UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

ALASKA

basic data for thermal springs and wells

as recorded in GEOTHERM

By

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INTRODUCTION

GEOTHERM, a computerized information system now offline, was used to maintain data on the geology, geochemistry and hydrology of geothermal sites primarily within the United States. The system was proposed at the First Geothermal Implementation Conference in New Zealand in 1974 (Swanson, 1977) and was active until 1983. The primary mission was to provide a broad informational framework for the Geothermal Research Program (Duffield and Guffanti, 1981). GEOTHERM was used to support national geothermal assessments--in 1978 (Muffler, 1979) and 1982 (Reed, 1983). It was however a public system and provided data to both public and private sectors. A detailed discussion on databases in GEOTHERM and a general scheme of how the information system operated can be found in Bliss and Rapport, 1983.

This report on Alaska is one of a series intended to preserve the data collected for GEOTHERM and make the data available to the public. States with significant geochemical data for geothermal fluids will be covered in individual reports such as this. A report will also be issued to cover miscellaneous data collected for sites in the central and eastern United States. The data found in this series is also available as a data file on the internationally-available General Electric Mark III service, a timeshare network. Those interested in accessing that system should contact the Energy Resource Center, University of Oklahoma, Norman, Oklahoma 73070. It is anticipated that a portion of the data will also be available on magnetic tape from the National Technical Information Service, U. S. Department of Commerce, Springfield, VA 22161. It will not be available until after the completion of the open-file series.

GEOTHERM INDEXES

Three computer-generated indexes are found in appendices A, B, and C of this report. The indexes give one line summaries of each GEOTHERM record describing the chemistry of geothermal springs and wells in the sample file for Alaska. Each index is sorted by different variables to assist the user in locating geothermal records describing specific sites.

Appendix A (p. 97-100) is sorted by the name of the source. Also given are site type (spring, well, fumarole), latitude, longitude (both use decimal minutes), township, range, section, GEOTHERM record identifier, and temperature (^{o}C). In conducting a search of Appendix A, site names are quite useful for locating springs or wells for which a specific name is commonly used, but sites which do not have specific names are more difficult to locate. It is suggested that site titles which begin with words such as warm, hot, unnamed, pumped, well, or spring be checked. Descriptive text found as part of the site name and the site coordinates should be used to assist in determining location.

Appendix B (p. 101-104) is sorted by township, range, and section. Also given are name of source, GEOTHERM record identifier, and temperature (°C). Records missing items used for sorting will be listed first.

Appendix C (p. 105-110) is first sorted into one-degree blocks by latitude, and longitude, and then by name of source. Adjacent one-degree blocks which are published as a 1:250,000 map are combined under the appropriate map name. Also given are GEOTHERM record identifier, and temperature (°C). Records missing items used for sorting will be listed first. Numbers with blank in the same position as zero will be given first.

GEOTHERM SAMPLE FILE

GEOTHERM sample file contains 179 records for Alaska (Table 1). Records may be present which are duplicates for the same analyses. A record may contain data on location, sample description, analysis type (water, condensate, or gas), collection condition, flow rates, and the chemical and physical properties of the fluid. Stable and radioactive isotopic data are occasionally available. Some records may contain only location and temperature. When sufficient chemical data was available, the charge balance (percentage of difference in anion- and cation-milliequivalents) was computed and added to the record. Many of the numeric fields in the sample file can be directly qualified. The qualifier code preceeds the number when appropriate. The codes and their meaning are given in Table 1.

Each thermal spring or well usually is represented by several records. This may document temporal changes in the geothermal fluids. Judgement on what constituted acceptable data was extremely complicated and the primary attempt was to insure that each GEOTHERM record faithfully reproduced the published data. On occasion, glaring inconsistencies or data clearly of poor quality were excluded. Regrettably, no database can be constructed or supported without the introduction of errors. The user, therefore, is advised to check with the published literature whenever possible. Users should carefully and critically evaluate the records they use.

This compilation should contain all of the chemical data for geothermal fluids in Alaska published as of December, 1981. However, no claim is made for completeness, and published sources have probably been missed. About 20% of the records in this list contains information which was unpublished at the time of data entry. A critically evaluated and corrected list of over 2000 records for the United States was extracted from the sample file and issued as a reference document for the national low-temperature geothermal resource assessment (Reed and others, 1983). This, along with a list of geothermal springs by Berry, and others, 1980, may be useful to some users.

GEOTHERM BIBLIOGRAPHY

A bibliography is given in Appendix D (p. 111-113). The abbreviated form of the reference (called code) is identifed as the record source in the full record list and is used to sort the entries in this appendix. Codes with a leading "*" identify records based on information which was unpublished at the time the record was prepared. Codes with a trailing "*" in the full GEOTHERM record are also described in greater detail in Appendix D and are listed ahead of published sources.

ACKNOWLEDGEMENTS

Contributions and support to GEOTHERM have been made by many in both federal and state agencies. This includes the U.S. Department of Energy (and associated contractors), and U.S. National Oceanic and Atmospheric Administration. Data-entry forms for most sites in Alaska were prepared by the staff of either the University of Alaska or the U.S. Geological Survey.

REFERENCES CITED

Berry G. W., Grim, P. J., and Ikelman, J. A., 1980, Thermal springs list for the United States: National Oceanic and Amospheric Administration, Key to Geophysical Records Document No. 12, 59 p.

Bliss, J. D., and Rapport, Amy, 1983, GEOTHERM: the U.S. Geological Survey geothermal information system: Computers & Geosciences, v. 9, no. 1, p. 35-39.

Duffield, W. A., and Guffanti, Marianne, 1981, The geothermal research program of the U.S. Geological Survey: U.S. Geological Survey Open-File Report 81-564, 108 p.

Muffler, L. J. P., ed., 1979, Assessment of geothermal resources of the United States--1978: U.S. Geological Survey Circular 790, 163 p.

Reed, M. J., ed., 1983, Assessment of low-temperature geothermal resources of the United States--1982: U.S. Geological Survey Circular 892.

Reed, M. J., Mariner, R. H., Brook, C. A., and Sorey, M. L., 1983, Selected data for low-temperature (less than 90°C) geothermal systems in the United States; reference data for U.S. Geological Survey Circular 892: U.S. Geological Survey Open-File Report 83-250, 129 p.

Swanson, J. R., 1977, GEOTHERM data file: Geothermal Resources Council Transactions, v. 1, p. 285.

TABLE 1

State of Alaska: computer-generated listing of records describing geothermal-fluid samples. [A few records may be for cold springs or wells--this was to provide ground-water references for some studies.]

ORGANIZATION: Records are sorted by the name of the spring or well. Two records, GODDARD HOT SPRINGS and SITKA HOT SPRINGS - MAGNESIA SPRING are out of sequence; they are the last two records in this table. Order is the same in Appendix A.

QUALIFICATION CODES: All numeric attributes may be qualified. The codes and their meaning:

L = less than

G = greater than

E = estimated

T = trace (no numeric value reported)

N = not detected (not followed by number)

Q = qualified (other data in qualification field)

R = midpoint of range (actual range in qualification field)

REFERENCE: An expanded citation of the reference is found in Appendix D. The abbreviated form used in this table is called "CODE" in the appendix. Unpublished sources are preceeded with "*". Those which begin and end with a "*" are also found in Appendix D.

RECORD 00001

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045072

NAME OF SAMPLE SOURCE... ACOCI BIAL NO. 1

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 05S 023W 17 — N1/2 OF SE OF SE QUAD — LAT/LONG... 59-44.73 N 153-13.85 W
STATE..... ALASKA — UTM ZONE... +05
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... ILIAMNA 1:250000, C-1 1:63360 — NORTHING... 6622884.
487025.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1956/06/13
TEMPERATURE (C)..... 92.2
WELL DEPTH (M)..... 2970.
GRADIENT (C/KM)..... 31.
OTHER SAMPLE INFORMATION.. CONSIDERABLE LOW PRESSURE GAS FROM 6000FT TO 9622FT PLUS OIL SHOWS.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00002

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001454

NAME OF SAMPLE SOURCE... ADAK ISLAND - UNNAMED HOT SPRING (1/2)

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 51-58.55 N 176-37.73 W
STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 2 KM NORTH OF ANDREW LAKE, ON EAST SIDE OF ANDREW BAY

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 76AMM220
POINT OF COLLECTION.. SPRING ISSUES FROM FRACTURES IN A LOW BENCH ONE METER ABOVE LOW TIDE
TEMPERATURE (C)..... 63.

WATER ANALYSIS

PH..... 7.4
ALKALINITY..... 420. AS HCO3

ANALYSIS IN PPM — ISOTOPES (O/OO)

AL....		CR.....		MG...	70.			
B.....	87.	F.....	0.49	NA...	6800.	SIO2.	218.	
BE....		FE(TOT).		NB...		SO4..	120.	
CA....	1500.	HCO3....	420.					
CL....	13500.							
CO....		K.....	460.					

REFERENCE AND IDENTIFICATION

COMPILED BY..... LIEB, RANDY
COMPILER AFFILIATION... US GEOLOGICAL SURVEY
REFERENCE..... *MILLER AND SMITH, 1977*

RECORD 00003

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001453

NAME OF SAMPLE SOURCE... ADAK ISLAND - UNNAMED HOT SPRING (2/2)

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 51-58.55 N 176-37.73 W

STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 2 KM NORTH OF ANDREW LAKE, ON EAST SIDE OF ANDREW BAY

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 76AMM221
POINT OF COLLECTION.. SPRING ISSUES THROUGH BEACH COBBLES AT SEA LEVEL
TEMPERATURE (C)..... 71.

WATER ANALYSIS
PH..... 7.5
ALKALINITY..... 430. AS HCO3
CHARGE IMBALANCE (% DIFF)... 104.7
ANALYSIS IN PPM

						ISOTOPES (0/00)	
AL....		CR.....		MG...	110.		
B.....	70.	F.....	0.55	NA...	610.	SIO2.	215.
BE....		FE(TOT).		NB...		SO4..	330.
CA....	1300.	HCO3....	430.				
CL....	12000.						
CO....		K.....	380.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... LIEB, RANDY
COMPILER AFFILIATION... US GEOLOGICAL SURVEY
REFERENCE..... *MILLER AND SMITH, 1977*

RECORD 00004

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001915
NAME OF SAMPLE SOURCE... AKUN STRAIT HOT SPRINGS
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 70S 111W LAT/LONG... 54-08.4 N 165-38.4 W
STATE..... ALASKA
MAP REFERENCE..... UNIMAK 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 8/10/80
TEMPERATURE (C)..... 42.8
DISCHARGE..... 15. L/MIN

WATER ANALYSIS
PH..... 7.47
SPECIFIC CONDUCTANCE..... 9800.
CHARGE IMBALANCE (% DIFF)... 2.4
ANALYSIS IN MG/L

						ISOTOPES (0/00)	
AL....		CR.....		MG...	46.		
B.....	5.7	F.....	0.67	NA...	1660.	SIO2.	50.
BE....		FE(TOT).		NB...		SO4..	222.
CA....	475.	HCO3....	82.				
CL....	3440.						
CO....		K.....	35.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00005

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001922
NAME OF SAMPLE SOURCE... AKUTAN HOT SPRINGS (SPRING A2)
LOCATION TOWNSHIP-RANGE COORDINATES

COUNTRY..... UNITED STATES 69S 112W LAT/LONG... 54-09. N 165-55. W
STATE..... ALASKA
MAP REFERENCE..... UNIMAK 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 8/07/80
TEMPERATURE (C)..... 84.
DISCHARGE..... 118. L/MIN

WATER ANALYSIS
PH..... 6.98
SPECIFIC CONDUCTANCE..... 1775.
CHARGE IMBALANCE (% DIFF)... 1.9
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	2.5			
B.....	11.	F.....	1.1	NA...	323.	SIO2.	145.	
BE....		FE(TOT).		NB...		SO4..	43.	
CA....	11.	HCO3....	172.					
CL....	424.							
CO....		K.....	25.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00006

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001923
NAME OF SAMPLE SOURCE... AKUTAN HOT SPRINGS (SPRING D2)
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 69S 112W LAT/LONG... 54-09. N 165-55. W
STATE..... ALASKA
MAP REFERENCE..... UNIMAK 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 8/08/80
TEMPERATURE (C)..... 58.8
DISCHARGE..... 20. L/MIN

WATER ANALYSIS
PH..... 6.82
SPECIFIC CONDUCTANCE..... 700.
CHARGE IMBALANCE (% DIFF)... 11.8
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	12.			
B.....	3.4	F.....	0.88	NA...	128.	SIO2.	91.	
BE....		FE(TOT).		NB...		SO4..	26.	
CA....	11.	HCO3....	128.					
CL....	136.							
CO....		K.....	9.3					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00007

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000207
NAME OF SAMPLE SOURCE... AKUTAN ISLAND - HOT SPRING B
LOCATION TOWNSHIP-RANGE COORDINATES

COUNTRY..... UNITED STATES 69S 110W LAT/LONG... 54-09.5 N 165-50.7 W
STATE..... ALASKA UTM ZONE... +03
COUNTY..... NORTHING... 6002170.
GEOLOGIC PROVINCE.. 445592.
MAP REFERENCE..... UNIMAK 1:250000
OTHER LOCALITY INFORMATION: .5 MILE SOUTH OF HOT SPRINGS BAY; WEST SIDE OF VALLEY.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1948/07/30
TEMPERATURE (C)..... 83.0

WATER ANALYSIS
PH..... 7.0
TOTAL DISSOLVED SOLIDS... 952.
ANALYSIS IN PPM

ISOTOPES (0/00)

AG....		CO3.....	N				
AL....		CR.....		MG...	1.4	SB...	N
AS....	N						
B.....	Q 5.59	F.....	0.7	NA...	288.	SIO2.	128.
BE....		FE(TOT).		NB...		SO4..	39.
CA....	9.9	HCO3....	Q 192.				
CL....	350.						
CO....		K.....	21.				

QUALIFICATION FIELD..... BORON CALCULATED FROM B2O3; HCO3 BY DIRECT TITRATION.

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BARTH, 1953

RECORD 00008

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045070
NAME OF SAMPLE SOURCE... AMOCO CATHEDRAL RIVER UNIT NO. 1

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 51S 083W 29 SW OF NE OF SE LAT/LONG... 55-44.05 N 162-07.30 W
STATE..... ALASKA UTM ZONE... +03
COUNTY..... NORTHING... 6180032.
GEOLOGIC PROVINCE.. 680724.
MAP REFERENCE..... COLD BAY 1:250000, C-1 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1974/06/28
TEMPERATURE (C)..... 142.8 AT (M).. 4356.
WELL DEPTH (M)..... 4359.
GRADIENT (C/KM)..... 32.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00009

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045077
NAME OF SAMPLE SOURCE... ANTONIO ZAPPA NO. 1, ALASKA CONSOLIDATED OIL CO. INC.

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 05S 023W 18 SE OF NE OF NE LAT/LONG... 59-44.1 N 153-14.7 W
STATE..... ALASKA
MAP REFERENCE..... ILIAMNA 1:250000, C-1 1:63360
OTHER LOCALITY INFORMATION: INISKIN PENINSULA; FITZ CREEK; 2370 FT SOUTH AND 290 FT WEST OF NE CORNER OF SECTION 18.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1961/11/07
TEMPERATURE (C)..... G 100. AT (M).. 2591.
WELL DEPTH (M)..... 3423.
PERTINENT LITHOLOGY..... HIGHLY FRACTURED AND FAULTED SILTSTONES AND VOLCANIC SEDIMENTS.
OTHER SAMPLE INFORMATION.. STRONG FLOWING SALT WATER AT THE 9740 FT DEPTH. WELL PLUGGED AND ABANDONED.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... BLASKO, 1976

RECORD 00010

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045048
NAME OF SAMPLE SOURCE... ARCO DRIFT RIVER ST. OIL WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 05N 016W 05 SE OF SW OF NW LAT/LONG... 60-33.25 N 157-07.92 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 6710871.
GEOLOGIC PROVINCE.. 543903.
MAP REFERENCE..... KENAI 1:250000, C-6 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1966/11/15
TEMPERATURE (C)..... 82.2
WELL DEPTH (M)..... 1644.
GRADIENT (C/KM)..... 51.
OTHER SAMPLE INFORMATION.. OFFSHORE
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00011

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045063
NAME OF SAMPLE SOURCE... ATLANTIC REF RAINBOW FED. NO. 1
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 08N 005W 31 NW OF SW LAT/LONG... 60-44. N 150-14. W
STATE..... ALASKA UTM ZONE... +06
COUNTY..... NORTHING... 6922211.
GEOLOGIC PROVINCE.. 539571.
MAP REFERENCE..... KENAI 1:250000, C-1 1:63360
OTHER LOCALITY INFORMATION: LAT/LONG ARE APPROXIMATE.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1965/12/20
TEMPERATURE (C)..... 28.3
WELL DEPTH (M)..... 910.
GRADIENT (C/KM)..... 34.
OTHER SAMPLE INFORMATION.. TD 914.4M NO WATER, OIL OR GAS FLOWS IN THIS WELL.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACHETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00012

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045062

NAME OF SAMPLE SOURCE... ATLANTIC REF RAINBOW FED. NO.2

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 08N 005W 01 NE OF NW — LAT/LONG... 60-49.2 N 150-04.5 W
STATE..... ALASKA — UTM ZONE... +06
COUNTY..... — NORTHING... 6931011.
GEOLOGIC PROVINCE.. — 547854.
MAP REFERENCE..... KENAI 1:250000, D-1 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1966/01/25
TEMPERATURE (C)..... 26.7
WELL DEPTH (M)..... 851.
GRADIENT (C/KM)..... 34.
OTHER SAMPLE INFORMATION.. NO WATER, OIL, OR GAS FLOWS IN THIS WELL.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00013

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000253

NAME OF SAMPLE SOURCE... BAILEY BAY HOT SPRINGS
WARING NUMBER..... 76

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 68S 089E 09 SE OF SW OF SW — LAT/LONG... 55-58.85 N 131-39.67 W
STATE..... ALASKA — UTM ZONE... +09
COUNTY..... — NORTHING... 6207201.
GEOLOGIC PROVINCE.. — 334150.
MAP REFERENCE..... KETCHIKAN D-5 1:63360

OTHER LOCALITY INFORMATION: 1.6 MILES WEST OF HEAD OF BAILEY BAY; 1.2 MILES NORTH OF MAUDE LAKE, BY A CREEK THAT EMPTIES INTO LAKE SHELOCKUM (MIRROR LAKE). WATER ISSUES FROM AT LEAST 9 SPRINGS ON THE SOUTH SIDE OF "WARM CREEK". VENTS ARE 150 FT ABOVE THE STREAM ON STEEP SLOPES.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/17 WARING, G.A.
SAMPLE NUMBER..... 91
TEMPERATURE (C)..... 85.0
DEPOSITS OR ALTERATION.... SMALL AMOUNTS OF CARBONATE DEPOSITS.
PERTINENT LITHOLOGY..... GRANITIC ROCKS WITH SOME WHITE-MARBLE PHASES IN WHICH MICA IS SCARCE, AND WITH PEGMATITE VEINS WITH LARGE FLAKES OF BLACK MICA.
OTHER SAMPLE INFORMATION.. SLIGHT TASTE AND ODOR OF H2S.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 413.

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	53.				
AL....	2.2	CR.....		MG...	2.1		
B.....	T	F.....		NA...		SIO2.	142.
BA....		FE+3....		NA+K.	Q 54.		
BE....		FE(TOT).	1.5	NB...		SO4..	32.
CA....	13.	HCO3....	27.	NO3..	T		
CL....	11.						

QUALIFICATION FIELD..... NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00014

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000249
NAME OF SAMPLE SOURCE... BARANOF HOT SPRINGS
WARING NUMBER..... 69

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 55S 066E 24 SW OF SE OF NE — LAT/LONG... 57-05.27 N 134-50.32 W
STATE..... ALASKA — UTM ZONE... +08
COUNTY..... — NORTHING... 6326462.
GEOLOGIC PROVINCE.. — 510102.
MAP REFERENCE..... SITKA A-3 1:63360
OTHER LOCALITY INFORMATION: SOUTHEASTERN ALASKA; NE OF SITKA.

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 84
TEMPERATURE (C)..... 51.0

WATER ANALYSIS
PH..... 9.6
CHARGE IMBALANCE (% DIFF)... 30.0
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....		LI...	0.06		
AL....	0.37	CR.....		MG...	0.14		
B.....	0.2	F.....	1.2	NA...	51.	SIO2.	70.
BE....		FE(TOT).		NB...		SO4..	68.
CA....	2.5	HCO3....	88.4				
CL....	11.						
CO....		K.....	1.2				

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00015

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021496
NAME OF SAMPLE SOURCE... BARANOF HOT SPRINGS - SPRING 7

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 55S 066E 24 SW OF SE OF NE — LAT/LONG... 57-05.10 N 164-50.34 W
STATE..... ALASKA
MAP REFERENCE..... SITKA A-3 1:63360
OTHER LOCALITY INFORMATION: UPPERMOST SPRING.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/06/22 WARING, G.A.
SAMPLE NUMBER..... 7
TEMPERATURE (C)..... 50.

WATER ANALYSIS
DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.
TOTAL DISSOLVED SOLIDS... 268.
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3..... N					
B.....		F.....		NA...	1.1	SIO2.	96.
BE....		FE(TOT). Q	1.8	NB...		SO4..	49.

CA.... 4.6 HCO3.... 93.
CL.... 9.8
CO.... K..... Q 58.
QUALIFICATION FIELD..... FE FROM FE203 + AL203; K IS CALCULATED.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00016

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021497
NAME OF SAMPLE SOURCE... BARANOF HOT SPRINGS - SPRING 8
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 55S 066E 24 SW OF SE OF NE LAT/LONG... 57-05.10 N 164-50.34 W
STATE..... ALASKA
MAP REFERENCE..... SITKA A-3 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1913/08/13 WEIGLE, W.G.
SAMPLE NUMBER..... 8
TEMPERATURE (C)..... 51.7
WATER ANALYSIS
DATE/ANALYST..... FURBER,F.B.; BUREAU OF CHEMISTRY, U.S. DEPT OF AGRICULTURE.
TOTAL DISSOLVED SOLIDS... 228.
CHARGE IMBALANCE (% DIFF)... 1.7
ANALYSIS IN PPM ISOTOPES (0/00)
AG.... CO3..... 35.
AL.... CR..... MG... 0.2
B..... N F..... NA... 55. SIO2.. 71.
BE.... FE(TOT). Q 0.6 NB... SO4.. 43.
CA.... 2.4 HCO3.... 30. NO3.. T
CL.... 2.8
CO.... K..... 2.3
QUALIFICATION FIELD..... FE IS FROM FE203 + AL203.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00017

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000247
NAME OF SAMPLE SOURCE... BARANOF ISLAND - FISH BAY AREA
WARING NUMBER..... 68
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 52S 064E 24 NE LAT/LONG... 57-21.90 N 135-23.20 W
STATE..... ALASKA UTM ZONE... +08
COUNTY..... NORTHING... 6358056.
GEOLOGIC PROVINCE.. 476942.
MAP REFERENCE..... SITKA B-5 1:63360
OTHER LOCALITY INFORMATION: N-NW OF MT ROSENBERG; N-NW OF FISH BAY CREEK ALONG A SMALL TRIBUTARY; 3 MILES EAST OF THE HEAD OF FISH BAY.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/06/26 WARING, G.A.
SAMPLE NUMBER..... 83
TEMPERATURE (C)..... 47.0

PERTINENT LITHOLOGY..... FRAGMENTS OF SOIL SHOW SCHIST WITH QUARTZ VEINS. THE SPRINGS ARE IN THE VICINITY OF THE EASTERN BORDER OF AN INTRUSIVE BELT.
OTHER SAMPLE INFORMATION.. SLIGHT TASTE AND ODOR OF H2S.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 393.
ANALYSIS IN PPM

						ISOTOPES (0/00)	
AG....		CO3.....	63.				
AL....	1.6	CR.....		MG...	2.4		
B.....	10.1	F.....		NA...		SIO2.	110.
BA....		FE+3....		NA+K.	Q 69.		
BE....		FE(TOT).	0.75	NB...		SO4..	24.
CA....	13.	HCO3....	43.	NO3..	T		
CL....	4.5						

OTHER ANALYTICAL DATA... B407 = 34. PPM.
QUALIFICATION FIELD..... NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION

COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00018

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001943

NAME OF SAMPLE SOURCE... BARNES LAKE(PARADISE) WARM SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 60S 080E 09 SW SW — LAT/LONG... 56-40.8 N 131-52.9 W
STATE..... ALASKA
MAP REFERENCE..... BRADFIELD CANAL C-6 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 9/25/79
TEMPERATURE (C)..... 26.
DISCHARGE..... 30. L/MIN

WATER ANALYSIS

PH..... 6.95
SPECIFIC CONDUCTANCE..... 455.
ANALYSIS IN MG/L

						ISOTOPES (0/00)	
AL....		CR.....		MG...	0.44		
B.....	0.05	F.....	2.3	NA...	72.	SIO2.	71.
BE....		FE(TOT).		NB...		SO4..	110.
CA....	8.9						
CL....	13.						
CO....		K.....	3.5				

REFERENCE AND IDENTIFICATION

COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00019

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000078

NAME OF SAMPLE SOURCE... BARNES LAKE(PARADISE) WARM SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 60S 080E 09 SW SW — LAT/LONG... 56-40.8 N 131-52.9 W
STATE..... ALASKA
MAP REFERENCE..... BRADFIELD CANAL C-6 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/25/79
TEMPERATURE (C)..... 26.
DISCHARGE..... 30. L/MIN
WATER ANALYSIS
PH..... 6.95
SPECIFIC CONDUCTANCE..... 455.
ANALYSIS IN MG/L

								ISOTOPES (0/00)
AL....		CR.....		MG...	0.44			
B.....	0.05	F.....	2.3	NA...	72.	SIO2.	71.	
BE....		FE(TOT).		NB...		SO4..	110.	
CA....	8.9							
CL....	13.							
CO....		K.....	3.5					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00020

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021470
NAME OF SAMPLE SOURCE... BATTLESHIP MTN - UNNAMED SPRING
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 08S 16 E1/2 OF NE OF NE LAT/LONG... 64-48. N 162-55. W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... SOLOMON D-2 1:63360
OTHER LOCALITY INFORMATION: 20 MILES NORTH OF GOLOVIN NEAR "MT KACHAUIK"; EAST SIDE OF EAST FORK "CLIFF CREEK" ON SMALL BEDROCK TERRACE ABOUT 75 FT ABOVE CREEK.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/00/00
SAMPLE NUMBER..... 4
TEMPERATURE (C)..... 17.
PERTINENT LITHOLOGY..... SPRING IS IN GRANODIORITE OF "KACHAUIK PLUTON" NEAR CONTACT WITH PRECAMBRIAN SCHISTOSE MARBLE.
OTHER SAMPLE INFORMATION.. H2S ODOR. TEMP MEASURED IN 1970.
WATER ANALYSIS
DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 9.2
CHARGE IMBALANCE (% DIFF)... 8.5
ANALYSIS IN PPM

								ISOTOPES (0/00)	
AG....		CO3.....		LI...	0.2	S....		DEL D OF WATER.....	-106.
AL....		CR.....		MG...	L 0.1	SB...		DEL O(18) OF WATER...	-13.8
B.....	0.66	F.....	9.	NA...	120.	SIO2.	56.		
BE....		FE(TOT).		NB...		SO4..	16.		
CA....	4.8	HCO3....	53.4						
CL....	120.								
CO....		K.....	1.2						

OTHER ANALYTICAL DATA... NH3 LESS THAN ONE MG/L. ISOTOPE DATA FROM J.R. O'NEIL.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00021

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0021469

NAME OF SAMPLE SOURCE... BATTLESHIP MTN - UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 08S 021W 16 — E1/2 OF NE OF NE — LAT/LONG... 64-48. N 162-55. W

STATE..... ALASKA

MAP REFERENCE..... SOLOMON D-2 1:63360

OTHER LOCALITY INFORMATION: 20 MILES NORTH OF GOLOVIN NEAR "MT KACHAUIK"; EAST SIDE OF EAST FORK "CLIFF CREEK" ON SMALL BEDROCK TERRACE ABOUT SEVENTY-FIVE FEET ABOUT CREEK.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1970/00/00

SAMPLE NUMBER..... 4

TEMPERATURE (C)..... 17.

PERTINENT LITHOLOGY..... SPRING IS IN GRANODIORITE OF "KACHAUIK PLUTON" NEAR CONTACT WITH PRECAMBRIAN SCHISTOSE MARBLE.

OTHER SAMPLE INFORMATION.. H2S ODOR

WATER ANALYSIS

DATE/ANALYST..... BARNES, R.B.

PH..... 8.97

CHARGE IMBALANCE (% DIFF)... 15.6

ANALYSIS IN PPM

AG....		CO3.....	10.	LI...		S....			
AL....		CR.....		MG...	0.2	SB...			
B.....	0.6	F.....		NA...	111.				
BE....		FE(TOT).		NB...		SO4..	16.		
CA....	14.	HCO3....	40.						
CL....	122.								
CO....		K.....	1.1						

ISOTOPES (O/OO)

DEL D OF WATER..... -106.

DEL O(18) OF WATER... -13.8

OTHER ANALYTICAL DATA... ISOTOPE DATA FROM J.R. O'NEIL.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00022

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0000255

NAME OF SAMPLE SOURCE... BELL ISLAND HOT SPRINGS

WARING NUMBER..... 79

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 68S 090E 31 — NE OF SW OF NW — LAT/LONG... 55-55.95 N 131-34.62 W

STATE..... ALASKA — UTM ZONE... +09

COUNTY..... — NORTHING... 6201422.

GEOLOGIC PROVINCE.. — 339661.

MAP REFERENCE..... KETCHIKAN D-5 1:63360

OTHER LOCALITY INFORMATION: 50 MILES NORTH OF KETCHIKAN ON THE WESTERN END OF BELL ISLAND. SPRINGS ISSUE FROM THE NORTH EDGE OF A SMALL CREEK ABOUT 400 YDS FROM AND 15 FT ABOVE HIGH-TIDE LIMIT; IN THE NARROW COVE INTO WHICH THE CREEK EMPTIES.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/06 WARING, G.A.

SAMPLE NUMBER..... 92

TEMPERATURE (C)..... 72.0

PERTINENT LITHOLOGY..... WATER ISSUES FROM A NARROW FISSURE 15 FT LONG, IN BIOTITE GRANITE CUT BY SMALL PEGMATITE VEINS; SLICK-EN-SIDES ARE EVIDENT.

OTHER SAMPLE INFORMATION.. LOWEST AND HOTTEST BASIN OF 5 BASINS; SLIGHT H2S ODOR; WATER IS CONDUCTED TO A BATHHOUSE.

WATER ANALYSIS

DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.

TOTAL DISSOLVED SOLIDS... 674.

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	13.				
AL....	Q 1.2	CR.....		MG...	1.0		
B.....		F.....		NA...		SIO2.	105.
BA....		FE+3....		NA+K.	Q 201.		
BE....		FE(TOT).		NB...		SO4..	129.
CA....	4.6	HCO3....	37.				
CL....	188.						

QUALIFICATION FIELD..... AL = AL + FE; NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION

COMPILED BY..... SHEARER, G., RENNER, J.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... WARING, 1917

RECORD 00023

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045028

NAME OF SAMPLE SOURCE... BERNICE LAKE POWER PLANT WELL DISCHARGE LINE

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 07N 012W 15 SE OF SE

STATE..... ALASKA

COUNTY.....

GEOLOGIC PROVINCE..

MAP REFERENCE..... KENAI 1:250000, C-4 1:63360

LAT/LONG... 60-41.53 N 151-23.17 W

UTM ZONE... +05

NORTHING... 6729378.

588126.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1964/05/11

TEMPERATURE (C)..... 20.5

WELL DEPTH (M)..... 53.

DISCHARGE..... E 189. L/MIN

OTHER SAMPLE INFORMATION.. SAMPLES MAY BE AFFECTED BY LOCAL HEAT OR HAVE STEAM ADDED. WELL WAS COLD BEFORE MARCH, 1964 ALASKAN EARTHQUAKE.

WATER ANALYSIS

PH..... 8.4

SPECIFIC CONDUCTANCE..... 605.

CHARGE IMBALANCE (% DIFF)... 9.4

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	12.				
AL....		CR.....		MG...	12.		
B.....		F.....		NA...	50.		
BE....		FE(TOT).		NB...		SO4..	41.
CA....	48.	HCO3....	127.	NO3..	1.8		
CL....	99.						
CO....		K.....	0.8				

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE

COMPILER AFFILIATION... UNIVERSITY OF ALASKA

REFERENCE..... *USGS, ANCHORAGE; ORAL COM.-R.A. JOHNSON, HOMER ELECTRIC

RECORD 00024

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021457

NAME OF SAMPLE SOURCE... BOWSER CREEK WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 06S 024W 11 NW OF SW OF NW OF NAT/LONG... 50-40.58 N 153-19.62 W
STATE..... ALASKA
MAP REFERENCE..... ILIAMNA C-1 1:63360
OTHER LOCALITY INFORMATION: ABANDONED WELL ON BOWSER CREEK.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1973/06/00 U.S. BUREAU OF MINES
OTHER SAMPLE INFORMATION.. GAS BUBBLING UP THROUGH WATER IN SURFACE CASING.

GAS ANALYSIS
DATE/ANALYST..... U.S. BUREAU OF MINES HELIUM OPERATION,AMARILLO,TX.
ANALYSIS IN VOLUME %

AR...	0.2		
CH4...	79.2	H2S..	N
C2H6..	N	N2...	20.4
CO2..	0.1	O2...	N
H2...	N		
HE...	0.01		

ISOTOPES (00/00)

OTHER ANALYTICAL DATA... TRACE OF PROPANE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BLASKO, 1976

RECORD 00025

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045055
NAME OF SAMPLE SOURCE... BP WAS ILLA ST. NO. 1 OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 17N 001W 33 NE OF NE OF SE LAT/LONG... 61-31.20 N 149-27.13 W
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... ANCHORAGE 1:250000, C-7 1:63360
UTM ZONE... +06
NORTHING... 6822961.
369563.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1963/02/22
TEMPERATURE (C)..... 36.7 AT (M).. 1469.
WELL DEPTH (M)..... 1478.
GRADIENT (C/KM)..... 40.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00026

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045068
NAME OF SAMPLE SOURCE... BP WHITE RIVER NO. 3

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 21S 019E 29 N1/2 OF NE OF SW LAT/LONG... 60-03.95 N 142-12.73 W
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... BERING GLACIER 1:250000, A-4 1:63360
UTM ZONE... +07
NORTHING... 6659155.
432522.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1963/06/30
TEMPERATURE (C)..... 66.7 AT (M).. 2077.

WELL DEPTH (M)..... 2129.
GRADIENT (C/KM)..... 32.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00027

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001911

NAME OF SAMPLE SOURCE... BRADFIELD HOT SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 65S 091E — LAT/LONG... 56-13.9 N 131-16.2 W
STATE..... ALASKA
MAP REFERENCE..... BRADFIELD CANAL A-4 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 10/2/79
TEMPERATURE (C)..... 57.
DISCHARGE..... 14. L/MIN

WATER ANALYSIS
PH..... 8.15
SPECIFIC CONDUCTANCE..... 885.
CHARGE IMBALANCE (% DIFF)... 10.1
ANALYSIS IN MG/L — ISOTOPES (O/OO)

AL....		CR.....		MG...	0.04			
B.....	0.1	F.....	2.5	NA...	118.	SIO2.	87.	
BE....		FE(TOT).		NB...		SO4..	235.	
CA....	13.	HCO3....	42.					
CL....	30.							
CO....		K.....	5.7					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00028

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000235

NAME OF SAMPLE SOURCE... CHENA HOT SPRINGS
WARING NUMBER..... 18

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 03N 008E 26 SW OF SE — LAT/LONG... 65-03.25 N 146-03.33 W
STATE..... ALASKA — UTM ZONE... +06
COUNTY..... — NORTHING... 7214170.
GEOLOGIC PROVINCE.. 02 — 544716.
MAP REFERENCE..... CIRCLE A-5 1:63360
OTHER LOCALITY INFORMATION: 62 MILES NE OF FAIRBANKS UP THE CHENA RIVER; 12.2 MILES E-SE OF "CHENA DOME".

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 30
TEMPERATURE (C)..... 57.0
DISCHARGE..... 840. L/MIN
PERTINENT LITHOLOGY..... SPRINGS ARE IN QUARTZ MONZANITE OF DARBY PLUTON LESS THAN 400M FROM CONTACT WITH DEVONIAN LIMESTONE.

WATER ANALYSIS
DATE/ANALYST..... WILLEY AND PRESSER
PH..... 9.1

CHARGE IMBALANCE (% DIFF)... 4.0

ANALYSIS IN MG/L

								ISOTOPES (0/00)	
AG....		CO3.....	8.	LI...	0.3	S....		DEL D OF WATER.....	-119.
AL....	0.028	CR.....		MG...	0.13	SB...		DEL O(18) OF WATER...	-15.6
B.....	0.16	F.....	18.6	NA...	110.	SIO2.	85.		
BE....		FE(TOT).		NB...		SO4..	68.		
BI....		GA.....		NH4..	Q 2.86				
CA....	1.3	HCO3....	114.7						
CL....	28.9								
CO....		K.....	3.3						

OTHER ANALYTICAL DATA... NH3 = 2.7 MG/L.
QUALIFICATION FIELD..... NH4 CALCULATED FROM NH3.

REFERENCE AND IDENTIFICATION

COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00029

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021503

NAME OF SAMPLE SOURCE... CHENA HOT SPRINGS - BATHOUSE SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 03N 008E 26 SW OF SE — LAT/LONG... 65-03.18 N 146-03.42 W
STATE..... ALASKA
MAP REFERENCE..... CIRCLE A-5 1:63360
OTHER LOCALITY INFORMATION: 62 MILES NE OF FAIRBANKS, UP THE CHENA RIVER.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/08/05
TEMPERATURE (C)..... 65.

WATER ANALYSIS

DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.
TOTAL DISSOLVED SOLIDS... 388.

ANALYSIS IN PPM

ISOTOPES (0/00)

AG....		CO3..... N		MG...	1.2		
AL....		CR.....		NA...		SIO2.	77.
B.....		F.....		NA+K.	Q 94.		
BA....		FE+3....		NB...		SO4..	78.
BE....		FE(TOT). Q 1.2					
CA....	2.3	HCO3....	118.				
CL....	26.						

QUALIFICATION FIELD..... FE(TOT) IS FE2O3 + AL2O3; NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00030

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021504

NAME OF SAMPLE SOURCE... CHENA HOT SPRINGS - SPRING A

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 03N 008E 26 SW OF SE — LAT/LONG... 65-03.18 N 146-03.42 W
STATE..... ALASKA
MAP REFERENCE..... CIRCLE A-5 1:63360
OTHER LOCALITY INFORMATION: JUST NORTH OF FILE NO. 0021503.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1912/00/00 LEBLANC, P.J.B.
TEMPERATURE (C)..... 51.1
WATER ANALYSIS
DATE/ANALYST..... REED, J.B.,BUREAU OF CHEMISTRY,U.S.DEPT AGRICULTURE
TOTAL DISSOLVED SOLIDS... 634.
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N	LI...	T		
B.....		F.....		NA...	6.	SIO2.	72.
BA.....		FE+3....		NA+K.	208.		
BE.....		FE(TOT).		NB...		SO4..	67.
CA....	2.9	HCO3....	494.				
CL....	38.						

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00031

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001908
NAME OF SAMPLE SOURCE... CHIEF SHAKES HOT SPRINGS
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 59S 085E 34 SE NE — LAT/LONG... 56-43.0 N 132-00.3 W
STATE..... ALASKA
MAP REFERENCE..... PETERSBURG C-1, 1:63,360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 6/19/15
TEMPERATURE (C)..... 52.
DISCHARGE..... 441. L/MIN
WATER ANALYSIS
CHARGE IMBALANCE (% DIFF)... 5.7
ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	18.				
AL....		CR.....		MG...	0.4		
B.....		F.....		NA...	87.	SIO2.	108.
BE.....		FE(TOT).		NB...		SO4..	142.
CA....	13.	HCO3....	43.				
CL....	6.5						
CO....		K.....	9.3				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00032

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001907
NAME OF SAMPLE SOURCE... CHIEF SHAKES HOT SPRINGS
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 59S 085E 34 SE NE — LAT/LONG... 56-43.0 N 132-00.3 W
STATE..... ALASKA
MAP REFERENCE..... PETERSBURG C-1, 1:63,360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 7/7/76 SLOAN, C.F.
TEMPERATURE (C)..... 50.5
DISCHARGE..... 238. L/MIN

WATER ANALYSIS
DATE/ANALYST..... USGS, DENVER LAB
PH..... 7.1
SPECIFIC CONDUCTANCE..... 390.
CHARGE IMBALANCE (% DIFF)... 4.6
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	0.1			
B.....	0.03	F.....		NA...	73.	SIO2.	70.	
BE....		FE(TOT).		NB...		SO4..	140.	
CA....	15.	HCO3....	45.					
CL....	6.3							
CO....		K.....	3.0					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00033

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001906
NAME OF SAMPLE SOURCE... CHIEF SHAKES HOT SPRINGS

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	59S 085E	34	SE NE	LAT/LONG...	56-43.0 N 132-00.3 W
STATE.....	ALASKA					
MAP REFERENCE.....	PETERSBURG C-1, 1:63,360					

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/18/79
TEMPERATURE (C)..... 45.
DISCHARGE..... 135. L/MIN
WATER ANALYSIS
PH..... 8.05
SPECIFIC CONDUCTANCE..... 415.
CHARGE IMBALANCE (% DIFF)... 5.6
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	0.2			
B.....		F.....	1.3	NA...	82.	SIO2.	63.	
BE....		FE(TOT).		NB...		SO4..	149.	
CA....	14.	HCO3....	50.					
CL....	4.6							
CO....		K.....	2.9					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00034

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001905
NAME OF SAMPLE SOURCE... CHIEF SHAKES HOT SPRINGS

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	59S 085E	34	SE NE	LAT/LONG...	56-43.0 N 132-00.3 W
STATE.....	ALASKA					
MAP REFERENCE.....	PETERSBURG C-1, 1:63,360					

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/18/79
TEMPERATURE (C)..... 50.4

DISCHARGE..... 320. L/MIN
WATER ANALYSIS
PH..... 7.90
SPECIFIC CONDUCTANCE..... 427.
CHARGE IMBALANCE (% DIFF)... 14.8
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	0.098			
B.....		F.....	1.3	NA...	85.	SIO2.	70.	
BE....		FE(TOT).		NB...		SO4..	137.	
CA....	14.	HCO3....	49.					
CL....	4.9							
CO....		K.....	3.0					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00035

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000237
NAME OF SAMPLE SOURCE... CIRCLE HOT SPRINGS
WARING NUMBER..... 19
LOCATION — TOWNSHIP-RANGE: 08N 015E 34 NE OF NW — COORDINATES:
COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
LAT/LONG... 65-28.98 N 144-38.17 W
UTM ZONE... +06
NORTHING... 7264162.
608796.
MAP REFERENCE..... CIRCLE B-2 1:63360
OTHER LOCALITY INFORMATION: SW OF CIRCLE AT THE BASE OF THE MTNS THAT FORM THE SOUTHERN BORDER OF THE WIDE FLAT VALLEY OF THE YUKON RIVER; NORTH SIDE OF "THE MASTODON DOME".
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 31
TEMPERATURE (C)..... 57.
DISCHARGE..... 494. L/MIN
WATER ANALYSIS
PH..... 7.6
CHARGE IMBALANCE (% DIFF)... 9.9
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AG....		CO3.....		LI...	0.34			
AL....	0.012	CR.....		MG...	0.3			
B.....	1.1	F.....	9.7	NA...	230.	SIO2.	95.	
BE....		FE(TOT).		NB...		SO4..	96.	
BI....		GA.....		NH4..	Q 0.11			
CA....	20.8	HCO3....	184.6					
CL....	249.							
CO....		K.....	9.8					

OTHER ANALYTICAL DATA... NH3 = 0.1 MG/L.
QUALIFICATION FIELD..... NH4 CALCULATED FROM NH3.
REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00036

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021445

NAME OF SAMPLE SOURCE... CIRCLE HOT SPRINGS - NORTHERNMOST SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 08N 015E 34 NE OF NW LAT/LONG... 65-28.98 N 144-38.22 W
STATE..... ALASKA
MAP REFERENCE..... CIRCLE B-2 1:63360
OTHER LOCALITY INFORMATION: SW OF CIRCLE AT THE BASE OF THE MTNS THAT FORM THE SOUTHERN BORDER OF THE FLAT VALLEY OF THE YUKON RIVER; ON THE NORTH SIDE OF THE "MASTODON DOME".

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/07/12 WARING, G.A.
SAMPLE NUMBER..... 1
DEPOSITS OR ALTERATION.... THIN COATS OF LIME CARBONATE FOUND ON PEBBLES ALONG THE RUNOFF STREAMS; SMALL AMOUNTS OF SULPHUR AN ALUM DEPOSITS.
OTHER SAMPLE INFORMATION.. CO2 GIVEN OFF. WATER RAPIDLY CORRODES IRON VESSELS.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 816.
CHARGE IMBALANCE (% DIFF)... 5.2
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....	3.7	CR.....		MG...	2.1			
B.....		F.....		NA...	248.	SIO2.	82.	
BE....		FE(TOT).	1.3	NB...		SO4..	98.	
CA....	29.	HCO3....	173.	NO3..	N			
CL....	252.							
CO....		K.....	8.6					

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00037

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021472

NAME OF SAMPLE SOURCE... CLEAR CREEK AREA

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 07S 018W 27 SW LAT/LONG... 64-51.00 N 162-18.00 W
STATE..... ALASKA
MAP REFERENCE..... SOLOMON D-1 1:63360
OTHER LOCALITY INFORMATION: 16 MILES NORTH OF ELIM.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 6
TEMPERATURE (C)..... 67.
PERTINENT LITHOLOGY..... SPRINGS ARE IN QUARTZ MONZONITE OF "DARBY PLUTON" NEAR (LESS THAN 400M) FROM CONTACT WITH DEVONIAN LIMESTONE.

WATER ANALYSIS

DATE/ANALYST..... BARNES, R.B.
PH..... 9.43
CHARGE IMBALANCE (% DIFF)... 12.8
ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	34.					
AL....		CR.....		MG...	0.06			
B.....	0.2	F.....		NA...	54.			
BE....		FE(TOT).		NH...		SO4..	25.	
CA....	5.6	HCO3....	34.					
CL....	4.9							
CO....		K.....	1.4					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00038

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000219
NAME OF SAMPLE SOURCE... CLEAR CREEK AREA

LOCATION		TOWNSHIP-RANGE		COORDINATES	
COUNTRY.....	UNITED STATES	07S 018W 27 SW		LAT/LONG...	64-51.00 N 162-18.00 W
STATE.....	ALASKA			UTM ZONE...	+03
COUNTY.....				NORTHING...	7194275.
GEOLOGIC PROVINCE..	SEWARD PENINSULA			628012.	
MAP REFERENCE.....	SOLOMON D-1 1:63360				

OTHER LOCALITY INFORMATION: 26 KM NORTH OF ELIM; SOUTH OF EAST FLOWING TRIBUTARY

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 6
TEMPERATURE (C)..... 67.
DISCHARGE..... R 90. L/MIN
PERTINENT LITHOLOGY..... SPRINGS ARE IN QUARTZ MONZONITE OF "DARBY PLUTON", LESS THAN 400 METERS FROM CONTACT WITH DEVONIAN LIMESTONE; PLUTON AND LIMESTONE CONTACT IS INFERRED TO BE A MAJOR FAULT (MILLER AND OTHERS, 1972) TRENDING N18E.

WATER ANALYSIS
DATE/ANALYST..... 1974/00/00
PH..... 9.43
CHARGE IMBALANCE (% DIFF)... 74.8
ANALYSIS IN MG/L

								ISOTOPES (O/OO)	
AG....		CO3.....		LI...		S....		DEL D OF WATER.....	-119.
AL....		CR.....		MG...	0.06	SB...		DEL O(18) OF WATER...	-15.6
B.....	0.2	F.....		NA...	54.				
BE....		FE(TOT).		NB...		SO4..	25.		
CA....	5.6	HCO3....	34.						
CL....	4.9								
CO.....		K.....	1.4						

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00039

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001919
NAME OF SAMPLE SOURCE... COLD BAY

LOCATION		TOWNSHIP-RANGE	COORDINATES	
COUNTRY.....	UNITED STATES	57S 087W	LAT/LONG...	55-13.3 N 162-24.7 W
STATE.....	ALASKA			
MAP REFERENCE.....	COLD BAY 1:250,000			

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 7/6/80
TEMPERATURE (C)..... 53.6
DISCHARGE..... 100. L/MIN

WATER ANALYSIS
PH..... 6.70
SPECIFIC CONDUCTANCE..... 4650.
CHARGE IMBALANCE (% DIFF)... 3.3

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AL....		CR.....		MG...	5.7			
B.....	25.	F.....	0.67	NA...	751.	SIO2.	125.	
BE....		FE(TOT).		NB...		SO4..	14.	
CA....	162.	HCO3....	248.					
CL....	1370.							
CO....		K.....	16.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA IND MOORMAN, 1981

RECORD 00040

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045067
NAME OF SAMPLE SOURCE... COLORADO OIL AND GAS COREHOLE NO. 1

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 27S 035E 20 — SE OF SW OF NE OF — NAT/LONG... 59-33.95 N 139-31.43 W
STATE..... ALASKA — UTM ZONE... +07
COUNTY..... — NORTHING... 6603780.
GEOLOGIC PROVINCE.. — 583412.
MAP REFERENCE..... YAKUTAT 1:250000, C-5 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1961/06/02
TEMPERATURE (C)..... 33.3 AT (M).. 981.
WELL DEPTH (M)..... 985.
GRADIENT (C/KM)..... 32.
OTHER SAMPLE INFORMATION.. USED AS A WATER WELL.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00041

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021494
NAME OF SAMPLE SOURCE... COPPER CENTER - HUDDLESTON WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
MAP REFERENCE..... VALDEZ 1:250000
OTHER LOCALITY INFORMATION: NEAR COPPER CENTER.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1959/09/24 HUDDLESTON, N. (OWNER)
SAMPLE NUMBER..... 17

WATER ANALYSIS
DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S., PALMER, ALASKA
PH..... 7.4
TOTAL DISSOLVED SOLIDS... 846.
CHARGE IMBALANCE (% DIFF)... 1.1

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3....	N					
AL....		CR.....		MG...	27.			
B.....		F.....		NA...	196.	SIO2.	46.	
BE....		FE(TOT).		NB...		SO4..	15.	
CA....	77.	HCO3....	407.					

CL.... 280.
CO.... K.... 5.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00042

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021495
NAME OF SAMPLE SOURCE... COPPER CENTER - UNNAMED SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
OTHER LOCALITY INFORMATION: 2.5 MILES NE OF COPPER CENTER.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/07/13 GRANTZ, A.
SAMPLE NUMBER..... 18
WATER ANALYSIS
DATE/ANALYST..... WHITEHEAD, H.C.
PH..... 6.8
TOTAL DISSOLVED SOLIDS... 23356.
CHARGE IMBALANCE (% DIFF)... 0.1
ANALYSIS IN PPM ISOTOPES (0/00)

AG....		CO3....	N				
AL....		CR.....		MG...	14.		
B.....		F.....		NA...	5910.	SIO2.	18.
BE....		FE(TOT).		NB...		SO4..	8.9
CA....	3040.	HCO3....	65.				
CL....	14500.						
CO....		K.....	33.				

GAS ANALYSIS
ANALYSIS IN VOLUME % ISOTOPES (00/0)

AR...	0.1		
CH4..	44.6	H2S..	N
C2H6.	N	N2...	55.
CO2..	0.1	O2...	T
H2...	N		
HE...	T		

OTHER ANALYTICAL DATA... GAS:SAMPLE COLLECTED 1960/08/07: PROPANE = 0.01 %, TRACE OF CYCLOPENTANE, TRACE OF HECTANES +.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00043

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021464
NAME OF SAMPLE SOURCE... COPPER RIVER BASIN - UNNAMED SEEP
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: E-NE OF GULKANA AIRFIELD.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1955/26/05 NICHOLS,D.R.

WATER ANALYSIS
DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
SPECIFIC CONDUCTANCE..... 16400.
TOTAL DISSOLVED SOLIDS... 8990.
ANALYSIS IN PPM

AG....		CO3.....	N				
AL....		CR.....		MG...	392.		
BA....		FE+3....		NA+K.	670.		
BE....		FE(TOT).		NB...		SO4..	60.
CA....	2080.	HCO3....	226.				
CL....	5680.						

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961; GRANTZ AND OTHERS, 1962

RECORD 00044

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021463
NAME OF SAMPLE SOURCE... COPPER RIVER BASIN - UNNAMED WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 001W LAT/LONG... 62-09. N 145-27. W
STATE..... ALASKA B&M: COPPER RIVER
OTHER LOCALITY INFORMATION: NEAR GULKANA AIRFIELD.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1954/12/28 ALASKA DISTRICT,CORPS OF ENGINEERS,U.S. ARMY
SAMPLE NUMBER..... 12
WELL DEPTH (M)..... 107.8
WATER ANALYSIS
DATE/ANALYST..... WHETSTONE, G.W.
PH..... 7.4
TOTAL DISSOLVED SOLIDS... 10200.
ANALYSIS IN PPM

AG....		CO3.....	N				
AL....		CR.....		MG...	520.		
B.....		F.....		NA...	1150.	SIO2.	19.
BE....		FE(TOT).	2.2	NB...		SO4..	N
CA....	1900.	HCO3....	53.				
CL....	6470.						
CO....		K.....	44.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961; GRANTZ AND OTHERS, 1962

RECORD 00045

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045032
NAME OF SAMPLE SOURCE... CRAIG HOT SPRINGS (DALTON HOT SPRINGS)
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 75S 077E 24 LAT/LONG... 55-20.04 N 133-38.46 W
STATE..... ALASKA UTM ZONE... +08
COUNTY..... NORTHING... 6134372.
GEOLOGIC PROVINCE.. 03 586482.
MAP REFERENCE..... CRAIG 1:250000
OTHER LOCALITY INFORMATION: INACCURATE LOCATION, BUT NEAR TOWN OF CRAIG.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1924/08/18
TEMPERATURE (C)..... 43.5
OTHER SAMPLE INFORMATION.. PEOPLE OF CRAIG PLANNED TO USE THE SPRINGS FOR A BATH.
WATER ANALYSIS
ANALYSIS IN MG/L ISOTOPES (0/00)

AG....		CO3.....	16.					
AL.....		CR.....		MG...	1.5			
B.....		F.....		NA...	30.	SIO2.	57.	
BE.....		FE(TOT).	0.02	NB...		SO4..	20.	
CA....	3.9	HCO3....	24.	NO3..	N			
CL....	8.4							

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *WARING, G.A., USGS

RECORD 00046

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021475
NAME OF SAMPLE SOURCE... DIVISION BM HOT SPRINGS
WARING NUMBER..... 3
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 66-22.02 N 156-46.02 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... SHUNGNAK 1:250000
OTHER LOCALITY INFORMATION: 38 MILES SOUTH OF KOBUK ON NORTH SIDE OF PURCELL MTN; LARGE OPEN MEADOW 200 YDS BY 1000 YDS AT THE SELAWIK RIVER.
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 11
TEMPERATURE (C)..... Q 55.
PERTINENT LITHOLOGY..... SPRINGS ARE IN LOWER CRETACEOUS ANDESITE NEAR PROMINENT N70W TRENDING LINEAMENT AND ABOUT 1.5 MILES NORTH OF QUARTZ MONZONITE OF "WHEELER CREEK PLUTON".
QUALIFICATION FIELD..... TEMP ESTIMATED AT 50-60 DEGREES C.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00047

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021476
NAME OF SAMPLE SOURCE... DULBI HOT SPRINGS
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 65-16.02 N 155-16.80 W
STATE..... ALASKA
MAP REFERENCE..... MELOZITNA B-5 1:63360
OTHER LOCALITY INFORMATION: 19.5 MILES N61W OF MELOZI SPRINGS, IN A SMALL CLEARING ALONG WEST SIDE OF SOUTH-FLOWING TRIBUTARY TO DULBI RIVER.
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 16
TEMPERATURE (C)..... Q 55.
PERTINENT LITHOLOGY..... SPRINGS OCCUR IN HORNFELSIC GRAYWACKE AND MUDSTONE OF CRETACEOUS AGE.
QUALIFICATION FIELD..... TEMP ESTIMATED AT 50-60 DEGREES C. NO CHEM ANALYSIS AVAILABLE.
REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00048

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000239

NAME OF SAMPLE SOURCE... EAST COLD BAY - UNNAMED HOT SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 57S 088W — LAT/LONG... 55-13.02 N 162-28.98 W
STATE..... ALASKA — UTM ZONE... +03
COUNTY..... — NORTHING... 6121576.
GEOLOGIC PROVINCE.. — 660107.
MAP REFERENCE..... COLD BAY 1:250000
OTHER LOCALITY INFORMATION: 9L MILE EAST OF COLD BAY; 6.9 MILES W-NW OF MT DUTTON.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 64
TEMPERATURE (C)..... 54.0

WATER ANALYSIS

PH..... 7.5

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....		LI...	1.5			
AL....		CR.....		MG...	7.0			
B.....	32.	F.....	0.1	NA...	780.	SIO2.	68.	
BE....		FE(TOT).	9.9					
CA....	229.	HCO3....	694.					
CL....	1390.							
CO....		K.....	34.					

REFERENCE AND IDENTIFICATION

COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00049

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045045

NAME OF SAMPLE SOURCE... ECHOOKA R. WEST SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 02S 020E 19 SE OF NW OF NE — LAT/LONG... 69-15.58 N 147-22.83 W
STATE..... ALASKA
MAP REFERENCE..... SAGAVANIRKTOK B-2 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/05/10
TEMPERATURE (C)..... 7.0
DISCHARGE..... R 37376. L/MIN
OTHER SAMPLE INFORMATION.. BELOW 20 DEGREES C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER ANALYSIS

PH..... 7.9
SPECIFIC CONDUCTANCE..... 257.
ALKALINITY..... 107. AS CACO3
TOTAL DISSOLVED SOLIDS... 143.
CHARGE IMBALANCE (% DIFF)... 1.3

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....		CR.....		MG...	9.8			

AS....		CS.....		MN...	N		
B.....		F.....	0.3	NA...	1.3	SIO2.	5.8
BE....		FE(TOT).	0.05	NB...		SO4..	24.
CA....	36.	HCO3....	131.	NO3..	Q 0.03		
CD....		H2S.....		PO4..	N		
CL....	1.3						
CO....		K.....	0.2				

QUALIFICATION FIELD..... NO3 = NO3 + NO4.

REFERENCE AND IDENTIFICATION
- COMPILED BY..... MACBETH, JOYCE
- COMPILER AFFILIATION... UNIVERSITY OF ALASKA
- REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00050

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001918

- NAME OF SAMPLE SOURCE... EGG ISLAND

LOCATION — TOWNSHIP-RANGE: 60S 090W — COORDINATES: LAT/LONG... 54-56.1 N 162-54.6 W
- COUNTRY..... UNITED STATES
- STATE..... ALASKA
- MAP REFERENCE..... FALSE PASS D-3, 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
- DATE/COLLECTOR..... 8/21/80
- TEMPERATURE (C)..... 50.6
- DISCHARGE..... L/MIN

WATER ANALYSIS
- PH..... 7.66
- SPECIFIC CONDUCTANCE..... 12300.
- CHARGE IMBALANCE (% DIFF)... 3.0

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AL....		CR.....		MG...	6.2		
B.....	33.	F.....	0.37	NA...	2030.	SIO2.	47.
BE....		FE(TOT).		NB...		SO4..	27.
CA....	869.	HCO3....	67.				
CL....	4505.						
CO....		K.....	18.				

REFERENCE AND IDENTIFICATION
- COMPILED BY..... MARINER, R.H.
- COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
- REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00051

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045152

- NAME OF SAMPLE SOURCE... EKALUAKAT R. SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES: LAT/LONG... 69-35.35 N 142-18.00 W
- COUNTRY..... UNITED STATES
- STATE..... ALASKA
- MAP REFERENCE..... DEMARCATION POINT C-3 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
- DATE/COLLECTOR..... 1975/04/22
- TEMPERATURE (C)..... 6.4
- DISCHARGE..... 8664. L/MIN
- OTHER SAMPLE INFORMATION.. BELOW 20 DEGREES C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER ANALYSIS

PH..... 7.9
SPECIFIC CONDUCTANCE..... 350.
ANALYSIS IN MG/L

								ISOTOPES (0/00)
AL....		CR.....		MG...	4.5			
B.....		F.....	0.4	NA...	0.6	SIO2.	3.9	
BE....		FE(TOT).		NB...		SO4..	25.	
CA....		HCO3....	165.	NO3..	Q 0.07			
CA+MG.	69.							
CD....		H2S.....		PO4..	N			
CL....	3.6							

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00052

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001916
NAME OF SAMPLE SOURCE... FALSE PASS
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 61S 093W LAT/LONG... 54-55.8 N 163-14.4 W
STATE..... ALASKA
MAP REFERENCE..... FALSE PASS 1: 250,000
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 7/2/80
TEMPERATURE (C)..... 62.2
DISCHARGE..... 225. L/MIN
WATER ANALYSIS
PH..... 8.44
SPECIFIC CONDUCTANCE..... 375.
CHARGE IMBALANCE (% DIFF)... 1.7
ANALYSIS IN MG/L

								ISOTOPES (0/00)
AL....		CR.....		MG...	0.01			
B.....	1.5	F.....	0.3	NA...	51.	SIO2.	63.	
BE....		FE(TOT).		NB...		SO4..	47.	
CA....	20.	HCO3....	45.					
CL....	53.							
CO....		K.....	2.6					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00053

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045046
NAME OF SAMPLE SOURCE... FARMS RED SHIRT LAKE NO. 1 OIL WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 18N 005W 24 NW OF NE OF NE LAT/LONG... 61-38.53 N 150-05.72 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 6837549.
GEOLOGIC PROVINCE.. 02 653890.
MAP REFERENCE..... TYONEK 1:250000, C-1 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1968/12/13
TEMPERATURE (C)..... 76.7

WELL DEPTH (M)..... 632.
GRADIENT (C/KM)..... 123.
PERTINENT LITHOLOGY..... DRILLED TO JURASSIC GRANITE.
OTHER SAMPLE INFORMATION.. NO RECORD OF ANY FLUIDS.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00054

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045039
NAME OF SAMPLE SOURCE... FLOOD CREEK SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 05S 018E 28 SE OF NE OF SW LAT/LONG... 68-58.66 N 147-51.50 W
STATE..... ALASKA
MAP REFERENCE..... PHILLIP SMITH MTNS D-2 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/04/20
TEMPERATURE (C)..... 7.2
DISCHARGE..... R 91740.6L/MIN
OTHER SAMPLE INFORMATION.. ANOTHER SAMPLE FROM SPRING NO. 45038
WATER ANALYSIS
PH..... 8.0
SPECIFIC CONDUCTANCE..... 222.
ANALYSIS IN MG/L ISOTOPES (O/OO)

B.....		F.....	0.4	NA...	0.3	SIO2.	5.3
BE.....		FE(TOT).		NB...		SO4..	11.
CA.....		HCO3....	131.				
CA+MG.	52.						
CO.....		H2S.....		PO4..	0.01		
CL.....	0.9						
CO.....		K.....	0.5				

OTHER ANALYTICAL DATA... NITRATE + NITRITE = 0.05 MG/L.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00055

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045038
NAME OF SAMPLE SOURCE... FLOOD CREEK SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 05S 018E 28 SE OF NE OF SW LAT/LONG... 68-58.66 N 147-51.50 W
STATE..... ALASKA
MAP REFERENCE..... PHILLIP SMITH MTNS D-2 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1973/05/10
TEMPERATURE (C)..... 8.5
DISCHARGE..... R 141008.0/MIN
OTHER SAMPLE INFORMATION.. BELOW 20 DEGREES C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.
WATER ANALYSIS
PH..... 8.2
SPECIFIC CONDUCTANCE..... 240.

ALKALINITY..... 112. AS CACO3
TOTAL DISSOLVED SOLIDS... 137.
CHARGE IMBALANCE (% DIFF)... 1.6
ANALYSIS IN MG/L — ISOTOPES (0/00)

AG....		CO3.....	N					
AL....		CR.....		MG...	8.8			
AS....		CS.....		MN...	N			
B.....		F.....	0.6	NA...	0.4	SIO2.	6.3	
BE....		FE(TOT).	0.030	NB...		SO4..	14.	
CA....	38.	HCO3....	136.					
CL....	1.3							
CO....		K.....	0.1					

OTHER ANALYTICAL DATA... NITRATE + NITRITE = 0.05 MG/L; P = NONE.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00056

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021492
NAME OF SAMPLE SOURCE... GAKONA - UNNAMED SPRING
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
OTHER LOCALITY INFORMATION: IN RIVER BLUFF NEAR GAKONA.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1958/09/23 FERRIANS, O.J.JR
SAMPLE NUMBER..... 14
WATER ANALYSIS
DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
PH..... 7.8
TOTAL DISSOLVED SOLIDS... 761.
CHARGE IMBALANCE (% DIFF)... 1.3
ANALYSIS IN PPM — ISOTOPES (0/00)

AL....		CR.....		MG...	50.			
B.....		F.....		NA...	100.	SIO2.	32.	
BE....		FE(TOT).		NB...		SO4..	161.	
CA....	91.	HCO3....	458.					
CL....	90.							
CO....		K.....	8.4					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00057

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045016
NAME OF SAMPLE SOURCE... GAS ROCKS HOT SPRING NEAR KANATAK, NO. AKRG 40135
WARING NUMBER..... 56
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 27S 044W 09 NW OF SW — LAT/LONG... 57-51.90 N 156-29.94 W
STATE..... ALASKA — UTM ZONE... +04
COUNTY.....
GEOLOGIC PROVINCE.. 01 — NORTHING... 6416250.
648392.

MAP REFERENCE..... UGASHIK 1:250000, D-2 1:63360
OTHER LOCALITY INFORMATION: ON GAS ROCKS PENINSULA

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1977/08/25 MCCOY, GEORGE USGS
SAMPLE NUMBER..... CQ135GM77
TEMPERATURE (C)..... 52.8
DISCHARGE..... E 57. L/MIN
OTHER SAMPLE INFORMATION.. ONE OF SEVERAL SPRINGS ON THE GAS ROCKS PENINSULA. SHOULD BE PUBLISHED IN 1977 ANNUAL REPORT.

WATER ANALYSIS
PH..... 5.9
SPECIFIC CONDUCTANCE..... 65850.
ANALYSIS IN MG/L

AG....		CO3.....		LI...	44.	S....	
AL....		CR.....		MG...	460.	SB...	
AS....		CS.....	3.6				
B.....	360.	F.....	0.13	NA...	17700.	SIO2.	120.
BE....		FE(TOT).		NB...		SO4..	140.
BI....		GA.....		NH4..	17.		
BR....	92.						
CA....	1500.	HCO3....	1240.				
CD....		H2S.....	1.7				
CL....	32000.	I.....	5.				
CO....		K.....	450.	RB...	2.1		

ISOTOPES (O/OO)
DEL D OF WATER..... -37.9
DEL O(18) OF WATER... +0.42

GAS ANALYSIS
ANALYSIS IN VOLUME %

AR...	L 0.02	HG...	
CH4..	0.04		
C2H6.	L 0.05	N2...	0.54
CO2..	98.40	O2...	0.02
H2...	L 0.01		
HE...	L 0.02		

ISOTOPES (OO/O)
DEL C(13) OF CO2..... -6.36

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... BARNES AND MCCOY, 1979

RECORD 00058

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000201
NAME OF SAMPLE SOURCE... GEYSER BIGHT - THERMAL SPRING G1
MARING NUMBER..... 41

LOCATION — TOWNSHIP-RANGE
COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..

COORDINATES
LAT/LONG... 53-13.38 N 168-28.62 W
UTM ZONE... +02
NORTHING... 5899152.
669151.

MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: 3.5 MILES SE OF GEYSER BIGHT; SOUTH OF INANUDAK BAY.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/08/17
TEMPERATURE (C)..... 100.0
DISCHARGE..... R 258. L/MIN

WATER ANALYSIS
PH..... 7.5
TOTAL DISSOLVED SOLIDS... 1741.

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	Q 33.	LI...	3.		
AL....		CR.....		MG...	0.1	SB...	N
AS....	Q 0.005						
B.....	Q 24.69	F.....	1.9	NA...	441.	SIO2.	303.
BE....		FE(TOT).	L 0.5	NB...		SO4..	160.
BI....		GA.....		NH4..	L 0.1		
CA....	15.	HCO3....	N	NO3..	N		
CL....	569.						
CO....		K.....	33.				

OTHER ANALYTICAL DATA... AS04 = 0.1 PPM; SB03 = NONE; B203 = 159. PPM.
QUALIFICATION FIELD..... AS CALCULATED FROM AS04; BORON CALCULATED FROM B203;C03 BY DIRECT TITRATION.
REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00059

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021452

NAME OF SAMPLE SOURCE... GEYSER BIGHT - THERMAL SPRING #1
WARING NUMBER..... 41
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — LAT/LONG... 53-12.78 N 168-27.78 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: 4.5 MILES SE OF GEYSER BIGHT.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/08/17
SAMPLE NUMBER..... 4
TEMPERATURE (C)..... 101.
WATER ANALYSIS
PH..... 6.9
TOTAL DISSOLVED SOLIDS... 1365.
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	Q 10.	LI...	2.		
AL....	Q 0.5	CR.....		MG...	0.2	SB...	N
AS....	Q 3.83						
B.....	Q 24.38	F.....	1.2	NA...	350.	SIO2.	150.
BE....		FE(TOT).	Q 0.1	NB...		SO4..	130.
BI....		GA.....		NH4..	Q 0.1		
CA....	40.	HCO3....	Q 29.	NO3..	N		
CL....	482.						
CO....		K.....	18.				

OTHER ANALYTICAL DATA... AS04 = 7.1 PPM; B203 = 157. PPM.
QUALIFICATION FIELD..... AL, FE, AND NH4 VALUES ARE DETECTION LIMITS. THESE MIGHT NOT BE PRESENT; BORON CALCULATED FROM B203, AND AS CALCULATED FROM AS04. C03 AND HC03 BY DIRECT TITRATION. ALKALINITY DUE TO SILICATE AND BORATE INCLUDED.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00060

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021473

NAME OF SAMPLE SOURCE... GRANITE MOUNTAIN (SWEEPSTAKES)
WARING NUMBER..... 8

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... CANDLE B-5 1:63360
LAT/LONG... 65-22.02 N 161-15.00 W
OTHER LOCALITY INFORMATION: 65 KM SE OF CANDLE ON SOUTH SIDE OF GRANITE MTN. SPRING IS ON WEST SIDE OF "SPRING CREEK" ABOUT 15M ABOVE VALLEY FLOOR.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 7
TEMPERATURE (C)..... 49.
PERTINENT LITHOLOGY..... SPRINGS ARE IN SMALL SATELLITIC STOCK OF MAFIC NEPHELINE SYENITE ABOUT 1.5 KM SOUTH OF "GRANITE MTN PLUTON". COUNTRY ROCK IS LOWER CRETACEOUS ANDESITE.

WATER ANALYSIS

DATE/ANALYST..... RAPP, J.B.
PH..... 9.55
CHARGE IMBALANCE (% DIFF)... 12.3
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....	0.2	CR.....		MG...	0.05			
B.....	0.22	F.....		NA...	67.	SIO2.	69.	
BE....		FE(TOT).	L 0.01	NB...		SO4..	50.3	
CA....	1.8	HCO3....	90.					
CL....	6.4							
CO....		K.....	1.9					

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00061

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000221

NAME OF SAMPLE SOURCE... GRANITE MOUNTAIN - SWEEPSTAKES HOT SPRINGS
WARING NUMBER..... 8

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 01S 013W 25 NW OF SW
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE.. YUKON - KOYUKUK
MAP REFERENCE..... CANDLE B-5 1:63360
LAT/LONG... 65-22.2 N 161-15.4 W
UTM ZONE... +04
NORTHING... 7250996.
395367.
OTHER LOCALITY INFORMATION: 65 KM SE OF CANDLE; 4.3 MILES S-SW OF GRANITE MTN. SPRING IS ON THE WEST SIDE OF SPRING CREEK ABOUT 15M ABOVE VALLEY BOTTOM.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 7
TEMPERATURE (C)..... 49.0
PERTINENT LITHOLOGY..... SPRINGS ARE IN SMALL SATELLITIC STOCK OF MAFIC NEPHELINE SYENITE, ABOUT 1.5KM SOUTH OF "GRANITE MTN PLUTON"; COUNTRY ROCK IS ANDESITE.

WATER ANALYSIS

DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 10.1
CHARGE IMBALANCE (% DIFF)... 14.7
ANALYSIS IN PPM

								ISOTOPES (O/OO)	
AG....		CO3.....		LI...	0.04	S....		DEL D OF WATER.....	-116.
AL....	0.094	CR.....		MG...	0.04	SB...		DEL O(18) OF WATER...	-15.7
B.....	0.13	F.....	8.2	NA...	51.	SIO2.	75.		

BE.... FE(TOT). NB... SO4.. 62.
CA.... 2.0 HCO3.... 45.7
CL.... 9.3
CO.... K.... 1.3

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00062

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045073
NAME OF SAMPLE SOURCE... GREAT BASINS UGASHIK NO. 1

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 32S 052W 08 SW OF SE LAT/LONG... 57-25.57 N 157-44.27 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6365318.
GEOLOGIC PROVINCE.. 575796.
MAP REFERENCE..... UGASHIK 1:250000, B-6 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1966/08/22
TEMPERATURE (C)..... 92.2
WELL DEPTH (M)..... 2888.
GRADIENT (C/KM)..... 31.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00063

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021453
NAME OF SAMPLE SOURCE... GREAT SITKIN ISLAND - FUMAROLE 1

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 52-02.6 N 176-06.5 W
STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 3.5 MILES S-SE OF "GREAT SITKIN VOLCANO", ON A LOW ROUNDED KNOLL 260 FT WEST OF "BIG FOX CREEK"; JUST ABOVE A HOLLOW SHELL WITH BUBBLING WATER.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/09/00
SAMPLE NUMBER..... 1
TEMPERATURE (C)..... 95.
PERTINENT LITHOLOGY..... DOMINANT ROCK IS A BRECCIA OF PORPHYRITIC VOLCANICS.
OTHER SAMPLE INFORMATION.. THE AREA IS PEPPERED WITH SMALL THERMAL SPRINGS, MUD POTS, AND TINY FUMAROLES.

GAS ANALYSIS
DATE/ANALYST..... NATIONAL BUREAU OF STANDARDS
ANALYSIS IN VOLUME % ISOTOPES (00/0)
AR... 0.8
C2H6.
CO2.. 12.1 N2... 69.2
O2... 17.8
OTHER ANALYTICAL DATA... SO2 = 0.1.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... AYERS AND BRANNOCK, 1949

RECORD 00064

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021454

NAME OF SAMPLE SOURCE... GREAT SITKIN ISLAND - FUMAROLE 2

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
LAT/LONG... 52-02.6 N 176-06.5 W
STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 150 FT SOUTH OF FUMAROLE 1, 6-8 FT ABOVE BOTTOM OF GULLY.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1946/09/00
SAMPLE NUMBER..... 2
TEMPERATURE (C)..... 100.

GAS ANALYSIS

DATE/ANALYST..... NATIONAL BUREAU OF STANDARDS
ANALYSIS IN VOLUME %

				ISOTOPES (00/0)
AR...	0.9			
C2H6.		N2...	78.2	
CO2..	0.02	O2...	20.9	

OTHER ANALYTICAL DATA... TENTHS UNCERTAIN.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00065

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021455

NAME OF SAMPLE SOURCE... GREAT SITKIN ISLAND - FUMAROLE 3

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
LAT/LONG... 52-02.6 N 176-06.5 W
STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 190 FT NE OF FUMAROLE 1, BOTTOM OF GULLY NEXT TO "BIG FOX CREEK", NW OF THE BEND.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1946/09/00
SAMPLE NUMBER..... 3
TEMPERATURE (C)..... 100.

GAS ANALYSIS

DATE/ANALYST..... NATIONAL BUREAU OF STANDARDS
ANALYSIS IN VOLUME %

				ISOTOPES (00/0)
AR...	0.9			
C2H6.		N2...	72.5	
CO2..	8.5	O2...	17.9	

OTHER ANALYTICAL DATA... H = 0.2%.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00066

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021456

NAME OF SAMPLE SOURCE... GREAT SITKIN ISLAND - FUMAROLE 4

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
MAP REFERENCE..... ADAK 1:250000
OTHER LOCALITY INFORMATION: 50 FT SE OF FUMAROLE 3; BOTTOM OF GULLY NEXT TO "BIG FOX CREEK", AT THE BEND.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/09/00
SAMPLE NUMBER..... 4
TEMPERATURE (C)..... 100.
GAS ANALYSIS
DATE/ANALYST..... NATIONAL BUREAU OF STANDARDS
ANALYSIS IN VOLUME %
AR... 0.2
C2H6.
CO2.. 81.5
N2... 16.7
O2... 0.8
ISOTOPES (00/00)
OTHER ANALYTICAL DATA... SO2 = 0.8.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00067

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045075
NAME OF SAMPLE SOURCE... GULF PORT HEIDEN UNIT NO. 1
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 37S 059W 20 SE OF NE LAT/LONG... 56-58.02 N 158-41.12 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6313544.
GEOLOGIC PROVINCE.. 519133.
MAP REFERENCE..... CHIGNIK 1:250000, D-3 1:63360
OTHER LOCALITY INFORMATION: BOTTOM 272 FT NORTH AND 1034 FT WEST OF SURFACE. BOTTOM OFFSHORE
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/09/10
TEMPERATURE (C)..... 138.9
WELL DEPTH (M)..... 4578.
GRADIENT (C/KM)..... 31.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00068

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045074
NAME OF SAMPLE SOURCE... GULF SANDY RIVER FEDERAL NO. 1
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 46S 070W 10 SW OF NE LAT/LONG... 56-12.87 N 160-10.33 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6230358.
GEOLOGIC PROVINCE.. 427299.
MAP REFERENCE..... CHIGNIK 1:250000, A-7 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1963/11/28
TEMPERATURE (C)..... 131.1
WELL DEPTH (M)..... 3989.
GRADIENT (C/KM)..... 31.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00069

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021489
NAME OF SAMPLE SOURCE... GULKANA - B. DYKES WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
OTHER LOCALITY INFORMATION: NEAR MILE 117 ON RICHARDSON HIGHWAY; SOUTH OF GULKANA AIRPORT.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1951/08/06 DYKES, B.
WELL DEPTH (M)..... 98.
WATER ANALYSIS
DATE/ANALYST..... LARSEN, B.C.
TOTAL DISSOLVED SOLIDS... 3830.
ANALYSIS IN PPM ISOTOPES (O/OO)

AG....		CO3.....	N				
AL....		CR.....		MG...	204.		
B.....		F.....		NA...		SIO2.	47.
BA....		FE+3....		NA+K.	429.		
BE....		FE(TOT).		NB...		SO4..	15.
CA....	693.	HCO3....	201.				
CL....	2300.						

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00070

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021490
NAME OF SAMPLE SOURCE... GULKANA AIRFIELD WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 001W W1/2 LAT/LONG... 62-09. N 145-28. W
STATE..... ALASKA B&M: COPPER RIVER
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: AT GULKANA AIRFIELD.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1945/00/00 ERICKSON, A.E., CIVIL AERONAUTICS ADMIN.
SAMPLE NUMBER..... 12
OTHER SAMPLE INFORMATION.. LAT/LONG ARE APPROXIMATE.
WATER ANALYSIS
DATE/ANALYST..... THERIAULT, A.
PH..... 6.6
TOTAL DISSOLVED SOLIDS... 23900.
ANALYSIS IN PPM ISOTOPES (O/OO)

AG....		CO3.....	N				
AL....		CR.....		MG...	984.		
B.....		F.....		NA...	2630.		
BE....		FE(TOT).		NB...		SO4..	L 5.
CA....	4780.	HCO3....	84.				

CL.... 15400.
CO.... K..... 82.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00071

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045052
NAME OF SAMPLE SOURCE... HALBOUTY FRITZ CREEK OIL WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 06S 012W 04 NE OF SE OF NW LAT/LONG... 59-41.37 N 151-19.87 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 6617806.
GEOLOGIC PROVINCE.. 593952.
MAP REFERENCE..... SELDOVIA 1:250000, C-4 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1963/03/02
TEMPERATURE (C)..... 50.0
WELL DEPTH (M)..... 1157.
GRADIENT (C/KM)..... 42.
OTHER SAMPLE INFORMATION.. BRACKISH WATER(?) ABOVE 3580FT.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00072

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045071
NAME OF SAMPLE SOURCE... HALBOUTY KING OIL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 07N 009W 06 NE OF SE LAT/LONG... 60-43.57 N 150-54.78 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 6733891.
GEOLOGIC PROVINCE.. 613839.
MAP REFERENCE..... KENAI 1:250000, C-3 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1959/05/04
TEMPERATURE (C)..... 62.2
WELL DEPTH (M)..... 3456.
GRADIENT (C/KM)..... 32.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00073

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021474
NAME OF SAMPLE SOURCE... HAWK RIVER
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 66-13.98 N 157-34.98 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02

MAP REFERENCE..... SHUNGNAK 1:250000
OTHER LOCALITY INFORMATION: 50 MILES S-SW OF KOBUK; SOUTH SIDE OF PURCELL MTNS ON EAST BANK OF HAWK RIVER AT THE SOUTH END OF A CLEARING 25M BY 60M IN TALL TIMBER.

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 8
TEMPERATURE (C)..... Q 50.
PERTINENT LITHOLOGY..... CONCEALED
OTHER SAMPLE INFORMATION.. SPRING FLOWS INTO HAWK RIVER. NO CHEMICAL ANALYSIS AVAILABLE.

QUALIFICATION FIELD..... TEMPERATURE ESTIMATED AT +50 DEGREES C.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00074

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045000

NAME OF SAMPLE SOURCE... HORNER HOT SPRINGS
WARING NUMBER..... 9

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 06S 020E 33 NW OF NW OF SW — LAT/LONG... 64-55.33 N 154-50.23 W
STATE..... ALASKA — UTM ZONE... +05
COUNTY..... — NORTHING... 7200736.
GEOLOGIC PROVINCE.. 02 — 413163.
MAP REFERENCE..... RUBY D-4 1:63360
OTHER LOCALITY INFORMATION: 5 MILES BELOW KOKRINES; 25 MILES NE OF RUBY ON THE NORTH SIDE OF THE YUKON RIVER.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/08/10 WARING, G.A.
SAMPLE NUMBER..... 15
TEMPERATURE (C)..... 47.0 AT (M).. E 95.
DISCHARGE..... 95. L/MIN
PERTINENT LITHOLOGY..... SPRINGS ARE IN FRACTURED GRANITE OF A SMALL PLUTON. COUNTRY ROCK IS SCHIST.
OTHER SAMPLE INFORMATION.. SPRINGS ISSUE FROM A GRANITIC CLIFF 40 FT ABOVE A SMALL CREEK THAT EMPTIES INTO THE YUKON RIVER 3/4 MILE FROM THE SPRINGS. HAS SLIGHT TASTE AND ODOR OF H2S.

WATER ANALYSIS
DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 292.
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AG....		CO3.....	32.					
AL....	0.2	CR.....		MG...	3.			
B.....		F.....		NA...	58.	SIO2.	29.	
BA....		FE+3....		NA+K.	Q 58.			
BE....		FE(TOT).	2.7	NB...		SO4..	45.	
CA....	10.	HCO3....	22.	NO3..	T			
CD....		H2S.....	T					
CL....	39.							

OTHER ANALYTICAL DATA... 8407 = NONE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... WARING, 1917

RECORD 00075

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045031

NAME OF SAMPLE SOURCE... HOT SPRING ON NORTH ARM OF PERIL STRAIT

WARING NUMBER..... 66

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 47S 059E 26 SW OF NW OF NW — LAT/LONG... 57-46.26 N 135-49.20 W
STATE..... ALASKA — UTM ZONE... +08
COUNTY..... — NORTHING... 6403336.
GEOLOGIC PROVINCE.. 03 — 451250.
MAP REFERENCE..... SITKA D-6 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/29 WARING, G.A.
TEMPERATURE (C)..... 38.3

WATER ANALYSIS

DATE/ANALYST.....
TOTAL DISSOLVED SOLIDS... 786.
CHARGE IMBALANCE (% DIFF)... 5.5
ANALYSIS IN PPM

								ISOTOPES (0/00)
AG....		CO3.....	N					
AL....	5.3	CR.....		MG...	11.			
B.....	T	F.....		NA...	206.	SIO2.	40.	
BE....		FE(TOT).	1.4	NB...		SO4..	329.	
CA....	37.	HCO3....	35.	NO3..	1.0			
CL....	133.							
CO....		K.....	3.8					

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... WARING, 1917; MILLER, 1973

RECORD 00076

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045154

NAME OF SAMPLE SOURCE... HOT SPRING ON ROOTOK ISLAND

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 71S 110W — LAT/LONG... 54-03. N 165-30. W
STATE..... ALASKA
MAP REFERENCE..... UNIMAK 1:250000
OTHER LOCALITY INFORMATION: S.E. OF AKUTAN ISLAND. ROOTAK ISLAND IS UNINHABITED, HAS NO HARBOR. LAND SELECTED BY AKUTAN INDIAN ASSOCIATION.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... WARING, 1965

RECORD 00077

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021451

NAME OF SAMPLE SOURCE... HOT SPRINGS COVE - THERMAL SPRING E5
WARING NUMBER..... 43

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 53-15.18 N 168-21.48 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: 4500 FT SOUTH OF HOT SPRINGS COVE; 25 FT WEST OF "HOT SPRINGS CREEK".

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1946/08/16
SAMPLE NUMBER..... 2
TEMPERATURE (C)..... 68.

WATER_ANALYSIS
PH..... 6.
TOTAL DISSOLVED SOLIDS... 1664.
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AG....		CO3.....	N	LI...	2.			
AL....	Q 0.5	CR.....		MG...	1.1	SB...	N	
AS....	Q 1.67							
B.....	Q 9.94	F.....	0.5	NA...	427.	SIO2..	65.	
BE....		FE(TOT).	Q 0.1	NB...		SO4..	73.	
BI....		GA.....		NH4..	Q 0.1			
CA....	116.	HCO3....	Q 65.	NO3..	N			
CL....	782.							
CO....		K.....	24.					

OTHER ANALYTICAL DATA... ASO4 = 3.1 PPM; B2O3 = 64. PPM.
QUALIFICATION FIELD..... AL, FE, AND NH4 VALUES ARE DETECTION LIMITS, THESE MIGHT NOT BE PRESENT; AS CALCULATED FROM ASO4; BORON CALCULATED FROM B2O3; HCO3 BY DIRECT TITRATION; ALKALINITY DUE TO SILICATE AND BORATE INCLUDED.
REFERENCE_AND_IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00078

GEOTHERM_SAMPLE_FILE GEOTHERM FILE ID: 0021450
NAME OF SAMPLE SOURCE... HOT SPRINGS COVE - THERMAL SPRING E1
WARING NUMBER..... 43
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES
LAT/LONG... 53-14.52 N 168-21.40 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: 4220 FT SOUTH OF HOT SPRINGS COVE; 178 FT WEST OF "HOT SPRINGS CREEK".
SAMPLE_DESCRIPTION_AND_CONDITIONS
DATE/COLLECTOR..... 1947/06/21
SAMPLE NUMBER..... 18
TEMPERATURE (C)..... 87.
WATER_ANALYSIS
PH..... 6.4
TOTAL DISSOLVED SOLIDS... 2208.
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AG....		CO3.....	N	LI...	2.			
AL....	Q 0.5	CR.....		MG...	3.3	SB...	N	
AS....	Q 1.51							
B.....	Q 13.66	F.....	0.9	NA...	573.	SIO2..	99.	
BE....		FE(TOT).	Q 0.1	NB...		SO4..	86.	
BI....		GA.....		NH4..	Q 0.1			
CA....	153.	HCO3....	Q 69.	NO3..	N			
CL....	1104.							
CO....		K.....	27.					

QUALIFICATION FIELD..... AL, FE, AND NH4- DETECTION LIMITS, THESE MIGHT NOT BE PRESENT; AS CALCULATED FROM ASO4; BORON CALCULATED FROM B2O3; HCO3 BY DIRECT TITRATION; ALKALINITY DUE TO SILICATE AND BORATE INCLUDED.
REFERENCE_AND_IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00079

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000203

NAME OF SAMPLE SOURCE... HOT SPRINGS COVE - THERMAL SPRING E1
WARING NUMBER..... 43

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... UMNAK 1:250000

LAT/LONG... 53-14.5 N 168-21.4 W
UTM ZONE... +02
NORTHING... 5901288.
676871.

OTHER LOCALITY INFORMATION: 4000 FT SOUTH OF HOT SPRINGS COVE; SOUTH OF INANUDAK BAY; UMNAK ISLAND.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1946/08/16
SAMPLE NUMBER..... 1A
TEMPERATURE (C)..... 89.0
DISCHARGE..... 54. L/MIN

WATER ANALYSIS

PH..... 6.4
TOTAL DISSOLVED SOLIDS... 2329.

ANALYSIS IN PPM

AG....		CO3....	N	LI...	3.		
AL....	L 0.5	CR.....		MG...	1.2	SB...	Q 0.93
AS....	Q 2.21						
B.....	Q 14.29	F.....		NA...	603.	SIO2.	88.
BE....		FE(TOT).	L 0.1	NB...		SO4..	88.
BI....		GA.....		NH4..	L 0.1		
CA....	163.	HCO3....	Q 67.				
CL....	1126.						
CO....		K.....	33.				

ISOTOPES (0/00)

OTHER ANALYTICAL DATA... AS04 = 4.1 PPM; SB03 = 1.3 PPM; B203 = 92. PPM.
QUALIFICATION FIELD..... AS CALCULATED FROM AS04; BORON CALCULATED FROM B203;SB CALCULATED FROM SB03; HC03 BY DIRECT TITRATION.

REFERENCE AND IDENTIFICATION

COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00080

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045049

NAME OF SAMPLE SOURCE... HUMBLE SHELL BEAR CREEK NO. 1 OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 29S 041W 36 — W1/2 OF SE OF SE
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... KARLUK 1:250000, C-6 1:63360

LAT/LONG... 57-37.70 N 155-51.58 W
UTM ZONE... +05
NORTHING... 6390721.
329243.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1959/02/26
TEMPERATURE (C)..... 210.0
WELL DEPTH (M)..... 4384.
GRADIENT (C/KM)..... 47.
PERTINENT LITHOLOGY..... DRILLED THROUGH SHALLOW WATER SHALES, SILTSTONES, AND WATER-LAID VOLCANICS OF UPPER TRIASSIC THROUGH UPPER JURASSIC AGE.

OTHER SAMPLE INFORMATION.. IRREGULAR TEMPERATURE CHANGES WITH DEPTH.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALSKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00081

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021479
NAME OF SAMPLE SOURCE... HUTLINANA HOT SPRING
WARING NUMBER..... 15
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 05N 012W 34 NE OF SW OF NW OF SAT/LONG... 65-12.96 N 149-59.58 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. YUKON - TANANA
MAP REFERENCE..... LIVENGOOD A-6 1:63360
OTHER LOCALITY INFORMATION: 20 MILES WEST OF FAIRBANKS; WEST SIDE OF "HUTLINANA CREEK".
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/08/06 WARING, G.A.
SAMPLE NUMBER..... 4
TEMPERATURE (C)..... 45.6
DISCHARGE..... R 189. L/MIN
PERTINENT LITHOLOGY..... SPRING IS AT BASE OF SHEARED QUARTZITE CLIFF.
OTHER SAMPLE INFORMATION.. SPRING ISSUES FROM A FISSURE AT BASE OF A CLIFF. CLEAR POOL 6 FT ACROSS AND ONE FOOT DEEP, WITH CONSTANT BUBBLING.
WATER ANALYSIS
DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.
TOTAL DISSOLVED SOLIDS... 634.
ANALYSIS IN PPM ISOTOPES (O/OO)

AG....		CO3.....	N				
AL....		CR.....		MG...	6.		
B.....		F.....		NA...		SIO2.	44.
BA....		FE+3....		NA+K.	208.		
BE....		FE(TOT).	0.09	NB...		SO4..	67.
CA....	22.	HCO3....	494.				
CL....	38.						

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00082

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021480
NAME OF SAMPLE SOURCE... HUTLINANA HOT SPRING
WARING NUMBER..... 15
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 05N 012W 34 NE OF SW OF NW OF SAT/LONG... 65-12.96 N 149-59.58 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... LIVENGOOD A-6 1:63360
OTHER LOCALITY INFORMATION: ABOUT 70 MILES WEST OF FAIRBANKS; WEST EDGE OF "HUTLINANA CREEK".
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1971/00/00
SAMPLE NUMBER..... 20
TEMPERATURE (C)..... 43.

DISCHARGE..... R 190. L/MIN
PERTINENT LITHOLOGY..... SPRING IS AT BASE OF SHEARED QUARTZITE CLIFF (JURASSIC AGE ?) ABOUT 3 MILES EAST OF A GRANITIC PLUTON.
OTHER SAMPLE INFORMATION.. FAINT H2S ODOR.

WATER ANALYSIS
DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 7.66
CHARGE IMBALANCE (% DIFF)... 6.9
ANALYSIS IN PPM

AG....		CO3.....		LI...	0.16	S....		ISOTOPES (O/OO)	
AL....	0.014	CR.....		MG...	6.6	SB...		DEL D OF WATER.....	-144.9
B.....	0.3	F.....	0.8	NA...	180.	SIO2.	40.	DEL O(18) OF WATER...	-19.2
BE....		FE(TOT).		NB...		SO4..	55.		
BI....		GA.....		NH4..	0.4				
CA....	20.2	HCO3....	488.						
CL....	40.								
CO....		K.....	7.9						

OTHER ANALYTICAL DATA... NH3 = 0.4 PPM, ISOTOPE DATA FROM J.R. O'NEIL.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00083

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045036
NAME OF SAMPLE SOURCE... INANUDAK BAY - UNNAMED SPRING

LOCATION		TOWNSHIP-RANGE	COORDINATES	
COUNTRY.....	UNITED STATES	80S 133W	LAT/LONG...	53-15.00 N 168-21.75 W
STATE.....	ALASKA		UTM ZONE...	+02
COUNTY.....			NORTHING...	5903111.
GEOLOGIC PROVINCE..				675968.
MAP REFERENCE.....	UMNAK 1:250000			

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1976/07/15
TEMPERATURE (C)..... 92.5
DISCHARGE..... 57. L/MIN
OTHER SAMPLE INFORMATION.. ACCORDING TO C.E. SLOAN (USGS WATER RESOURCES DIVISION.

WATER ANALYSIS
PH..... 7.1
SPECIFIC CONDUCTANCE..... 4085.
ANALYSIS IN MG/L

AG....		CO3.....		LI...	2.6			ISOTOPES (O/OO)	
AL....		CR.....		MG...	1.5				
AS....	3.6								
B.....	28.	F.....		NA...	650.	SIO2.	110.		
BE....		FE(TOT).		NB...		SO4..	88.		
CA....	180.								
CA+MG.		HG.....		PB...	N				
CO....		H2S.....	0.2						
CL....	1300.								
CO....		K.....	36.			ZN...	0.030		

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... U.S. GEOLOGICAL SURVEY, 1977; BYER AND BRANNOCK, 1949

RECORD 00084

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0045043

NAME OF SAMPLE SOURCE... IVISHAK HILLSIDE SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 69-01.83 N 147-43.00 W

STATE..... ALASKA

MAP REFERENCE..... SAGAVANIRKTOK A-2 1:63360

OTHER LOCALITY INFORMATION: AT SW CORNER OF SECTION 6, T05S, R019E; AND SE CORNER OF SECTION 1, T05S, R018E.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/05/11

TEMPERATURE (C)..... 7.5

DISCHARGE..... R 329586.6/MIN

OTHER SAMPLE INFORMATION.. BELOW 20 DEGREES C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER_ANALYSIS

PH..... 8.0

SPECIFIC CONDUCTANCE..... 238.

ALKALINITY..... 112. AS CACO3

TOTAL DISSOLVED SOLIDS... 133.

CHARGE IMBALANCE (% DIFF)... 0.0

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....		CR.....		MG...	9.1			
AS....		CS.....		MN...	0.01			
B.....		F.....	0.6	NA...	0.4	SIO2.	5.8	
BE....		FE(TOT).	0.02	NB...		SO4..	13.	
CA....	36.	HCO3....	137.					
CL....	0.6							
CO....		K.....	0.1					

OTHER ANALYTICAL DATA... NITRATE + NITRITE = 0.04 MG/L; P = NONE.

REFERENCE_AND_IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE

COMPILER AFFILIATION... UNIVERSITY OF ALASKA

REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00085

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0045044

NAME OF SAMPLE SOURCE... IVISHAK HILLSIDE SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 69-01.83 N 147-43.00 W

STATE..... ALASKA

MAP REFERENCE..... SAGAVANIRKTOK A-2 1:63360

OTHER LOCALITY INFORMATION: AT SW CORNER OF SECTION 6, T35S, R019E; AND SE CORNER OF SECTION 1, T05S, R018E.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1975/04/20

TEMPERATURE (C)..... N

DISCHARGE..... 125715.L/MIN

OTHER SAMPLE INFORMATION.. ANOTHER SAMPLE FROM SPRING NO. 0045043.

WATER_ANALYSIS

PH..... 7.5

SPECIFIC CONDUCTANCE..... 252.

ANALYSIS IN PPM — ISOTOPES (O/OO)

B.....	F.....	0.04	NA...	0.4	SIO2.	4.9	

BE.... FE(TOT). NB... SO4.. 8.9
CA.... HCO3.... 128.
CA+MG. 47.
CL.... 0.3
CO.... K..... 0.4

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00086

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000229
NAME OF SAMPLE SOURCE... KANUTI - UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE.. KOKRINE - HODZANA HIGHLANDS
MAP REFERENCE..... BETTLES B-2 1:63360
LAT/LONG... 66-20.52 N 150-51.00 W
UTM ZONE... +05
NORTHING... 7358609.
598533.
OTHER LOCALITY INFORMATION: 5 MILES SW OF CARIBOU MTN; EAST SIDE OF KANUTI RIVER IN A LARGE OPEN GRASSY AREA 100 YDS IN DIAMETER.

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 26
TEMPERATURE (C)..... 66.0
PERTINENT LITHOLOGY..... BEDROCK CONCEALED; AREA IS UNDERLAIN BY MAFIC VOLCANIC ROCKS; WITHIN 1/4 MILE OF CONTACT WITH THE GRANITIC ROCKS OF "HOT SPRINGS PLUTON".
OTHER SAMPLE INFORMATION.. STRONG H2S ODOR.

WATER ANALYSIS
PH..... 8.0
CHARGE IMBALANCE (% DIFF)... 23.9
ANALYSIS IN PPM

AG.... CO3..... LI... S.... ISOTOPES (O/OO)
AL.... CR..... MG... 0.3 SB... DEL D OF WATER..... -146.
B..... 1.3 F..... NA... 111. DEL O(18) OF WATER... -18.
BE.... FE(TOT). NB... SO4.. 21.
CA.... 2.7 HCO3.... 169.
CL.... 28.
CO.... K..... 3.7

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00087

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045027
NAME OF SAMPLE SOURCE... KENAI HIGH SCHOOL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 05N 011W 05 NW
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... KENAI 1:250000, C-4 1:63360
LAT/LONG... 60-33.72 N 151-12.67 W
UTM ZONE... +05
NORTHING... 6715131.
598075.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1967/09/26

TEMPERATURE (C)..... 20.0
WELL DEPTH (M)..... 61.
WATER ANALYSIS
PH..... 8.0
SPECIFIC CONDUCTANCE..... 475.
CHARGE IMBALANCE (% DIFF)... 8.0
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AG....		CO3.....	N					
AL....		CR.....		MG...	0.7			
B.....		F.....	1.2	NA...	108.	SIO2.	32.	
BE....		FE(TOT).		NB...		SO4..	2.0	
CA....	0.5	HCO3....	308.	NO3..	2.2			
CL....	5.6							
CO....		K.....	4.7					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *USGS, ANCHORAGE

RECORD 00088

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045900
NAME OF SAMPLE SOURCE... KENAI HIGH SCHOOL WELL

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	05N 011W	05	NW	LAT/LONG...	60-33.72 N 151-12.67 W
STATE.....	ALASKA				UTM ZONE...	+05
COUNTY.....					NORTHING...	6715131.
GEOLOGIC PROVINCE..					598075.	

MAP REFERENCE..... KENAI 1:250000, C-4 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1966/09/02
POINT OF COLLECTION.. SAMPLE TAKEN IN TEACHER'S LOUNGE.
TEMPERATURE (C)..... 24.0
WELL DEPTH (M)..... 61.
OTHER SAMPLE INFORMATION.. SAMPLE TAKEN IN TEACHER'S LOUNGE. SEE REC. 45027
WATER ANALYSIS
PH..... 8.1
SPECIFIC CONDUCTANCE..... 488.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *UNIVERSITY OF ALASKA

RECORD 00089

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021482
NAME OF SAMPLE SOURCE... KILO HOT SPRINGS

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	11N 018W	02	SW OF SE OF NE	LAT/LONG...	65-48.60 N 151-14.22 W
STATE.....	ALASKA					
GEOLOGIC PROVINCE..	02					

MAP REFERENCE..... TANANA D-3 1:63360
OTHER LOCALITY INFORMATION: 110 MILES NW OF FAIRBANKS ON KANUTI KILULITNA RIVER.
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 23
TEMPERATURE (C)..... 66.

PERTINENT LITHOLOGY..... SPRINGS ISSUE FROM PLUTON OF PORPHYRITIC QUARTZ MONZONITE OF TENTATIVE CRETACEOUS AGE, ON OR VERY CLOSE TO CONTACT WITH SCHIST AND HORNFELS OF PALEOZOIC AND PRECAMBRIAN (?) AGE.
OTHER SAMPLE INFORMATION.. SEVERAL HOT SPRINGS IN AN OPEN GRASSY AREA OF ABOUT 1000 SQ FT. NO CHEMICAL ANALYSIS AVAILABLE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00090

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021506
NAME OF SAMPLE SOURCE... KONGAKUT RIVER - UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 04N 042E 09 SW OF NE OF SE — LAT/LONG... 69-42.36 N 141-49.38 W
STATE..... ALASKA
MAP REFERENCE..... DEMARCATION POINT C-2 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/04/27
TEMPERATURE (C)..... 0.5
DISCHARGE..... R 150183.L/MIN

WATER ANALYSIS
PH..... 6.7
SPECIFIC CONDUCTANCE..... 210.
CHARGE IMBALANCE (% DIFF)... 58.2

ANALYSIS IN MG/L — ISOTOPES (0/00)

B.....		F.....		NA...	1.1	SIO2.	2.3
BE.....		FE(TOT).		NB...		SO4..	17.
CA.....	50.	HCO3....	62.	NO3..	Q 0.16		
CD.....		H2S.....		PO4..	N		
CL.....	1.						
CO.....		K.....	0.1				

OTHER ANALYTICAL DATA... ORGANIC CARBON = 34. MG/L.
QUALIFICATION FIELD..... NO3 = NO3 + NO4.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00091

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021471
NAME OF SAMPLE SOURCE... KWINIUK - UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — LAT/LONG... 64-42. N 162-28. W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... SOLOMON C-1 1:63360
OTHER LOCALITY INFORMATION: 9 MILES NORTH OF ELIM: 100 YDS NORTH OF THE "KWINIUK RIVER".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1971/00/00
SAMPLE NUMBER..... 5
TEMPERATURE (C)..... Q 45.
PERTINENT LITHOLOGY..... SPRING IS IN " DARBY PLUTON" ABOUT 2 MILES FROM COUNTRY ROCK AND ON OR NEAR PROMINENT LINEAMENTS IN THE PLUTON CONTACTS.

WATER ANALYSIS

DATE/ANALYST..... WILLEY, L.M.
PH..... 7.3
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AL....		CR.....		MG...	0.1			
B.....	1.	F.....	5.8	NA...	500.	SIO2.	45.	
BR....	4.							
CA....	130.	HCO3....	10.2					
CL....	912.							
CO....		K.....	9.					

QUALIFICATION FIELD..... TEMPERATURE ESTIMATED AT 40-50 DEGREES C.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00092

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021468
NAME OF SAMPLE SOURCE... LAVA CREEK AREA
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 65-13. N 162-54. W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... BENDELEBEN A-2 1:63360
OTHER LOCALITY INFORMATION: 80 KM NORTH OF GOLOVIN ON SOUTH SIDE OF BENDELEBEN MTNS. ONE PRINCIPAL SPRING ON EAST SIDE OF LAVA CREEK ABOUT 30MABOVE VALLEY FLOOR.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/00/00
SAMPLE NUMBER..... 3
TEMPERATURE (C)..... G 50.
PERTINENT LITHOLOGY..... SPRING ALMOST ON CONTACT BETWEEN LATE CRETACEOUS QUARTZ MONZONITE OF "BENDELEBEN PLUTON" AND PRECAMBRIAN MIGMATITE.
OTHER SAMPLE INFORMATION.. LAT/LONG DO NOT MATCH 883 DESCRIPTION.
WATER ANALYSIS
DATE/ANALYST..... WILLEY, L.M.
PH..... 9.1
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	L 0.025			
B.....	0.8	F.....	9.	NA...	75.	SIO2.	70.	
BR....	1.							
CA....	2.	HCO3....	100.					
CL....	8.							
CO....		K.....	1.4					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00093

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000217
NAME OF SAMPLE SOURCE... LAVA CREEK AREA
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 65-13. N 162-54. W
STATE..... ALASKA UTM ZONE... +03
COUNTY..... NORTHING... 7234044.

GEOLOGIC PROVINCE.. SEWARD PENINSULA 598216.
MAP REFERENCE..... BENDELEBEN A-2 1:63360
OTHER LOCALITY INFORMATION: 50 MILES NORTH OF GOLOVIN ON SOUTH SIDE OF BENDELEBEN MTNS. ONE PRINCIPAL SPRING ON EAST SIDE OF LAVA CREEK ABOUT 30M ABOVE VALLEY FLOOR.

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 3
TEMPERATURE (C)..... E 50.
PERTINENT LITHOLOGY..... SPRING ALMOST ON CONTACT BETWEEN LATE CRETACEOUS QUARTZ MONZONITE OF "THE BENDELEBEN PLUTON", AND A MIGMATITE ZONE OF PRECAMBRIAN AGE; BIOTITE SAMPLE FROM "THE BENDELEBEN PLUTON" HAS YIELDED K:AR AGE OF 79.8 + OR - 2.4 MY (MILLER AND OTHERS, 1972); PARTS OF FLOOR OF LAVA CREEK ARE UNDERLAIN BY QUATERNARY BASALT.
OTHER SAMPLE INFORMATION.. LAT/LONG DO NOT MATCH 883 DESCRIPTION.

WATER ANALYSIS
DATE/ANALYST..... 1974/00/00 WILLEY, L.M. AND PRESSER, T.S.
PH..... 9.1
ANALYSIS IN MG/L — ISOTOPES (0/00)

AL....		CR.....		MG...	L 0.025		
B.....	0.8	F.....	9.	NA...	75.	SIO2.	70.
BI....		GA.....		NH4..	Q 1.06		
BR....	1.						
CA....	2.	HCO3....	100.				
CL....	8.						
CO....		K.....	1.4				

OTHER ANALYTICAL DATA... NH3 LESS THAN ONE MG/L.
QUALIFICATION FIELD..... NH4 CALCULATED FROM NH3.

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00094

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000227
NAME OF SAMPLE SOURCE... LITTLE MELOZITNA HOT SPRINGS
WARING NUMBER..... 11

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 01N 027E 29 SW OF SW OF NW — LAT/LONG... 65-27.6 N 153-18.6 W
STATE..... ALASKA — UTM ZONE... +05
COUNTY..... — NORTHING... 7260311.
GEOLOGIC PROVINCE.. KOKRINE - HODZANA HIGHLANDS — 485328.
MAP REFERENCE..... MELOZITNA B-1 1:63360
OTHER LOCALITY INFORMATION: 64 KM WEST OF TANANA; ON A SMALL FLAT ON THE EAST BANK OF HOT SPRINGS CREEK; 2.5 MILES UP FROM THE "LITTLE MELOZITNA RIVER".

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 18
PERTINENT LITHOLOGY..... SPRINGS ARE IN A SMALL GRANITIC PLUTON INTRUDED INTO SCHIST.
OTHER SAMPLE INFORMATION.. H2S ODOR.

WATER ANALYSIS
TOTAL DISSOLVED SOLIDS... 350.
ANALYSIS IN PPM — ISOTOPES (0/00)

B.....	F.....	NA...	SIO2.	80.	

OTHER ANALYTICAL DATA... ANALYSIS AND LITHOLOGY ARE FROM WARING, 1917.

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00095

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021481

NAME OF SAMPLE SOURCE... LITTLE MINOOK CREEK - HOT SPRING
WARING NUMBER..... 16

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — LAT/LONG... 66-27.00 N 150-00.00 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. YUKON - TANANA
OTHER LOCALITY INFORMATION: NEAR DIVIDE BETWEEN LITTLE MINOOK CREEK AND A TRIBUTARY OF HESS (HOOSIER) CREEK; NW OF WOLVERINE MTN.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 22
TEMPERATURE (C)..... ?
PERTINENT LITHOLOGY..... GENERAL AREA IS UNDERLAIN BY PALEOZOIC CONGLOMERATE AND SHALE AND / OR JURASSIC (OR CRETACEOUS) MUDSTONE.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00096

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045023

NAME OF SAMPLE SOURCE... LOWER KLAWASI - DRUM GROUP (SHRUB)

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 04N 002E 10 NE OF NE OF NW — LAT/LONG... 62-08.75 N 145-01.55 W
STATE..... ALASKA — B&M; COPPER RIVER — UTM ZONE... +06
COUNTY.....
GEOLOGIC PROVINCE.. 02 — NORTHING... 6881713.
592919.
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: N-NE OF VABM KLAWASI (3017); BY VABM SHRUB (2943).

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1956/11/08
TEMPERATURE (C)..... 27.7
AMBIENT TEMP (C)..... 5.6
DISCHARGE..... 30. L/MIN
OTHER SAMPLE INFORMATION.. OTHER HOT SPRINGS IN THE AREA; WATER QUALITY BAD; NO SURFACE DRAINAGE.

WATER ANALYSIS

PH..... 8.2
SPECIFIC CONDUCTANCE..... 37000.
TOTAL DISSOLVED SOLIDS... 26100.

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....		CR.....		MG...	502.			
B.....	120.	F.....	0.4	NA...	9390.	SIO2..	65.	
BE....		FE(TOT).	0.04	NB...		SO4..	N	
BI....		GA.....		NH4..	11.			
CA....	94.	HCO3....	7350.	NO3..	5.5			
CL....	12000.							
CO....		K.....	275.					

GAS ANALYSIS

DATE/ANALYST..... U.S. BUREAU OF MINES, AMARILLO, TX.

ANALYSIS — ISOTOPES (O/OO)

AR... T

CH4..	N	H2S..	N
C2H6.		N2...	0.6
CO2..		O2...	T
H2...	N		
HE...	T		

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... NICHOLS AND YEHLE, 1961

RECORD 00097

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045024
NAME OF SAMPLE SOURCE... LOWER KLAWASI - DRUM GROUP-WEST SPRING(MINERAL)

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 03N 001E 09 SW OF NE OF SE OF — NAT/LONG... 62-03.48 N 145-13.32 W
STATE..... ALASKA — B&M: COPPER RIVER — UTM ZONE... +06
COUNTY.....
GEOLOGIC PROVINCE.. 02 — NORTHING... 6881713.
MAP REFERENCE..... GULKANA 1:250000, A-3 1:63360 — 592919.
OTHER LOCALITY INFORMATION: 5.5 MILES N76E OF CONFLUENCE OF TAZLINA AND COPPER RIVERS. ELEV = 1872 FT. SAME AREA AS GEOTHERM FILE NO. 0045023.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/07/13 GRANTZ, A.
SAMPLE NUMBER..... 5
TEMPERATURE (C)..... R 21.
DISCHARGE..... R 28. L/MIN
OTHER SAMPLE INFORMATION.. GROUP OF SPRINGS WITH MUDCONES.

WATER ANALYSIS
DATE/ANALYST..... WHITEHEAD, M.C.
PH..... 7.7
TOTAL DISSOLVED SOLIDS... 27500.
CHARGE IMBALANCE (% DIFF)... 3.9

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N	LI...	6.9		
AL....	0.14	CR.....		MG...	136.		
AS....		CS.....		MN...	N		
B.....	169.	F.....	0.3	NA...	10000.	SIO2.	123.
BE....		FE(TOT).	0.01	NB...		SO4..	664.
BI....		GA.....		NH4..	5.	SR...	8.
BR....	29.						
CA....	31.	HCO3....	7230.	NO3..	17.		
CD....		H2S.....		PO4..	18.		
CL....	12100.	I.....	6.8				
CO....		K.....	271.			ZN...	31.

OTHER ANALYTICAL DATA... NO2 = NONE; OH = NONE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00098

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021459
NAME OF SAMPLE SOURCE... LOWER KLAWASI - DRUM GROUP-WEST SPRING (MINERAL)
LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 03N 001E 09 SE OF NE LAT/LONG... 62-03.48 N 145-13.32 W
STATE..... ALASKA B&M: COPPER RIVER
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: COPPER RIVER BASIN: 5.5 MILES S76E OF CONFLUENCE OF "TAZLINA" AND "COPPER" RIVERS.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1956/09/07 GRANTZ, A.
SAMPLE NUMBER..... N-8.9
TEMPERATURE (C)..... 27.
DISCHARGE..... R 13. L/MIN
DEPOSITS OR ALTERATION.... DARK SCUM OVER THE MAIN CENTERS OF ACTIVITY. CLAY (MONTMORILLONITE ?) CONTAINING SMALL ANGULAR GRAINS OF CLEAR QUARTZ, WHITE QUARTZ, BLUISH-GRAY CHALCEDONY, AND NODULES OF LIMONITE.
OTHER SAMPLE INFORMATION.. GAS SAMPLE COLLECTED 1958/06/18. ACTIVE SPRING IN CRATER 1/5 FT IN DIAMETER, WITH GAS BUBBLES AT NUMEROUS POINTS.

WATER ANALYSIS
DATE/ANALYST..... WHITEHEAD, H.C.
PH..... 7.7
SPECIFIC CONDUCTANCE..... 39500.
TOTAL DISSOLVED SOLIDS... 28000.
CHARGE IMBALANCE (% DIFF)... 1.2
ANALYSIS IN PPM

								ISOTOPES (0/00)
AG....		CO3.....	N					
AL....		CR.....		MG...	130.			
B.....		F.....		NA...	10400.	SIO2.	132.	
BE....		FE(TOT).	0.03	NB...		SO4..	666.	
CA....	119.	HCO3....	7290.					
CL....	12500.							
CO....		K.....	433.					

GAS ANALYSIS
DATE/ANALYST..... 1958/06/17 U.S. BUREAU OF MINES, AMARILLO, TX.
ANALYSIS IN MOLE %

				ISOTOPES (00/0)
AR...	0.2			
CH4..	T	H2S..	N	
C2H6.	N	N2...	3.4	
CO2..	96.4	O2...	0.6	
H2...	N			
HE...	T			

OTHER ANALYTICAL DATA... GAS SAMPLE CONTAMINATED WITH AIR. VALUES CALCULATED ON AN AIR FREE BASIS.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961

RECORD 00099

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021484
NAME OF SAMPLE SOURCE... LOWER RAY RIVER HOT SPRINGS
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 65-59. N 150-35. W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... TANANA D-2 1:63360
OTHER LOCALITY INFORMATION: IN GRAVEL BAR ON NORTH SIDE OF "RAY RIVER".

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 25
TEMPERATURE (C)..... 66.

PERTINENT LITHOLOGY..... BEDROCK CONCEALED.
OTHER SAMPLE INFORMATION.. H2S ODOR.

WATER ANALYSIS

DATE/ANALYST..... BARNES, R.B.
PH..... 9.04
CHARGE IMBALANCE (% DIFF)... 32.7

ANALYSIS IN PPM

AG....		CO3.....	21.	LI...		S....		ISOTOPES (O/OO)	
AL....		CR.....		MG...	0.1	SB...		DEL D OF WATER.....	-157.
B.....	1.6	F.....		NA...	95.			DEL O(18) OF WATER...	-19.2
BE....		FE(TOT).		NB...		SO4..	23.		
CA....	11.	HCO3....	93.						
CL....	25.								
CO....		K.....	2.						

OTHER ANALYTICAL DATA... ISOTOPE DATA FROM J.R. O'NEIL.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00100

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045019

NAME OF SAMPLE SOURCE... LUPINE SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 07S 016E 12 NE OF SW OF SE LAT/LONG... 68-51.75 N 148-12.33 W
STATE..... ALASKA
MAP REFERENCE..... PHILLIP SMITH MTNS D-3 1:63360
OTHER LOCALITY INFORMATION: BETWEEN THE LUPINE AND SAVIUKVIAYAK RIVERS.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/05/09
TEMPERATURE (C)..... 2.5
DISCHARGE..... R 2548.4 L/MIN
PERTINENT LITHOLOGY..... SPRING IS ON A NW TRENDING LINEAMENT WITH SEVERAL OTHER SPRINGS.
OTHER SAMPLE INFORMATION.. BELOW 20 DEGREE C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMA FROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER ANALYSIS

PH..... 7.8
SPECIFIC CONDUCTANCE..... 298.
ALKALINITY..... AS CACO3
TOTAL DISSOLVED SOLIDS... 166.
CHARGE IMBALANCE (% DIFF)... 1.5

ANALYSIS IN MG/L

AG....		CO3.....	N					ISOTOPES (O/OO)	
AL....		CR.....		MG...	7.7				
AS....		CS.....		MN...	N				
B.....		F.....	0.3	NA...	0.4	SIO2.	3.7		
BE....		FE(TOT).	0.030	NB...		SO4..	12.		
CA....	51.	HCO3....	177.	NO3..	Q 0.13				
CL....	2.8								
CO....		K.....	0.1						

QUALIFICATION FIELD..... NO3 = NITRATE + NITRITE.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00101

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021478

NAME OF SAMPLE SOURCE... MANLEY HOT SPRINGS (BAKER HOT SPRINGS)
WARING NUMBER..... 14

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 02N 015W 17 SW OF NE OF NE — LAT/LONG... 65-00.36 N 150-37.98 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... TANANA A-2 1:63360
OTHER LOCALITY INFORMATION: NEXT TO THE TANANA RIVER IN "KARSHNER CREEK" VALLEY; NORTH EDGE OF AREA.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/00/00
SAMPLE NUMBER..... 19
TEMPERATURE (C)..... 59.
PERTINENT LITHOLOGY..... BEDROCK AT SPRINGS IS CONCEALED; BLACK HORNFELS OUTCROPS 800M UP "KARSHNER CREEK" FROM THE HOT SPRINGS. LARGE BLOCKS OF BIOTITE GRANITE ARE PRESENT.

WATER ANALYSIS

DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 7.7
CHARGE IMBALANCE (% DIFF)... 11.3

ANALYSIS IN MG/L

AG....		CO3.....		LI...	0.28	S....			
AL....	0.016	CR.....		MG...	1.	SB...			
B.....	1.3	F.....	8.5	NA...	130.	SIO2.	65.		
BE....		FE(TOT).		NB...		SO4..	54.		
CA....	4.	HCO3....	89.6						
CL....	134.								
CO....		K.....	4.5						

ISOTOPES (O/OO)

DEL D OF WATER..... -142.
DEL O(18) OF WATER... -18.1

OTHER ANALYTICAL DATA... NH_3 = 4.9 MG/L. ISOTOPE DATA FROM J.R. O'NEIL.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00102

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000231

NAME OF SAMPLE SOURCE... MANLEY HOT SPRINGS (BAKER HOT SPRINGS)
WARING NUMBER..... 14

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 02N 015W 17 SW OF NE OF NE — LAT/LONG... 65-00.35 N 150-37.97 W
STATE..... ALASKA — UTM ZONE... +05
COUNTY..... — NORTHING... 7210351.
GEOLOGIC PROVINCE.. 02 — 611588.
MAP REFERENCE..... TANANA A-2 1:63360
OTHER LOCALITY INFORMATION: NEXT TO TANANA RIVER; BY KARSHNER CREEK AT NORTH EDGE OF AREA.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 19
TEMPERATURE (C)..... 56.0
DISCHARGE..... 560. L/MIN
PERTINENT LITHOLOGY..... BEDROCK IS CONCEALED.

WATER ANALYSIS

DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 7.7

CHARGE IMBALANCE (% DIFF)... 6.7

ANALYSIS IN PPM

AG....		CO3.....		LI...	0.28	S....			
AL....	0.016	CR.....		MG...	1.	SB...			
B.....	1.3	F.....	8.5	NA...	130.	SIO2.	65.		
BE....		FE(TOT).		NB...		SO4..	54.		
BI....		GA.....		NH4..	Q 5.19				
CA....	4.0	HCO3....	89.6						
CL....	134.								
CO....		K.....	4.5						

ISOTOPES (O/OO)

DEL D OF WATER..... -142.

DEL O(18) OF WATER... -18.1

OTHER ANALYTICAL DATA... NH3 = 4.9 PPM; ISOTOPE DATA FROM J.R. O'NEIL.

QUALIFICATION FIELD..... NH4 CALCULATED FROM NH3.

REFERENCE AND IDENTIFICATION

COMPILED BY..... RENNER, J.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00103

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021477

NAME OF SAMPLE SOURCE... MANLEY HOT SPRINGS (BAKER HOT SPRINGS)

WARING NUMBER..... 14

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 02N 015W 17 — SW OF NE OF NE — LAT/LONG... 65-00.36 N 150-37.98 W

STATE..... ALASKA

GEOLOGIC PROVINCE.. YUKON - TANANA UPLAND

MAP REFERENCE..... TANANA A-2 1:63360

OTHER LOCALITY INFORMATION: NEXT TO TANANA RIVER IN "KARSHNER CREEK" VALLEY; NORTH EDGE OF AREA.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1917/00/00

SAMPLE NUMBER..... 19

TEMPERATURE (C)..... 52.

PERTINENT LITHOLOGY..... CONCEALED.

WATER ANALYSIS

DATE/ANALYST..... WARING,G.A.

CHARGE IMBALANCE (% DIFF)... 3.5

ANALYSIS IN PPM

AG....		CO3.....	N						
AL....	Q 0.8	CR.....		MG...	0.9				
B.....		F.....		NA...	121.	SIO2.	59.		
BE....		FE(TOT).		NB...		SO4..	48.		
CA....	9.1	HCO3....	86.						
CL....	120.								
CO....		K.....	8.2						

ISOTOPES (O/OO)

QUALIFICATION FIELD..... AL = AL + FE.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... WARING, 1917; MILLER AND OTHERS, 1973

RECORD 00104

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000225

NAME OF SAMPLE SOURCE... MELOZI HOT SPRINGS (MELOZITNA HOT SPRING)

WARING NUMBER..... 10

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 04S 020E 23 SW OF SE OF NE LAT/LONG... 65-07.8 N 154-41.5 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 7224154.
GEOLOGIC PROVINCE.. 02 421801.
MAP REFERENCE..... MELOZITNA A-4 1:63360
OTHER LOCALITY INFORMATION: ON HOT SPRINGS CREEK 48 KM NE OF RUBY; 10 MILES FROM THE MELOZITNA RIVER UP HOT SPRINGS CREEK.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/08/12 WARING, G.A.
SAMPLE NUMBER..... 17
TEMPERATURE (C)..... 56.
DISCHARGE..... 494. L/MIN
DEPOSITS OR ALTERATION.... SMALL AMOUNTS OF NATIVE SULFUR AND LIME CARBONATE.
PERTINENT LITHOLOGY..... SPRING IS IN "QUARTZ MONZONITE PLUTON", ABOUT 3.2KM FROM CONTACT WITH HORNFELSIC MAFIC AND ULTRAMAFIC ROCKS, AND ABOUT 2.5KM FROM PELITIC SCHIST.
OTHER SAMPLE INFORMATION.. ONE MAIN FLOWING HOT SPRING; H2S ODOR.

WATER ANALYSIS
DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 442.
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AG....		CO3.....	31.					
AL....		CR.....		MG...	2.8			
B.....		F.....		NA...		SIO2.	78.	
BA....		FE+3....		NA+K.	Q 107.			
BE....		FE(TOT).	0.75	NB...		SO4..	61.	
CA....	11.	HCO3....	32.	NO3..	T			
CL....	92.							

OTHER ANALYTICAL DATA... B407 = TRACE; ANALYSIS FROM WARING, 1917.
QUALIFICATION FIELD..... NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00105

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001921
NAME OF SAMPLE SOURCE... MOTHER GOOSE

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 35S 048W LAT/LONG... 57-10.8 N 157-01.1 W
STATE..... ALASKA
MAP REFERENCE..... UGASHIK A4 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 8/13/80
TEMPERATURE (C)..... 66.
DISCHARGE..... 2567. L/MIN

WATER ANALYSIS
PH..... 6.35
SPECIFIC CONDUCTANCE..... 3000.
CHARGE IMBALANCE (% DIFF)... 7.3
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	131.			
B.....	0.8	F.....	0.41	NA...	198.	SIO2.	245.	
BE....		FE(TOT).		NB...		SO4..	491.	
CA....	227.	HCO3....	560.					
CL....	528.							

CO.... K.... 47.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00106

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021505
NAME OF SAMPLE SOURCE... NEW EDDYSTONE ROCK - PIPE SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 73S 095E — LAT/LONG... 55-30. N 130-58. W
STATE..... ALASKA
MAP REFERENCE..... KETCHIKAN 1:250000
OTHER LOCALITY INFORMATION: BEHM CANAL: E-NE OF KETCHIKAN.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/06/16 WARING, G.A.
SAMPLE NUMBER..... 109
TEMPERATURE (C)..... 10.
DISCHARGE..... R 15.1 L/MIN
DEPOSITS OR ALTERATION.... IRON DEPOSITS.
OTHER SAMPLE INFORMATION.. SLIGHT TASTE OF H2S. PIPE IS BELOW HIGH-TIDE LEVEL.

WATER ANALYSIS
DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 1362.
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3....	N					
AL....	3.7	CR.....		MG...	117.			
B.....	N	F.....		NA...	110.	SIO2.	75.	
BE....		FE(TOT).	1.3	NB...		SO4..	N	
CA....	273.	HCO3....	1439.	NO3..	N			
CL....	132.							
CO....		K.....	9.6					

OTHER ANALYTICAL DATA... WATER IS SUPERSATURATED WITH CO2.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00107

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045153
NAME OF SAMPLE SOURCE... NYLEN HOT SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 49S 063E 08 SE OF SW OF SE — LAT/LONG... 57-38.64 N 135-19.98 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 03
MAP REFERENCE..... SITKA C-4 1:63360
OTHER LOCALITY INFORMATION: S.E. 1/4 SEC. 08 AND N.E. 1/4 SEC. 17 IN TONGASS NATIONAL FOREST. SPRINGS 2000 FT. FROM W. BANK AND CAN BE FOUND BY MOSSES AND STREAMS.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1978/ /
TEMPERATURE (C)..... 49.
DISCHARGE..... 30. L/MIN
OTHER SAMPLE INFORMATION.. NINE SPRINGS HAVE BEEN LOCATED, EIGHT SMALL, ONE FLOWING 8 GAL./MIN OVER THIRTY FOOT CLIFF INTO CREEK.

WATER ANALYSIS
PH..... 8.7
SPECIFIC CONDUCTANCE..... 523.8
ANALYSIS IN PPM — ISOTOPES (O/OO)

AL....	CR.....	MG...	0.5		
AS.... N					
BE....	FE(TOT). N				
BI....	GA.....	NH4..		SR...	0.908
CA.... 90.					
CA+MG.	HG.....	PB... N			
CO....	H2S.....	PO4..	0.032		
CO....	K.....			ZN...	0.18

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *HARMON, C., U. S. FOREST SERVICE GEOLOGIST, ALASKA

RECORD 00108

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021446
NAME OF SAMPLE SOURCE... OKMOK CALDERA - CONE A (FUMAROLE A1)
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — LAT/LONG... 53-24.3 N 168-10.6 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: NORTHEASTERN UMNAK ISLAND; JUST OUTSIDE CONE A; SW CORNER OF THE CALDERA.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/09/26
TEMPERATURE (C)..... 96.5
OTHER SAMPLE INFORMATION.. BY GAS SAMPLING TRAIN.
GAS ANALYSIS
ANALYSIS IN VOLUME % — ISOTOPES (OO/O)

C2H6.	N2... Q 85.		
CO2.. 7.			

OTHER ANALYTICAL DATA... SO2 = 8.; HCL = 0; HF = 0; VAPOR PRESSURE OF H2O = 670MM; BAROMETRIC PRESSURE = 703MM; VOLUME % H2O VAPOR = 95..
QUALIFICATION FIELD..... N2 = N2 + O2 + AR.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00109

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021447
NAME OF SAMPLE SOURCE... OKMOK CALDERA - CONE A (FUMAROLE A2)
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — LAT/LONG... 53-24.3 N 168-10.6 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: NE UMNAK ISLAND; SW CORNER OF THE CALDERA; JUST OUTSIDE OF CONE A.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/09/26
TEMPERATURE (C)..... 97.
OTHER SAMPLE INFORMATION.. BY GAS SAMPLING TRAIN.
GAS ANALYSIS

ANALYSIS IN VOLUME % ISOTOPES (00/00)
C2H6. N2... 35.
CO2.. 43.
OTHER ANALYTICAL DATA... SO2 = 22%; HCL = 0; HF = 0; VAPOR PRESSURE OF H2O = 670MM; BAROMETRIC PRESSURE = 703MM;
VOLUME % H2O VAPOR = 96.5.
QUALIFICATION FIELD..... N2 = N2 + O2 + AR.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00110

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021448
NAME OF SAMPLE SOURCE... OKMOK CALDERA - CONE A (FUMAROLE A2)
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 53-24.3 N 168-10.6 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: NE UMNAK ISLAND; SW CORNER OF THE CALDERA; JUST OUTSIDE OF CONE A.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1946/09/26
TEMPERATURE (C)..... 98.
OTHER SAMPLE INFORMATION.. BY GAS SAMPLING TUBE; ANALYSIS BY MASS SPECTROMETER.
GAS ANALYSIS
ANALYSIS IN VOLUME % ISOTOPES (00/00)
AR... 0.8
C2H6. N2... 61.9
CO2.. 15.5 O2... 12.5
OTHER ANALYTICAL DATA... SO2 = 9.3%; HCL = 0; HF = 0.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00111

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021449
NAME OF SAMPLE SOURCE... OKMOK CALDERA - CONE A (FUMAROLE A8)
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 53-24.3 N 168-10.6 W
STATE..... ALASKA
MAP REFERENCE..... UMNAK 1:250000
OTHER LOCALITY INFORMATION: 50 FT SE OF FUMAROLE A2.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1947/06/28
OTHER SAMPLE INFORMATION.. FAIRLY NEW FUMAROLE. SAMPLE TAKEN BY GAS-SAMPLING TUBE.
GAS ANALYSIS
ANALYSIS IN VOLUME % ISOTOPES (00/00)
AR... 0.96
C2H6. N2... 77.6
CO2.. 0.58 O2... 20.5
OTHER ANALYTICAL DATA... SO2 = 0.33%; HCL = 0; HF = 0.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00112

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000209

NAME OF SAMPLE SOURCE... OKMOK CALDERA - HOT SPRING (UNNAMED)

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... UMNAK 1:250000
LAT/LONG... 53-28.7 N 168-04.7 W
UTM ZONE... +02
NORTHING... 5929738.
692423.

OTHER LOCALITY INFORMATION: WEST SPRING AREA.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1946/09/07
TEMPERATURE (C)..... 22.0
OTHER SAMPLE INFORMATION.. WARM SPRINGLET OF WEST SPRING.

WATER ANALYSIS

TOTAL DISSOLVED SOLIDS... 303.

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3..... N					
AL....		CR.....		MG...	7.5		
B..... Q 1.4		F.....	0.1	NA...	53.	SIO2.	59.
BE....		FE(TOT).		NB...		SO4..	69.
CA....	18.	HCO3.... Q 84.					
CL....	39.						
CO....		K.....	5.6				

OTHER ANALYTICAL DATA... ASO4 LESS THAN 0.1 PPM IF PRESENT; FE LESS THAN 0.1 PPM IF PRESENT; B2O3 = 9. PPM; SAMPLE DELAYED SEVERAL MONTHS IN SHIPPING, SOME SOLUTION MAY HAVE OCCURED.

QUALIFICATION FIELD..... BORON CALCULATED FROM B2O3; HCO3 BY DIRECT TITRATION.

REFERENCE AND IDENTIFICATION

COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... BYERS AND BRANNOCK, 1949

RECORD 00113

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045037

NAME OF SAMPLE SOURCE... OKPILAK HOT SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 01S 033E 25 NE OF NE OF NW
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... MT. MICHELSON 1:250000, B-1 1:63360
LAT/LONG... 69-19.80 N 144-02.64 W
UTM ZONE... +06
NORTHING... 7693847.
616393.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1976/08/27
TEMPERATURE (C)..... Q 48.5

WATER ANALYSIS

SPECIFIC CONDUCTANCE..... 650.

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AL....		CR.....		MG...	0.1		
B.....		F.....	14.	NA...	120.		
BE....		FE(TOT).		NB...		SO4..	200.
CA....	9.8						
CL....	31.						

CO.... K..... 4.5
QUALIFICATION FIELD..... C.E. SLOAN CONFIRMED TEMPERATURE.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... U.S. GEOLOGICAL SURVEY, 1977

RECORD 00114

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045069
NAME OF SAMPLE SOURCE... PAN AM BACHATNA CREEK
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 08N 015W 21 SW OF SW LAT/LONG... 60-46.42 N 152-05.00 W
STATE..... ALASKA UTM ZONE... +05
COUNTY..... NORTHING... 6737722.
GEOLOGIC PROVINCE.. 549932.
MAP REFERENCE..... KENAI 1:250000, D-5 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1969/02/04
TEMPERATURE (C)..... 60.0 AT (M).. 1872.
WELL DEPTH (M)..... 1926.
GRADIENT (C/KM)..... 32.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00115

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045066
NAME OF SAMPLE SOURCE... PAN AM DAVID RIVER NO. 1 AND 1A
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 50S 080W 12 NE OF SW LAT/LONG... 55-51.80 N 161-34.17 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6193640.
GEOLOGIC PROVINCE.. 339195.
MAP REFERENCE..... PORT MOLLER 1:250000
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1969/08/01
TEMPERATURE (C)..... 151.1 1ST SEPARATION PRESSURE (KG/CM2)... R 3.0
WELL DEPTH (M)..... 4197.
GRADIENT (C/KM)..... 32.
OTHER SAMPLE INFORMATION.. FLOWING WATER AND GAS IN LOWER PART OF WELL.
QUALIFICATION FIELD..... SEPARATOR PRESSURE 2.1 TO 3.9 KG/CM**2.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00116

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045060
NAME OF SAMPLE SOURCE... PAN AM STEDATNA CREEK ST. OIL WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 12N 012W 30 SE OF SW LAT/LONG... 61-05.5 N 151-29. W
STATE..... ALASKA UTM ZONE... +05

COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... TYONEK 1:250000, A-4 1:63360
NORTHING... 6774690.
582669.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1962/02/07
TEMPERATURE (C)..... 47.2
WELL DEPTH (M)..... 2182.
GRADIENT (C/KM)..... 35.
OTHER SAMPLE INFORMATION.. TD 2273.5M; QUARTZ DIORITE.

WATER ANALYSIS
PH..... 8.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00117

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000213
NAME OF SAMPLE SOURCE... PILGRIM HOT SPRING (KRUZGAMEPA)
MARING NUMBER..... 6

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 04S 031W 36 SE OF SE — LAT/LONG... 65-05.9 N 164-55.3 W
STATE..... ALASKA — UTM ZONE... +03
COUNTY..... — NORTHING... 7219409.
GEOLOGIC PROVINCE.. SEWARD PENINSULA — 503915.
MAP REFERENCE..... BENDELEBEN A-6 1:63360
OTHER LOCALITY INFORMATION: 65 KM NORTH OF NOME; .8 KM SOUTH OF PILGRIM RIVER. FORMERLY KNOWN AS "KRUZGAMERA SPRING".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/00/00
SAMPLE NUMBER..... 1
TEMPERATURE (C)..... 55.
DISCHARGE..... L 36. L/MIN
PERTINENT LITHOLOGY..... BEDROCK CONCEALED; SPRING IS 4 KM NORTH OF PLUTONIC AND HIGH-GRADE METAMORPHIC ROCKS OF THE KIGUAIK MTNS AND 4KM SOUTH OF LOW GRADE METAMORPHIC ROCKS OF THE HEN-AND-CHICKENS MTN.
OTHER SAMPLE INFORMATION.. TEMP = 69C IN 1915; TEMP = 60C IN 1972.

WATER ANALYSIS
DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 6.75
CHARGE IMBALANCE (% DIFF)... 4.1
ANALYSIS IN PPM

								ISOTOPES (0/00)	
AG....		CO3.....		LI...	4.	S....		DEL D OF WATER.....	-122.
AL....	0.044	CR.....		MG...	1.4	SB...		DEL O(18) OF WATER...	-14.9
B.....	2.4	F.....	4.7	NA...	1450.	SIO2.	100.		
BE....		FE(TOT).		NB...		SO4..	110.		
CA....	530.	HCO3....	30.1						
CL....	3346.								
CO....		K.....	61.						

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J., SHEAKER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00118

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0021465
NAME OF SAMPLE SOURCE... PILGRIM HOT SPRING (KRUZGAMEPA)
WARING NUMBER..... 6

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 04S 03IW 36 — SE OF SE — LAT/LONG... 65-05.58 N 164-55.32 W
STATE..... ALASKA
MAP REFERENCE..... BENDELEBEN A-6 1:63360
OTHER LOCALITY INFORMATION: 65 KM NORTH OF NOME; .8 KM SOUTH OF PILGRIM RIVER.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/09/02 WARING, G.A.
SAMPLE NUMBER..... 1
TEMPERATURE (C)..... 69.
DEPOSITS OR ALTERATION.... DEPOSITS: SMALL AMOUNTS OF NACL, CACO3, AND ALUM.
PERTINENT LITHOLOGY..... BEDROCK CONCEALED.
OTHER SAMPLE INFORMATION.. H2S ODOR. SPRING HAS SALTY TASTE.

WATER ANALYSIS
DATE/ANALYST..... DINSMORE, S.C.
CHARGE IMBALANCE (% DIFF)... 0.2
ANALYSIS IN PPM — ISOTOPES (0/00)

AL....	4.1	CR.....		MG...	7.4			
B.....		F.....		NA...	1587.	SIO2.	87.	
BE....		FE(TOT).	0.7	NB...		SO4..	25.	
CA....	545.	HCO3....	21.					
CL....	3450.							
CO....		K.....	61.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973; WARING, 1917

RECORD 00119

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0045155
NAME OF SAMPLE SOURCE... POCAHONTAS HOT SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 07N 023E 33 — E1/2 OF NE OF NW — LAT/LONG... 65-58.22 N 154-01.00 W
STATE..... ALASKA
MAP REFERENCE..... MELOZITNA 1:250000
OTHER LOCALITY INFORMATION: ON POCAHONTAS CREEK

SAMPLE DESCRIPTION AND CONDITIONS
PERTINENT LITHOLOGY..... NEAR CONTACT BETWEEN K. GRAYWACKE AND MUDSTONE AND INDIAN MOUNTAIN GRANODIORITE PLUTON.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *SELKREGG, 1976, YUKON REGIONAL PROFILES.

RECORD 00120

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0001920
NAME OF SAMPLE SOURCE... PORT MOLLER HOT SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 50S 073W 13 — SE SW — LAT/LONG... 55-51.7 N 160-29.5 W
STATE..... ALASKA

MAP REFERENCE..... PORT MOLLER D-2, 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 8/18/80
TEMPERATURE (C)..... 71.
DISCHARGE..... 252. L/MIN

WATER ANALYSIS
PH..... 8.24
SPECIFIC CONDUCTANCE..... 5300.
CHARGE IMBALANCE (% DIFF)... 2.3
ANALYSIS IN MG/L

						ISOTOPES (O/OO)	
AL....		CR.....		MG...	0.16		
B.....	13.	F.....	2.7	NA...	792.	SIO2.	63.
BE....		FE(TOT).		NB...		SO4..	17.
CA....	228.	HCO3....	71.				
CL....	1615.						
CO....		K.....	12.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00121

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021502
NAME OF SAMPLE SOURCE... PORT MOLLER HOT SPRINGS
WARING NUMBER..... 54

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 50S 073W 12 — NE OF NE OF SE OF SAT/LONG... 55-51.78 N 160-29.58 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 01
MAP REFERENCE..... PORT MOLLER D-2 1:63360
OTHER LOCALITY INFORMATION: SW SIDE OF BAY, A FEW FEET ABOVE HIGH-TIDE LEVEL.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1908/00/00
TEMPERATURE (C)..... 73.9
DEPOSITS OR ALTERATION... NONE
OTHER SAMPLE INFORMATION.. SPRING WATER IS "SCALDING" HOT. ONE MAIN POOL WITH SEVERAL MINOR POOLS. THE SPRINGS "BUBBLE VORACIOUSLY". THE WATER HAS A SLICK ALKALINE TASTE WITH NO ODOR.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00122

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045065
NAME OF SAMPLE SOURCE... PURE CANOE BAY NO. 1

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 54S 078W 08 — SE OF NE
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
LAT/LONG... 55-31.2 N 161-05.7 W
UTM ZONE... +04
NORTHING... 6096463.
372052.
MAP REFERENCE..... PORT MOLLER 1:250000, C-4 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1961/10/24
TEMPERATURE (C)..... 71.1

WELL DEPTH (M)..... 2025.
GRADIENT (C/KM)..... 33.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00123

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021483
NAME OF SAMPLE SOURCE... RAY RIVER HOT SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 13N 016W 10 S1/2 OF SW OF SW LAT/LONG... 65-57.78 N 150-55.14 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... TANANA D-2 1:63360
OTHER LOCALITY INFORMATION: 105 MILES NW OF FAIRBANKS; NORTH SIDE OF RAY RIVER AT BASE OF HILL IN "FOOL PLAIN".
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 24
TEMPERATURE (C)..... 45.
PERTINENT LITHOLOGY..... BEDROCK CONCEALED.
OTHER SAMPLE INFORMATION.. SLIGHT H2S ODOR.
WATER ANALYSIS
DATE/ANALYST..... BARNES, R.B.
PH..... 9.16
CHARGE IMBALANCE (% DIFF)... 28.5
ANALYSIS IN PPM

AG....		CO3.....	22.	LI...		S....		ISOTOPES (O/OO)	
AL....		CR.....		MG...	0.7	SB...		DEL D OF WATER.....	-150.
B.....	0.6	F.....		NA...	71.			DEL O(18) OF WATER...	-19.1
BE....		FE(TOT).		NB...		SO4..	19.		
CA....	5.6	HCO3....	74.						
CL....	9.1								
CO....		K.....	1.4						

OTHER ANALYTICAL DATA... ISOTOPE DATA FROM J.R. O'NEIL.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00124

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045021
NAME OF SAMPLE SOURCE... RED HILL SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 03N 025E 08 SE OF NE LAT/LONG... 69-37.62 N 146-01.62 W
STATE..... ALASKA UTM ZONE... +06
COUNTY..... NORTHING... 7724402.
GEOLOGIC PROVINCE.. 02 537797.
MAP REFERENCE..... MT. MICHELSON 1:250000, C-4 1:63360
OTHER LOCALITY INFORMATION: EAST SIDE OF THE CANNING RIVER AT THE WEST END OF SADLEROCHIT MTNS. THE SPRING WATER FLOWS ACROSS AND THROUGH A RUBBLE SLOPE FOR 90M AND JOINS THE SPRING-FED HEADWATERS OF THE "TAMAYARIAK RIVER".
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/04/28 SLOAN, C. E.
TEMPERATURE (C)..... 32.8
DISCHARGE..... Q 1444. L/MIN

DEPOSITS OR ALTERATION.... LAVENDER AND CREAM COLORED ALGAE COAT THE ROCKS AND THE BOTTOM OF THE POOL; THE HEADWATER STREAM CONTAINS AN UNIDENTIFIED SUSPENDED "PRECIPITATE" AND APPEARS BLACK.
OTHER SAMPLE INFORMATION.. GAS BUBBLES PRESENT WITH STRONG H2S ODOR.

WATER ANALYSIS

PH.....	7.0						
SPECIFIC CONDUCTANCE.....	1000.						
ANALYSIS IN MG/L						ISOTOPES (0/00)	
B.....		F.....	1.1	NA...	130.	SIO2.	29.
BE....		FE(TOT).		NB...		SO4..	90.
CA....		HCO3....	93.				
CD....		H2S.....		PO4..	0.09		
CL....	150.						
CO....		K.....	5.9				

QUALIFICATION FIELD,.... FLOW CONVERTED FROM CUBIC FEET / SECOND.

REFERENCE AND IDENTIFICATION

COMPILED BY.....	MACBETH, JOYCE
COMPILER AFFILIATION...	UNIVERSITY OF ALASKA
REFERENCE.....	CHILDERS AND OTHERS, 1977

RECORD 00125

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045022

NAME OF SAMPLE SOURCE... RED HILL SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY.....	UNITED STATES	03N 025E 08 SE OF NE	LAT/LONG... 69-37.62 N 146-01.62 W
STATE.....	ALASKA		UTM ZONE... +06
COUNTY.....			NORTHING... 7724402.
GEOLOGIC PROVINCE..	02		537797.

MAP REFERENCE..... MT. MICHELSON 1:250000, C-4 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR.....	1975/08/12
TEMPERATURE (C).....	29.

OTHER SAMPLE INFORMATION.. STRONG ODOR OF H2S

WATER ANALYSIS

PH.....	8.2						
SPECIFIC CONDUCTANCE.....	950.						
TOTAL DISSOLVED SOLIDS...	569.						
CHARGE IMBALANCE (% DIFF)...	2.0						
ANALYSIS IN MG/L						ISOTOPES (0/00)	
AG....		CO3.....	N				
AL....		CR.....		MG...	21.		
B.....		F.....	1.0	NA...	120.	SIO2.	27.
BE....		FE(TOT).		NB...		SO4..	50.
CA....	55.	HCO3....	322.				
CD....		H2S.....		PO4..	W 0.03		
CL....	130.						
CO....		K.....	5.8				

QUALIFICATION FIELD..... PO4 = PO4 + NITRATE + NITRITE.

REFERENCE AND IDENTIFICATION

COMPILED BY.....	MACBETH, JOYCE
COMPILER AFFILIATION...	UNIVERSITY OF ALASKA
REFERENCE.....	CHILDERS AND OTHERS, 1977

RECORD 00126

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021491

NAME OF SAMPLE SOURCE... RICHARDSON HIGHWAY - UNNAMED WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA B-3 1:63360
LAT/LONG... 62-25. N 145-27. W
OTHER LOCALITY INFORMATION: NEAR MILE 149, NORTH OF GULKANA.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1960/08/01 FERRIANS, O.J.JR
SAMPLE NUMBER..... 13
WELL DEPTH (M)..... 14.6
OTHER SAMPLE INFORMATION.. LAT/LONG ARE APPROXIMATE.

WATER ANALYSIS

DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
PH..... 7.3
TOTAL DISSOLVED SOLIDS... 1530.
CHARGE IMBALANCE (% DIFF)... 1.0
ANALYSIS IN PPM — ISOTOPES (0/00)

AL....		CR.....		MG...	111.		
B.....		F.....		NA...	233.	SIO2.	36.
BE....		FE(TOT).		NB...		SO4..	3.
CA....	167.	HCO3....	337.				
CL....	800.						
CO....		K.....	11.				

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00127

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021493

NAME OF SAMPLE SOURCE... RICHARDSON HIGHWAY - UNNAMED WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 03N 001W
STATE..... ALASKA — B&M: COPPER RIVER
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: NEAR MILE 112.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1956/06/14 WALLING, F.B.
SAMPLE NUMBER..... 16
WELL DEPTH (M)..... 4.6

WATER ANALYSIS

DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
TOTAL DISSOLVED SOLIDS... 8990.
CHARGE IMBALANCE (% DIFF)... 129.7
ANALYSIS IN PPM — ISOTOPES (0/00)

AG....		CO3.....	N				
AL....		CR.....		MG...	87.		
B.....		F.....		NA...	643.	SIO2.	43.
BE....		FE(TOT).		NB...		SO4..	60.
CA....	69.	HCO3....	1280.				
CL....	5680.						
CO....		K.....	14.				

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00128

GEOTHERM_SAMPLE_FILE GEOTHERM FILE ID: 0045059
NAME OF SAMPLE SOURCE... RICHFIELD WIDE BAY NO. 1 OIL WELL
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 33S 044W 05 SE OF NW OF NW LAT/LONG... 57-21.80 N 156-23.90 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6360613.
GEOLOGIC PROVINCE.. 656486.
MAP REFERENCE..... UGASHIK 1:250000, B-2 1:63360
OTHER LOCALITY INFORMATION: OFFSHORE.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1963/10/13
TEMPERATURE (C)..... 139.4
WELL DEPTH (M)..... 3830.
GRADIENT (C/KM)..... 35.
PERTINENT LITHOLOGY..... METAMORPHICS AND PROBABLY TUFF OR VOLCANICS.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00129

GEOTHERM_SAMPLE_FILE GEOTHERM FILE ID: 0045150
NAME OF SAMPLE SOURCE... SADLEROCHIT SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 031E 36 SE LAT/LONG... 69-39.38 N 144-23.62 W
STATE..... ALASKA
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... MT MICHELSON C-3 1:63360
OTHER LOCALITY INFORMATION: EXTREME EAST END OF SADLEROCHIT MTNS; ELEV=1000 FT.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/08/07
TEMPERATURE (C)..... 13.0
DISCHARGE..... 63537. L/MIN
OTHER SAMPLE INFORMATION.. ANOTHER SAMPLE FROM SPRING NO. 45149
WATER_ANALYSIS
PH..... 7.3
SPECIFIC CONDUCTANCE..... 400.
ALKALINITY..... 115. AS CACO3
TOTAL DISSOLVED SOLIDS... 223.
CHARGE IMBALANCE (% DIFF)... 9.7
ANALYSIS IN MG/L ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....		CR.....		MG...	18.			
B.....		F.....	0.6	NA...	7.8	SIO2.	10.	
BE....		FE(TOT).	0.030	NB...		SO4..	66.	
CA....	47.	HCO3....	140.	NO3..	@ 0.07			
CL....	3.5							
CO....		K.....	1.0					

OTHER ANALYTICAL DATA... P = 0.01.
QUALIFICATION FIELD..... NO3 = NITRATE + NITRITE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00130

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045151
NAME OF SAMPLE SOURCE... SADLEROCHIT SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 031E 36 SE LAT/LONG... 69-39.38 N 144-23.62 W
STATE..... ALASKA
MAP REFERENCE..... MT MICHELSON C-3 1:63360
OTHER LOCALITY INFORMATION: EXTREME EAST END OF SADLEROCHIT MTNS; ELEV=1000 FT.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/11/16
TEMPERATURE (C)..... 4.0
DISCHARGE..... 65745. L/MIN
OTHER SAMPLE INFORMATION.. TEMP MEASURED ABOUT ONE MILE DOWNSTREAM FROM SPRING.
WATER ANALYSIS
PH..... 7.3
SPECIFIC CONDUCTANCE..... 360.
ANALYSIS IN MG/L ISOTOPES (0/00)

B.....		F.....		NA...	6.9	SIO2.	9.5
BE....		FE(TOT).		NB...		SO4..	61.
CA....		HCO3....	126.	NO3..	Q 0.1		
CL....	3.6						
CO....		K.....	0.5				

OTHER ANALYTICAL DATA... P = 0.01 PPM.
QUALIFICATION FIELD,.... NO3 = NITRATE + NITRITE.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00131

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045149
NAME OF SAMPLE SOURCE... SADLEROCHIT SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 031E 36 SE LAT/LONG... 69-39.38 N 144-23.62 W
STATE..... ALASKA
MAP REFERENCE..... MT MICHELSON C-3 1:63360
OTHER LOCALITY INFORMATION: EXTREME EAST END OF SADLEROCHIT MTNS; ELEV=1000 FT.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/04/27
TEMPERATURE (C)..... 13.0
DISCHARGE..... 59460. L/MIN
OTHER SAMPLE INFORMATION.. SPRING ISSUES FROM A PRIMARY ORIFICE AND ONE SECONDARY ORIFICE FROM TALUS DERIVED FROM THE SADLEROCHIT SANDSTONE.
WATER ANALYSIS
PH..... 7.9
SPECIFIC CONDUCTANCE..... 410.
ANALYSIS IN MG/L ISOTOPES (0/00)

B.....		F.....	0.7	NA...	8.2	SIO2.	10.
BE....		FE(TOT).		NB...		SO4..	71.

CA.... HCO3.... 156. NO3.. Q 0.05
CA+MG. 78.
CL.... 4.0
CO.... K..... 1.1
QUALIFICATION FIELD..... NO3 = NITRATE + NITRITE.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00132

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045020
NAME OF SAMPLE SOURCE... SAVIUKVIAYAK R. WEST SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES LAT/LONG... 68-54.17 N 148-05.17 W
STATE..... ALASKA
MAP REFERENCE..... PHILLIP SMITH MTNS D-3 1:63360
OTHER LOCALITY INFORMATION: NE OF "LUPINE SPRING".
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1973/05/05
TEMPERATURE (C)..... 5.
DISCHARGE..... R 151202.8L/MIN
PERTINENT LITHOLOGY..... ON A NE TRENDING LINEAMENT WITH "LUPINE SPRING" AND SEVERAL OTHER SPRINGS.
OTHER SAMPLE INFORMATION.. BELOW 20 DEGREE C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.
WATER ANALYSIS
PH..... 7.8
SPECIFIC CONDUCTANCE..... 259.
ALKALINITY..... 127. AS CACO3
TOTAL DISSOLVED SOLIDS... 141.
CHARGE IMBALANCE (% DIFF)... 0.8
ANALYSIS IN MG/L ISOTOPES (O/OO)
AG.... CO3.... N
AL.... CR..... MG... 9.2
B..... F..... 0.5 NA... 0.7 SIO2. 4.8
BE.... FE(TOT). 0.060 NB... SO4.. 8.5
CA.... 40. HCO3.... 155.
CL.... 0.7
CO.... K..... 0.1
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00133

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045033
NAME OF SAMPLE SOURCE... SAVIUKVIAYAK TRIBUTARY SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 06S 017E 12 SE OF SE OF NW LAT/LONG... 68-56.33 N 147-58.75 W
STATE..... ALASKA
MAP REFERENCE..... PHILLIP SMITH MTNS D-2 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
TEMPERATURE (C)..... 3.5
DISCHARGE..... R 91740.6L/MIN

OTHER SAMPLE INFORMATION.. BELOW 20 DEGREE C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER ANALYSIS

PH	7.9
SPECIFIC CONDUCTANCE	239.
ALKALINITY	112. AS CACO3
TOTAL DISSOLVED SOLIDS	132.
CHARGE IMBALANCE (% DIFF)	1.0

ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AG		CO3	N					
AL		CR		MG	7.3			
AS		CS		MN	0.01			
B		F	0.5	NA	0.3	SIO2	4.6	
BE		FE(TOT)	0.050	NB		SO4	12.	
CA	39.	HCO3	137.					
CD		H2S		PO4	N			
CL	0.5							
CO		K	0.1					

OTHER ANALYTICAL DATA... NITRATE + NITRITE = 0.05 MG/L.

REFERENCE AND IDENTIFICATION

COMPILED BY	MACBETH, JOYCE
COMPILER AFFILIATION	UNIVERSITY OF ALASKA
REFERENCE	CHILDERS AND OTHERS, 1977

RECORD 00134

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045034

NAME OF SAMPLE SOURCE... SAVIUKVIAYAK TRIBUTARY SPRING

LOCATION

		TOWNSHIP-RANGE			COORDINATES	
COUNTRY	UNITED STATES	06S	017E	12 SE OF SE OF NW	LAT/LONG	68-56.33 N 147-58.75 W
STATE	ALASKA					
MAP REFERENCE	PHILLIP SMITH MTNS D-2 1:63360					

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR	1975/04/20
TEMPERATURE (C)	6.5
AMBIENT TEMP (C)	6.5
DISCHARGE	R 76450.5L/MIN

OTHER SAMPLE INFORMATION.. ANOTHER SAMPLE FROM SPRING NO. 45033

WATER ANALYSIS

PH	8.2
SPECIFIC CONDUCTANCE	247.

ANALYSIS IN MG/L

								ISOTOPES (O/OO)
B		F	0.3	NA	0.8	SIO2	4.8	
BE		FE(TOT)		NB		SO4	9.1	
CA		HCO3	145.					
CA+MG	52.							
CD		H2S		PO4	0.03			
CL	0.9							
CO		K	0.5					

OTHER ANALYTICAL DATA... NITRATE + NITRITE = 0.11 MG/L.

REFERENCE AND IDENTIFICATION

COMPILED BY	MACBETH, JOYCE
COMPILER AFFILIATION	UNIVERSITY OF ALASKA
REFERENCE	CHILDERS AND OTHERS, 1977

RECORD 00135

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0000215

NAME OF SAMPLE SOURCE... SERPENTINE SPRINGS (ARCTIC)
WARING NUMBER..... 4

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 05N 029W 02 — SE OF SW OF SE — LAT/LONG... 65-51.4 N 164-41.3 W
STATE..... ALASKA — UTM ZONE... +03
COUNTY..... — NORTHING... 7303033.
GEOLOGIC PROVINCE.. SEWARD PENINSULA — 513696.
MAP REFERENCE..... BENDELEBEN D-6 1:63360
OTHER LOCALITY INFORMATION: 150 KM NORTH OF NOME ON HOT SPRINGS CREEK.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1972/00/00
SAMPLE NUMBER..... 2
TEMPERATURE (C)..... 60.
DISCHARGE..... 2. L/MIN
PERTINENT LITHOLOGY..... SPRINGS OCCUR IN "SERPENTINE HOT SPRINGS PLUTON", ABOUT 1.6KM FROM A FAULTED CONTACT. PLUTON IS COMPOSED OF BIOTITE GRANITE OF CRETACEOUS OR TERTIARY AGE; COUNTRY ROCK IS PRECAMBRIAN METASILLITE AND RELATED ROCKS (SALISBURY AND OTHERS, 1969).

WATER ANALYSIS

DATE/ANALYST..... WILLEY, L.M. AND PRESSER, T.S.
PH..... 7.91
CHARGE IMBALANCE (% DIFF)... 20.1

ANALYSIS IN MG/L

AG....		CO3.....	1.3	LI...	4.7	S....			
AL....	0.083	CR.....		MG...	0.48	SB...			
B.....	3.4	F.....	6.4	NA...	730.	SIO2.	100.		
BE....		FE(TOT). L	0.01	NB...		SO4..	29.		
BR....	4.9								
CA....	47.	HCO3....	64.5						
CL....	1480.								
CO....		K.....	40.						

ISOTOPES (O/OO)

DEL D OF WATER..... -123.
DEL O(18) OF WATER... -15.2

REFERENCE AND IDENTIFICATION

COMPILED BY..... RENNER, J., SHEARER, G.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00136

GEOTHERM_SAMPLE_FILE — GEOTHERM FILE ID: 0021467

NAME OF SAMPLE SOURCE... SERPENTINE SPRINGS (ARTIC)
WARING NUMBER..... 4

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 05N 029W 02 — SE OF SW OF SE — LAT/LONG... 65-51.48 N 164-42.60 W
STATE..... ALASKA
MAP REFERENCE..... BENDELEBEN D-6 1:63360
OTHER LOCALITY INFORMATION: 150 KM NORTH OF NOME ON HOT SPRINGS CREEK.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1972/00/00
SAMPLE NUMBER..... 2A
TEMPERATURE (C)..... 71.
PERTINENT LITHOLOGY..... SPRINGS OCCUR IN "SERPENTINE HOT SPRINGS PLUTON" ABOUT 1.6 KM FROM FAULTED CONTACT. PLUTON IS COMPOSED OF BIOTITE GRANITE. COUNTRY ROCK IS PRECAMBRIAN METASILITE AND RELATED ROCKS.

WATER ANALYSIS

DATE/ANALYST..... RAPP, J.B.
PH..... 7.94
CHARGE IMBALANCE (% DIFF)... 4.0
ANALYSIS IN PPM

								ISOTOPES (0/00)
AG....		CO3.....	0.7					
AL....	0.06	CR.....		MG...	0.34			
B.....	2.8	F.....	6.	NA...	800.	SIO2.	89.	
BE....		FE(TOT). L	0.01	NB...		SO4..	1.	
BR....	4.8							
CA....	78.	HCO3.....	56.8					
CL....	1420.							
CO....		K.....	41.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00137

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021466
NAME OF SAMPLE SOURCE... SERPENTINE SPRINGS (ARTIC)
WARING NUMBER..... 4
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 05N 029W 02 — SE OF SW OF SE — LAT/LONG... 65-51.48 N 164-42.60 W
STATE..... ALASKA
MAP REFERENCE..... BENDELEBEN D-6 1:63360
OTHER LOCALITY INFORMATION: 150 KM NORTH OF NOME ON HOT SPRINGS CREEK.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/00/00
SAMPLE NUMBER..... 2
TEMPERATURE (C)..... 60.
PERTINENT LITHOLOGY..... SPRINGS OCCUR IN "SERPENTINE HOT SPRINGS PLUTON" ANOUT 1.6 KM FROM FAULTED CONTACT ; PLUTON IS COMPOSED OF BIOTITE GRANITE; COUNTRY ROCK IS PRECAMBRIAN METASILTITE AND RELATED ROCKS.
WATER ANALYSIS
DATE/ANALYST..... PRESSER, T.S. AND WILLEY, L.M.
PH..... 7.91
CHARGE IMBALANCE (% DIFF)... 19.9
ANALYSIS IN MG/L

								ISOTOPES (0/00)
AG....		CO3.....		LI...	4.7			
AL....	0.083	CR.....		MG...	0.48			
B.....	3.4	F.....	6.4	NA...	730.	SIO2.	100.	
BE....		FE(TOT).		NB...		SO4..	29.	
CA....	47.	HCO3.....	64.5					
CL....	1480.							
CO....		K.....	40.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00138

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000205
NAME OF SAMPLE SOURCE... SHAKES SPRINGS (CHIEF SHAKES)
WARING NUMBER..... 73
LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 59S 085E
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... PETERSBURG C-2 1:63360
LAT/LONG... 56-43.02 N 132-02.30 W
UTM ZONE... +08
NORTHING... 6289565.
681561.
OTHER LOCALITY INFORMATION: 20 MILES NE OF WRANGELL ON THE NORTH EDGE OF THE STIKINE RIVER VALLEY.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1915/06/19 WARING, G.A.
TEMPERATURE (C)..... 52.0
DISCHARGE..... R 378. L/MIN
OTHER SAMPLE INFORMATION.. SPRINGS ISSUE FROM BASE OF A GRANITE CLIFF.

WATER ANALYSIS
DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.
TOTAL DISSOLVED SOLIDS... 409.
CHARGE IMBALANCE (% DIFF)... 5.6
ANALYSIS IN PPM

AG....		CO3.....	18.				
AL....		CR.....		MG...	0.4		
B.....		F.....		NA...	87.	SIO2.	108.
BE....		FE(TOT). @	1.2	NB...		SO4..	142.
CA....	13.	HCO3....	43.				
CL....	6.5						
CO....		K.....	9.2				

ISOTOPES (0/00)

QUALIFICATION FIELD..... FE = FE + AL(FE2O3 + AL2O3).

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00139

GEOTHERM SAMPLE FILE
GEOTHERM FILE ID: 0045054
NAME OF SAMPLE SOURCE... SHELL JOHNSON SLOUGH OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 08N 016W 36 S/2 OF SE
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... KENAI 1:250000, C-6 1:63360
LAT/LONG... 60-44. N 152-00. W
UTM ZONE... +05
NORTHING... 6733296.
554539.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1969/02/15
TEMPERATURE (C)..... 75.0 AT (M).. 1918.
WELL DEPTH (M)..... 1919.
GRADIENT (C/KM)..... 40.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00140

GEOTHERM SAMPLE FILE
GEOTHERM FILE ID: 0045064
NAME OF SAMPLE SOURCE... SHELL KUSTATAN RIVER

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES 08N 015W 04 NE OF SW OF SE
STATE..... ALASKA
LAT/LONG... 60-48.52 N 151-54.87 W
UTM ZONE... +05

COUNTY.....
GEOLOGIC PROVINCE..
NORTHING... 6741760.
559063.
MAP REFERENCE..... KENAI 1:250000, D-6 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1969/01/11
TEMPERATURE (C)..... 38.9
WELL DEPTH (M)..... 1207.
GRADIENT (C/KM)..... 33.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00141

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045053

NAME OF SAMPLE SOURCE... SHELL MIDDLE RIVER ST. OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 10N 013W 05 NE OF SW — LAT/LONG... 60-59. N 151-37. W
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
UTM ZONE... +05
NORTHING... 6761517.
574857.
MAP REFERENCE..... KENAI 1:250000, D-5 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1967/03/05
TEMPERATURE (C)..... 64.4
WELL DEPTH (M)..... 1611.
GRADIENT (C/KM)..... 41.
OTHER SAMPLE INFORMATION.. BOTTOM AT 416.5 FT.S., 487.1 FT. W. OF SURFACE.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00142

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045148

NAME OF SAMPLE SOURCE... SHUBLIK SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 01N 024E 03 SE OF NE — LAT/LONG... 69-28.33 N 146-11.30 W
STATE..... ALASKA
MAP REFERENCE..... MT MICHELSON B-4 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1975/04/28
SAMPLE NUMBER..... 7
TEMPERATURE (C)..... 5.5
DISCHARGE..... 40772. L/MIN
OTHER SAMPLE INFORMATION.. ANOTHER SAMPLE FROM SPRING NO. 45147

WATER ANALYSIS
PH..... 7.9
SPECIFIC CONDUCTANCE..... 270.
ANALYSIS IN MG/L — ISOTOPES (O/OO)
CA.... HCO3.... 124.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA

REFERENCE.............. CHILDERS AND OTHERS, 1977

RECORD 00143

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045147

NAME OF SAMPLE SOURCE... SHUBLIK SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 01N 024E 03 — SE OF NE — LAT/LONG... 69-28.33 N 146-11.83 W

STATE..... ALASKA

MAP REFERENCE..... MT MICHELSON B-4 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/05/10

SAMPLE NUMBER..... 7

TEMPERATURE (C)..... 5.5

DISCHARGE..... 40772. L/MIN

OTHER SAMPLE INFORMATION.. BELOW 20 DEGREES C. CUT-OFF, BUT YEAR-ROUND FLOW FROM PERMAFROST INDICATES CONSIDERABLE GEOTHERMAL ENERGY.

WATER ANALYSIS

PH..... 8.0

SPECIFIC CONDUCTANCE..... 275.

ALKALINITY..... 104. AS CACO3

TOTAL DISSOLVED SOLIDS... 157.

CHARGE IMBALANCE (% DIFF)... 1.4

ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....		CR.....		MG...	11.			
AS....		CS.....		MN...	N			
B.....		F.....	0.5	NA...	1.5	SIO2.	4.8	
BE....		FE(TOT).	0.050	NB...		SO4..	37.	
CA....	38.	HCO3....	127.	NO3..	Q 0.03			
CD....		H2S.....		PO4..	N			
CL....	1.3							
CO....		K.....	0.3					

QUALIFICATION FIELD..... NO3 = NO3 + NO4.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE

COMPILER AFFILIATION... UNIVERSITY OF ALASKA

REFERENCE..... CHILDERS AND OTHERS, 1977

RECORD 00144

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021498

NAME OF SAMPLE SOURCE... SITKA HOT SPRINGS - MAIN SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 58S 064E — LAT/LONG... 56-50. N 135-22. W

STATE..... ALASKA

MAP REFERENCE..... PORT ALEXANDER D-4 1:63360

OTHER LOCALITY INFORMATION: KLIUCHEF PENINSULA; 16 MILES SOUTH OF SITKA; NEXT TO "HOT SPRINGS BAY"; ELEVATION = 60 FT ABOVE HIGH TIDE.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/25

SAMPLE NUMBER..... 3

TEMPERATURE (C)..... 65.

DISCHARGE..... R 36. L/MIN

PERTINENT LITHOLOGY..... GRANITE CUT BY NARROW DIKES OF DARKER ROCK, RESEMBLING DIABASE, THAT IS CLASSIFIED AS A SPESSARTITE (GARNET) LAMPROPHYRE.

OTHER SAMPLE INFORMATION.. WATER TASTES SALTY AND HAS FAINT ODOR AND TASTE OF H2S.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.

TOTAL DISSOLVED SOLIDS... 4877.

CHARGE IMBALANCE (% DIFF)... 4.8

ANALYSIS IN PPM

ISOTOPES (O/OO)

AG....		CO3.....	N				
AL....	1.6	CR.....		MG...	7.2		
B.....		F.....		NA...	1440.	SIO2.	96.
BE....		FE(TOT).	0.75	NB...		SO4..	88.
CA....	378.	HCO3....	29.	NO3..	N		
CL....	2745.						
CO....		K.....	60.				

OTHER ANALYTICAL DATA... TRACE OF B407.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... WARING, 1917

RECORD 00145

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000223

NAME OF SAMPLE SOURCE... SOUTH - UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES

STATE..... ALASKA

COUNTY.....

GEOLOGIC PROVINCE.. 02

MAP REFERENCE..... SHUNGNAK 1:250000

LAT/LONG... 66-09.00 N 157-07.02 W

UTM ZONE... +04

NORTHING... 7337718.

584969.

OTHER LOCALITY INFORMATION: 84 KM SOUTH OF KOBUK ON SOUTH SIDE OF PURCELL MTNS. SPRINGS ARE SCATTERED ON A WEST-FACING TIMBERED SLOPE 60 TO 120 METERS ABOVE A SOUTH FLOWING TRIBUTARY TO "BILLY HAWK CREEK".

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 9

PERTINENT LITHOLOGY..... SPRING IS IN LATE CRETACEOUS QUARTZ MONZONITE OF "WHEELER CREEK PLUTON", WITHIN 400M OF CONTACT WITH LOWER CRETACEOUS ANDESITE (MILLER, 1970). SPRINGS ARE ON CONSPICUOUS LINEAMENT TRENDING N80W (PATTON AND OTHERS, 1968).

OTHER SAMPLE INFORMATION.. ESTIMATED TEMP OF +50C.

WATER ANALYSIS

DATE/ANALYST..... BARNES, R.B.

ANALYSIS IN MG/L

ISOTOPES (O/OO)

AL....	0.1	CR.....		MG...	0.01		
B.....		F.....		NA...	83.	SIO2.	65.
BE....		FE(TOT).	L 0.01	NB...		SO4..	122.
CA....	5.9						
CL....	6.						
CO....		K.....	2.1				

REFERENCE AND IDENTIFICATION

COMPILED BY..... RENNER, J., SHEAKER, G.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... MILLER AND OTHERS, 1973

RECORD 00146

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001917

NAME OF SAMPLE SOURCE... STAN CHRISTIANSON HOT SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 61S 092W LAT/LONG... 54-54.2 N 163-08.6 W
STATE..... ALASKA
MAP REFERENCE..... FALSE PASS 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 7/3/80
TEMPERATURE (C)..... 43.3
DISCHARGE..... 20. L/MIN

WATER ANALYSIS
PH..... 7.39
SPECIFIC CONDUCTANCE..... 5600.
CHARGE IMBALANCE (% DIFF)... 0.2
ANALYSIS IN MG/L

						ISOTOPES (O/OO)	
AL....		CR.....		MG...	66.		
B.....	3.0	F.....	0.25	NA...	783.	SIO2.	41.
BE....		FE(TOT).		NB...		SO4..	359.
CA....	275.	HCO3....	102.				
CL....	1570.						
CO....		K.....	13.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00147

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001912
NAME OF SAMPLE SOURCE... SUMMER BAY (SPRING)
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 73S 117W LAT/LONG... 53-53.1 N 166-26.9 W
STATE..... ALASKA
MAP REFERENCE..... UNALASKA 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 7/18/80
TEMPERATURE (C)..... 35.
DISCHARGE..... 64. L/MIN

WATER ANALYSIS
PH..... 6.98
SPECIFIC CONDUCTANCE..... 1810.
CHARGE IMBALANCE (% DIFF)... 5.5
ANALYSIS IN MG/L

						ISOTOPES (O/OO)	
AL....		CR.....		MG...	1.0		
B.....	0.5	F.....	0.22	NA...	150.	SIO2.	18.
BE....		FE(TOT).		NB...		SO4..	245.
CA....	202.	HCO3....	73.				
CL....	404.						
CO....		K.....	3.0				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00148

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001913
NAME OF SAMPLE SOURCE... SUMMER BAY (WELL 1)
LOCATION TOWNSHIP-RANGE COORDINATES

COUNTRY..... UNITED STATES 73S 117W LAT/LONG... 53-53.1 N 166-26.9 W
STATE..... ALASKA
MAP REFERENCE..... UNALASKA 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/26/80
TEMPERATURE (C)..... 50.
DISCHARGE..... 180. L/MIN

WATER ANALYSIS
SPECIFIC CONDUCTANCE..... 3850.
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	6.3			
B.....	0.5	F.....	0.44	NA...	332.	SIO2.	35.	
BE....		FE(TOT).		NB...		SO4..	528.	
CA....	460.							
CL....	923.							
CO....		K.....	6.5					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00149

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0001914
NAME OF SAMPLE SOURCE... SUMMER BAY (WELL 2)

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 73S 117W LAT/LONG... 53-53.1 N 166-26.9 W
STATE..... ALASKA
MAP REFERENCE..... UNALASKA 1:250,000

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/27/80
TEMPERATURE (C)..... 44.
DISCHARGE..... 30. L/MIN

WATER ANALYSIS
ANALYSIS IN MG/L

								ISOTOPES (O/OO)
AL....		CR.....		MG...	10.			
B.....	0.5	F.....	0.4	NA...	276.	SIO2.	25.	
BE....		FE(TOT).		NB...		SO4..	423.	
CA....	372.							
CL....	741.							
CO....		K.....	5.5					

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND MOORMAN, 1981

RECORD 00150

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0045035
NAME OF SAMPLE SOURCE... SURPRISE LAKE HOT SPRING AT ANIAKCHAK CRATER

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 38S 056W 01 NW OF NE OF NE OF NW LAT/LONG... 56-55.68 N 158-07.20 W
STATE..... ALASKA UTM ZONE... +04
COUNTY..... NORTHING... 6309541.
GEOLOGIC PROVINCE.. 01 553592.
MAP REFERENCE..... CHIGNIK 1:250000, D-1 1:63360

OTHER LOCALITY INFORMATION: WITHIN ANIAKCHAK CRATER NEAR PORT HEIDEN.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1976/07/25
TEMPERATURE (C)..... 23.0

WATER ANALYSIS
SPECIFIC CONDUCTANCE..... 850.
TOTAL DISSOLVED SOLIDS... 548.
CHARGE IMBALANCE (% DIFF)... 0.6
ANALYSIS IN MG/L

						ISOTOPES (0/00)	
AL....		CR.....		MG...	31.		
B.....	3800.	F.....	0.7	NA...	99.	SIO2.	87.
BE....		FE(TOT).		NB...		SO4..	23.
CA....	45.	HCO3....	388.				
CD....		H2S.....		PO4..	0.15		
CL....	86.						
CO....		K.....	9.8				

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... U.S. GEOLOGICAL SURVEY, 1977

RECORD 00151

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045030
NAME OF SAMPLE SOURCE... SWANSON RIVER #4

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 08N 009W 16 — S1/2 OF SW OF SE
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... KENAI 1:250000, D-3 1:63360
LAT/LONG... 60-46.67 N 150-51.75 W
UTM ZONE... +05
NORTHING... 6739732.
616405.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1959/03/03
TEMPERATURE (C)..... 102.8
WELL DEPTH (M)..... 3834.
OTHER SAMPLE INFORMATION.. OIL-GAS WELL, S-0 WESTERN

WATER ANALYSIS
PH..... 6.5
SPECIFIC CONDUCTANCE..... 49400.
TOTAL DISSOLVED SOLIDS... 36100.
CHARGE IMBALANCE (% DIFF)... 0.7
ANALYSIS IN MG/L

						ISOTOPES (0/00)	
AG....		CO3.....		LI...	20.		
AL....		CR.....		MG...	59.		
B.....		F.....	2.4	NA...	4716.	SIO2.	55.
BE....		FE(TOT).		NB...		SO4..	79.
CA....	7820.	HCO3....	330.				
CD....		H2S.....		PO4..	N		
CL....	21400.						
CO....		K.....	138.			ZN...	N

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *USGS, ANCHORAGE

RECORD 00152

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000245

NAME OF SAMPLE SOURCE... TENAKEE HOT SPRINGS (FORMERLY HOONIAH HOT SPRINGS)
WARING NUMBER..... 67

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE.. 03
LAT/LONG... 57-46.86 N 135-13.02 W
UTM ZONE... +08
NORTHING... 6404398.
487115.

OTHER LOCALITY INFORMATION: AT TENAKEE SPRINGS; SW OF JUNEAU.

SAMPLE DESCRIPTION AND CONDITIONS

SAMPLE NUMBER..... 82
TEMPERATURE (C)..... 42.5

WATER ANALYSIS

PH..... 9.0
CHARGE IMBALANCE (% DIFF)... 7.2
ANALYSIS IN MG/L — ISOTOPES (O/OO)

AG....		CO3.....		LI...	0.08			
AL....	0.05	CR.....		MG...	0.76			
B.....	4.4	F.....	5.	NA...	190.	SIO2.	60.	
BE....		FE(TOT).		NB...		SO4..	322.	
CA....	28.	HCO3....	54.8					
CL....	95.4							
CO....		K.....	3.3					

REFERENCE AND IDENTIFICATION

COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00153

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021501

NAME OF SAMPLE SOURCE... TENAKEE HOT SPRINGS - MINERAL SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
LAT/LONG... 57-46.86 N 135-13.02 W
MAP REFERENCE..... SITKA D-4 1:63360

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/23
TEMPERATURE (C)..... 13.3
PERTINENT LITHOLOGY..... BEDROCK IS COVERED BY A GRAVEL THAT IS CEMENTED BY LIME DEPOSITION.
OTHER SAMPLE INFORMATION.. COOL MINERAL SPRING, WITH DISTINCT TASTE AND ODOR OF H2S.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.
TOTAL DISSOLVED SOLIDS... 592.
CHARGE IMBALANCE (% DIFF)... 3.6
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	28.					
AL....	T	CR.....		MG...	0.6			
B.....		F.....		NA...	111.	SIO2.	57.	
BE....		FE(TOT).	0.5	NB...		SO4..	166.	
CA....	11.	HCO3....	2.4	NO3..	N			
CL....	31.							
CO....		K.....	2.8					

OTHER ANALYTICAL DATA... B407 PRESENT.
REFERENCE AND IDENTIFICATION
  COMPILED BY..... LAWSON, WILLIAM A.
  COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
  REFERENCE..... WARING, 1917

RECORD 00154

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021500
  NAME OF SAMPLE SOURCE... TENAKEE HOT SPRINGS - PRINCIPAL SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
  COUNTRY..... UNITED STATES LAT/LONG... 57-46.86 N 135-13.02 W
  STATE..... ALASKA
  MAP REFERENCE..... SITKA D-4 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
  DATE/COLLECTOR..... 1915/06/23
  TEMPERATURE (C)..... 41.1
  PERTINENT LITHOLOGY..... SPRINGS ISSUE FROM A FISSURE IN A DARK GNEISS, WHICH IS INTRUDED BY A LIGHT-GRAY GRANITE.
WATER ANALYSIS
  DATE/ANALYST..... DINSMORE, S.C.
  TOTAL DISSOLVED SOLIDS... 787.
  CHARGE IMBALANCE (% DIFF)... 4.9
  ANALYSIS IN PPM ISOTOPES (O/OO)

AG....		CO3.....	24.					
AL....	2.4	CR.....		MG...	2.8			
B.....		F.....		NA...	201.	SIO2.	94.	
BE....		FE(TOT).	1.	NB...		SO4..	302.	
CA....	35.	HCO3....	26.	NO3..	N			
CL....	99.							
CO....		K.....	4.					

OTHER ANALYTICAL DATA... TRACE OF B407.
REFERENCE AND IDENTIFICATION
  COMPILED BY..... LAWSON, WILLIAM A.
  COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
  REFERENCE..... WARING, 1917

RECORD 00155

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000241
  NAME OF SAMPLE SOURCE... TENAKEE INLET - UNNAMED HOT SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
  COUNTRY..... UNITED STATES 44S 058E 33 SE OF SE LAT/LONG... 58-00.30 N 135-55.23 W
  STATE..... ALASKA UTM ZONE... +08
  COUNTY..... NORTHING... 6428867.
  GEOLOGIC PROVINCE.. 445810.
  MAP REFERENCE..... JUNEAU A-6 1:63360
  OTHER LOCALITY INFORMATION: ABOUT 4 MILES ABOVE THE MOUTH OF A LARGE CREEK THAT ENTERS THE HEAD OF TENAKEE INLET.
SAMPLE DESCRIPTION AND CONDITIONS
  DATE/COLLECTOR..... 1915/07/01 WARING, G.A.
  SAMPLE NUMBER..... 78
  TEMPERATURE (C)..... 81.5
  DISCHARGE..... 38. L/MIN
  DEPOSITS OR ALTERATION.... SMALL AMOUNTS OF CACO3 DEPOSITS.
  PERTINENT LITHOLOGY..... ROCK EXPOSED IN LOW CLIFFS ON EACH SIDE OF THE CREEK, NEAR THE SPRINGS, IS DIORITIC, MUCH ALTERED ON THE SURFACE, AND IS TRAVERSED BY VEINLETS (WHITE) OF HEULANDITE. WHITE CRYSTALLINE LIMESTONE FRAGMENTS ARE IN EVIDENCE. COUNTRY ROCK AROUND THE DIORITE IS GRANITE.

OTHER SAMPLE INFORMATION.. SPRING FORMS A POOL;NOTICABLE ODOR AND TASTE OF H2S.
WATER ANALYSIS
DATE/ANALYST..... DINSMORE, S.C.
CHARGE IMBALANCE (% DIFF)... 9.1
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	7.2					
AL....	4.6	CR.....		MG...	2.3			
B.....		F.....		NA...	137.	SIO2.	119.	
BE....		FE(TOT).	2.1	NB...		SO4..	226.	
CA....	21.	HCO3....	48.					
CL....	33.							
CO....		K.....	4.1					

OTHER ANALYTICAL DATA... ANALYSIS FROM WARING, 1917.
REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00156

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000233
NAME OF SAMPLE SOURCE... TOLOVANA HOT SPRING
WARING NUMBER..... 17
LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY.....	UNITED STATES	05N 006W 07	NE OF NE OF SE	LAT/LONG...	65-16.43 N 148-50.83 W
STATE.....	ALASKA			UTM ZONE...	+06
COUNTY.....				NORTHING...	7239226.
GEOLOGIC PROVINCE..	YUKON - TANANA UPLAND				414415.
MAP REFERENCE.....	LIVENGOOD B-4 1:63360				

OTHER LOCALITY INFORMATION: ONE OF SEVERAL HOT SPRINGS FOUND ALONG THE WEST SIDE OF A CREEK DRAINING "HOT SPRINGS DOME" (EAST SIDE).
SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 21
TEMPERATURE (C)..... 56.
PERTINENT LITHOLOGY..... SPRINGS ARE IN MUDSTONE OF JURASSIC, AND OR CRETACEOUS AGE.
WATER ANALYSIS
DATE/ANALYST..... 1962/00/00
PH..... 7.7
SPECIFIC CONDUCTANCE..... 2090.
TOTAL DISSOLVED SOLIDS... 1180.
CHARGE IMBALANCE (% DIFF)... 1.3
ANALYSIS IN PPM — ISOTOPES (O/OO)

AL....		CR.....		MG...	1.2			
B.....		F.....	0.2	NA...	321.	SIO2.	75.	
BE....		FE(TOT).	0.02	NB...		SO4..	40.	
CA....	82.	HCO3....	49.	NO3..	0.2			
CL....	615.							
CO....		K.....	23.					

OTHER ANALYTICAL DATA... ANALYSIS FROM WARING, 1917. ANDERSON 1970- SAMPLE NO. SP-3.
REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... ANDERSON, 1970

RECORD 00157

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021486

NAME OF SAMPLE SOURCE... TOLSONA GROUP - MOOSE LAKE-UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 04N 005W — LAT/LONG... 62-08. N 146-06. W

STATE..... ALASKA — B&M: COPPER RIVER

MAP REFERENCE..... GULKANA A-4 1:63360

OTHER LOCALITY INFORMATION: N-NW EDGE OF MOOSE LAKE.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1952/11/09

SAMPLE NUMBER..... 7

OTHER SAMPLE INFORMATION.. LAT/LONG ARE APPROXIMATE.

WATER ANALYSIS

DATE/ANALYST..... WHETSTONE, G.W.

TOTAL DISSOLVED SOLIDS... 35000.

ANALYSIS IN PPM — ISOTOPES (0/00)

BE....		FE(TOT).		NB...	
CA....	7600.	HCO3....	16.		
CL....	15000.				

S04.. N

GAS ANALYSIS

ANALYSIS IN VOLUME % — ISOTOPES (00/0)

AR...	0.1		
CH4..	48.6	H2S..	N
C2H6.	0.2	N2...	50.6
CO2..	0.2	O2...	0.1
H2...	N		
HE...	0.1		

OTHER ANALYTICAL DATA... GAS ANALYSIS: TRACE OF ISOBUTANE.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00158

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021485

NAME OF SAMPLE SOURCE... TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 03N 003W 33 NE — LAT/LONG... 62-00.18 N 145-46.80 W

STATE..... ALASKA — B&M: COPPER RIVER

MAP REFERENCE..... GULKANA A-4 1:63360

OTHER LOCALITY INFORMATION: COPPER RIVER BASIN. 9.1 MILES S42E OF THE "GLENN HIGHWAY" BRIDGE ACROSS "TOLSONA CREEK".

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1957/00/00 MAHON, C.B.

SAMPLE NUMBER..... 3

GAS ANALYSIS

ANALYSIS IN VOLUME % — ISOTOPES (00/0)

AR...	0.1		
CH4..	52.4		
C2H6.	0.1	N2...	47.
CO2..	0.1	O2...	T
H2...	0.1		
HE...	0.1		

OTHER ANALYTICAL DATA... PROPANE = 0.1 %.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00159

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021460
NAME OF SAMPLE SOURCE... TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING

LOCATION		TOWNSHIP-RANGE	COORDINATES
COUNTRY.....	UNITED STATES	03N 003W 33 NE	LAT/LONG... 62-00.18 N 145-46.80 W
STATE.....	ALASKA	B&M: COPPER RIVER	
MAP REFERENCE.....	GULKANA A-4 1:63360		

OTHER LOCALITY INFORMATION: COPPER RIVER BASIN. 9.1 MILES S42E OF THE "GLENN HIGHWAY" BRIDGE ACROSS "TOLSONA CREEK".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1958/06/19 NICHOLS, D.R.
SAMPLE NUMBER..... N-8.628
DISCHARGE..... T L/MIN
OTHER SAMPLE INFORMATION.. SURFACE TEMPERATURE = COLD. SPRING WITH MUD CONE.

WATER ANALYSIS
DATE/ANALYST..... U.S. GEOLOGICAL SURVEY, PALMER, ALASKA
PH..... 6.8
SPECIFIC CONDUCTANCE..... 24900.
TOTAL DISSOLVED SOLIDS... 14900.
CHARGE IMBALANCE (% DIFF)... 2.0
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....		LI...	8.		
AL....		CR.....		MG...	65.		
AS....		CS.....		MN...	0.97		
B.....		F.....	0.4	NA...	2600.	SIO2.	10.
BE....		FE(TOT).	0.67	NB...		SO4..	230.
BR....	17.						
CA....	2760.	HCO3....	90.				
CO....		H2S.....		PO4..	0.16		
CL....	9100.	I.....	2.2				
CO....		K.....	24.				

GAS ANALYSIS
DATE/ANALYST..... 1958/08/22 U.S. BUREAU OF MINES, AMARILLO, TX.
ANALYSIS IN MOLE % — ISOTOPES (OO/O)

AR...	0.1		
CH4..	54.4	H2S..	N
C2H6.	N	N2...	44.9
CO2..	0.4	O2...	0.1
H2...	T		
HE...	0.1		

OTHER ANALYTICAL DATA... GAS ANALYSIS FROM NICHOLS AND YEHLE, 1961.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961; GRANTZ AND OTHERS, 1962

RECORD 00160

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021461
NAME OF SAMPLE SOURCE... TOLSONA GROUP - TOLSONA NO.1-SOUTHWEST SPRING
LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES 04N 004W 21 NE OF SE OF SE LAT/LONG... 62-06.50 N 145-57.10 W
STATE..... ALASKA B&M: COPPER RIVER
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA A-4 1:63360
OTHER LOCALITY INFORMATION: COPPER RIVER BASIN. 3/4 MILE N40E OF THE "GLENN HIGHWAY" BRIDGE ACROSS "TOLSONA CREEK".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1956/09/21 WEBER, F.R. AND COLLINS, F.R.
SAMPLE NUMBER..... 1
TEMPERATURE (C)..... R 10.
DISCHARGE..... T L/MIN

WATER ANALYSIS
DATE/ANALYST..... GASTON, G.
PH..... 7.1
SPECIFIC CONDUCTANCE..... 23600.
TOTAL DISSOLVED SOLIDS... 14600.
ANALYSIS IN PPM ISOTOPES (O/OO)

AG....		CO3.....	N	LI...	Q 0.5			
AL....	0.16	CR.....		MG...	111.			
B.....	35.	F.....	0.3	NA...	4660.	SIO2.	16.	
BA....	14.							
BE....		FE(TOT).	0.26	NB...		SO4..	N	
BI....		GA.....		NH4..	5.6			
BR....	17.							
CA....	787.	HCO3....	143.	NO3..	0.7			
CL....	8870.	I.....	3.7					
CO....		K.....	60.			ZN...	0.02	

GAS ANALYSIS
DATE/ANALYST..... U.S. BUREAU OF MINES
ANALYSIS IN VOLUME % ISOTOPES (OO/O)

AR...	0.1		
CH4..	66.9	H2S..	N
C2H6.	N	N2...	32.6
CO2..	0.2	O2...	T
H2...	N		
HE...	0.1		

OTHER ANALYTICAL DATA... GAS SAMPLE COLLECTED 1957/09/07 BY GRANTZ AND DETTERMAN, U.S. GEOLOGICAL SURVEY.
QUALIFICATION FIELD..... LI DETERMINED FROM A DUPLICATE SAMPLE BY C.E. ROBERSON.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961; GRANTZ AND OTHERS, 1962

RECORD 00161

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021462
NAME OF SAMPLE SOURCE... TOLSONA GROUP - TOLSONA NO.2-NORTHWEST SPRING

LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 004W 15 S1/2 OF SW LAT/LONG... 62-07.20 N 145-56.60 W
STATE..... ALASKA B&M: COPPER RIVER
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA A-4 1:63360
OTHER LOCALITY INFORMATION: COPPER RIVER BASIN. 1.2 MILES N33E OF THE "GLENN HIGHWAY" BRIDGE ACROSS "TOLSONA CREEK".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1958/07/14 NICHOLS AND YEHLE
SAMPLE NUMBER..... N-8.111
TEMPERATURE (C)..... R 15.

DISCHARGE..... T L/MIN
OTHER SAMPLE INFORMATION.. 150 FT DIAMETER CRATER. SALINE SPRING ON MUDCONE.
WATER ANALYSIS
DATE/ANALYST..... WHITEHEAD, H.C.
PH..... 6.3
SPECIFIC CONDUCTANCE..... 24794.
TOTAL DISSOLVED SOLIDS... 15200.
CHARGE IMBALANCE (% DIFF)... 2.4
ANALYSIS IN PPM ISOTOPES (0/00)

AL....		CR.....		MG...	94.		
AS....		CS.....		MN...	0.02		
B.....		F.....		NA...	4000.	SIO2.	7.1
BE....		FE(TOT).		NB...		SO4..	5.5
CA....	1580.	HCO3....	48.				
CL....	9450.						
CO....		K.....	26.				

GAS ANALYSIS
DATE/ANALYST..... 1958/08/22 U.S. BUREAU OF MINES, AMARILLO,TX.
ANALYSIS IN MOLE % ISOTOPES (00/0)

AR...	0.1		
CH4..	69.4	H2S..	N
C2H6.	N	N2...	30.
CO2..	0.4	O2...	0.1
H2...	N		
HE...	0.1		

OTHER ANALYTICAL DATA... WATER SAMPLE COLLECTED 1960/07/25 BY GRANTZ AND MACKEVETT.
REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... NICHOLS AND YEHLE, 1961

RECORD 00162

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021487
NAME OF SAMPLE SOURCE... TOLSONA GROUP - UNNAMED SPRING
LOCATION TOWNSHIP-RANGE COORDINATES
COUNTRY..... UNITED STATES 04N 004W 35 W1/2 LAT/LONG... 62-05.15 N 145-54.50 W
STATE..... ALASKA B&M: COPPER RIVER
MAP REFERENCE..... GULKANA A-4 1:63360
OTHER LOCALITY INFORMATION: 2.8 MILES E-NE OF "TOLSONA CREEK" MOUTH; SW OF "PLUMB BOB LAKE".
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/08/08 NICHOLS, D.R.
WATER ANALYSIS
DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
PH..... 7.3
TOTAL DISSOLVED SOLIDS... 5670.
CHARGE IMBALANCE (% DIFF)... 1.0
ANALYSIS IN PPM ISOTOPES (0/00)

AL....		CR.....		MG...	48.		
B.....		F.....		NA...	1170.	SIO2.	24.
BE....		FE(TOT).		NB...		SO4..	3.5
CA....	909.	HCO3....	216.				
CL....	3400.						
CO....		K.....	11.				

GAS ANALYSIS
ANALYSIS IN VOLUME % ISOTOPES (00/0)

AR...	0.2		
CH4..	58.2	H2S..	N
C2H6.	N	N2...	40.4
CO2..	0.9	O2...	0.1
H2...	0.1		
HE...	0.1		

OTHER ANALYTICAL DATA... GAS ANALYSIS: PROPANE = 0.1 %.

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00163

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021488

NAME OF SAMPLE SOURCE... TOLSONA GROUP - UNNAMED WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 04N 003W — LAT/LONG... 62-07. N 145-43. W
STATE..... ALASKA — B&M: COPPER RIVER
MAP REFERENCE..... GULKANA A-4 1:63360
OTHER LOCALITY INFORMATION: APPROX. 4.5 MILES WEST OF "GLENNALLEN".

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1959/10/25 FERRIANS, O.J.JR
WELL DEPTH (M)..... 153.
OTHER SAMPLE INFORMATION.. LAT/LONG ARE APPROXIMATE.

WATER ANALYSIS
DATE/ANALYST..... QUALITY OF WATER BRANCH, U.S.G.S.,PALMER,ALASKA
PH..... 7.8
TOTAL DISSOLVED SOLIDS... 3240.
CHARGE IMBALANCE (% DIFF)... 1.6

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N				
AL....		CR.....		MG...	118.		
B.....		F.....		NA...	767.	SIO2.	22.
BE....		FE(TOT).		NB...		SO4..	20.
CA....	290.	HCO3....	201.				
CL....	1900.						
CO....		K.....	27.				

REFERENCE AND IDENTIFICATION
COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00164

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0001910

NAME OF SAMPLE SOURCE... TWIN LAKES (WEST SHAKES) WARM SPRINGS

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 60S 084E S NW — LAT/LONG... 56-42.0 N 132-16.8 W
STATE..... ALASKA
MAP REFERENCE..... PETERSBURG C-1, 1:63,360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 9/21/79
TEMPERATURE (C)..... 21.
DISCHARGE..... 270. L/MIN

WATER ANALYSIS

PH..... 6.95
SPECIFIC CONDUCTANCE..... 150.
CHARGE IMBALANCE (% DIFF)... 65.1
ANALYSIS IN MG/L

AL....		CR.....		MG...	0.3				
B.....	0.1	F.....	0.28	NA...	26.	SIO2.	26.		
BE....		FE(TOT).		NB...		SO4..	32.		
CA....	5.4	HCO3....	30.						
CL....	60.								
CO....		K.....	1.3						

ISOTOPES (0/00)

REFERENCE AND IDENTIFICATION
COMPILED BY..... MARINER, R.H.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MOTYKA AND OTHERS, 1980

RECORD 00165

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045058
NAME OF SAMPLE SOURCE... UNION BACHATNA CREEK U-1

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... KENAI 1:250000, D-6 1:63360
TOWNSHIP-RANGE: 08N 016W 21 CENTER OF NE 1/4
LAT/LONG... 60-46.42 N 152-05.14 W
UTM ZONE... +05
NORTHING... 6737722.
549932.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/01/02
TEMPERATURE (C)..... 35.0 AT (M).. 939.
WELL DEPTH (M)..... 940.
GRADIENT (C/KM)..... 38.
WATER ANALYSIS
PH..... .10.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00166

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045056
NAME OF SAMPLE SOURCE... UNION BACHATNA CREEK U-7 OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... KENAI 1:250000, C-6 1:63360
TOWNSHIP-RANGE: 07N 016W 09 W1/2 OF SE OF NW
LAT/LONG... 60-42.85 N 152-05.93 W
UTM ZONE... +05
NORTHING... 6731083.
549179.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1972/02/10
TEMPERATURE (C)..... 30.6
WELL DEPTH (M)..... 809.
GRADIENT (C/KM)..... 39.
PERTINENT LITHOLOGY..... JURASSIC ROCKS.
OTHER SAMPLE INFORMATION.. JURASSIC AT 791.0M RECOVERED SALT WATER, MAX. PRESSURE 60PSI; DEAD AFTER 2 HR FLOW.
WATER ANALYSIS
ANALYSIS

ISOTOPES (0/00)

CL.... 2100.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00167

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045057
NAME OF SAMPLE SOURCE... UNION BIG RIVER OIL WELL

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	08N 016W 26	S1/2 OF NE OF SE		LAT/LONG...	60-45.20 N 152-01.43 W
STATE.....	ALASKA				UTM ZONE...	+05
COUNTY.....					NORTHING...	6735504.
GEOLOGIC PROVINCE..						553206.
MAP REFERENCE.....	KENAI 1:250000, D-6 1:63360					

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1976/01/09
TEMPERATURE (C)..... Q 31.7 AT (M).. 826.
WELL DEPTH (M)..... 827.
GRADIENT (C/KM)..... 39.
PERTINENT LITHOLOGY..... GRANODIORITE.
QUALIFICATION FIELD.... MAXIMUM TEMPERATURE RECORDED.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00168

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045061
NAME OF SAMPLE SOURCE... UNION FISH CREEK U. 12-8 OIL WELL

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	16N 003W 08	NW OF NW OF SW		LAT/LONG...	61-29.48 N 149-51.93 W
STATE.....	ALASKA				UTM ZONE...	+06
COUNTY.....					NORTHING...	6820667.
GEOLOGIC PROVINCE..						347445.
MAP REFERENCE.....	ANCHORAGE 1:250000, B-8 1:63360					

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1961/09/30
TEMPERATURE (C)..... 66.1
WELL DEPTH (M)..... 1954.
GRADIENT (C/KM)..... 34.
OTHER SAMPLE INFORMATION.. TD 1956.2M; TUFFACEOUS IGNEOUS OR METAMORPHIC ROCK.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00169

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045047
NAME OF SAMPLE SOURCE... UNION KASILOF U-1 OIL WELL

LOCATION		TOWNSHIP-RANGE			COORDINATES	
COUNTRY.....	UNITED STATES	03N 012W 30	SW OF NE		LAT/LONG...	60-16.73 N 151-25.50 W
STATE.....	ALASKA				UTM ZONE...	+05

COUNTY.....
GEOLOGIC PROVINCE..
NORTHING... 6687501.
586546.
MAP REFERENCE..... KENAI 1:250000, B-4 1:63360
OTHER LOCALITY INFORMATION: 3405-3435 FT OFFSHORE; WEST OF KASILOF.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1967/10/06
TEMPERATURE (C)..... 50.6
WELL DEPTH (M)..... 1676.
GRADIENT (C/KM)..... 57.
OTHER SAMPLE INFORMATION.. FORMATION WATER FILLED DRILL STRING, SALINITY 900 PPM, 3405-3435 FT OFFSHORE. TEST NO.1: INT=3405-3435 FT; TEMP=100 F, SALINITY =900 PPM.; TEST NO. 2: INT=3315-3345 FT, TEMP=97 F, SALINITY=800 PPM, TIME TO FILL DRILL PIPE=50 MIN; TEST ?: INT=3215-3230 FT, TEMP=95 F, SALINITY=930 PPM, TIME TO FILL DRILL PIPE=20 MIN. DRILL PIPE KEPT FILLING WITH SALT WATER, NO PRESSURES OF FLOW REATE GIVEN
OTHER ANALYTICAL DATA... SALINITY RANGES 800-930 PPM.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00170

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045076

NAME OF SAMPLE SOURCE... UNION KASILOF U-1 OIL WELL (UNION KASILOF NO.1)

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 03N 012W 30 SE OF NE
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
LAT/LONG... 60-16.73 N 151-25.5 W
UTM ZONE... +05
NORTHING... 6687567.
589308.
MAP REFERENCE..... KENAI 1:250000, B-4 1:63360
OTHER LOCALITY INFORMATION: BOTTOM IN SW/4 OF NW/4 OF SECTION 29, OFFSHORE.

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1964/06/20
TEMPERATURE (C)..... 94.4 AT (M).. 4908.
WELL DEPTH (M)..... 4914.
GRADIENT (C/KM)..... 31.
OTHER SAMPLE INFORMATION.. SAME WELL AS GEOTHERM FILE NO. 0045047.

REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00171

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045050

NAME OF SAMPLE SOURCE... UNION KNIK ARM NO. 1 OIL WELL

LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 16N 004W 02 SW OF NE OF NW OF
STATE..... ALASKA
COUNTY.....
GEOLOGIC PROVINCE..
LAT/LONG... 61-30.75 N 149-56.07 W
UTM ZONE... +06
NORTHING... 6823186.
343880.
MAP REFERENCE..... ANCHORAGE 1:250000, C-8 1:63360

SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/10/06
TEMPERATURE (C)..... 40.6
WELL DEPTH (M)..... 917.
GRADIENT (C/KM)..... 45.

WATER ANALYSIS
ANALYSIS — ISOTOPES (O/OO)
BI.... GA..... NH4.. 0.2
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00172

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045051
NAME OF SAMPLE SOURCE... UNION KNIK ARM NO. 2 OIL WELL
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 16N 003W 05 N1/2 OF SE OF NW — DEAMELONG... 61-30.68 N 149-51.00 W
STATE..... ALASKA — UTM ZONE... +06
COUNTY..... — NORTHING... 6822857.
GEOLOGIC PROVINCE.. — 348367.
MAP REFERENCE..... ANCHORAGE 1:250000, C-8 1:63360
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/10/23
TEMPERATURE (C)..... 40.0
WELL DEPTH (M)..... 981.
GRADIENT (C/KM)..... 42.
REFERENCE AND IDENTIFICATION
COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *ALASKA DIVISION OF OIL AND GAS, UNPUBLISHED DATA

RECORD 00173

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0021458
NAME OF SAMPLE SOURCE... UPPER KLAWASI - DRUM GROUP-SOUTHEAST SPRING
LOCATION — TOWNSHIP-RANGE — COORDINATES
COUNTRY..... UNITED STATES — 04N 002E 35 SW OF SW — LAT/LONG... 62-04.86 N 145-00.42 W
STATE..... ALASKA — B&M: COPPER RIVER
GEOLOGIC PROVINCE.. 02
MAP REFERENCE..... GULKANA A-3 1:63360
OTHER LOCALITY INFORMATION: AT APEX OF LARGE MUD CONE AT VABM KLAWASI 3017.
SAMPLE DESCRIPTION AND CONDITIONS
DATE/COLLECTOR..... 1960/07/13 GRANTZ, A.
SAMPLE NUMBER..... N-8.45
TEMPERATURE (C)..... 32.
DISCHARGE..... R 61. L/MIN
OTHER SAMPLE INFORMATION.. GROUP OF SPRINGS WITH MUDCONES.
WATER ANALYSIS
DATE/ANALYST..... WHITEHEAD, H.C.
PH..... 7.5
TOTAL DISSOLVED SOLIDS... 25800.
CHARGE IMBALANCE (% DIFF)... 2.2
ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N	LI...	9.1			
AL....	0.38	CR.....		MG...	248.			
AS....		CS.....		MN...	N			
B.....	173.	F.....	0.6	NA...	9490.	SIO2.	34.	
BE....		FE(TOT).	0.18	NB...		SO4..	614.	
BI....		GA.....		NH4..	1.3	SR...	N	

BR....	22.						
CA....	63.	HCO3....	8280.	NO3..	N		
CD....		H2S.....		PO4..	6.		
CL....	10800.	I.....	6.2				
CO....		K.....	232.				

GAS ANALYSIS

DATE/ANALYST..... 1958/08/22

ANALYSIS IN VOLUME %

ISOTOPES (00/00)

AR...	T		
CH4..	0.1	H2S..	N
C2H6.	N	N2...	1.1
CO2..	98.8	O2...	N
H2...	N		
HE...	T		

OTHER ANALYTICAL DATA... NO2 = 21.PPM; GAS SAMPLE COLLECTED 1958/06/18 BY NICHOLS AND YEHLE.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... GRANTZ AND OTHERS, 1962

RECORD 00174

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045026

NAME OF SAMPLE SOURCE... UPPER KLAWASI - MUD VOLCANO

LOCATION

		TOWNSHIP-RANGE		COORDINATES	
COUNTRY.....	UNITED STATES	04N 002E 35	SW OF SW	LAT/LONG...	62-04.82 N 145-00.00 W
STATE.....	ALASKA	B&M: COPPER RIVER		UTM ZONE...	+06
COUNTY.....				NORTHING...	6884530.
GEOLOGIC PROVINCE..				604166.	

MAP REFERENCE..... GULKANA 1:250000, A-3 1:63360

OTHER LOCALITY INFORMATION: DRUM GROUP; JUST EAST OF KLAWASI PEAK (ELEV 3017 FT). 12 MILES W-SW OF MOUNT DRUM.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1973/07/09
TEMPERATURE (C)..... 18.0
OTHER SAMPLE INFORMATION.. INCLUDED TO SHOW DROP IN TEMPERATURE.

WATER ANALYSIS

PH..... 7.1
SPECIFIC CONDUCTANCE..... 32200.
CHARGE IMBALANCE (% DIFF)... 3.3

ANALYSIS IN PPM

ISOTOPES (0/00)

AG....		CO3.....	360.	LI...	7.9		
AL....		CR.....		MG...	300.		
B.....	140.	F.....	0.4	NA...	10000.	SIO2.	53.
BE....		FE(TOT).		NB...		SO4..	740.
CA....	6.5	HCO3....	6970.				
CL....	11000.						
CO....		K.....	240.				

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *USGS, ANALYTICAL STATEMENT, ANCHORAGE

RECORD 00175

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045025

NAME OF SAMPLE SOURCE... UPPER KLAWASI - MUD VOLCANO

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 04N 002E 35 SW OF SW — LAT/LONG... 62-04.82 N 145-00.00 W
STATE..... ALASKA — B&M: COPPER RIVER — UTM ZONE... +06
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... GULKANA 1:250000, A-3 1:63360 — NORTHING... 6884530. 604166.

OTHER LOCALITY INFORMATION: DRUM GROUP; JUST EAST OF KLAWASI PEAK (ELEV 3017 FT). 12 MILES W-SW OF MOUNT DRUM.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1962/01/31
TEMPERATURE (C)..... 30.3
DISCHARGE..... N L/MIN
OTHER SAMPLE INFORMATION.. SHARP INCREASE IN DISCHARGE OF BOTH GAS AND WATER 1941-1954

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... NICHOLS AND YEHLE, 1961

RECORD 00176

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0045015

NAME OF SAMPLE SOURCE... W. UKINEK SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 27S 044W 20 E1/2 OF SE OF SE — LAT/LONG... 57-49.86 N 156-30.78 W
STATE..... ALASKA — UTM ZONE... +04
COUNTY.....
GEOLOGIC PROVINCE..
MAP REFERENCE..... UGASHIK D-2 1:63360 — NORTHING... 6412435. 647681.

OTHER LOCALITY INFORMATION: SPRING IN BOTTOM OF MAAR.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1977/08/24 MCCOY, GEORGE USGS
TEMPERATURE (C)..... 81.0
OTHER SAMPLE INFORMATION.. SHOULD BE PUBLISHED IN 1977 ANNUAL REPORT AND IN OPEN-FILE REPORT BY I. BARNES. POOL FORMED BY SPRING.

WATER ANALYSIS

SPECIFIC CONDUCTANCE..... 17740.

REFERENCE AND IDENTIFICATION

COMPILED BY..... MACBETH, JOYCE
COMPILER AFFILIATION... UNIVERSITY OF ALASKA
REFERENCE..... *USGS, WATER RESOURCES SPRING SCHEDULE, ANCHORAGE

RECORD 00177

GEOTHERM SAMPLE FILE — GEOTHERM FILE ID: 0000243

NAME OF SAMPLE SOURCE... WHITE SULPHUR SPRINGS (FORMERLY HOONIAH WARM SPRINGS)
WARING NUMBER..... 65

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 47S 056E 09 SW OF NE OF SE — LAT/LONG... 57-48.35 N 136-20.42 W
STATE..... ALASKA — UTM ZONE... +08
COUNTY..... GREATER SITKA BORROUGH — NORTHING... 6407013. 420749.
GEOLOGIC PROVINCE..
MAP REFERENCE..... SITKA D-8 1:63360

OTHER LOCALITY INFORMATION: OCEANWARD COAST OF CHICHAGOF ISLAND, ABOUT 70 MILES NW OF SITKA; .6 MILE EAST OF POINT DOUGHERTY; NORTH EDGE OF BERTHA BAY. SPRINGS ARE IN A SMALL ROCK COVE.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/28 WARING, G.A.
SAMPLE NUMBER..... 80

TEMPERATURE (C)..... 44.0
DISCHARGE..... 114. L/MIN
PERTINENT LITHOLOGY..... SPRING ISSUES FROM HARD DARK SCHISTOSE ROCK.
OTHER SAMPLE INFORMATION.. SLIGHT TASTE AND ODOR OF H2S.

WATER ANALYSIS
DATE/ANALYST..... DOLE, R.B. AND CHAMBERS, A.A.
TOTAL DISSOLVED SOLIDS... 276.
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AG....		CO3.....	25.					
AL....		CR.....		MG...	8.5			
B.....		F.....		NA...		SIO2.	96.	
BA....		FE+3....		NA+K.	Q 59.			
BE....		FE(TOT).	3.1	NB...		SO4..	35.	
CA....	85.	HCO3....	18.	NO3..	0.3			
CL....	42.							

QUALIFICATION FIELD..... NA + K IS A CALCULATED VALUE (BY THE TESTER).

REFERENCE AND IDENTIFICATION
COMPILED BY..... RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... WARING, 1917

RECORD 00178

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0000251
NAME OF SAMPLE SOURCE... GODDARD HOT SPRINGS
WARING NUMBER..... 70

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY.....	UNITED STATES	58S 063E	20	NE OF NE OF NW	LAT/LONG... 56-49.95 N 135-22.25 W
STATE.....	ALASKA				UTM ZONE... +08
COUNTY.....	SITKA BORROUGH				NORTHING... 6298681.
GEOLOGIC PROVINCE..					477626.

MAP REFERENCE..... PORT ALEXANDER D-5 1:63360
OTHER LOCALITY INFORMATION: BARANOF ISLAND; 1.1 MILES W-SW OF MT KLIUCHEF; 0.4 MILE SE OF GODDARD.

SAMPLE DESCRIPTION AND CONDITIONS
SAMPLE NUMBER..... 85
TEMPERATURE (C)..... 67.0
DISCHARGE..... 49. L/MIN

WATER ANALYSIS
PH..... 7.4
CHARGE IMBALANCE (% DIFF)... 4.9
ANALYSIS IN PPM

								ISOTOPES (O/OO)
AG....		CO3.....		LI...	1.6			
AL....	0.018	CR.....		MG...	1.9			
B.....	1.1	F.....	1.4	NA...	1500.	SIO2.	120.	
BE....		FE(TOT).		NB...		SO4..	110.	
CA....	380.	HCO3....	78.7					
CL....	2780.							
CO....		K.....	61.					

REFERENCE AND IDENTIFICATION
COMPILED BY..... SHEARER, G., RENNER, J.
COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY
REFERENCE..... MILLER, 1973

RECORD 00179

GEOTHERM SAMPLE FILE GEOTHERM FILE ID: 0021499

NAME OF SAMPLE SOURCE... SITKA HOT SPRINGS - MAGNESIA SPRING

LOCATION — TOWNSHIP-RANGE — COORDINATES

COUNTRY..... UNITED STATES — 58S 064E — LAT/LONG... 56-50. N 135-22. W

STATE..... ALASKA

COUNTY..... SITKA BORROUGH

MAP REFERENCE..... PORT ALEXANDER D-4 1:63360

OTHER LOCALITY INFORMATION: KLIUCHEF PENINSULA; 16 MILES SOUTH OF SITKA; NEXT TO "HOT SPRINGS BAY"; ELEVATION = 55 FT ABOVE HIGH TIDE.

SAMPLE DESCRIPTION AND CONDITIONS

DATE/COLLECTOR..... 1915/06/25 WARING, G.A.

TEMPERATURE (C)..... 61.1

DISCHARGE..... R 8.5 L/MIN

PERTINENT LITHOLOGY..... GRANITE CUT BY NARROW DIKES OF DARKER ROCK, RESEMBLING DIABASE, THAT IS CLASSIFIED AS A SPESSARTITE (GARNET) LAMPROPHYRE.

OTHER SAMPLE INFORMATION.. WATER TASTES SALTY AND HAS FAINT TASTE AND ODOR OF H2S.

WATER ANALYSIS

DATE/ANALYST..... DINSMORE, S.C.

TOTAL DISSOLVED SOLIDS... 5046.

CHARGE IMBALANCE (% DIFF)... 0.1

ANALYSIS IN PPM — ISOTOPES (O/OO)

AG....		CO3.....	N					
AL....	2.1	CR.....		MG...	2.6			
B.....		F.....		NA...	1365.	SIO2.	122.	
BE....		FE(TOT).	0.5	NB...		SO4..	97.	
CA....	378.	HCO3....	31.	NO3..	N			
CL....	2740.							
CO....		K.....	57.					

OTHER ANALYTICAL DATA... TRACE OF B407.

REFERENCE AND IDENTIFICATION

COMPILED BY..... LAWSON, WILLIAM A.

COMPILER AFFILIATION... U.S. GEOLOGICAL SURVEY

REFERENCE..... WARING, 1917

APPENDIX A

Index to GEOTHERM'S sample file for the state of Alaska. This computer generated appendix contains some trucated fields. The index is sorted by name of the source. Type - Sample site type, TNS - township, RNG-range, Sect. - section, I.D. - GEOTHERM record identifier, Temp. - temperature (see Table 1 for explanation of alphabetic qualifiers preceeding temperature.)

Name of Source	Type	Latitude	Longitude	TNS	RNG	Sect.	I.D.	Temp.°C
ACOCI BIAL NO. 1	WELL	59-44.73 N	153-13.85 W	05S	023W	17	0045072	92.2
ADAK ISLAND - UNNAMED HOT SPRING (1/2)	SPRING	51-58.55 N	176-37.73 W				0001454	63.
ADAK ISLAND - UNNAMED HOT SPRING (2/2)	SPRING	51-58.55 N	176-37.73 W				0001453	71.
AKUN STRAIT HOT SPRINGS	SPRING	54-08.4 N	165-38.4 W	70S	111W		0001915	42.8
AKUTAN HOT SPRINGS (SPRING A2)	SPRING	54-09. N	165-55. W	69S	112W		0001922	84.
AKUTAN HOT SPRINGS (SPRING D2)	SPRING	54-09. N	165-55. W	69S	112W		0001923	58.8
AKUTAN ISLAND - HOT SPRING B	SPRING	54-09.5 N	165-50.7 W	69S	110W		0000207	83.0
AMOCO CATHEDRAL RIVER UNIT NO. 1	WELL	55-44.05 N	162-07.30 W	51S	083W	29	0045070	142.
ANTONIO ZAPPA NO. 1, ALASKA CONSOLIDATED OIL CO¶ INC.	WELL	59-44.1 N	153-14.7 W	05S	023W	18	0045077	G 100.
ARCO DRIFT RIVER ST. OIL WELL	WELL	60-33.25 N	157-07.92 W	05N	016W	05	0045048	82.2
ATLANTIC REF RAINBOW FED. NO. 1	WELL	60-44. N	150-14. W	08N	005W	31	0045063	28.3
ATLANTIC REF RAINBOW FED. NO.2	WELL	60-49.2 N	150-04.5 W	08N	005W	01	0045062	26.7
BAILEY BAY HOT SPRINGS	SPRING	55-58.85 N	131-39.67 W	68S	089E	09	0000253	85.0
BARANOF HOT SPRINGS	SPRING	57-05.27 N	134-50.32 W	55S	066E	24	0000249	51.0
BARANOF HOT SPRINGS - SPRING 7	SPRING	57-05.10 N	164-50.34 W	55S	066E	24	0021496	50.
BARANOF HOT SPRINGS - SPRING 8	SPRING	57-05.10 N	164-50.34 W	55S	066E	24	0021497	51.7
BARANOF ISLAND - FISH BAY AREA	SPRING	57-21.90 N	135-23.20 W	52S	064E	24	0000247	47.0
BARNES LAKE(PARADISE) WARM SPRINGS	SPRING	56-40.8 N	131-52.9 W	60S	080E	09	0001943	26.
BARNES LAKE(PARADISE) WARM SPRINGS	SPRING	56-40.8 N	131-52.9 W	60S	080E	09	0000078	26.
BATTLESHIP MTN - UNNAMED SPRING	SPRING	64-48. N	162-55. W	08S		16	0021470	17.
BATTLESHIP MTN - UNNAMED SPRING	SPRING	64-48. N	162-55. W	08S	021W	16	0021469	17.
BELL ISLAND HOT SPRINGS	SPRING	55-55.95 N	131-34.62 W	68S	090E	31	0000255	72.0
BERNICE LAKE POWER PLANT WELL DISCHARGE LINE	WELL	60-41.53 N	151-23.17 W	07N	012W	15	0045028	20.5
BOWSER CREEK WELL	WELL	50-40.58 N	153-19.62 W	06S	024W	11	0021457	
BP WAS ILLA ST. NO. 1 OIL WELL	WELL	61-31.20 N	149-27.13 W	17N	001W	33	0045055	36.7
BP WHITE RIVER NO. 3	WELL	60-03.95 N	142-12.73 W	21S	019E	29	0045068	66.7
BRADFIELD HOT SPRINGS	SPRING	56-13.9 N	131-16.2 W	65S	091E		0001911	57.
CHENA HOT SPRINGS	SPRING	65-03.25 N	146-03.33 W	03N	008E	26	0000235	57.0
CHENA HOT SPRINGS - BATHOUSE SPRING	SPRING	65-03.18 N	146-03.42 W	03N	008E	26	0021503	65.
CHENA HOT SPRINGS - SPRING A	SPRING	65-03.18 N	146-03.42 W	03N	008E	26	0021504	51.1
CHIEF SHAKES HOT SPRINGS	SPRING	56-43.0 N	132-00.3 W	59S	085E	34	0001908	52.
CHIEF SHAKES HOT SPRINGS	SPRING	56-43.0 N	132-00.3 W	59S	085E	34	0001907	50.5
CHIEF SHAKES HOT SPRINGS	SPRING	56-43.0 N	132-00.3 W	59S	085E	34	0001906	45.
CHIEF SHAKES HOT SPRINGS	SPRING	56-43.0 N	132-00.3 W	59S	085E	34	0001905	50.4
CIRCLE HOT SPRINGS	SPRING	65-28.98 N	144-38.17 W	08N	015E	34	0000237	57.
CIRCLE HOT SPRINGS - NORTHERNMOST SPRING	SPRING	65-28.98 N	144-38.22 W	08N	015E	34	0021445	
CLEAR CREEK AREA	SPRING	64-51.00 N	162-18.00 W	07S	018W	27	0021472	67.
CLEAR CREEK AREA	SPRING	64-51.00 N	162-18.00 W	07S	018W	27	0000219	67.
COLD BAY	SPRING	55-13.3 N	162-24.7 W	57S	087W		0001919	53.6
COLORADO OIL AND GAS COREHOLE NO. 1	WELL	59-33.95 N	139-31.43 W	27S	035E	20	0045067	33.3
COPPER CENTER - HUDDLESTON WELL	WELL						0021494	
COPPER CENTER - UNNAMED SPRING	SPRING						0021495	
COPPER RIVER BASIN - UNNAMED SEEP	SPRING						0021464	
COPPER RIVER BASIN - UNNAMED WELL	WELL	62-09. N	145-27. W	04N	001W		0021463	
CRAIG HOT SPRINGS (DALTON HOT SPRINGS)	SPRING	55-20.04 N	133-38.46 W	75S	077E	24	0045032	43.5

DIVISION BM HOT SPRINGS	SPRING	66-22.02	N	156-46.02	W			0021475	Q 55.
DULBI HOT SPRINGS	SPRING	65-16.02	N	155-16.80	W			0021476	Q 55.
EAST COLD BAY - UNNAMED HOT SPRING	SPRING	55-13.02	N	162-28.98	W	57S	088W	0000239	54.0
ECHOOKA R. WEST SPRING	SURFACE	69-15.58	N	147-22.83	W	02S	020E 19	0045045	7.0
EGG ISLAND	SPRING	54-56.1	N	162-54.6	W	60S	090W	0001918	50.6
EKALUAKAT R. SPRING	SURFACE	69-35.35	N	142-18.00	W			0045152	6.4
FALSE PASS	SPRING	54-55.8	N	163-14.4	W	61S	093W	0001916	62.2
FARMS RED SHIRT LAKE NO. 1 OIL WELL	WELL	61-38.53	N	150-05.72	W	18N	005W 24	0045046	76.7
FLOOD CREEK SPRING	SURFACE	68-58.66	N	147-51.50	W	05S	018E 28	0045039	7.2
FLOOD CREEK SPRING	SURFACE	68-58.66	N	147-51.50	W	05S	018E 28	0045038	8.5
GAKONA - UNNAMED SPRING	SPRING							0021492	
GAS ROCKS HOT SPRING NEAR KANATAK, NO. AKRG 4013S	SPRING	57-51.90	N	156-29.94	W	27S	044W 09	0045016	52.8
GEYSER BIGHT - THERMAL SPRING G1	SPRING	53-13.38	N	168-28.62	W			0000201	100.
GEYSER BIGHT - THERMAL SPRING H1	SPRING	53-12.78	N	168-27.78	W			0021452	101.
GRANITE MOUNTAIN (SWEEPSTAKES)	SPRING	65-22.02	N	161-15.00	W			0021473	49.
GRANITE MOUNTAIN - SWEEPSTAKES HOT SPRINGS	SPRING	65-22.2	N	161-15.4	W	01S	013W 25	0000221	49.0
GREAT BASINS UGASHIK NO. 1	WELL	57-25.57	N	157-44.27	W	32S	052W 08	0045073	92.2
GREAT SITKIN ISLAND - FUMAROLE 1	FUMAROLE	52-02.6	N	176-06.5	W			0021453	95.
GREAT SITKIN ISLAND - FUMAROLE 2	FUMAROLE	52-02.6	N	176-06.5	W			0021454	100.
GREAT SITKIN ISLAND - FUMAROLE 3	FUMAROLE	52-02.6	N	176-06.5	W			0021455	100.
GREAT SITKIN ISLAND - FUMAROLE 4	FUMAROLE							0021456	100.
[GODDARD HOT SPRINGS--OUT OF SEQUENCE, SEE LAST TWO RECORDS IN LIST]									
GULF PORT HEIDEN UNIT NO. 1	WELL	56-58.02	N	158-41.12	W	37S	059W 20	0045075	138.
GULF SANDY RIVER FEDERAL NO. 1	WELL	56-12.87	N	160-10.33	W	46S	070W 10	0045074	131.
GULKANA - B. DYKES WELL	WELL							0021489	
GULKANA AIRFIELD WELL	WELL	62-09.	N	145-28.	W	04N	001W	0021490	
HALBOUTY FRITZ CREEK OIL WELL	WELL	59-41.37	N	151-19.87	W	06S	012W 04	0045052	50.0
HALBOUTY KING OIL	WELL	60-43.57	N	150-54.78	W	07N	009W 06	0045071	62.2
HAWK RIVER	SPRING	66-13.98	N	157-34.98	W			0021474	Q 50.
HORNER HOT SPRINGS	SPRING	64-55.33	N	154-50.23	W	06S	020E 33	0045000	47.0
HOT SPRING ON NORTH ARM OF PERIL STRAIT	SPRING	57-46.26	N	135-49.20	W	47S	059E 26	0045031	38.3
HOT SPRING ON ROOTOK ISLAND	SURFACE	54-03.	N	165-30.	W	71S	110W	0045154	
HOT SPRINGS COVE - THERMAL SPRING E5	SPRING	53-15.18	N	168-21.48	W			0021451	68.
HOT SPRINGS COVE - THERMAL SPRING E1	SPRING	53-14.52	N	168-21.40	W			0021450	87.
HOT SPRINGS COVE - THERMAL SPRING E1	SPRING	53-14.5	N	168-21.4	W			0000203	89.0
HUMBLE SHELL BEAR CREEK NO. 1 OIL WELL	WELL	57-37.70	N	155-51.58	W	29S	041W 36	0045049	210.
HUTLINANA HOT SPRING	SPRING	65-12.96	N	149-59.58	W	05N	012W 34	0021479	45.6
HUTLINANA HOT SPRING	SPRING	65-12.96	N	149-59.58	W	05N	012W 34	0021480	43.
INANUDAK BAY - UNNAMED SPRING	SPRING	53-15.00	N	168-21.75	W	80S	133W	0045036	92.5
IVISHAK HILLSIDE SPRING	SURFACE	69-01.83	N	147-43.00	W			0045043	7.5
IVISHAK HILLSIDE SPRING	SPRING	69-01.83	N	147-43.00	W			0045044	N
KANUTI - UNNAMED SPRING	SPRING	66-20.52	N	150-51.00	W			0000229	66.0
KENAI HIGH SCHOOL WELL	WELL	60-33.72	N	151-12.67	W	05N	011W 05	0045027	20.0
KENAI HIGH SCHOOL WELL	WELL	60-33.72	N	151-12.67	W	05N	011W 05	0045900	24.0
KILO HOT SPRINGS	SPRING	65-48.60	N	151-14.22	W	11N	018W 02	0021482	66.
KONGAKUT RIVER - UNNAMED SPRING	SPRING	69-42.36	N	141-49.38	W	04N	042E 09	0021506	0.5
KWINIUK - UNNAMED SPRING	SPRING	64-42.	N	162-28.	W			0021471	Q 45.
LAVA CREEK AREA	SPRING	65-13.	N	162-54.	W			0021468	G 50.
LAVA CREEK AREA	SPRING	65-13.	N	162-54.	W			0000217	E 50.
LITTLE MELOZITNA HOT SPRINGS	SPRING	65-27.6	N	153-18.6	W	01N	027E 29	0000227	
LITTLE MINOOK CREEK - HOT SPRING	SPRING	66-27.00	N	150-00.00	W			0021481	?
LOWER KLAWASI - DRUM GROUP (SHRUB)	SPRING	62-08.75	N	145-01.55	W	04N	002E 10	0045023	27.7
LOWER KLAWASI - DRUM GROUP-WEST SPRING(MINERAL)	SPRING	62-03.48	N	145-13.32	W	03N	001E 09	0045024	R 21.
LOWER KLAWASI - DRUM GROUP-WEST SPRING (MINERAL)	SPRING	62-03.48	N	145-13.32	W	03N	001E 09	0021459	27.

LOWER RAY RIVER HOT SPRINGS	SPRING	65-59.	N	150-35.	W				0021484	66.
LUPINE SPRING	SURFACE	68-51.75	N	148-12.33	W	07S	016E	12	0045019	2.5
MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	SPRING	65-00.36	N	150-37.98	W	02N	015W	17	0021478	59.
MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	SPRING	65-00.35	N	150-37.97	W	02N	015W	17	0000231	56.0
MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	SPRING	65-00.36	N	150-37.98	W	02N	015W	17	0021477	52.
MELOZI HOT SPRINGS (MELOZITNA HOT SPRING)	SPRING	65-07.8	N	154-41.5	W	04S	020E	23	0000225	56.
MOTHER GOOSE	SPRING	57-10.8	N	157-01.1	W	35S	048W		0001921	66.
NEW EDDYSTONE ROCK - PIPE SPRING	SPRING	55-30.	N	130-58.	W	73S	095E		0021505	10.
NYLEN HOT SPRINGS	SURFACE	57-38.64	N	135-19.98	W	49S	063E	08	0045153	49.
OKMOK CALDERA - CONE A (FUMAROLE A1)	FUMAROLE	53-24.3	N	168-10.6	W				0021446	96.5
OKMOK CALDERA - CONE A (FUMAROLE A2)	FUMAROLE	53-24.3	N	168-10.6	W				0021447	97.
OKMOK CALDERA - CONE A (FUMAROLE A2)	FUMAROLE	53-24.3	N	168-10.6	W				0021448	98.
OKMOK CALDERA - CONE A (FUMAROLE A8)	FUMAROLE	53-24.3	N	168-10.6	W				0021449	
OKMOK CALDERA - HOT SPRING (UNNAMED)	SPRING	53-28.7	N	168-04.7	W				0000209	22.0
OKPILAK HOT SPRING	SPRING	69-19.80	N	144-02.64	W	01S	033E	25	0045037	Q 48.5
PAN AM BACHATNA CREEK	WELL	60-46.42	N	152-05.00	W	08N	015W	21	0045069	60.0
PAN AM DAVID RIVER NO. 1 AND 1A	WELL	55-51.80	N	161-34.17	W	50S	080W	12	0045066	151.
PAN AM STEDATNA CREEK ST. OIL WELL	WELL	61-05.5	N	151-29.	W	12N	012W	30	0045060	47.2
PILGRIM HOT SPRING (KRUZGAMEPA)	SPRING	65-05.9	N	164-55.3	W	04S	031W	36	0000213	55.
PILGRIM HOT SPRING (KRUZGAMEPA)	SPRING	65-05.58	N	164-55.32	W	04S	031W	36	0021465	69.
POCAHONTAS HOT SPRING	SURFACE	65-58.22	N	154-01.00	W	07N	023E	33	0045155	
PORT MOLLER HOT SPRINGS	SPRING	55-51.7	N	160-29.5	W	50S	073W	13	0001920	71.
PORT MOLLER HOT SPRINGS	SPRING	55-51.78	N	160-29.58	W	50S	073W	12	0021502	73.9
PURE CANOE BAY NO. 1	WELL	55-31.2	N	161-05.7	W	54S	078W	08	0045065	71.1
RAY RIVER HOT SPRING	SPRING	65-57.78	N	150-55.14	W	13N	016W	10	0021483	45.
RED HILL SPRING	SPRING	69-37.62	N	146-01.62	W	03N	025E	08	0045021	32.8
RED HILL SPRING	SPRING	69-37.62	N	146-01.62	W	03N	025E	08	0045022	29.
RICHARDSON HIGHWAY - UNNAMED WELL	WELL	62-25.	N	145-27.	W				0021491	
RICHARDSON HIGHWAY - UNNAMED WELL	WELL					03N	001W		0021493	
RICHFIELD WIDE BAY NO. 1 OIL WELL	WELL	57-21.80	N	156-23.90	W	33S	044W	05	0045059	139.
SADLEROCHIT SPRING	SURFACE	69-39.38	N	144-23.62	W	04N	031E	36	0045150	13.0
SADLEROCHIT SPRING	SURFACE	69-39.38	N	144-23.62	W	04N	031E	36	0045151	4.0
SADLEROCHIT SPRING	SURFACE	69-39.38	N	144-23.62	W	04N	031E	36	0045149	13.0
SAVIUKVIAYAK R. WEST SPRING	SURFACE	68-54.17	N	148-05.17	W				0045020	5.
SAVIUKVIAYAK TRIBUTARY SPRING	SURFACE	68-56.33	N	147-58.75	W	06S	017E	12	0045033	3.5
SAVIUKVIAYAK TRIBUTARY SPRING	SURFACE	68-56.33	N	147-58.75	W	06S	017E	12	0045034	6.5
SERPENTINE SPRINGS (ARCTIC)	SPRING	65-51.4	N	164-41.3	W	05N	029W	02	0000215	60.
SERPENTINE SPRINGS (ARTIC)	SPRING	65-51.48	N	164-42.60	W	05N	029W	02	0021467	71.
SERPENTINE SPRINGS (ARTIC)	SPRING	65-51.48	N	164-42.60	W	05N	029W	02	0021466	60.
SHAKES SPRINGS (CHIEF SHAKES)	SPRING	56-43.02	N	132-02.30	W	59S	085E		0000205	52.0
SHELL JOHNSON SLOUGH OIL WELL	WELL	60-44.	N	152-00.	W	08N	016W	36	0045054	75.0
SHELL KUSTATAN RIVER	WELL	60-48.52	N	151-54.87	W	08N	015W	04	0045064	38.9
SHELL MIDDLE RIVER ST. OIL WELL	WELL	60-59.	N	151-37.	W	10N	013W	05	0045053	64.4
SHUBLIK SPRING	SURFACE	69-28.33	N	146-11.30	W	01N	024E	03	0045148	5.5
SHUBLIK SPRING	SURFACE	69-28.33	N	146-11.83	W	01N	024E	03	0045147	5.5
SITKA HOT SPRINGS - MAIN SPRING	SPRING	56-50.	N	135-22.	W	58S	064E		0021498	65.
[SITKA HOT SPRINGS - MAGNESIA SPRING--OUT OF SEQUENCE, SEE LAST RECORD IN LIST.]										
SOUTH - UNNAMED SPRING	SPRING	66-09.00	N	157-07.02	W				0000223	
STAN CHRISTIANSON HOT SPRINGS	SPRING	54-54.2	N	163-08.6	W	61S	092W		0001917	43.3
SUMMER BAY (SPRING)	SPRING	53-53.1	N	166-26.9	W	73S	117W		0001912	35.
SUMMER BAY (WELL 1)	SPRING	53-53.1	N	166-26.9	W	73S	117W		0001913	50.
SUMMER BAY (WELL 2)	SPRING	53-53.1	N	166-26.9	W	73S	117W		0001914	44.
SURPRISE LAKE HOT SPRING AT ANIAKCHAK CRATER	SPRING	56-55.68	N	158-07.20	W	38S	056W	01	0045035	23.0
SWANSON RIVER #4	WELL	60-46.67	N	150-51.75	W	08N	009W	16	0045030	102.

TENAKEE HOT SPRINGS (FORMERLY HOONIAH HOT SPRINGS)	SPRING	57-46.86	N	135-13.02	W			0000245	42.5
TENAKEE HOT SPRINGS - MINERAL SPRING	SPRING	57-46.86	N	135-13.02	W			0021501	13.3
TENAKEE HOT SPRINGS - PRINCIPAL SPRING	SPRING	57-46.86	N	135-13.02	W			0021500	41.1
TENAKEE INLET - UNNAMED HOT SPRING	SPRING	58-00.30	N	135-55.23	W	44S	058E 33	0000241	81.5
TOLOVANA HOT SPRING	SPRING	65-16.43	N	148-50.83	W	05N	006W 07	0000233	56.
TOLSONA GROUP - MOOSE LAKE-UNNAMED SPRING	SPRING	62-08.	N	146-06.	W	04N	005W	0021486	
TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	SPRING	62-00.18	N	145-46.80	W	03N	003W 33	0021485	
TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	SPRING	62-00.18	N	145-46.80	W	03N	003W 33	0021460	
TOLSONA GROUP - TOLSONA NO.1-SOUTHWEST SPRING	SPRING	62-06.50	N	145-57.10	W	04N	004W 21	0021461	R 10.
TOLSONA GROUP - TOLSONA NO.2-NORTHWEST SPRING	SPRING	62-07.20	N	145-56.60	W	04N	004W 15	0021462	R 15.
TOLSONA GROUP - UNNAMED SPRING	SPRING	62-05.15	N	145-54.50	W	04N	004W 35	0021487	
TOLSONA GROUP - UNNAMED WELL	WELL	62-07.	N	145-43.	W	04N	003W	0021488	
TWIN LAKES (WEST SHAKES) WARM SPRINGS	SPRING	56-42.0	N	132-16.8	W	60S	084E	0001910	21.
UNION BACHATNA CREEK U-1	WELL	60-46.42	N	152-05.14	W	08N	016W 21	0045058	35.0
UNION BACHATNA CREEK U-7 OIL WELL	WELL	60-42.85	N	152-05.93	W	07N	016W 09	0045056	30.6
UNION BIG RIVER OIL WELL	WELL	60-45.20	N	152-01.43	W	08N	016W 26	0045057	Q 31.7
UNION FISH CREEK U. 12-8 OIL WELL	WELL	61-29.48	N	149-51.93	W	16N	003W 08	0045061	66.1
UNION KASILOF U-1 OIL WELL	WELL	60-16.73	N	151-25.50	W	03N	012W 30	0045047	50.6
UNION KASILOF U-1 OIL WELL (UNION KASILOF NO.1)	WELL	60-16.73	N	151-25.5	W	03N	012W 30	0045076	94.4
UNION KNIK ARM NO. 1 OIL WELL	WELL	61-30.75	N	149-56.07	W	16N	004W 02	0045050	40.6
UNION KNIK ARM NO. 2 OIL WELL	WELL	61-30.68	N	149-51.00	W	16N	003W 05	0045051	40.0
UPPER KLAWASI - DRUM GROUP-SOUTHEAST SPRING	SPRING	62-04.86	N	145-00.42	W	04N	002E 35	0021458	32.
UPPER KLAWASI - MUD VOLCANO	SPRING	62-04.82	N	145-00.00	W	04N	002E 35	0045026	18.0
UPPER KLAWASI - MUD VOLCANO	SPRING	62-04.82	N	145-00.00	W	04N	002E 35	0045025	30.3
W. UKINEK SPRING	SPRING	57-49.86	N	156-30.78	W	27S	044W 20	0045015	81.0
WHITE SULPHUR SPRINGS (FORMERLY HOONIAH WARM SPRINGS)	SPRING	57-48.35	N	136-20.42	W	47S	056E 09	0000243	44.0
GODDARD HOT SPRINGS	SPRING	56-49.95	N	135-22.25	W	58S	063E 20	0000251	67.0
SITKA HOT SPRINGS - MAGNESIA SPRING	SPRING	56-50.	N	135-22.	W	58S	064E	0021499	61.1

APPENDIX B

Index to GEOTHERM sample file for the state of Alaska sorted by township (TNS), range (RNG), and section (Sect.) Also given are the name of source, GEOTHERM record identifier, and temperature (Temp. °C). See Table 1 for explanation of alphabetic qualifiers proceeding temperature.

TNS	RNG	Sect.	Name of Source	I.D.	Temp. °C
			HOT SPRINGS COVE - THERMAL SPRING E1	0000203	89.0
			GEYSER BIGHT - THERMAL SPRING G1	0000201	100.
			OKMOK CALDERA - HOT SPRING (UNNAMED)	0000209	22.0
			KANUTI - UNNAMED SPRING	0000229	66.0
			LAVA CREEK AREA	0000217	E 50.
			IVISHAK HILLSIDE SPRING	0045044	N
			GULKANA - B. DYKES WELL	0021489	
			LITTLE MINOOK CREEK - HOT SPRING	0021481	?
			DULBI HOT SPRINGS	0021476	Q 55.
			COPPER RIVER BASIN - UNNAMED SEEP	0021464	
			GREAT SITKIN ISLAND - FUMAROLE 4	0021456	100.
			GREAT SITKIN ISLAND - FUMAROLE 3	0021455	100.
			GREAT SITKIN ISLAND - FUMAROLE 2	0021454	100.
			GREAT SITKIN ISLAND - FUMAROLE 1	0021453	95.
			GEYSER BIGHT - THERMAL SPRING H1	0021452	101.
			HOT SPRINGS COVE - THERMAL SPRING E5	0021451	68.
			HOT SPRINGS COVE - THERMAL SPRING E1	0021450	87.
			OKMOK CALDERA - CONE A (FUMAROLE A8)	0021449	
			OKMOK CALDERA - CONE A (FUMAROLE A2)	0021448	98.
			OKMOK CALDERA - CONE A (FUMAROLE A2)	0021447	97.
			OKMOK CALDERA - CONE A (FUMAROLE A1)	0021446	96.5
			HAWK RIVER	0021474	Q 50.
			ADAK ISLAND - UNNAMED HOT SPRING (1/2)	0001454	63.
			ADAK ISLAND - UNNAMED HOT SPRING (2/2)	0001453	71.
			EKALUAKAT R. SPRING	0045152	6.4
			IVISHAK HILLSIDE SPRING	0045043	7.5
			SAVIUKVIAYAK R. WEST SPRING	0045020	5.
			RICHARDSON HIGHWAY - UNNAMED WELL	0021491	
			LOWER RAY RIVER HOT SPRINGS	0021484	66.
			DIVISION BM HOT SPRINGS	0021475	Q 55.
			GRANITE MOUNTAIN (SWEEPSTAKES)	0021473	49.
			KWINIUK - UNNAMED SPRING	0021471	Q 45.
			LAVA CREEK AREA	0021468	G 50.
			TENAKEE HOT SPRINGS (FORMERLY HOONIAH HOT SPRIN	0000245	42.5
			SOUTH - UNNAMED SPRING	0000223	
			TENAKEE HOT SPRINGS - MINERAL SPRING	0021501	13.3
			TENAKEE HOT SPRINGS - PRINCIPAL SPRING	0021500	41.1
			COPPER CENTER - UNNAMED SPRING	0021495	
			COPPER CENTER - HUDDLESTON WELL	0021494	
			GAKONA - UNNAMED SPRING	0021492	
01N	024E	03	SHUBLIK SPRING	0045147	5.5
01N	024E	03	SHUBLIK SPRING	0045148	5.5
01N	027E	29	LITTLE MELOZITNA HOT SPRINGS	0000227	
01S	013W	25	GRANITE MOUNTAIN - SWEEPSTAKES HOT SPRINGS	0000221	49.0
01S	033E	25	OKPILAK HOT SPRING	0045037	Q 48.5

02N	015W	17	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0021478	59.
02N	015W	17	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0000231	56.0
02N	015W	17	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0021477	52.
02S	020E	19	ECHOOKA R. WEST SPRING	0045045	7.0
03N	001E	09	LOWER KLAWASI - DRUM GROUP-WEST SPRING(MINERAL)	0045024	R 21.
03N	001E	09	LOWER KLAWASI - DRUM GROUP-WEST SPRING (MINERAL	0021459	27.
03N	001W		RICHARDSON HIGHWAY - UNNAMED WELL	0021493	
03N	003W	33	TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	0021460	
03N	003W	33	TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	0021485	
03N	008E	26	CHENA HOT SPRINGS - SPRING A	0021504	51.1
03N	008E	26	CHENA HOT SPRINGS - BATHOUSE SPRING	0021503	65.
03N	008E	26	CHENA HOT SPRINGS	0000235	57.0
03N	012W	30	UNION KASILOF U-1 OIL WELL	0045047	50.6
03N	012W	30	UNION KASILOF U-1 OIL WELL (UNION KASILOF NO.1)	0045076	94.4
03N	025E	08	RED HILL SPRING	0045021	32.8
03N	025E	08	RED HILL SPRING	0045022	29.
04N	001W		GULKANA AIRFIELD WELL	0021490	
04N	001W		COPPER RIVER BASIN - UNNAMED WELL	0021463	
04N	002E	10	LOWER KLAWASI - DRUM GROUP (SHRUB)	0045023	27.7
04N	002E	35	UPPER KLAWASI - DRUM GROUP-SOUTHEAST SPRING	0021458	32.
04N	002E	35	UPPER KLAWASI - MUD VOLCANO	0045026	18.0
04N	002E	35	UPPER KLAWASI - MUD VOLCANO	0045025	30.3
04N	003W		TOLSONA GROUP - UNNAMED WELL	0021488	
04N	004W	15	TOLSONA GROUP - TOLSONA NO.2-NORTHWEST SPRING	0021462	R 15.
04N	004W	21	TOLSONA GROUP - TOLSONA NO.1-SOUTHWEST SPRING	0021461	R 10.
04N	004W	35	TOLSONA GROUP - UNNAMED SPRING	0021487	
04N	005W		TOLSONA GROUP - MOOSE LAKE-UNNAMED SPRING	0021486	
04N	031E	36	SADLEROCHIT SPRING	0045150	13.0
04N	031E	36	SADLEROCHIT SPRING	0045149	13.0
04N	031E	36	SADLEROCHIT SPRING	0045151	4.0
04N	042E	09	KONGAKUT RIVER - UNNAMED SPRING	0021506	0.5
04S	020E	23	MELOZI HOT SPRINGS (MELOZITNA HOT SPRING)	0000225	56.
04S	031W	36	PILGRIM HOT SPRING (KRUZGAMEPA)	0021465	69.
04S	031W	36	PILGRIM HOT SPRING (KRUZGAMEPA)	0000213	55.
05N	006W	07	TOLOVANA HOT SPRING	0000233	56.
05N	011W	05	KENAI HIGH SCHOOL WELL	0045027	20.0
05N	011W	05	KENAI HIGH SCHOOL WELL	0045900	24.0
05N	012W	34	HUTLINANA HOT SPRING	0021480	43.
05N	012W	34	HUTLINANA HOT SPRING	0021479	45.6
05N	016W	05	ARCO DRIFT RIVER ST. OIL WELL	0045048	82.2
05N	029W	02	SERPENTINE SPRINGS (ARCTIC)	0000215	60.
05N	029W	02	SERPENTINE SPRINGS (ARTIC)	0021467	71.
05N	029W	02	SERPENTINE SPRINGS (ARTIC)	0021466	60.
05S	018E	28	FLOOD CREEK SPRING	0045039	7.2
05S	018E	28	FLOOD CREEK SPRING	0045038	8.5
05S	023W	17	ACOCI BIAL NO. 1	0045072	92.2
05S	023W	18	ANTONIO ZAPPA NO. 1, ALASKA CONSOLIDATED OIL CO	0045077	G 100.
06S	012W	04	HALBOUTY FRITZ CREEK OIL WELL	0045052	50.0
06S	017E	12	SAVIUKVIAYAK TRIBUTARY SPRING	0045034	6.5
06S	017E	12	SAVIUKVIAYAK TRIBUTARY SPRING	0045033	3.5
06S	020E	33	HORNER HOT SPRINGS	0045000	47.0
06S	024W	11	BOWSER CREEK WELL	0021457	
07N	009W	06	HALBOUTY KING OIL	0045071	62.2
07N	012W	15	BERNICE LAKE POWER PLANT WELL DISCHARGE LINE	0045028	20.5

07N	016W	09	UNION BACHATNA CREEK U-7 OIL WELL	0045056	30.6
07N	023E	33	POCAHONTAS HOT SPRING	0045155	
07S	016E	12	LUPINE SPRING	0045019	2.5
07S	018W	27	CLEAR CREEK AREA	0021472	67.
07S	018W	27	CLEAR CREEK AREA	0000219	67.
08N	005W	01	ATLANTIC REF RAINBOW FED. NO.2	0045062	26.7
08N	005W	31	ATLANTIC REF RAINBOW FED. NO. 1	0045063	28.3
08N	009W	16	SWANSON RIVER #4	0045030	102.
08N	015E	34	CIRCLE HOT SPRINGS - NORTHERNMOST SPRING	0021445	
08N	015E	34	CIRCLE HOT SPRINGS	0000237	57.
08N	015W	04	SHELL KUSTATAN RIVER	0045064	38.9
08N	015W	21	PAN AM BACHATNA CREEK	0045069	60.0
08N	016W	21	UNION BACHATNA CREEK U-1	0045058	35.0
08N	016W	26	UNION BIG RIVER OIL WELL	0045057	Q 31.7
08N	016W	36	SHELL JOHNSON SLOUGH OIL WELL	0045054	75.0
08S		16	BATTLESHIP MTN - UNNAMED SPRING	0021470	17.
08S	021W	16	BATTLESHIP MTN - UNNAMED SPRING	0021469	17.
10N	013W	05	SHELL MIDDLE RIVER ST. OIL WELL	0045053	64.4
11N	018W	02	KILO HOT SPRINGS	0021482	66.
12N	012W	30	PAN AM STEDATNA CREEK ST. OIL WELL	0045060	47.2
13N	016W	10	RAY RIVER HOT SPRING	0021483	45.
16N	003W	05	UNION KNIK ARM NO. 2 OIL WELL	0045051	40.0
16N	003W	08	UNION FISH CREEK U. 12-8 OIL WELL	0045061	66.1
16N	004W	02	UNION KNIK ARM NO. 1 OIL WELL	0045050	40.6
17N	001W	33	BP WAS ILLA ST. NO. 1 OIL WELL	0045055	36.7
18N	005W	24	FARMS RED SHIRT LAKE NO. 1 OIL WELL	0045046	76.7
21S	019E	29	BP WHITE RIVER NO. 3	0045068	66.7
27S	035E	20	COLORADO OIL AND GAS COREHOLE NO. 1	0045067	33.3
27S	044W	09	GAS ROCKS HOT SPRING NEAR KANATAK, NO. AKRG 401	0045016	52.8
27S	044W	20	W. UKINEK SPRING	0045015	81.0
29S	041W	36	HUMBLE SHELL BEAR CREEK NO. 1 OIL WELL	0045049	210.
32S	052W	08	GREAT BASINS UGASHIK NO. 1	0045073	92.2
33S	044W	05	RICHFIELD WIDE BAY NO. 1 OIL WELL	0045059	139.
35S	048W		MOTHER GOOSE	0001921	66.
37S	059W	20	GULF PORT HEIDEN UNIT NO. 1	0045075	138.
38S	056W	01	SURPRISE LAKE HOT SPRING AT ANIAKCHAK CRATER	0045035	23.0
44S	058E	33	TENAKEE INLET - UNNAMED HOT SPRING	0000241	81.5
46S	070W	10	GULF SANDY RIVER FEDERAL NO. 1	0045074	131.
47S	056E	09	WHITE SULPHUR SPRINGS (FORMERLY HOONIAH WARM SP	0000243	44.0
47S	059E	26	HOT SPRING ON NORTH ARM OF PERIL STRAIT	0045031	38.3
49S	063E	08	NYLEN HOT SPRINGS	0045153	49.
50S	073W	12	PORT MOLLER HOT SPRINGS	0021502	73.9
50S	073W	13	PORT MOLLER HOT SPRINGS	0001920	71.
50S	080W	12	PAN AM DAVID RIVER NO. 1 AND 1A	0045066	151.
51S	083W	29	AMOCO CATHEDRAL RIVER UNIT NO. 1	0045070	142.
52S	064E	24	BARANOF ISLAND - FISH BAY AREA	0000247	47.0
54S	078W	08	PURE CANOE BAY NO. 1	0045065	71.1
55S	066E	24	BARANOF HOT SPRINGS - SPRING 7	0021496	50.
55S	066E	24	BARANOF HOT SPRINGS	0000249	51.0
55S	066E	24	BARANOF HOT SPRINGS - SPRING 8	0021497	51.7
57S	087W		COLD BAY	0001919	53.6
57S	088W		EAST COLD BAY - UNNAMED HOT SPRING	0000239	54.0
58S	063E	20	GODDARD HOT SPRINGS	0000251	67.0
58S	064E		SITKA HOT SPRINGS - MAIN SPRING	0021498	65.

58S	064E		SITKA HOT SPRINGS - MAGNESIA SPRING	0021499	61.1
59S	085E		SHAKES SPRINGS (CHIEF SHAKES)	0000205	52.0
59S	085E	34	CHIEF SHAKES HOT SPRINGS	0001908	52.
59S	085E	34	CHIEF SHAKES HOT SPRINGS	0001907	50.5
59S	085E	34	CHIEF SHAKES HOT SPRINGS	0001906	45.
59S	085E	34	CHIEF SHAKES HOT SPRINGS	0001905	50.4
60S	080E	09	BARNES LAKE(PARADISE) WARM SPRINGS	0001943	26.
60S	080E	09	BARNES LAKE(PARADISE) WARM SPRINGS	0000078	26.
60S	084E		TWIN LAKES (WEST SHAKES) WARM SPRINGS	0001910	21.
60S	090W		EGG ISLAND	0001918	50.6
61S	092W		STAN CHRISTIANSON HOT SPRINGS	0001917	43.3
61S	093W		FALSE PASS	0001916	62.2
65S	091E		BRADFIELD HOT SPRINGS	0001911	57.
68S	089E	09	BAILEY BAY HOT SPRINGS	0000253	85.0
68S	090E	31	BELL ISLAND HOT SPRINGS	0000255	72.0
69S	110W		AKUTAN ISLAND - HOT SPRING B	0000207	83.0
69S	112W		AKUTAN HOT SPRINGS (SPRING D2)	0001923	58.8
69S	112W		AKUTAN HOT SPRINGS (SPRING A2)	0001922	84.
70S	111W		AKUN STRAIT HOT SPRINGS	0001915	42.8
71S	110W		HOT SPRING ON ROOTOK ISLAND	0045154	
73S	095E		NEW EDDYSTONE ROCK - PIPE SPRING	0021505	10.
73S	117W		SUMMER BAY (WELL 2)	0001914	44.
73S	117W		SUMMER BAY (WELL 1)	0001913	50.
73S	117W		SUMMER BAY (SPRING)	0001912	35.
75S	077E	24	CRAIG HOT SPRINGS (DALTON HOT SPRINGS)	0045032	43.5
80S	133W		INANUDAK BAY - UNNAMED SPRING	0045036	92.5

APPENDIX C

Index to GEOTHERM sample file for the state of Alaska sorted into one-degree blocks by latitude and longitude. Records are sorted by name of source within each one-degree block. Adjacent one-degree blocks which are published as a 1:250,000 map are combined under the appropriate map name. See Table 1 for explanation of alphabetic qualifiers preceding temperature. I.D. - GEOTHERM record identifier. Temp. - Temperature °C.

Latitude	Longitude	Name of Source	I.D.	Temp.
COORDINATES NOT GIVEN				
		COPPER CENTER - HUDDLESTON WELL	0021494	
		COPPER CENTER - UNNAMED SPRING	0021495	
		COPPER RIVER BASIN - UNNAMED SEEP	0021464	
		GAKONA - UNNAMED SPRING	0021492	
		GREAT SITKIN ISLAND - FUMAROLE 4	0021456	100.
		GULKANA - B. DYKES WELL	0021489	
		RICHARDSON HIGHWAY - UNNAMED WELL	0021493	
ADAK 1:250,000				
51-58.55 N	176-37.73 W	ADAK ISLAND - UNNAMED HOT SPRING (1/2)	0001454	63.
51-58.55 N	176-37.73 W	ADAK ISLAND - UNNAMED HOT SPRING (2/2)	0001453	71.
52-02.6 N	176-06.5 W	GREAT SITKIN ISLAND - FUMAROLE 1	0021453	95.
52-02.6 N	176-06.5 W	GREAT SITKIN ISLAND - FUMAROLE 2	0021454	100.
52-02.6 N	176-06.5 W	GREAT SITKIN ISLAND - FUMAROLE 3	0021455	100.
UNALASKA 1:250,000				
53-53.1 N	166-26.9 W	SUMMER BAY (SPRING)	0001912	35.
53-53.1 N	166-26.9 W	SUMMER BAY (WELL 1)	0001913	50.
53-53.1 N	166-26.9 W	SUMMER BAY (WELL 2)	0001914	44.
UMNAK 1:250,000				
53-13.38 N	168-28.62 W	GEYSER BIGHT - THERMAL SPRING G1	0000201	100.
53-12.78 N	168-27.78 W	GEYSER BIGHT - THERMAL SPRING H1	0021452	101.
53-15.18 N	168-21.48 W	HOT SPRINGS COVE - THERMAL SPRING E5	0021451	68.
53-14.52 N	168-21.40 W	HOT SPRINGS COVE - THERMAL SPRING E1	0021450	87.
53-14.5 N	168-21.4 W	HOT SPRINGS COVE - THERMAL SPRING E1	0000203	89.0
53-15.00 N	168-21.75 W	INANUDAK BAY - UNNAMED SPRING	0045036	92.5
53-24.3 N	168-10.6 W	OKMOK CALDERA - CONE A (FUMAROLE A1)	0021446	96.5
53-24.3 N	168-10.6 W	OKMOK CALDERA - CONE A (FUMAROLE A2)	0021447	97.
53-24.3 N	168-10.6 W	OKMOK CALDERA - CONE A (FUMAROLE A2)	0021448	98.
53-24.3 N	168-10.6 W	OKMOK CALDERA - CONE A (FUMAROLE A8)	0021449	
53-28.7 N	168-04.7 W	OKMOK CALDERA - HOT SPRING (UNNAMED)	0000209	22.0
FALSE PASS 1:250,000				
54-56.1 N	162-54.6 W	EGG ISLAND	0001918	50.6

54-55.8	N 163-14.4	W FALSE PASS	0001916	62.2
54-54.2	N 163-08.6	W STAN CHRISTIANSON HOT SPRINGS	0001917	43.3

UNIMAK 1:250,000

54-08.4	N 165-38.4	W AKUN STRAIT HOT SPRINGS	0001915	42.8
54-09.	N 165-55.	W AKUTAN HOT SPRINGS (SPRING A2)	0001922	84.
54-09.	N 165-55.	W AKUTAN HOT SPRINGS (SPRING D2)	0001923	58.8
54-09.5	N 165-50.7	W AKUTAN ISLAND - HOT SPRING B	0000207	83.0
54-03.	N 165-30.	W HOT SPRING ON ROOTOK ISLAND	0045154	

KETCHIKAN 1:250,000

55-30.	N 130-58.	W NEW EDDYSTONE ROCK - PIPE SPRING	0021505	10.
55-58.85	N 131-39.67	W BAILEY BAY HOT SPRINGS	0000253	85.0
55-55.95	N 131-34.62	W BELL ISLAND HOT SPRINGS	0000255	72.0

CRAIG 1:250,000

55-20.04	N 133-38.46	W CRAIG HOT SPRINGS (DALTON HOT SPRINGS)	0045032	43.5

PORT MOLLER 1:250,000

55-51.78	N 160-29.58	W PORT MOLLER HOT SPRINGS	0021502	73.9
55-51.7	N 160-29.5	W PORT MOLLER HOT SPRINGS	0001920	71.
55-51.80	N 161-34.17	W PAN AM DAVID RIVER NO. 1 AND 1A	0045066	151.
55-31.2	N 161-05.7	W PURE CANOE BAY NO. 1	0045065	71.1

COLD BAY 1:250,000

55-44.05	N 162-07.30	W AMOCO CATHEDRAL RIVER UNIT NO. 1	0045070	142.
55-13.3	N 162-24.7	W COLD BAY	0001919	53.6
55-13.02	N 162-28.98	W EAST COLD BAY - UNNAMED HOT SPRING	0000239	54.0

BRADFIELD CANAL 1:250,000

56-40.8	N 131-52.9	W BARNES LAKE(PARADISE) WARM SPRINGS	0001943	26.
56-40.8	N 131-52.9	W BARNES LAKE(PARADISE) WARM SPRINGS	0000078	26.
56-13.9	N 131-16.2	W BRADFIELD HOT SPRINGS	0001911	57.

PETERSBURG 1:250,000

56-43.0	N 132-00.3	W CHIEF SHAKES HOT SPRINGS	0001908	52.
56-43.0	N 132-00.3	W CHIEF SHAKES HOT SPRINGS	0001907	50.5
56-43.0	N 132-00.3	W CHIEF SHAKES HOT SPRINGS	0001906	45.
56-43.0	N 132-00.3	W CHIEF SHAKES HOT SPRINGS	0001905	50.4
56-43.02	N 132-02.30	W SHAKES SPRINGS (CHIEF SHAKES)	0000205	52.0
56-42.0	N 132-16.8	W TWIN LAKES (WEST SHAKES) WARM SPRINGS	0001910	21.

PORT ALEXANDER 1:250,000

56-49.95	N 135-22.25	W GODDARD HOT SPRINGS	0000251	67.0
56-50.	N 135-22.	W SITKA HOT SPRINGS - MAGNESIA SPRING	0021499	61.1
56-50.	N 135-22.	W SITKA HOT SPRINGS - MAIN SPRING	0021498	65.

CHIGNIK 1:250,000

56-58.02 N 158-41.12 W GULF PORT HEIDEN UNIT NO. 1	0045075	138.
56-55.68 N 158-07.20 W SURPRISE LAKE HOT SPRING AT ANIAKCHAK CRATER	0045035	23.0
56-12.87 N 160-10.33 W GULF SANDY RIVER FEDERAL NO. 1	0045074	131.

SITKA 1:250,000

57-05.27 N 134-50.32 W BARANOF HOT SPRINGS	0000249	51.0
57-21.90 N 135-23.20 W BARANOF ISLAND - FISH BAY AREA	0000247	47.0
57-46.26 N 135-49.20 W HOT SPRING ON NORTH ARM OF PERIL STRAIT	0045031	38.3
57-38.64 N 135-19.98 W NYLEN HOT SPRINGS	0045153	49.
57-46.86 N 135-13.02 W TENAKEE HOT SPRINGS (FORMERLY HOONIAH HOT SPRIN	0000245	42.5
57-46.86 N 135-13.02 W TENAKEE HOT SPRINGS - MINERAL SPRING	0021501	13.3
57-46.86 N 135-13.02 W TENAKEE HOT SPRINGS - PRINCIPAL SPRING	0021500	41.1
57-48.35 N 136-20.42 W WHITE SULPHUR SPRINGS (FORMERLY HOONIAH WARM SP	0000243	44.0
57-05.10 N 134-50.34 W BARANOF HOT SPRINGS - SPRING 7	0021496	50.
57-05.10 N 134-50.34 W BARANOF HOT SPRINGS - SPRING 8	0021497	51.7

KARLUK 1:250,000

57-37.70 N 155-51.58 W HUMBLE SHELL BEAR CREEK NO. 1 OIL WELL	0045049	210.

UGASHIK 1:250,000

57-51.90 N 156-29.94 W GAS ROCKS HOT SPRING NEAR KANATAK, NO. AKRG 401	0045016	52.8
57-21.80 N 156-23.90 W RICHFIELD WIDE BAY NO. 1 OIL WELL	0045059	139.
57-49.86 N 156-30.78 W W. UKINEK SPRING	0045015	81.0
57-25.57 N 157-44.27 W GREAT BASINS UGASHIK NO. 1	0045073	92.2
57-10.8 N 157-01.1 W MOTHER GOOSE	0001921	66.

JUNEAU

58-00.30 N 135-55.23 W TENAKEE INLET - UNNAMED HOT SPRING	0000241	81.5

YAKUTAT 1:250,000

59-33.95 N 139-31.43 W COLORADO OIL AND GAS COREHOLE NO. 1	0045067	33.3

SELDOVIA 1:250,000

59-41.37 N 151-19.87 W HALBOUTY FRITZ CREEK OIL WELL	0045052	50.0

ILIAMNA 1:250,000

59-40.58 N 153-19.62 W BOWSER CREEK WELL	0021457	
59-44.73 N 153-13.85 W ACOCI BIAL NO. 1	0045072	92.2
59-44.1 N 153-14.7 W ANTONIO ZAPPA NO. 1, ALASKA CONSOLIDATED OIL CO	0045077	G 100.

BERING GLACIER 1:250,000

60-03.95 N 142-12.73 W BP WHITE RIVER NO. 3	0045068	66.7

KENAI 1:250,000

60-44.	N 150-14.	W ATLANTIC REF RAINBOW FED. NO. 1	0045063	28.3
60-49.2	N 150-04.5	W ATLANTIC REF RAINBOW FED. NO.2	0045062	26.7
60-43.57	N 150-54.78	W HALBOUTY KING OIL	0045071	62.2
60-46.67	N 150-51.75	W SWANSON RIVER #4	0045030	102.
60-41.53	N 151-23.17	W BERNICE LAKE POWER PLANT WELL DISCHARGE LINE	0045028	20.5
60-33.72	N 151-12.67	W KENAI HIGH SCHOOL WELL	0045900	24.0
60-33.72	N 151-12.67	W KENAI HIGH SCHOOL WELL	0045027	20.0
60-48.52	N 151-54.87	W SHELL KUSTATAN RIVER	0045064	38.9
60-59.	N 151-37.	W SHELL MIDDLE RIVER ST. OIL WELL	0045053	64.4
60-16.73	N 151-25.50	W UNION KASILOF U-1 OIL WELL	0045047	50.6
60-16.73	N 151-25.5	W UNION KASILOF U-1 OIL WELL (UNION KASILOF NO.1)	0045076	94.4
60-46.42	N 152-05.00	W PAN AM BACHATNA CREEK	0045069	60.0
60-44.	N 152-00.	W SHELL JOHNSON SLOUGH OIL WELL	0045054	75.0
60-46.42	N 152-05.14	W UNION BACHATNA CREEK U-1	0045058	35.0
60-42.85	N 152-05.93	W UNION BACHATNA CREEK U-7 OIL WELL	0045056	30.6
60-45.20	N 152-01.43	W UNION BIG RIVER OIL WELL	0045057	Q 31.7
60-33.25	N 152-07.92	W ARCO DRIFT RIVER ST. OIL WELL	0045048	82.2

ANCHORAGE 1:250,000

61-31.20	N 149-27.13	W BP WAS ILLA ST. NO. 1 OIL WELL	0045055	36.7
61-29.48	N 149-51.93	W UNION FISH CREEK U. 12-8 OIL WELL	0045061	66.1
61-30.75	N 149-56.07	W UNION KNIK ARM NO. 1 OIL WELL	0045050	40.6
61-30.68	N 149-51.00	W UNION KNIK ARM NO. 2 OIL WELL	0045051	40.0

TYONEK 1:250,000

61-38.53	N 150-05.72	W FARMS RED SHIRT LAKE NO. 1 OIL WELL	0045046	76.7
61-05.5	N 151-29.	W PAN AM STEDATNA CREEK ST. OIL WELL	0045060	47.2

GULKANA 1:250,000

62-09.	N 145-27.	W COPPER RIVER BASIN - UNNAMED WELL	0021463	
62-09.	N 145-28.	W GULKANA AIRFIELD WELL	0021490	
62-08.75	N 145-01.55	W LOWER KLAWASI - DRUM GROUP (SHRUB)	0045023	27.7
62-03.48	N 145-13.32	W LOWER KLAWASI - DRUM GROUP-WEST SPRING(MINERAL)	0045024	R 21.
62-03.48	N 145-13.32	W LOWER KLAWASI - DRUM GROUP-WEST SPRING (MINERAL	0021459	27.
62-25.	N 145-27.	W RICHARDSON HIGHWAY - UNNAMED WELL	0021491	
62-00.18	N 145-46.80	W TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	0021460	
62-00.18	N 145-46.80	W TOLSONA GROUP - NICKEL CREEK-UNNAMED SPRING	0021485	
62-06.50	N 145-57.10	W TOLSONA GROUP - TOLSONA NO.1-SOUTHWEST SPRING	0021461	R 10.
62-07.20	N 145-56.60	W TOLSONA GROUP - TOLSONA NO.2-NORTHWEST SPRING	0021462	R 15.
62-05.15	N 145-54.50	W TOLSONA GROUP - UNNAMED SPRING	0021487	
62-07.	N 145-43.	W TOLSONA GROUP - UNNAMED WELL	0021488	
62-04.86	N 145-00.42	W UPPER KLAWASI - DRUM GROUP-SOUTHEAST SPRING	0021458	32.
62-04.82	N 145-00.00	W UPPER KLAWASI - MUD VOLCANO	0045026	18.0
62-04.82	N 145-00.00	W UPPER KLAWASI - MUD VOLCANO	0045025	30.3
62-08.	N 146-06.	W TOLSONA GROUP - MOOSE LAKE-UNNAMED SPRING	0021486	

RUBY 1:250,000

64-55.33	N 154-50.23	W HORNER HOT SPRINGS	0045000	47.0

SOLOMON 1:250,000

64-48.	N 162-55.	W	BATTLESHIP MTN - UNNAMED SPRING	0021469	17.
64-48.	N 162-55.	W	BATTLESHIP MTN - UNNAMED SPRING	0021470	17.
64-51.00	N 162-18.00	W	CLEAR CREEK AREA	0021472	67.
64-51.00	N 162-18.00	W	CLEAR CREEK AREA	0000219	67.
64-42.	N 162-28.	W	KWINIUK - UNNAMED SPRING	0021471 Q	45.

CIRCLE 1:250,000

65-28.98	N 144-38.17	W	CIRCLE HOT SPRINGS	0000237	57.
65-28.98	N 144-38.22	W	CIRCLE HOT SPRINGS - NORTHERNMOST SPRING	0021445	
65-03.25	N 146-03.33	W	CHENA HOT SPRINGS	0000235	57.0
65-03.18	N 146-03.42	W	CHENA HOT SPRINGS - BATHOUSE SPRING	0021503	65.
65-03.18	N 146-03.42	W	CHENA HOT SPRINGS - SPRING A	0021504	51.1

LIVENGOOD 1:250,000

65-16.43	N 148-50.83	W	TOLOVANA HOT SPRING	0000233	56.
65-12.96	N 149-59.58	W	HUTLINANA HOT SPRING	0021480	43.
65-12.96	N 149-59.58	W	HUTLINANA HOT SPRING	0021479	45.6

TANANA 1:250,000

65-59.	N 150-35.	W	LOWER RAY RIVER HOT SPRINGS	0021484	66.
65-00.36	N 150-37.98	W	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0021478	59.
65-00.36	N 150-37.98	W	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0021477	52.
65-00.35	N 150-37.97	W	MANLEY HOT SPRINGS (BAKER HOT SPRINGS)	0000231	56.0
65-57.78	N 150-55.14	W	RAY RIVER HOT SPRING	0021483	45.
65-48.60	N 151-14.22	W	KILO HOT SPRINGS	0021482	66.

MELOZITNA 1:250,000

65-27.6	N 153-18.6	W	LITTLE MELOZITNA HOT SPRINGS	0000227	
65-07.8	N 154-41.5	W	MELOZI HOT SPRINGS (MELOZITNA HOT SPRING)	0000225	56.
65-58.22	N 154-01.00	W	POCAHONTAS HOT SPRING	0045155	
65-16.02	N 155-16.80	W	DULBI HOT SPRINGS	0021476 Q	55.

CANDLES 1:250,000

65-22.02	N 161-15.00	W	GRANITE MOUNTAIN (SWEEPSTAKES)	0021473	49.
65-22.2	N 161-15.4	W	GRANITE MOUNTAIN - SWEEPSTAKES HOT SPRINGS	0000221	49.0

BENDELEBEN 1:250,000

65-13.	N 162-54.	W	LAVA CREEK AREA	0000217 E	50.
65-13.	N 162-54.	W	LAVA CREEK AREA	0021468 G	50.
65-05.58	N 164-55.32	W	PILGRIM HOT SPRING (KRUZGAMEPA)	0021465	69.
65-05.9	N 164-55.3	W	PILGRIM HOT SPRING (KRUZGAMEPA)	0000213	55.
65-51.4	N 164-41.3	W	SERPENTINE SPRINGS (ARCTIC)	0000215	60.
65-51.48	N 164-42.60	W	SERPENTINE SPRINGS (ARTIC)	0021467	71.
65-51.48	N 164-42.60	W	SERPENTINE SPRINGS (ARTIC)	0021466	60.

BETTLES 1:250,000

66-20.52 N 150-51.00 W	KANUTI - UNNAMED SPRING	0000229	66.0
66-27.00 N 150-00.00 W	LITTLE MINOOK CREEK - HOT SPRING	0021481	?

SHUNGNAK 1:250,000

66-22.02 N 156-46.02 W	DIVISION BM HOT SPRINGS	0021475	Q 55.
66-13.98 N 157-34.98 W	HAWK RIVER	0021474	Q 50.
66-09.00 N 157-07.02 W	SOUTH - UNNAMED SPRING	0000223	

PHILIP SMITH MTS 1:250,000

68-58.66 N 147-51.50 W	FLOOD CREEK SPRING	0045039	7.2
68-58.66 N 147-51.50 W	FLOOD CREEK SPRING	0045038	8.5
68-56.33 N 147-58.75 W	SAVIUKVIAYAK TRIBUTARY SPRING	0045034	6.5
68-56.33 N 147-58.75 W	SAVIUKVIAYAK TRIBUTARY SPRING	0045033	3.5
68-51.75 N 148-12.33 W	LUPINE SPRING	0045019	2.5
68-54.17 N 148-05.17 W	SAVIUKVIAYAK R. WEST SPRING	0045020	5.

DEMARCATION POINT 1:250,000

69-42.36 N 141-49.38 W	KONGAKUT RIVER - UNNAMED SPRING	0021506	0.5
69-35.35 N 142-18.00 W	EKALUAKAT R. SPRING	0045152	6.4

MT MICHELSON 1:250,000

69-19.80 N 144-02.64 W	OKPILAK HOT SPRING	0045037	Q 48.5
69-39.38 N 144-23.62 W	SADLEROCHIT SPRING	0045151	4.0
69-39.38 N 144-23.62 W	SADLEROCHIT SPRING	0045149	13.0
69-39.38 N 144-23.62 W	SADLEROCHIT SPRING	0045150	13.0
69-37.62 N 146-01.62 W	RED HILL SPRING	0045022	29.
69-37.62 N 146-01.62 W	RED HILL SPRING	0045021	32.8
69-28.33 N 146-11.30 W	SHUBLIK SPRING	0045148	5.5
69-28.33 N 146-11.83 W	SHUBLIK SPRING	0045147	5.5
69-15.58 N 147-22.83 W	ECHOOKA R. WEST SPRING	0045045	7.0
69-01.83 N 147-43.00 W	IVISHAK HILLSIDE SPRING	0045043	7.5
69-01.83 N 147-43.00 W	IVISHAK HILLSIDE SPRING	0045044	N

APPENDIX D

Sources for the records in the GEOTHERM sample file for Alaska. Each reference is preceded by the abbreviated reference (called CODE) used in the sample file (Table 1). Entries in this computer-generated appendix are sorted by CODE. Those CODES which begin and end with "*" are for references which were unpublished data and have entries in this appendix. Unpublished CODES will precede those for published sources.

CODE = *MILLER AND SMITH, 1977*

MILLER, T. P., AND SMITH, R. L., 1977, GEOLOGICAL TECHNIQUES APPLIED TO THE EVALUATION OF THE GEOTHERMAL POTENTIAL OF ADAK ISLAND, ALASKA, U.S. GEOLOGICAL SURVYE.

CODE = ANDERSON, 1970

ANDERSON, G. S., 1970, HYDROLOGIC RECONNAISSANCE OF THE TANANA BASIN, CENTRAL ALASKA: U. S. GEOLOGICAL SURVEY HYDROLOGIC INVESTIGATIONS ATLAS HA-319, 4 SHEETS.

CODE = BARNES AND MCCOY, 1979

BARNES, I. AND MCCOY, G. A., 1979, POSSIBLE ROLE OF MANTLE-DERIVED CO2 IN CAUSING TWO "PHREATIC" EXPLOSIONS IN ALASKA: GEOLOGY, VOL. 7, P. 434-435.

CODE = BLASKO, 1976

BLASKO, D. P., 1976, OIL AND GAS EXPLORATION ON THE INISKIN PENINSULA, ALASKA: U. S. GEOLOGICAL SURVEY OPEN-FILE REPORT 76-69, 19 P.

CODE = BYERS AND BARTH, 1953

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