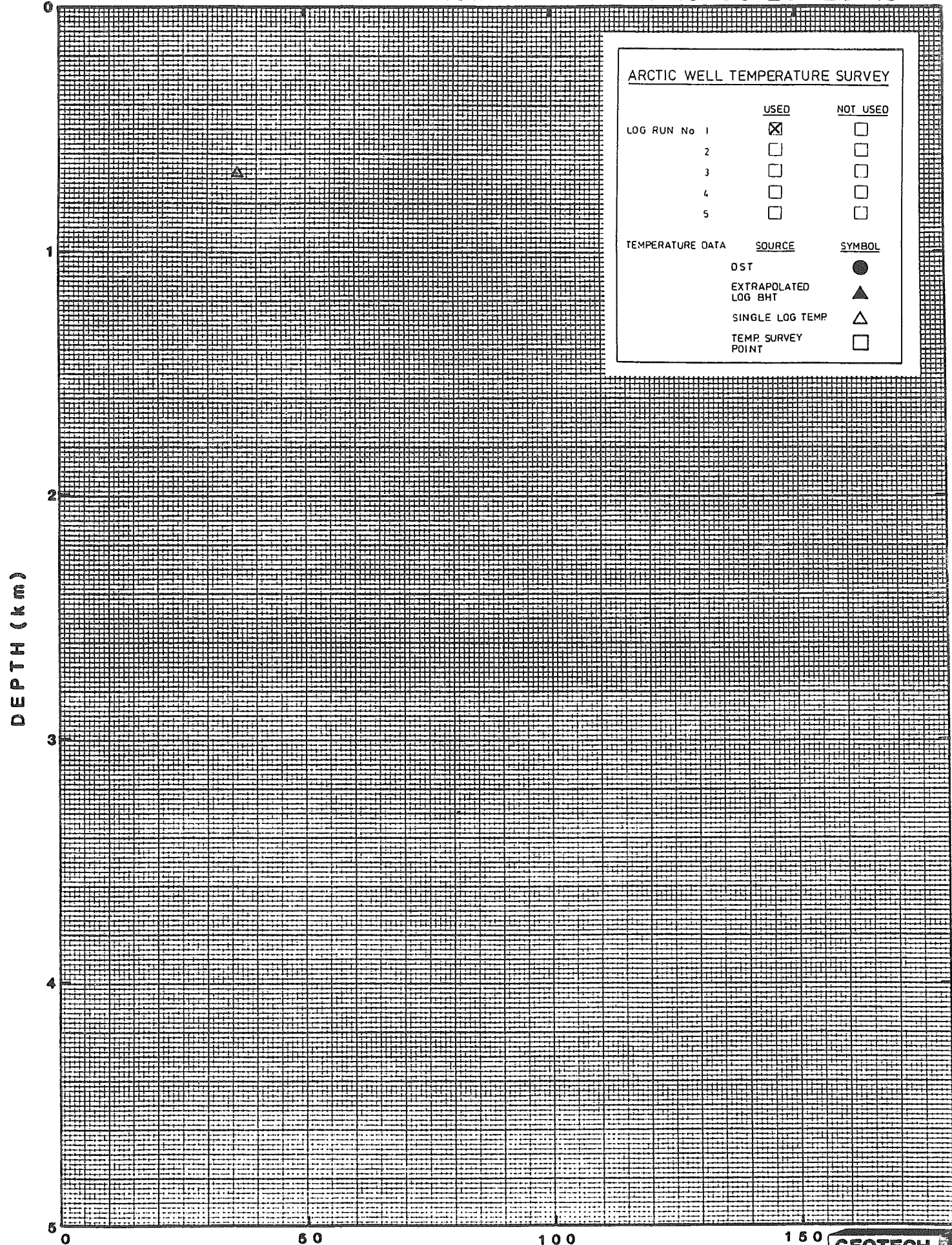


FIGURE 327

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

FIGURE 328

BOTTOM HOLE TEMPERATURE (°C)



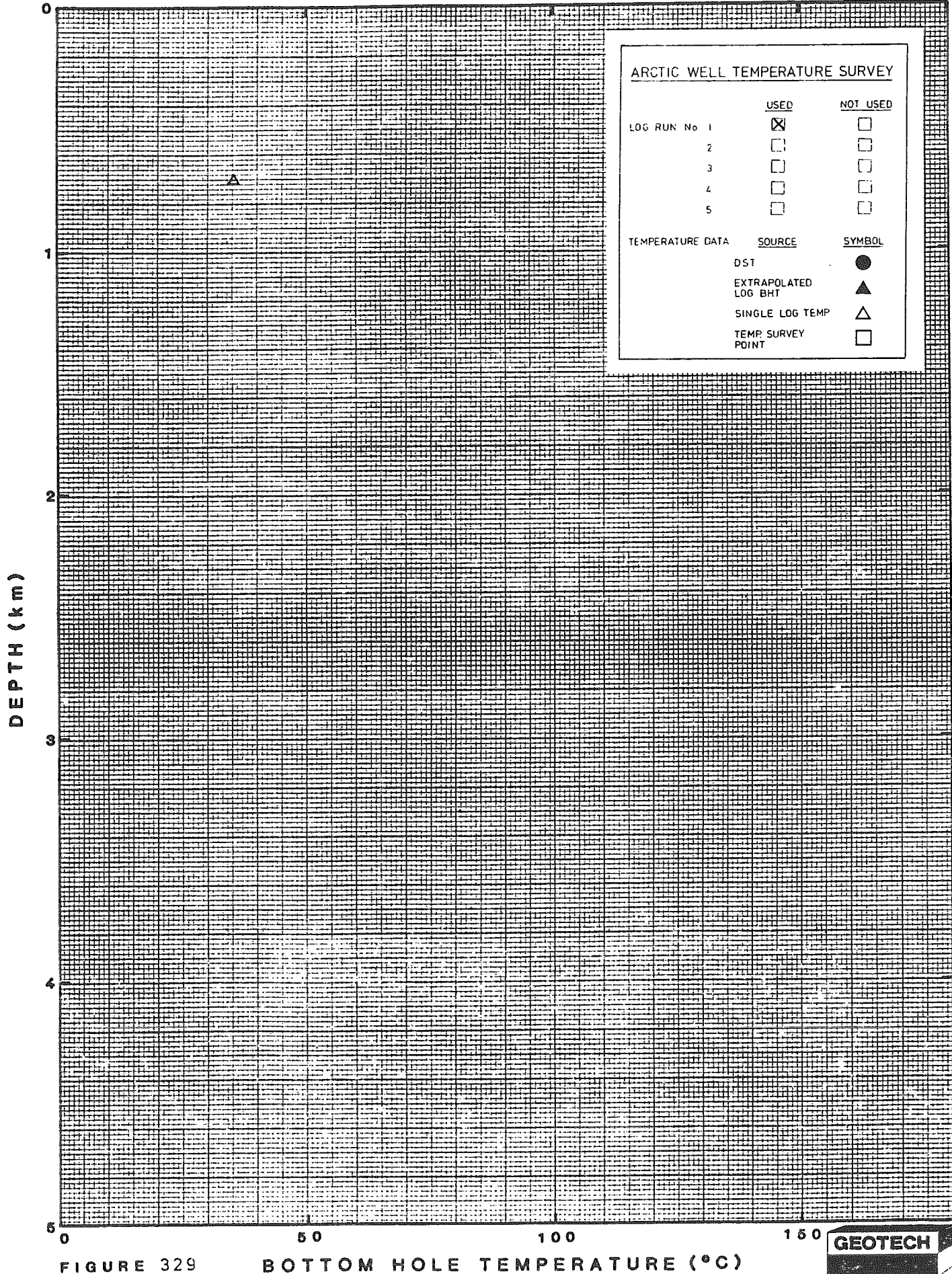
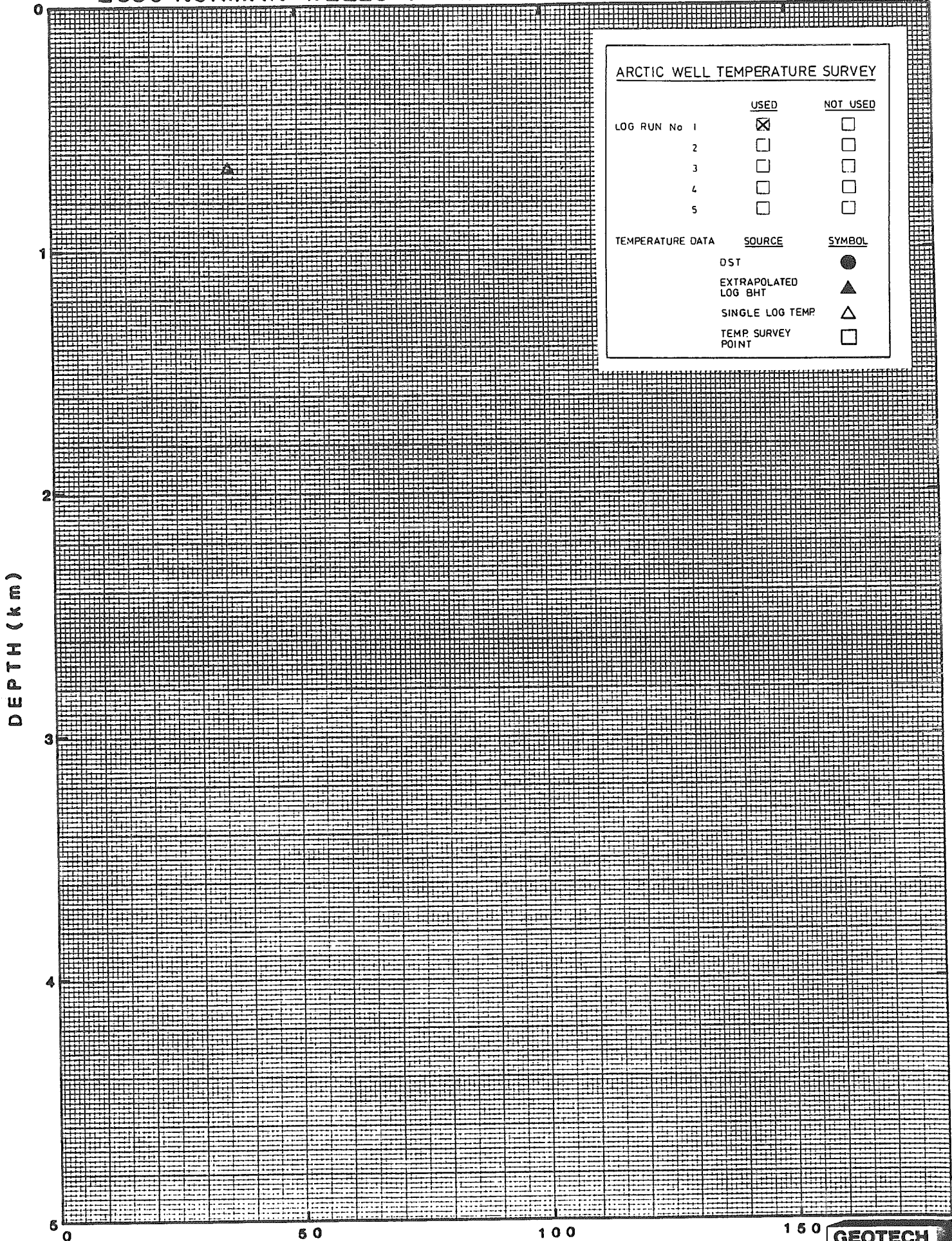


FIGURE 329

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

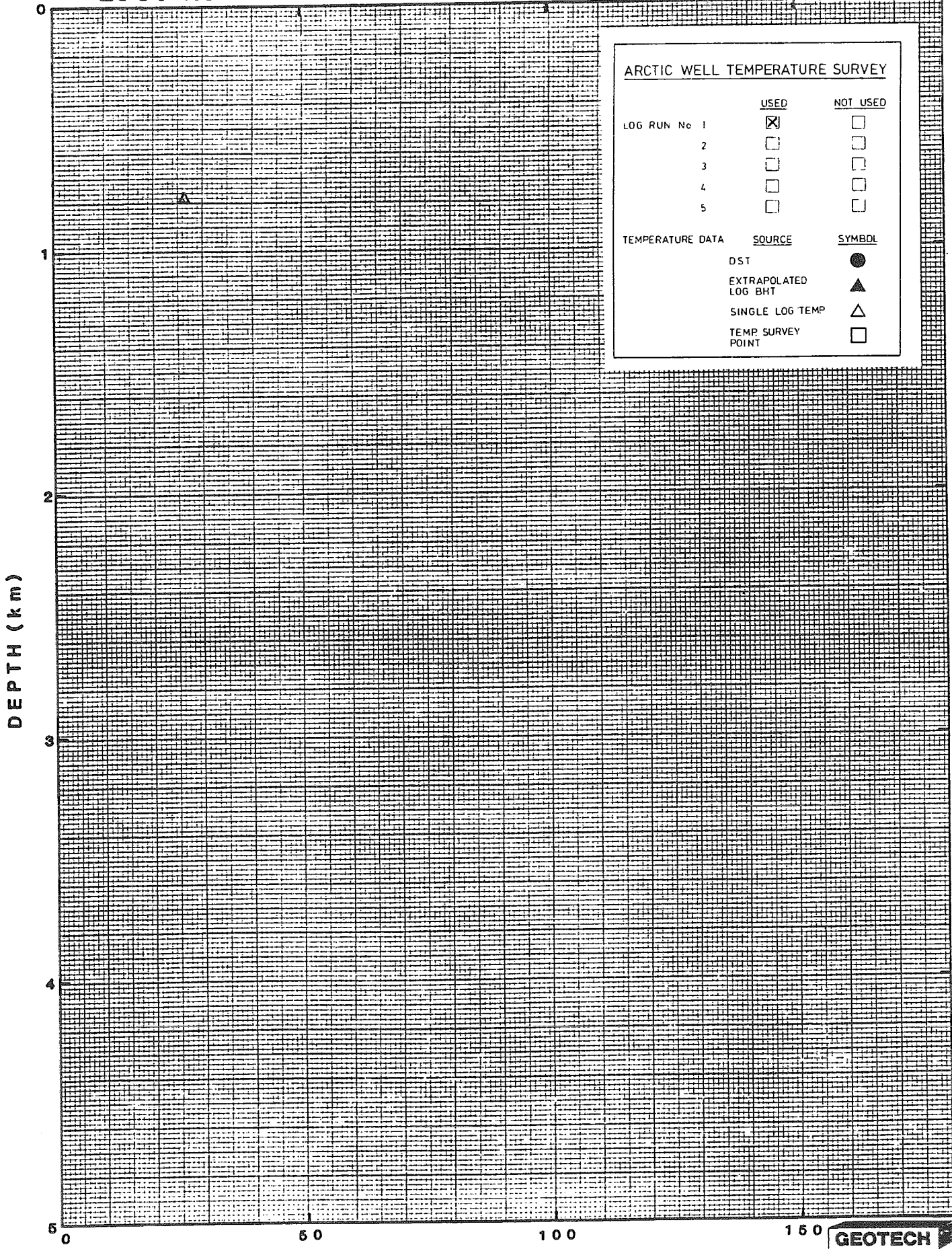
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP. SURVEY POINT		□

FIGURE 330

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

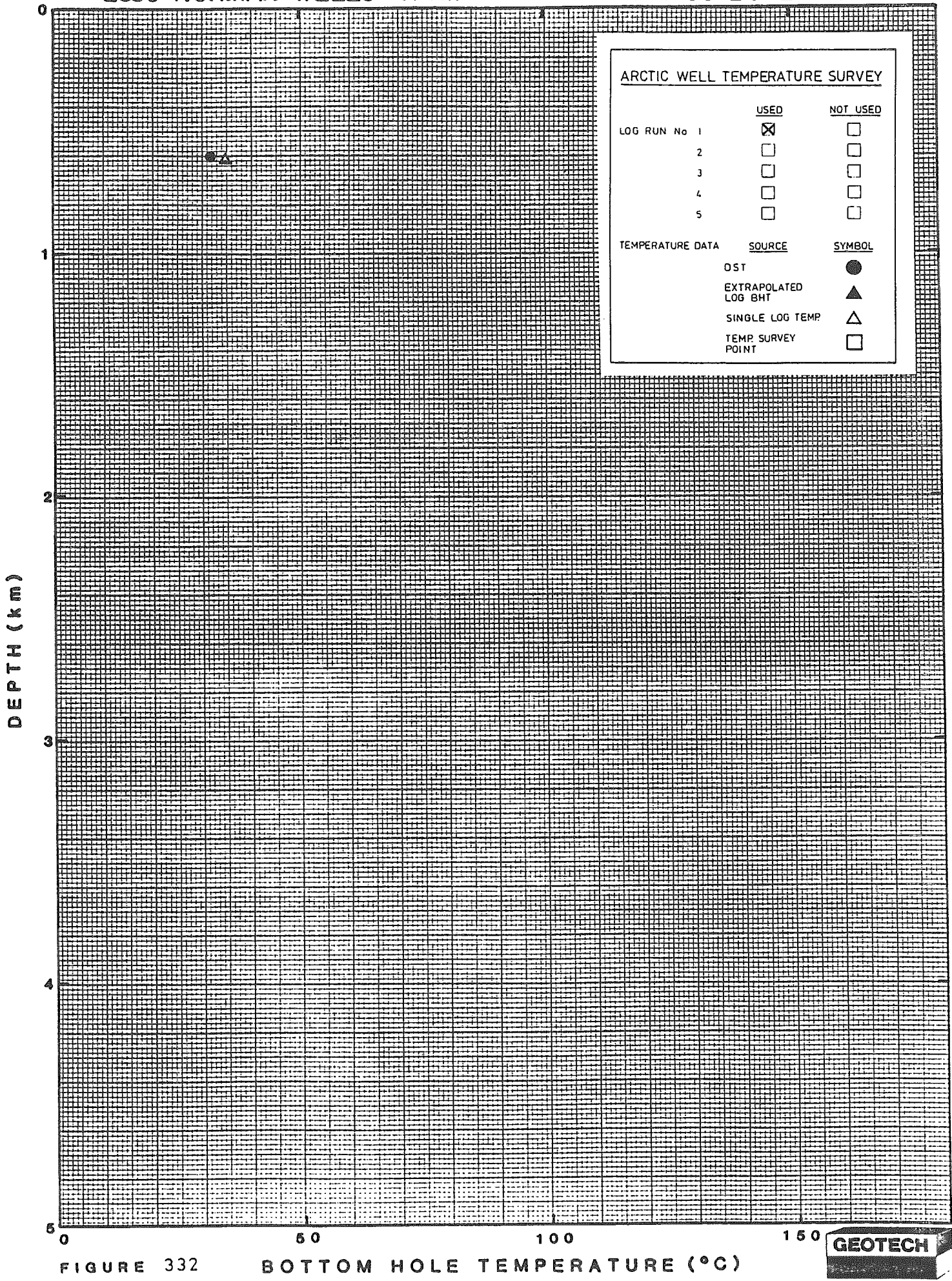
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 331

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
OST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP. SURVEY POINT		□

DEPTH (km)

FIGURE 332

BOTTOM HOLE TEMPERATURE (°C)



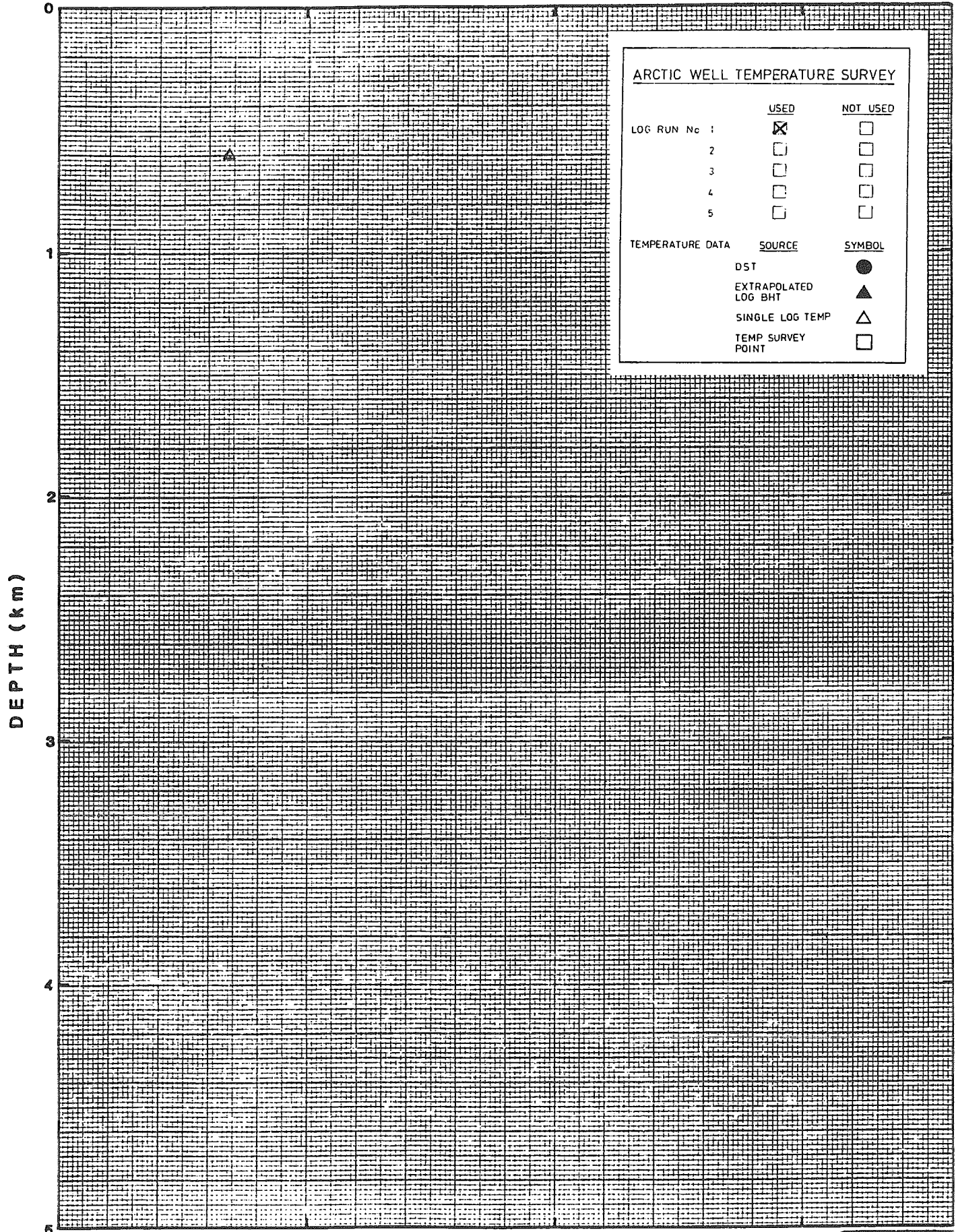
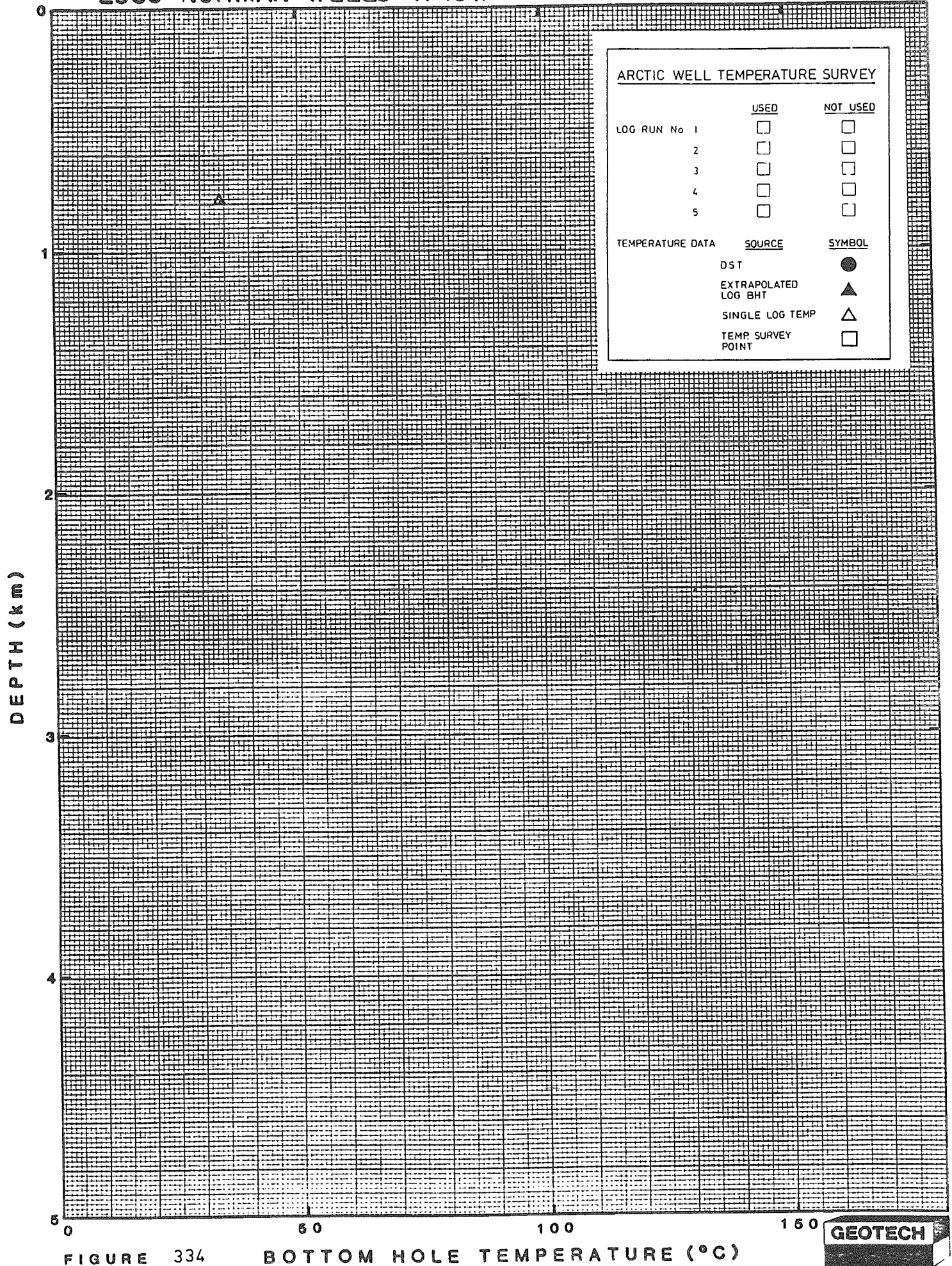


FIGURE 333

BOTTOM HOLE TEMPERATURE (°C)







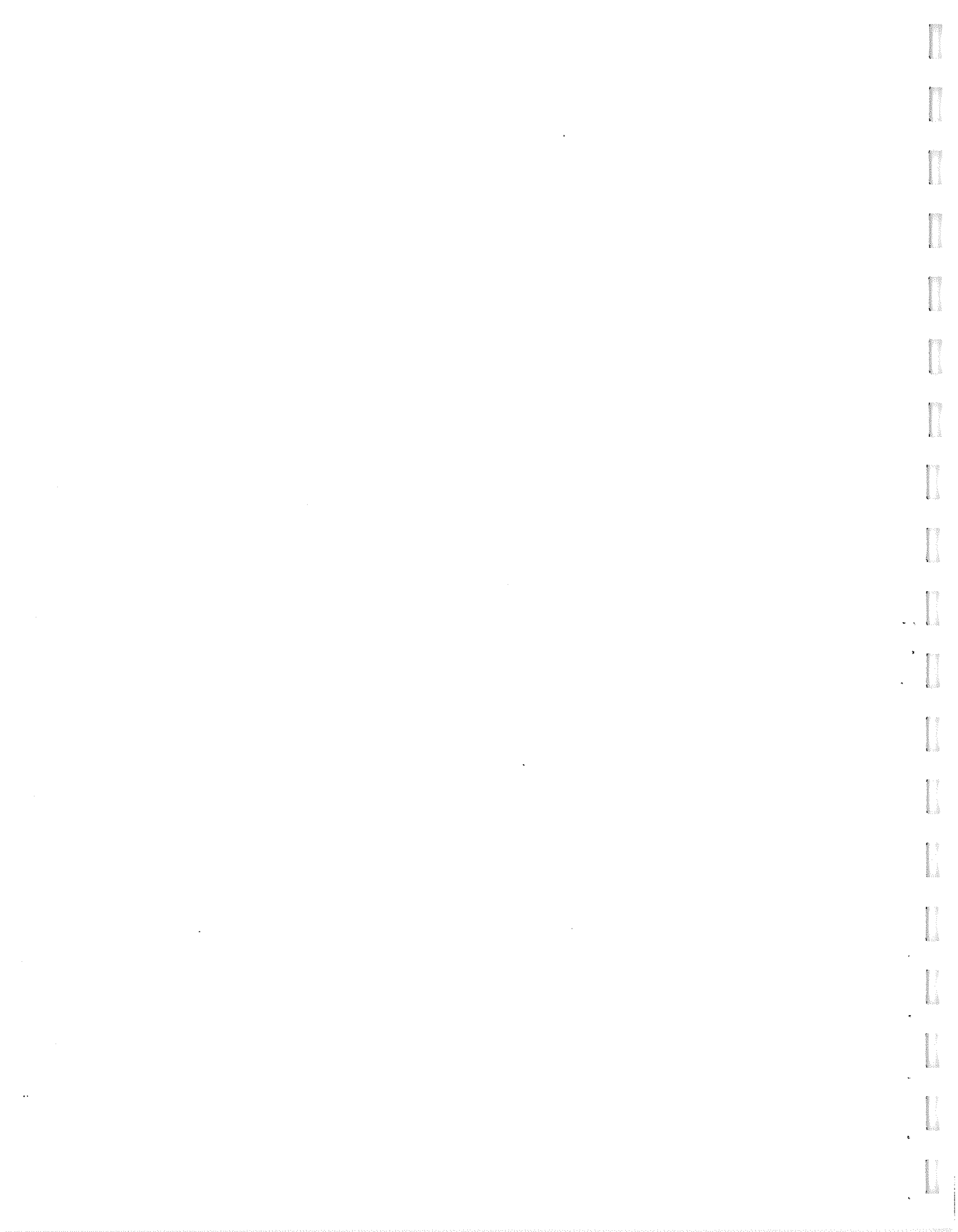
ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 334

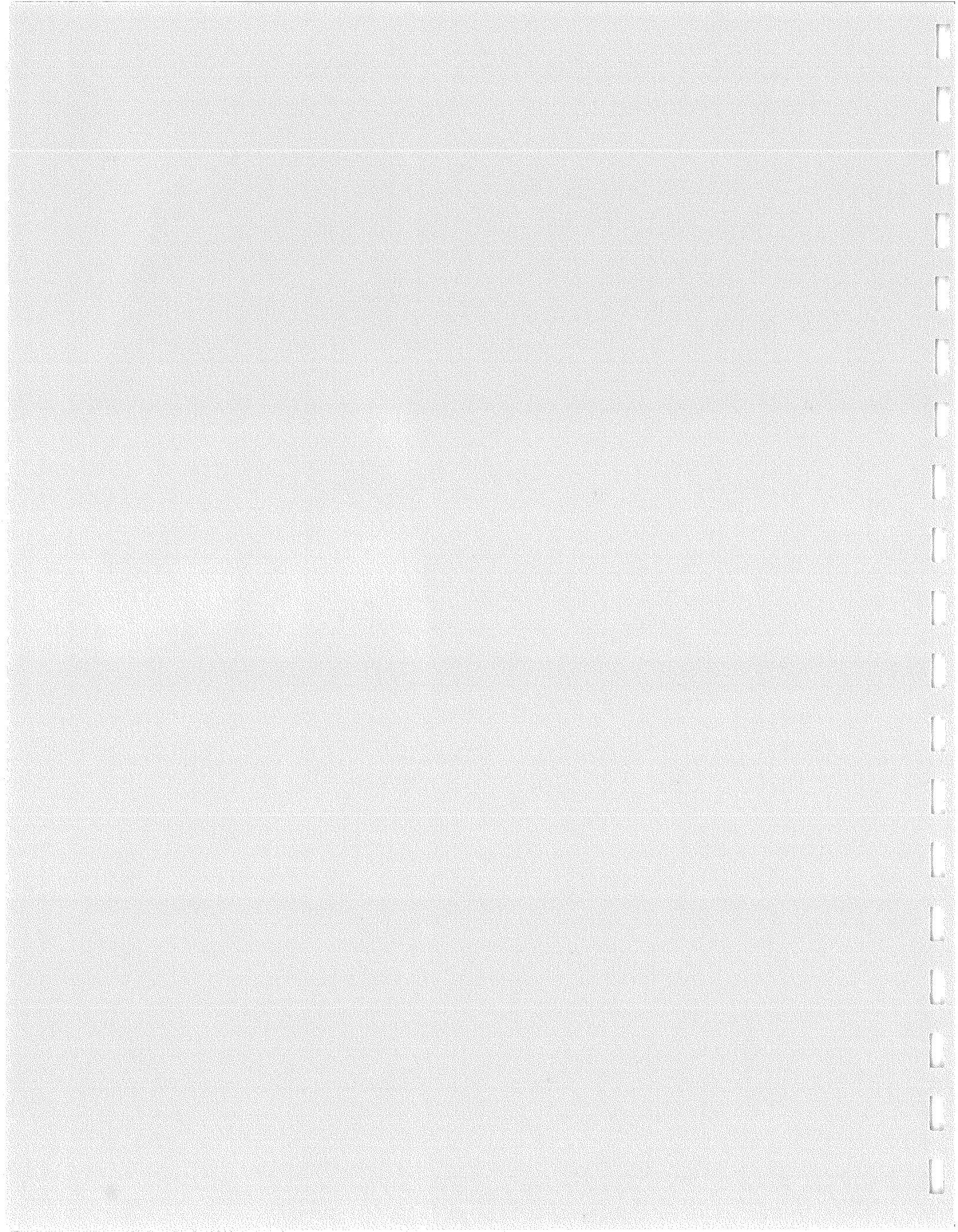
BOTTOM HOLE TEMPERATURE (°C)







65-30





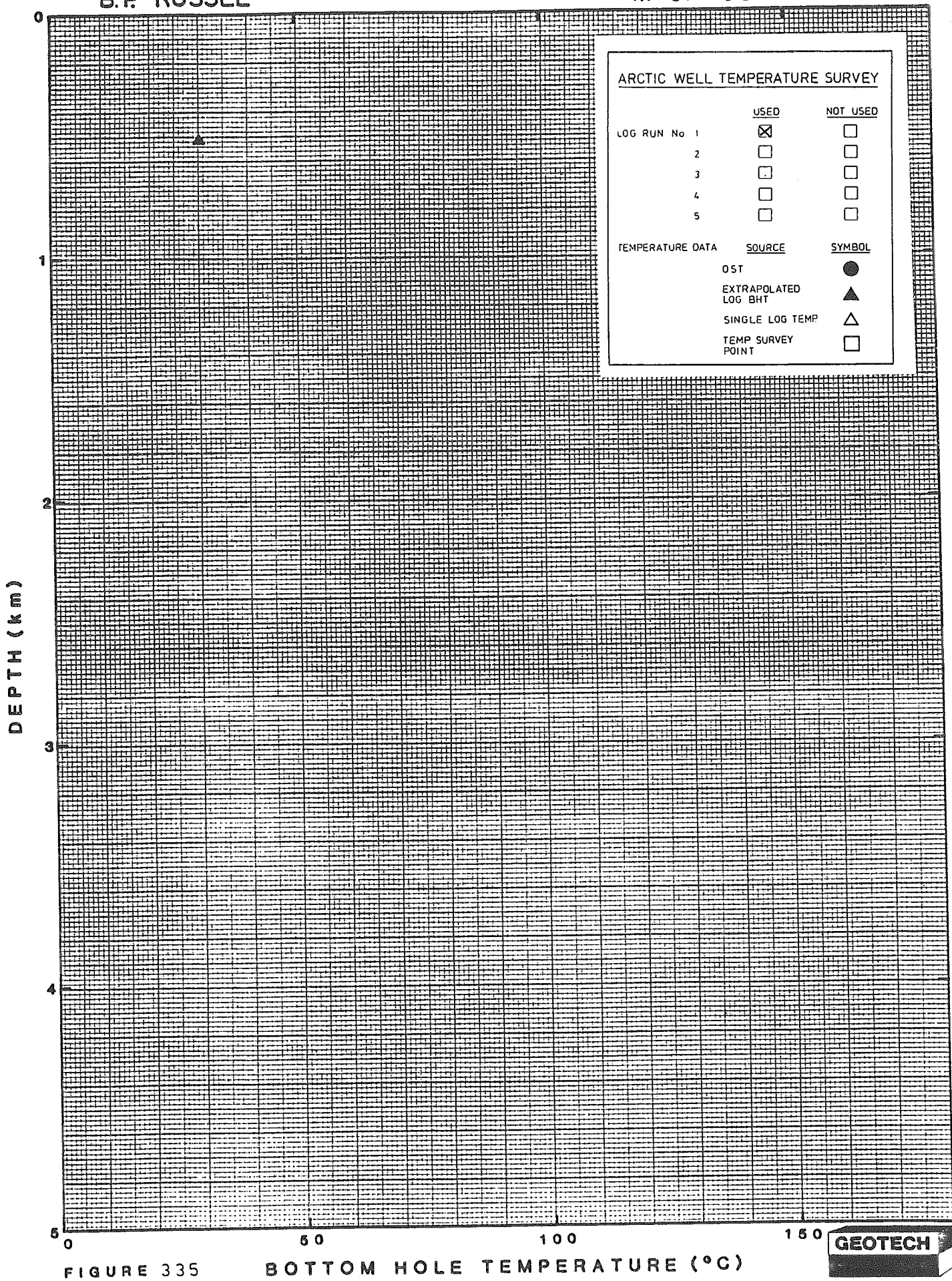


FIGURE 335

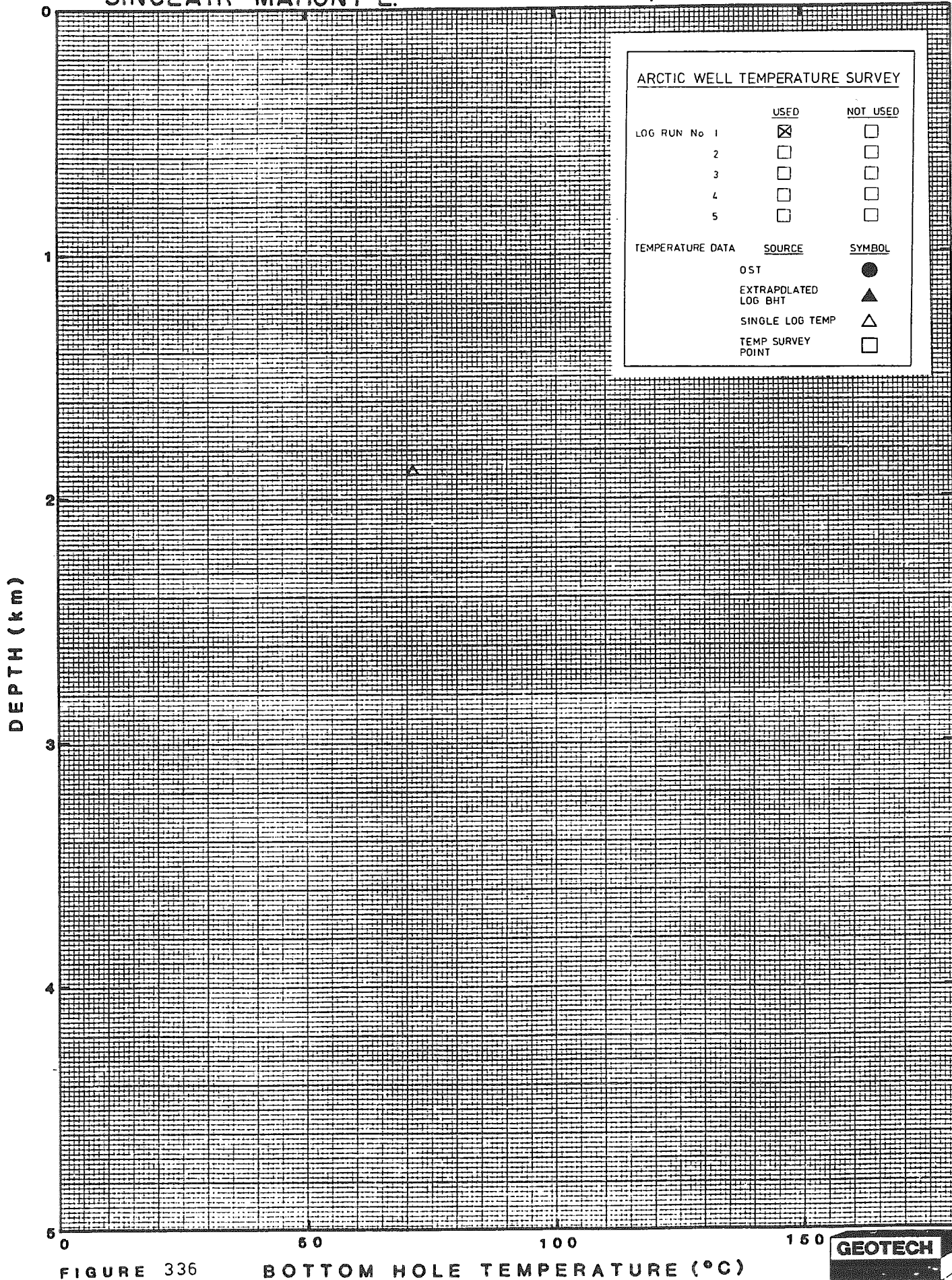
BOTTOM HOLE TEMPERATURE (°C)





SINCLAIR MAHONY L.

1-74 65-30-124-30



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPDLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 336

BOTTOM HOLE TEMPERATURE (°C)



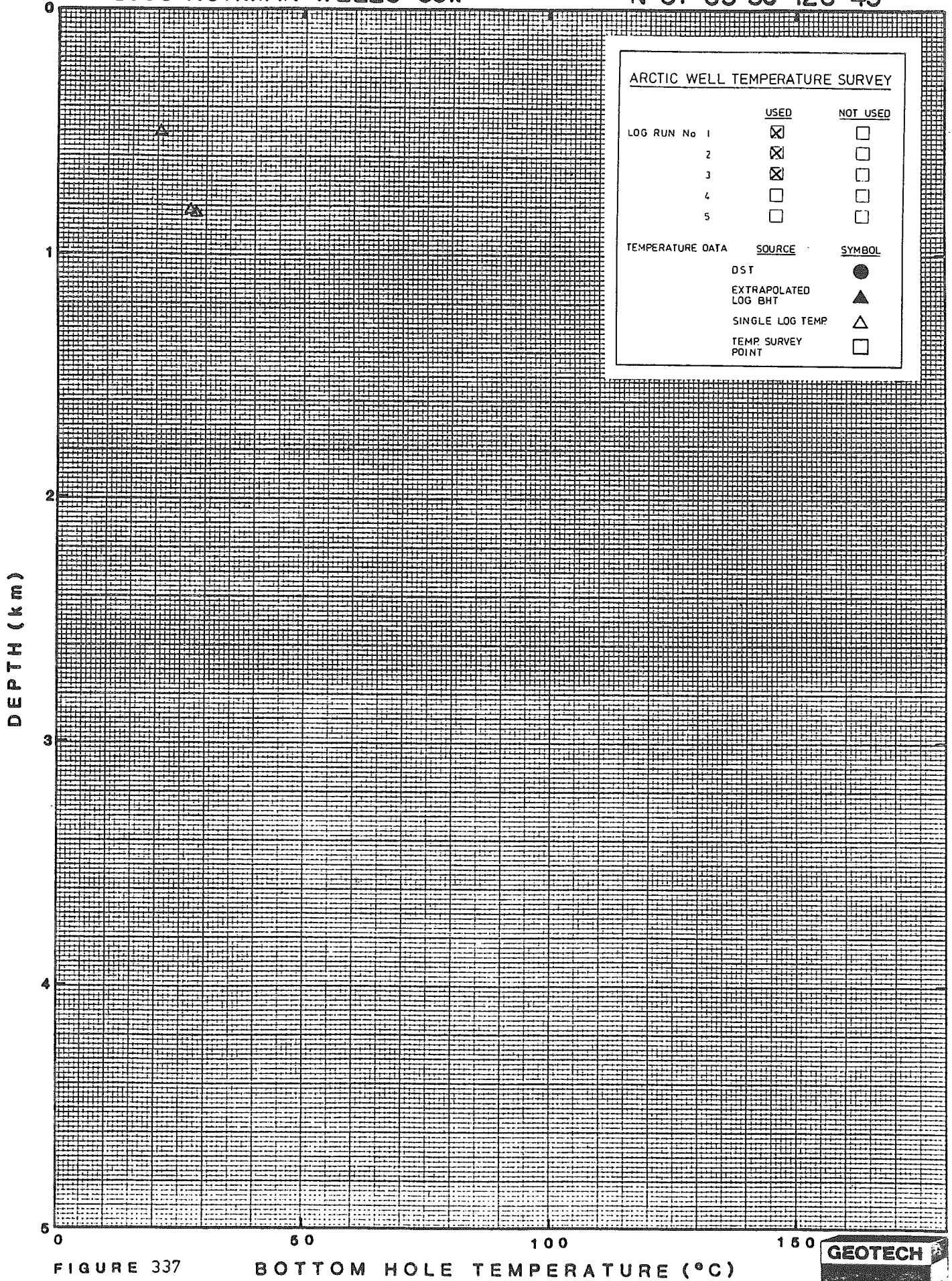


FIGURE 337

BOTTOM HOLE TEMPERATURE (°C)



BANFF OSCAR CK.

J-48 65-30-127-00

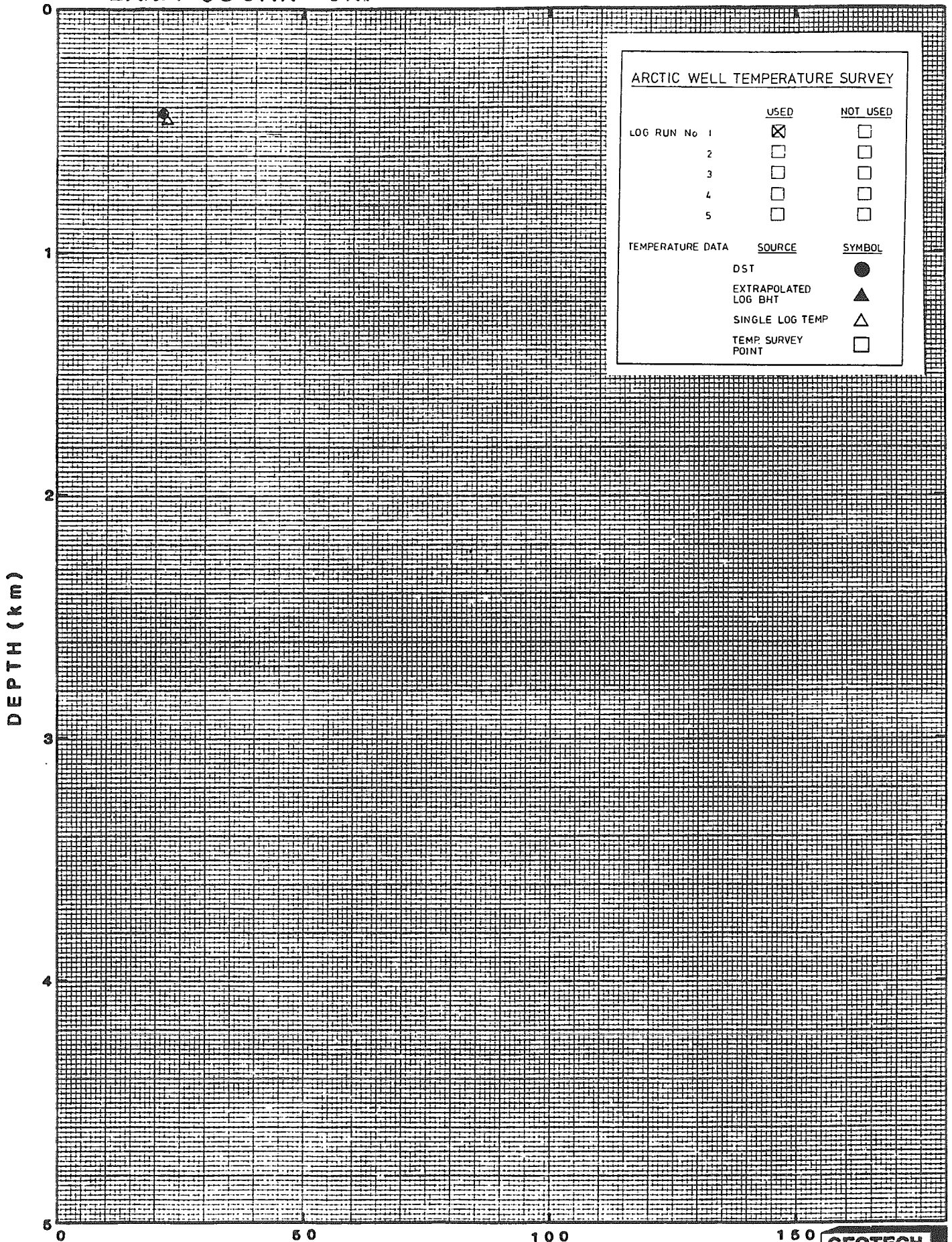


FIGURE 338

BOTTOM HOLE TEMPERATURE (°C)



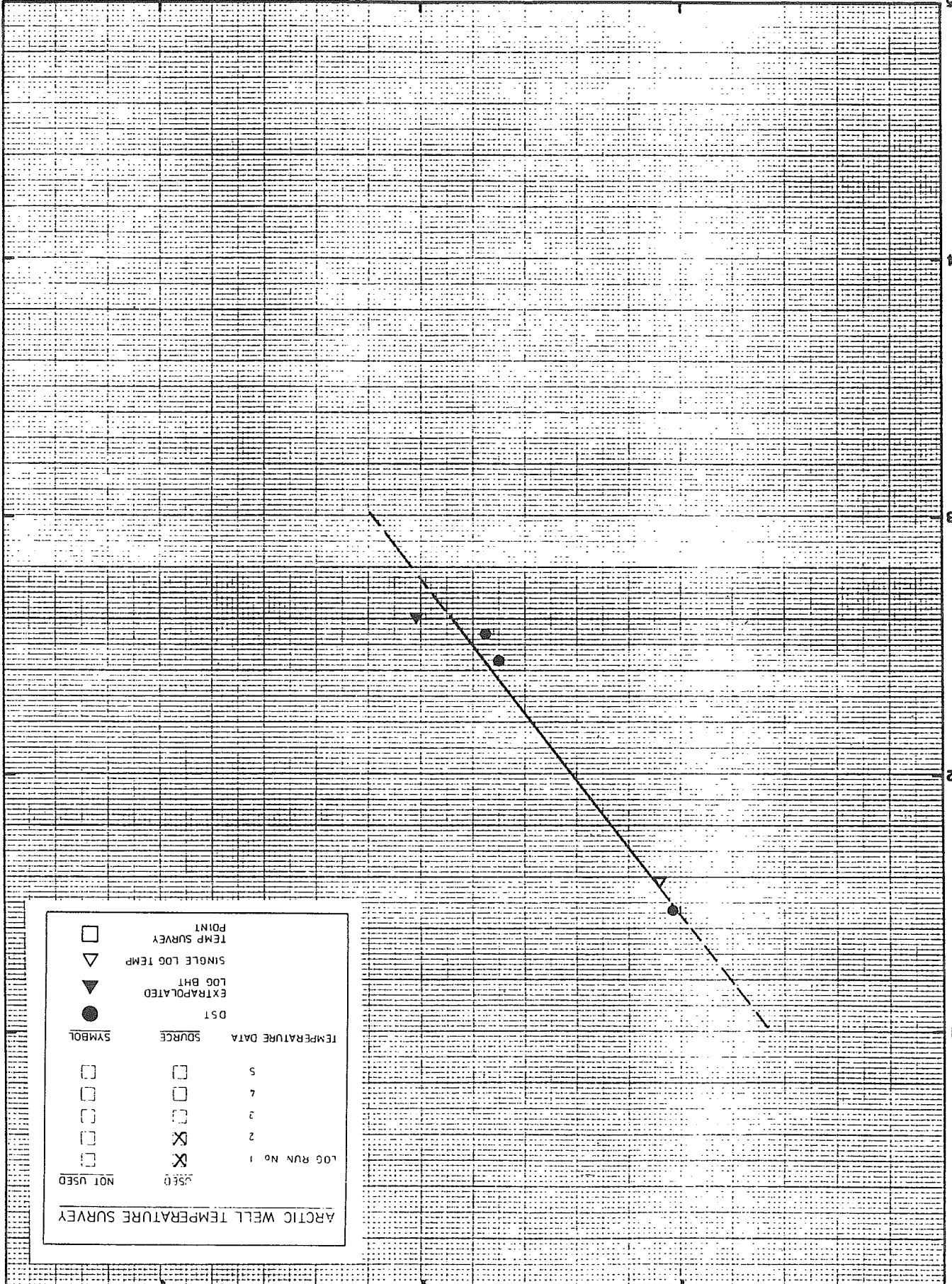


DEPTH (km)

L-09 65-30-129-30

MOBIL HUME R.

ARCTIC WELL TEMPERATURE SURVEY			
LOG RUN No.	SOURCE	TEMPERATURE DATA	SYMBOL
5	□	TEMPERATURE DATA	□
7	□	TEMPERATURE DATA	□
3	□	TEMPERATURE DATA	□
2	⊗	TEMPERATURE DATA	⊗
1	⊗	TEMPERATURE DATA	⊗
	NOT USED		□
		DST	●
		EXTRAPOLATED LOG BHT	▽
		SINGLE LOG TEMP	▽
		TEMP SURVEY POINT	□





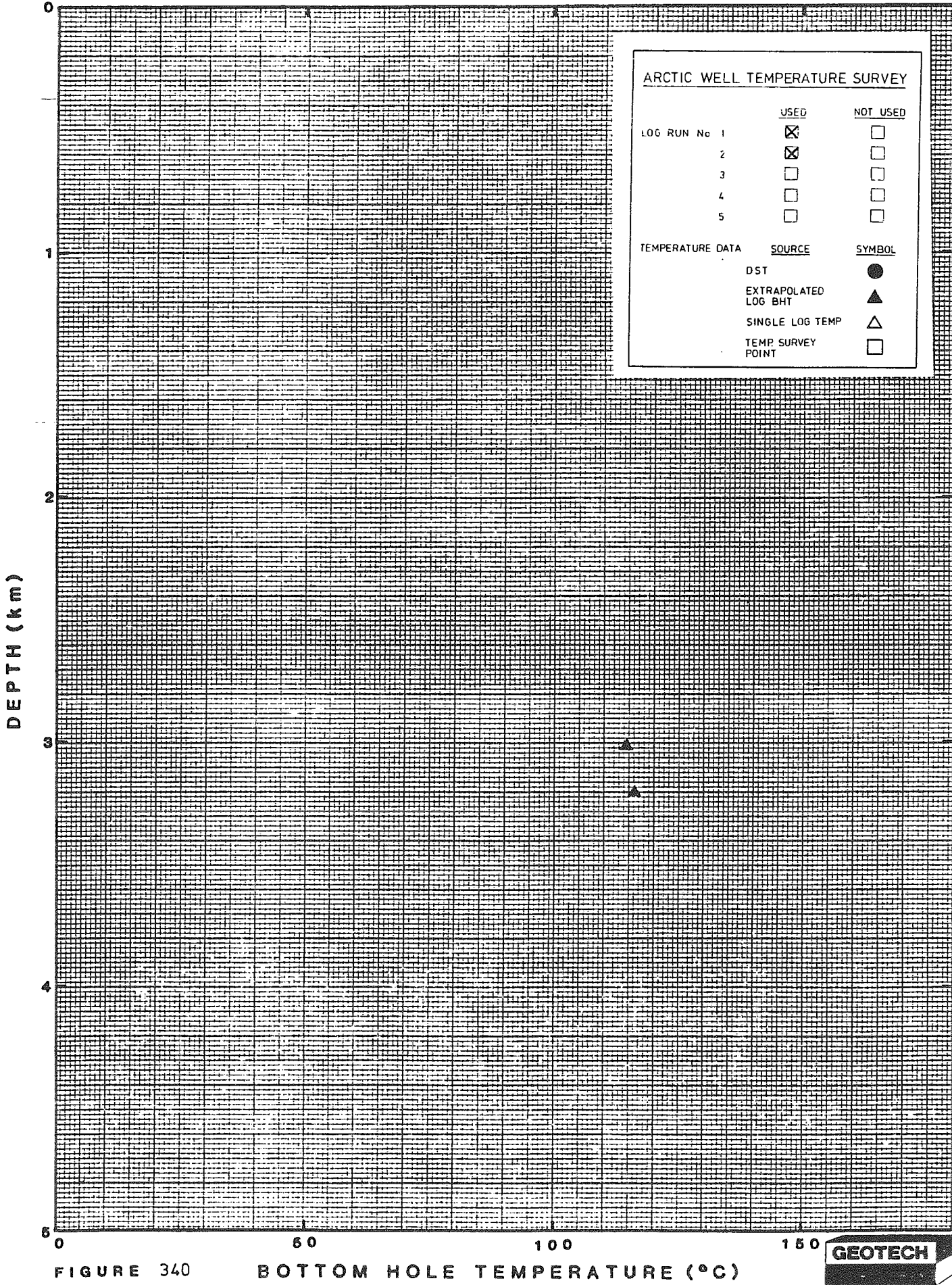
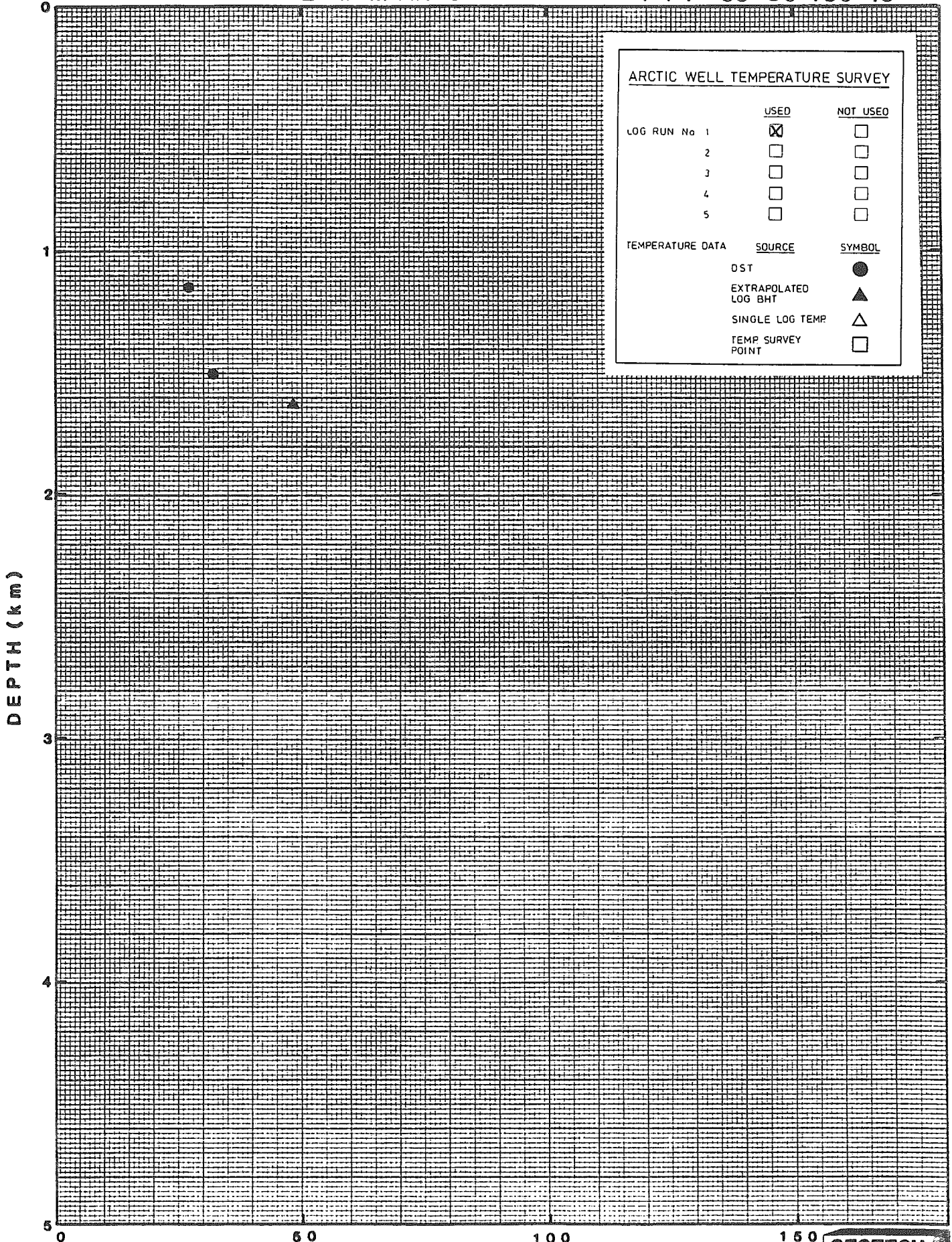


FIGURE 340

BOTTOM HOLE TEMPERATURE (°C)



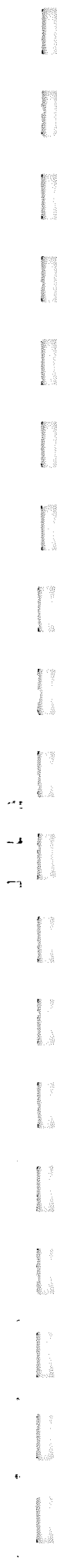


ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 341

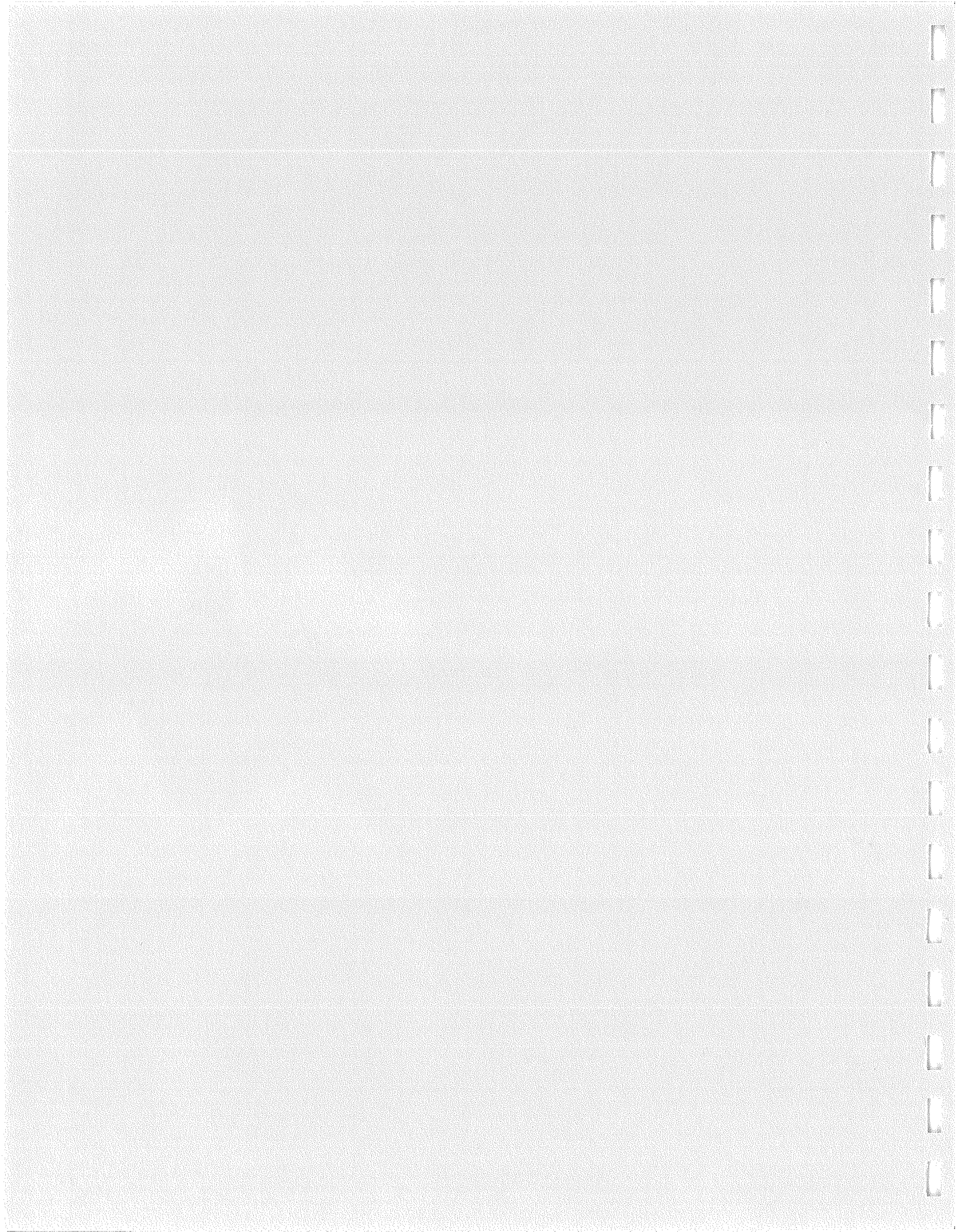
BOTTOM HOLE TEMPERATURE (°C)





65-40





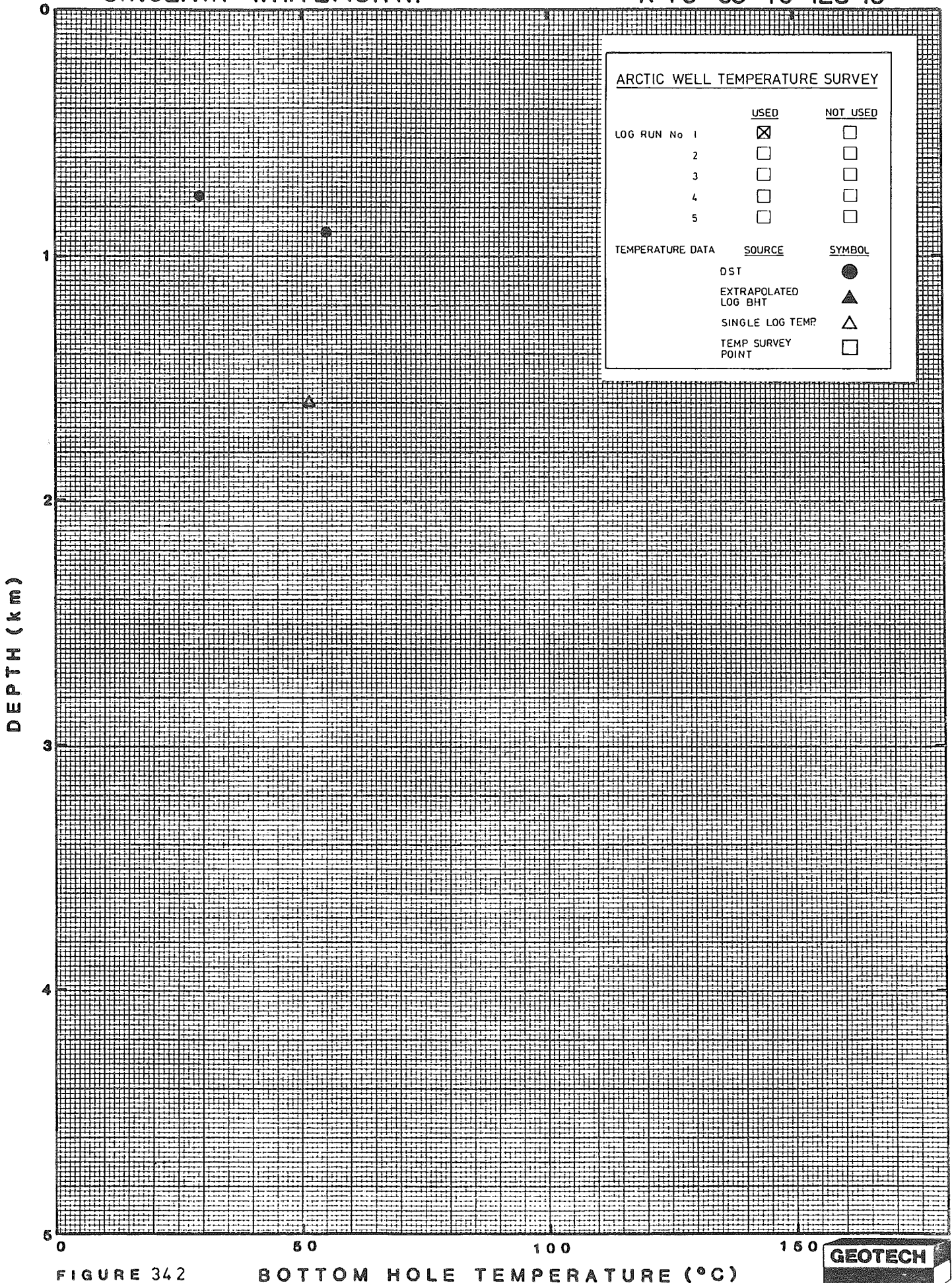


FIGURE 342

BOTTOM HOLE TEMPERATURE (°C)





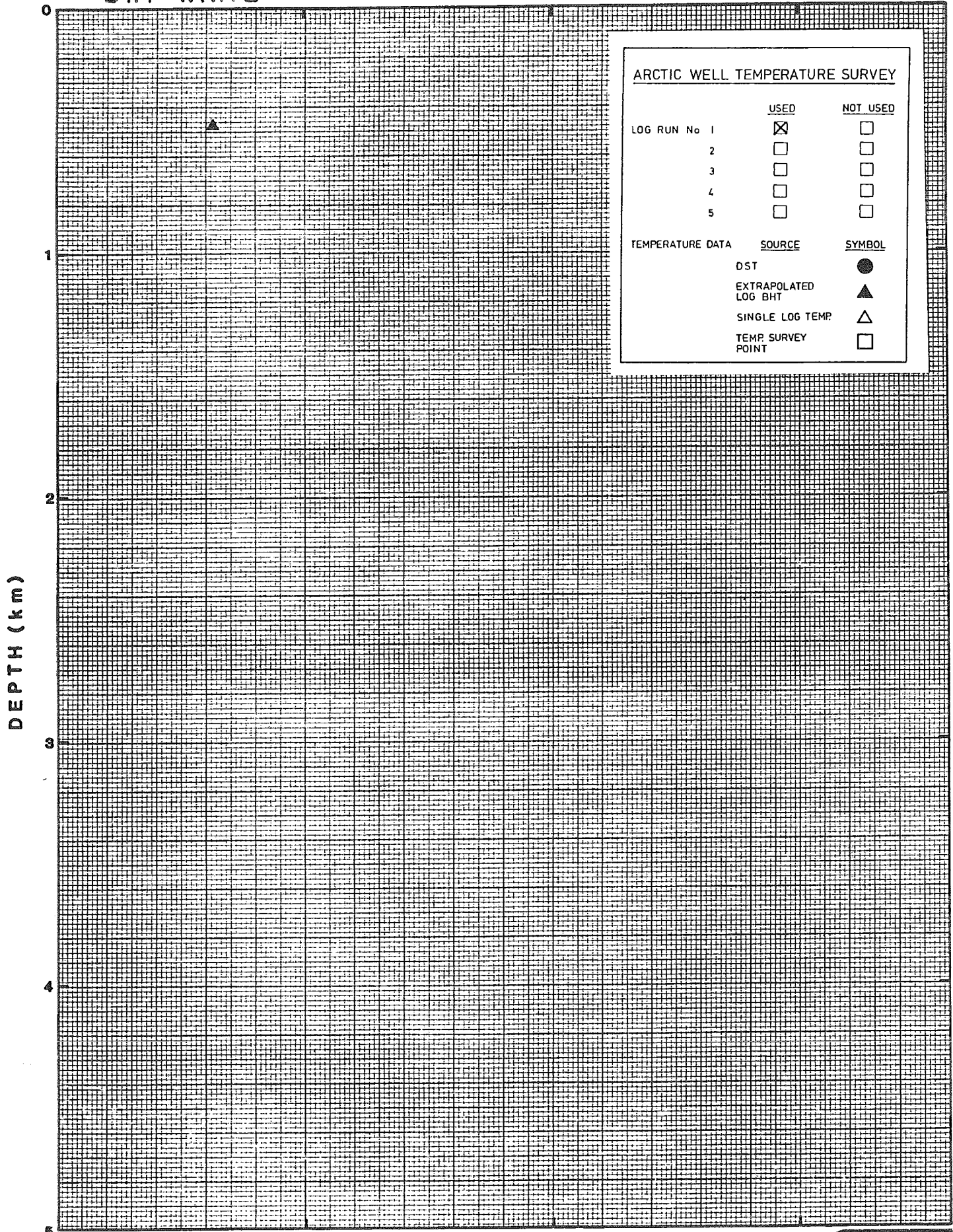


FIGURE 343

BOTTOM HOLE TEMPERATURE (°C)



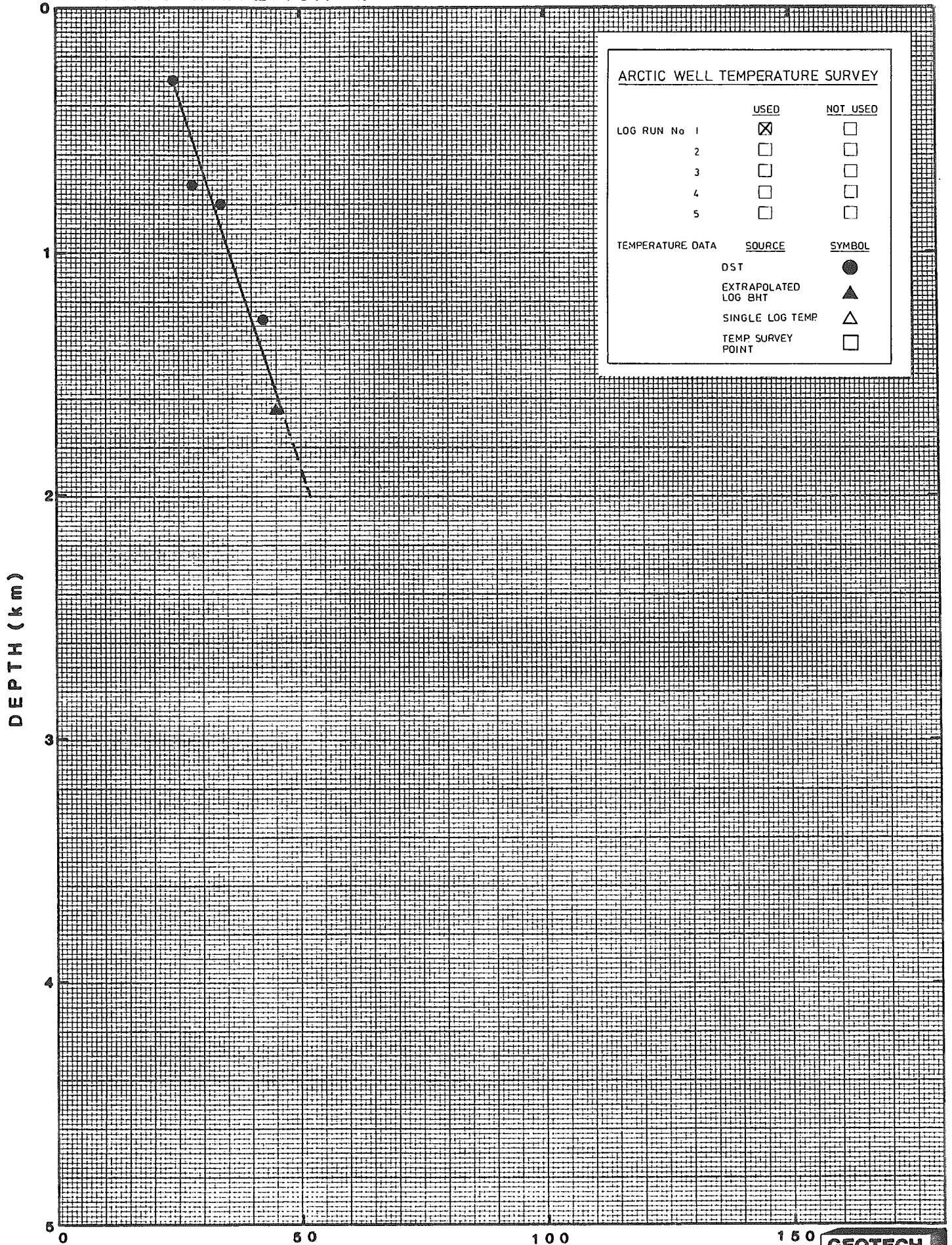


FIGURE 344

BOTTOM HOLE TEMPERATURE (°C)





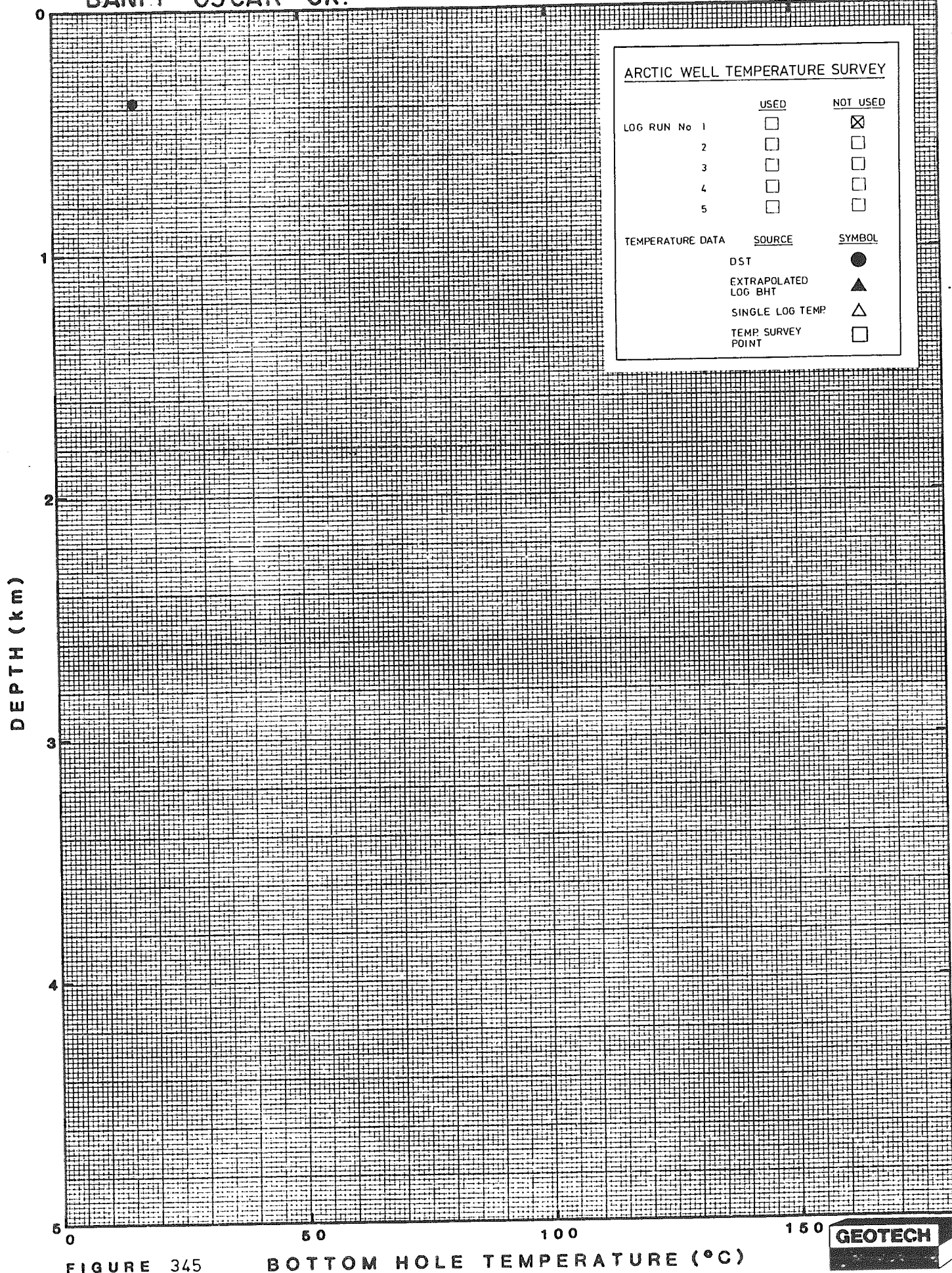


FIGURE 345

BOTTOM HOLE TEMPERATURE (°C)



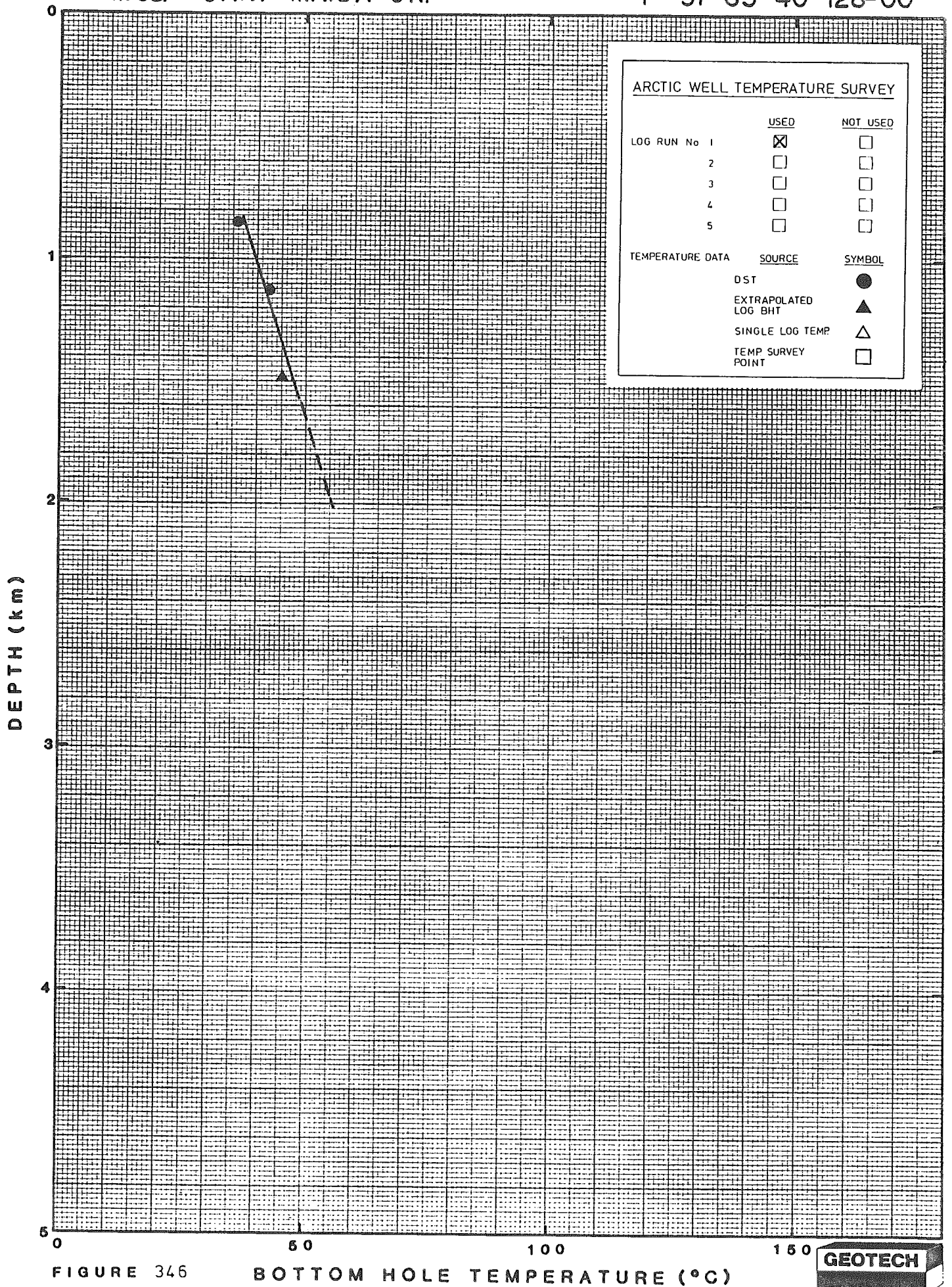


FIGURE 346

BOTTOM HOLE TEMPERATURE (°C)



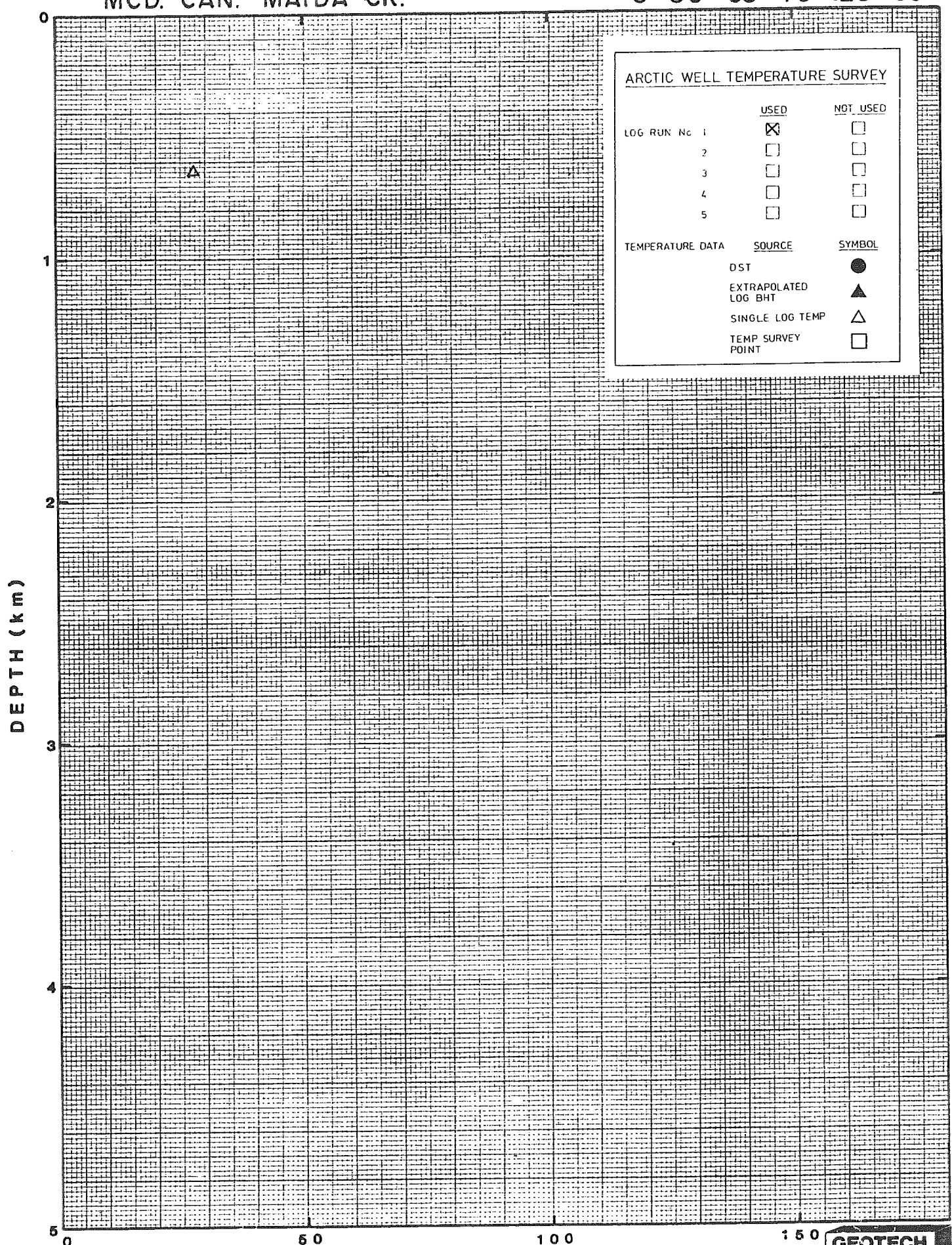


FIGURE 347

BOTTOM HOLE TEMPERATURE (°C)





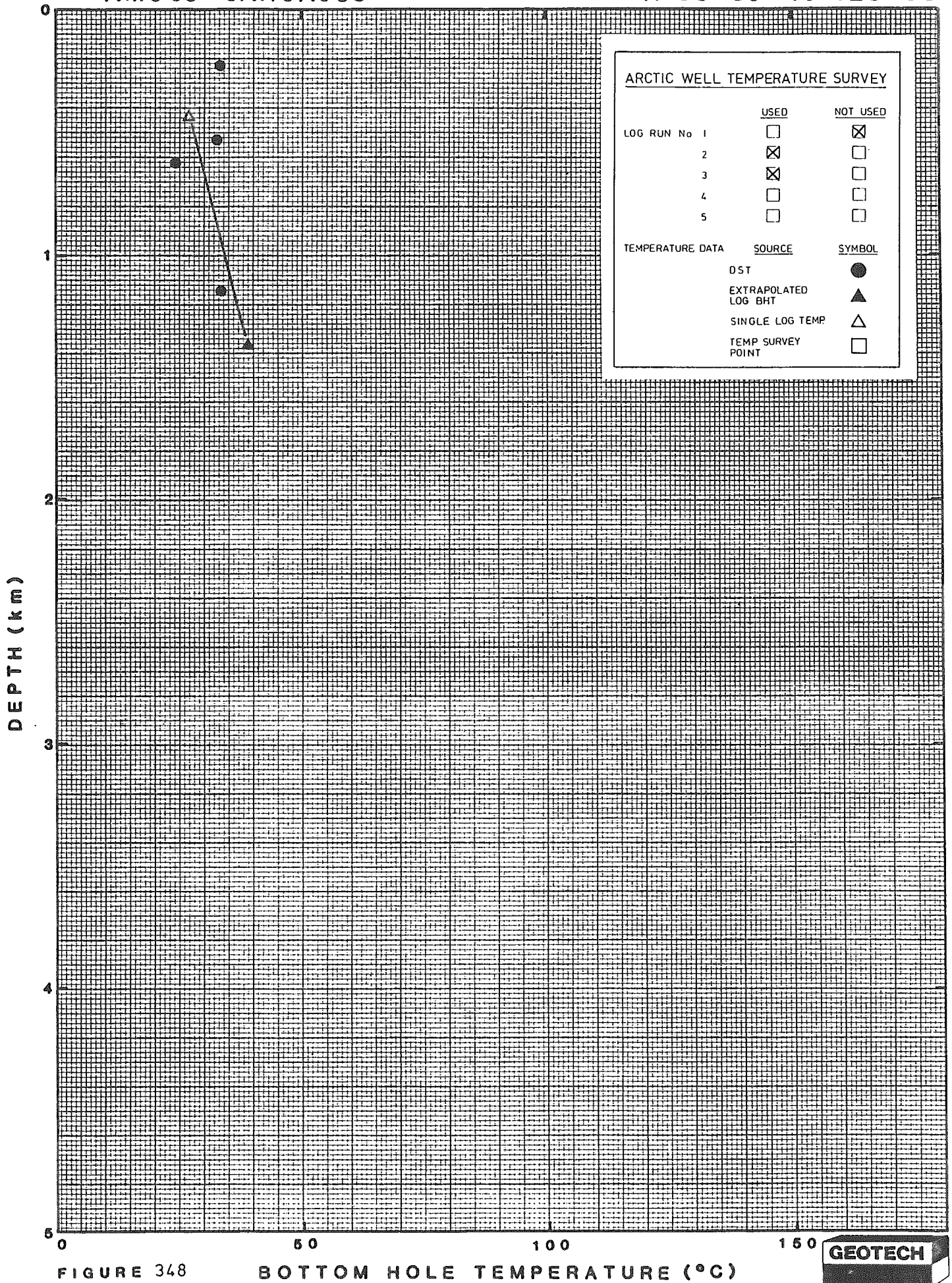


FIGURE 348

BOTTOM HOLE TEMPERATURE (°C)





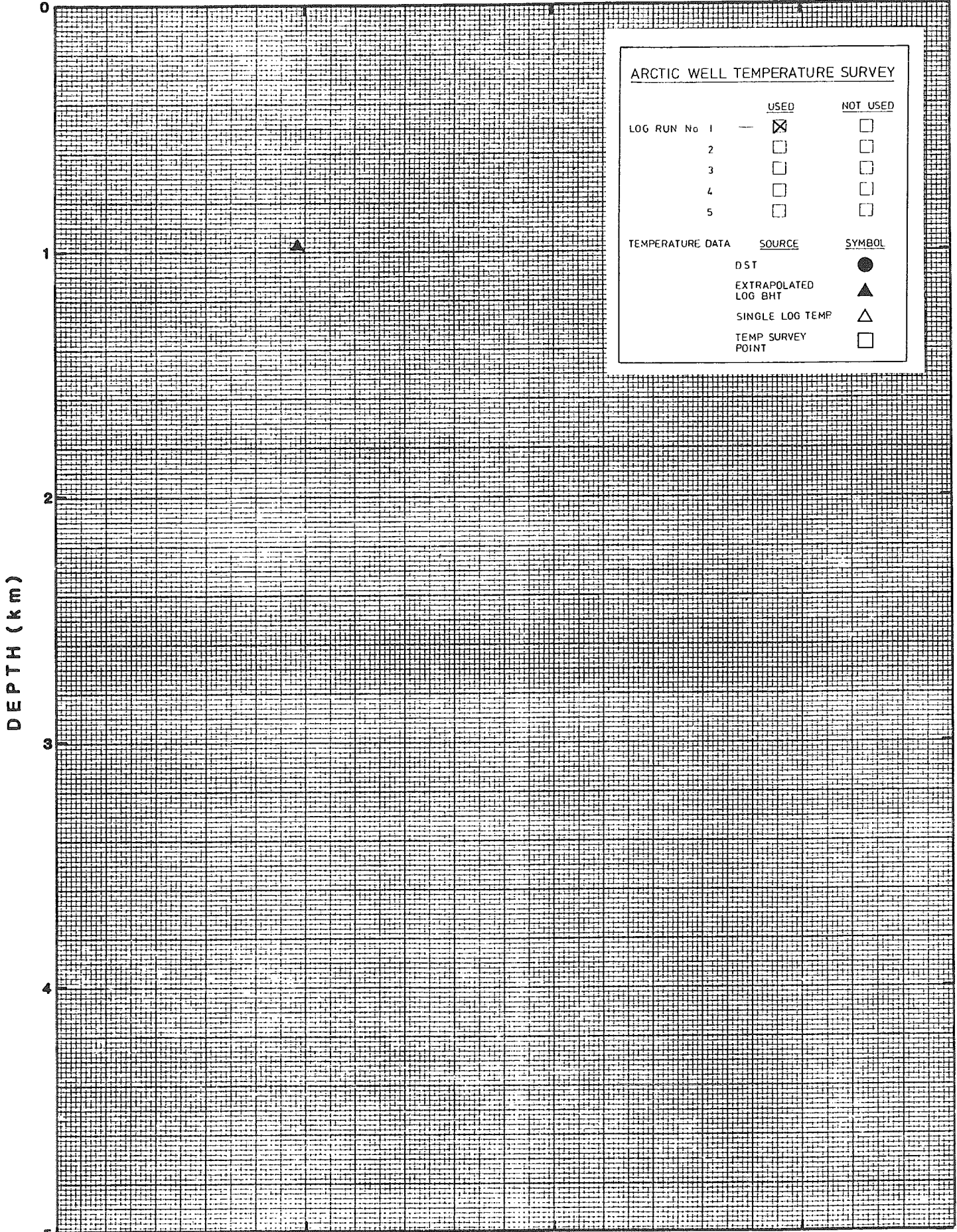


FIGURE 349

BOTTOM HOLE TEMPERATURE (°C)



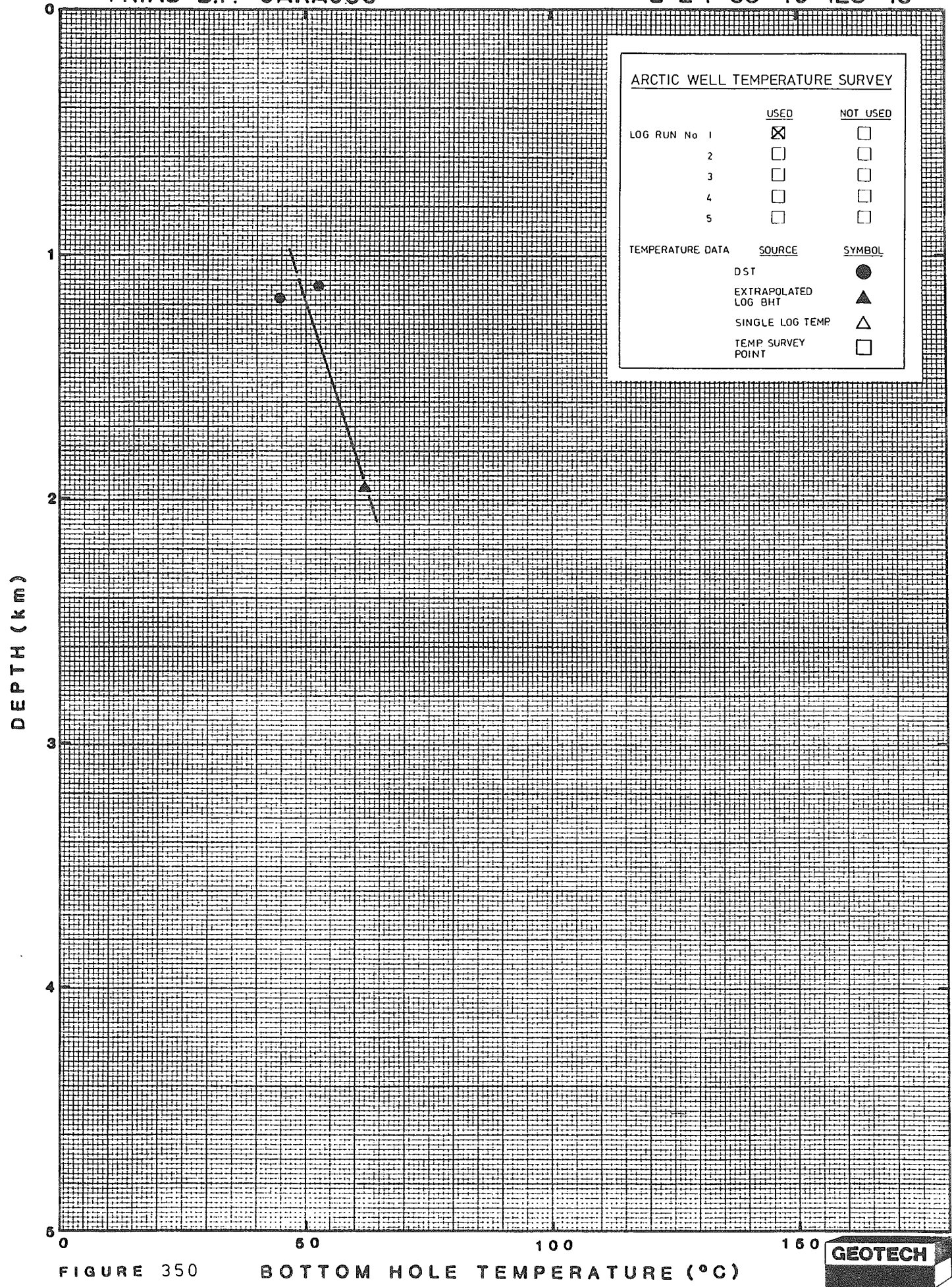
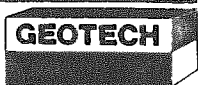
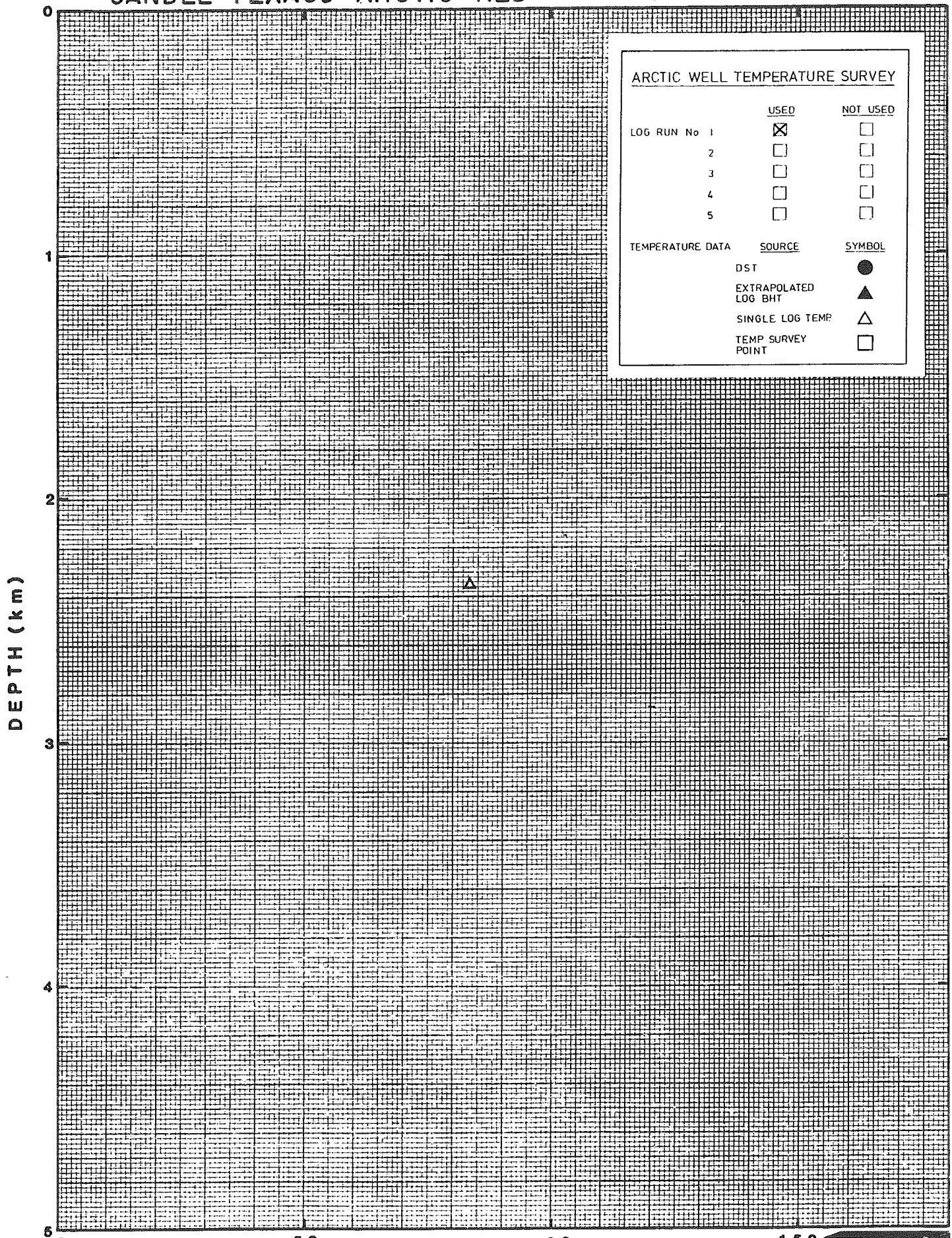


FIGURE 350

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No		
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
<u>TEMPERATURE DATA</u>	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0 50 100 150

FIGURE 351 BOTTOM HOLE TEMPERATURE (°C)





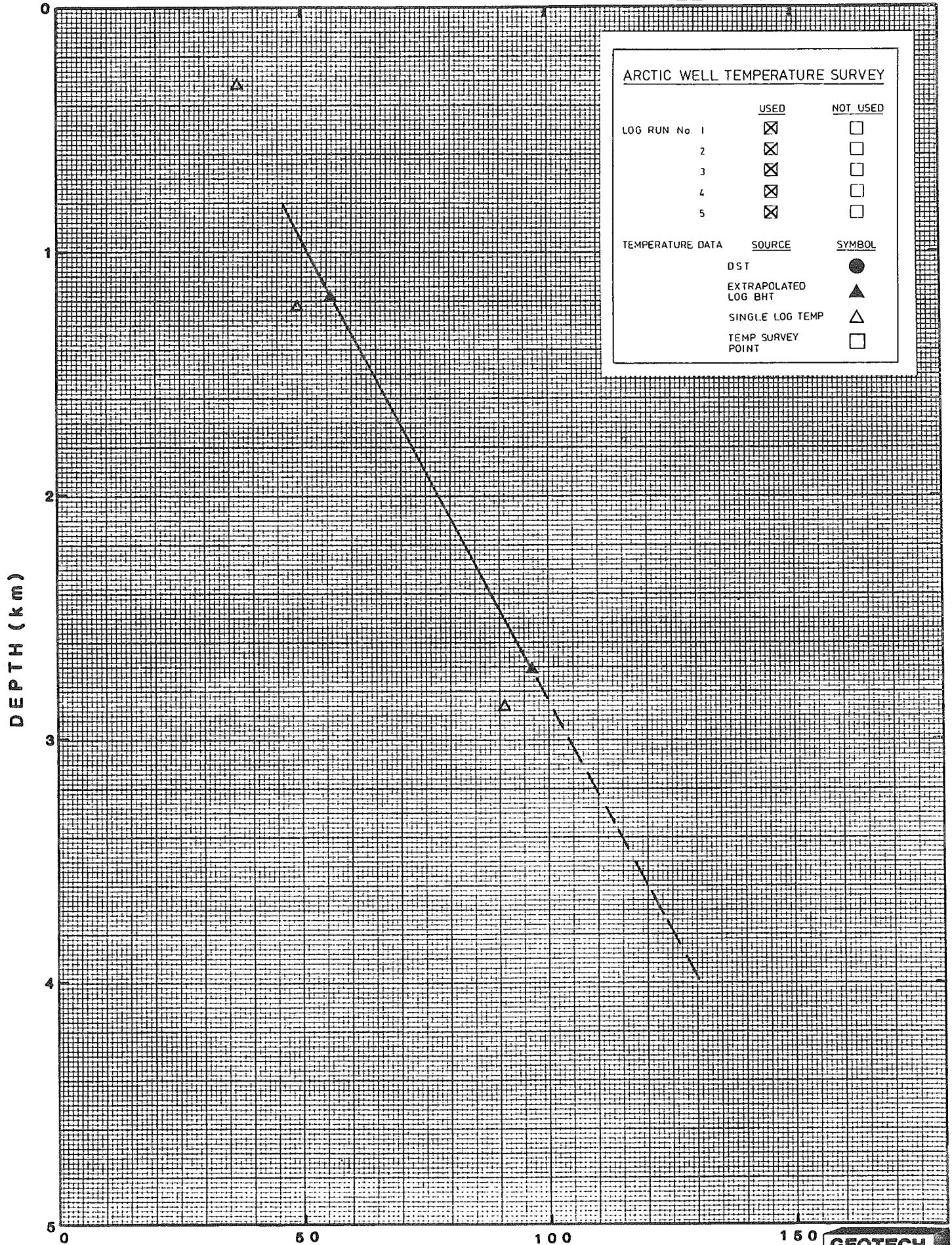


FIGURE 352

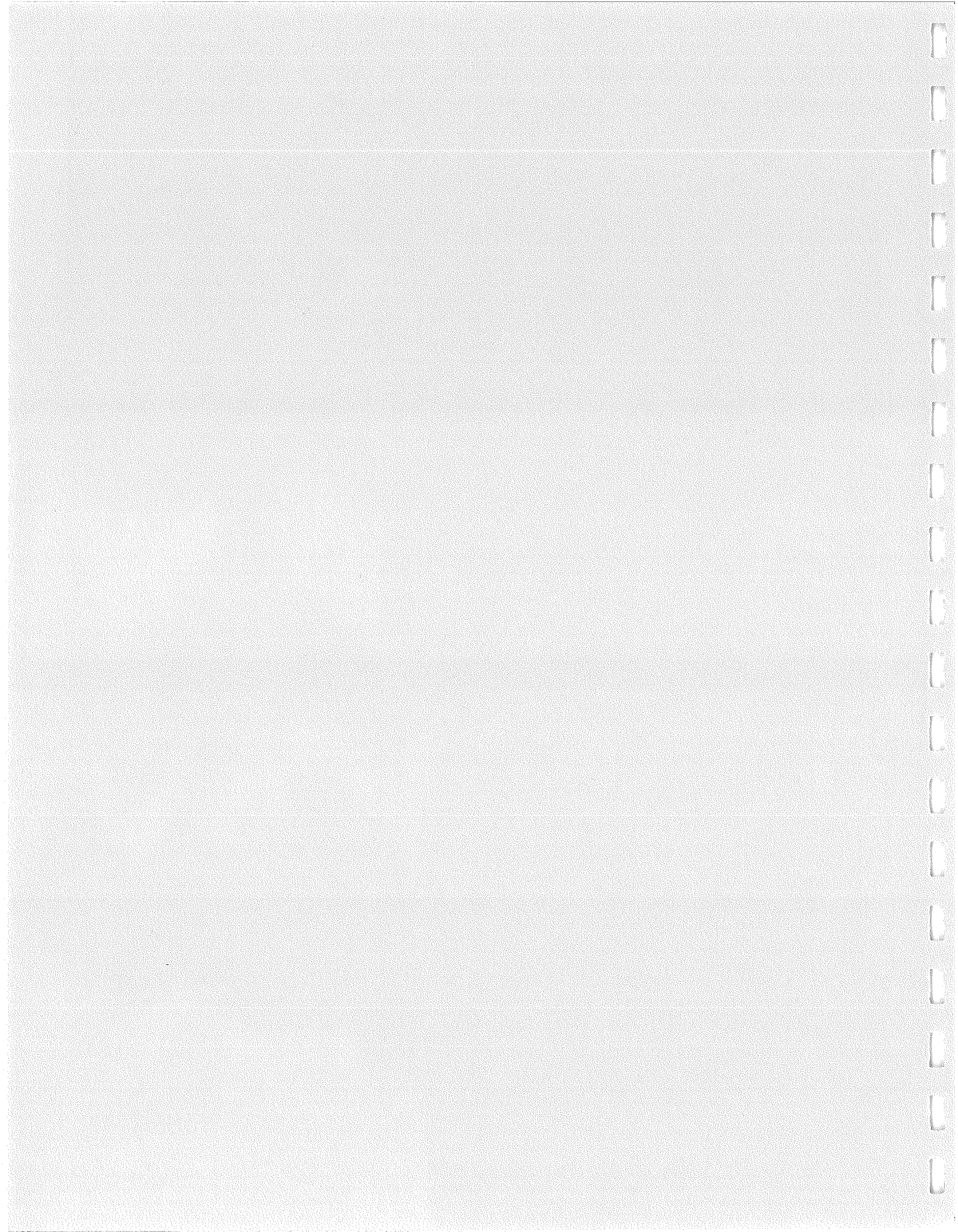
BOTTOM HOLE TEMPERATURE (°C)







65-50





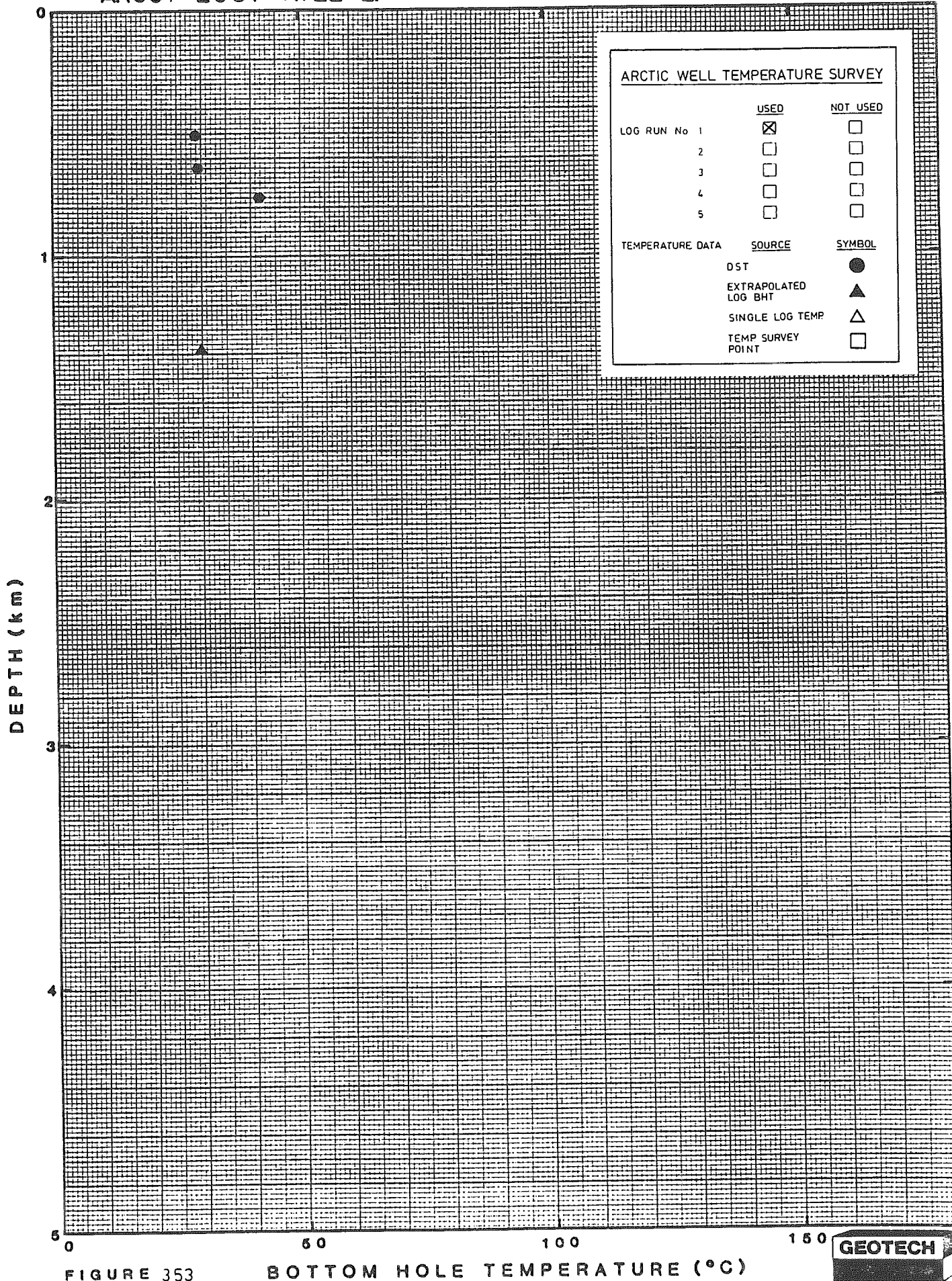
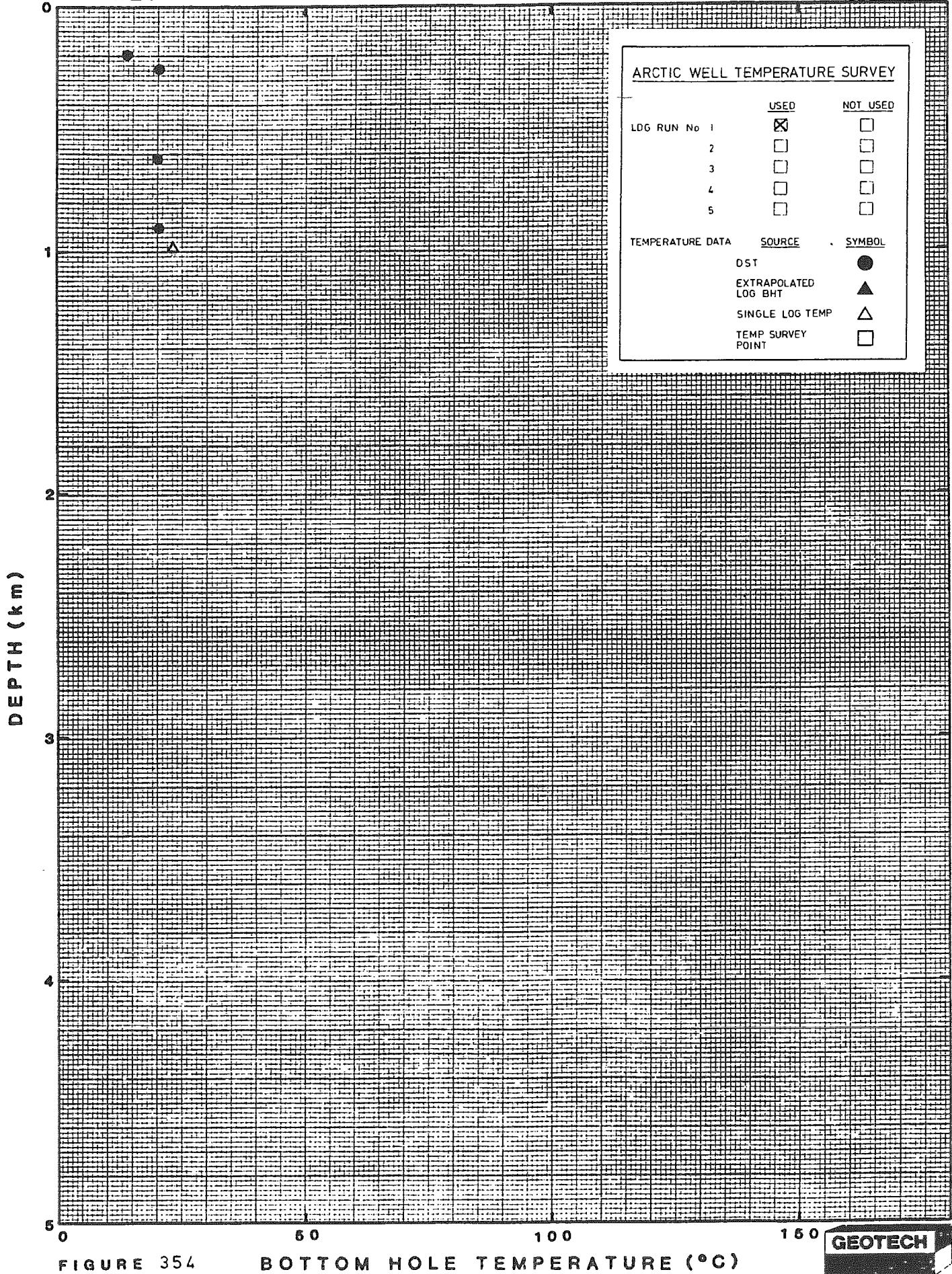


FIGURE 353

BOTTOM HOLE TEMPERATURE (°C)







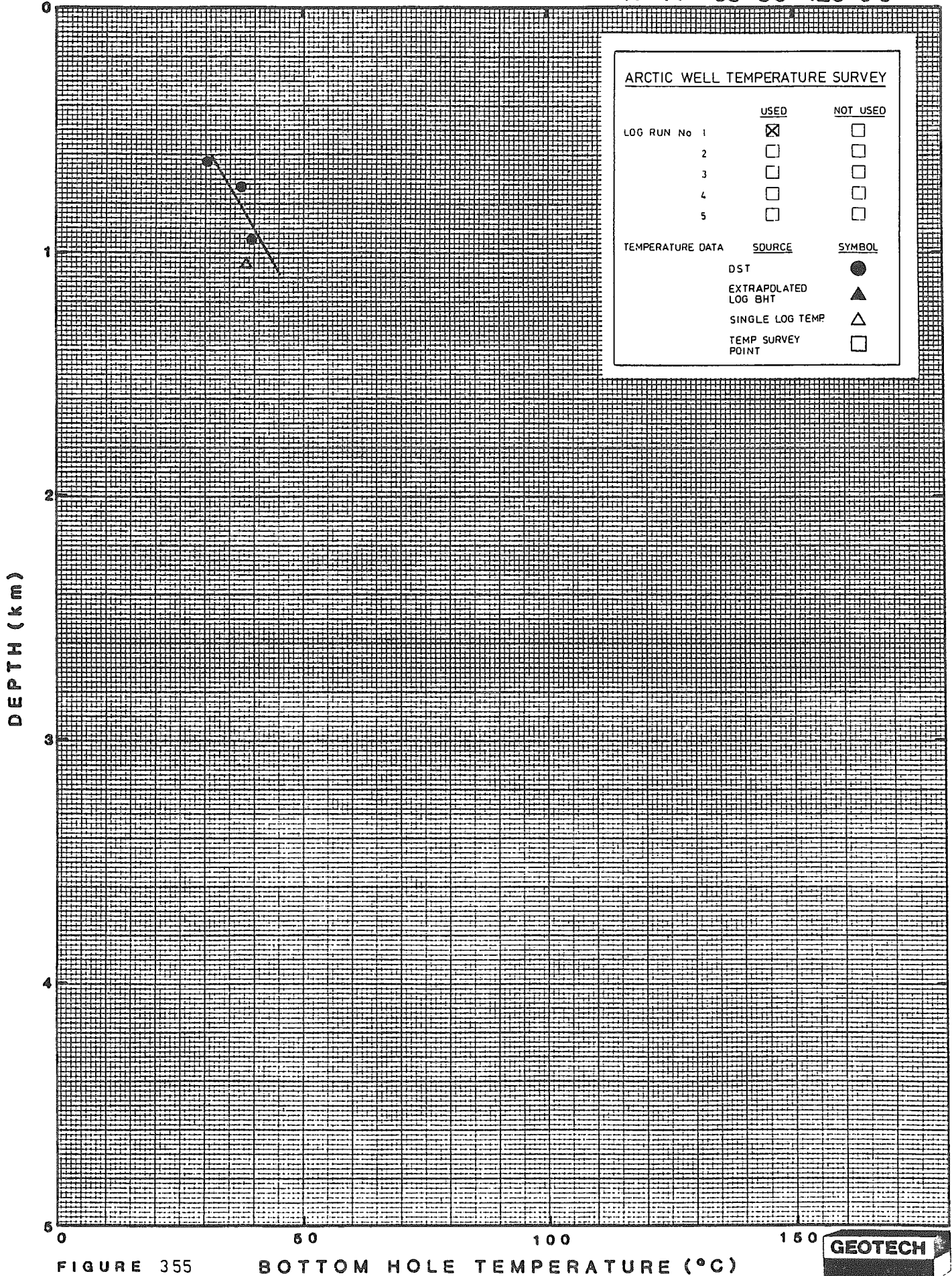


FIGURE 355

BOTTOM HOLE TEMPERATURE (°C)



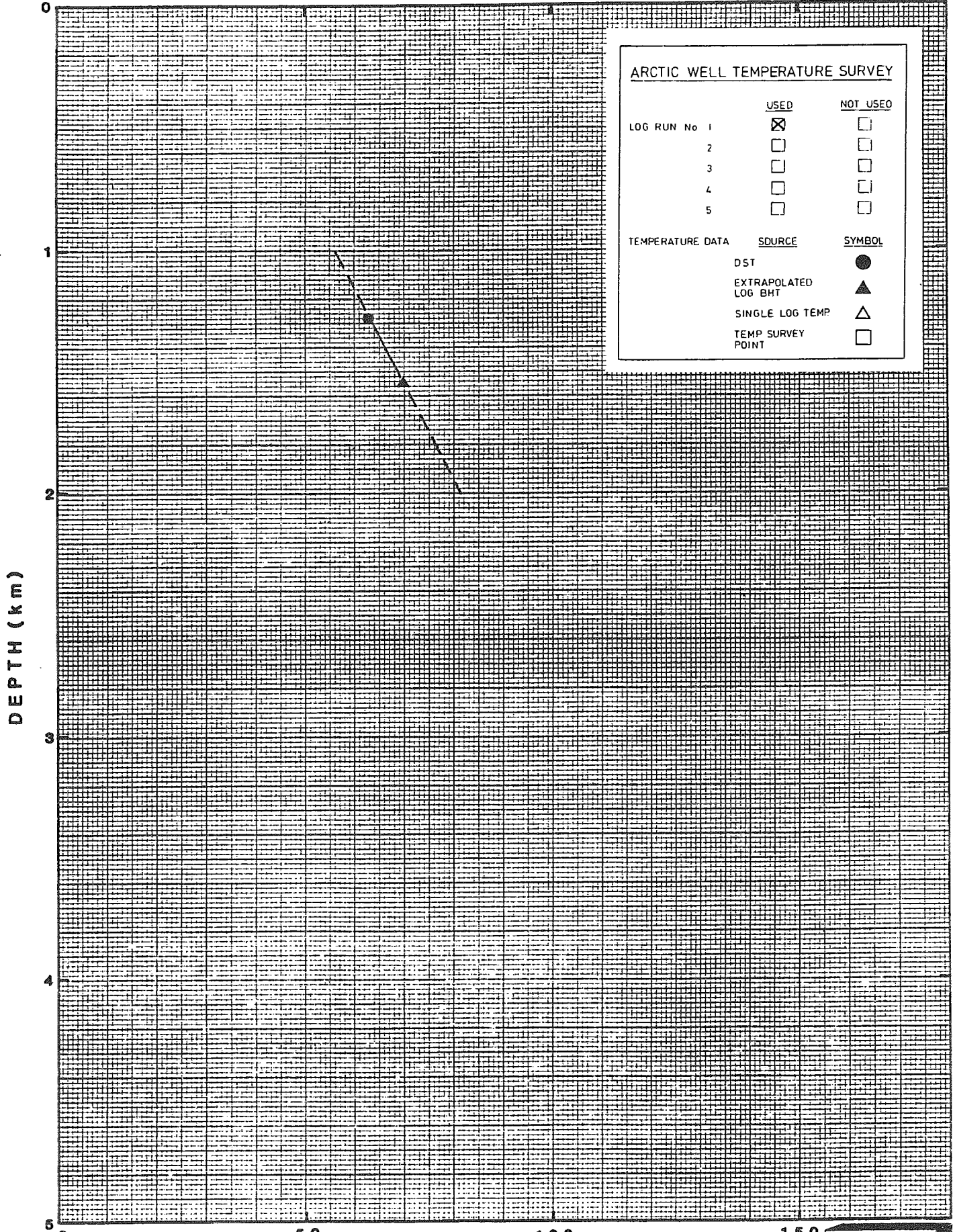


FIGURE 356

BOTTOM HOLE TEMPERATURE (°C)





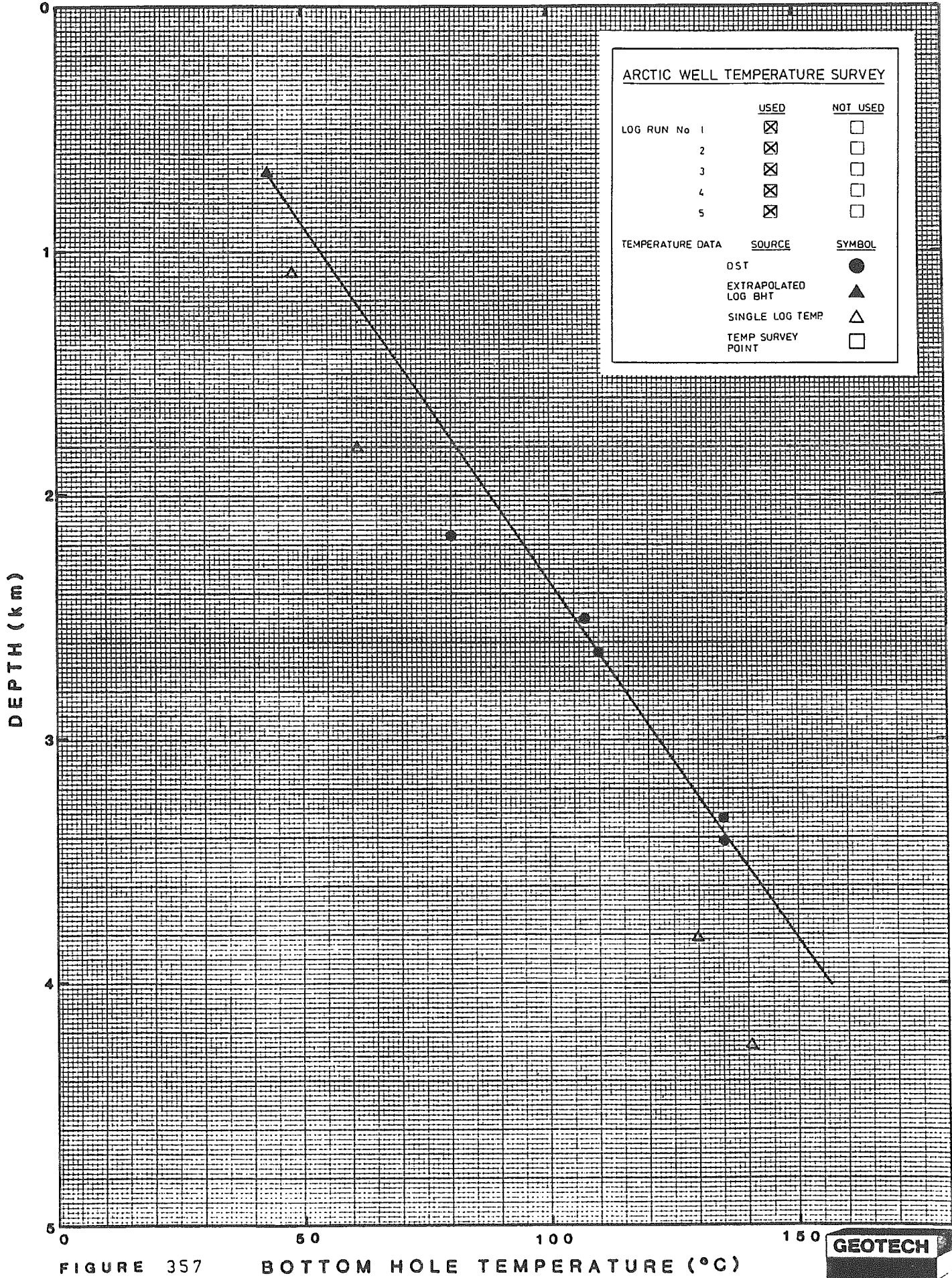


FIGURE 357

BOTTOM HOLE TEMPERATURE (°C)





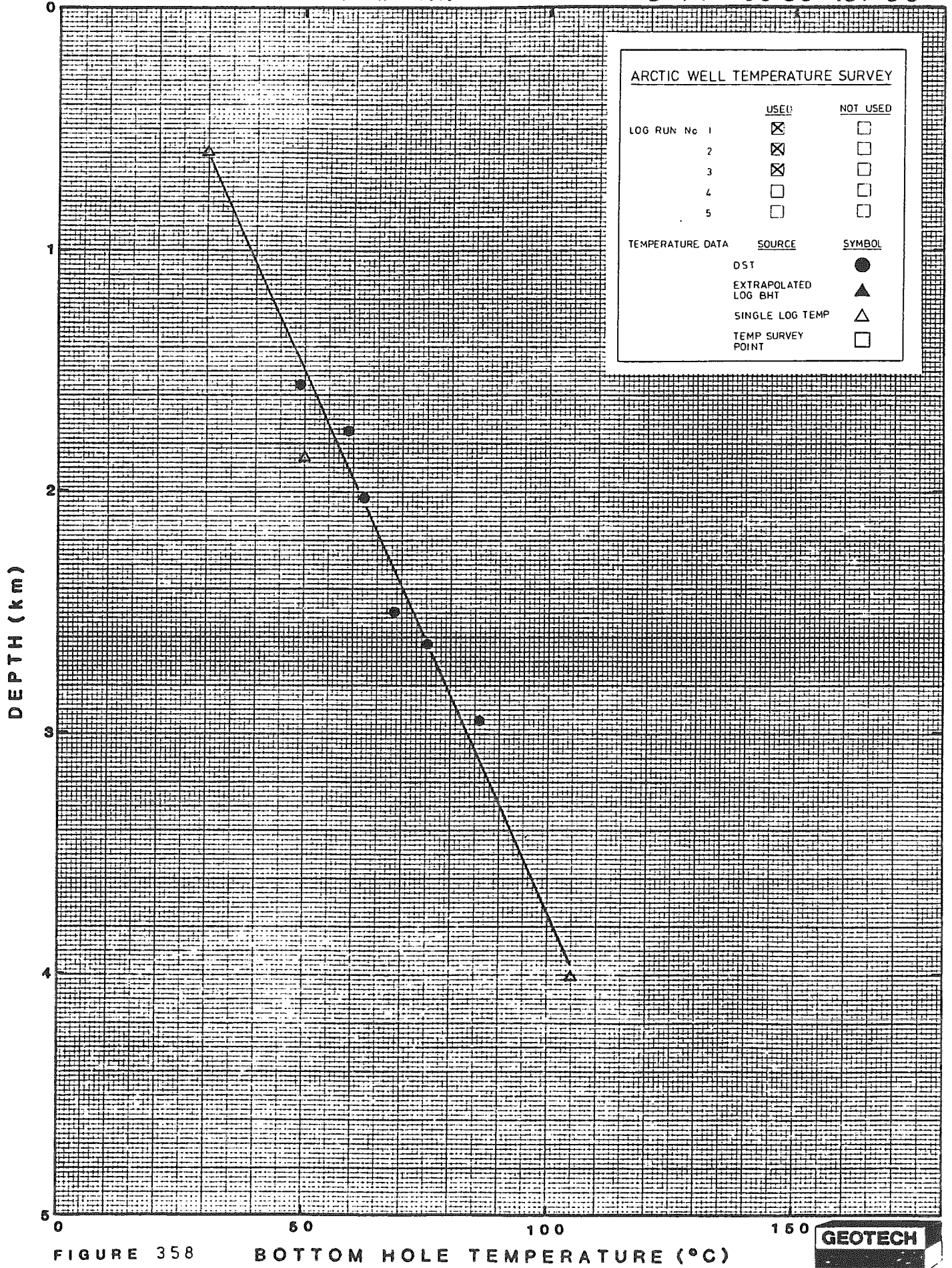


FIGURE 358

BOTTOM HOLE TEMPERATURE (°C)



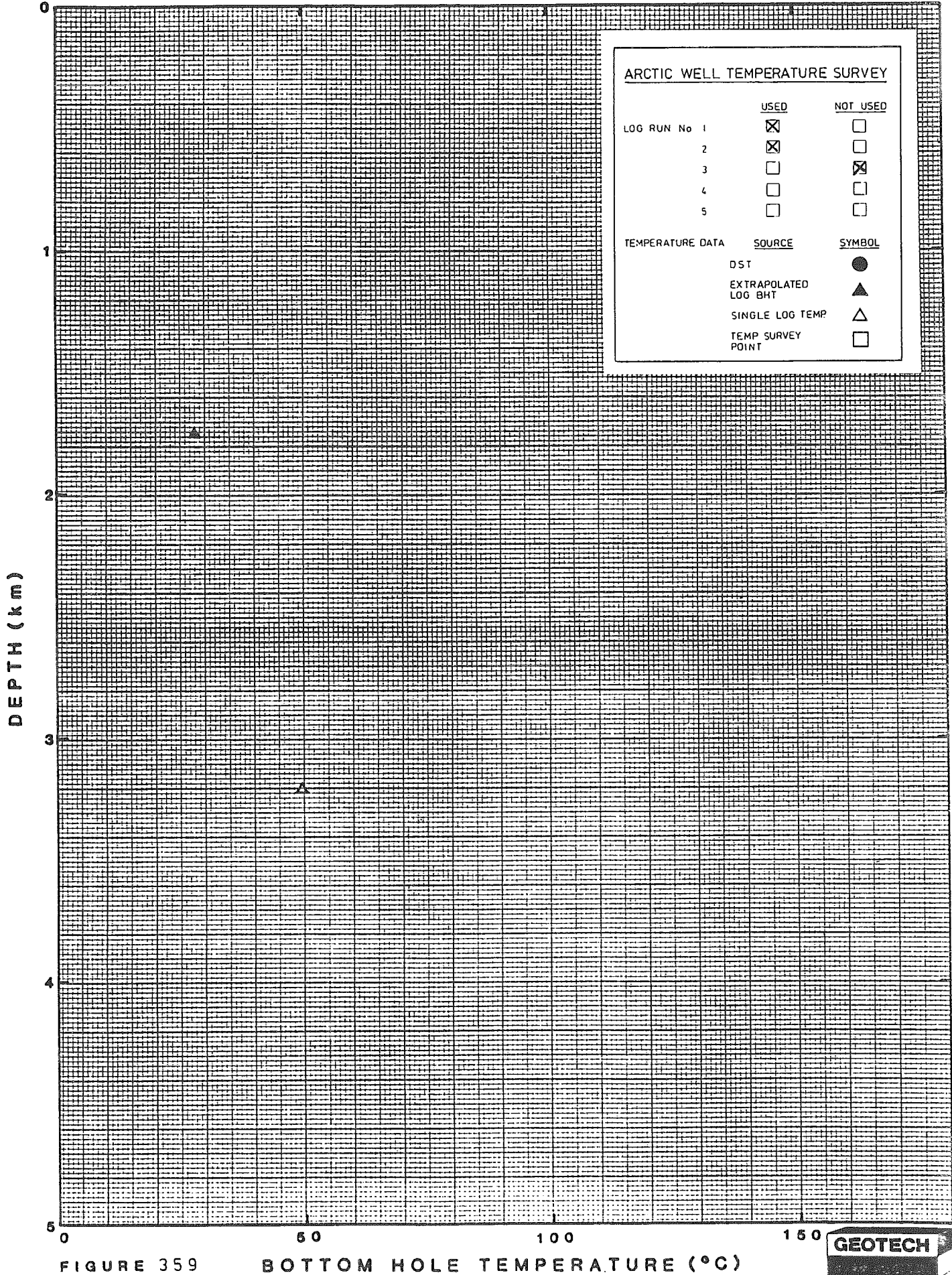


FIGURE 359

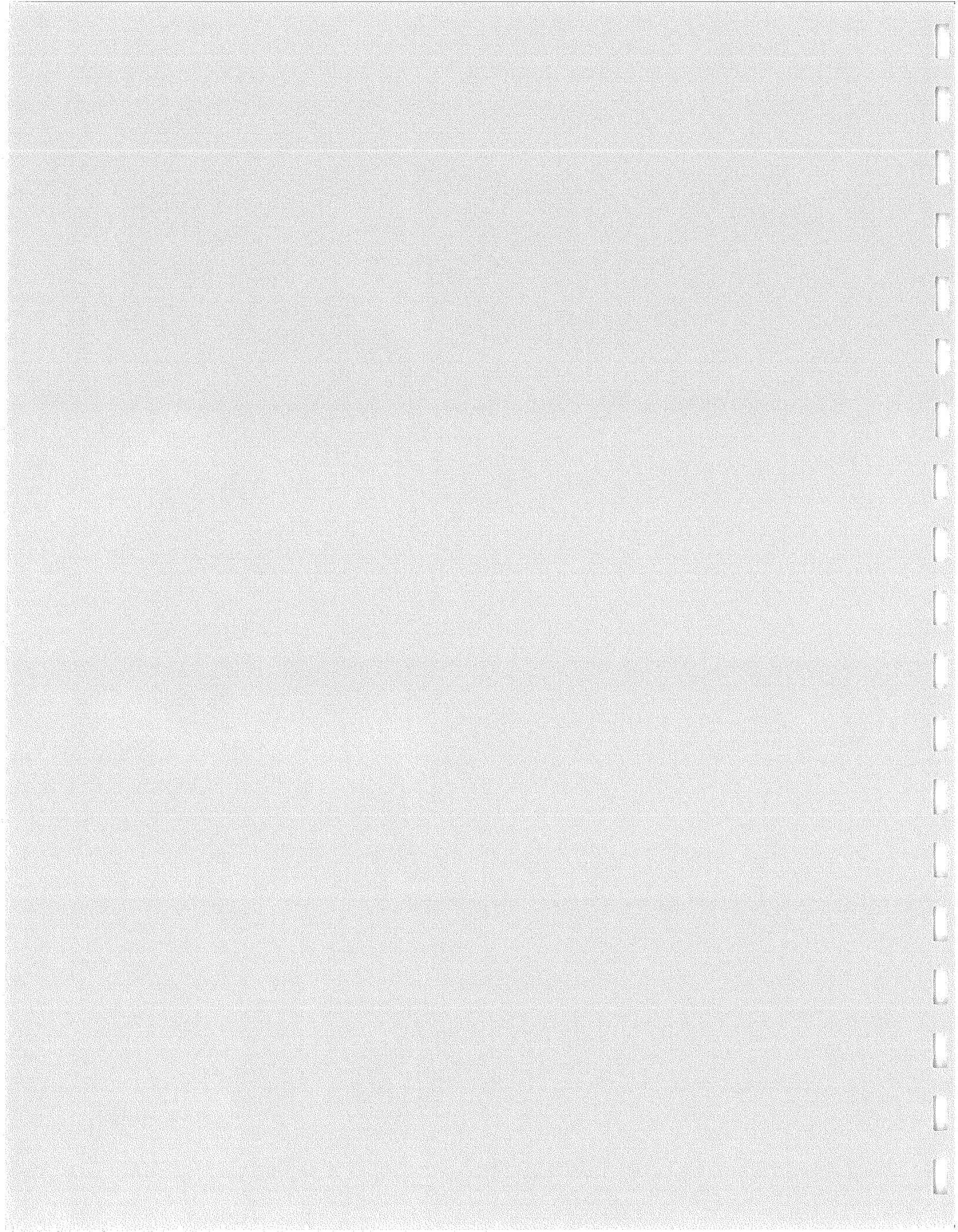
BOTTOM HOLE TEMPERATURE (°C)





66-00





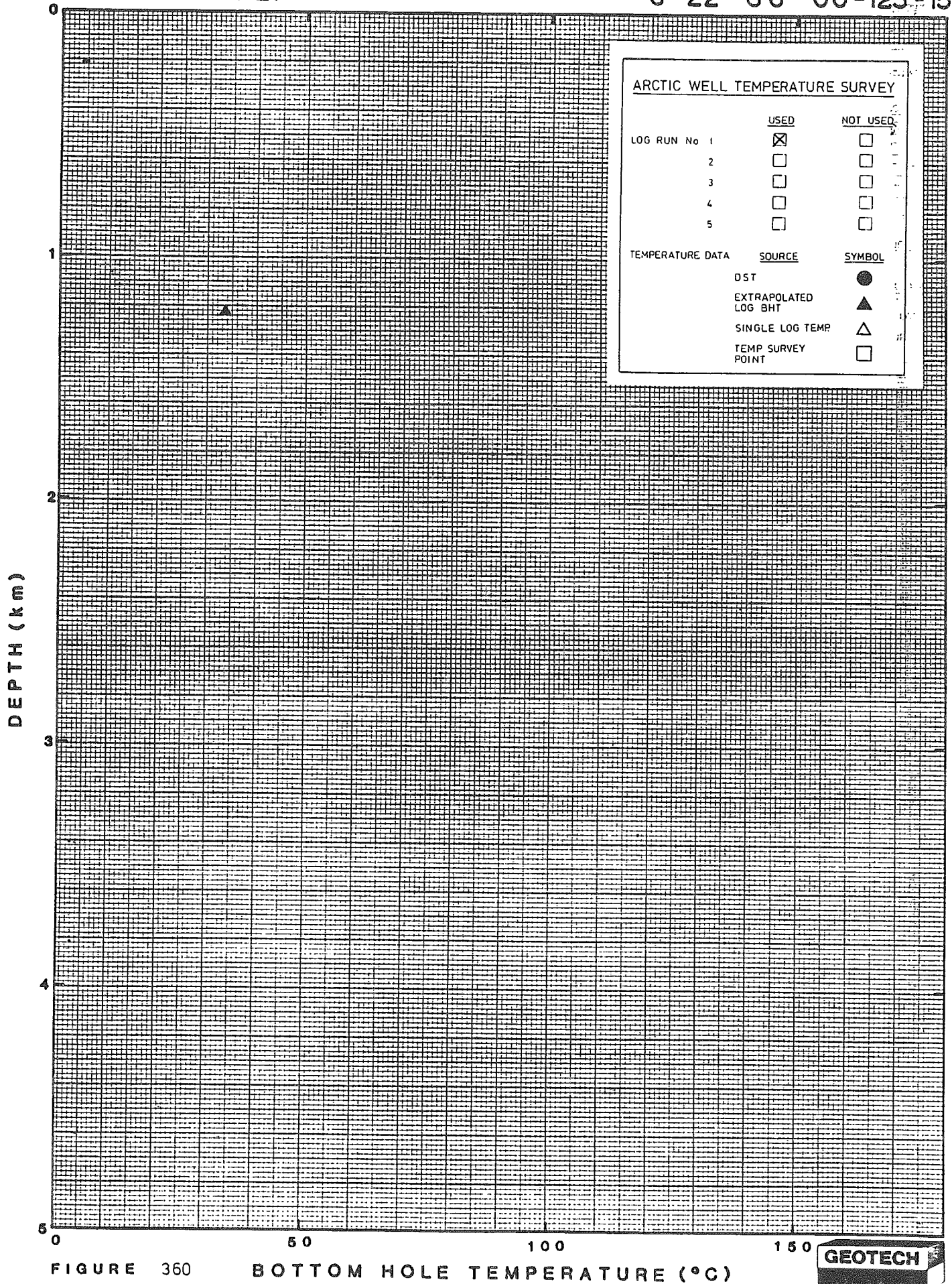


FIGURE 360

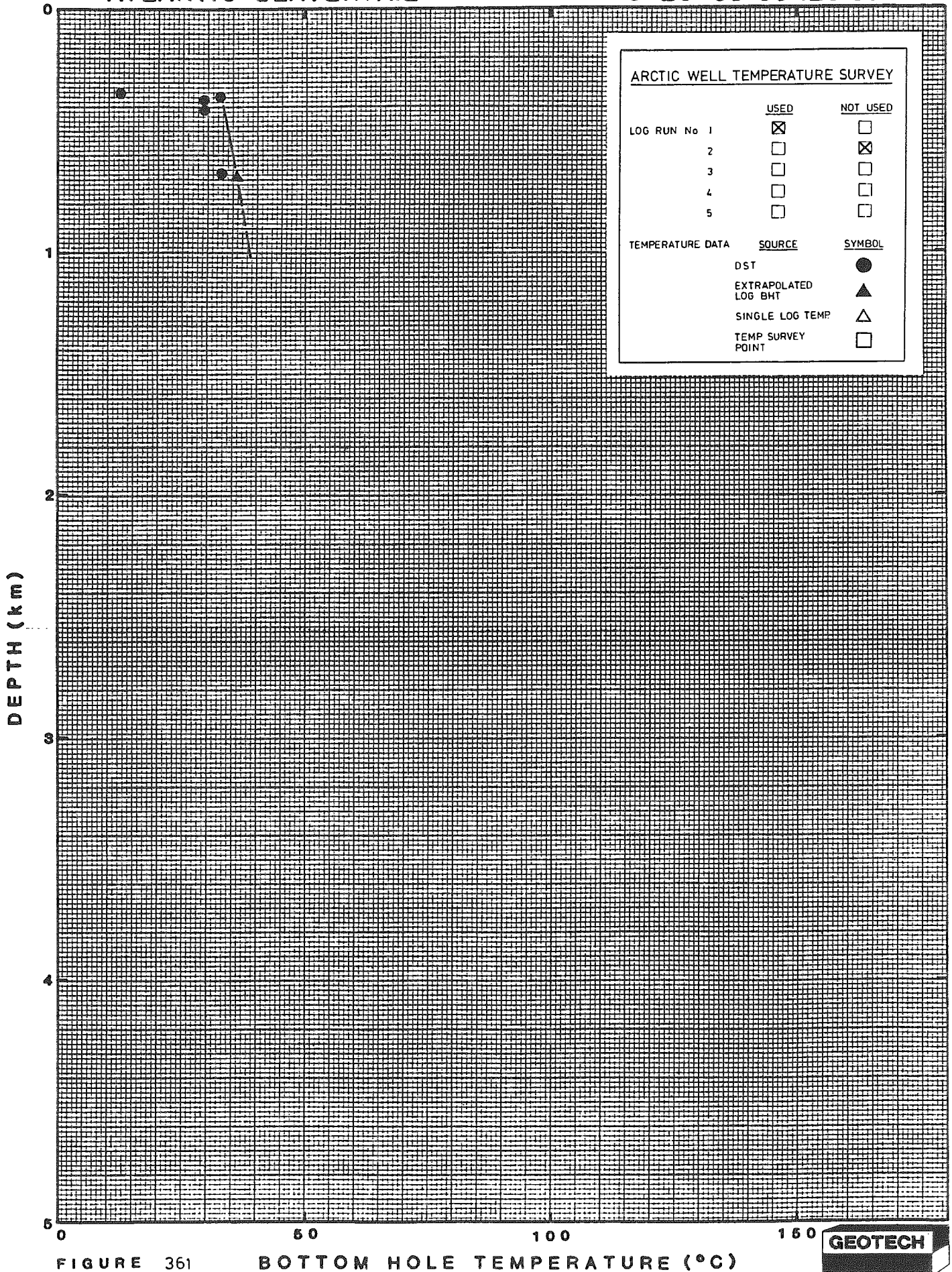
BOTTOM HOLE TEMPERATURE (°C)





# ATLANTIC BEAVERTAIL

G-26 66-00-128-30



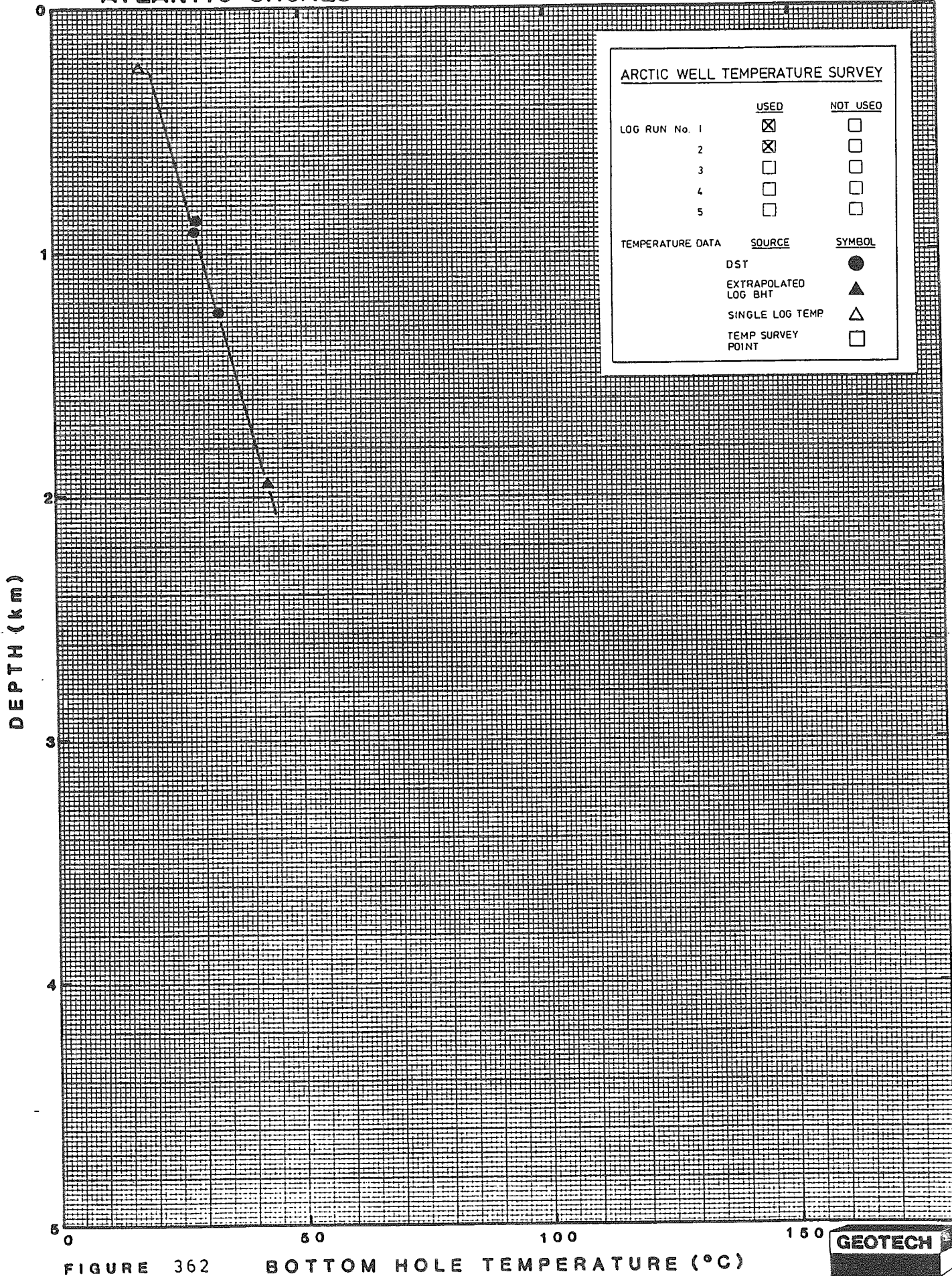


FIGURE 362

BOTTOM HOLE TEMPERATURE (°C)





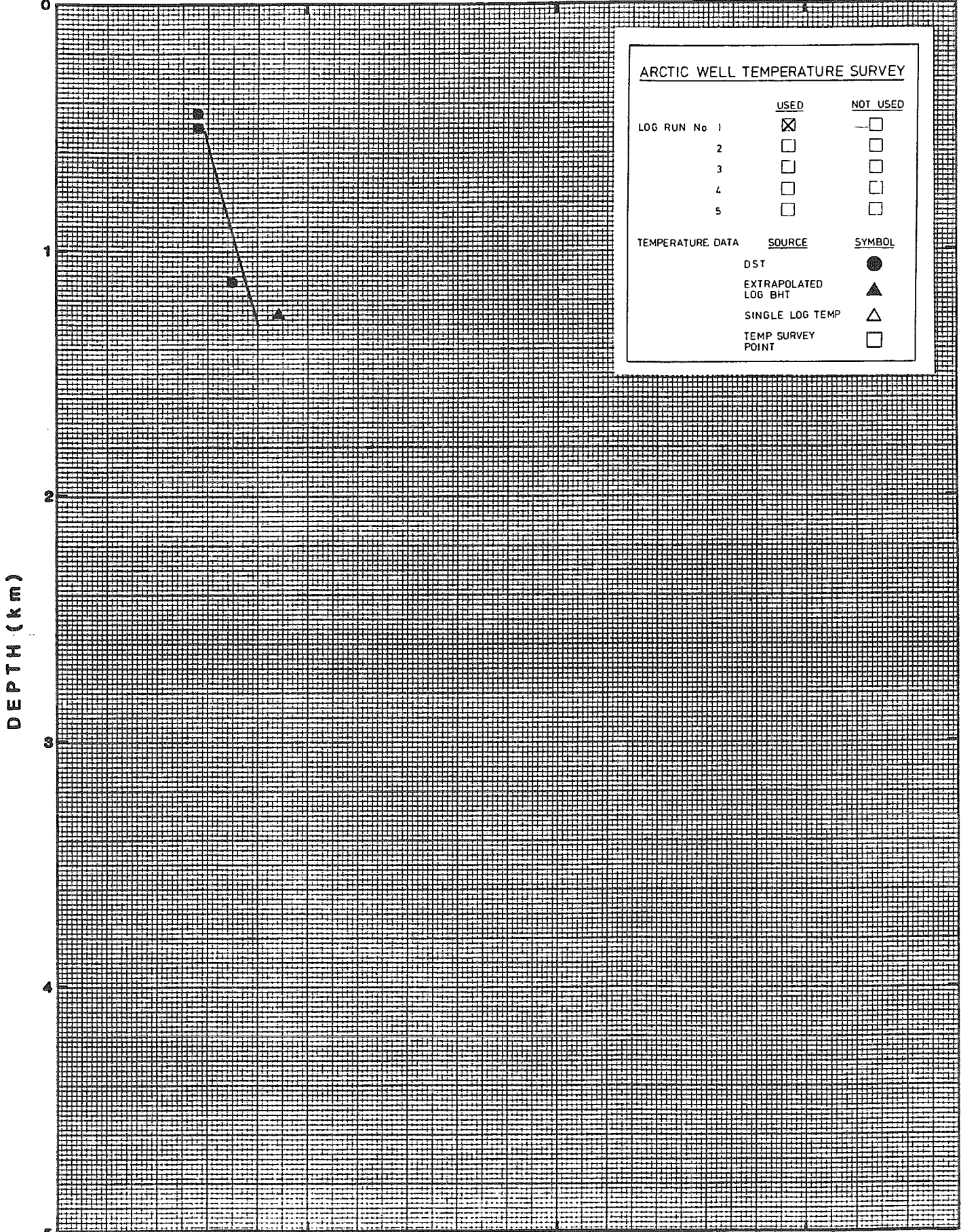


FIGURE 363

BOTTOM HOLE TEMPERATURE (°C)



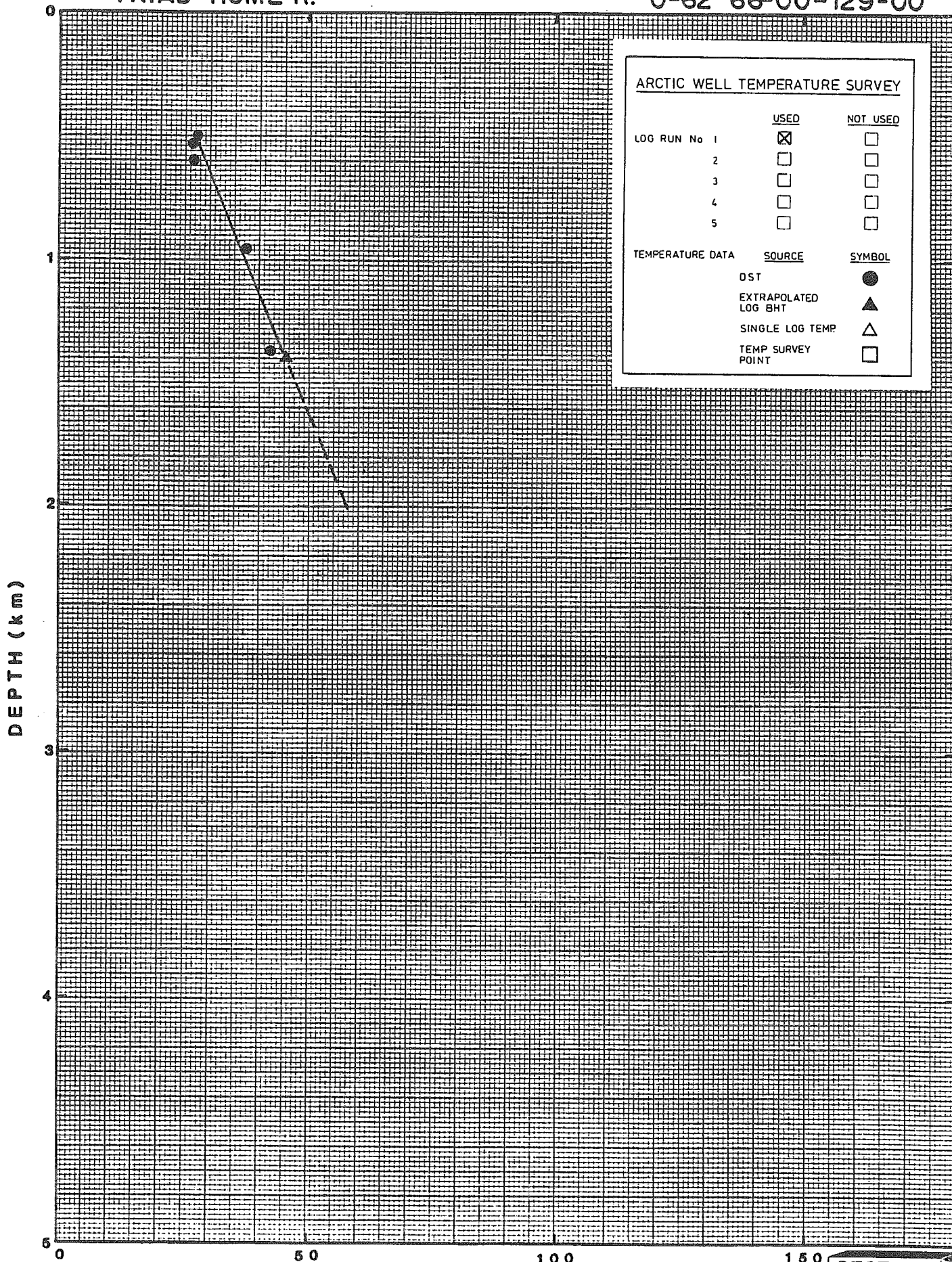


FIGURE 364

BOTTOM HOLE TEMPERATURE (°C)



# DOME SOUTH PEEL

D-64 66-00-132-15

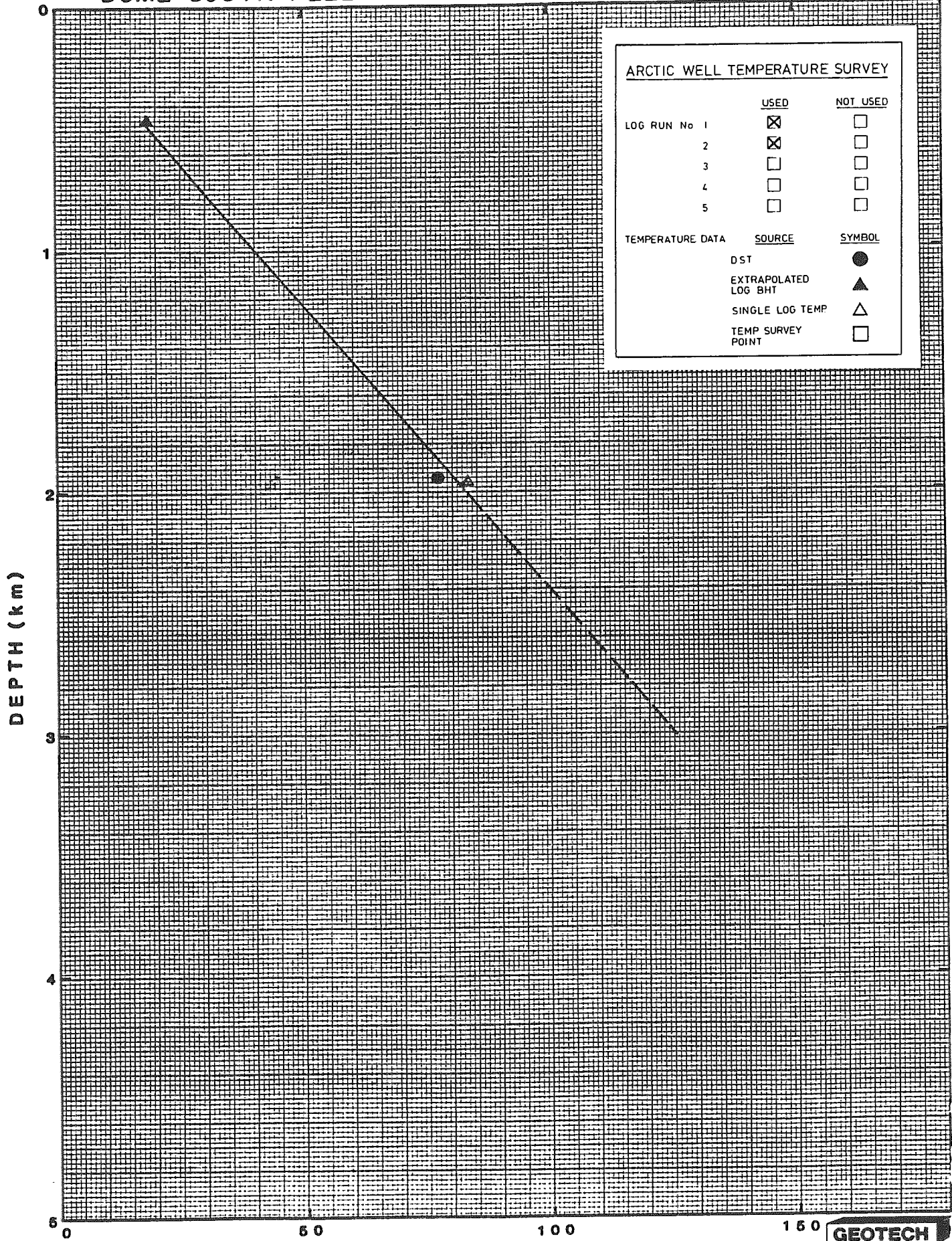


FIGURE 365

BOTTOM HOLE TEMPERATURE (°C)





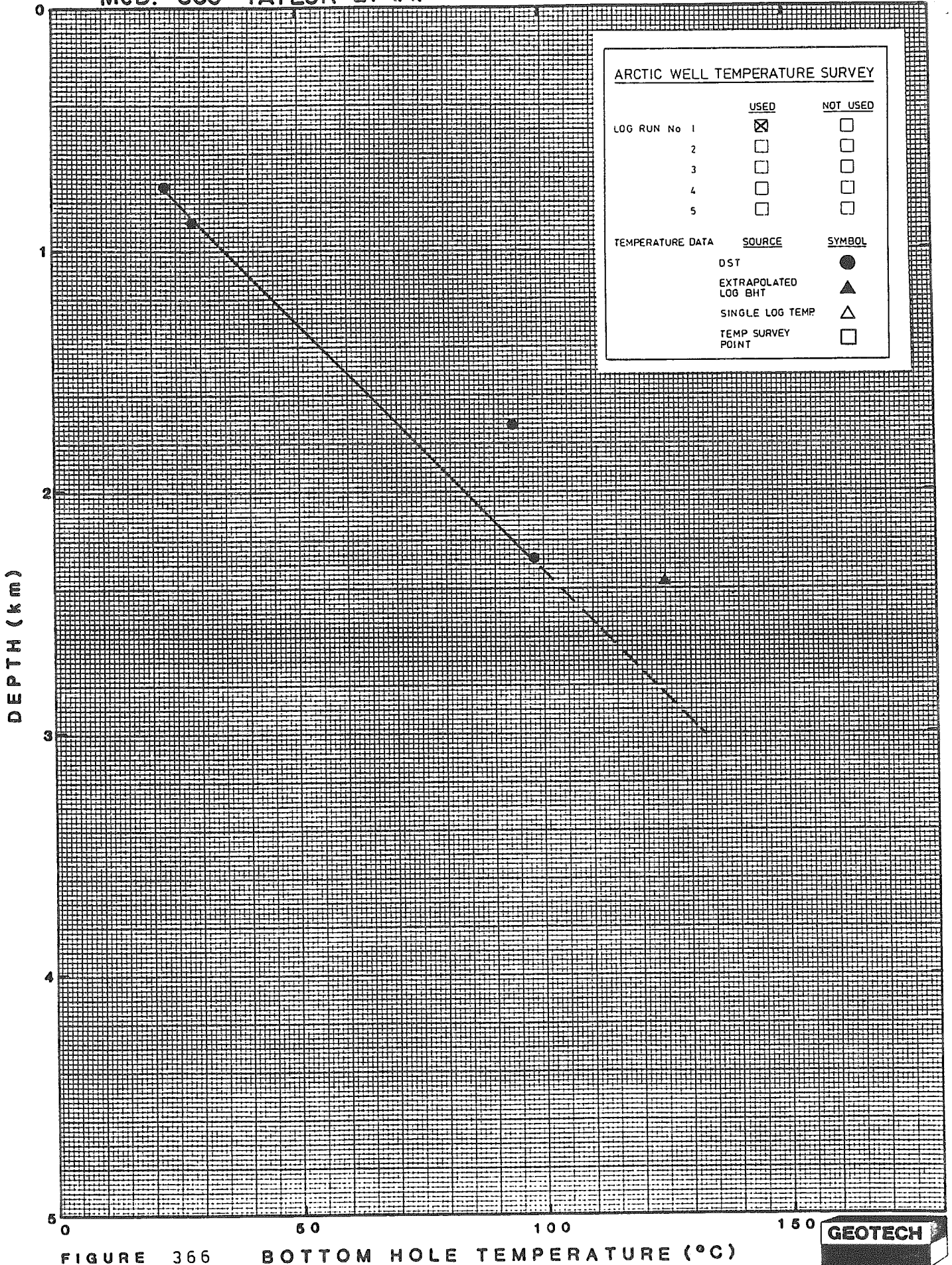


FIGURE 366

BOTTOM HOLE TEMPERATURE (°C)





AQUIT. ALDER Y.T.

C-33 66-00-136-45

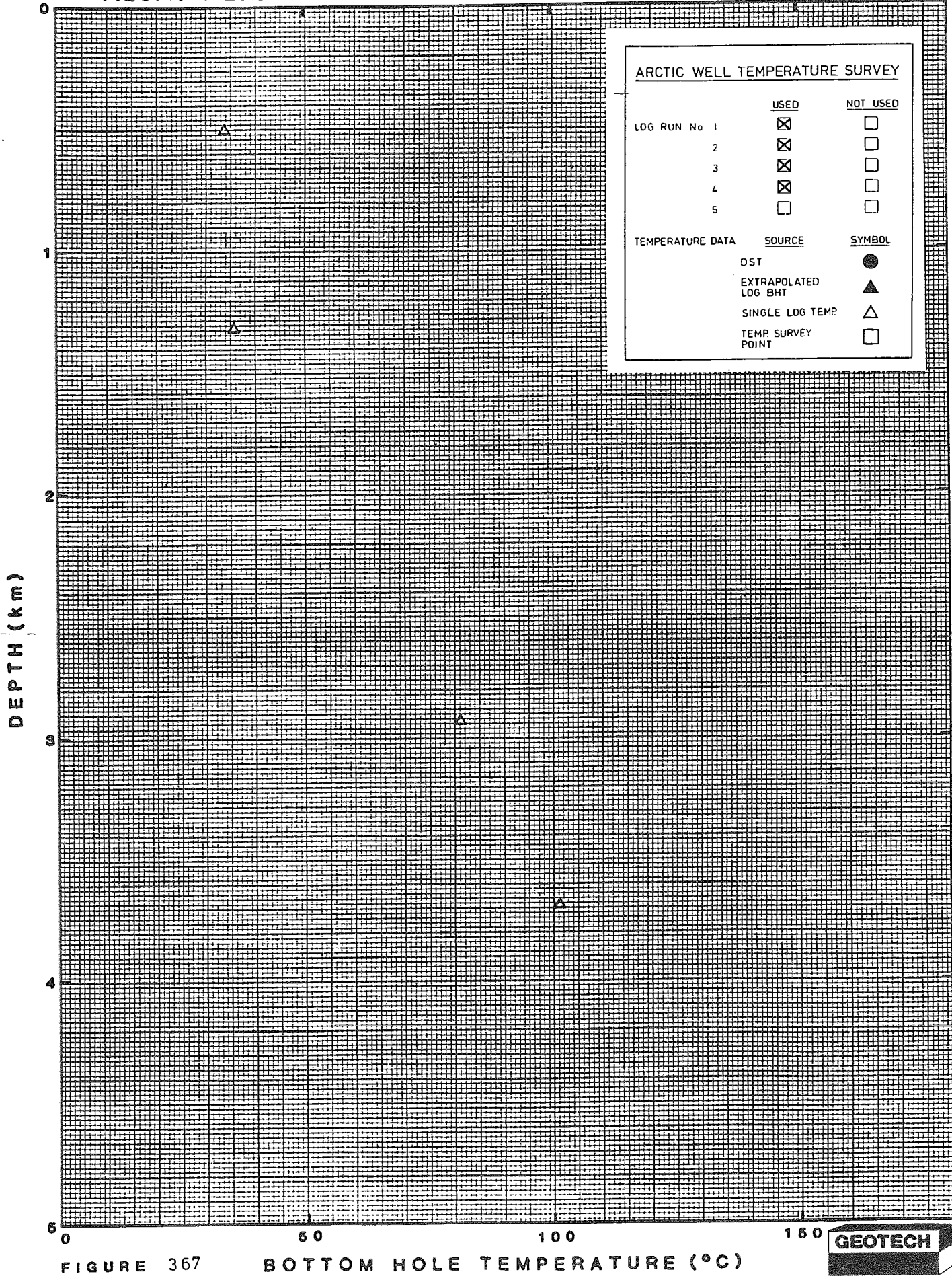
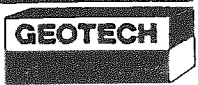
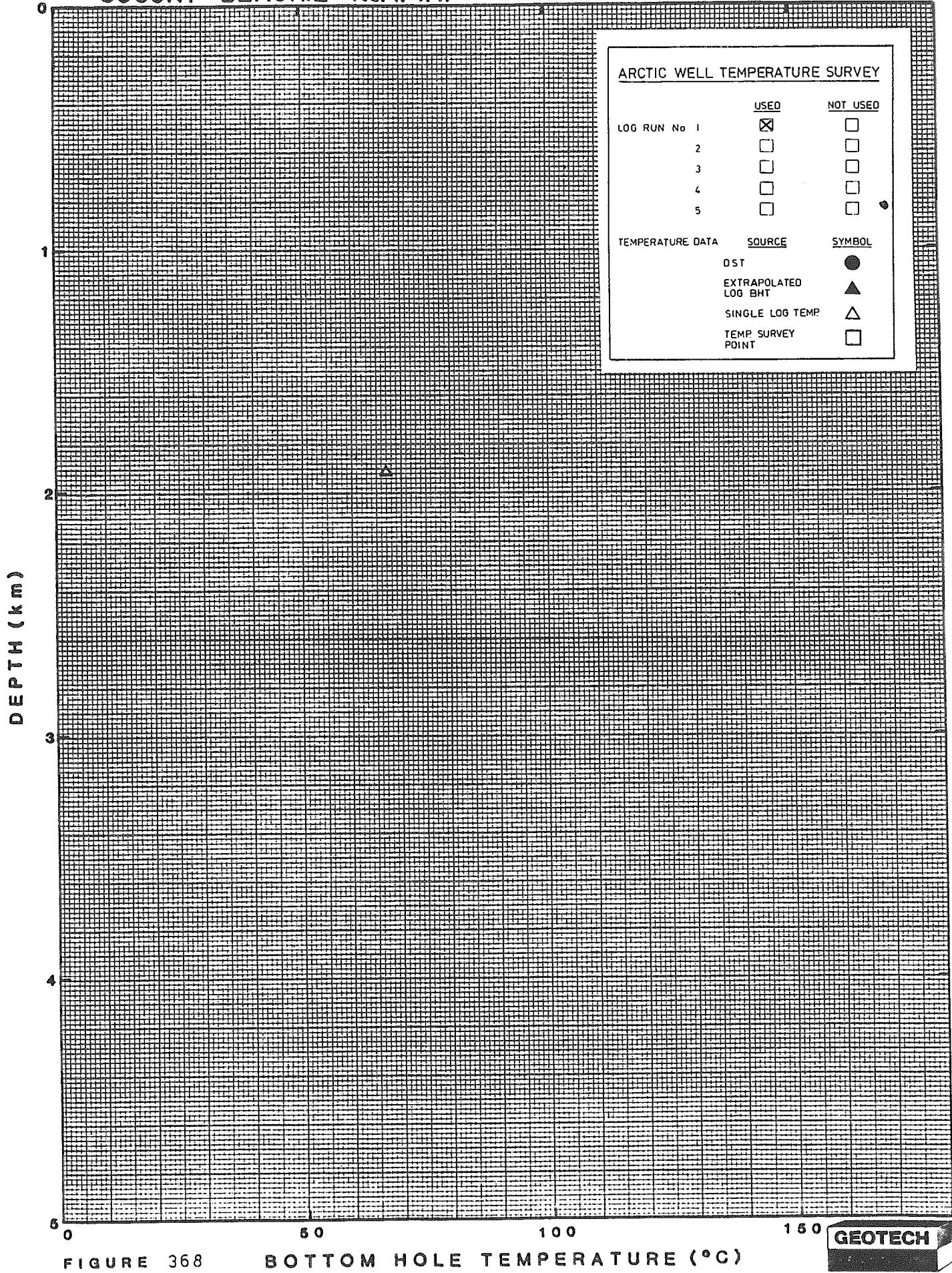


FIGURE 367

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 368

BOTTOM HOLE TEMPERATURE (°C)



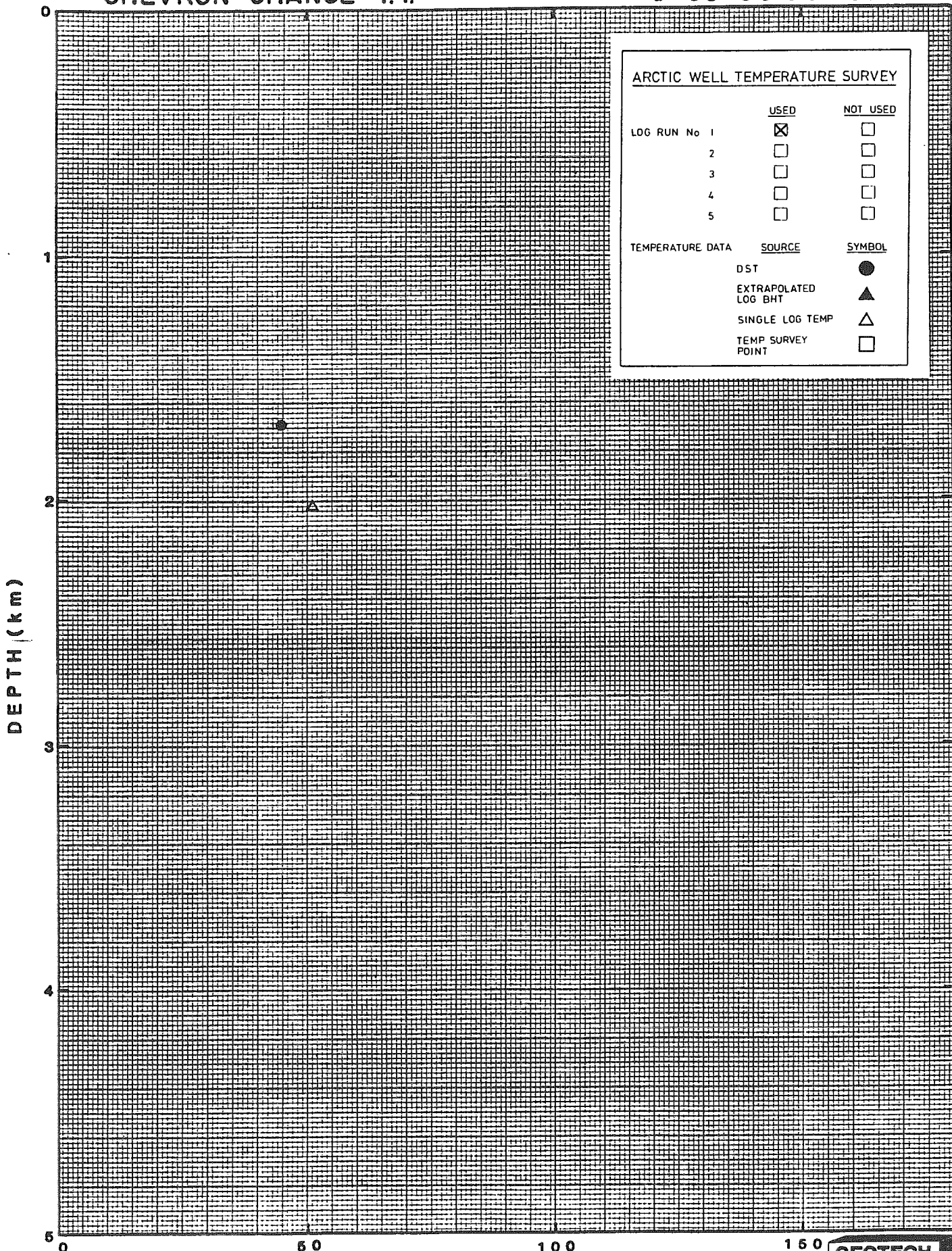


FIGURE 369

BOTTOM HOLE TEMPERATURE (°C)





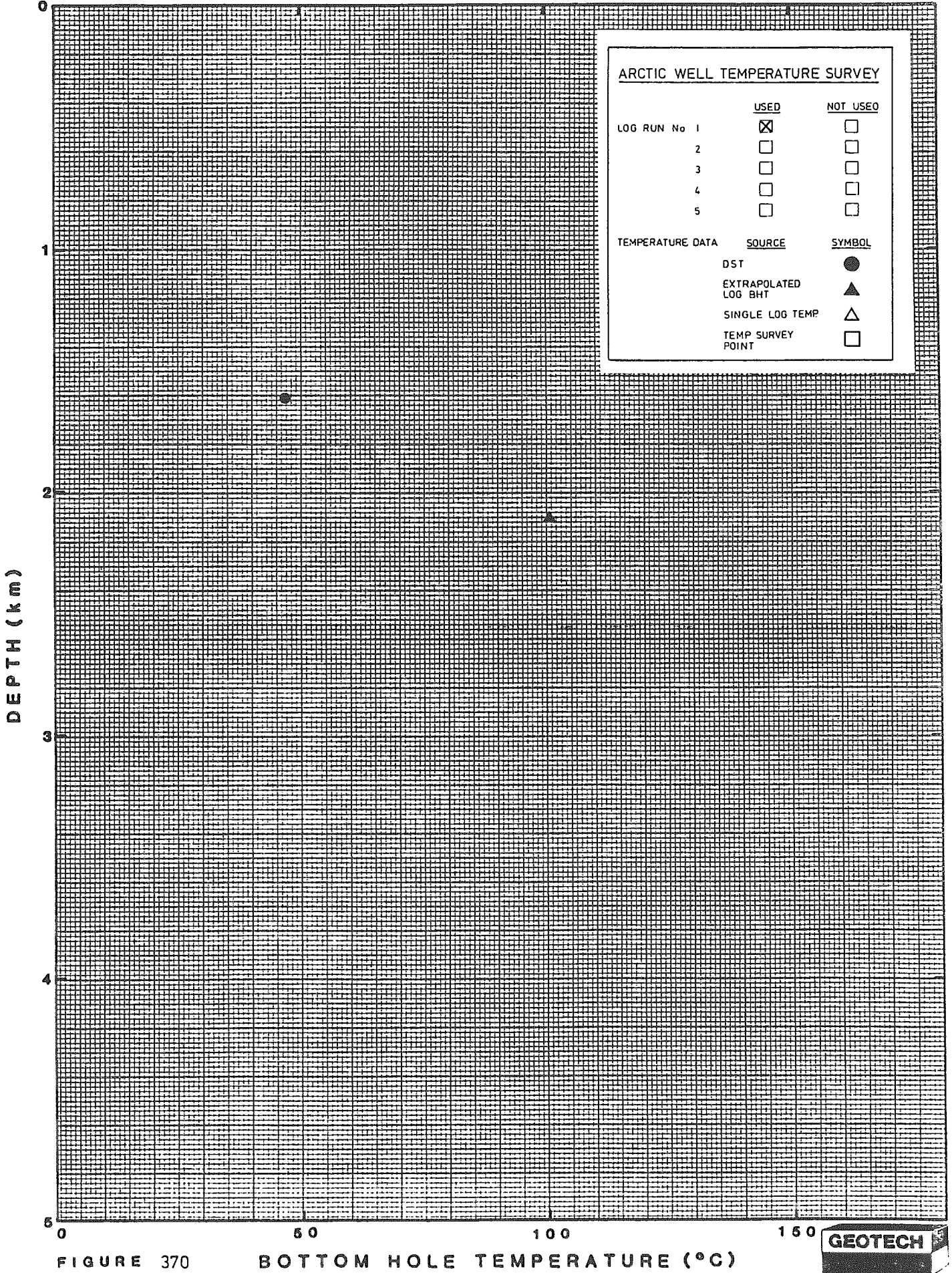


FIGURE 370

BOTTOM HOLE TEMPERATURE (°C)





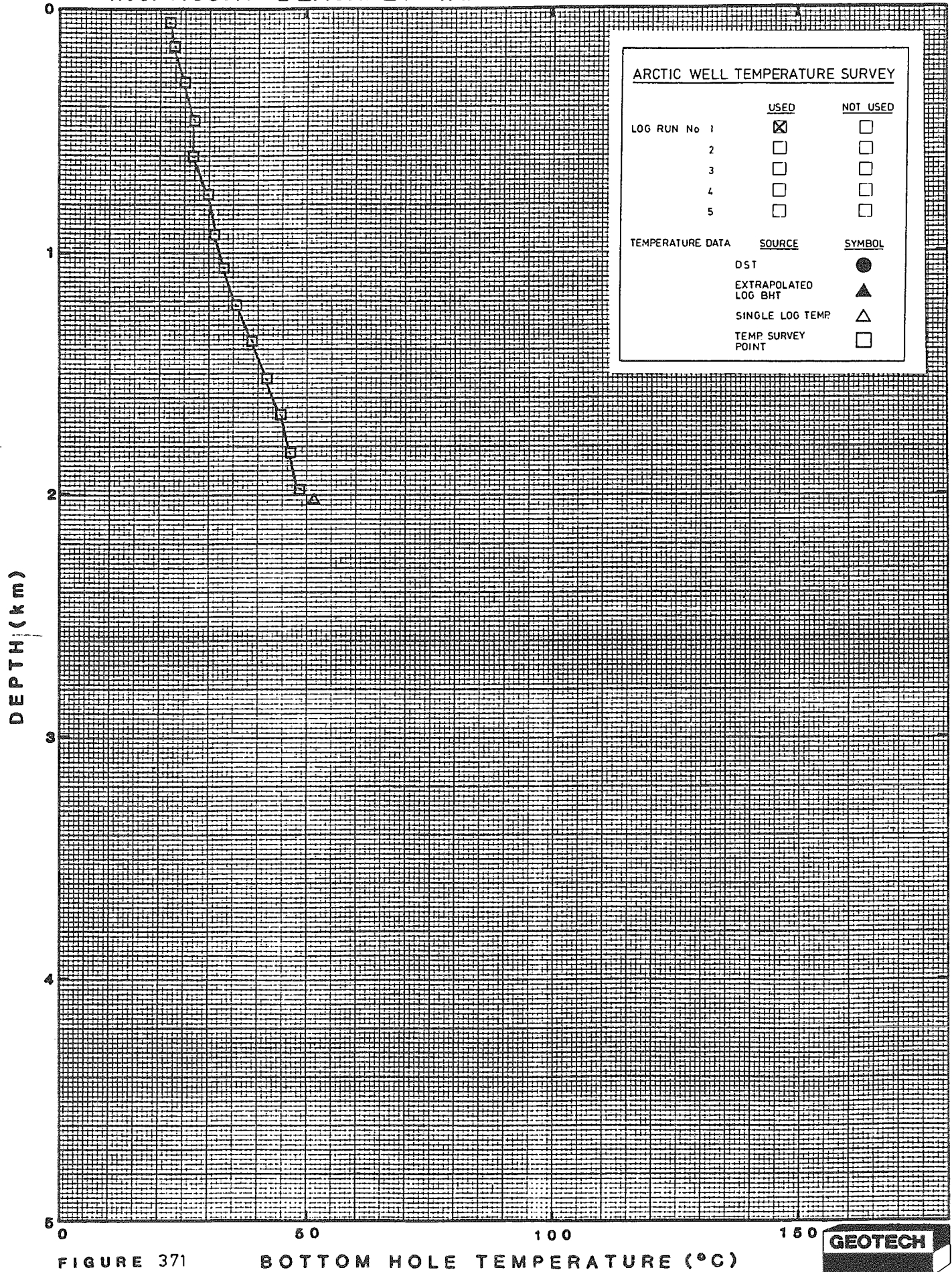


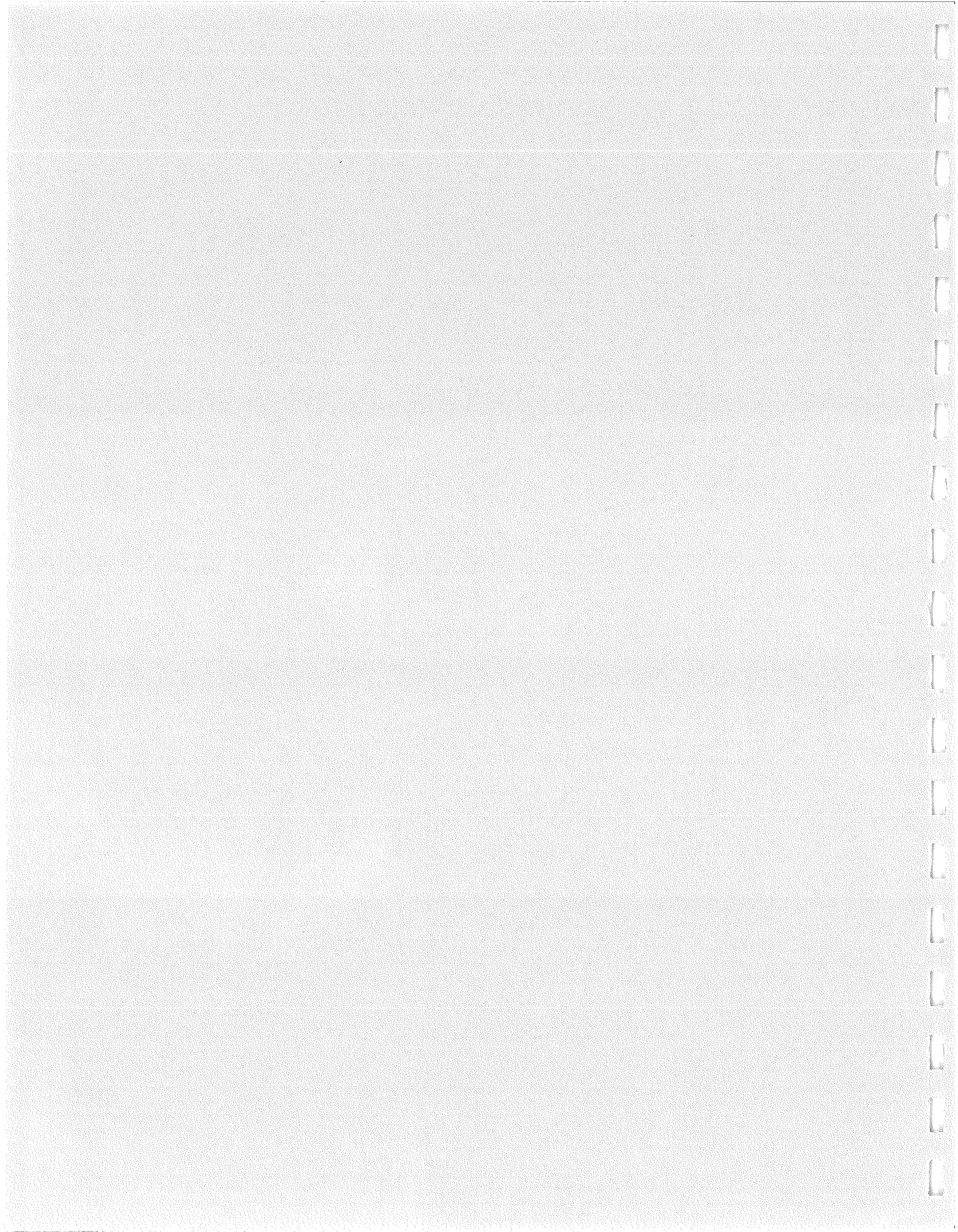
FIGURE 371

BOTTOM HOLE TEMPERATURE (°C)



66-10





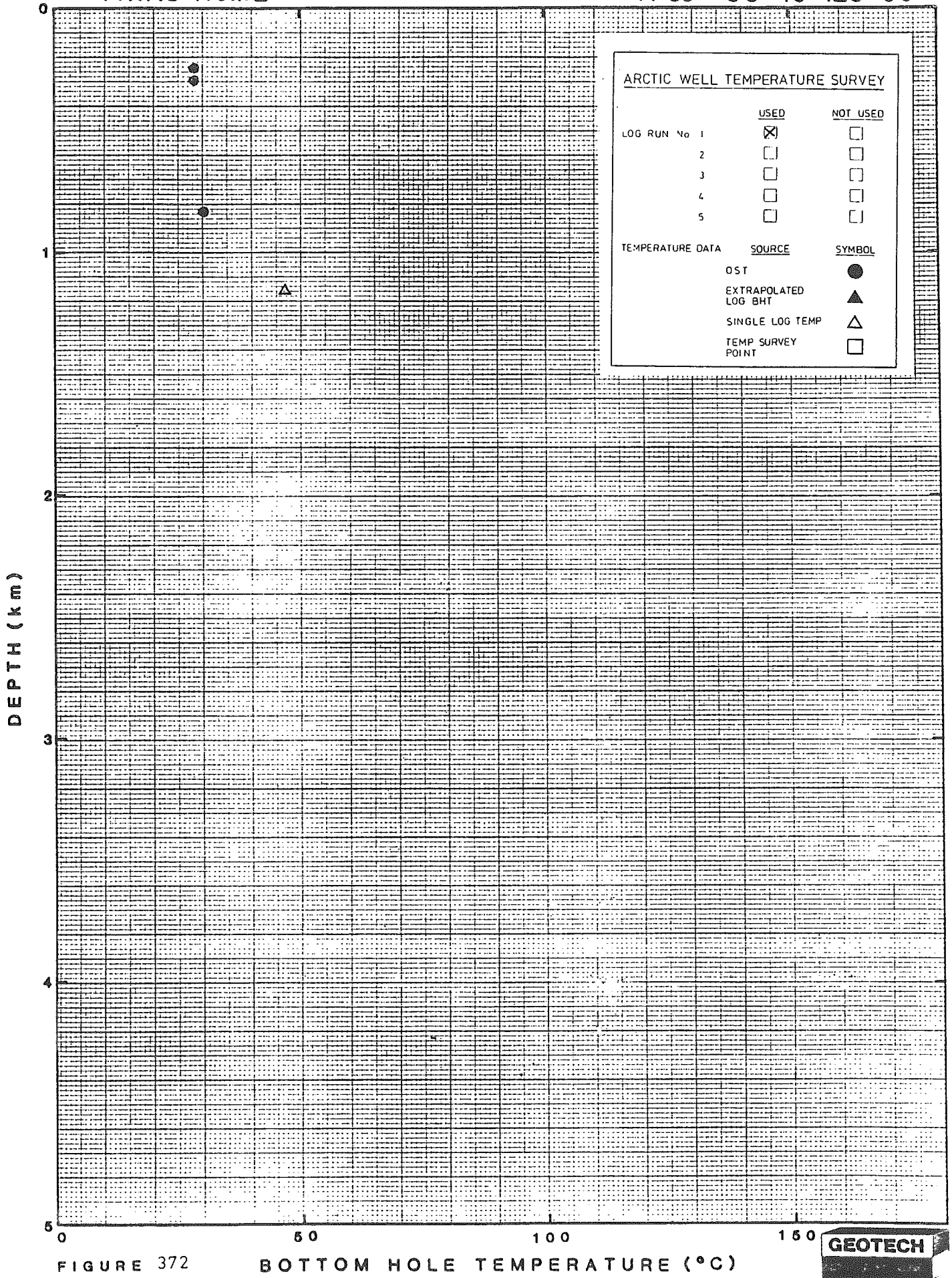


FIGURE 372

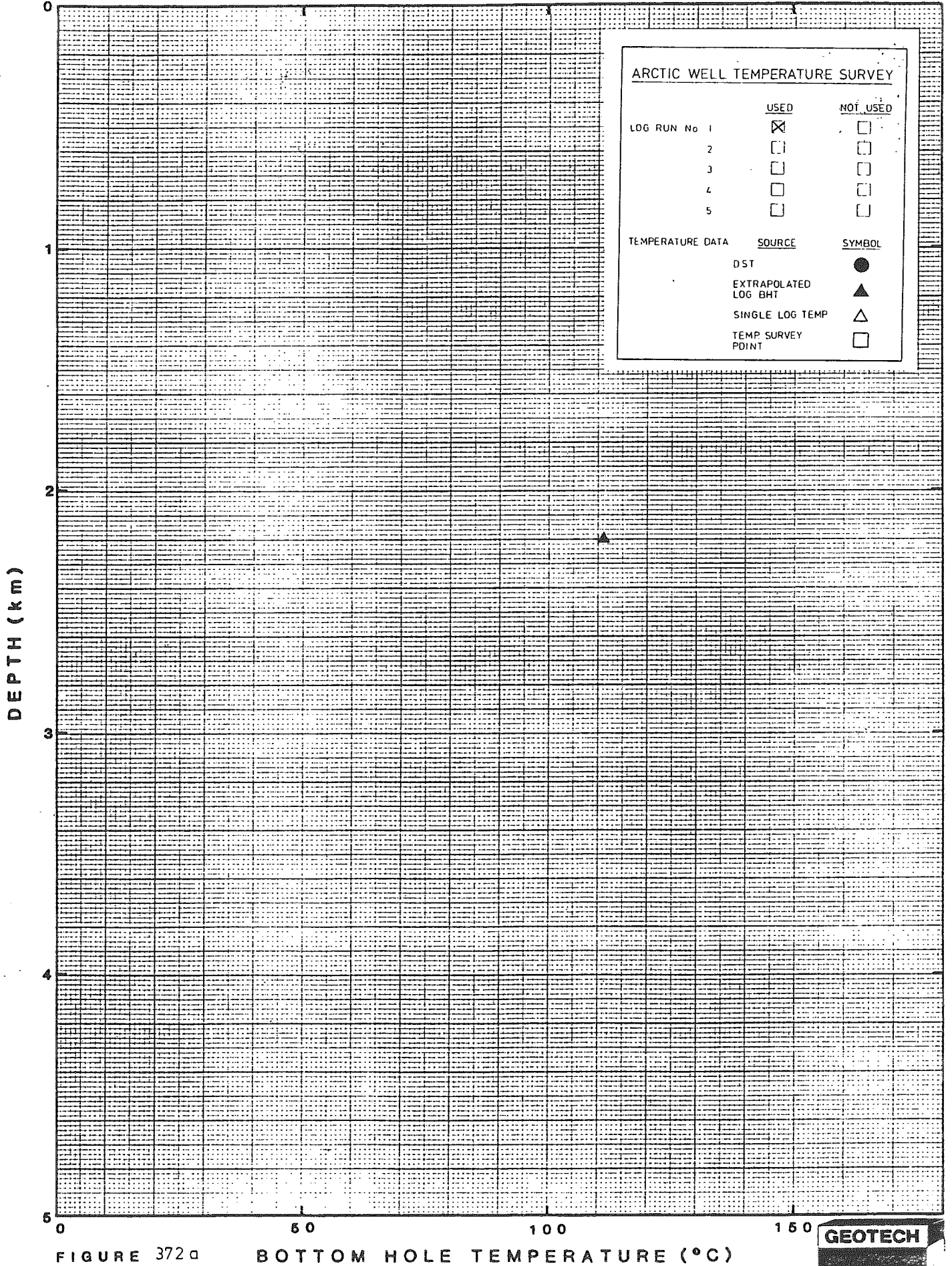
BOTTOM HOLE TEMPERATURE (°C)





INEXCO WELDON CK.

0-65 66-10-132-15



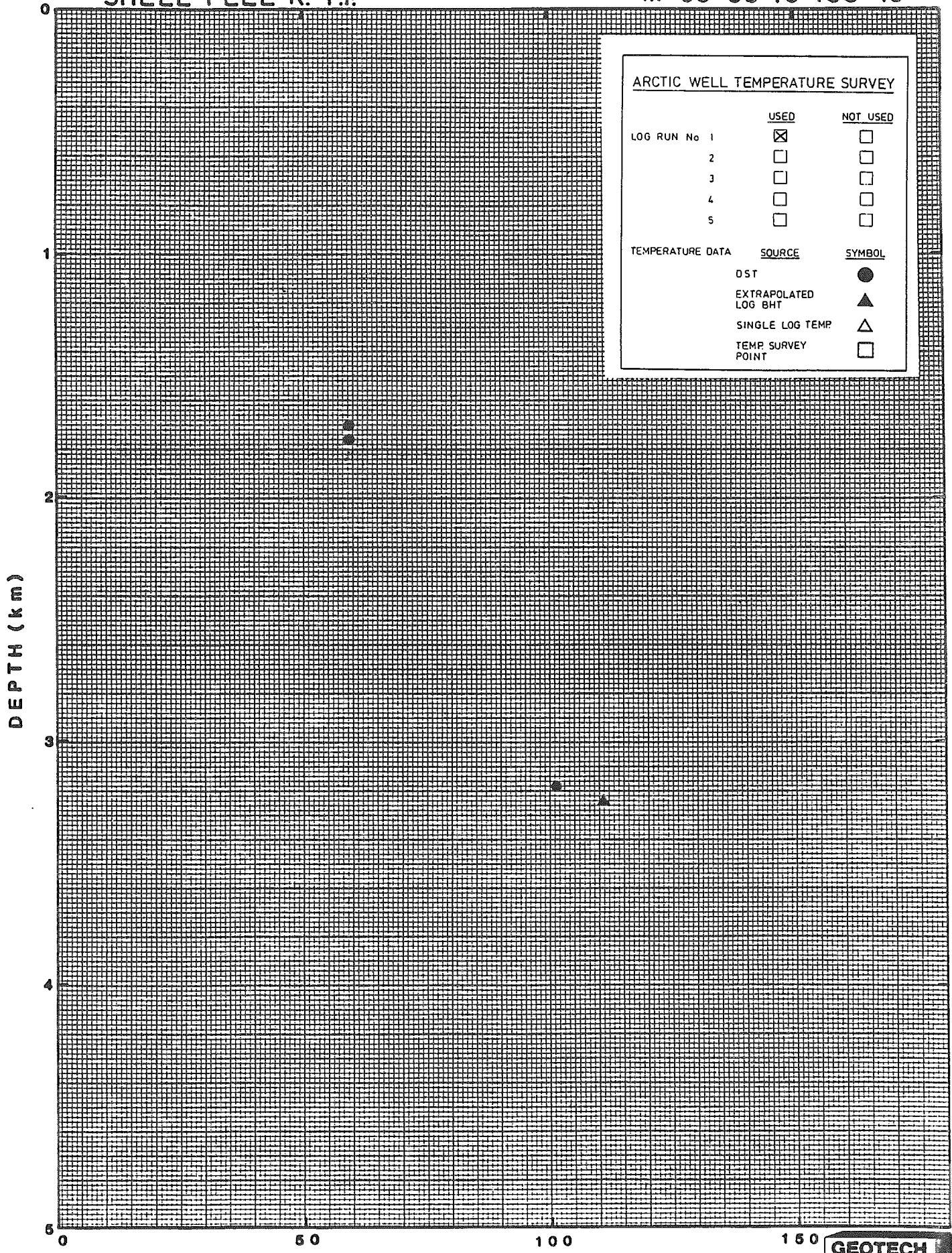


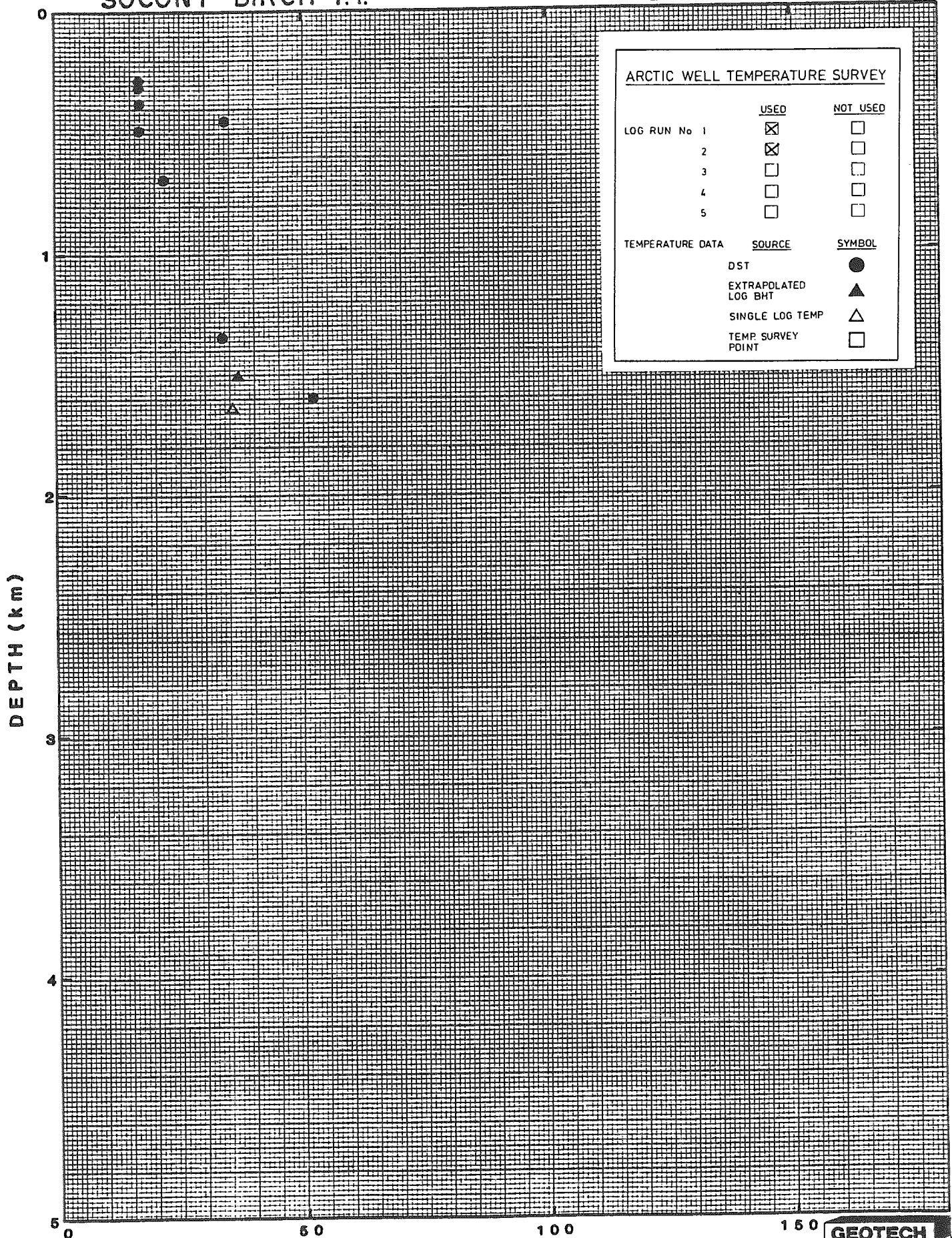
FIGURE 373

BOTTOM HOLE TEMPERATURE (°C)



SOCONY BIRCH Y.T.

B-34 66-10-136-45



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPDLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 374

BOTTOM HOLE TEMPERATURE (°C)





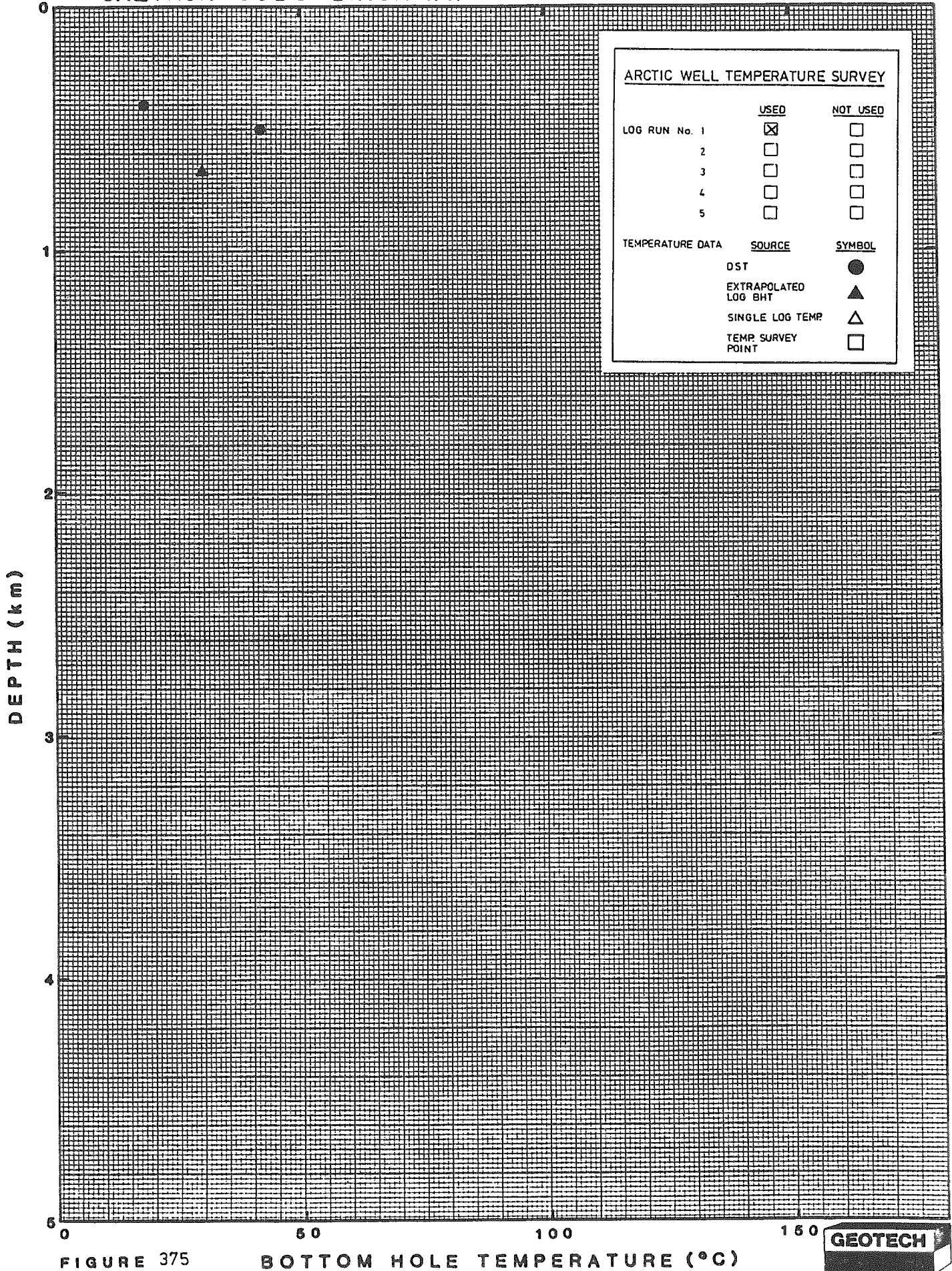
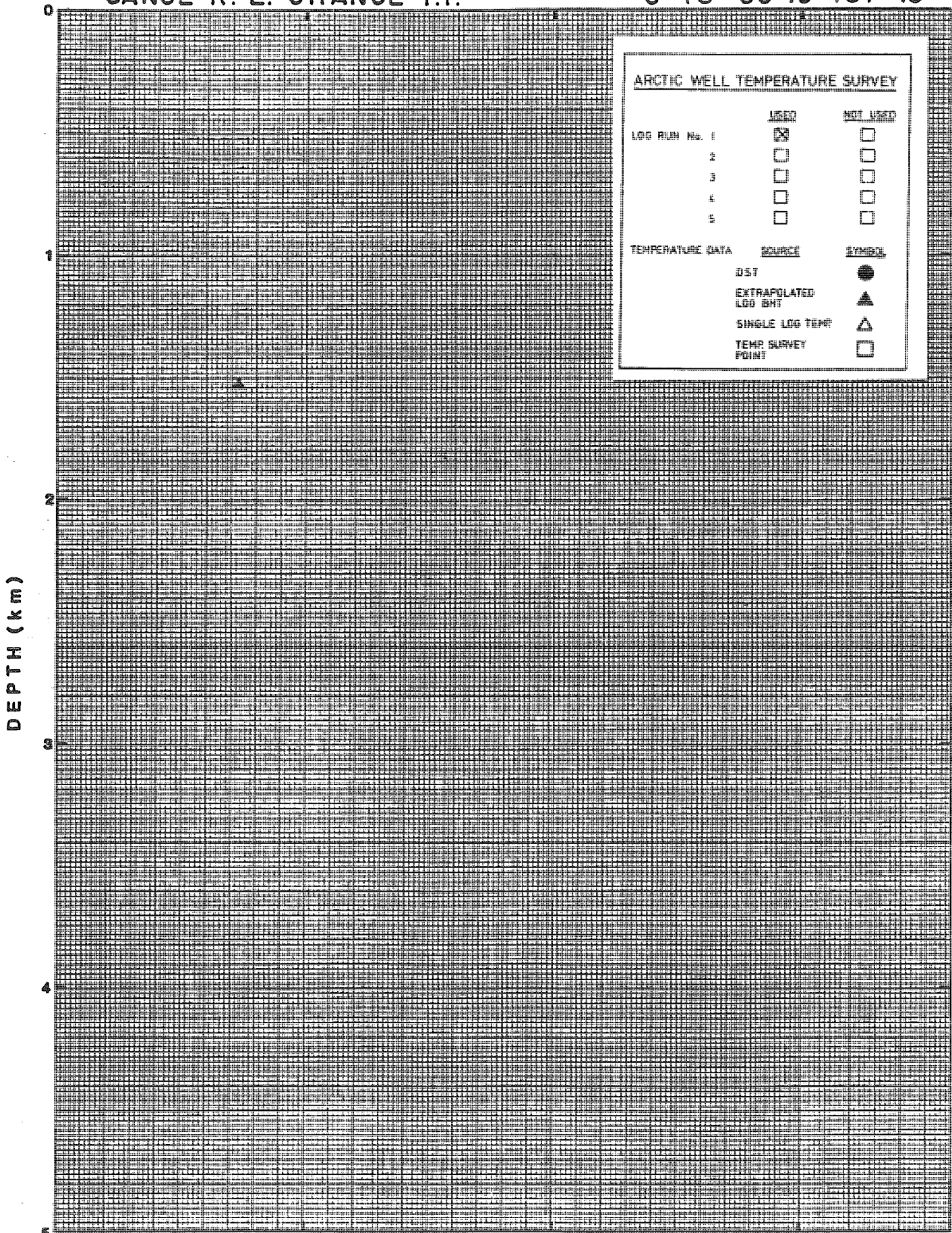


FIGURE 375

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
<u>TEMPERATURE DATA</u>	<u>SOURCE</u>	<u>SYMBOL</u>
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

0

50

100

150

FIGURE 376

BOTTOM HOLE TEMPERATURE (°C)



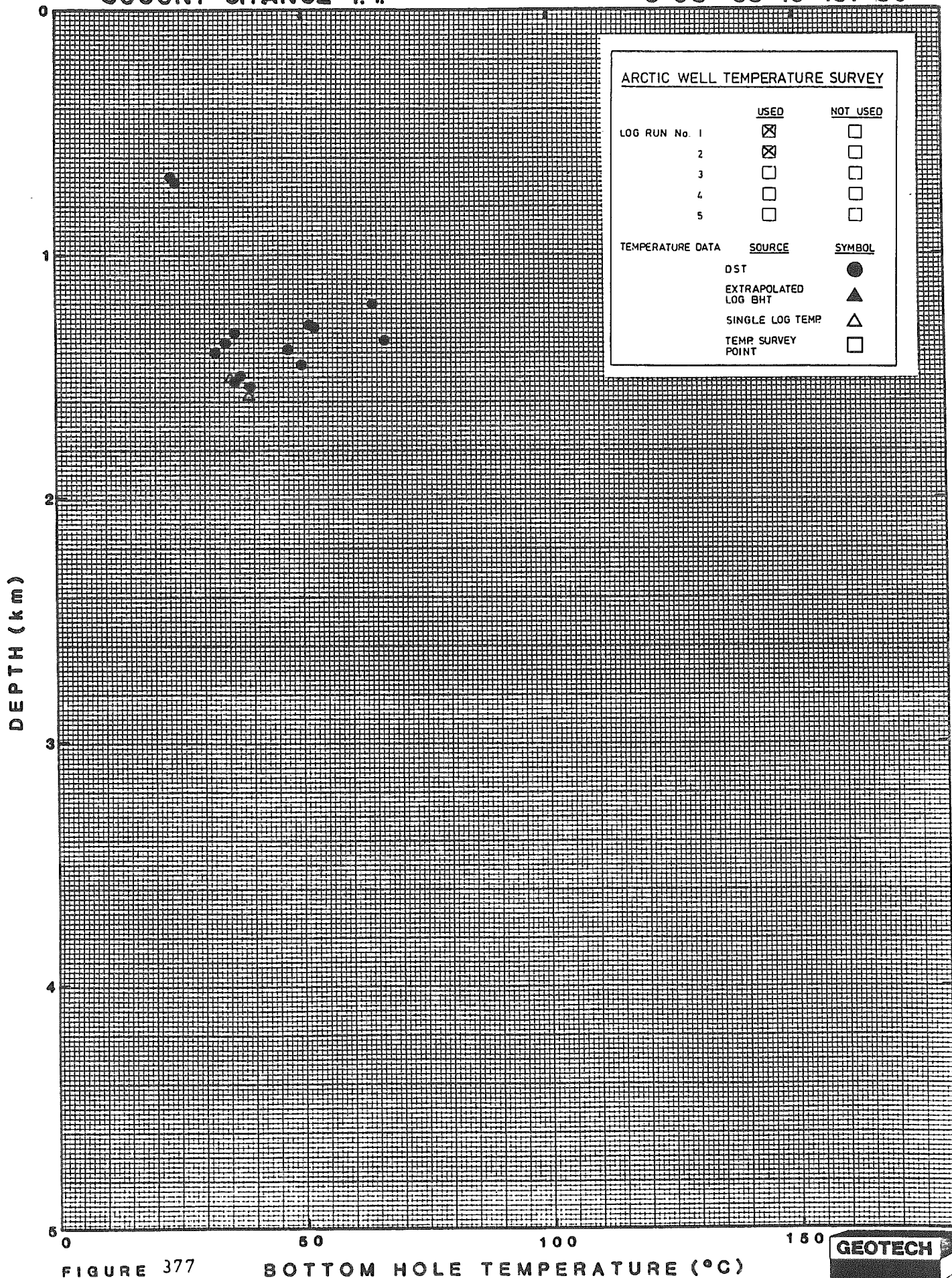


FIGURE 377

BOTTOM HOLE TEMPERATURE (°C)





CANOE R. CHANCE Y.T.

J-19 66-10-137-30

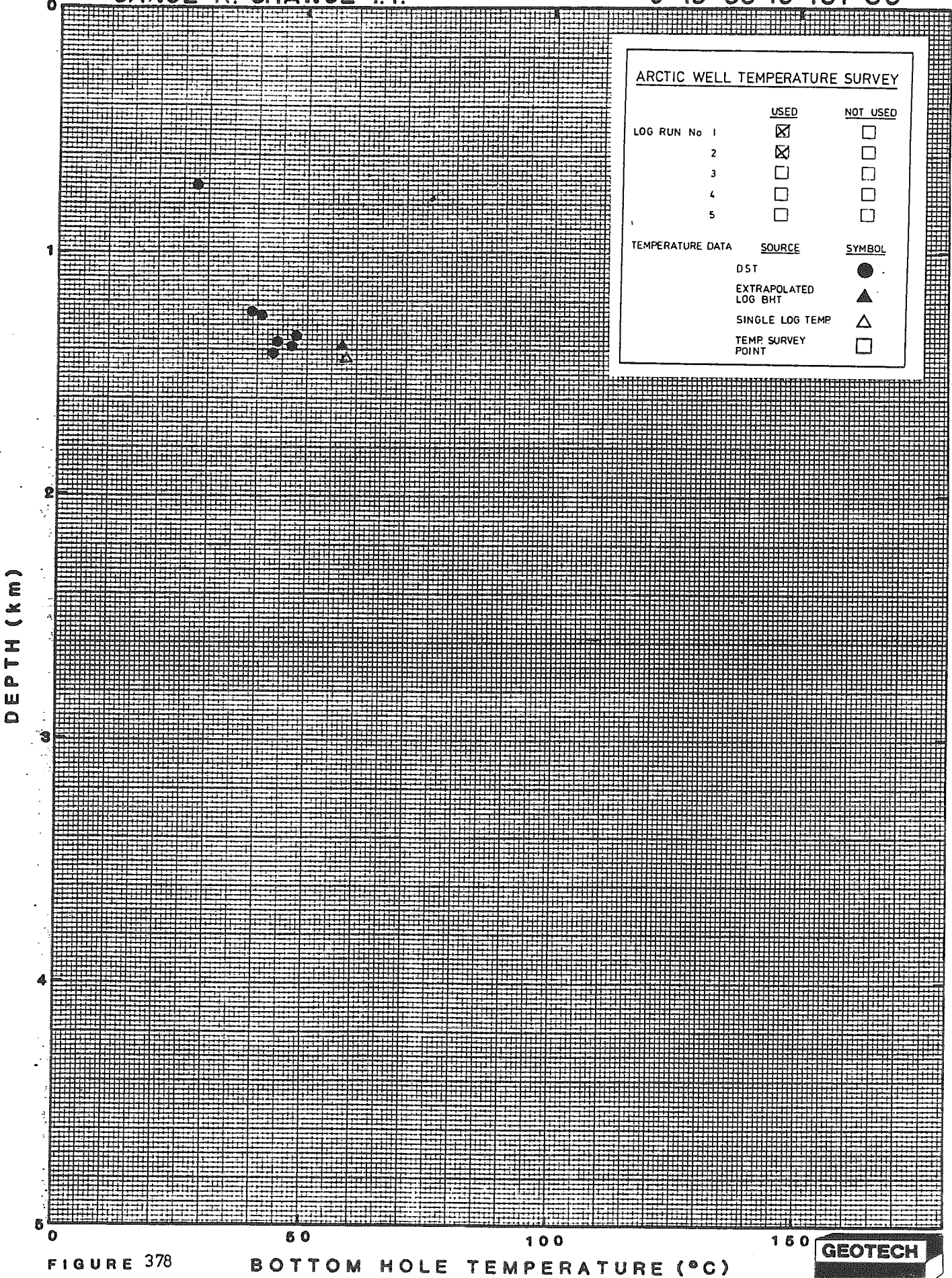
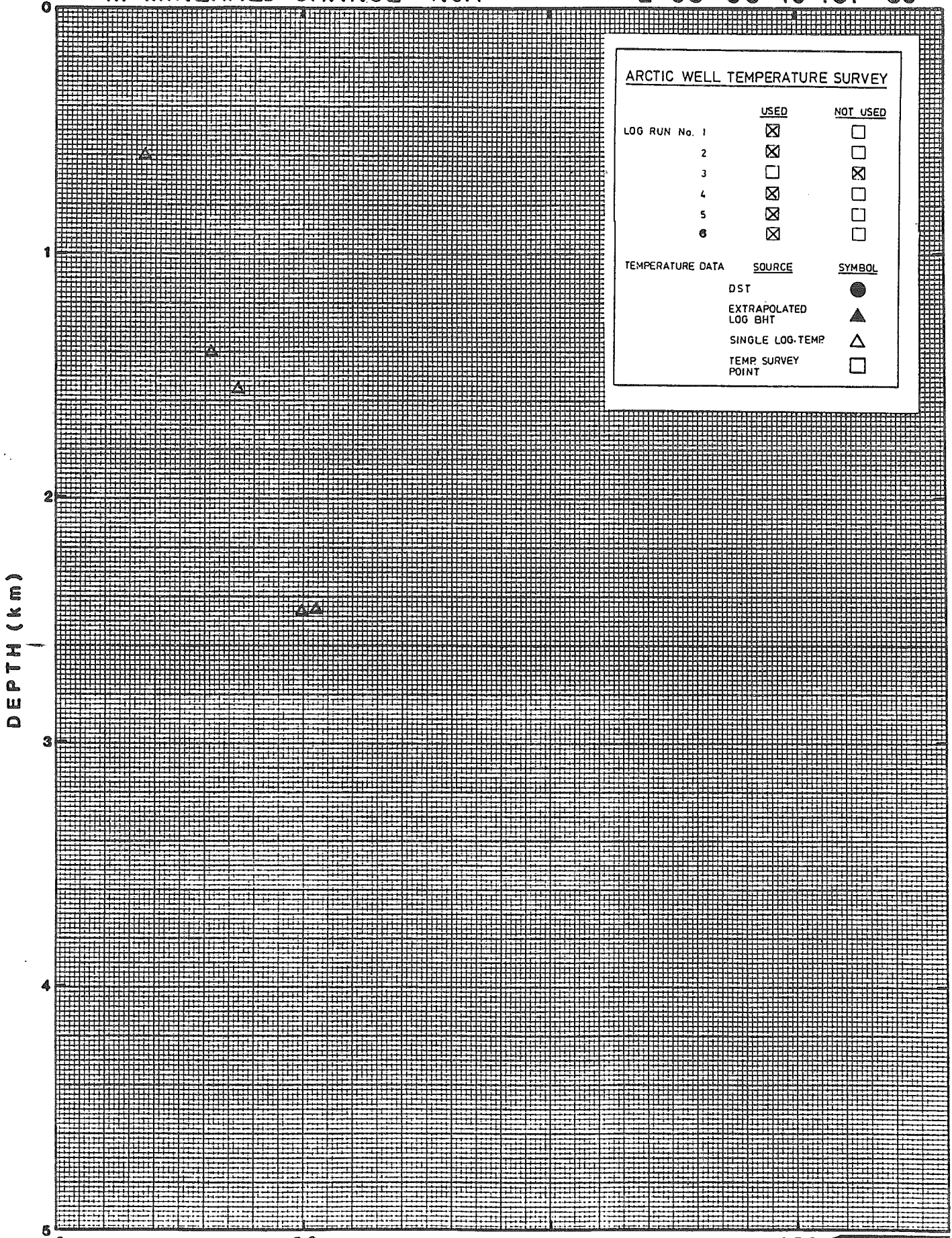


FIGURE 378





ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No. 1	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>

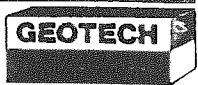
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG-TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 379

BOTTOM HOLE TEMPERATURE (°C)





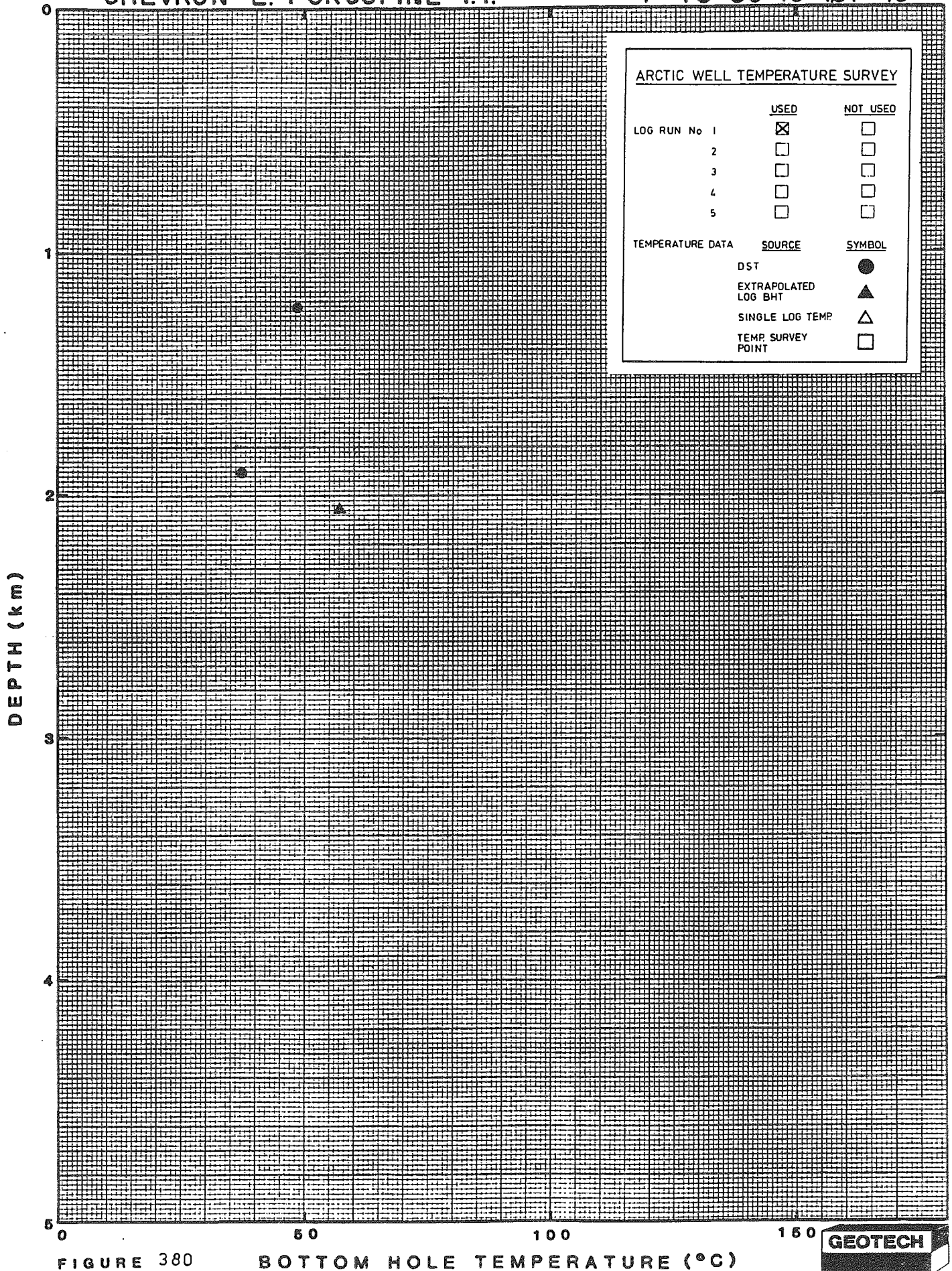
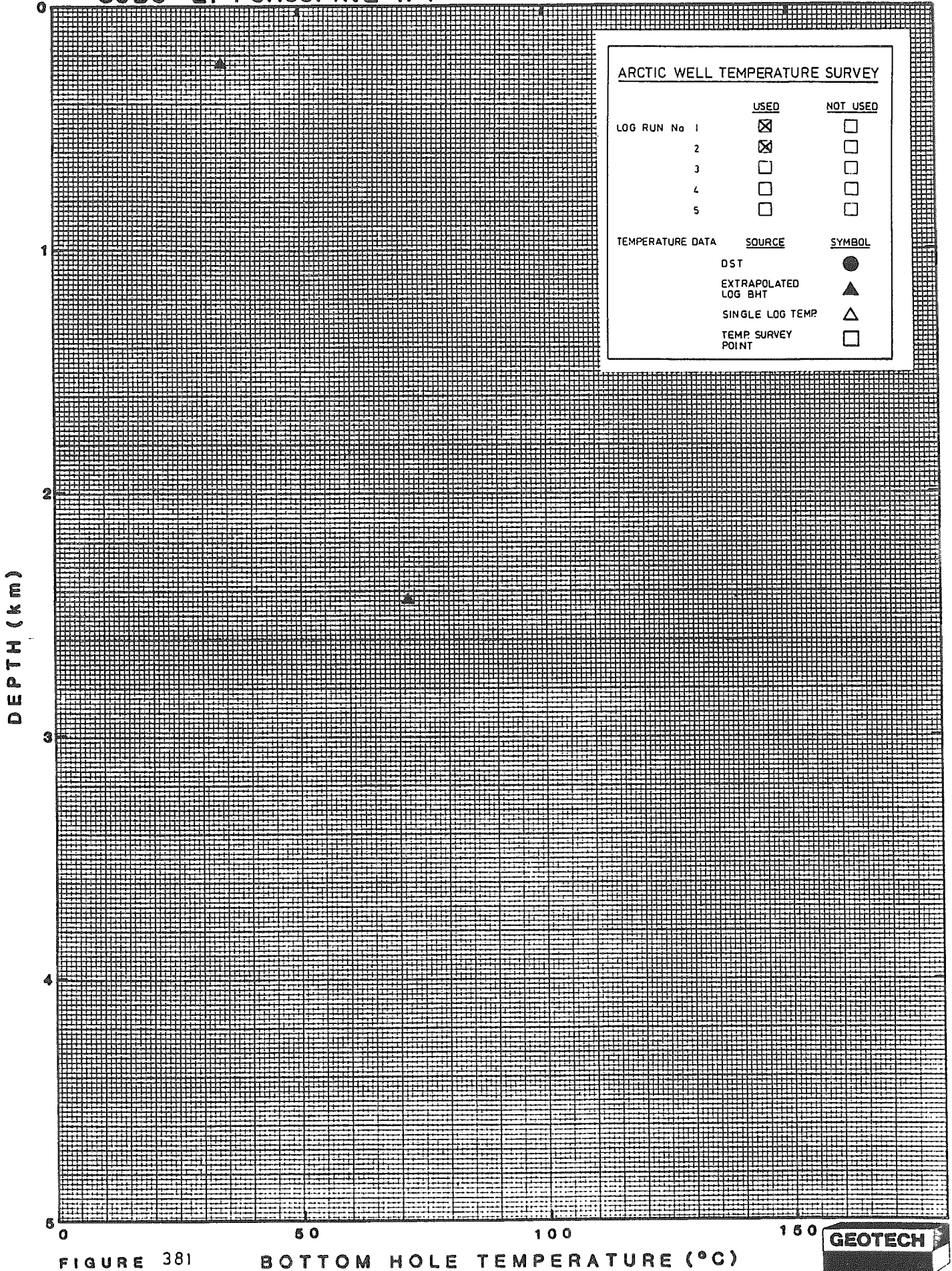


FIGURE 380

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

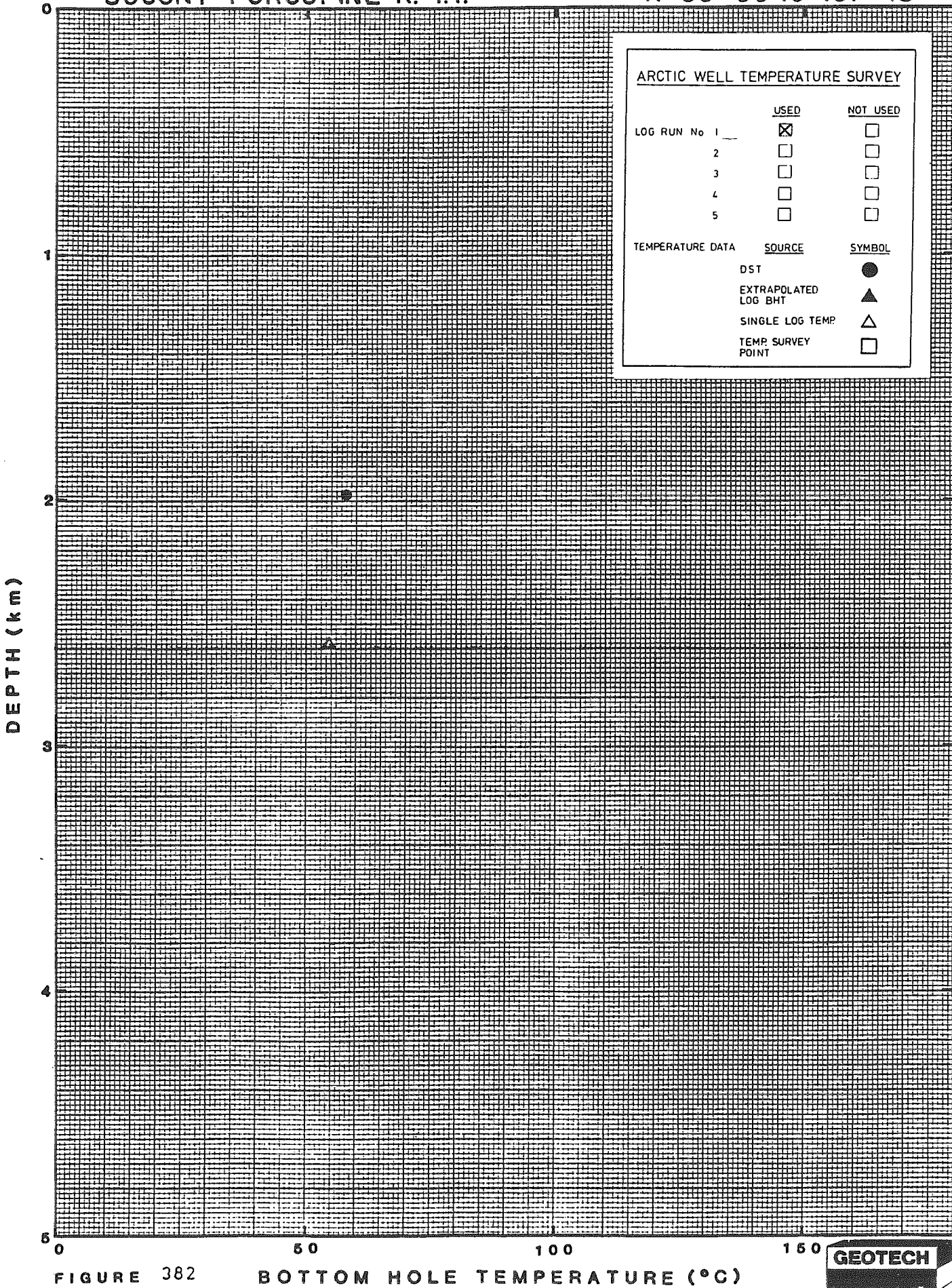
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 381

BOTTOM HOLE TEMPERATURE (°C)







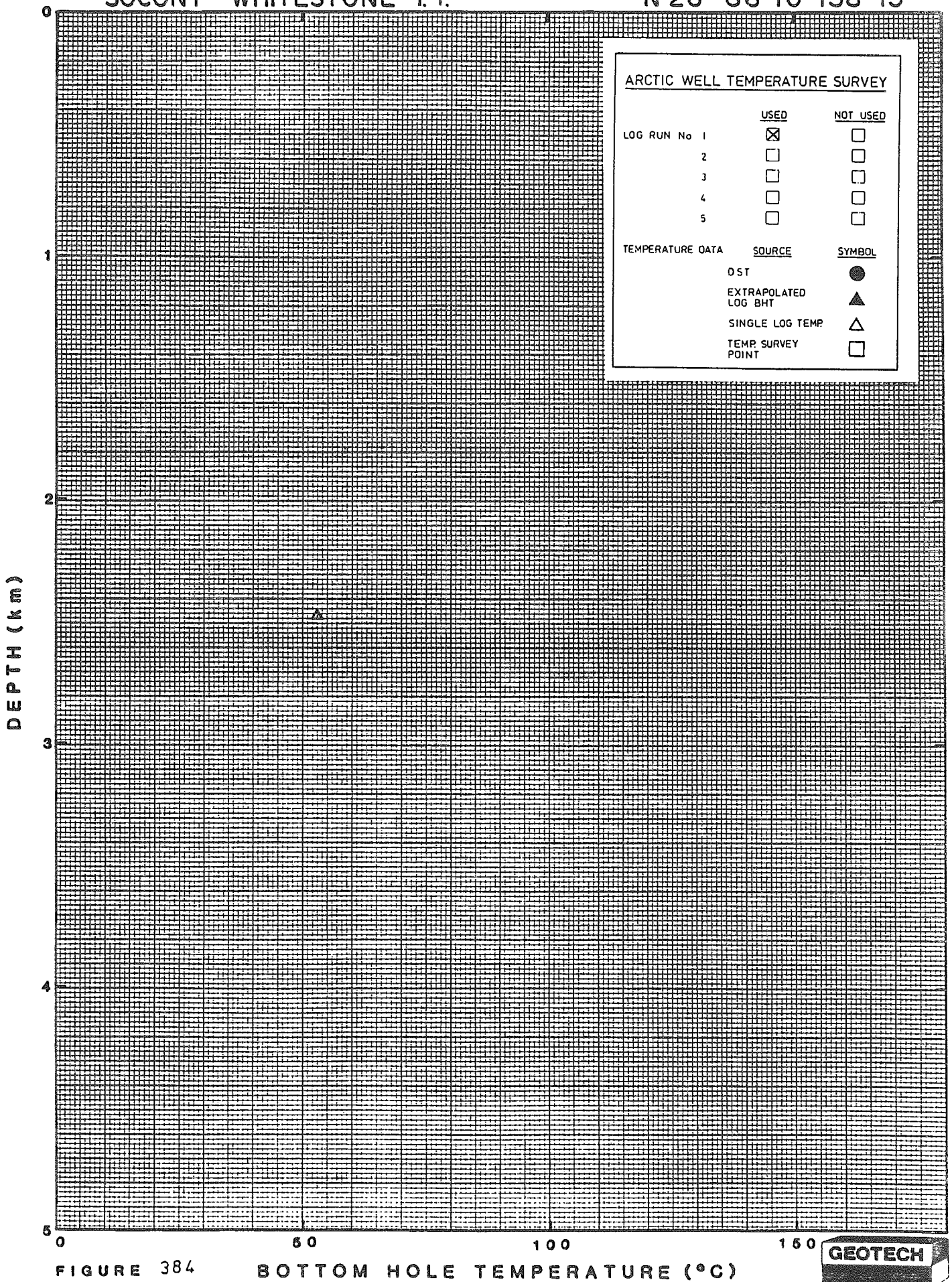
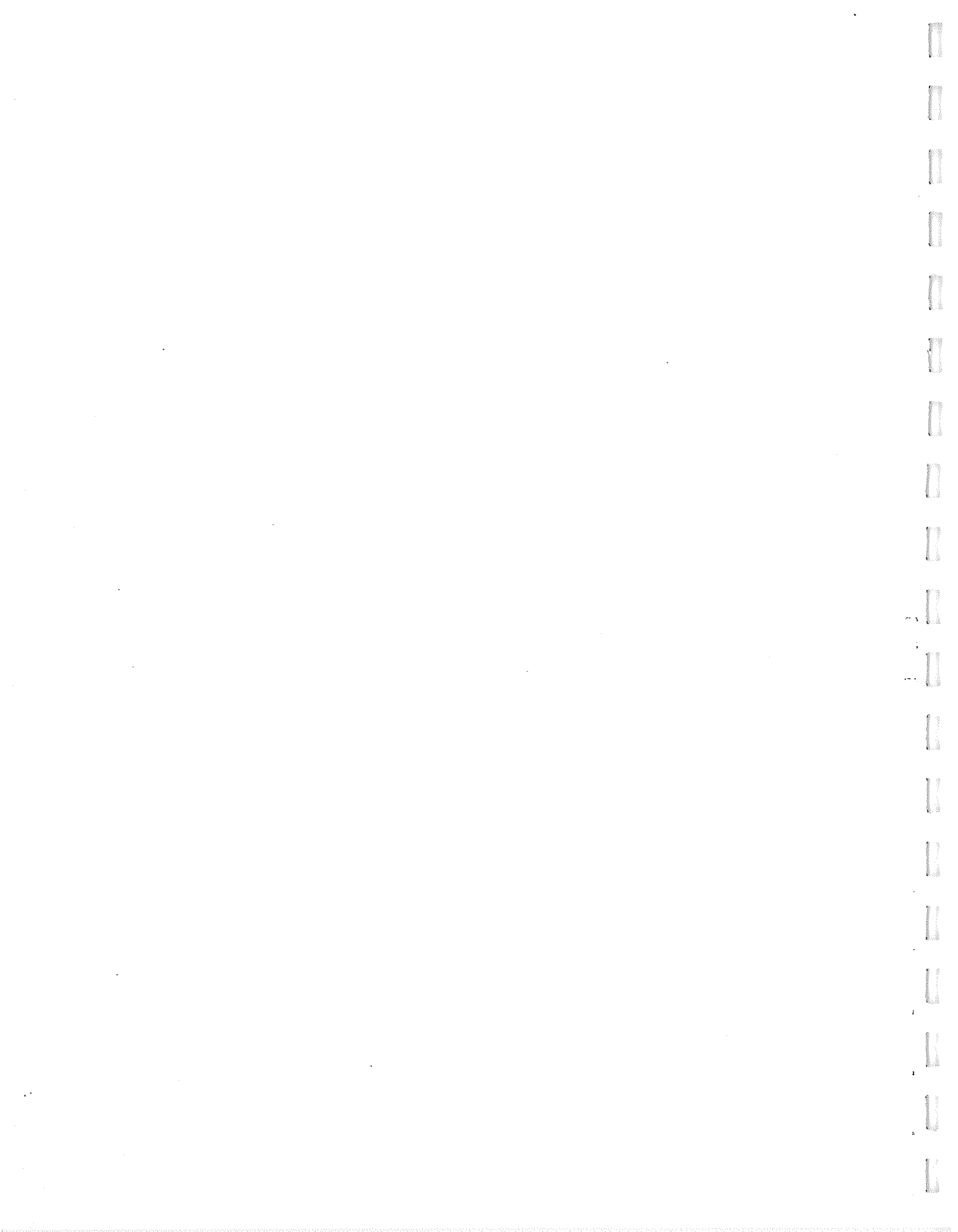


FIGURE 384

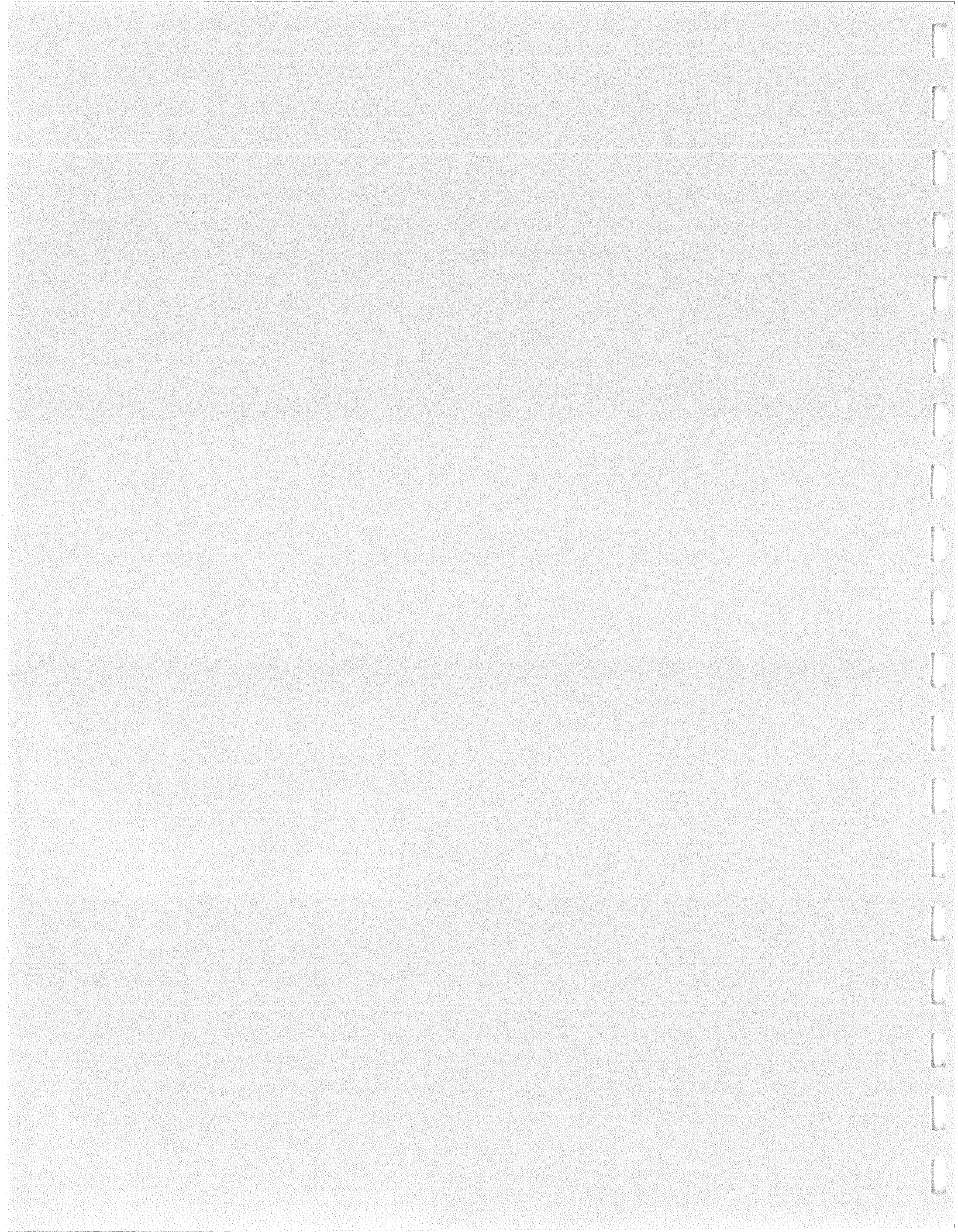
BOTTOM HOLE TEMPERATURE (°C)













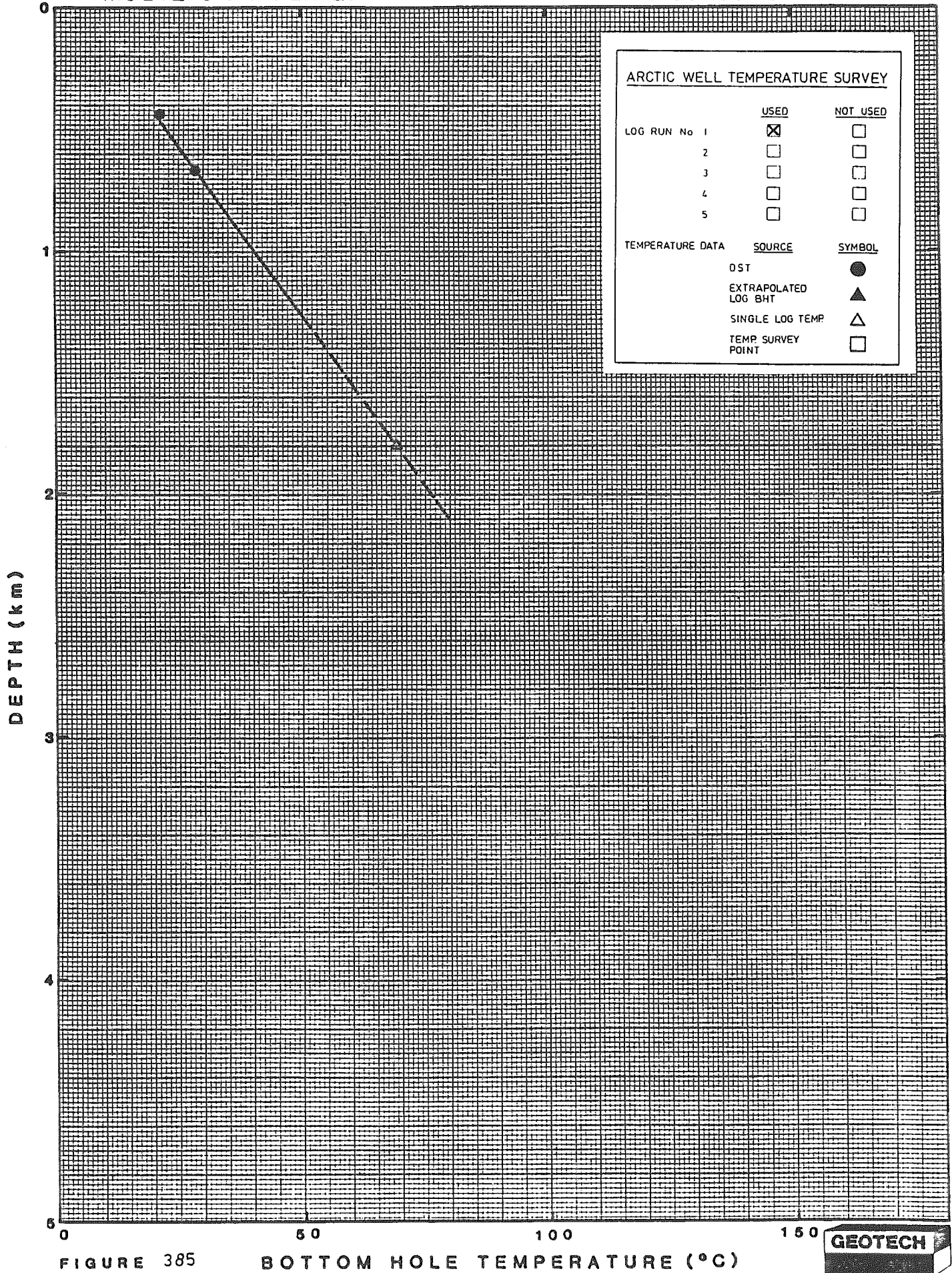
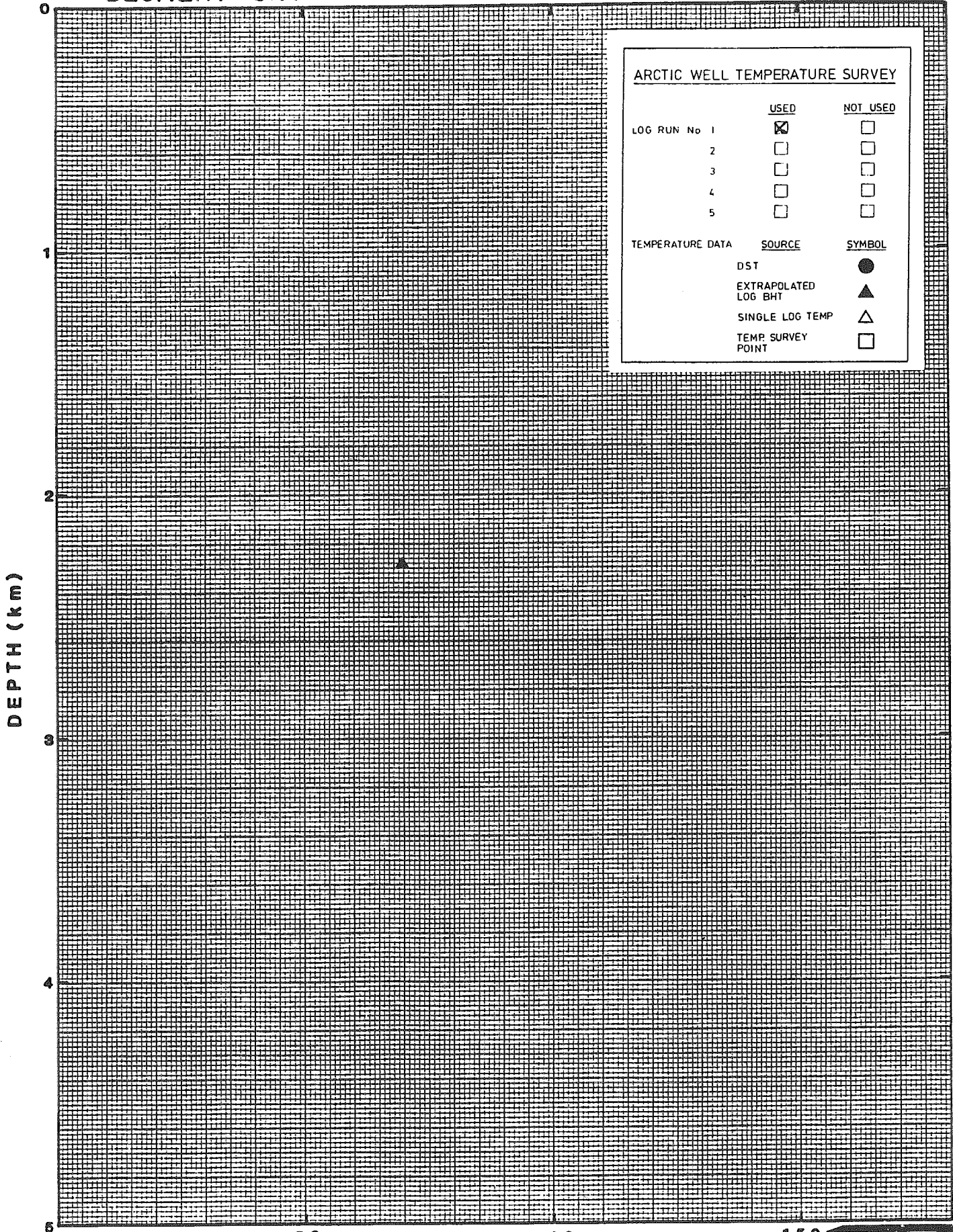


FIGURE 385

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 386

BOTTOM HOLE TEMPERATURE (°C)



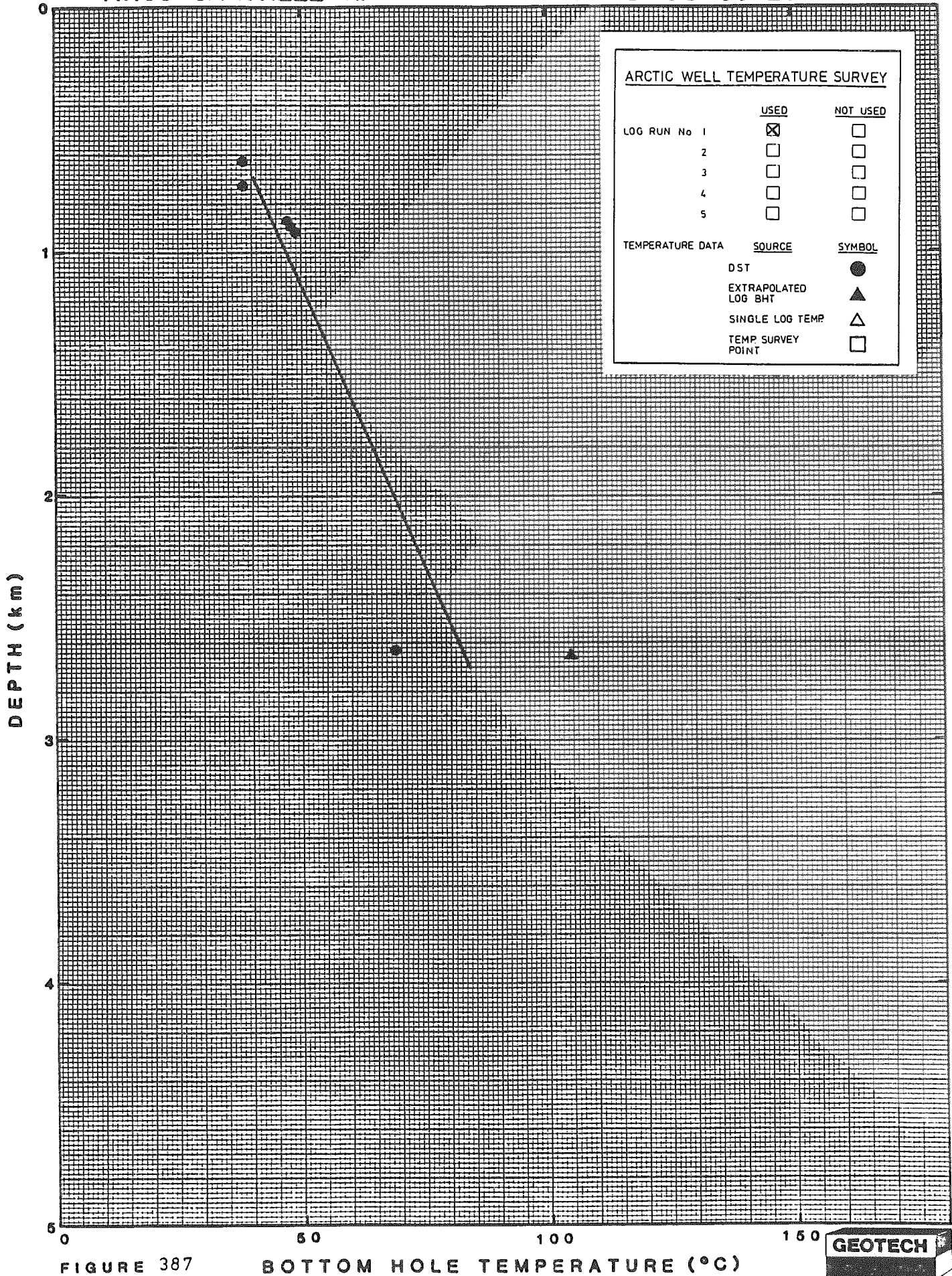


FIGURE 387

BOTTOM HOLE TEMPERATURE (°C)





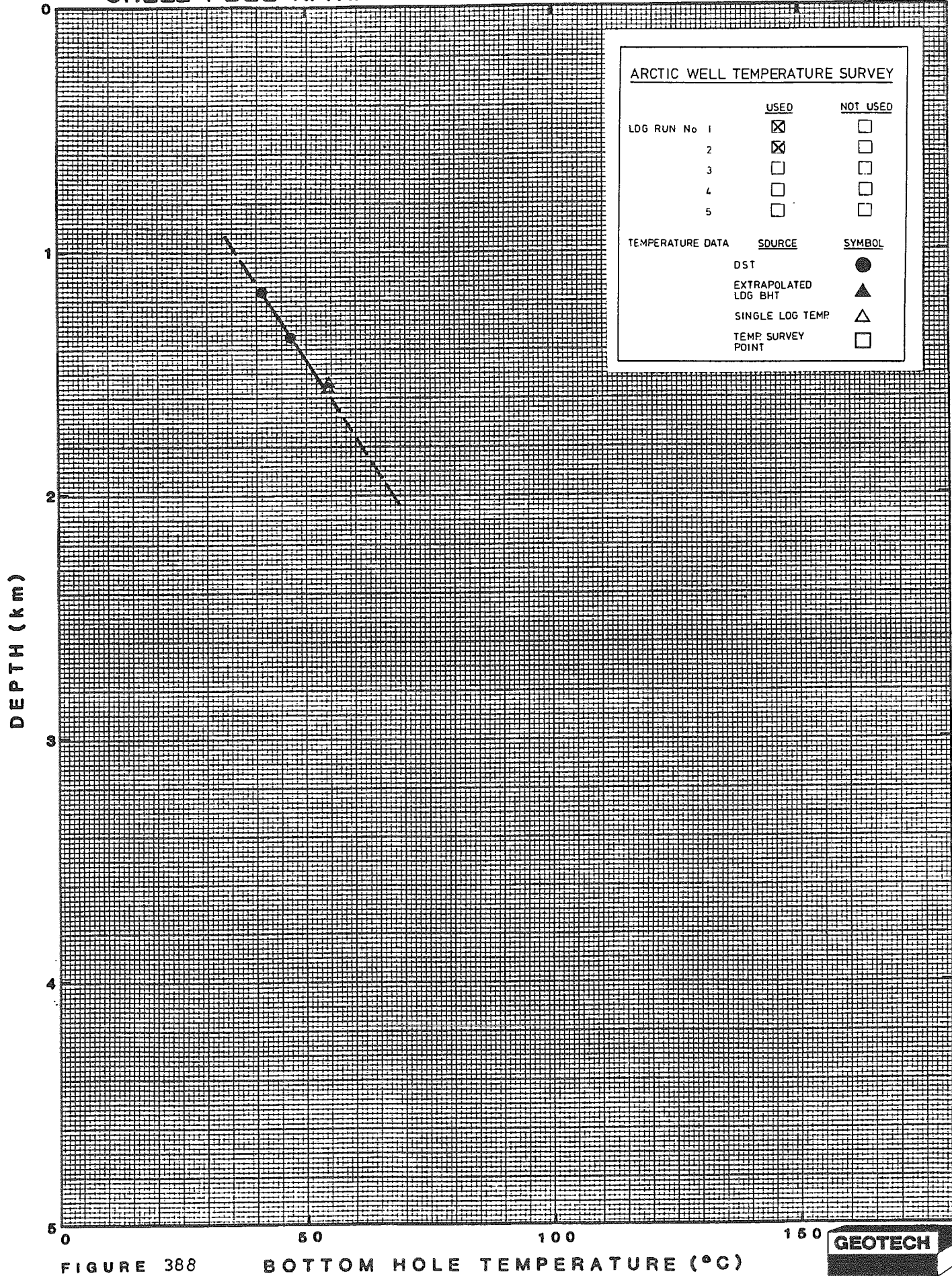


FIGURE 388

BOTTOM HOLE TEMPERATURE (°C)



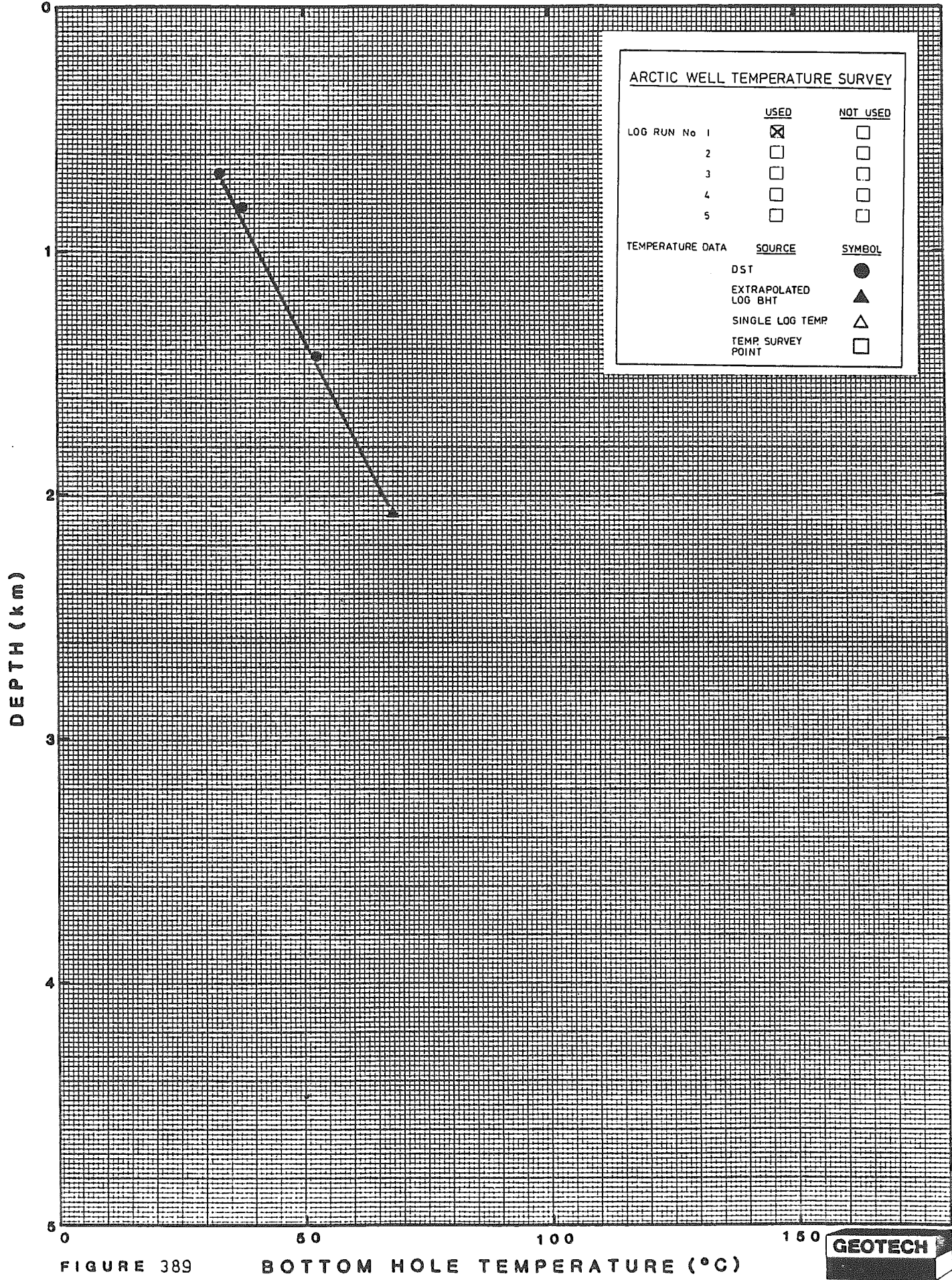


FIGURE 389

BOTTOM HOLE TEMPERATURE (°C)





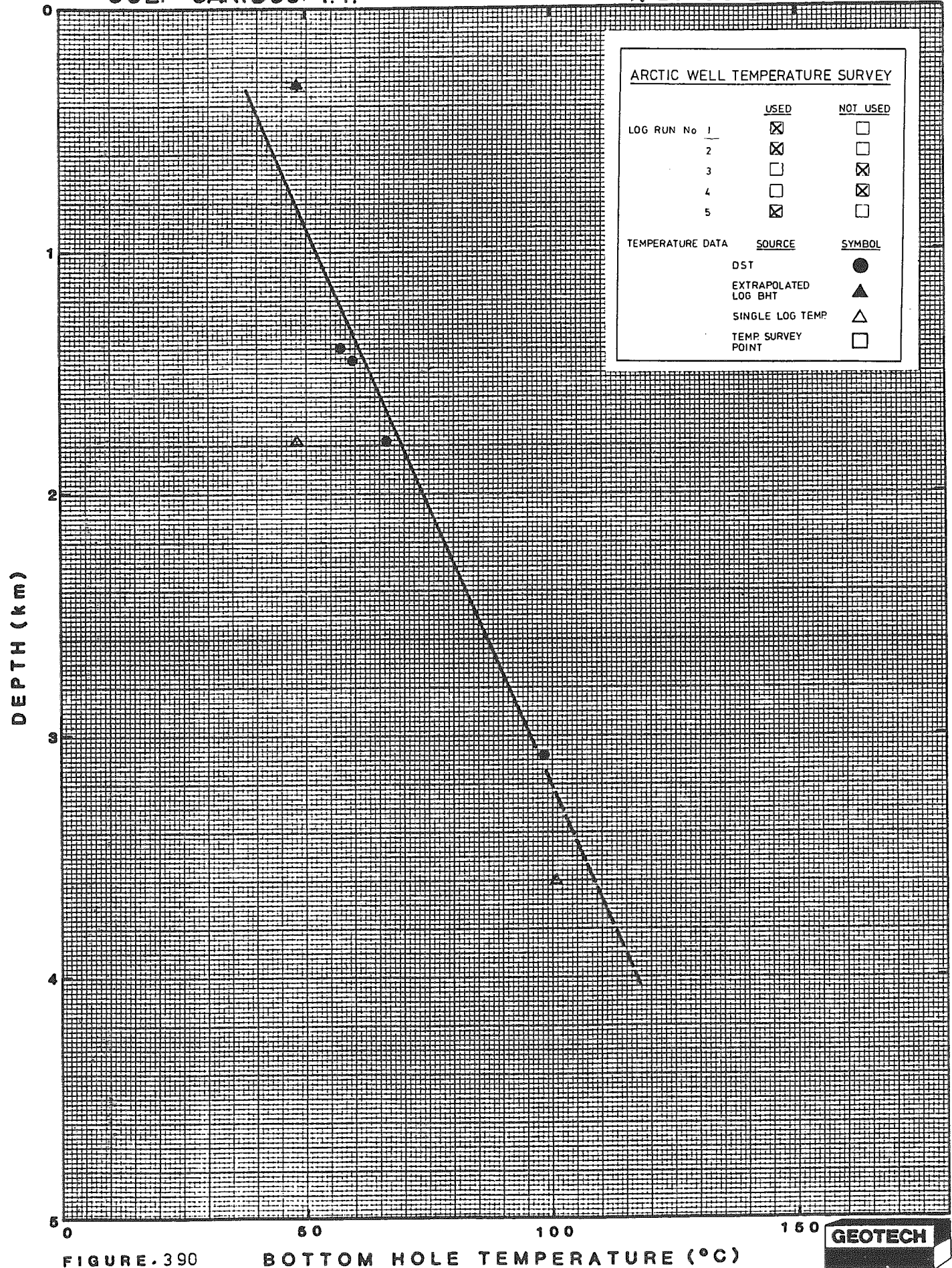


FIGURE.390

BOTTOM HOLE TEMPERATURE (°C)



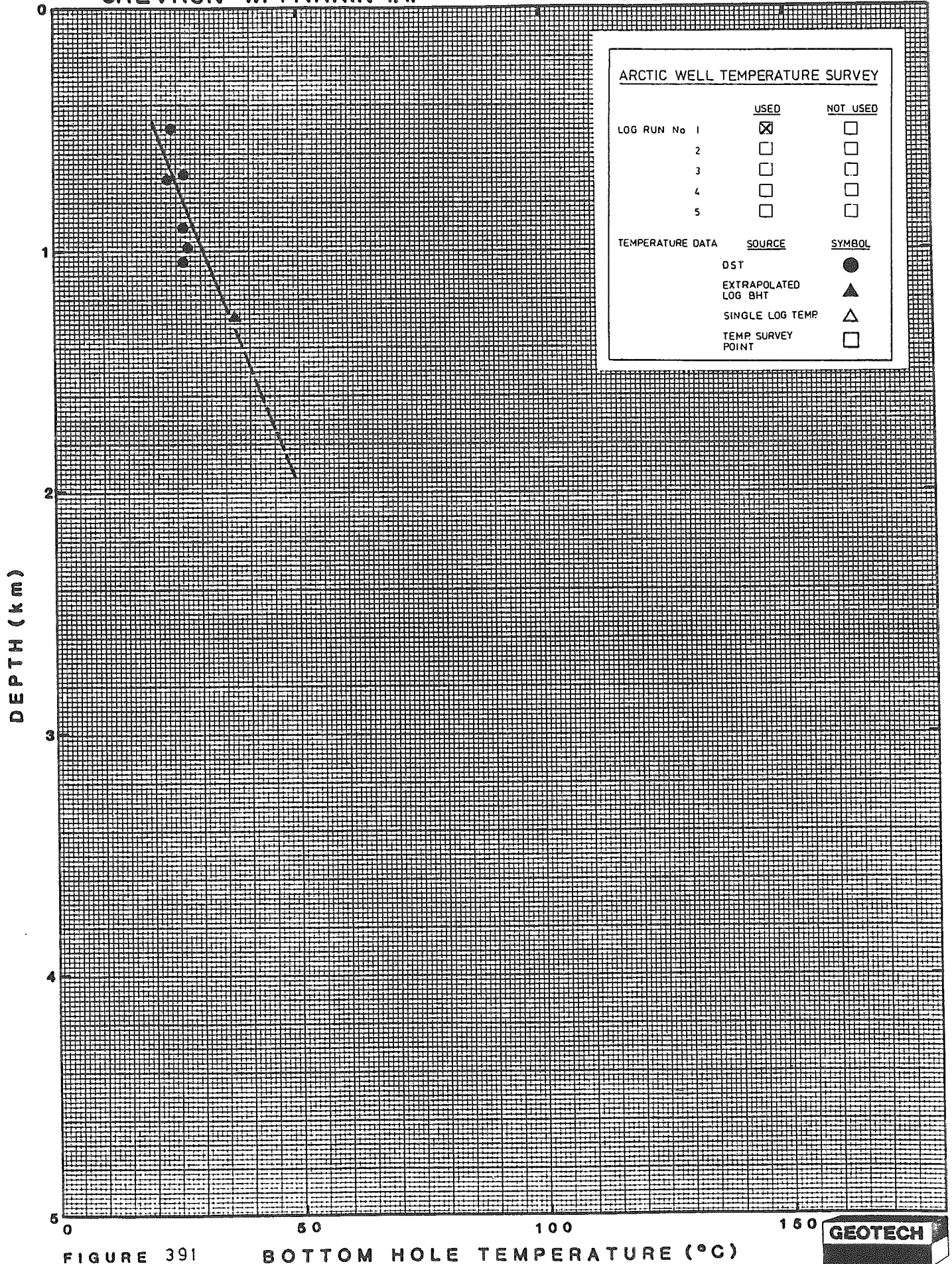


FIGURE 391

BOTTOM HOLE TEMPERATURE (°C)



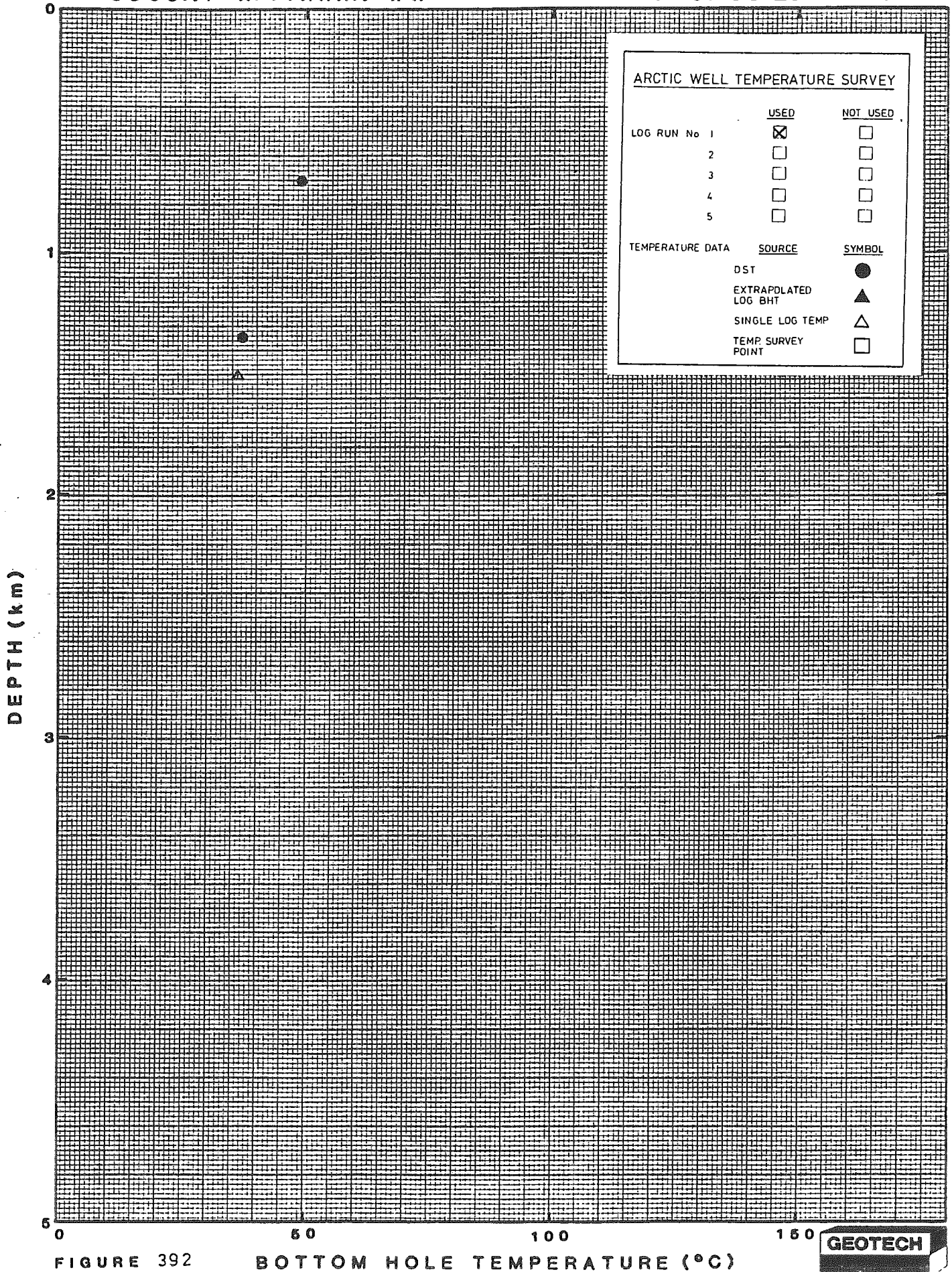
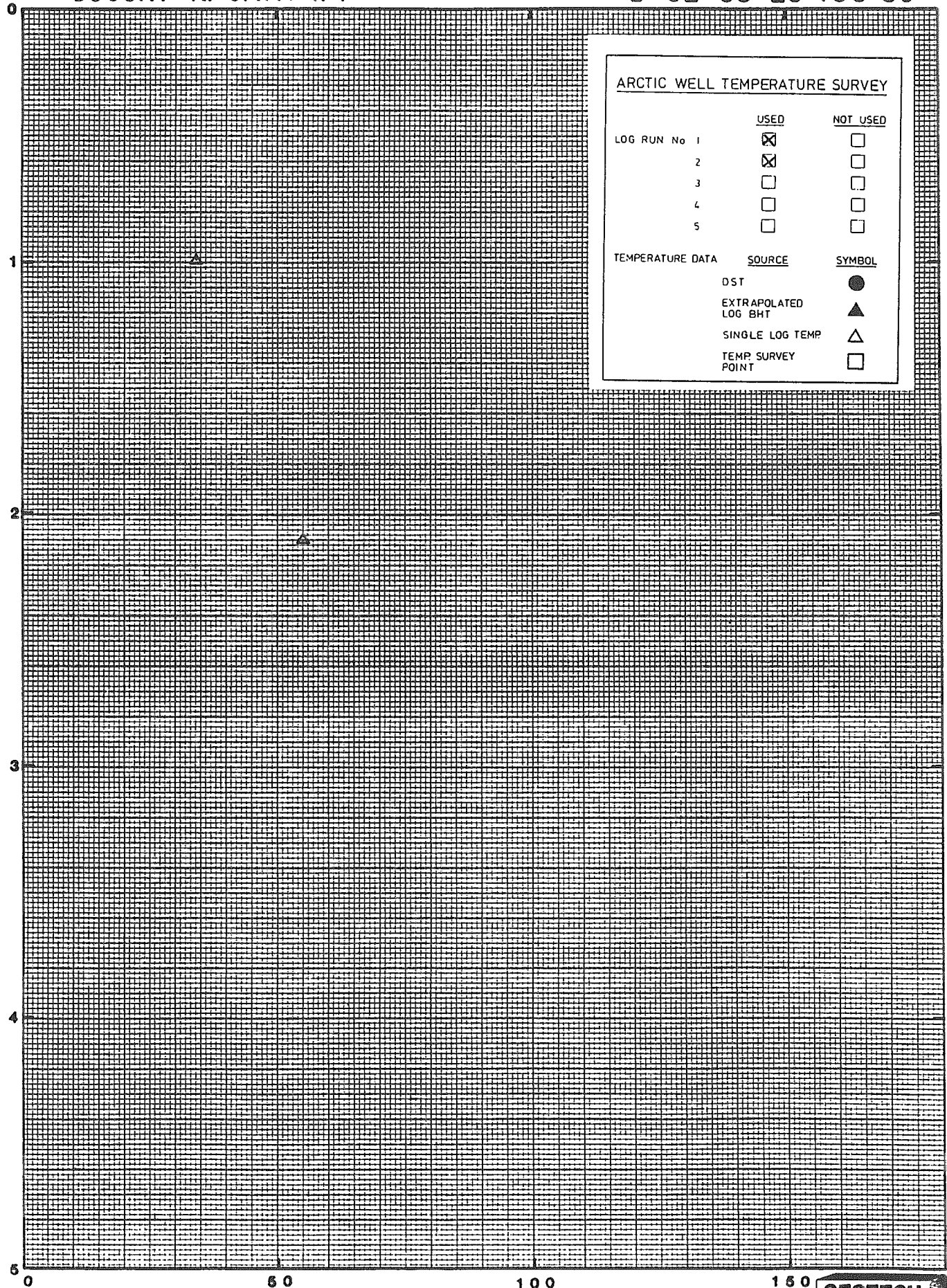


FIGURE 392

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 393

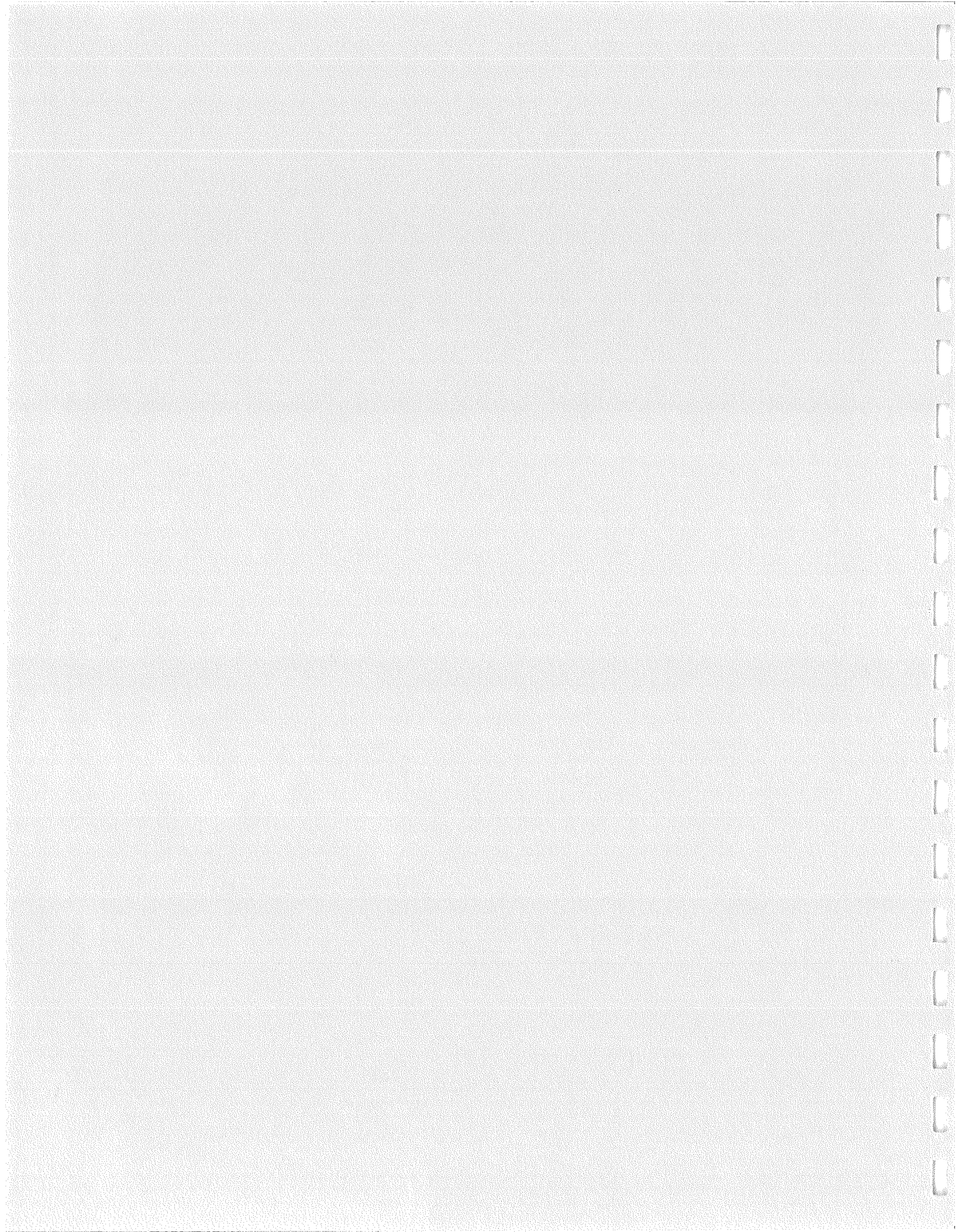
BOTTOM HOLE TEMPERATURE (°C)







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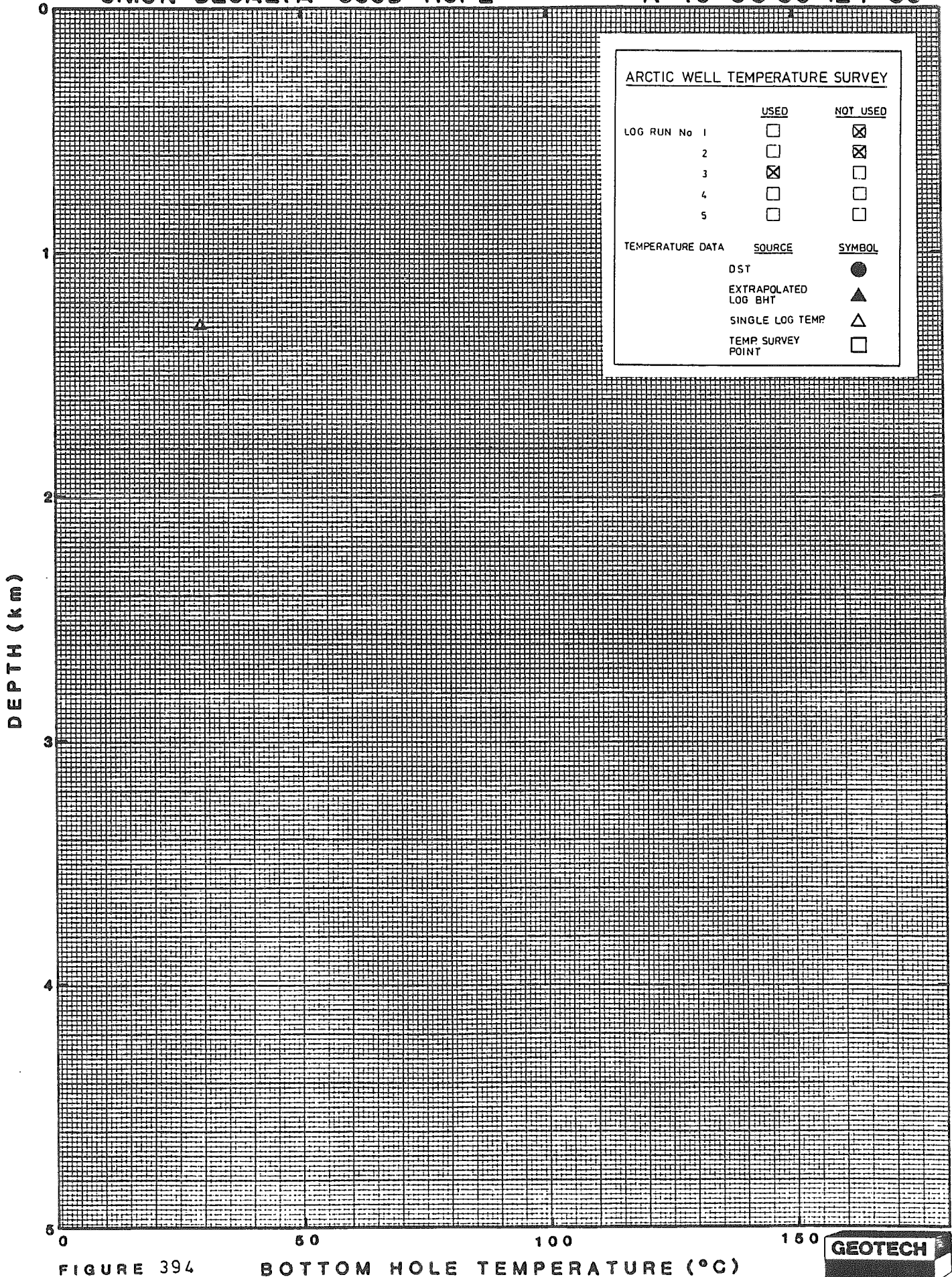


FIGURE 394

BOTTOM HOLE TEMPERATURE (°C)





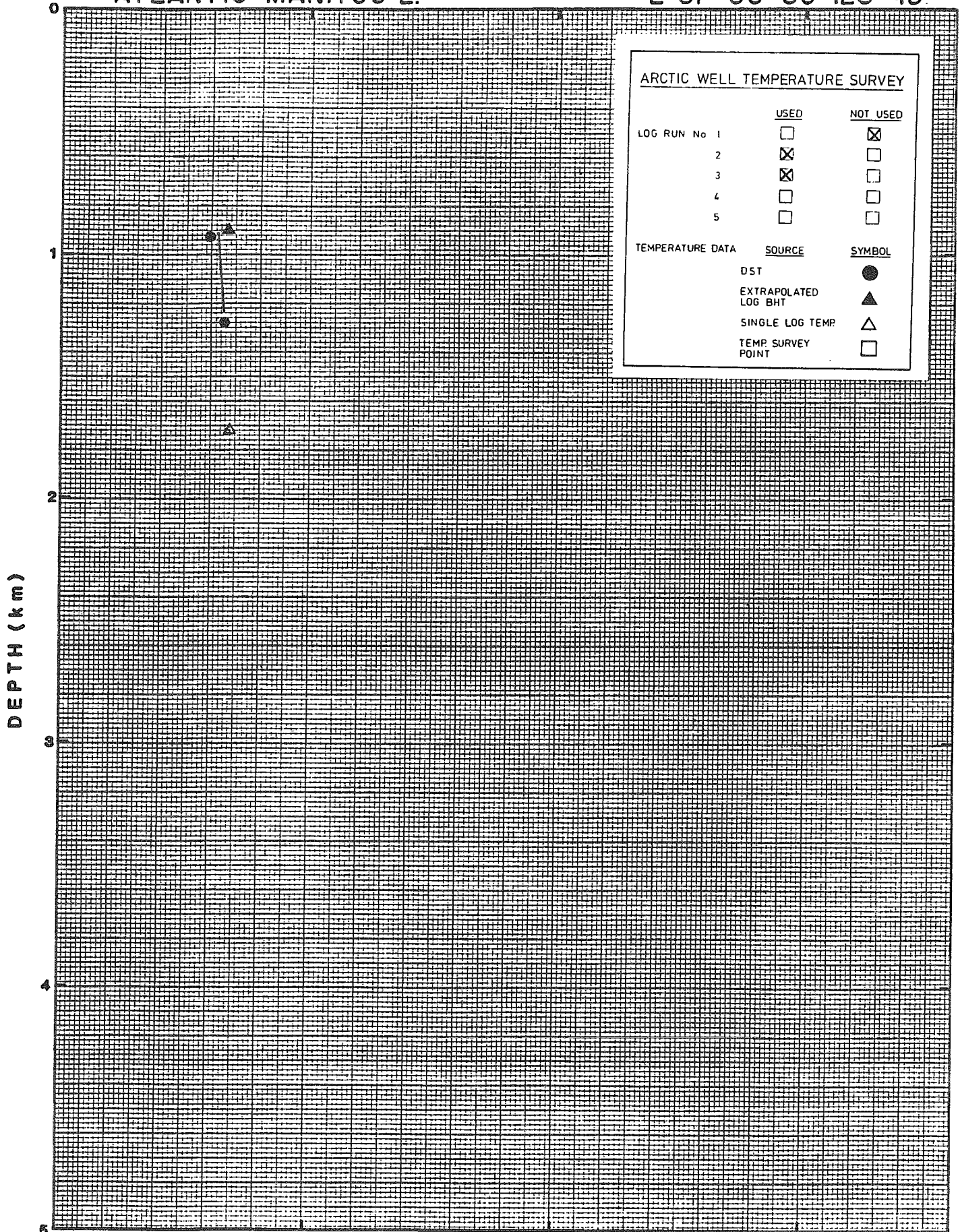


FIGURE 395

BOTTOM HOLE TEMPERATURE (°C)



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

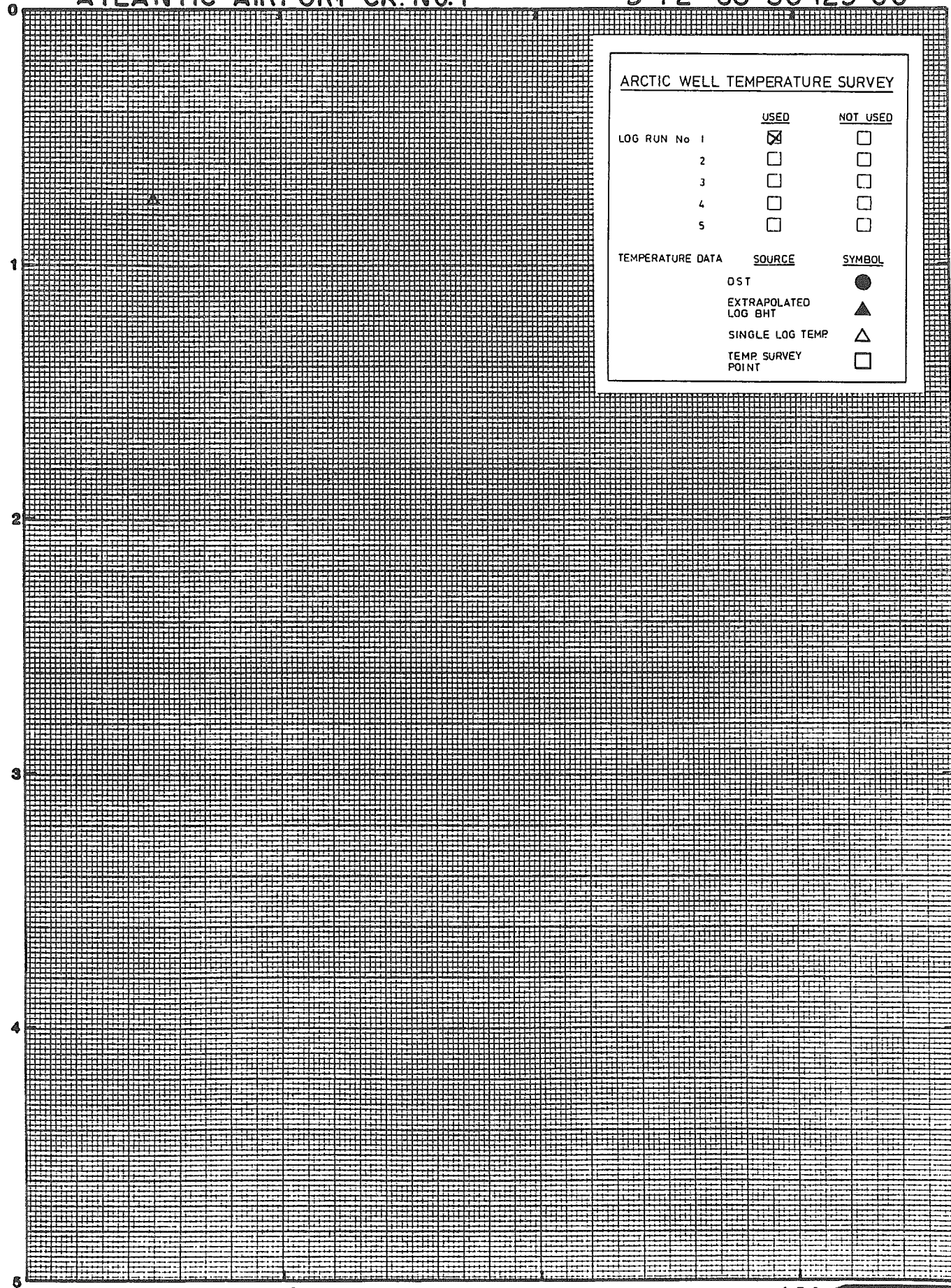
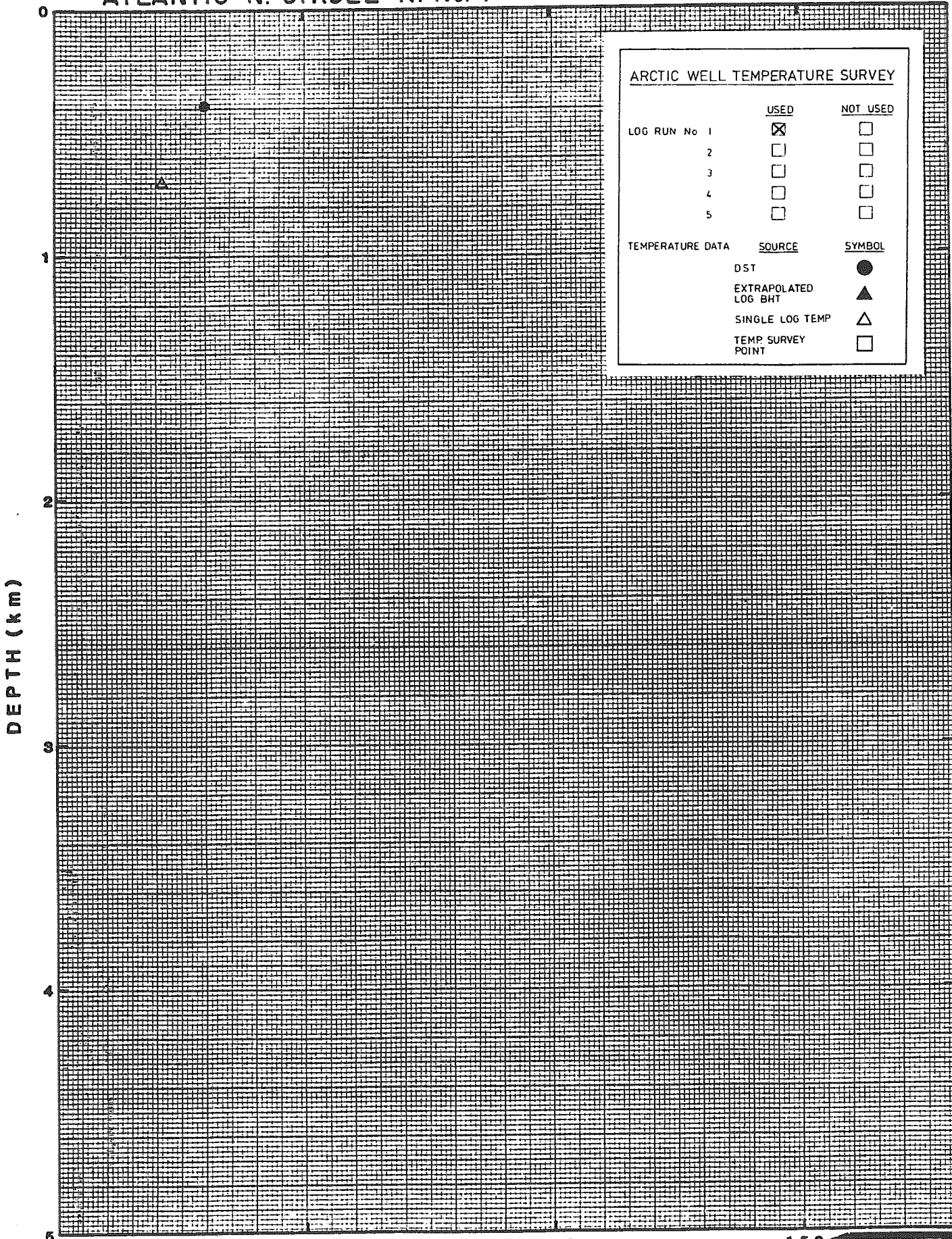


FIGURE 396

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

DEPTH (km)

BOTTOM HOLE TEMPERATURE (°C)

FIGURE 397





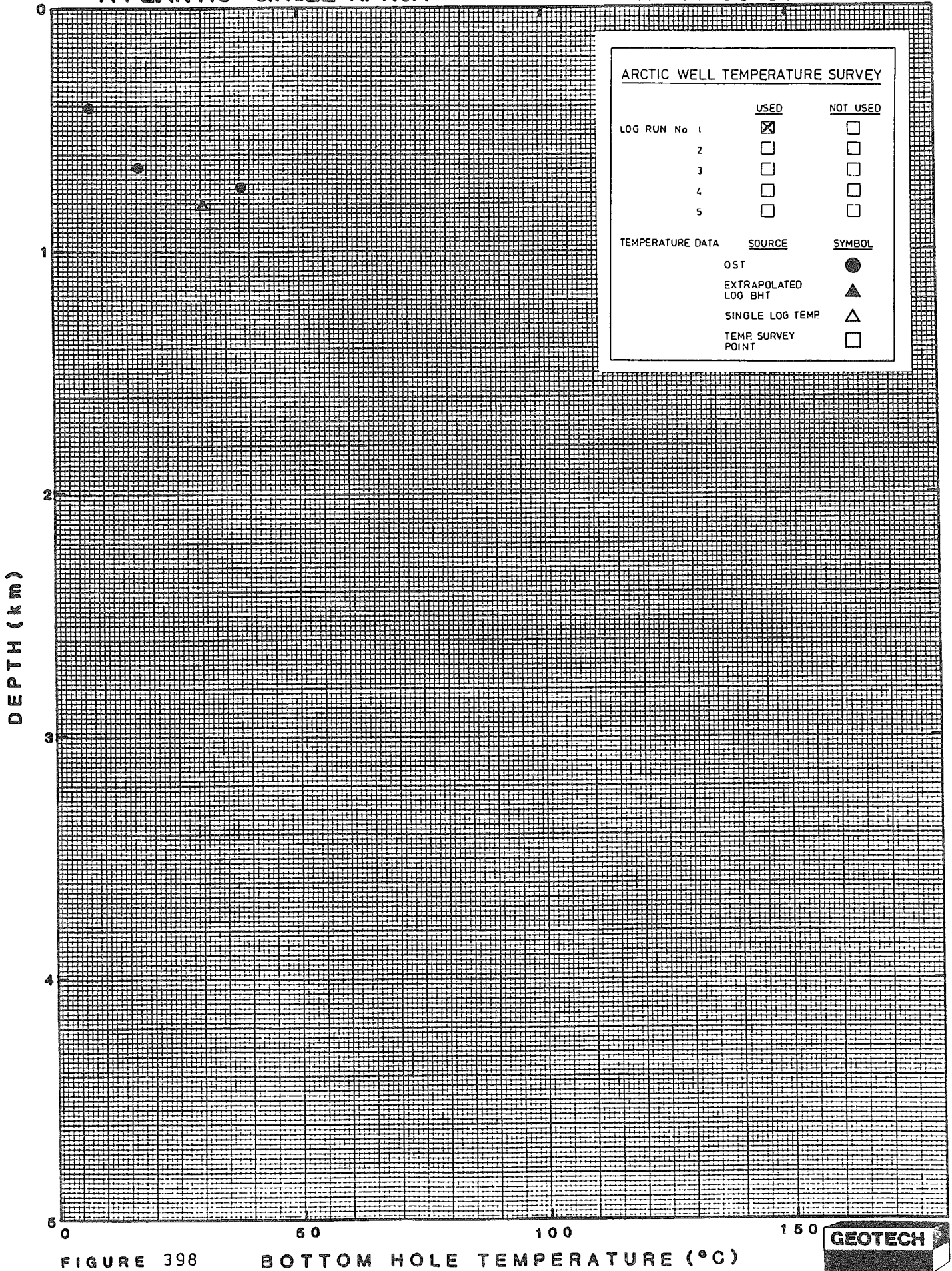


FIGURE 398

BOTTOM HOLE TEMPERATURE (°C)





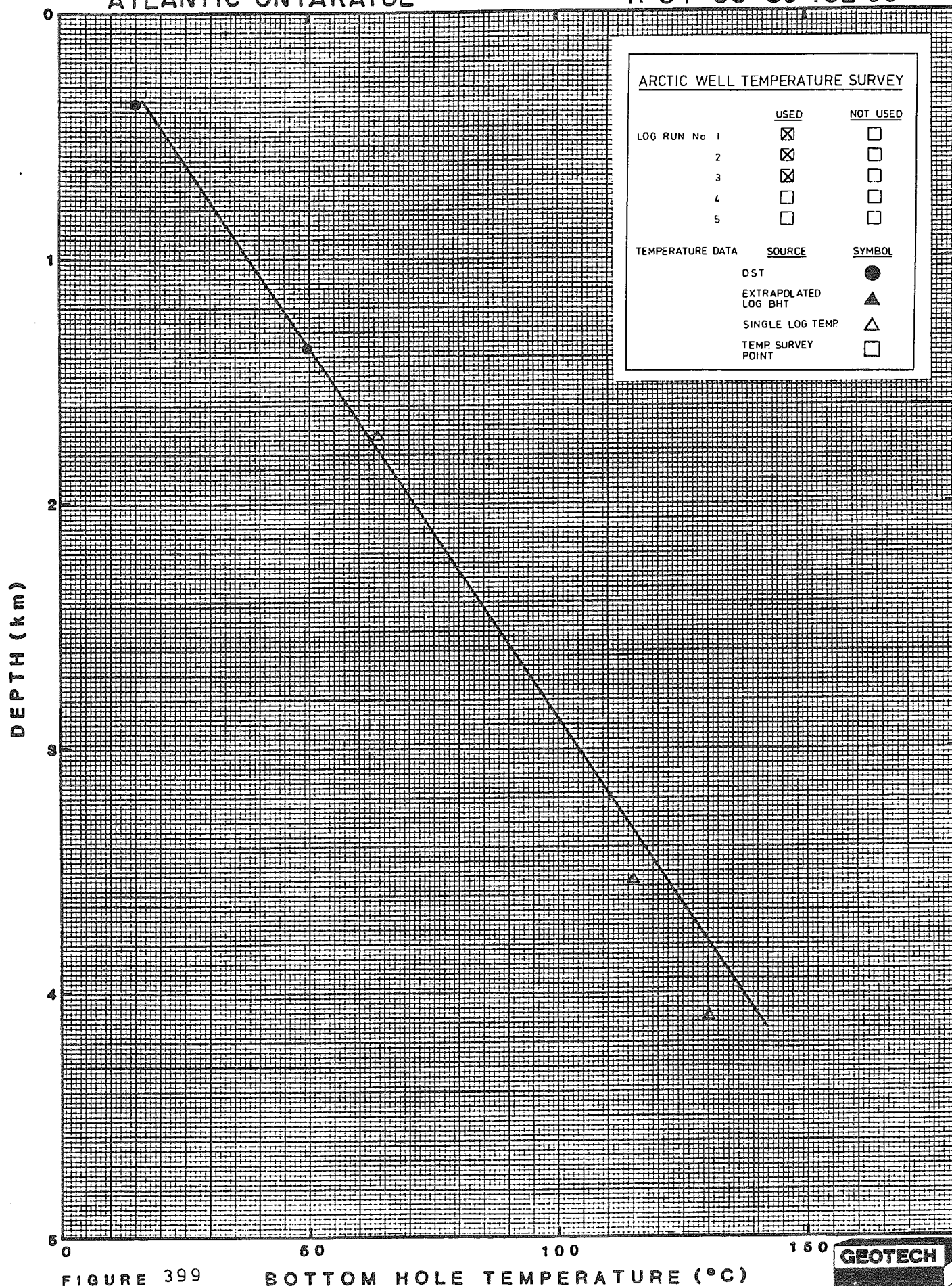


FIGURE 399

BOTTOM HOLE TEMPERATURE (°C)



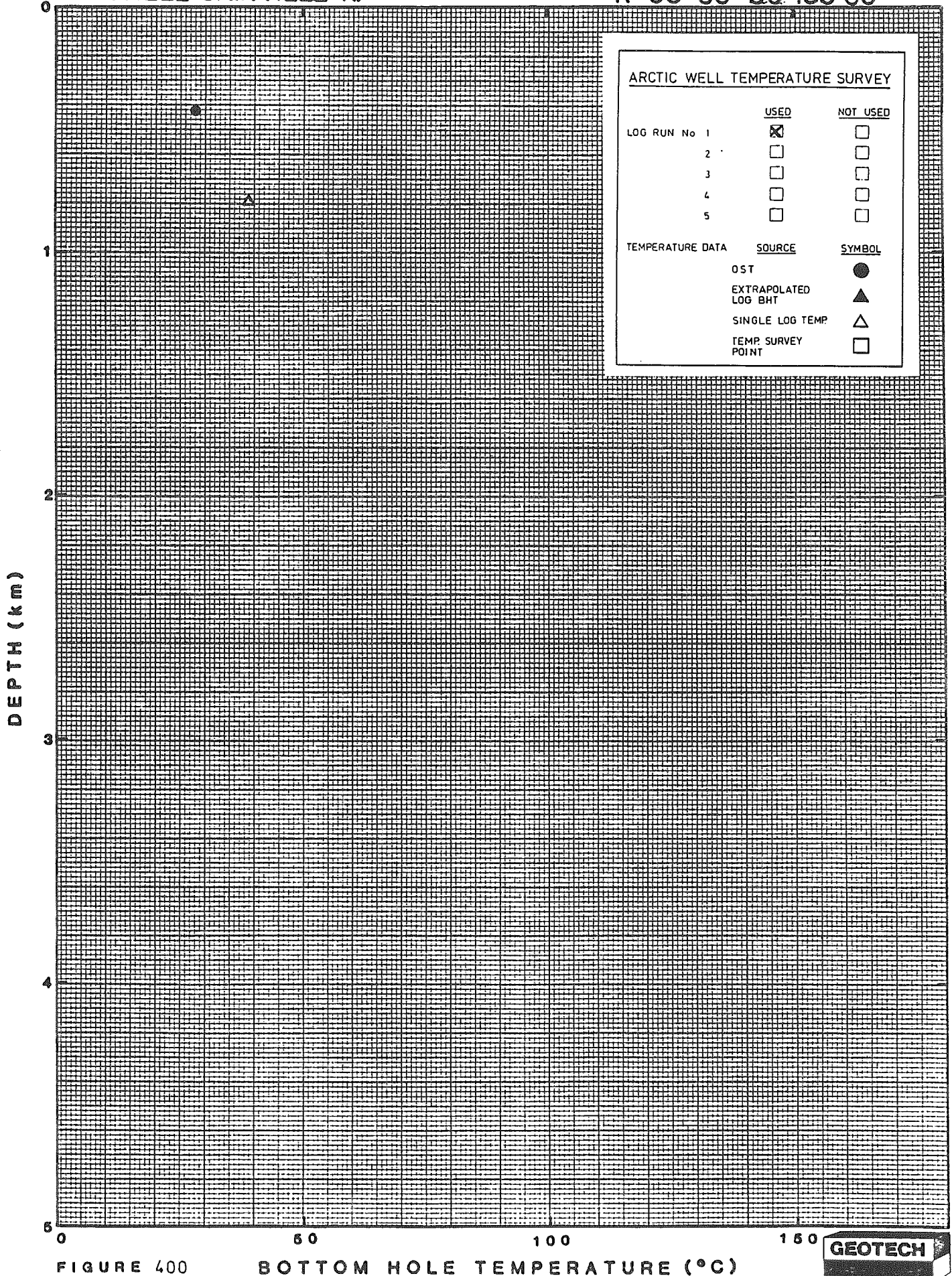


FIGURE 400

BOTTOM HOLE TEMPERATURE (°C)



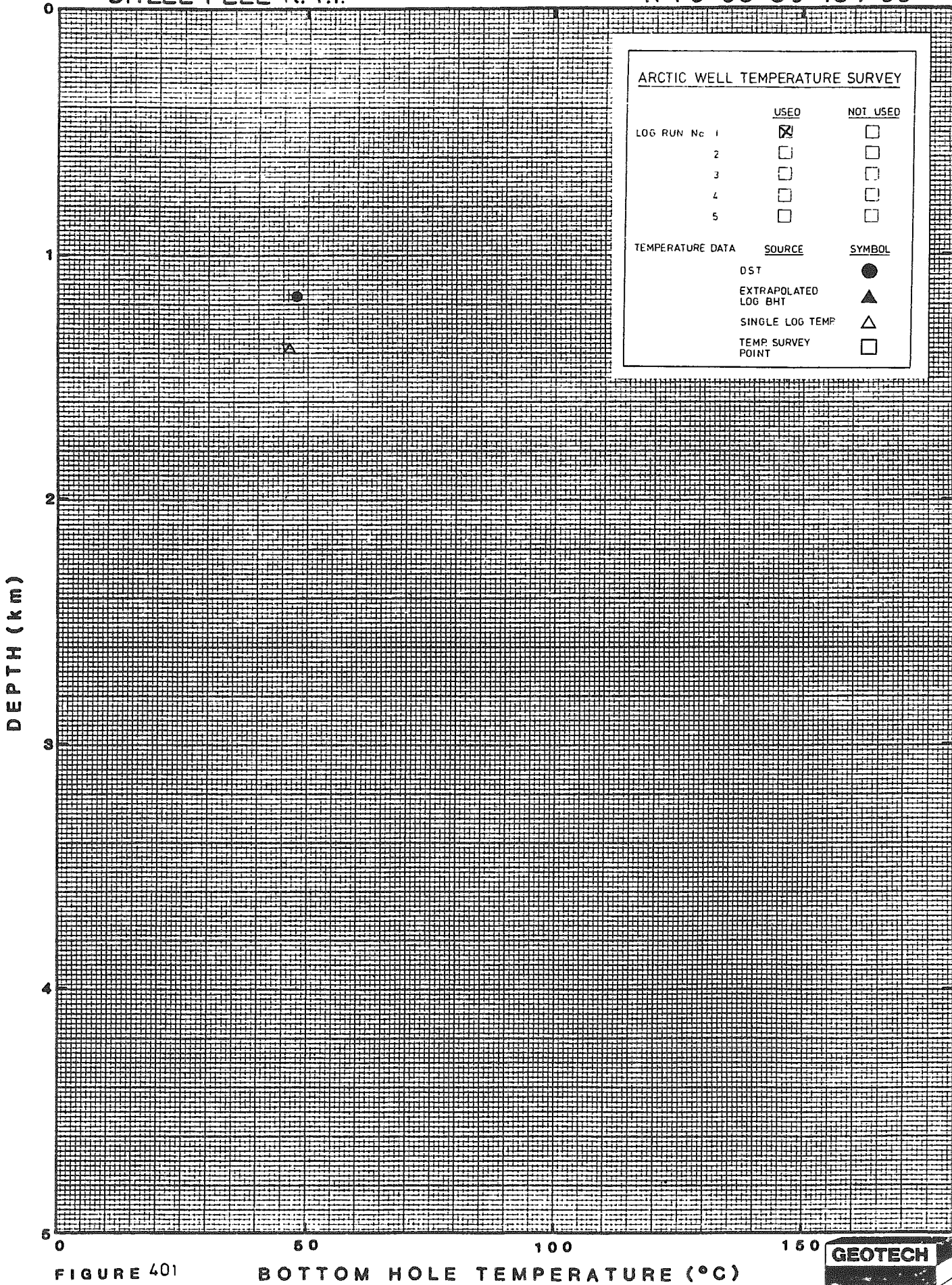


FIGURE 401

BOTTOM HOLE TEMPERATURE (°C)





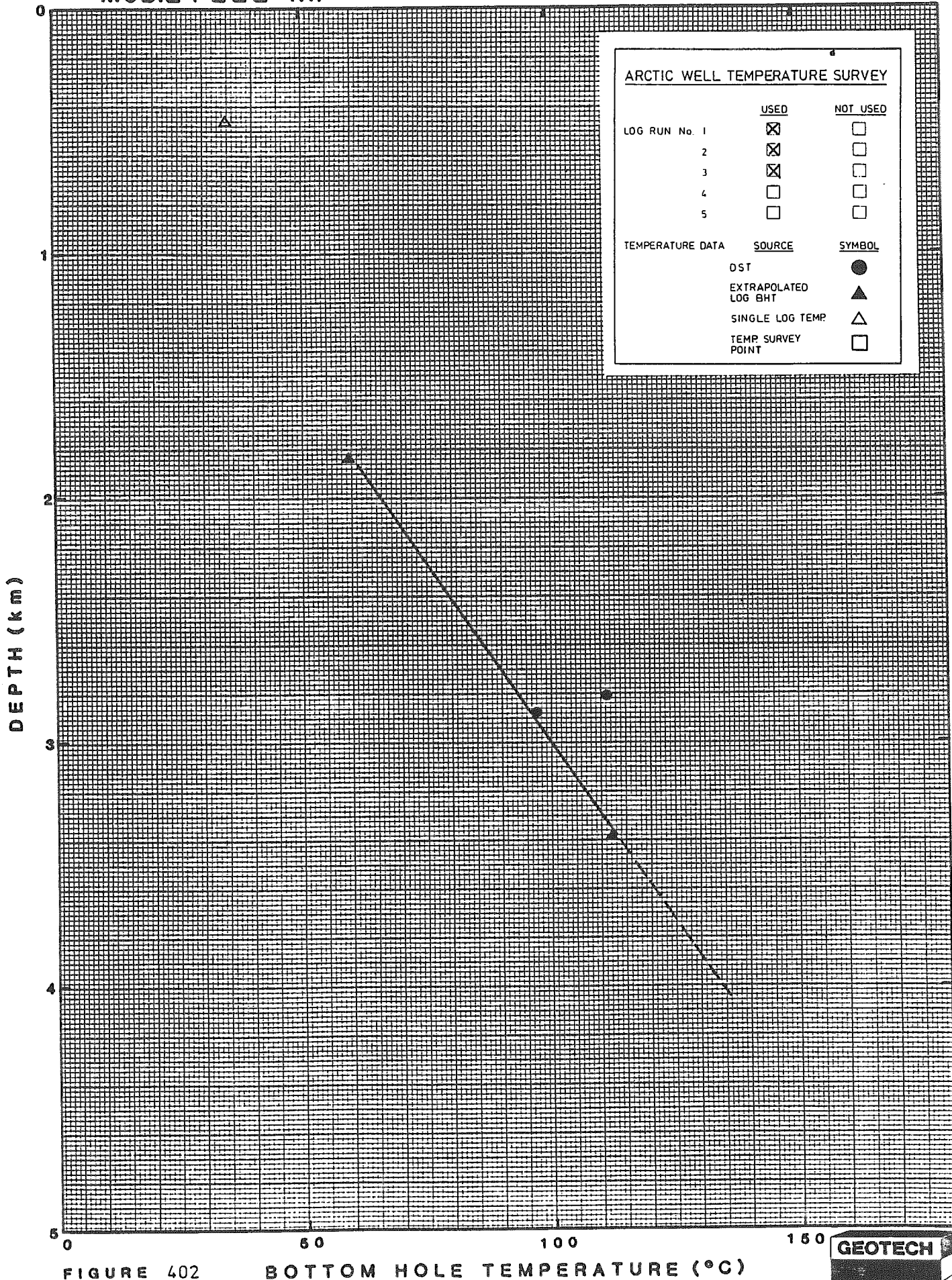


FIGURE 402

BOTTOM HOLE TEMPERATURE (°C)





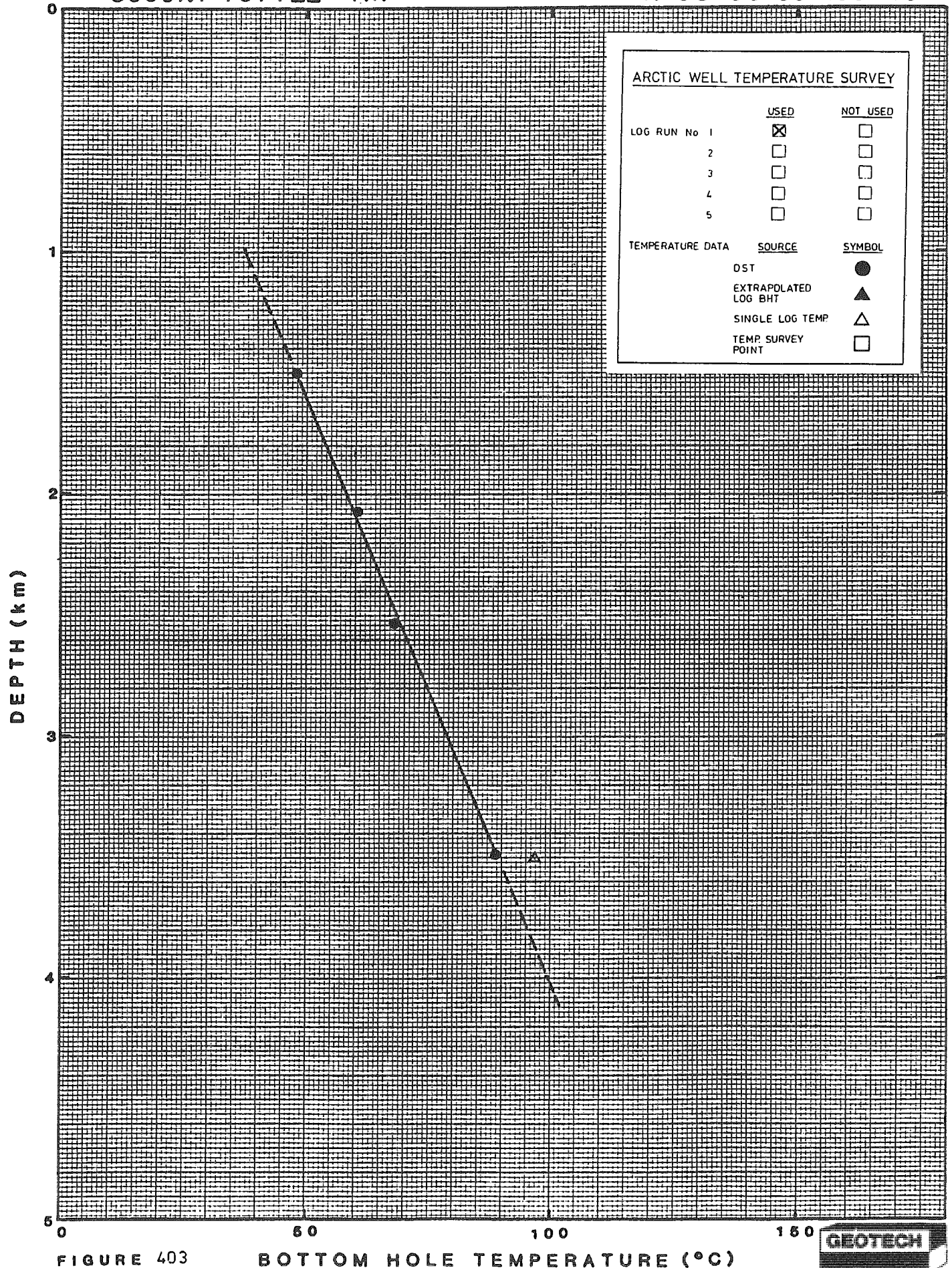


FIGURE 403

BOTTOM HOLE TEMPERATURE (°C)



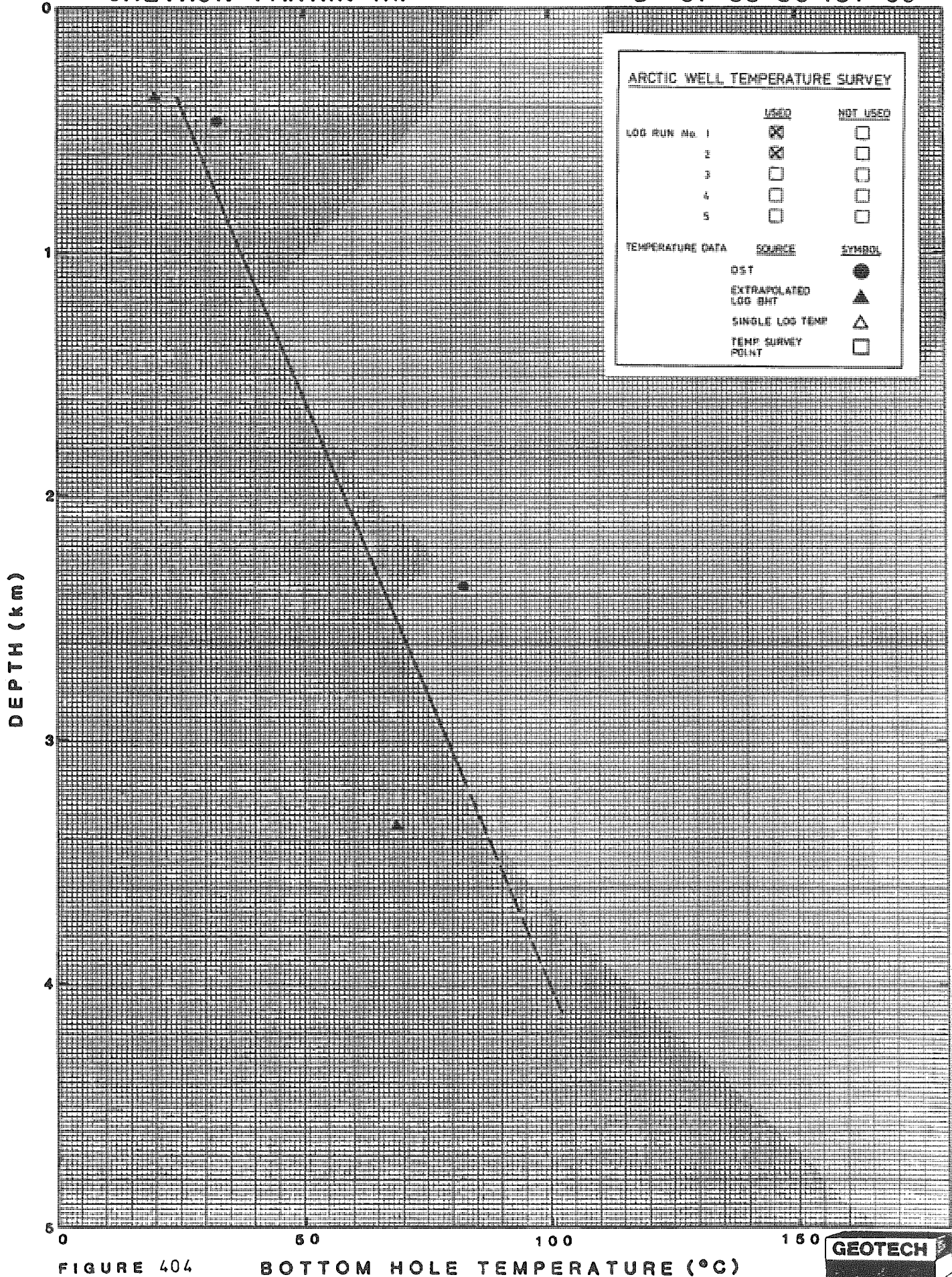
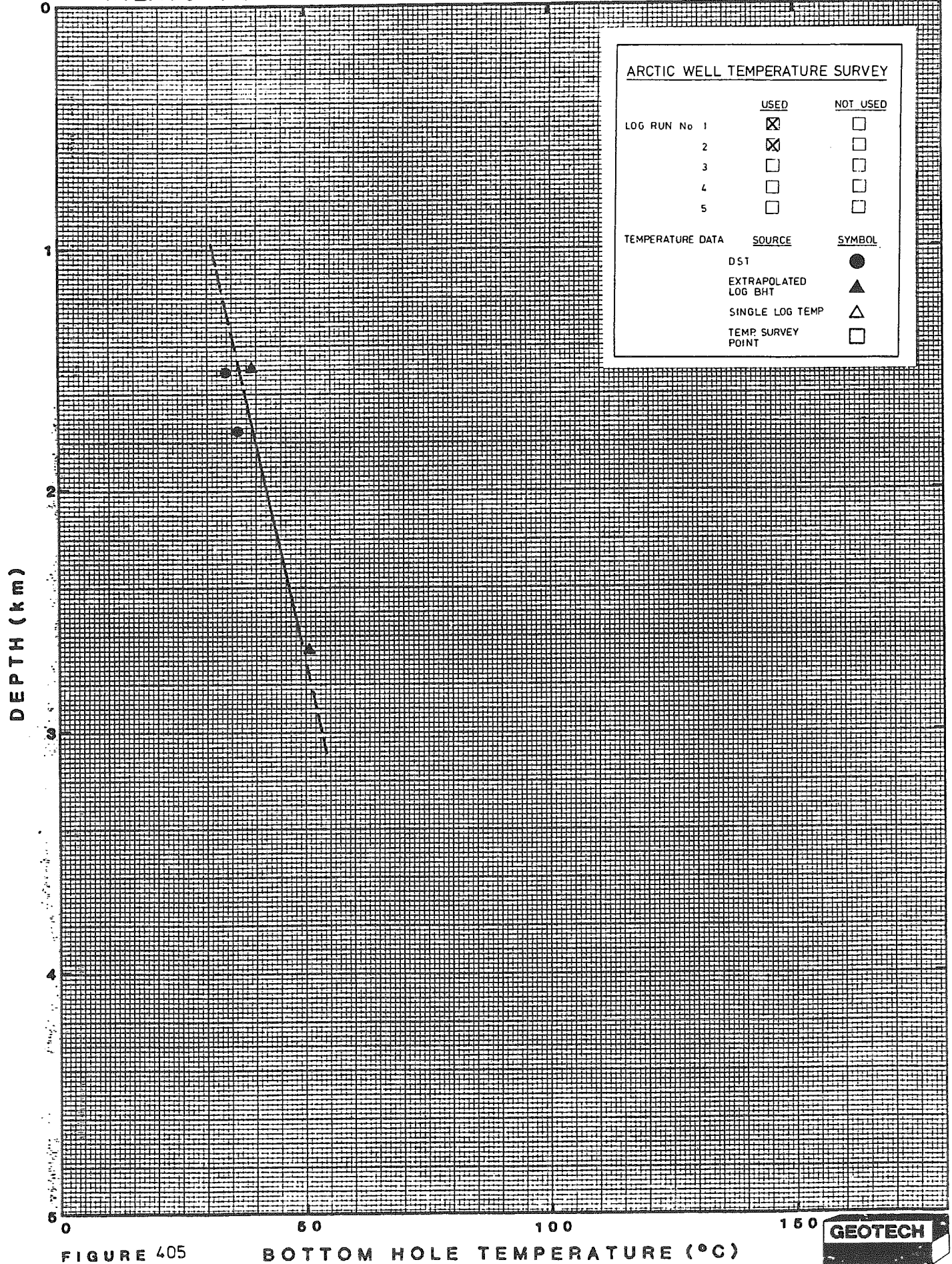


FIGURE 404

BOTTOM HOLE TEMPERATURE (°C)

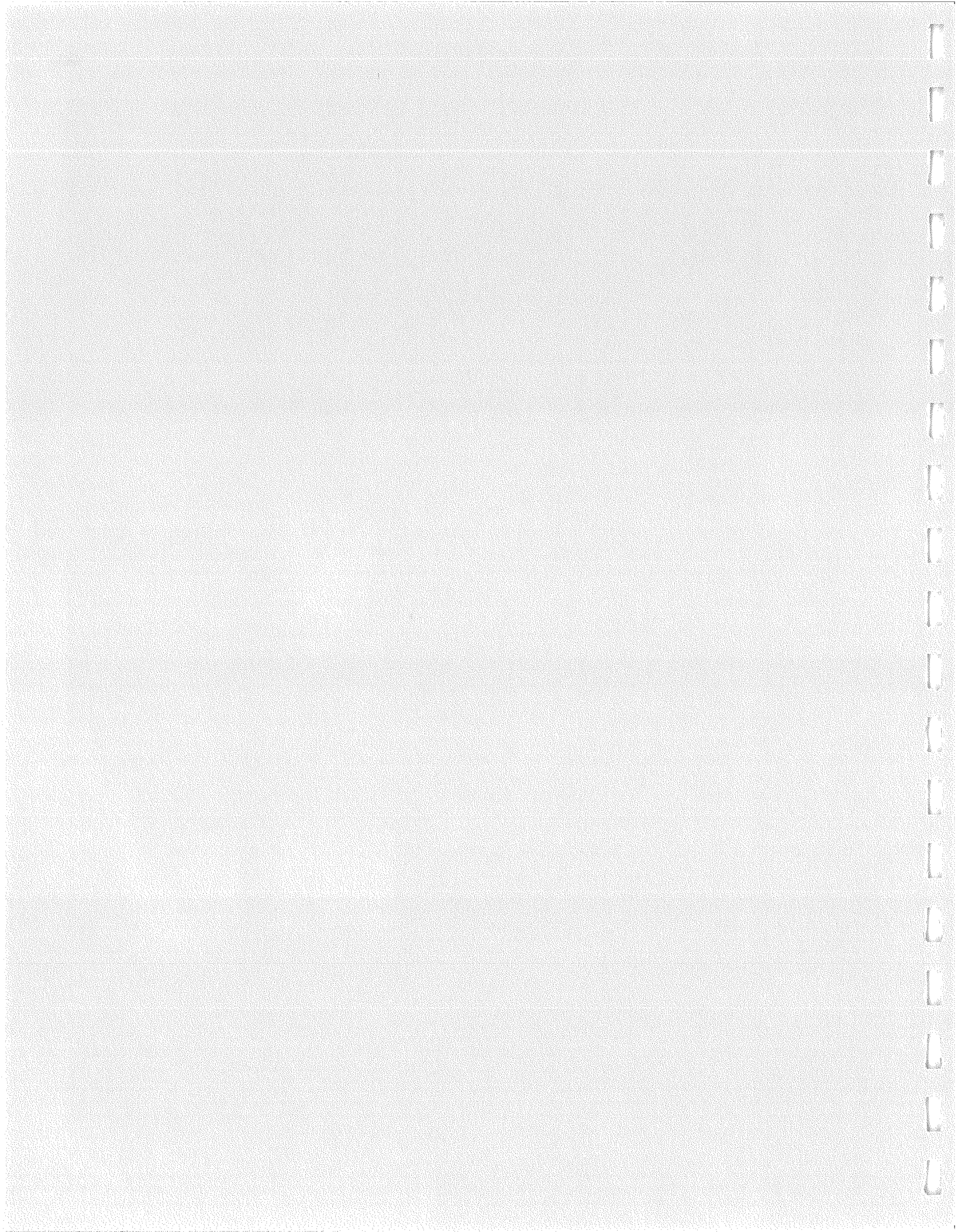






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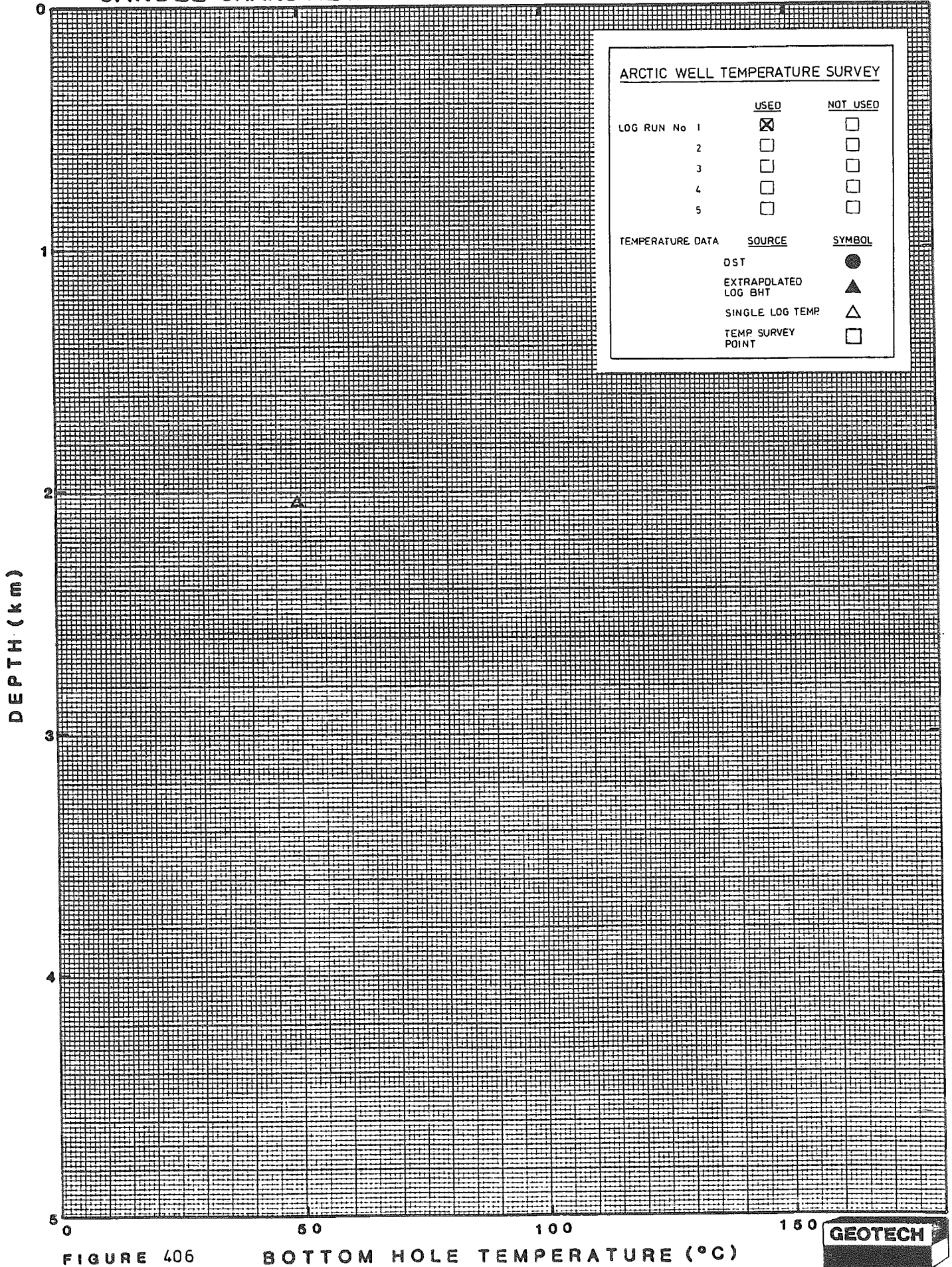
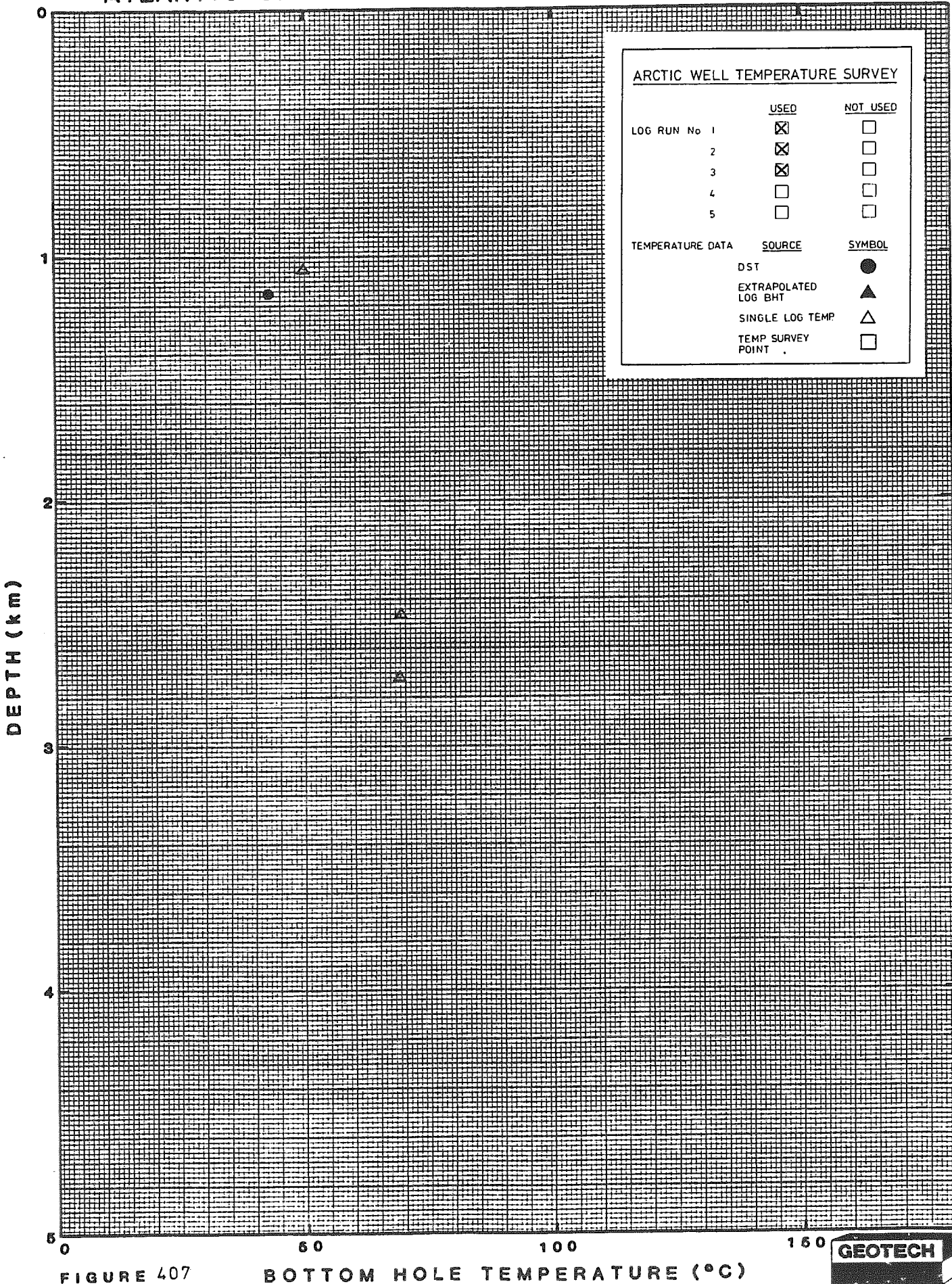


FIGURE 406

BOTTOM HOLE TEMPERATURE (°C)







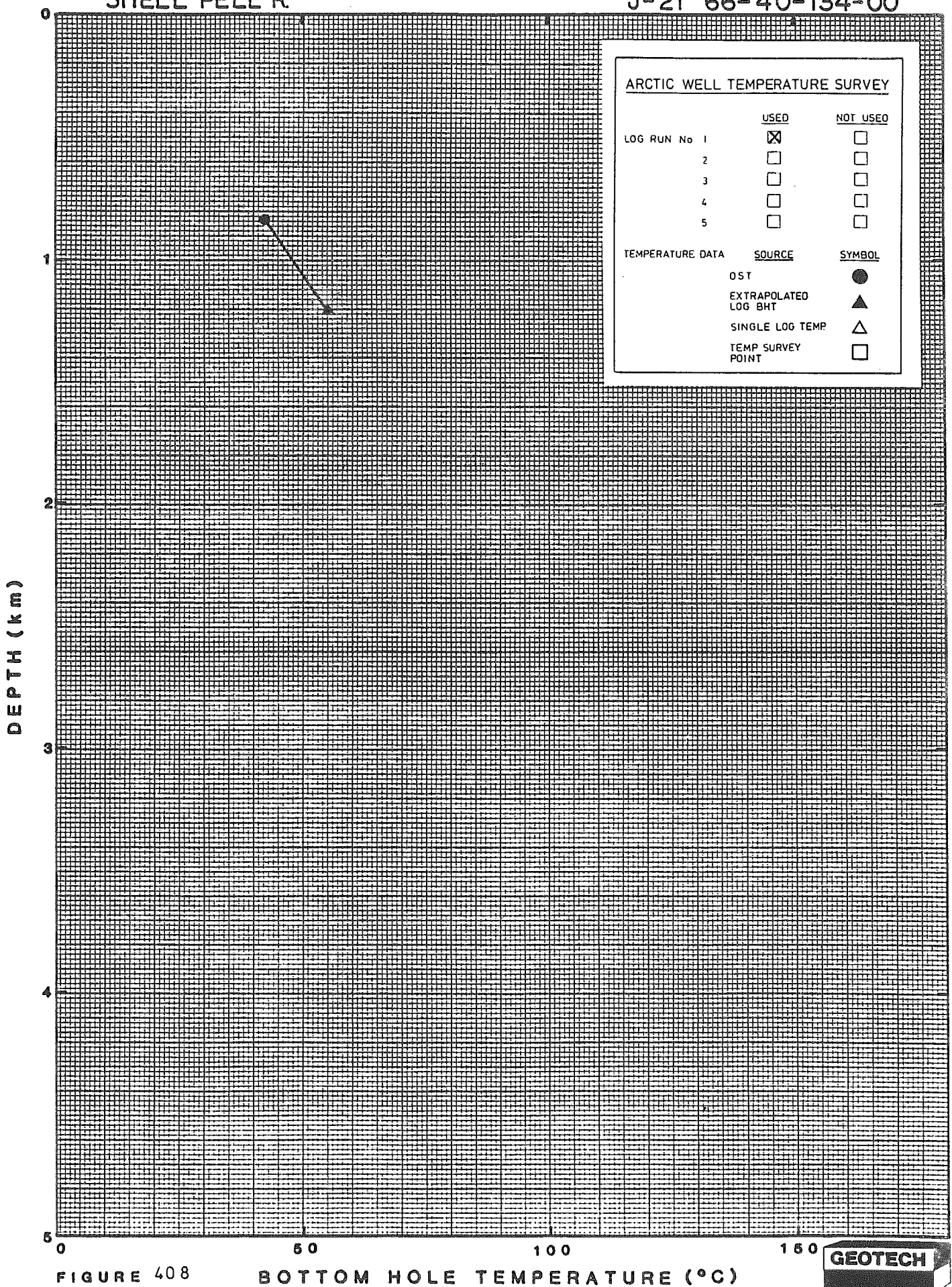


FIGURE 408

BOTTOM HOLE TEMPERATURE (°C)





SHELL PEEL R. Y.T.

H-59 66-40-134-30

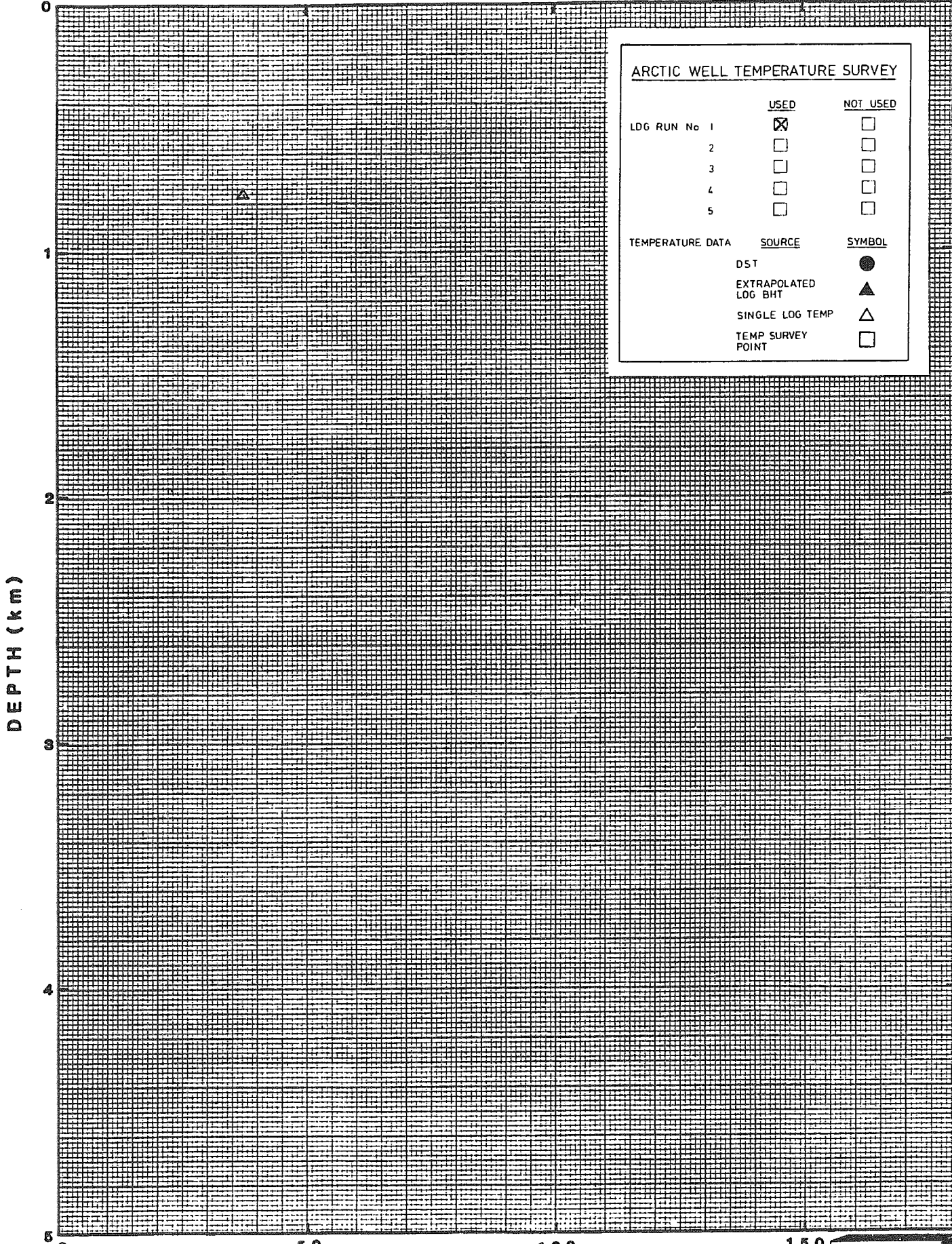


FIGURE 409

BOTTOM HOLE TEMPERATURE (°C)



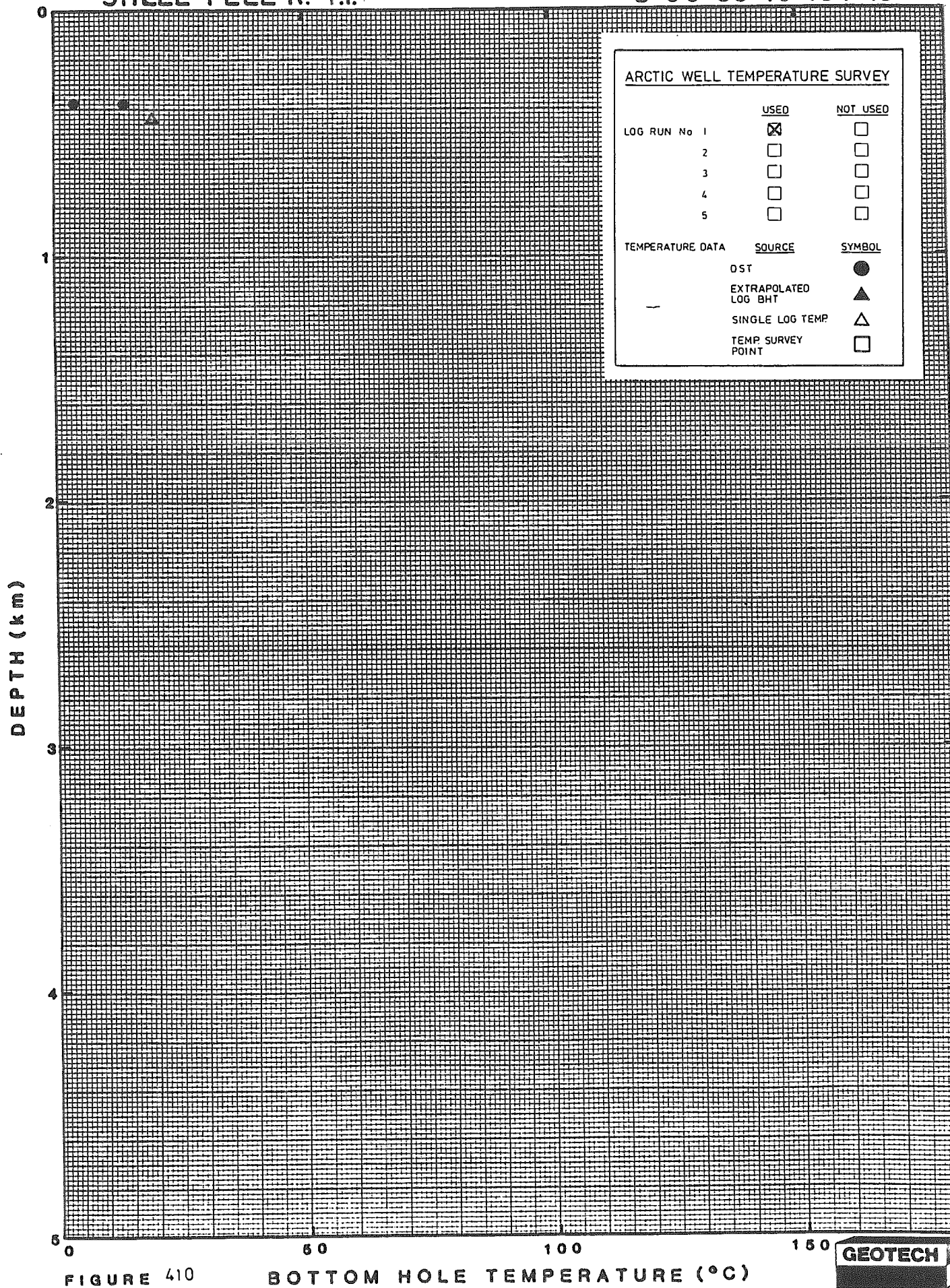


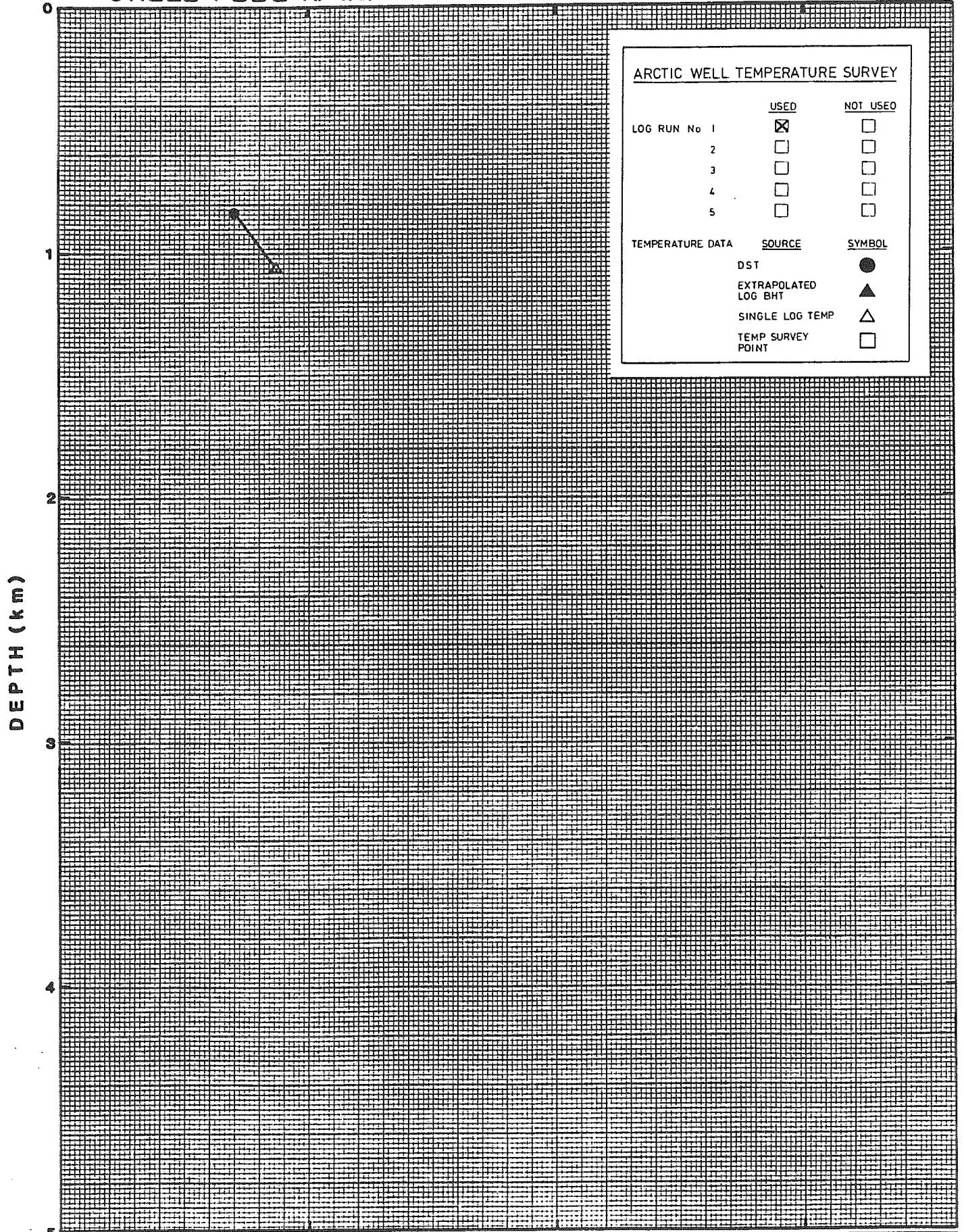
FIGURE 410

BOTTOM HOLE TEMPERATURE (°C)



SHELL PEEL R. Y.T.

B-06A 66-40-134-45



ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 411

BOTTOM HOLE TEMPERATURE (°C)





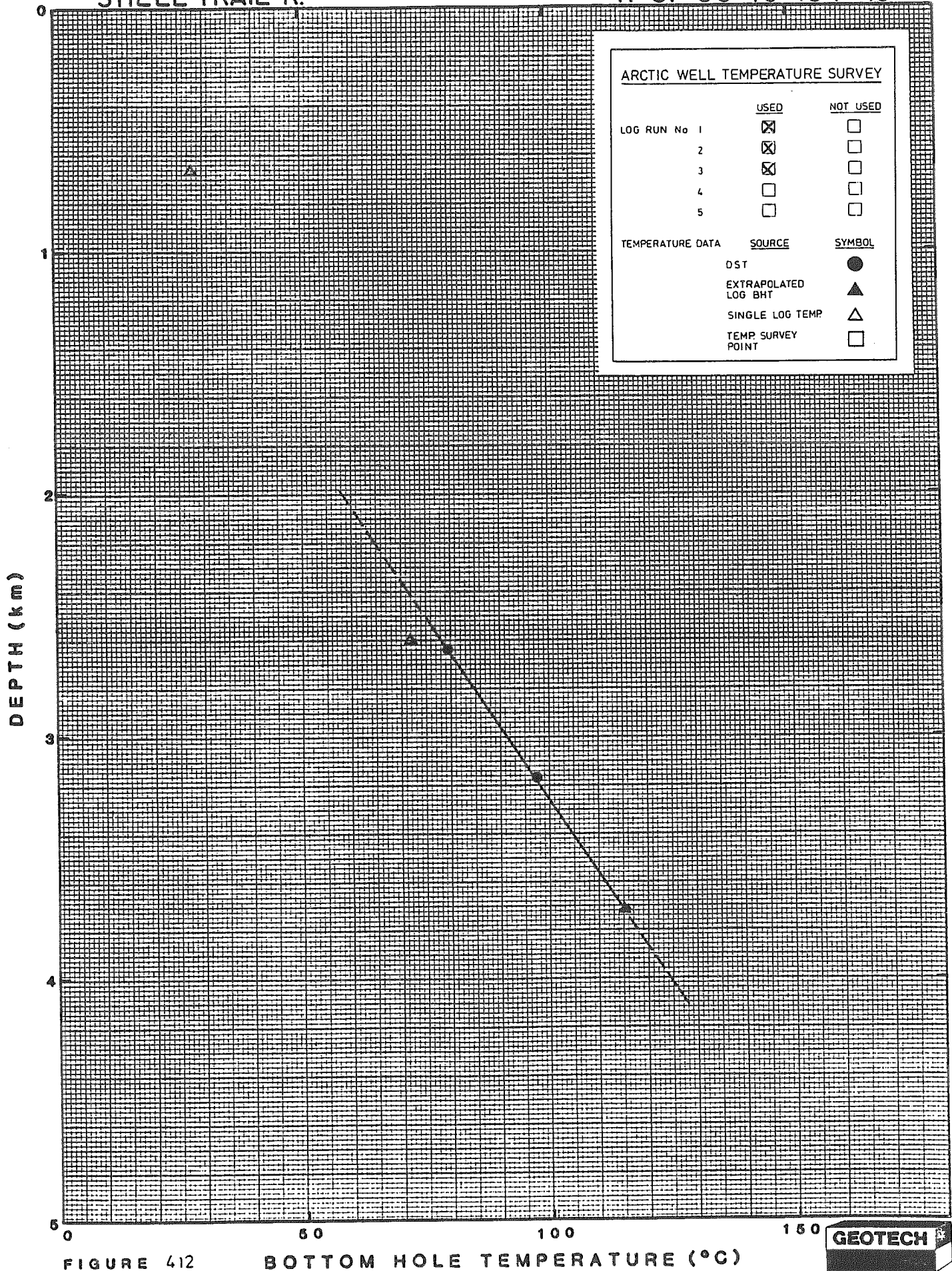


FIGURE 412

BOTTOM HOLE TEMPERATURE (°C)





SHELL PEEL R. Y.T.

L-01 66-40-134-45

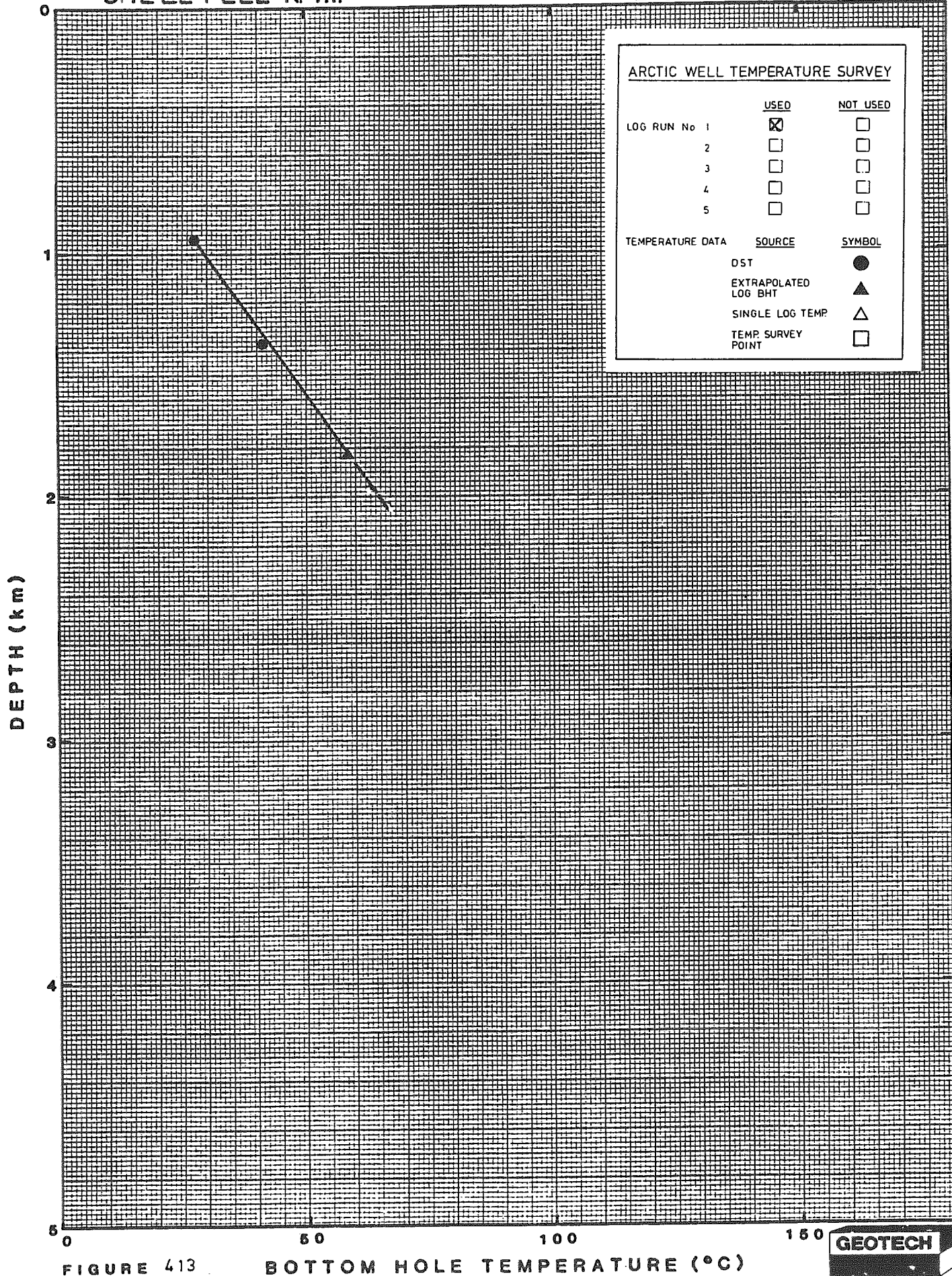


FIGURE 413

BOTTOM HOLE TEMPERATURE (°C)

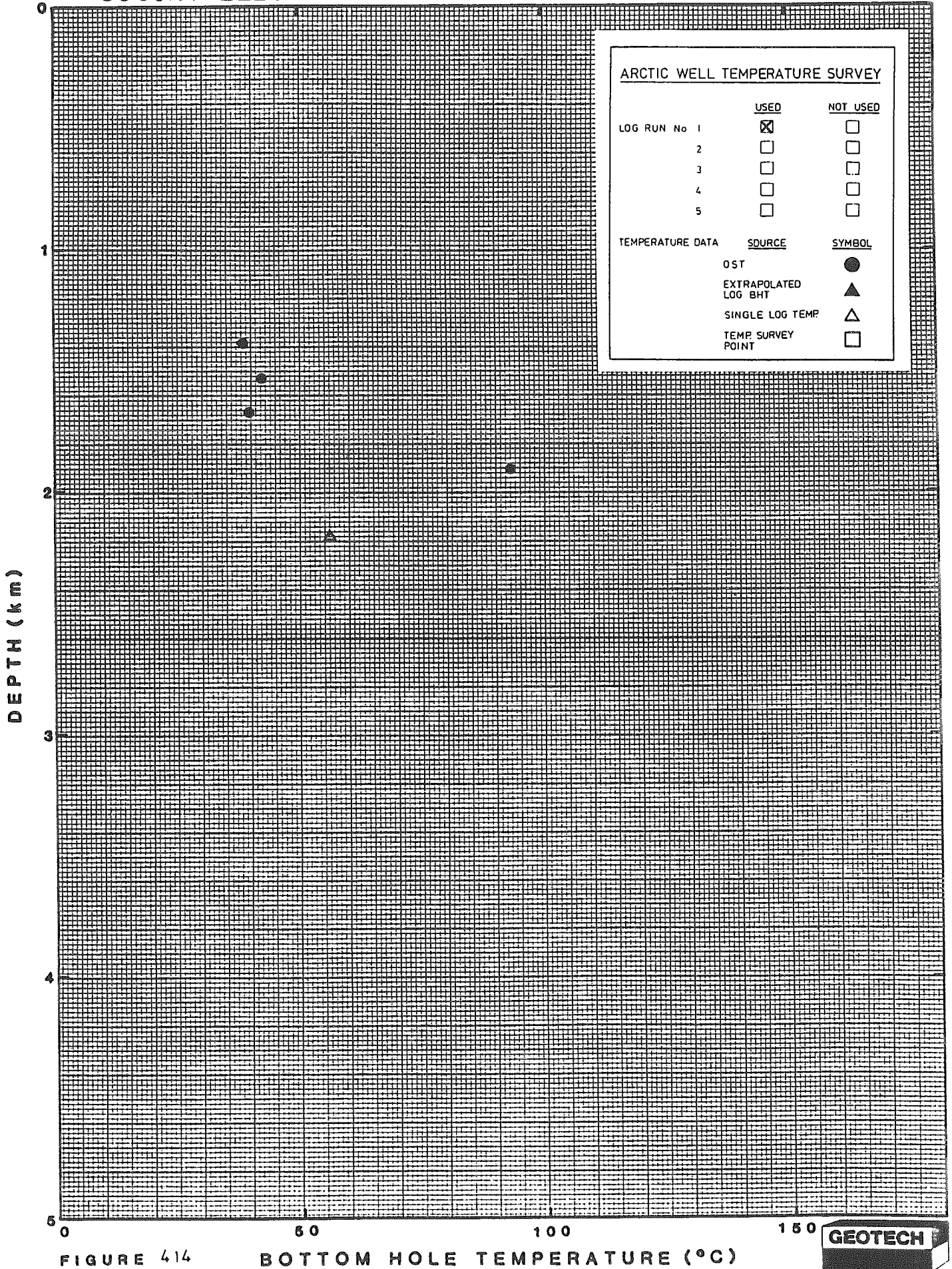


FIGURE 414

BOTTOM HOLE TEMPERATURE (°C)



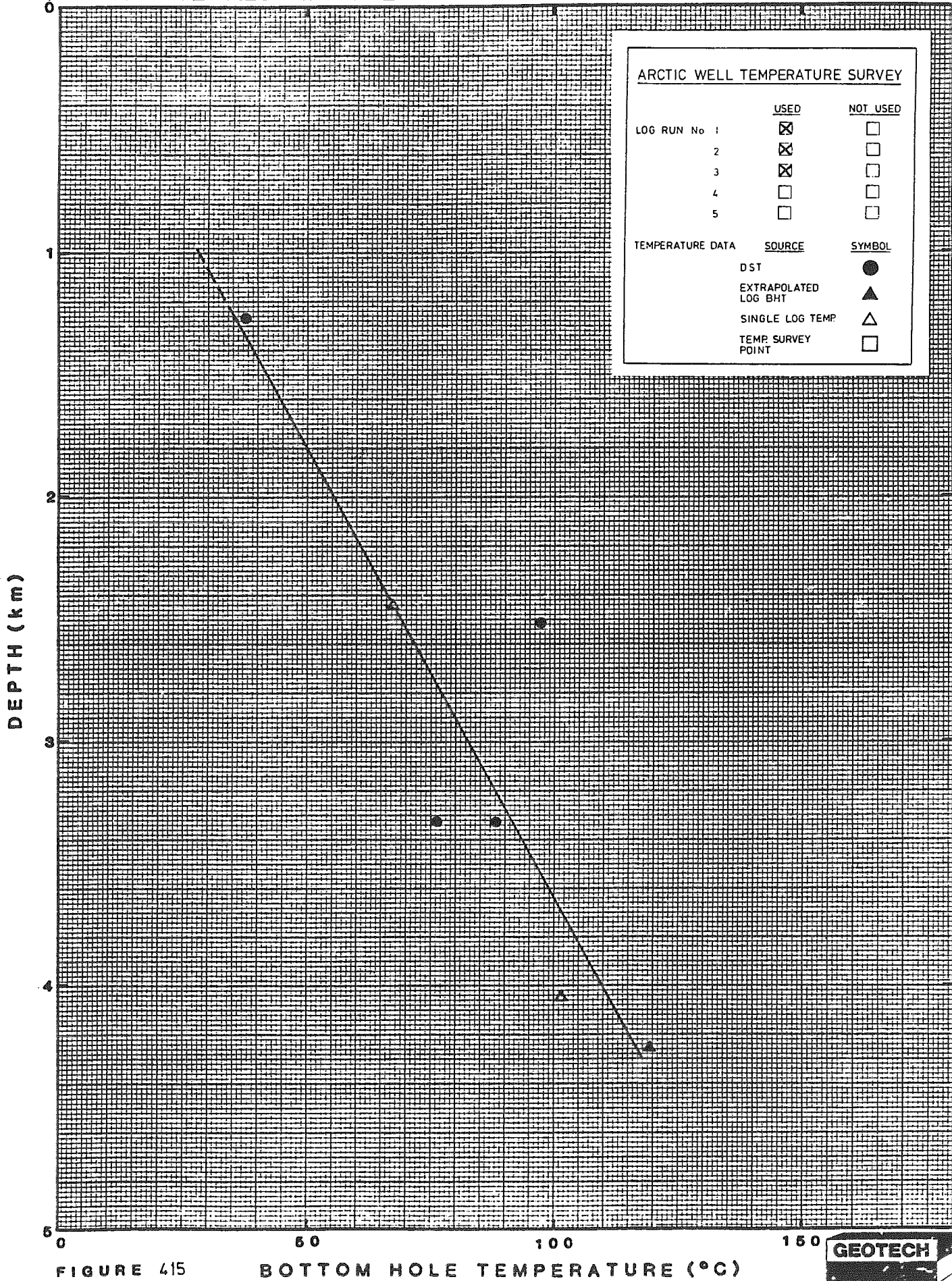


FIGURE 415

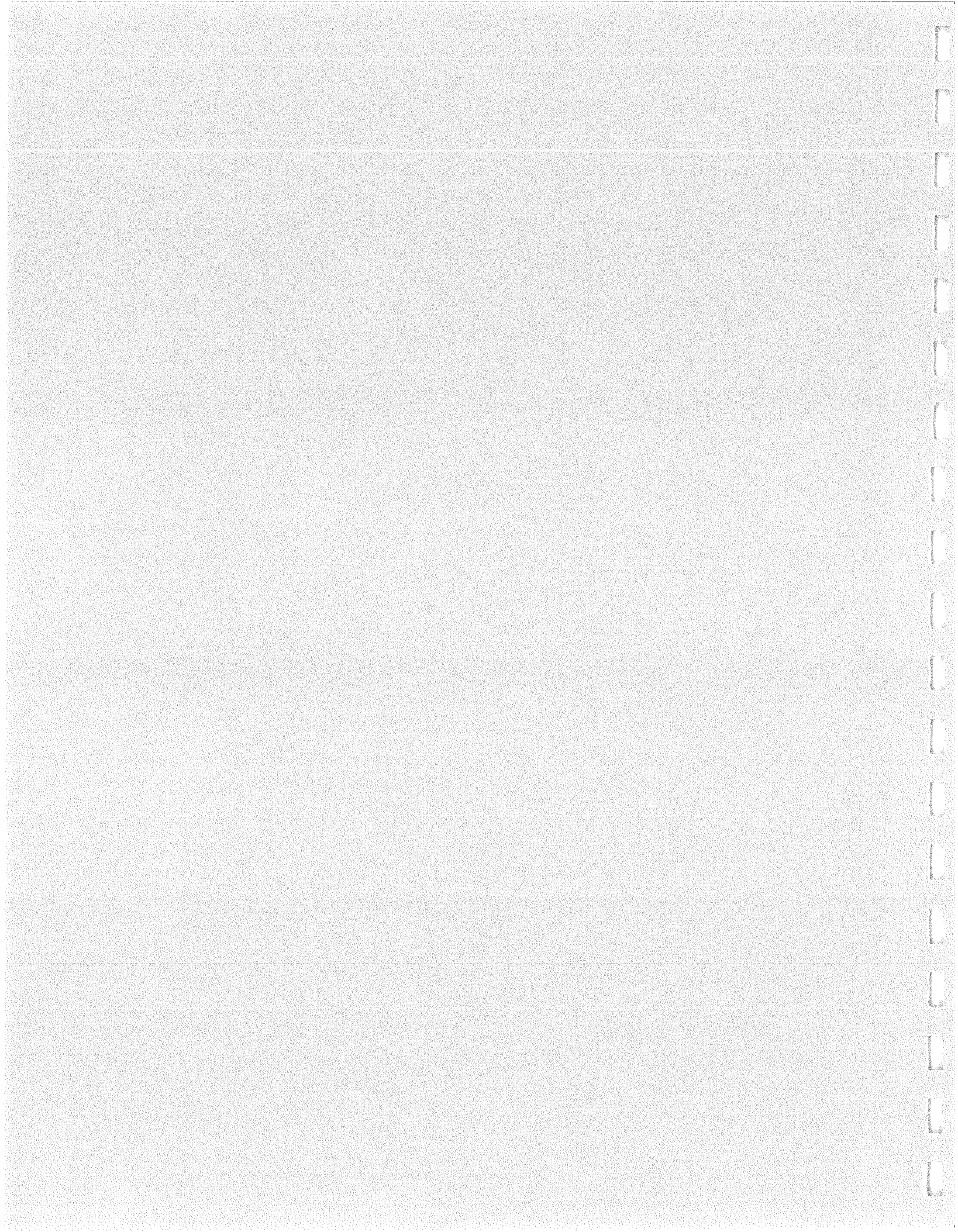
BOTTOM HOLE TEMPERATURE (°C)





66-50





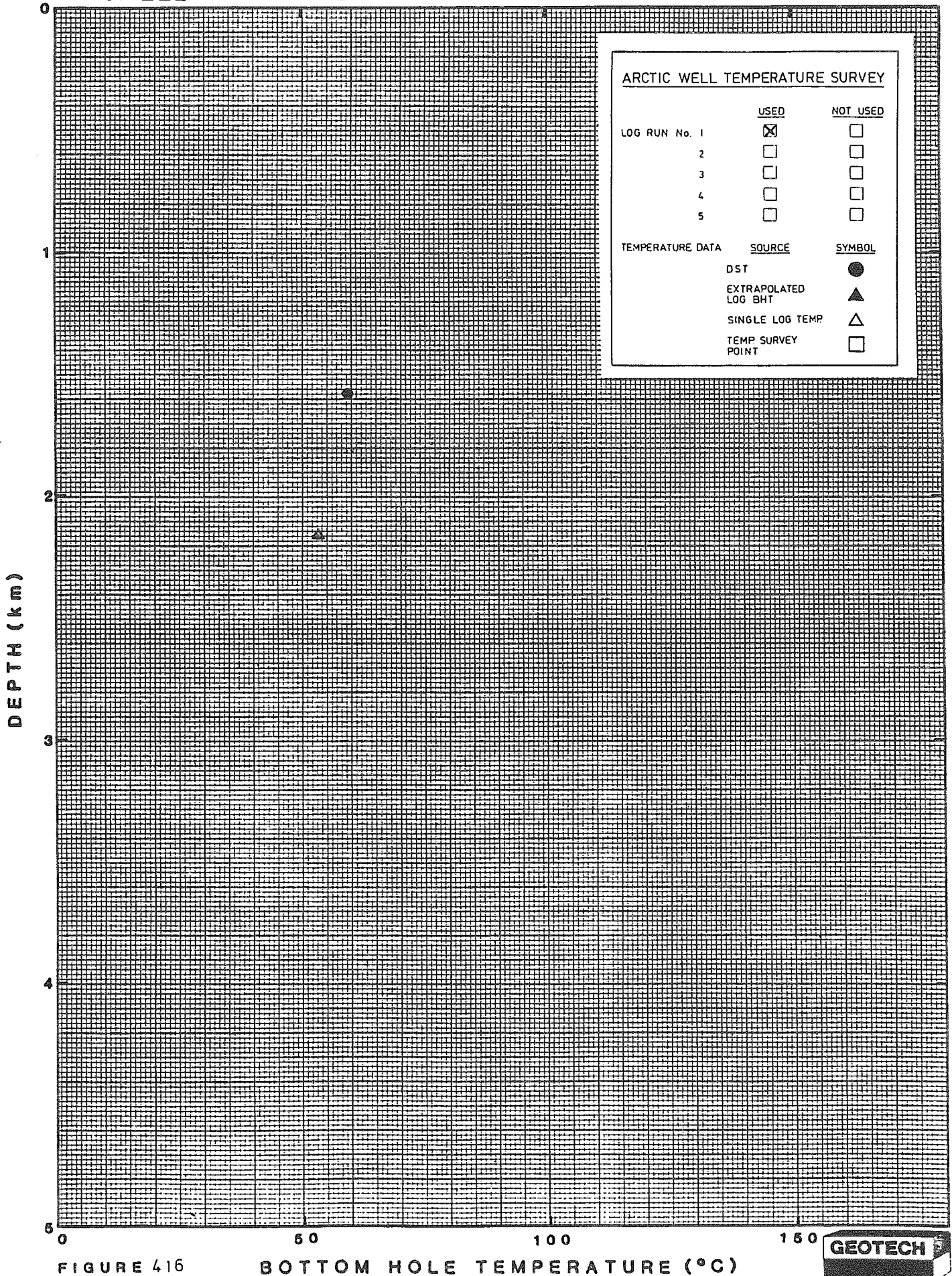


FIGURE 416

BOTTOM HOLE TEMPERATURE (°C)



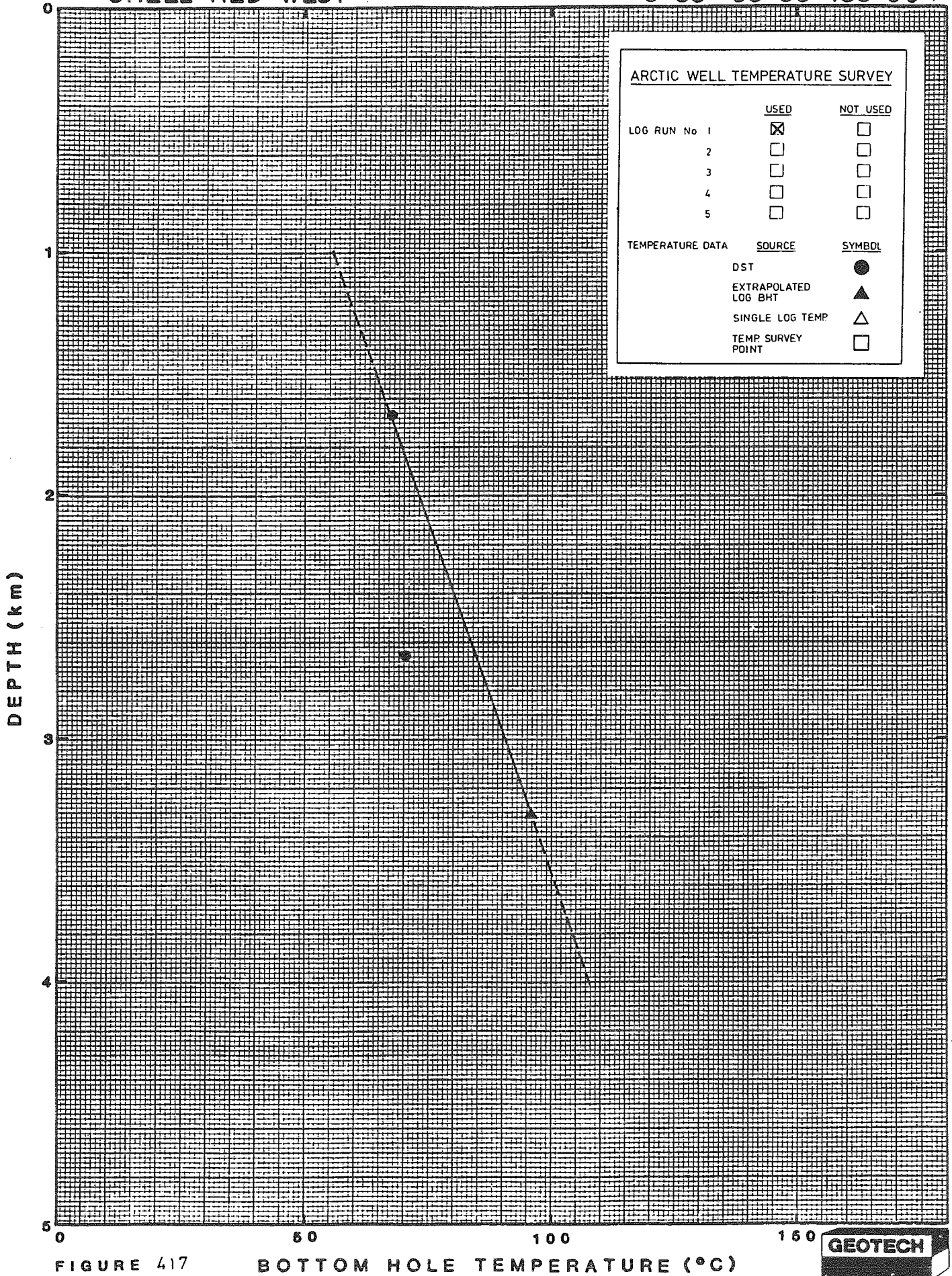


FIGURE 417

BOTTOM HOLE TEMPERATURE (°C)





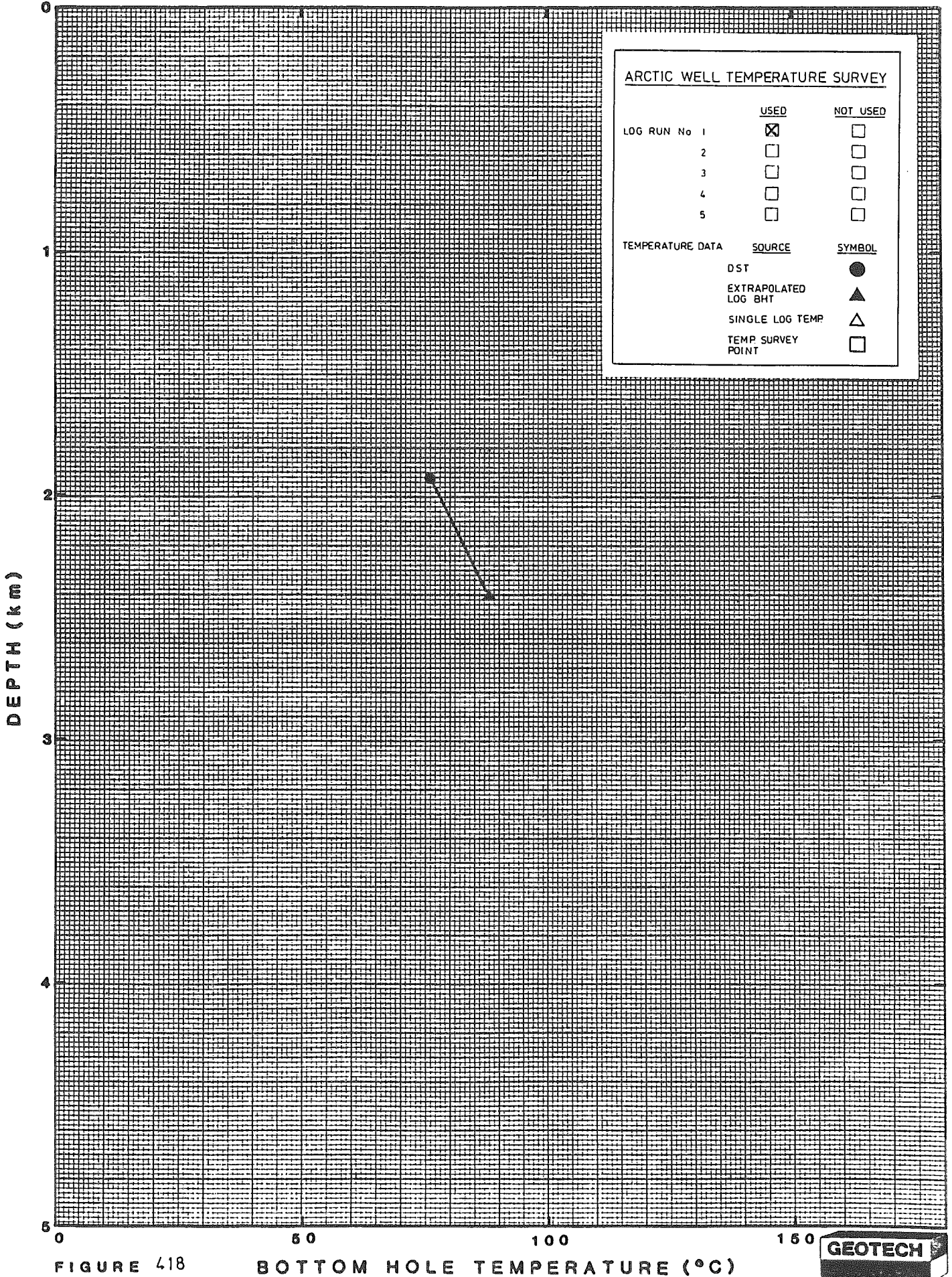


FIGURE 418

BOTTOM HOLE TEMPERATURE (°C)





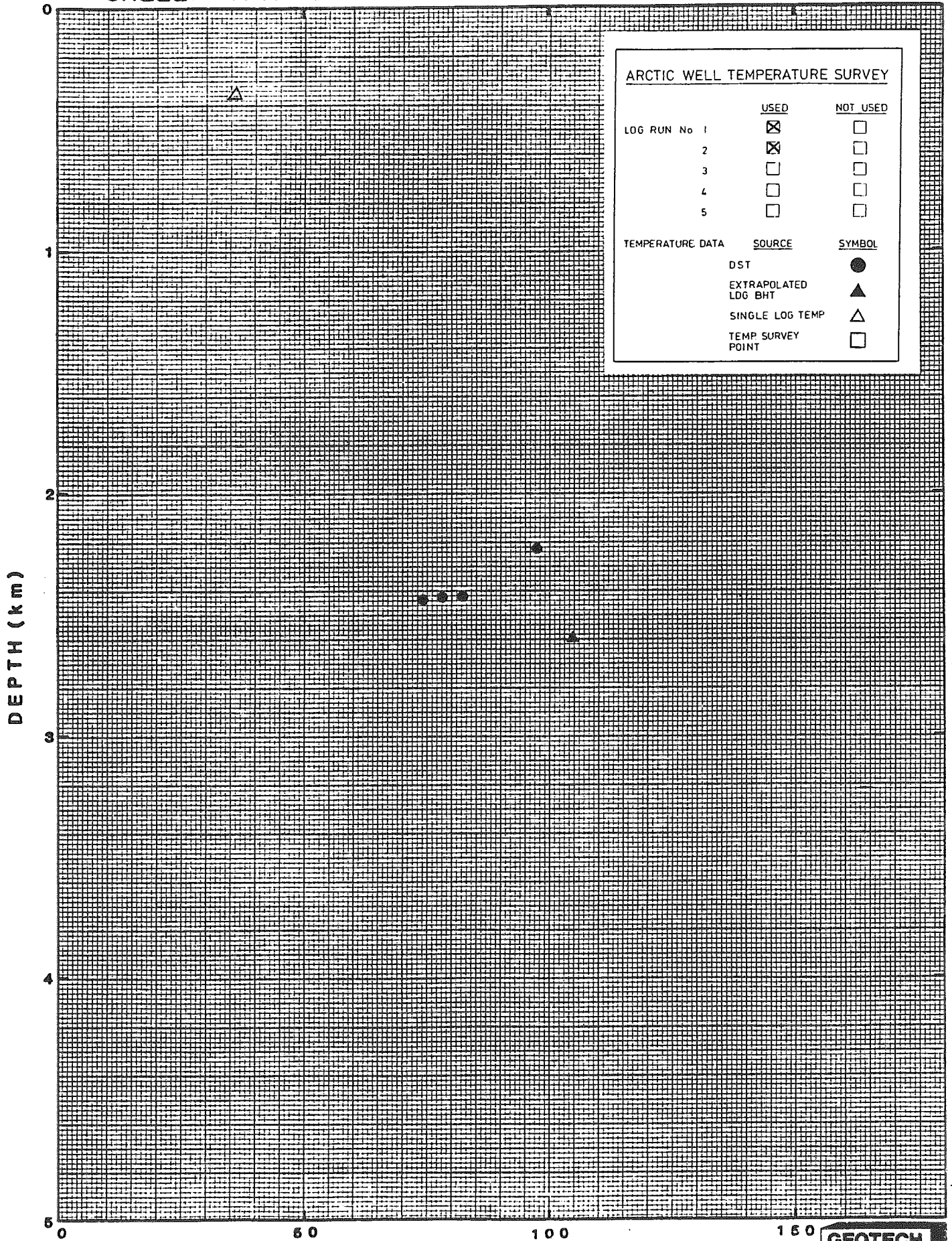


FIGURE 419

BOTTOM HOLE TEMPERATURE (°C)

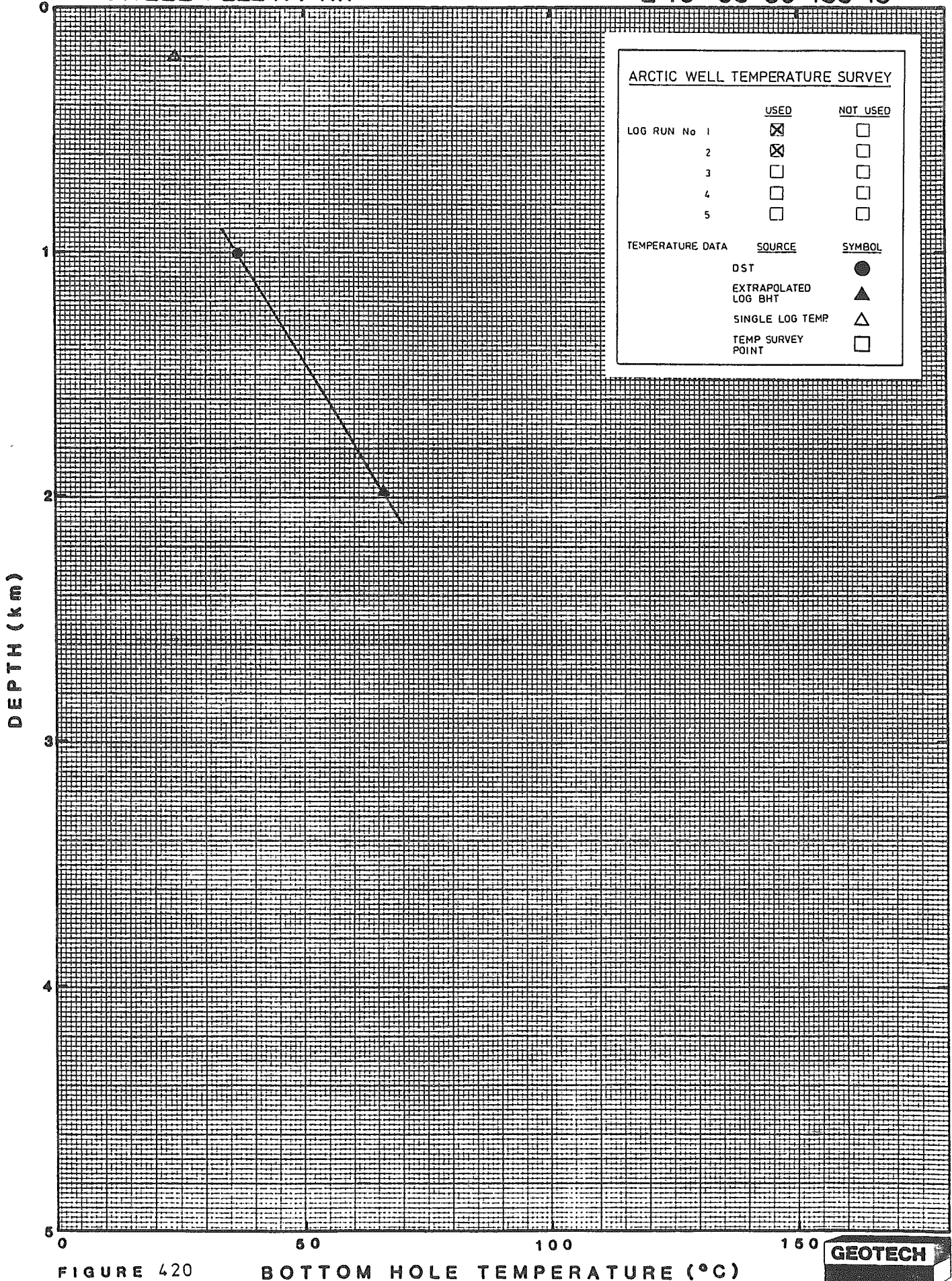


FIGURE 420

BOTTOM HOLE TEMPERATURE (°C)



SOBC SHAEFFER CK. Y.T.

0-22 66-50-137-15

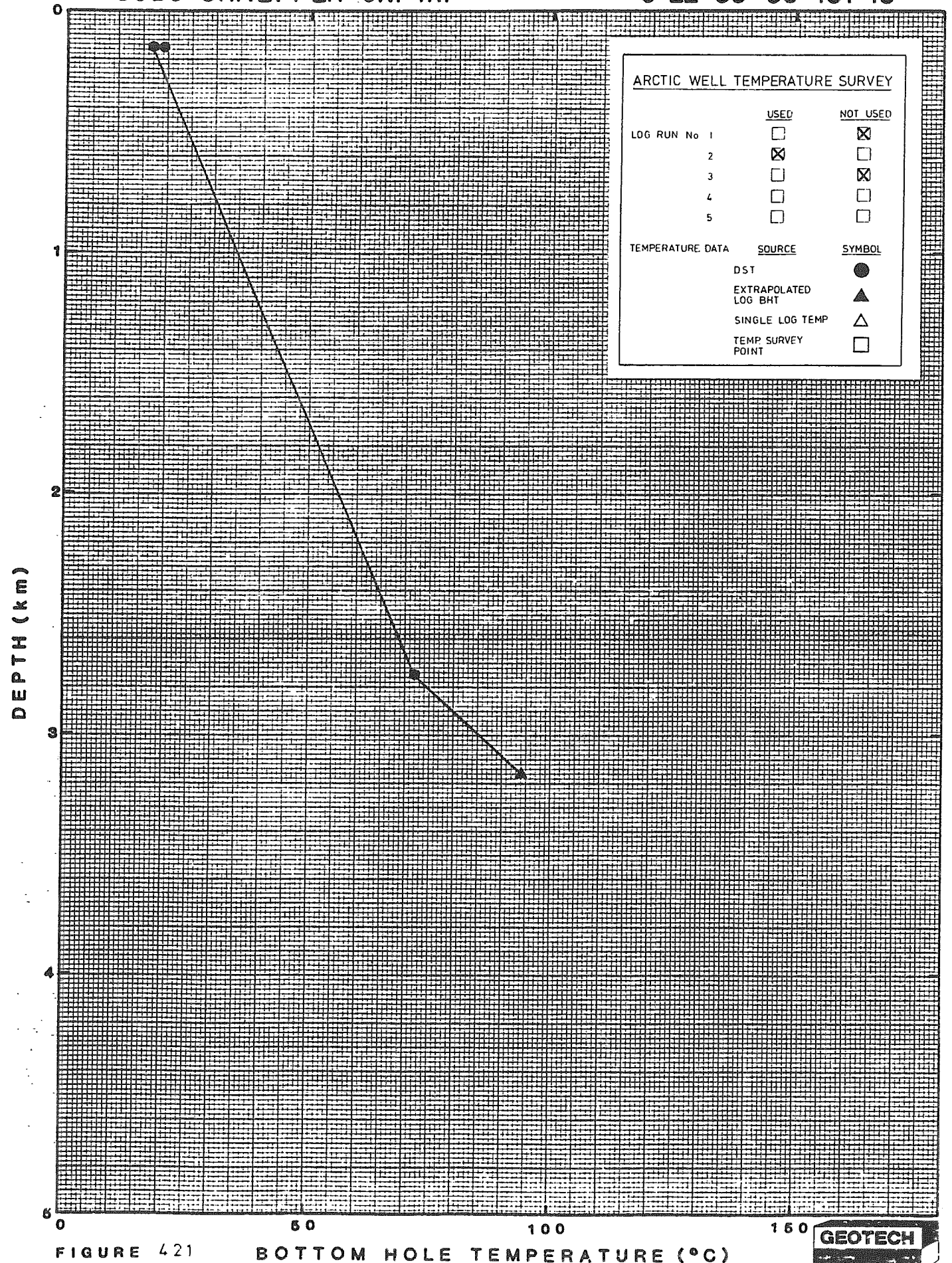


FIGURE 421

BOTTOM HOLE TEMPERATURE (°C)





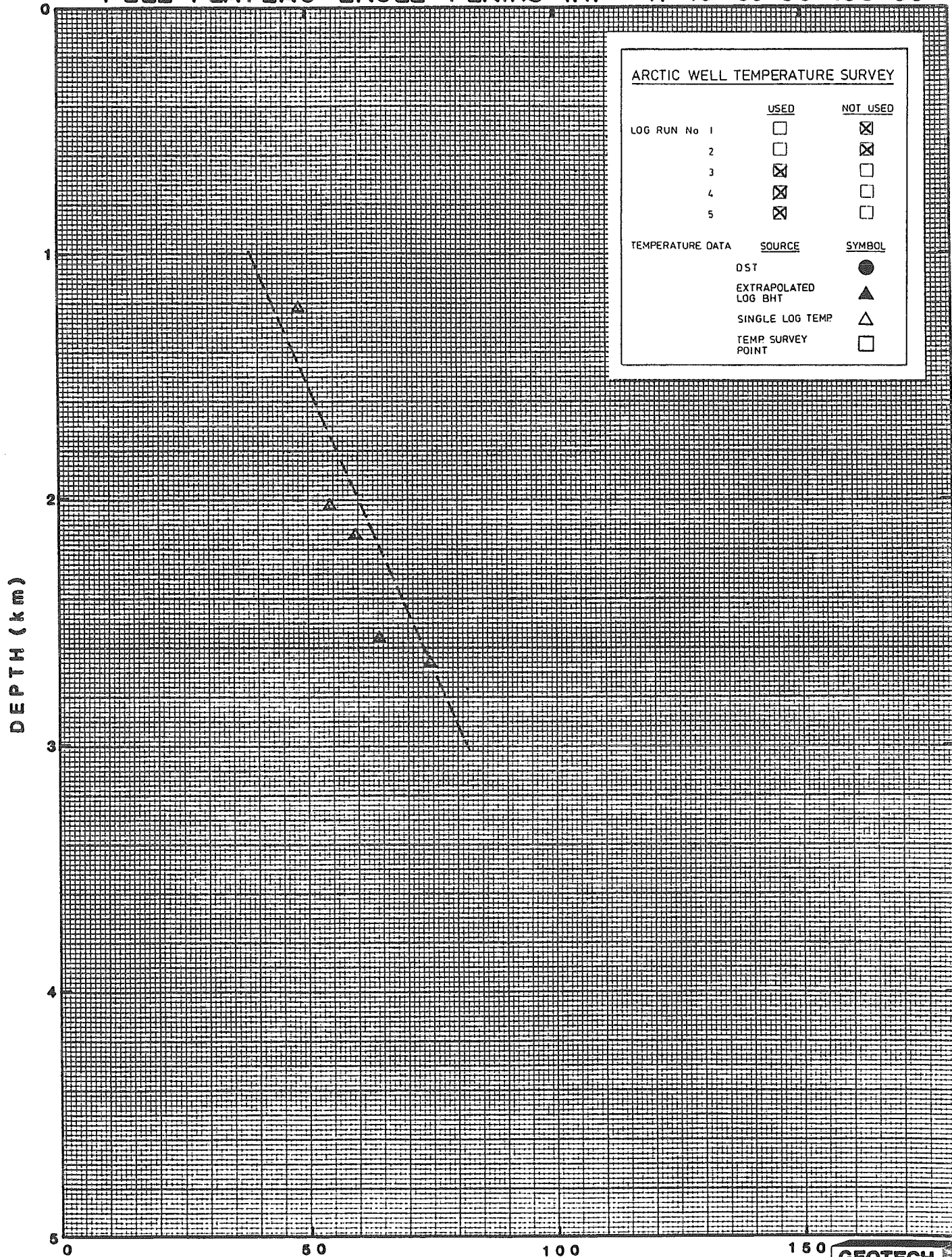
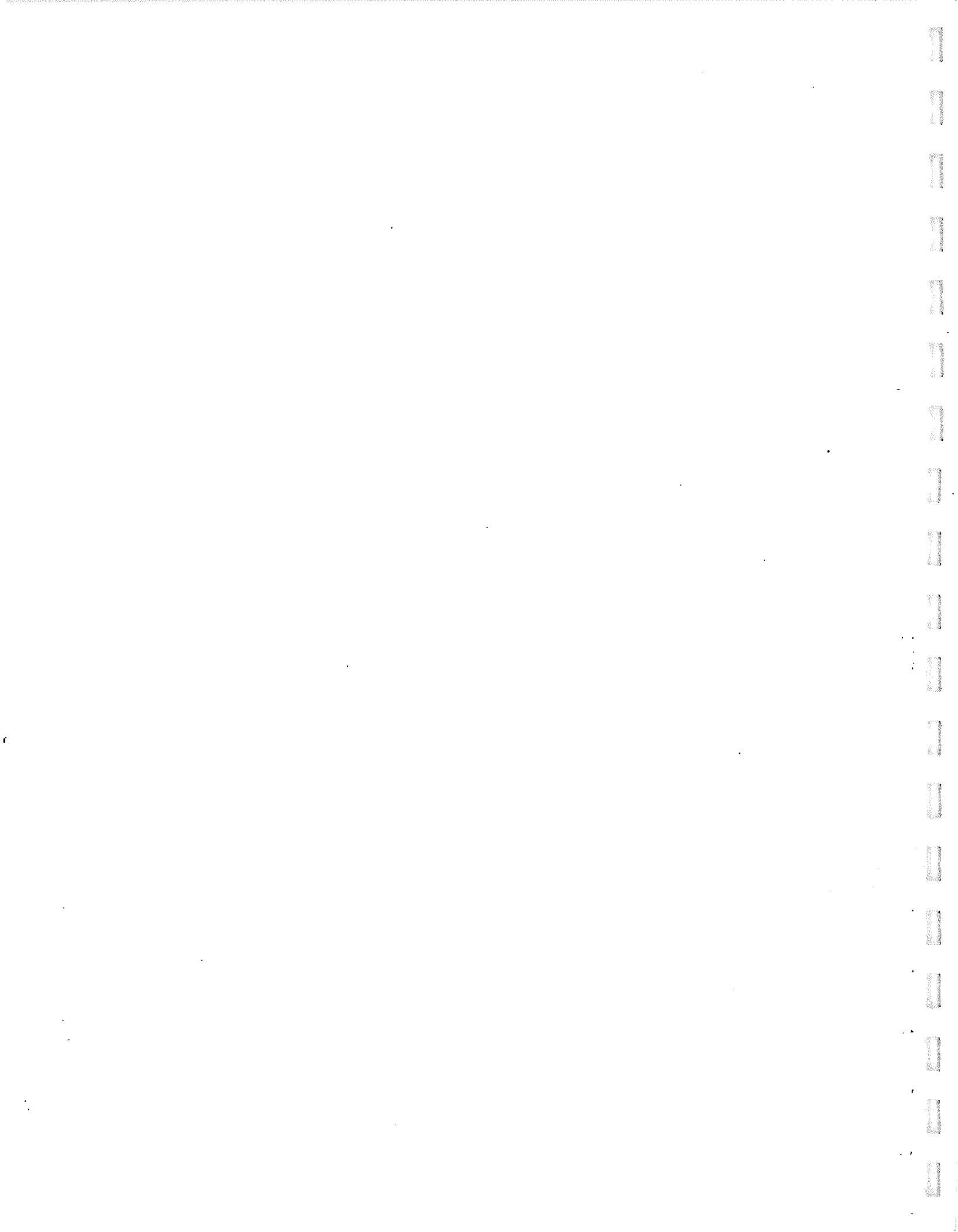


FIGURE 422

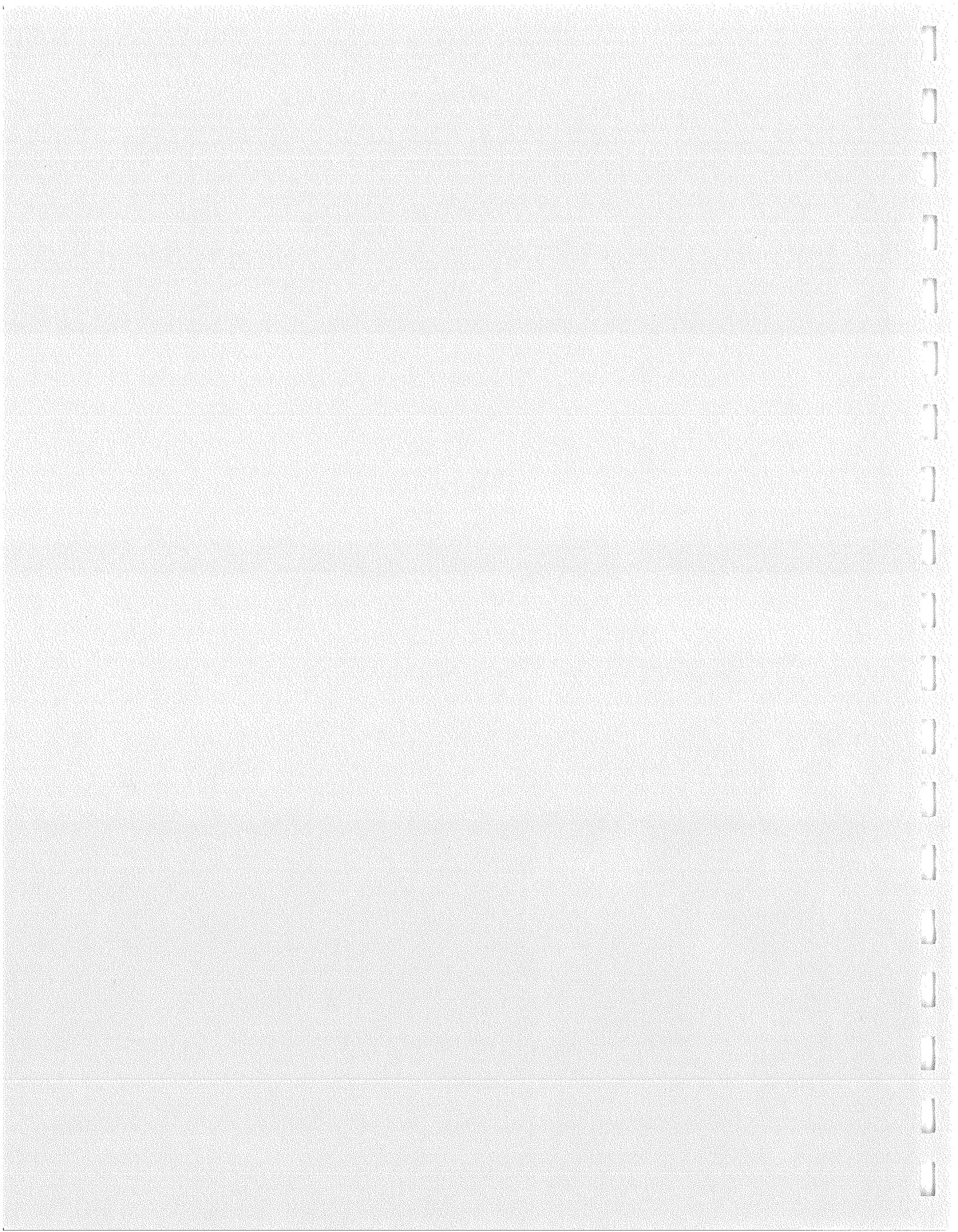
BOTTOM HOLE TEMPERATURE (°C)

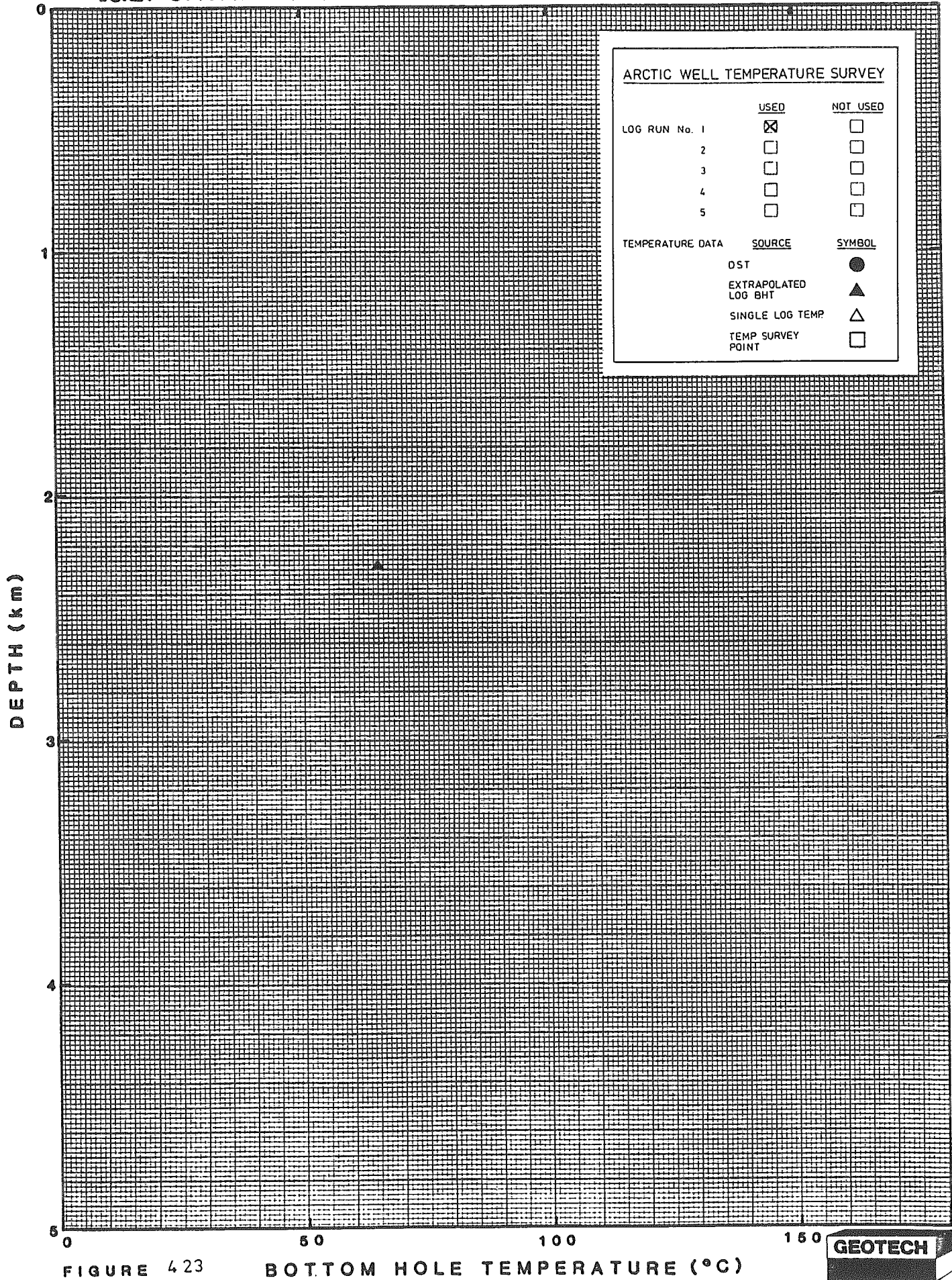






67-00





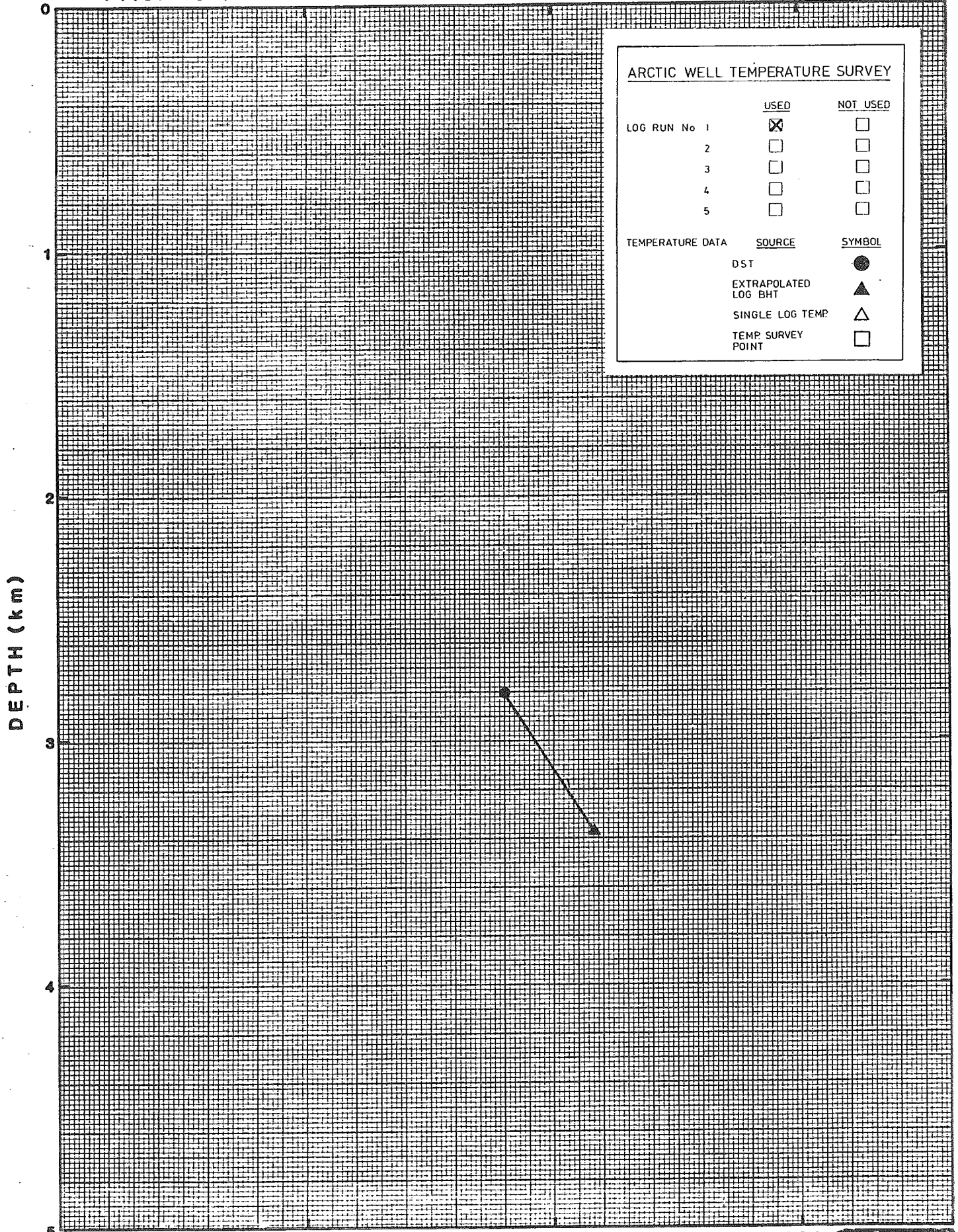
ARCTIC WELL TEMPERATURE SURVEY		
	<u>USED</u>	<u>NOT USED</u>
LOG RUN No. 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	<u>SOURCE</u>	<u>SYMBOL</u>
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 4.23

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP. SURVEY POINT		□

FIGURE 424

BOTTOM HOLE TEMPERATURE (°C)



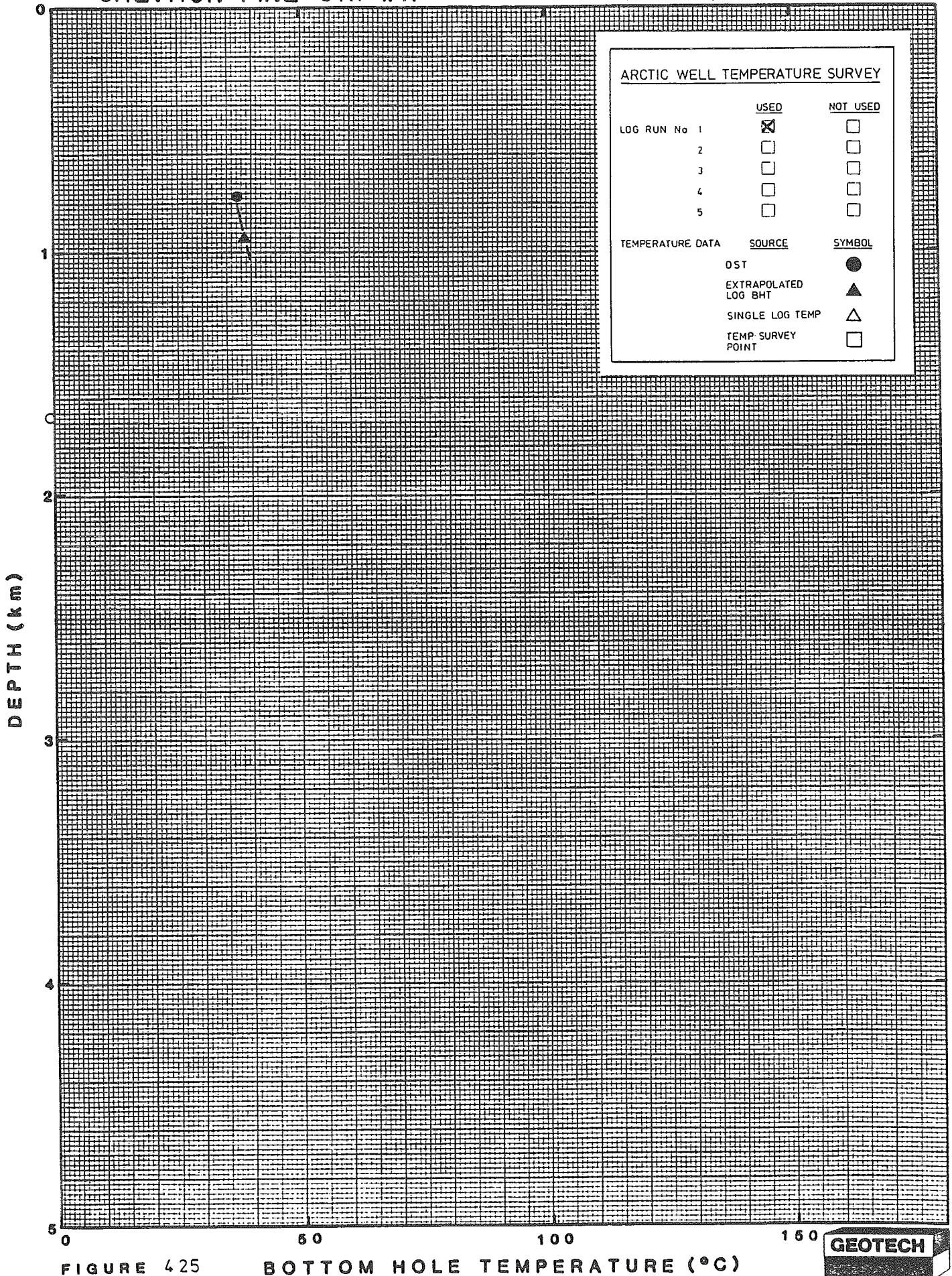
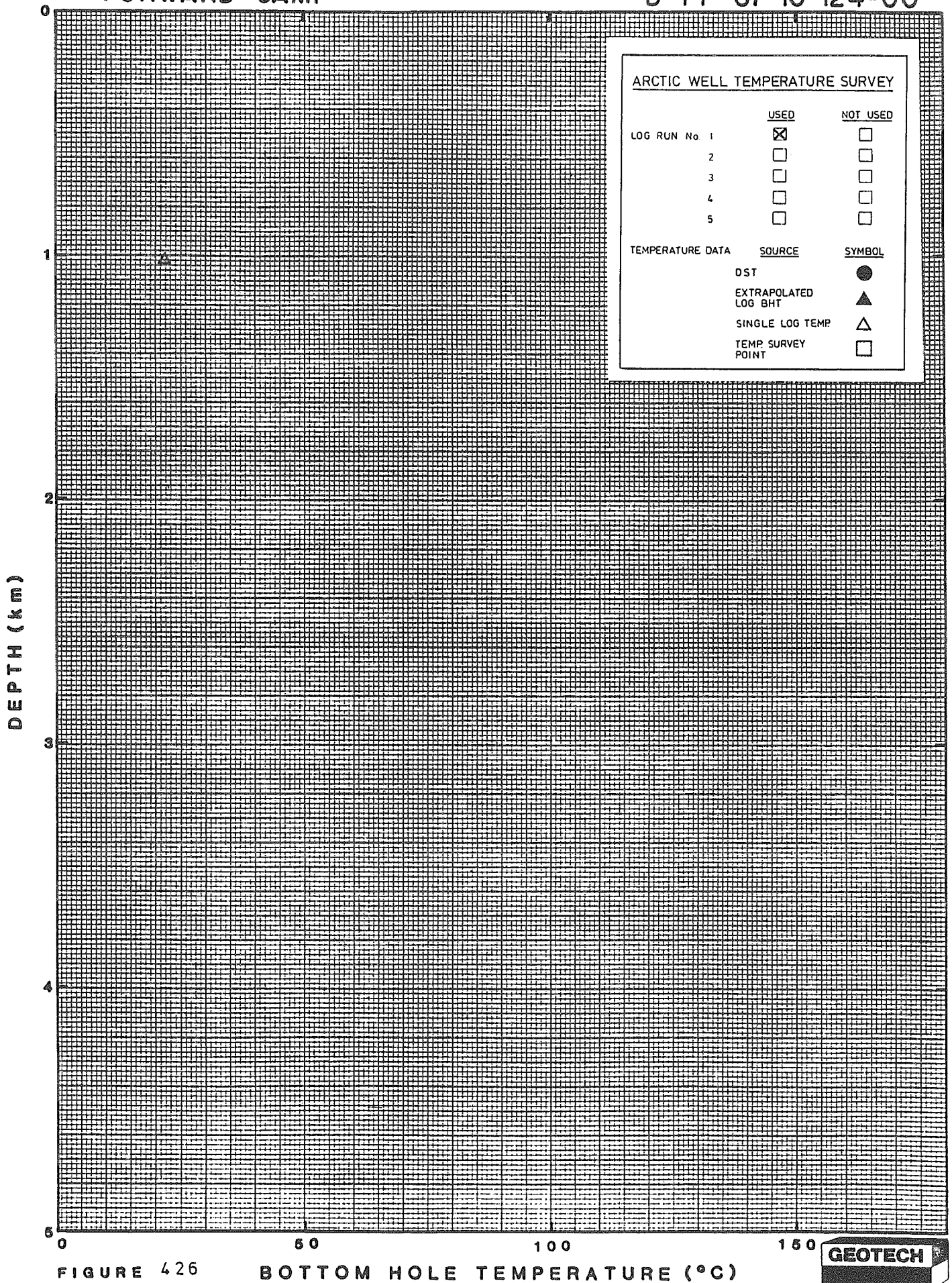


FIGURE 425

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP. SURVEY POINT		□

FIGURE 426

BOTTOM HOLE TEMPERATURE (°C)





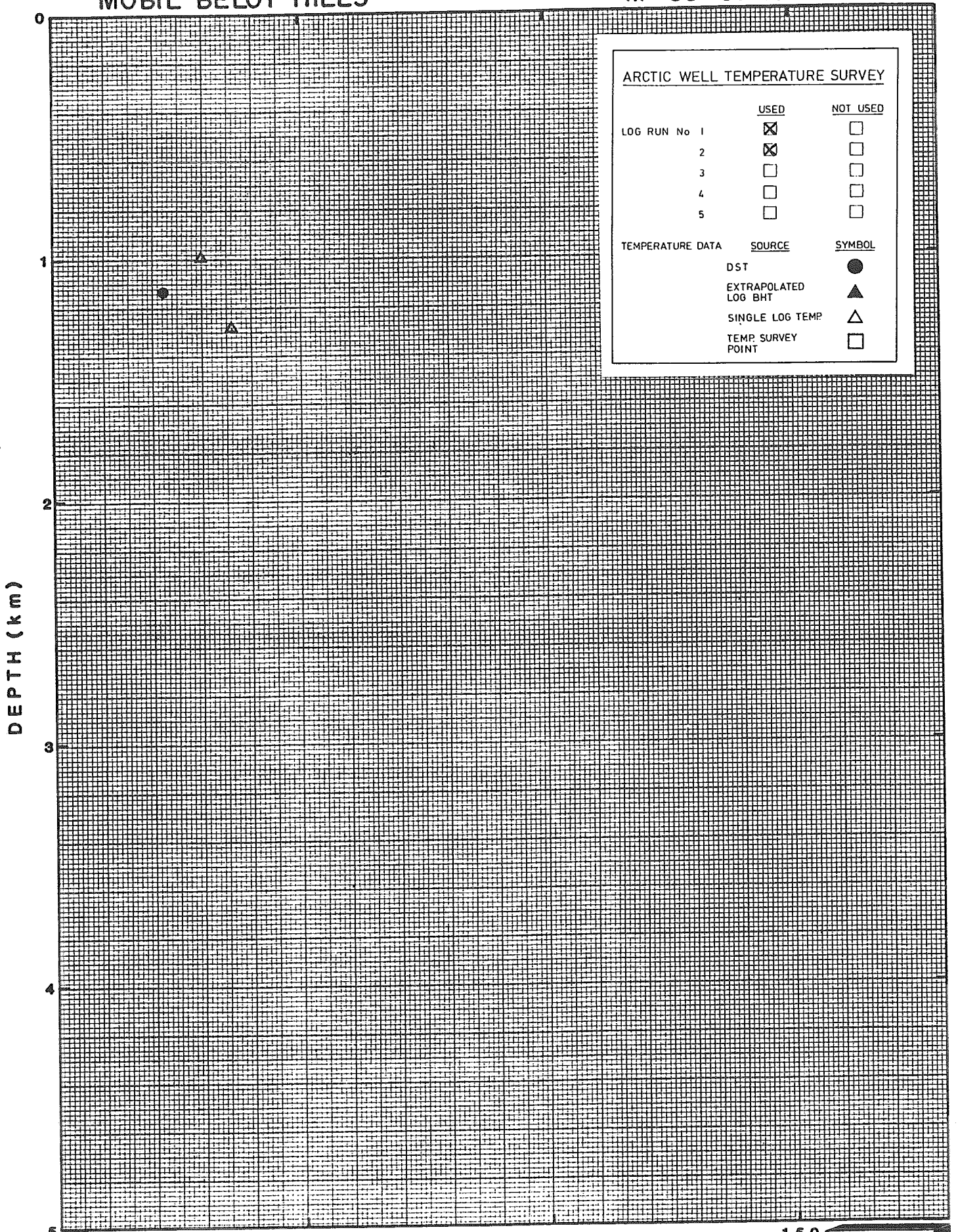


FIGURE 427

BOTTOM HOLE TEMPERATURE (°C)



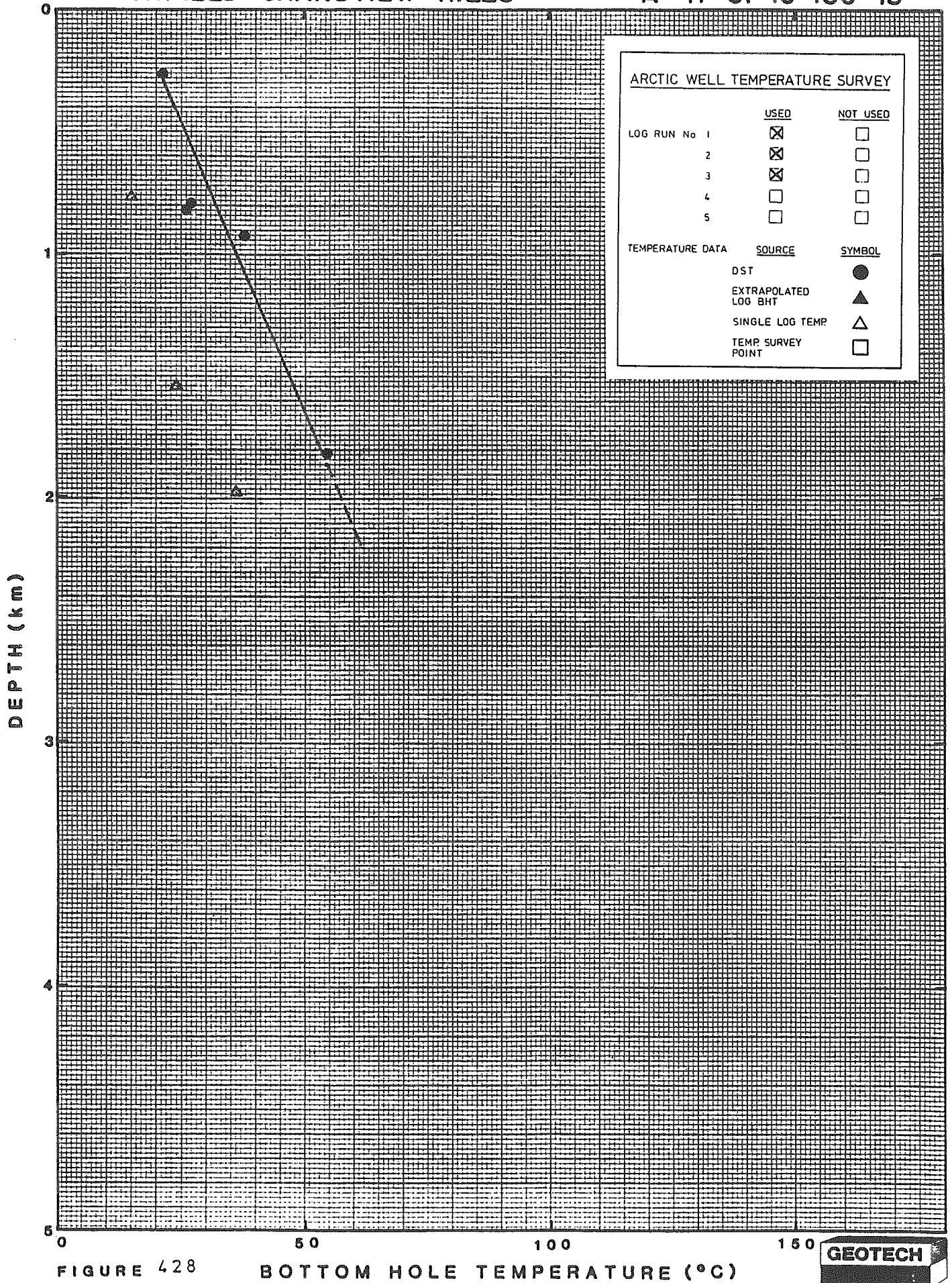


FIGURE 428

BOTTOM HOLE TEMPERATURE (°C)



SHELL TREE R.

F-57 67-10-132-15

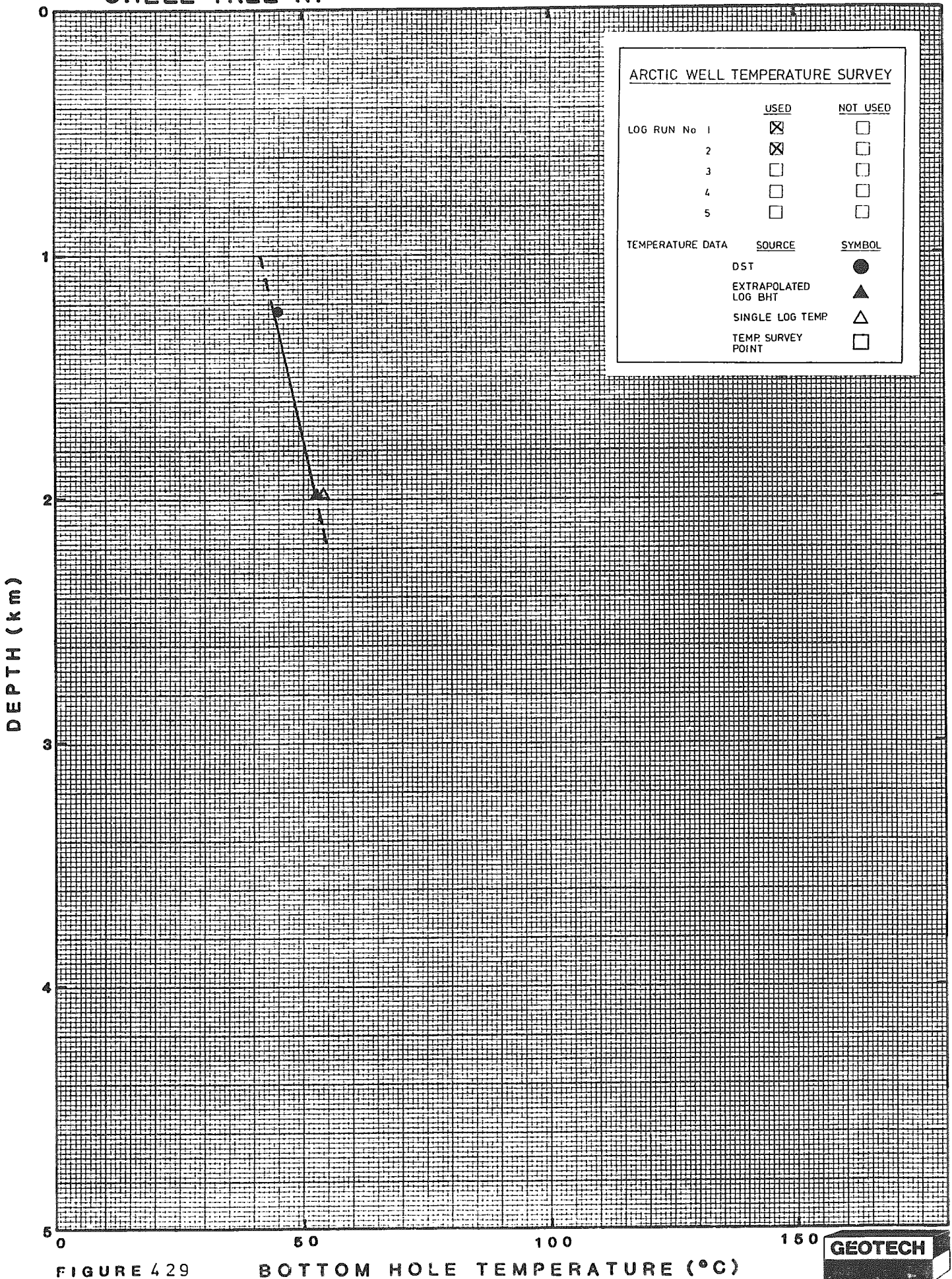
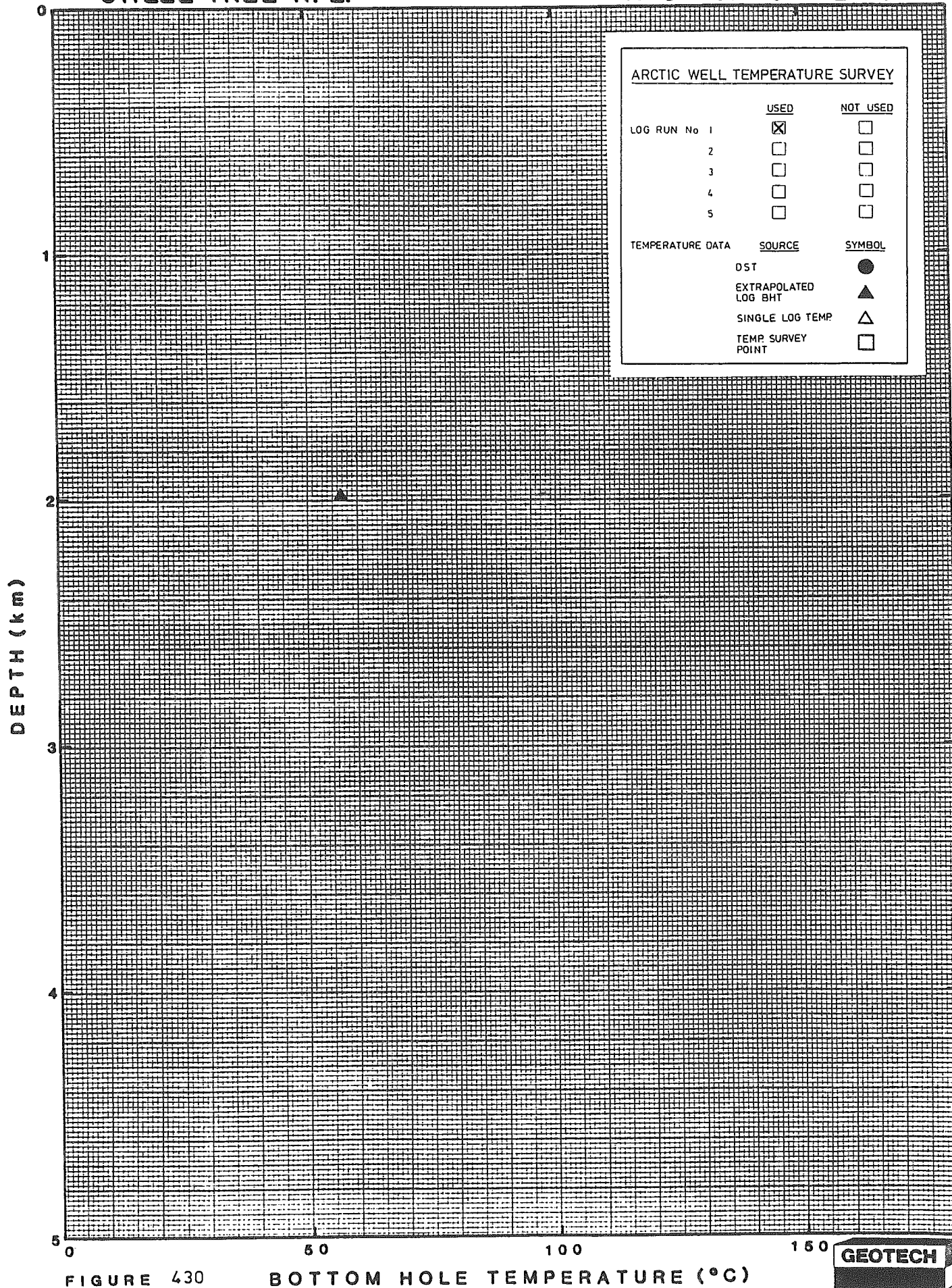


FIGURE 429

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 430

BOTTOM HOLE TEMPERATURE (°C)





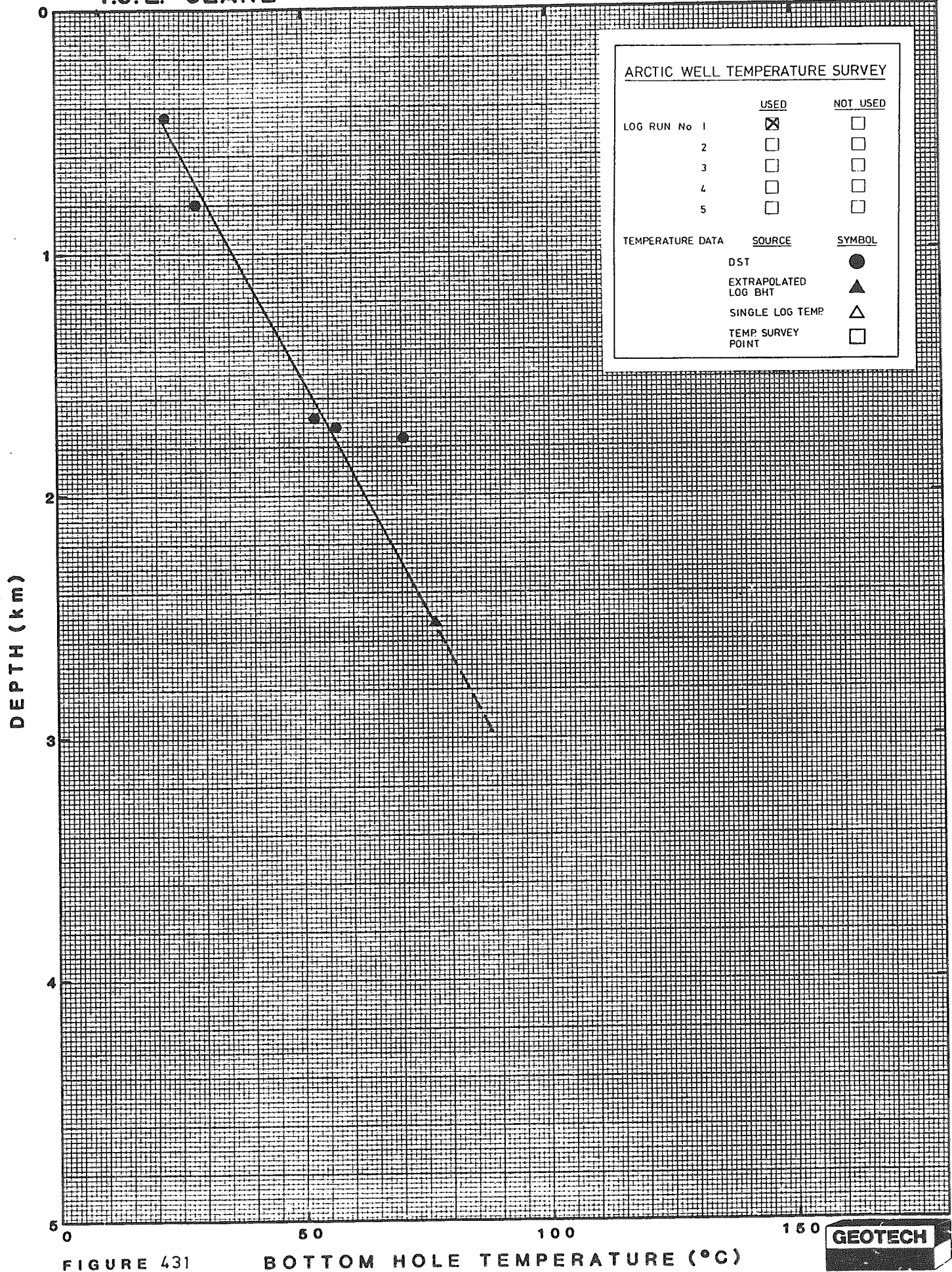
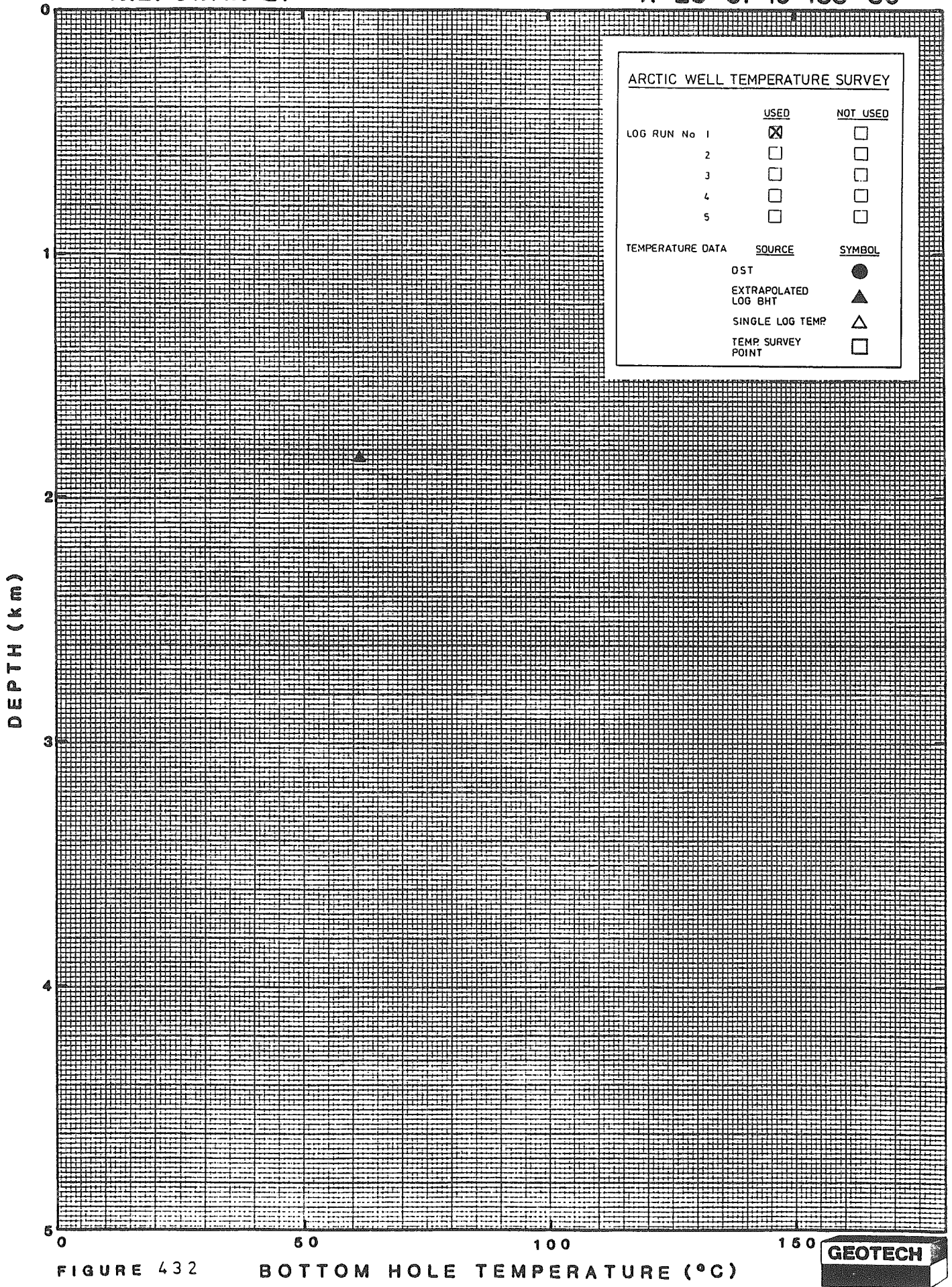


FIGURE 431

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 432

BOTTOM HOLE TEMPERATURE (°C)



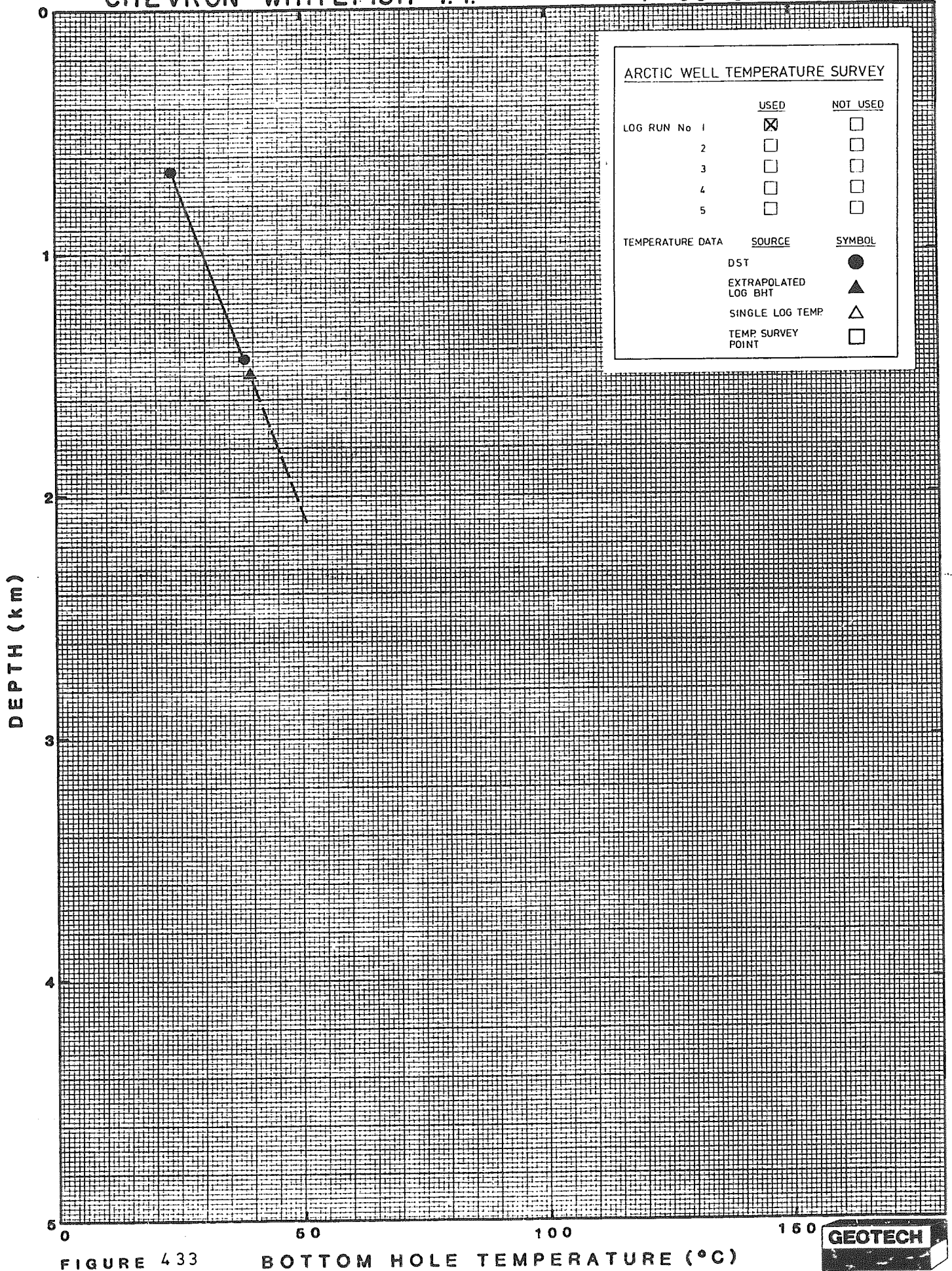


FIGURE 433

BOTTOM HOLE TEMPERATURE (°C)





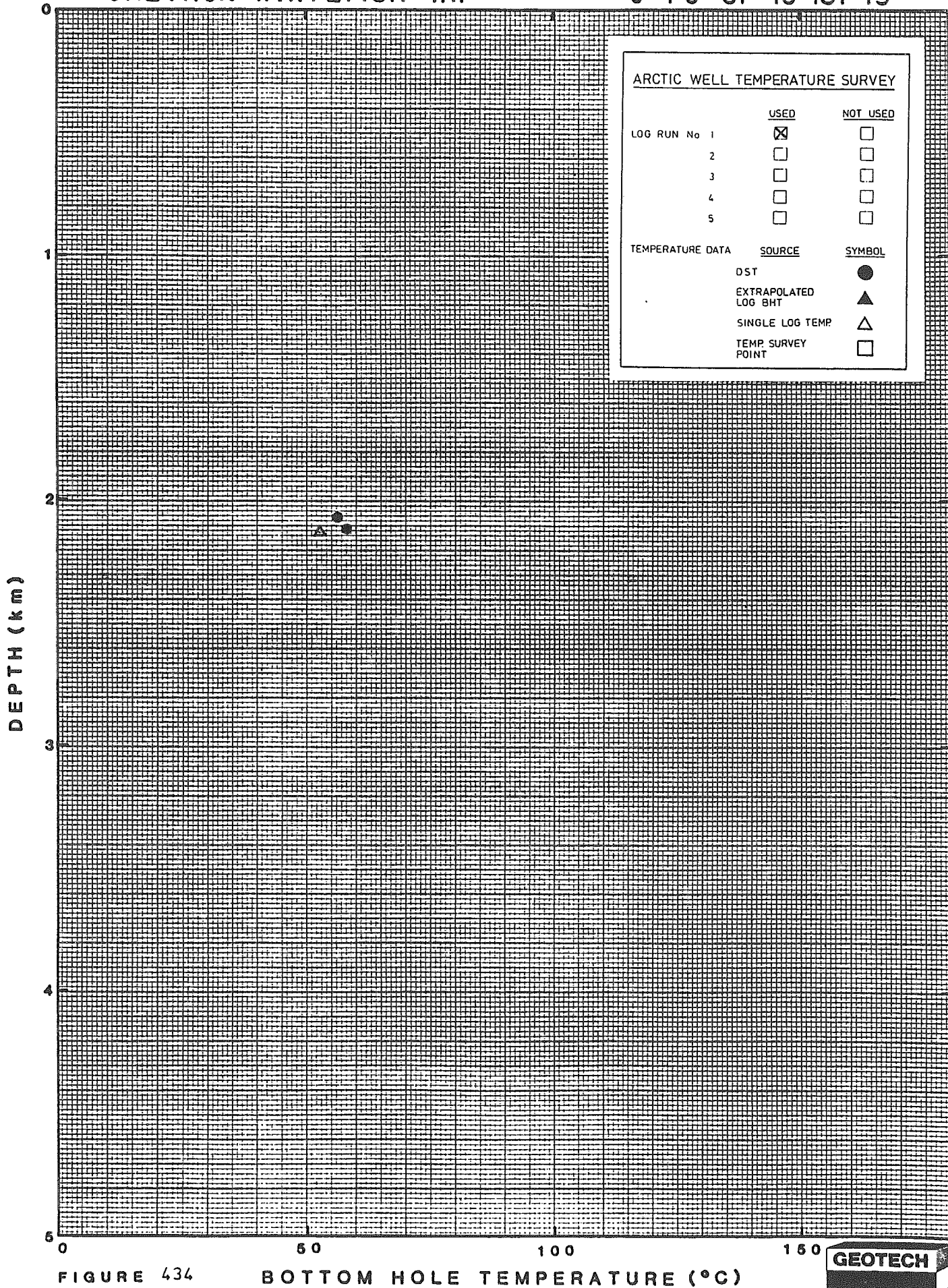
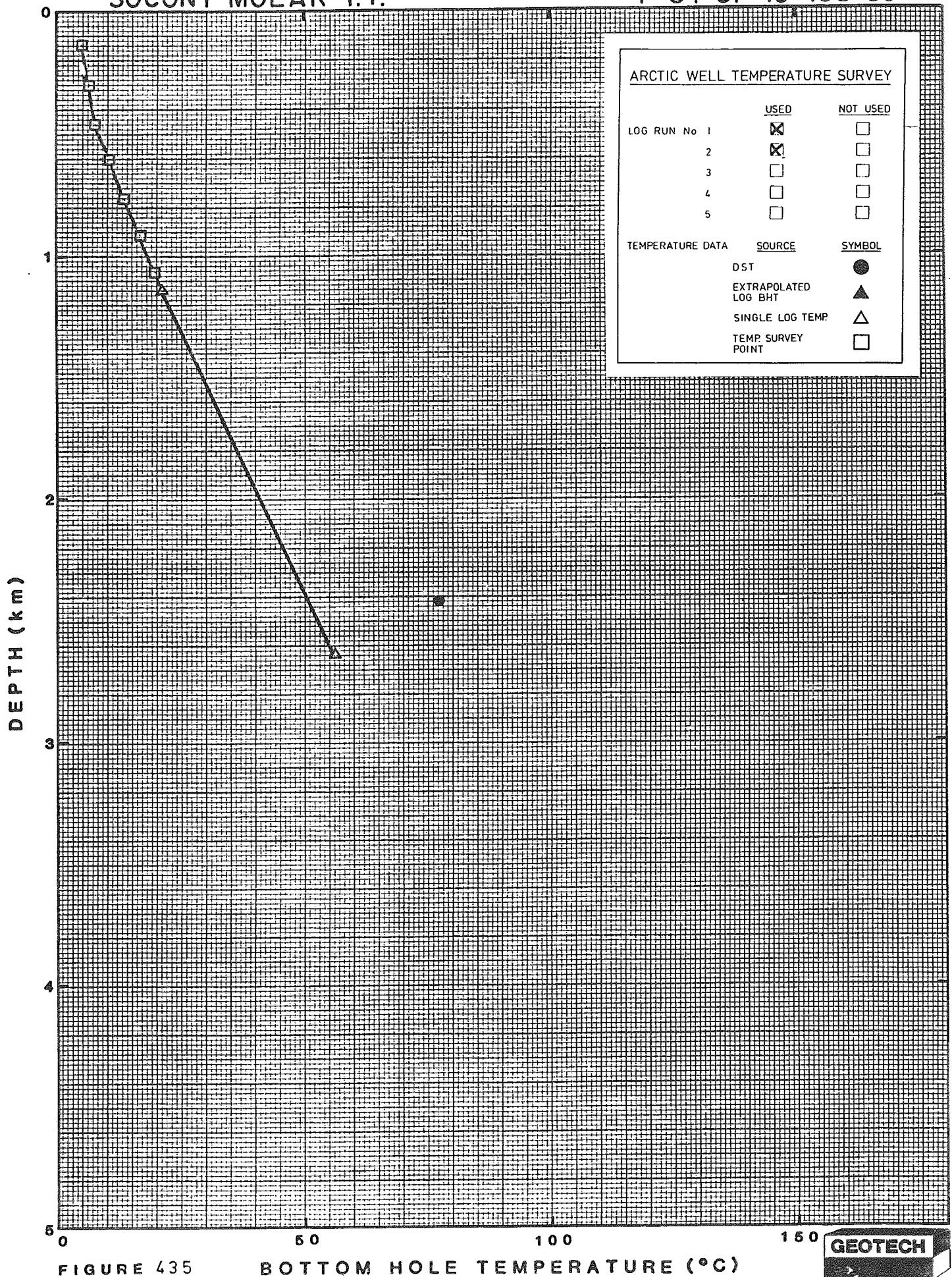


FIGURE 434

BOTTOM HOLE TEMPERATURE (°C)







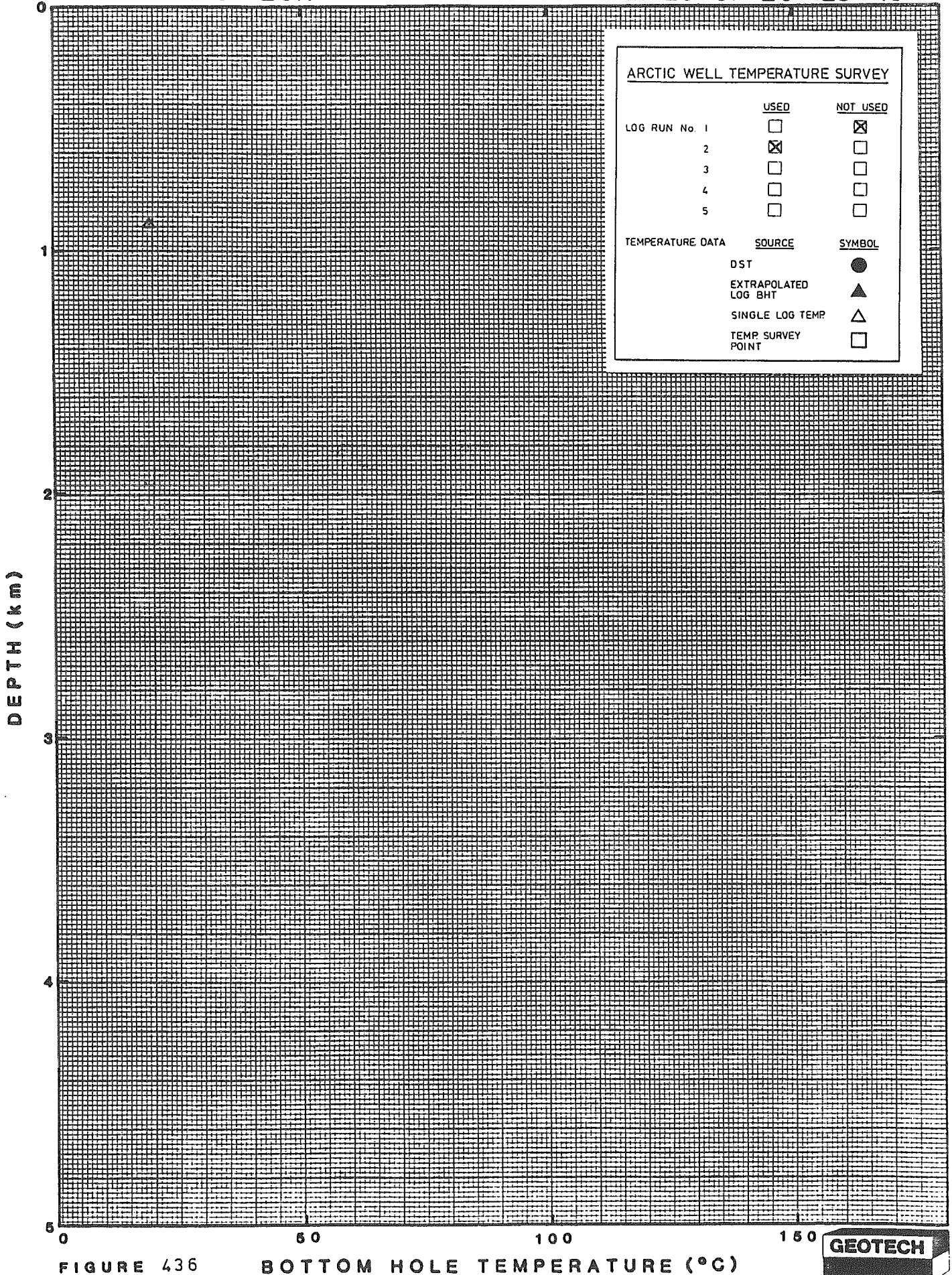
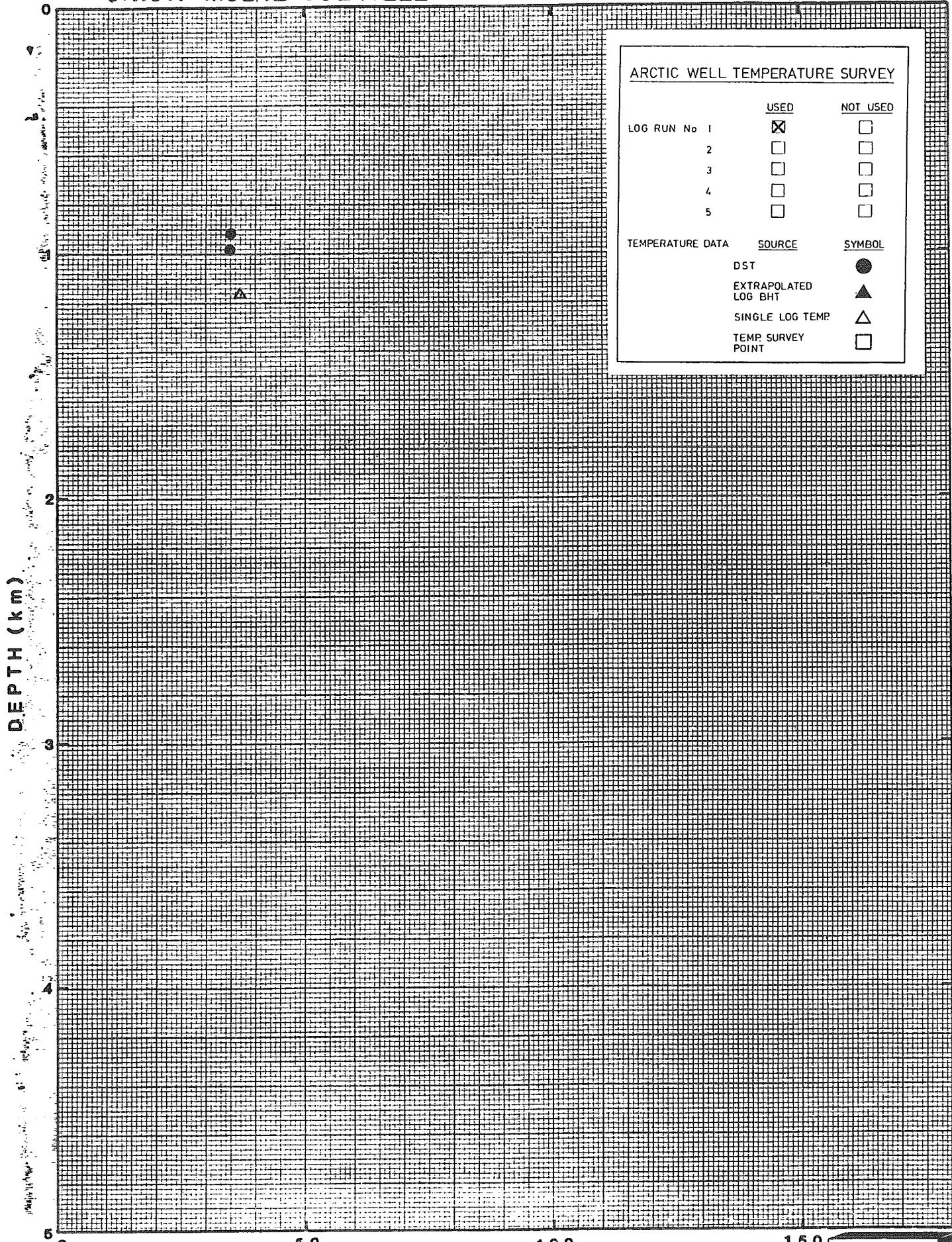


FIGURE 436

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
LOG RUN No	USED	NOT USED
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>

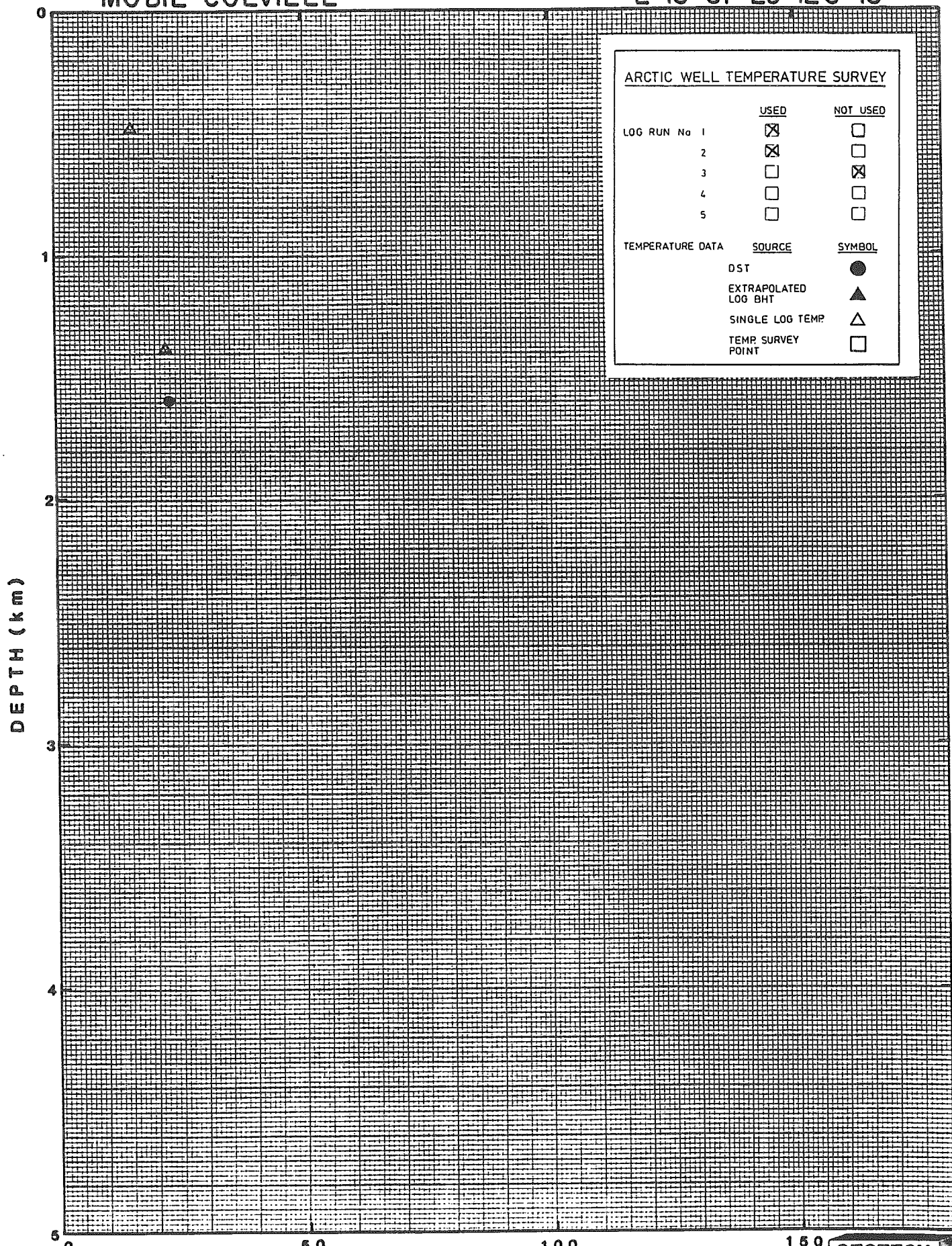
  

TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 437

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

FIGURE 438

BOTTOM HOLE TEMPERATURE (°C)





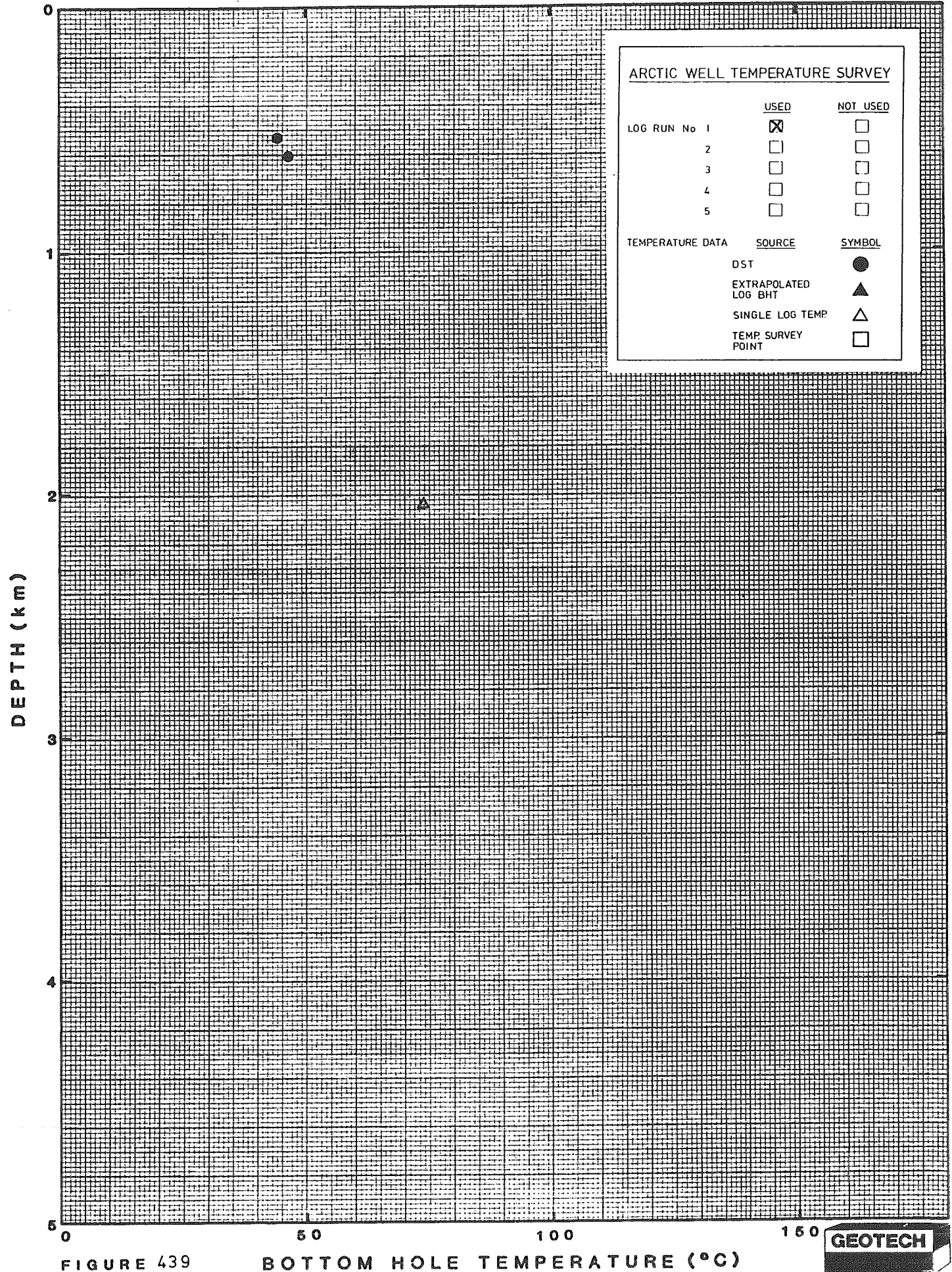


FIGURE 439

BOTTOM HOLE TEMPERATURE (°C)



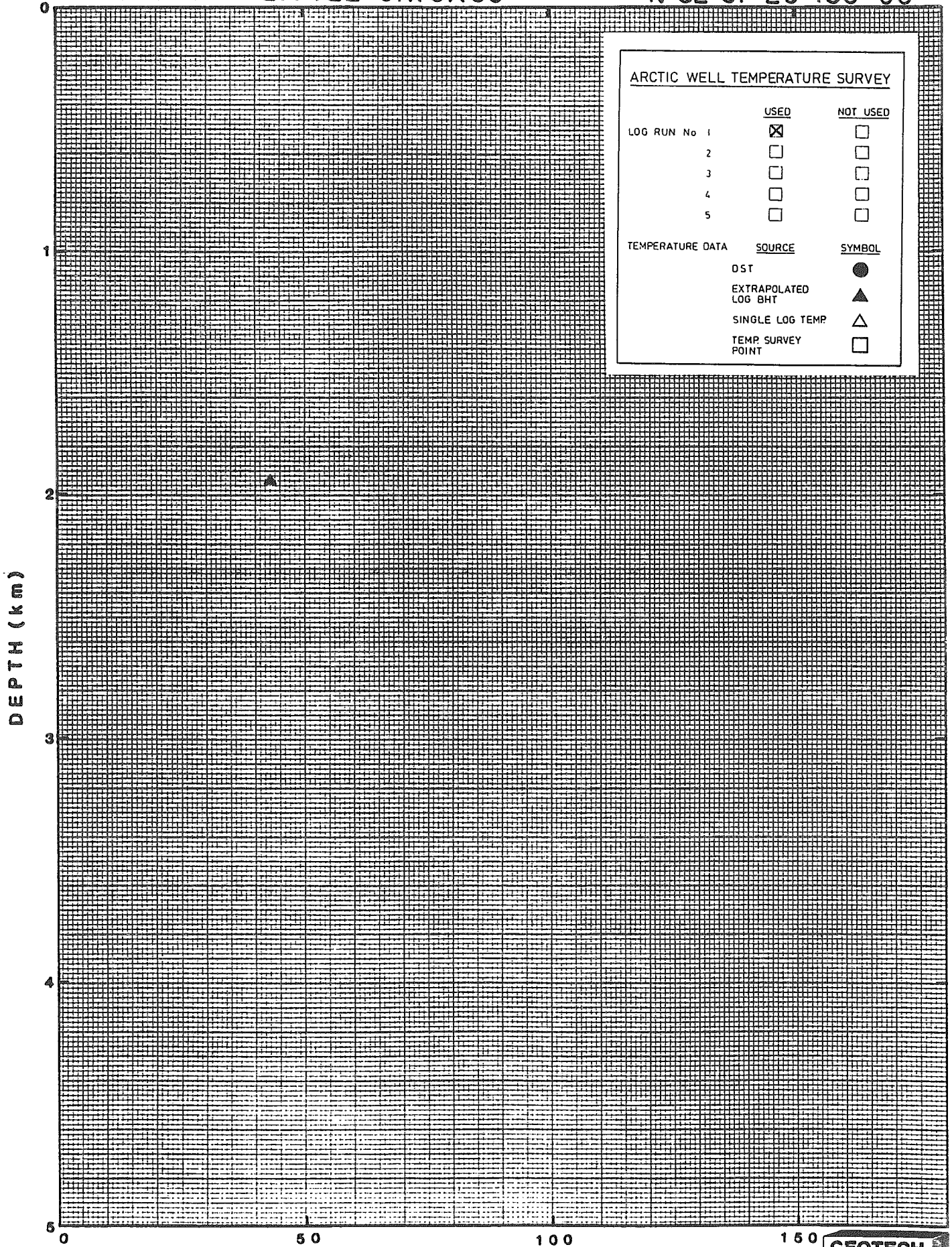


FIGURE 440

BOTTOM HOLE TEMPERATURE (°C)



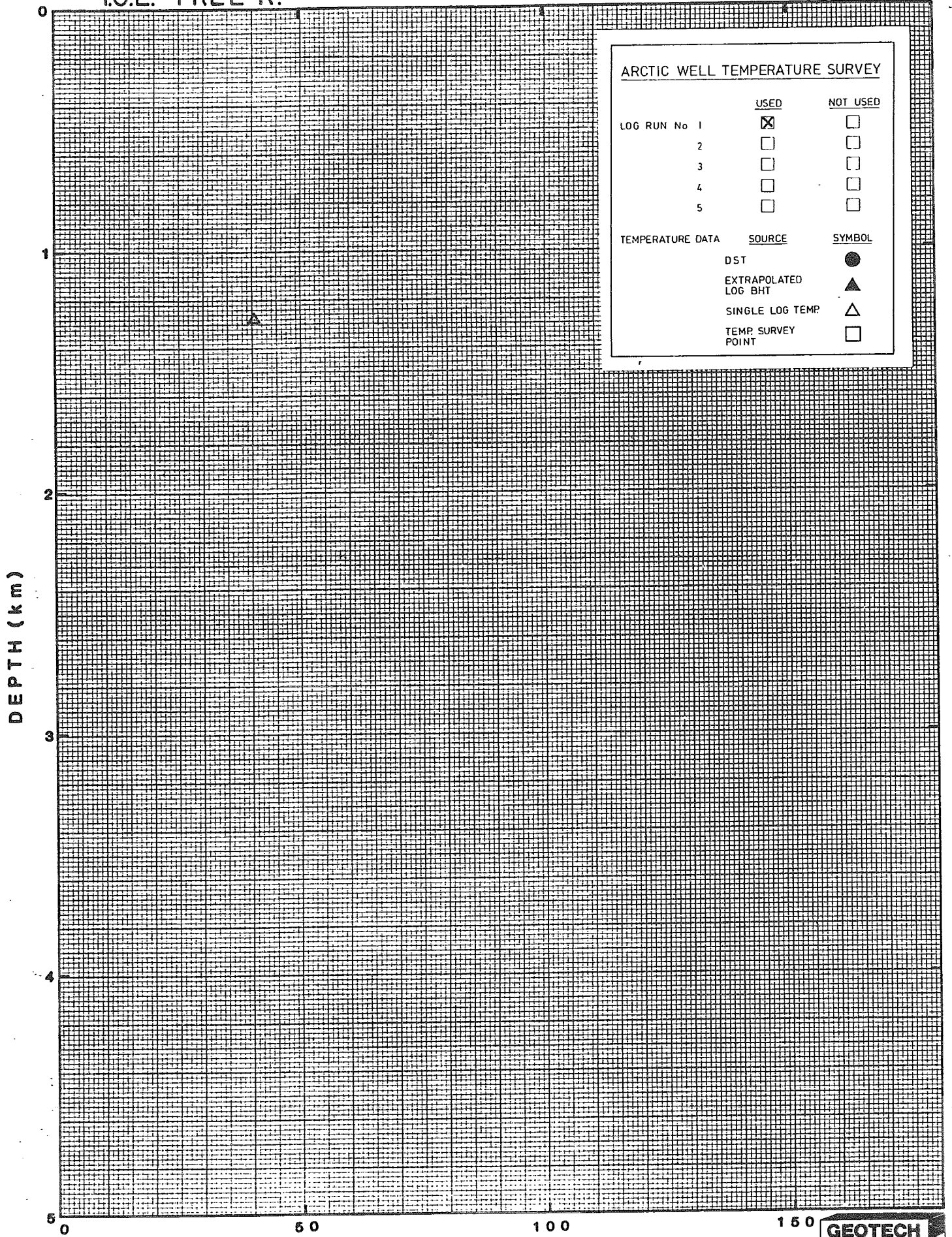


FIGURE 441

BOTTOM HOLE TEMPERATURE (°C)





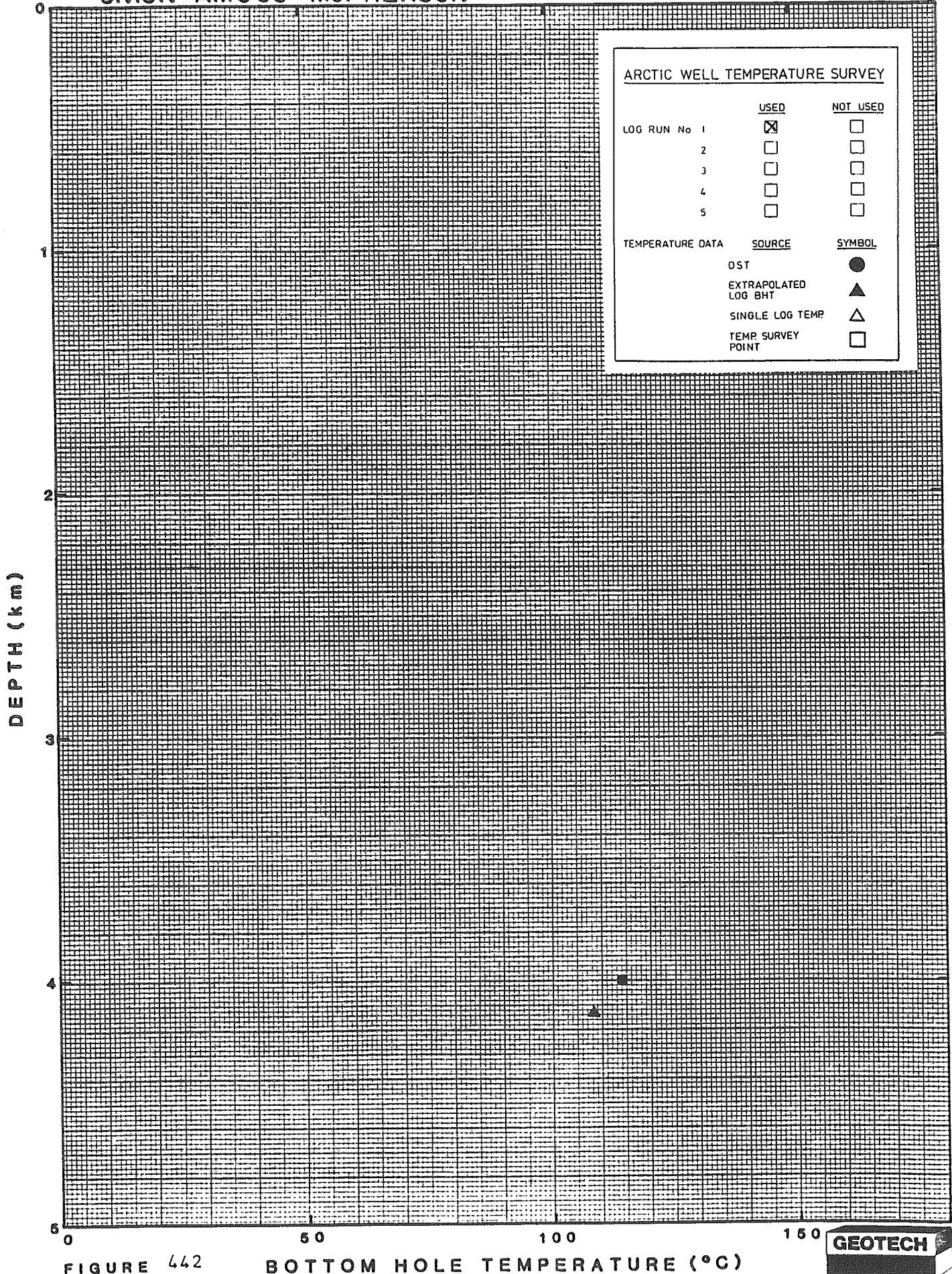
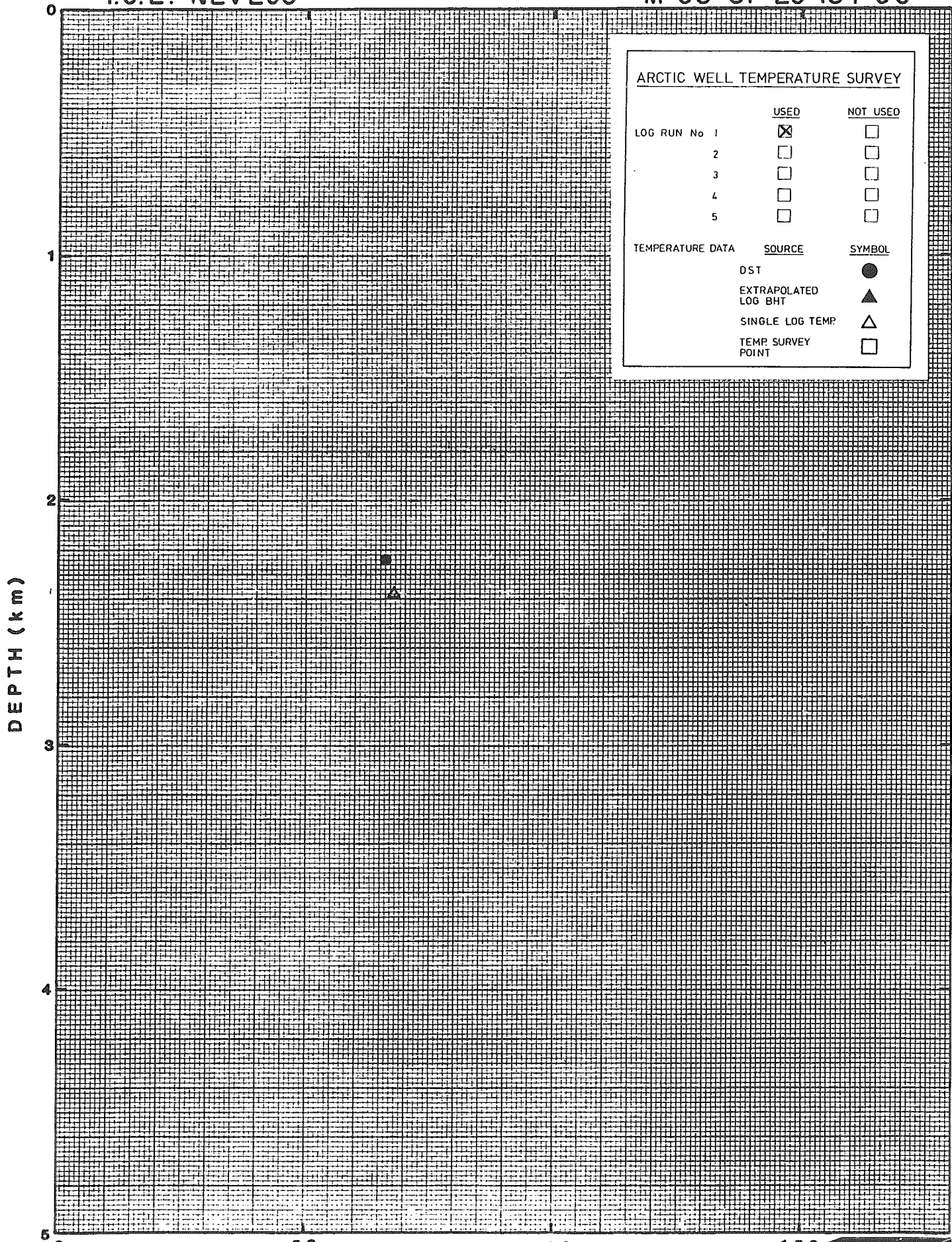


FIGURE 442

BOTTOM HOLE TEMPERATURE (°C)







ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
	DST	●
	EXTRAPOLATED LOG BHT	▲
	SINGLE LOG TEMP	△
	TEMP SURVEY POINT	□

FIGURE 443

BOTTOM HOLE TEMPERATURE (°C)



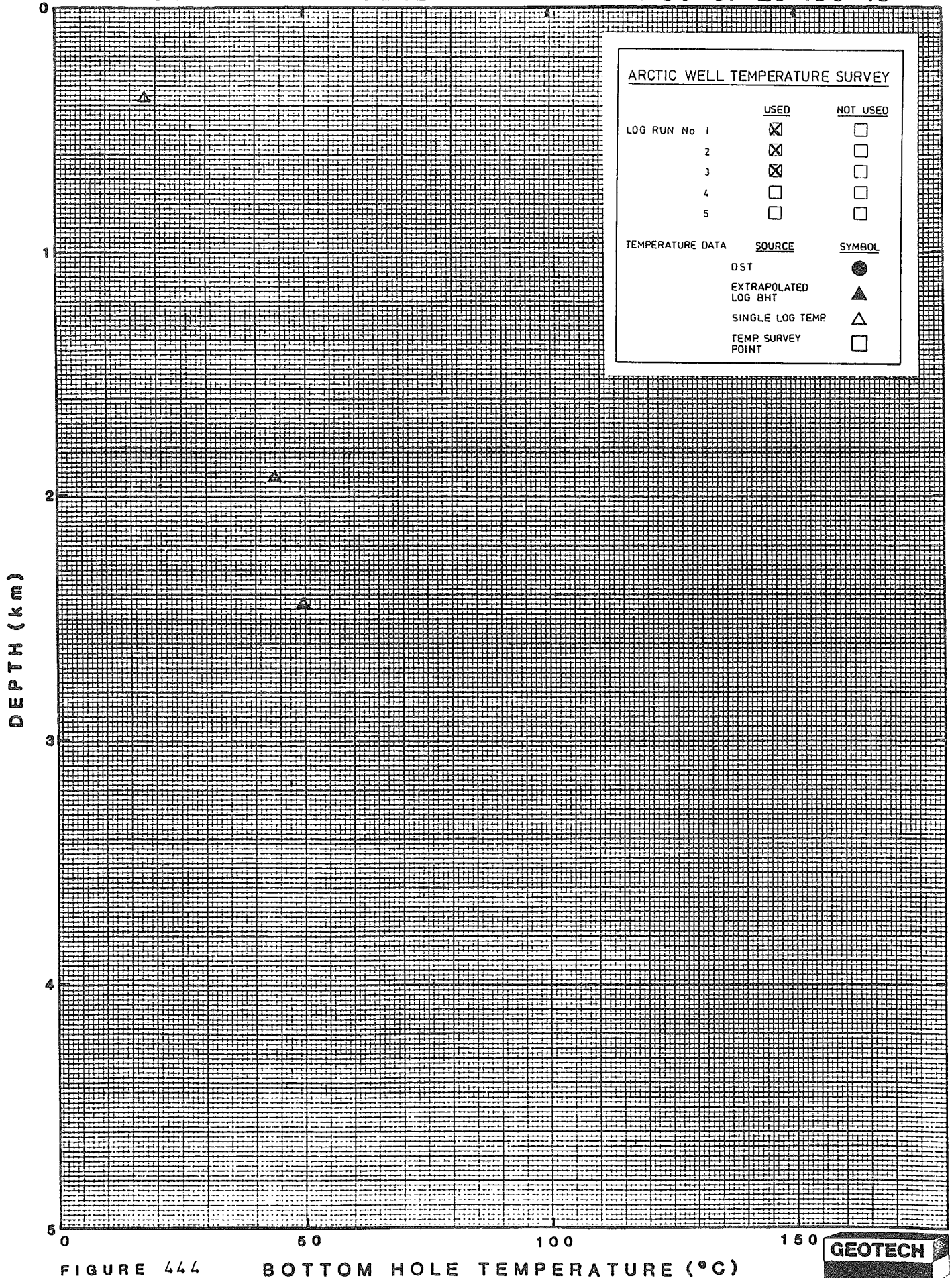


FIGURE 444

BOTTOM HOLE TEMPERATURE (°C)



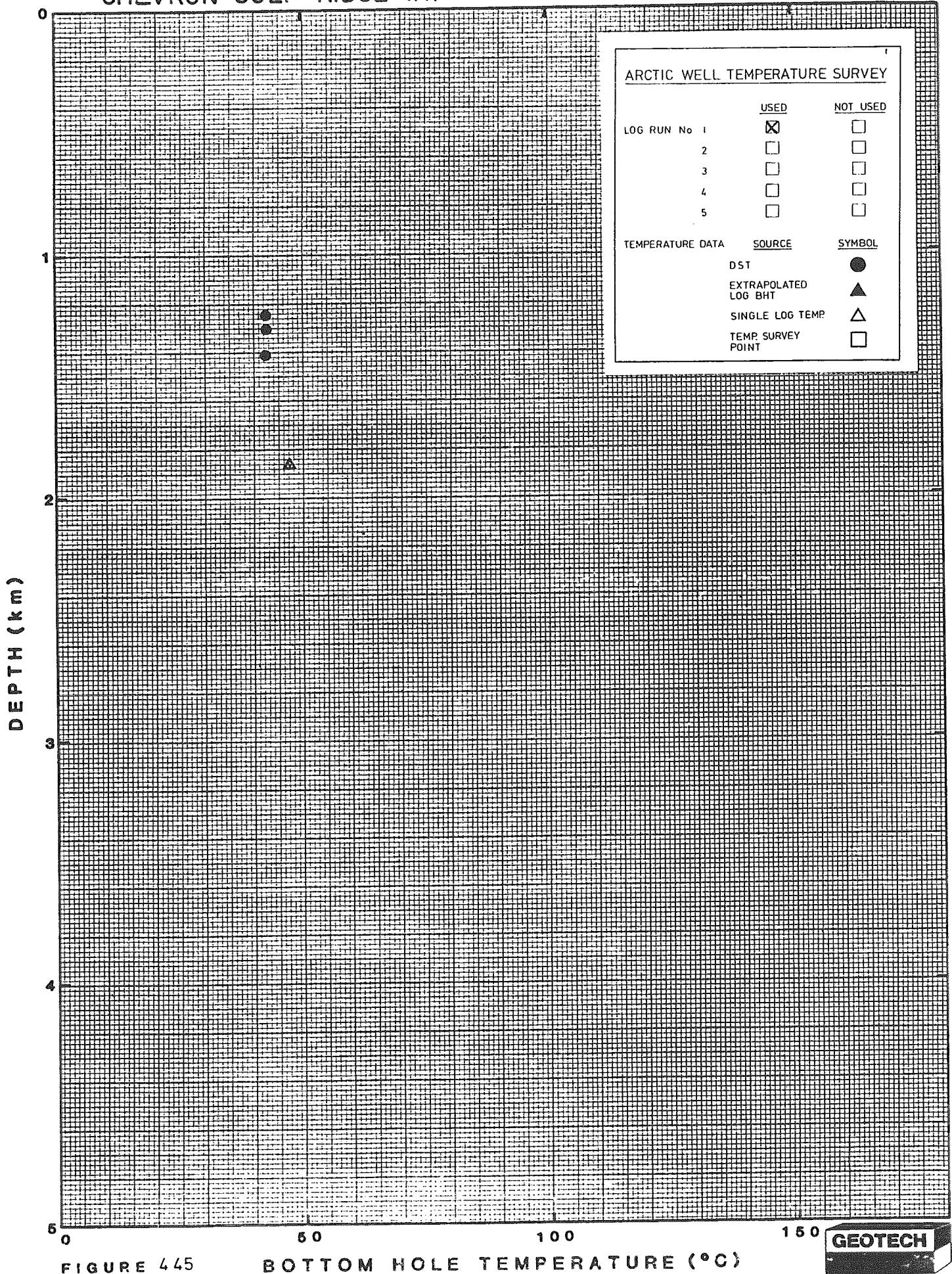


FIGURE 445

BOTTOM HOLE TEMPERATURE (°C)





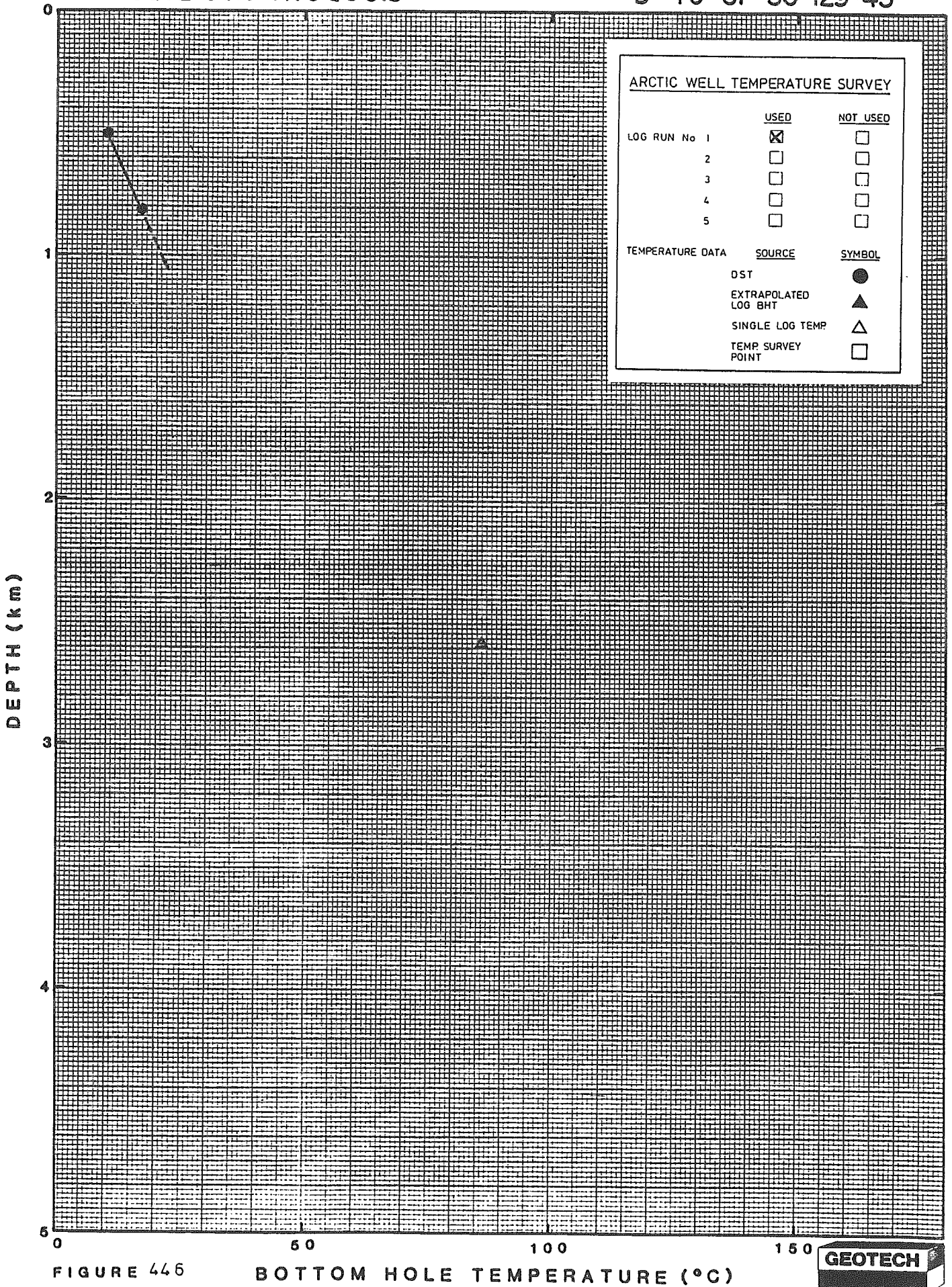


FIGURE 446

BOTTOM HOLE TEMPERATURE (°C)





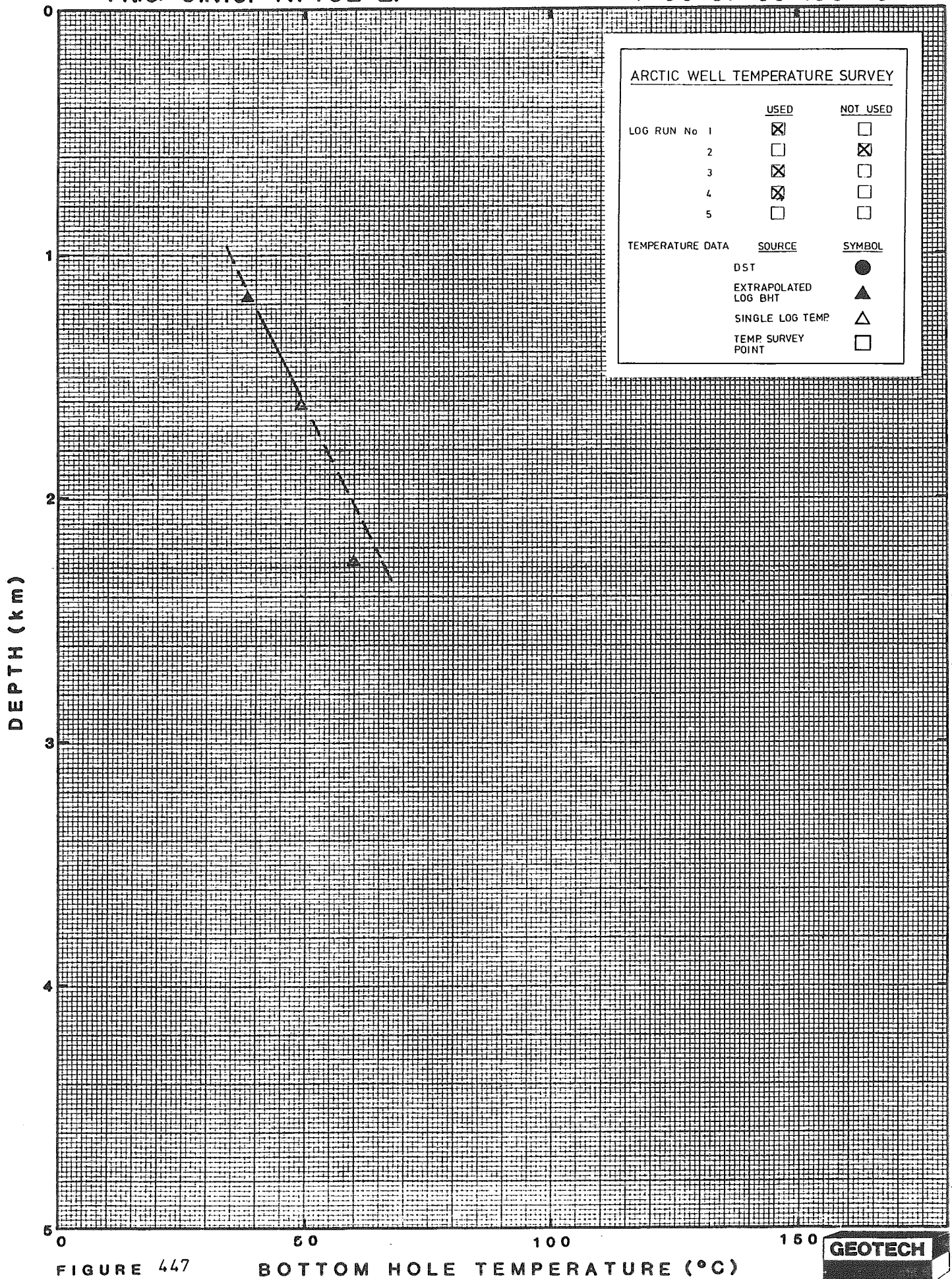
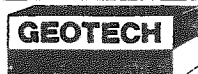


FIGURE 447



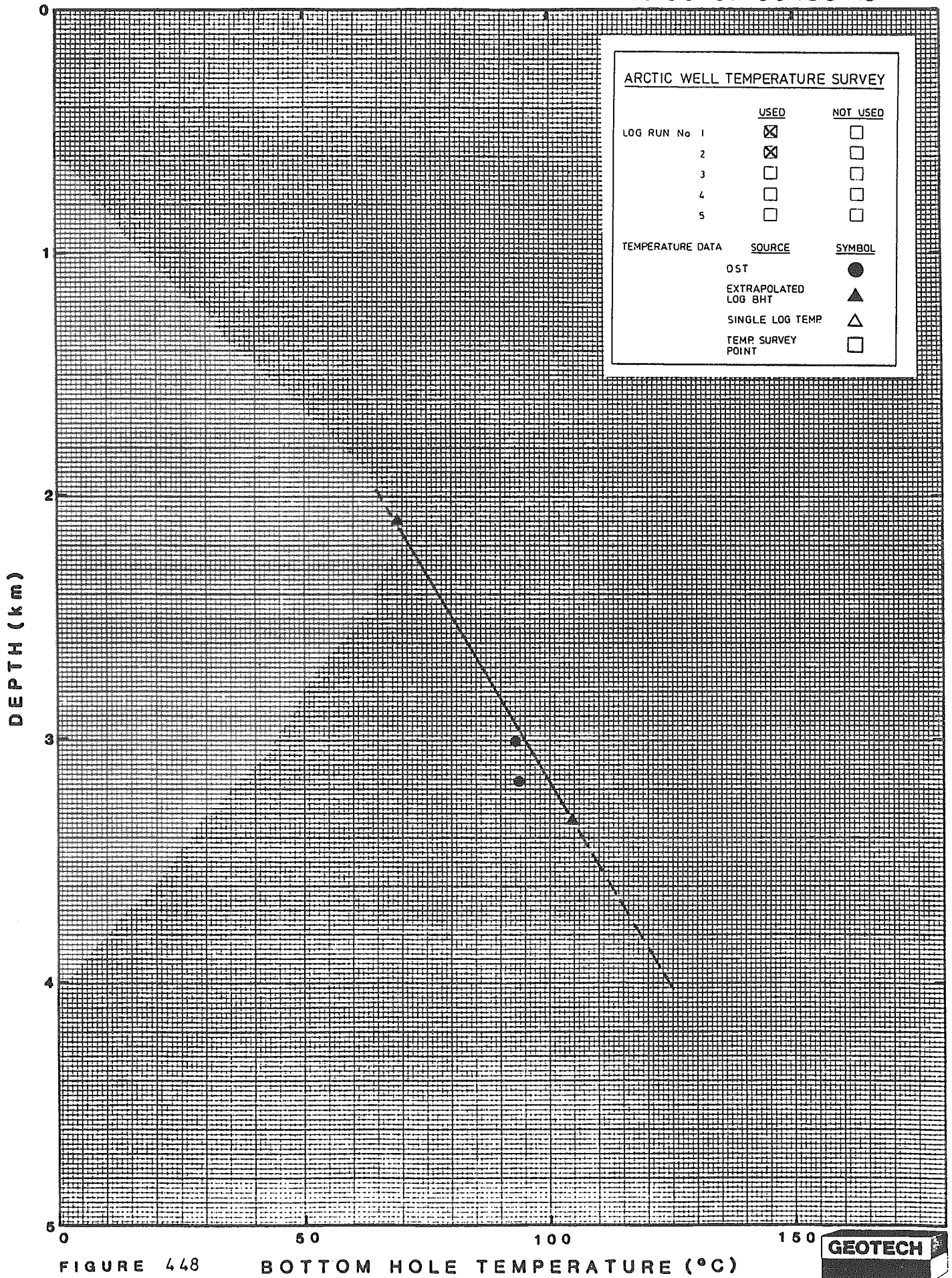
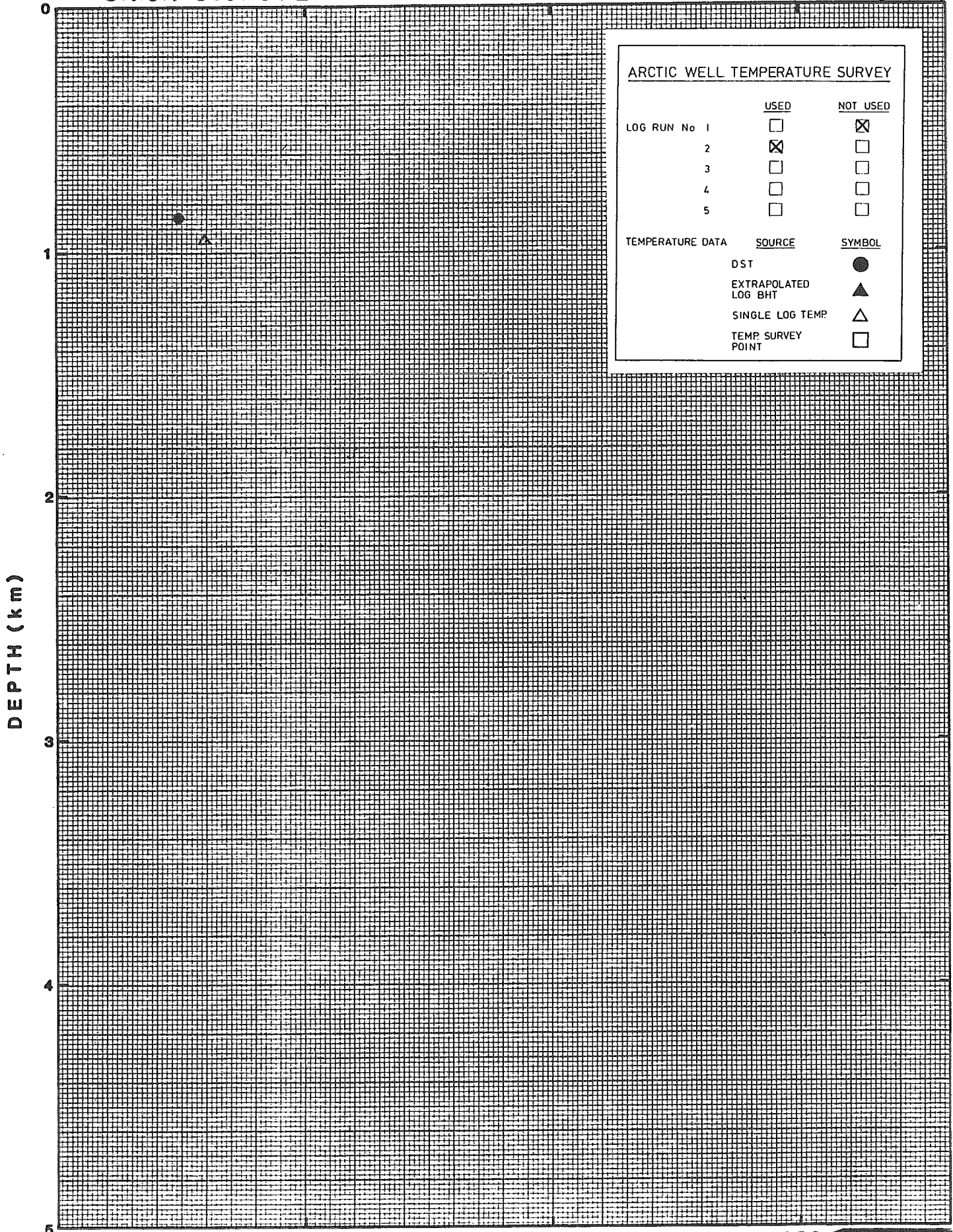


FIGURE 448

BOTTOM HOLE TEMPERATURE (°C)





DEPTH (km)

0 50 100 150

FIGURE 449 BOTTOM HOLE TEMPERATURE (°C)





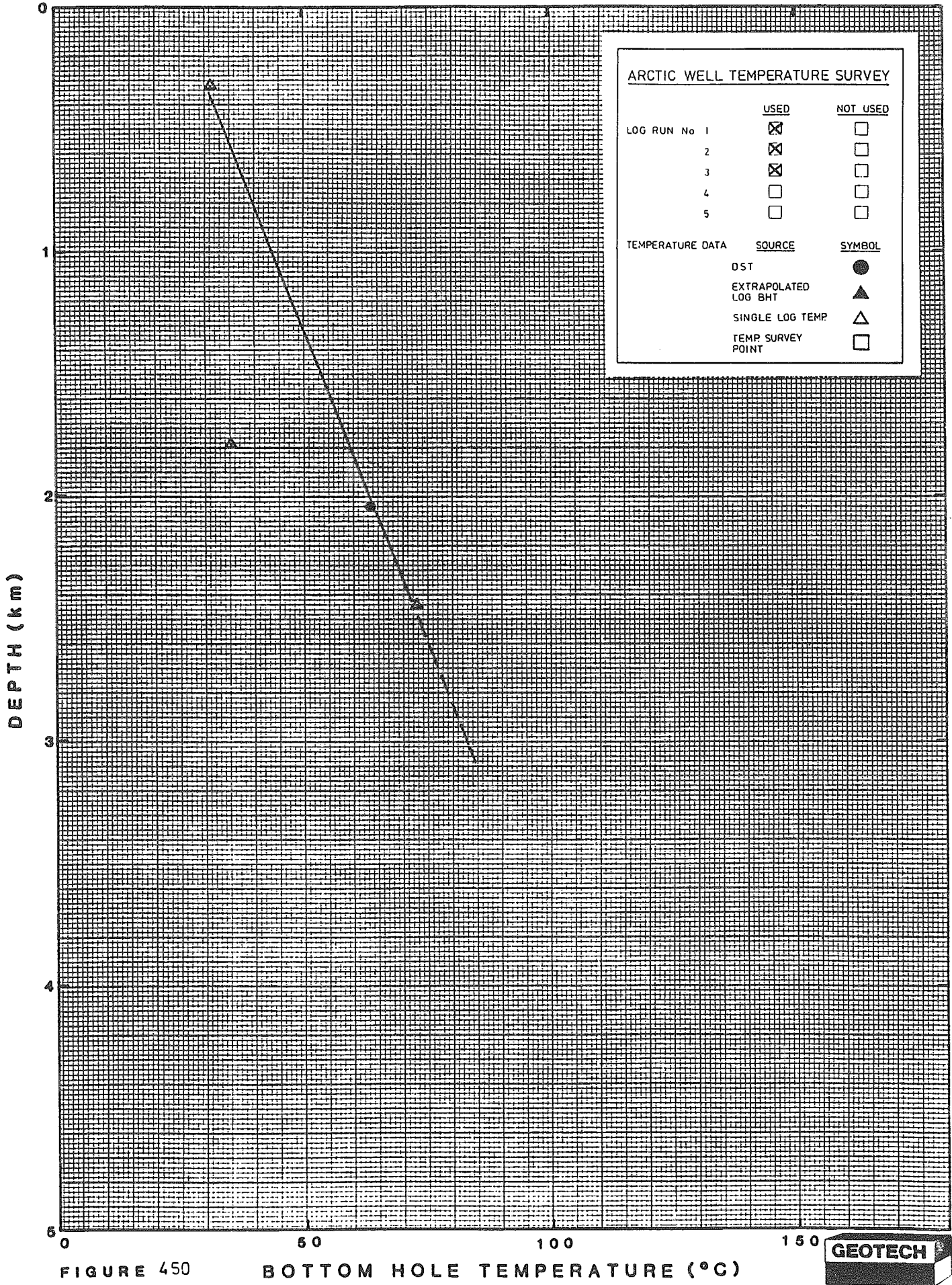


FIGURE 450

BOTTOM HOLE TEMPERATURE (°C)





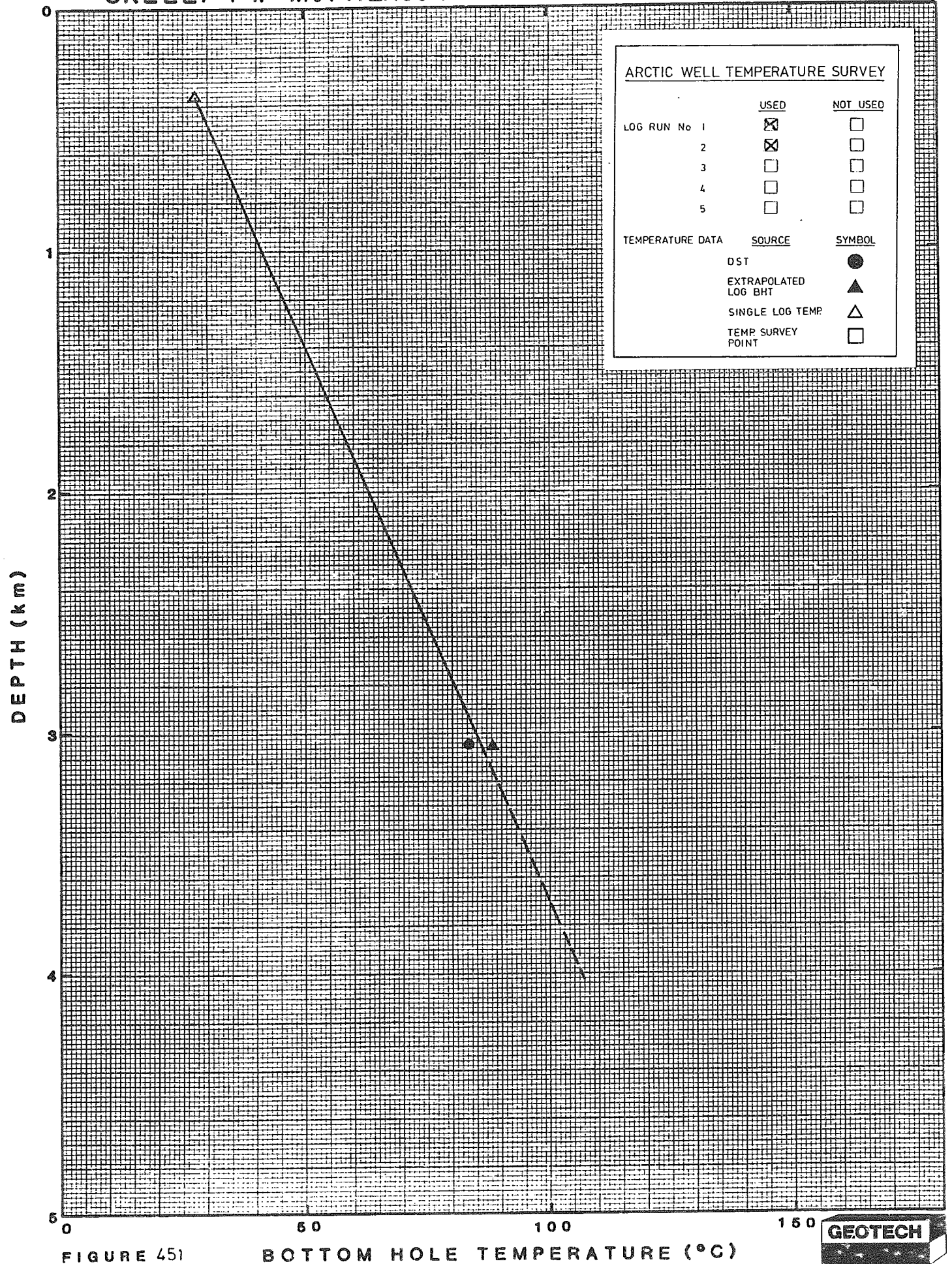


FIGURE 451

BOTTOM HOLE TEMPERATURE (°C)



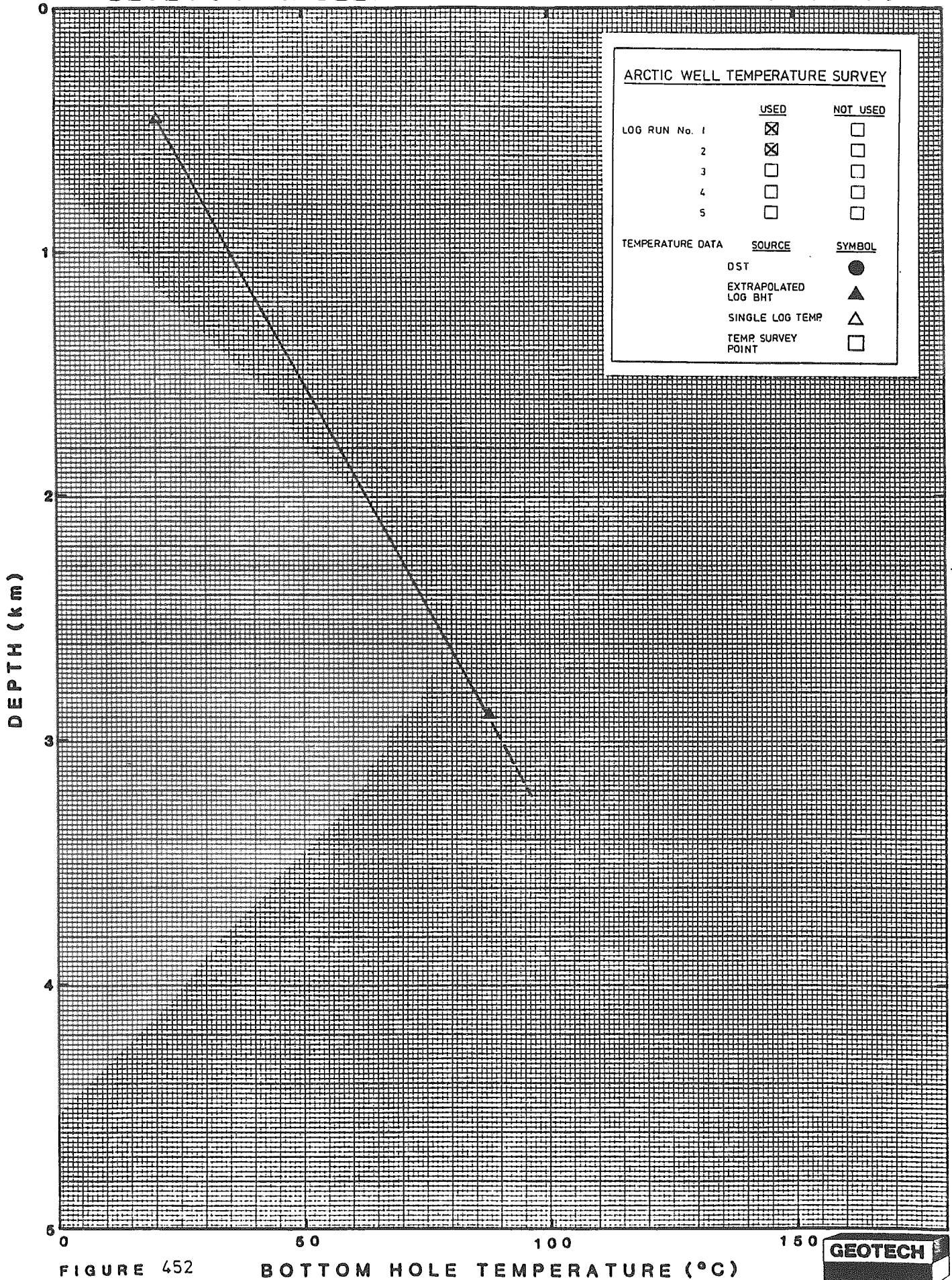


FIGURE 452

BOTTOM HOLE TEMPERATURE (°C)





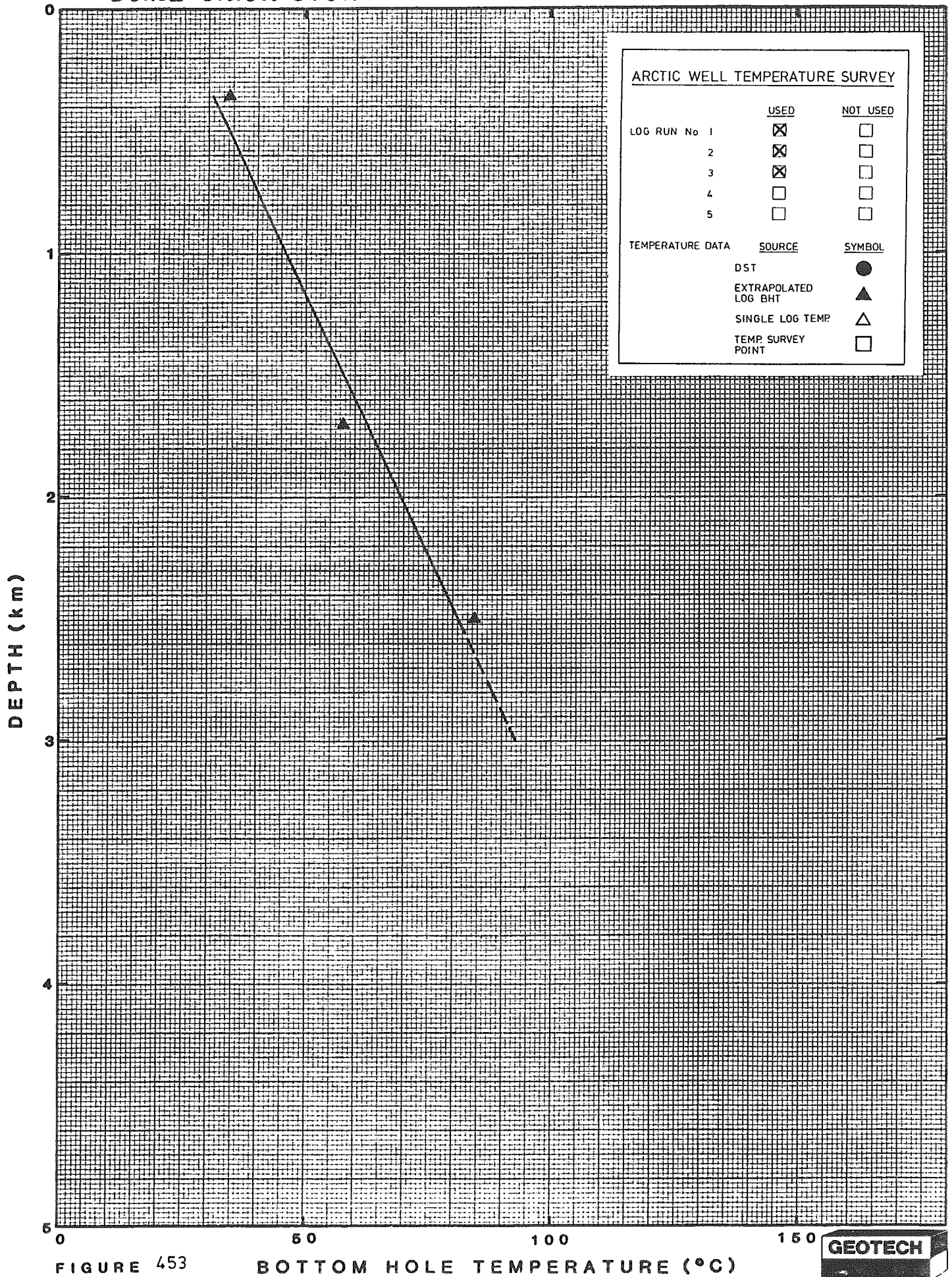
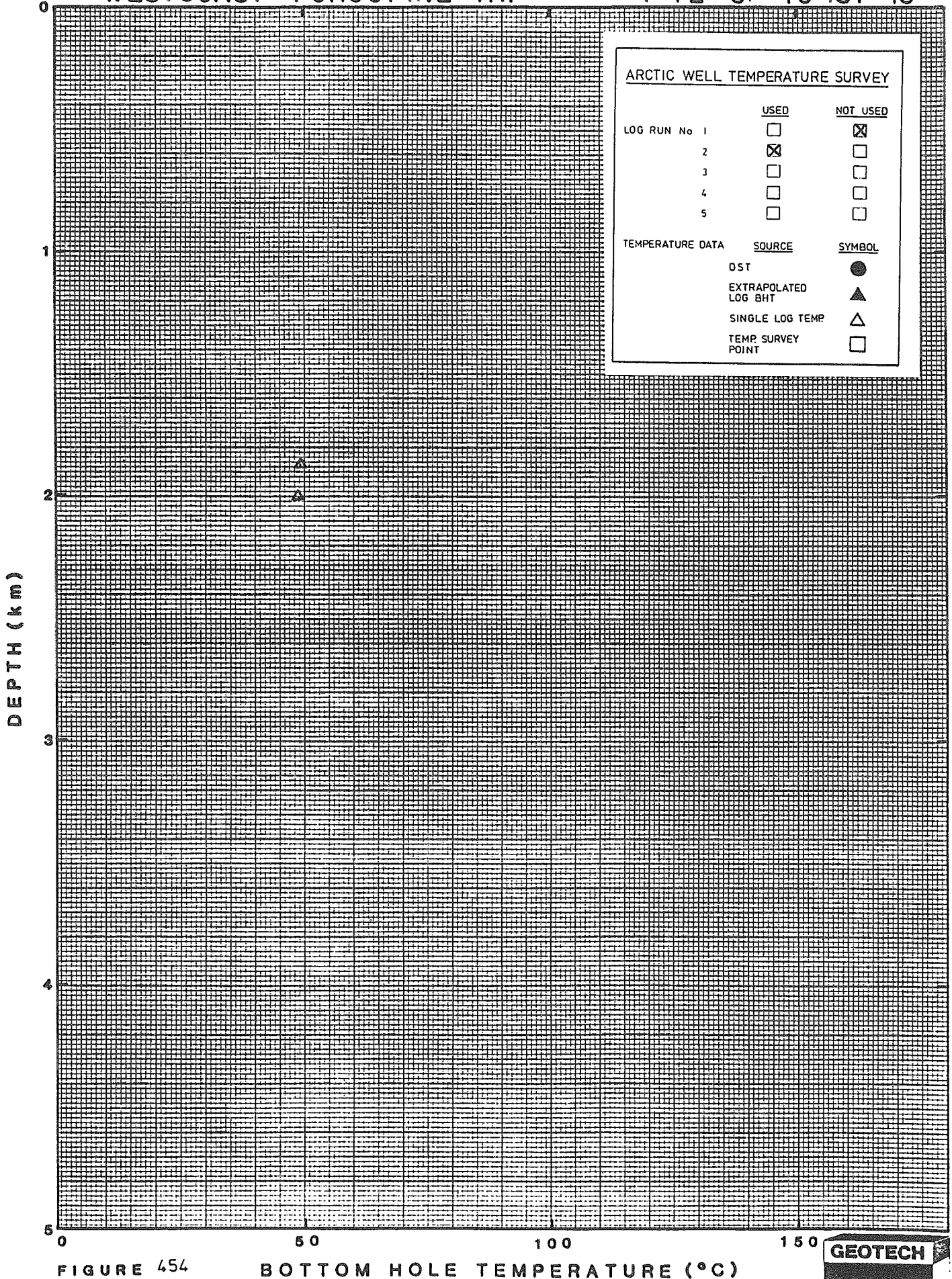


FIGURE 453

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

FIGURE 454

BOTTOM HOLE TEMPERATURE (°C)





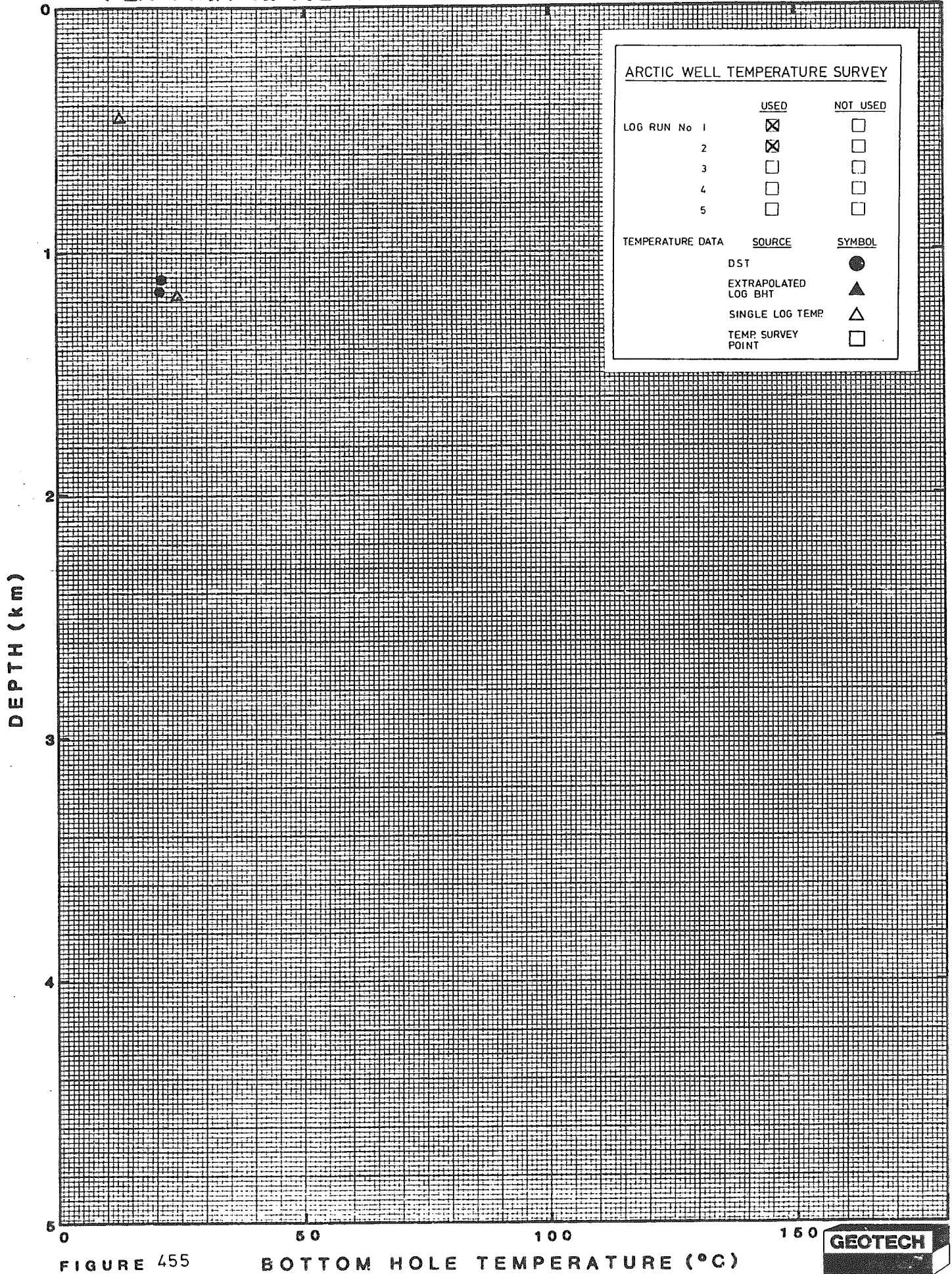


FIGURE 455

BOTTOM HOLE TEMPERATURE (°C)



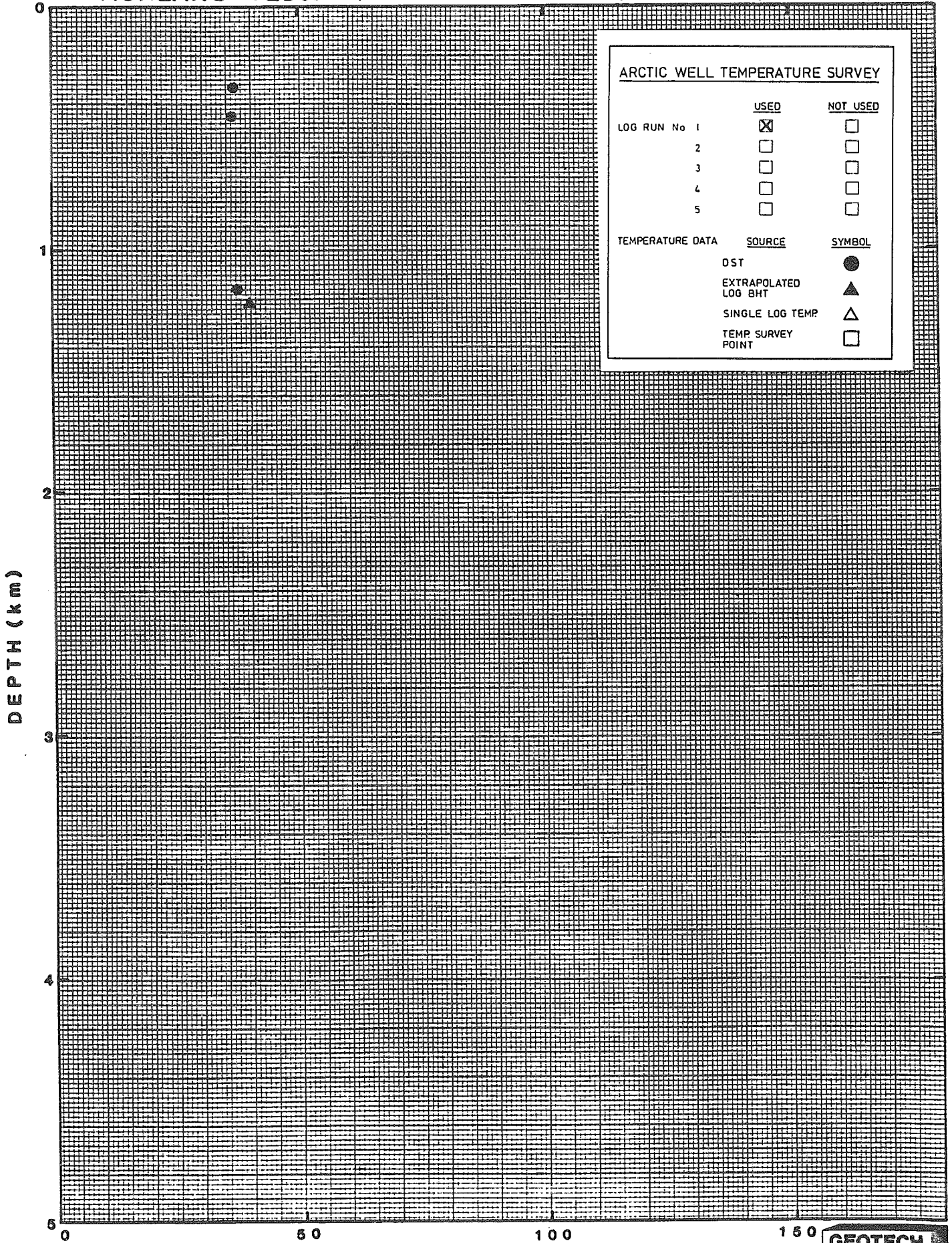


FIGURE 456

BOTTOM HOLE TEMPERATURE (°C)





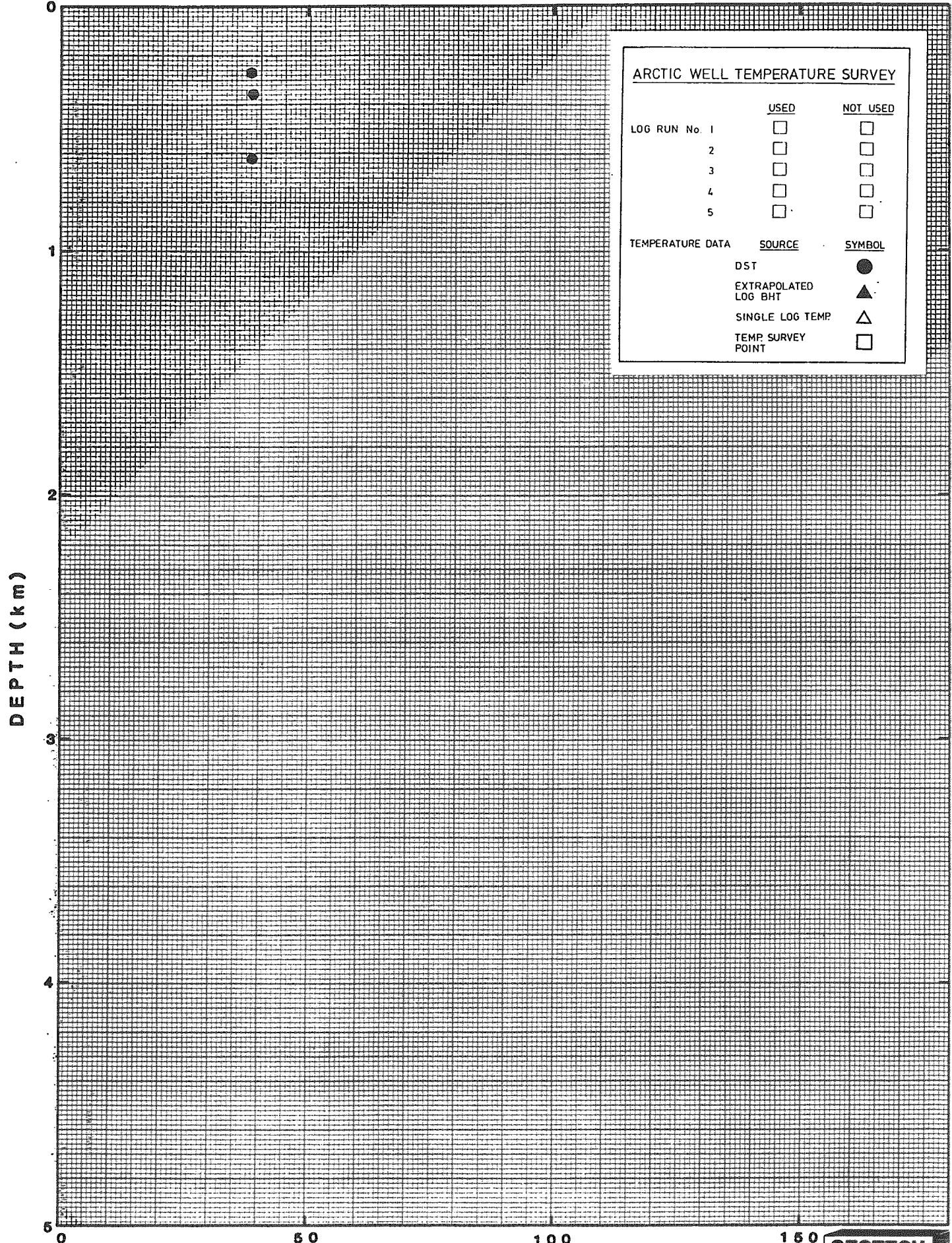
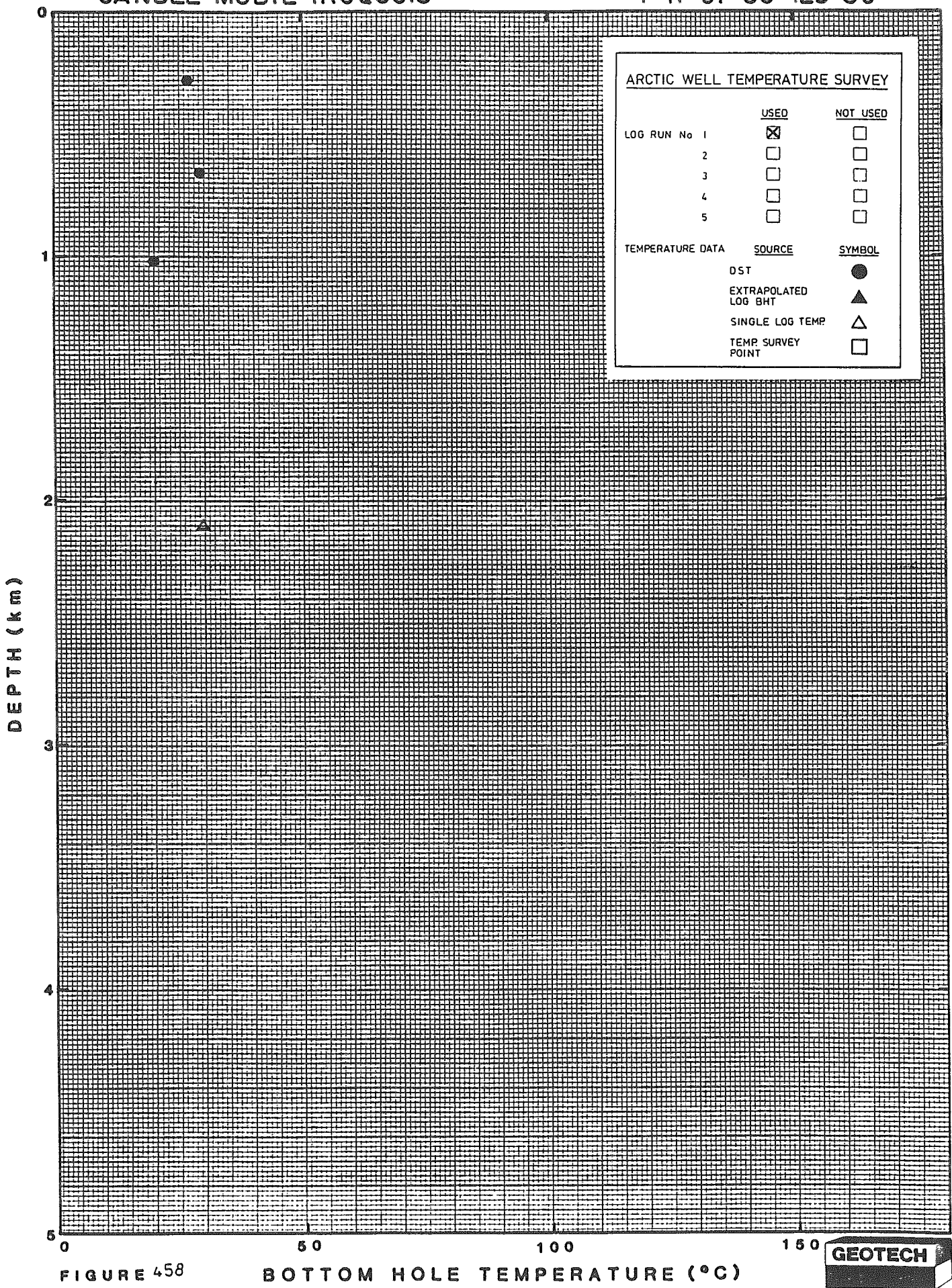


FIGURE 457

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP SURVEY POINT		□

DEPTH (km)

FIGURE 458

BOTTOM HOLE TEMPERATURE (°C)





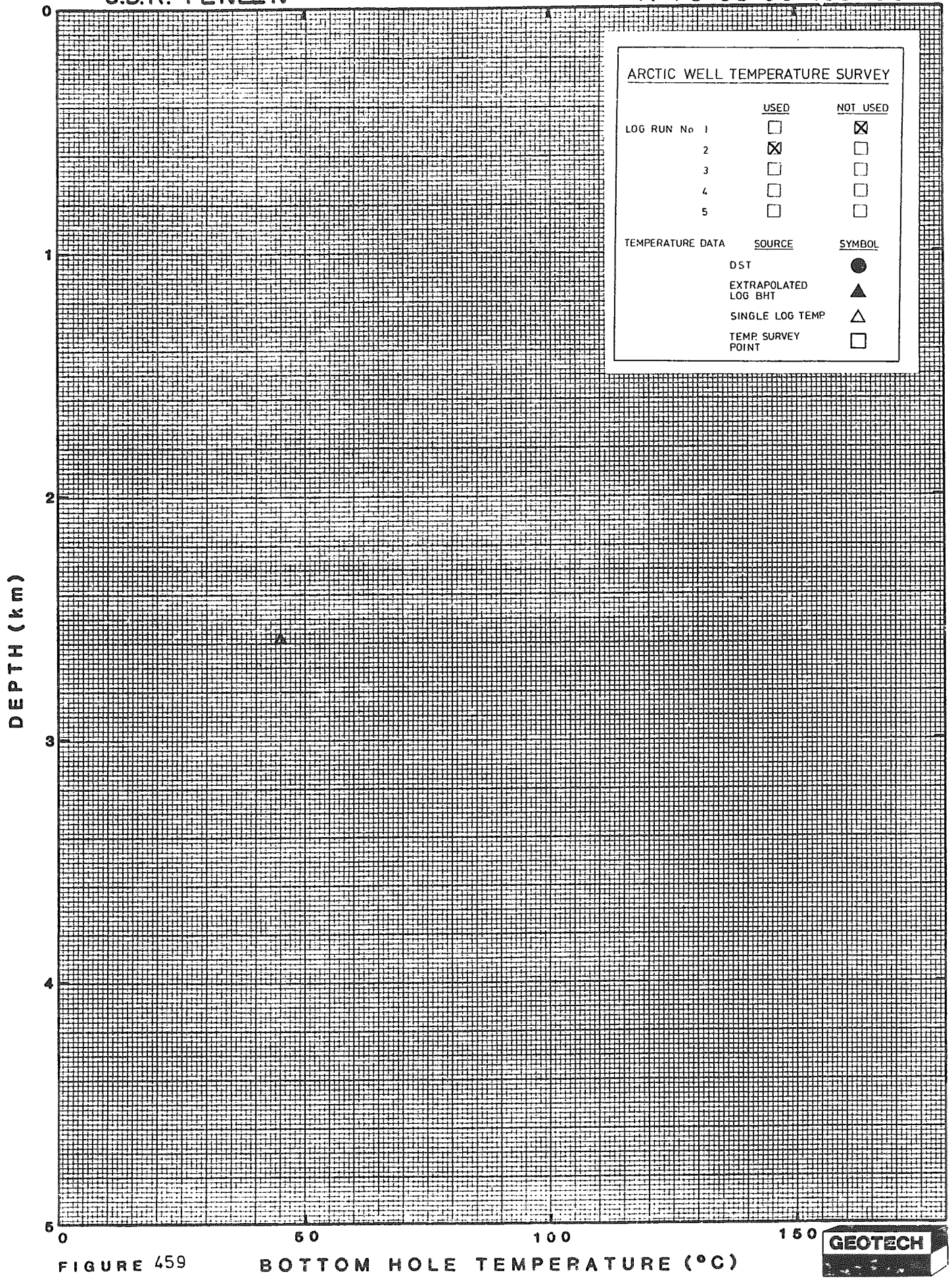


FIGURE 459

BOTTOM HOLE TEMPERATURE (°C)



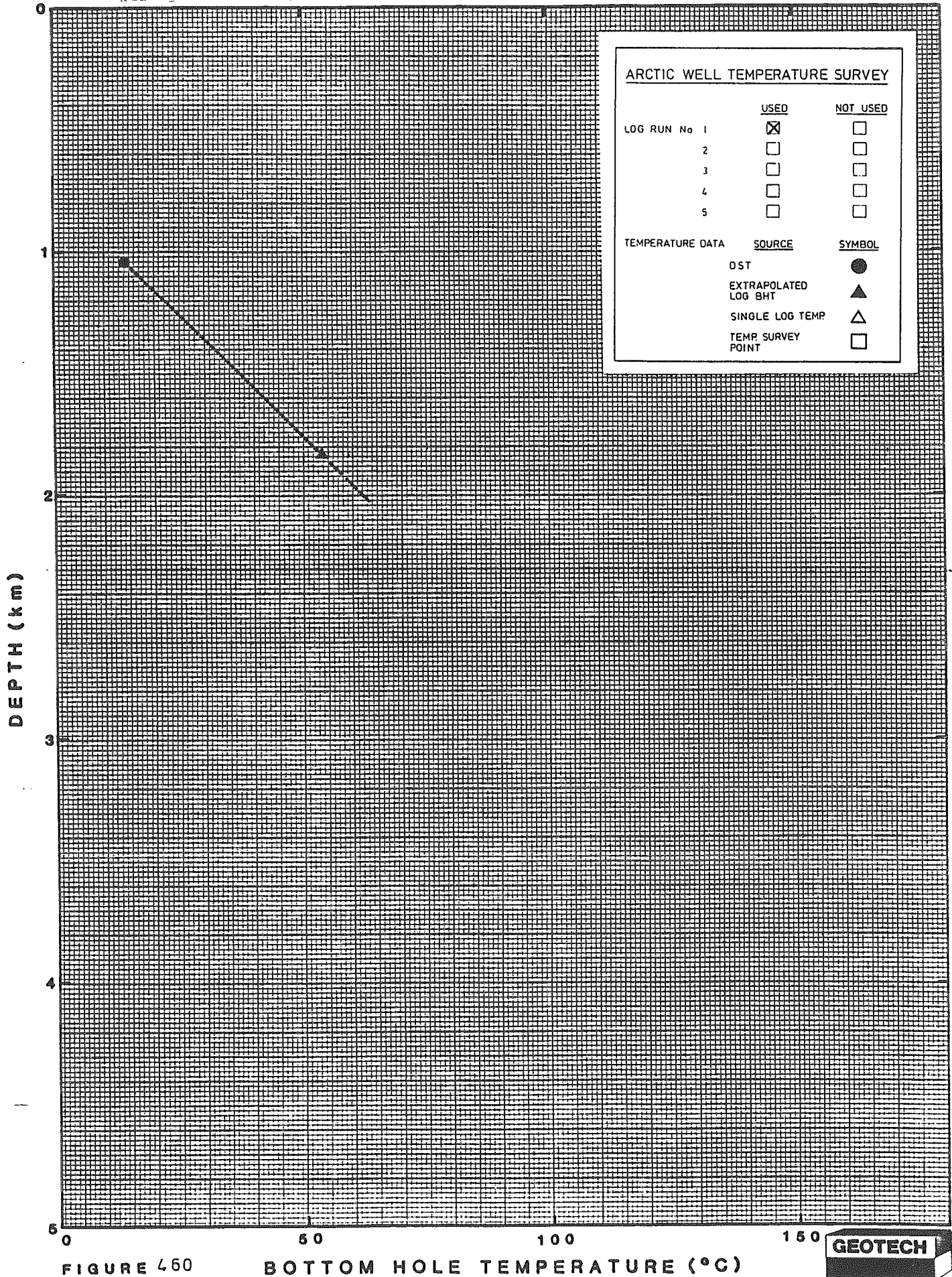


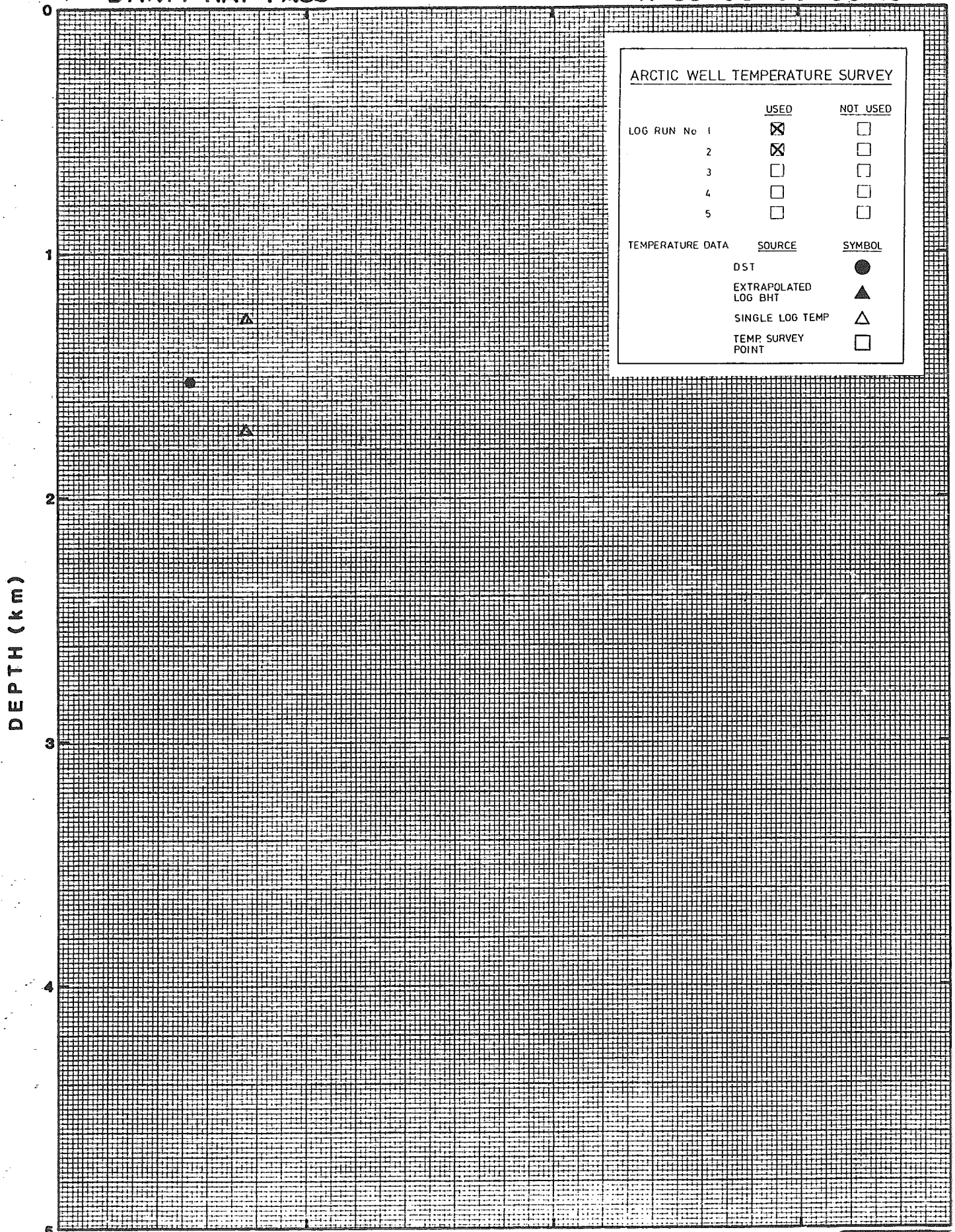
FIGURE 460

BOTTOM HOLE TEMPERATURE (°C)





ARCTIC WELL TEMPERATURE SURVEY		
	USED	NOT USED
LOG RUN No 1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>
5	<input type="checkbox"/>	<input type="checkbox"/>
TEMPERATURE DATA	SOURCE	SYMBOL
DST		●
EXTRAPOLATED LOG BHT		▲
SINGLE LOG TEMP		△
TEMP. SURVEY POINT		□



DEPTH (km)

0 50 100 150

FIGURE 461 BOTTOM HOLE TEMPERATURE (°C)



