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**Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data
From the Area of the
Teller, Bendeleben, Candle, and Kateel River Quadrangles,
Seward Peninsula and Vicinity, Alaska**

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URANIUM HYDROGEOCHEMICAL AND STREAM SEDIMENT RECONNAISSANCE DATA

FROM THE AREA OF THE

TELLER, BENDELEBEN, CANDLE, AND KATEEL RIVER QUADRANGLES,

SEWARD PENINSULA AND VICINITY, ALASKA

by

Robert R. Sharp, Jr., and Dwight E. Hill

ABSTRACT

During July-August 1976, a total of 2026 natural waters and 2085 bottom sediments were collected from 2209 sample locations (at a nominal density of one location each 23 km²) on streams and small lakes throughout the Teller, Bendeleben, Candle, and western one-third of the Kateel River NTMS quadrangles, Alaska. These samples were collected as part of the US Department of Energy's Hydrogeochemical and Stream Sediment Reconnaissance (HSSR) of the National Uranium Resource Evaluation. The HSSR is being conducted throughout Alaska and the Rocky Mountain states by the Los Alamos Scientific Laboratory. Total uranium was measured in the waters by fluorometry and in the sediments and some few waters by delayed-neutron counting. The uranium content of the waters ranged from below the detection limit of 0.02 parts per billion (ppb) to a high of 14.50 ppb, averaging 0.44 ppb, and that of the sediments ranged from a low of 0.2 parts per million (ppm) to a high of 107.4 ppm, averaging 3.93 ppm. The uranium data for water and sediment are separately presented--as computer listings that include pertinent field measurements from each location, as graphically portrayed concentration overlays at 1:250 000 scale for each quadrangle, and as reduced figures showing contours drawn at various concentration levels for each quadrangle--and their areal distributions are compared and correlated with the known features and uranium showings. A test of increasingly detailed methods of data evaluation shows that the more extensive the evaluation, the more useful the reconnaissance uranium data are likely to be. The validity and potential usefulness of the HSSR uranium data are conclusively substantiated by the fact that evidence of all 23 of the reported uranium showings in the 50 000-km² study area can be discerned. Several new locations of interest for further field investigation are identified in each of the quadrangles, and most notably in the Bendeleben Mountains. However, the data presented would appear equally useful in guiding field investigation around the uranium occurrences already known, as noteworthy samples often come from close by but on tributary drainages adjacent, opposite, or above them.

I. INTRODUCTION

This report describes work done by the Los Alamos Scientific Laboratory (LASL) for the United States Department of Energy (US DOE) over a 50 000-km² area on the Seward Peninsula and vicinity, Alaska, in 1976 (Fig. 1). The DOE Grand Junction Office (GJO), in Colorado, is responsible for administering the nationwide Hydrogeochemical and Stream Sediment Reconnaissance (HSSR) as part of its National Uranium Resource Evaluation (NURE) program. The HSSR is designed to delineate areas within the conterminous US and Alaska having higher than normal concentrations of uranium in surface water, ground water, and waterborne bottom sediment. The HSSR will aid in assessment of the nation's uranium resources, and provide guidance to the private sector in selecting those areas most promising for uranium exploration. The LASL is responsible for completing the HSSR project primarily throughout the states of New Mexico, Colorado, Wyoming, Montana, and Alaska.¹ As recently as 1977, the LASL approach to uranium geochemical reconnaissance has been described both in general² and in some detail,³ and a continuous account of the NURE HSSR project at the LASL is publicly available in the form of quarterly progress reports.⁴⁻¹³

This is the first reporting of NURE HSSR data obtained on a true areal reconnaissance basis from Alaska. Data for samples taken during the same field season, from an equivalent-sized area immediately to the north are soon to be reported.^{3,9-13} Also, sampling of an area in Alaska approximately six times as large as that reported here was planned and carried out by the LASL in 1977.^{3,8-14} Neither time nor funding will allow in-depth evaluation of all the field and analytical data by the LASL. Rather, the principal aim is to see that all data are standardized, consistent, and valid as far as the described sampling techniques, sample locations, and analytical results are concerned.⁷⁻¹³ More detailed evaluation of the results is left to the GJO of the DOE in the case of assessment, and to the private sector in the case of actual exploration.¹⁻³

Sample Collection and Analysis

The field sampling was done during the 55 days between July 7 and August 30, 1976, when a total of 4111 samples (2026 waters and 2085 sediments) were collected from 2209 different locations in the report area at a nominal density of one location per 23 km² (9 mi²). The waters consisted of samples from 1671 small streams (a few meters or less across), 354 natural lakes (less than 10 m deep and about 0.3 to 2.0 km in least horizontal dimension), and a single spring. The sediment samples came from 1661 wet streams, 116 dry stream channels, 307 wet natural lakes, and the spring mentioned above. Overlays of individual sample locations are shown on Plates I through IV in the envelope of Part 2 of this report. Note on Plates I through IV that the LASL sample numbers (as given in the Appendixes) are utilized, but with the leading 40 dropped (or with 400 000 subtracted) at each location. The standard procedures followed during both the sampling and analytical work are described in Appendix A. The samples were collected by helicopter according to published specifications.⁷ Streams and the spring were sampled on foot, away from the helicopter, and lakes were sampled by a direct landing near their center. In general, water samples were accompanied by a sample of bottom sediment. However, occasional loss of one or the other has resulted in a few unpaired samples.

Uranium concentrations in all water samples are reported in units of parts per billion (ppb). These concentrations were determined by fluorometry

Fig. 1. Index map of area and NTMS 1:250 000-scale map sheets covered by uranium HSSR sample data reported.

or--in some cases--by delayed-neutron counting (DNC), as described in Appendix A. Uranium concentrations in all sediments were determined by DNC and are reported in parts per million (ppm). The uranium concentrations determined for water samples are listed, along with the field data, in Appendix B and those for the sediment samples in Appendix C. It should be borne in mind that the values set forth in Appendix C therefore represent total uranium as opposed to some more- or less-easily leached component. The advantages of using DNC for determining total uranium in sediment,¹⁵⁻²² as well as uranium in water,^{17,20-22} are becoming widely recognized throughout the world.³ The codes to the data listings and the sample types used in Appendixes B and C are presented in Appendix D. Concentrations of dissolved oxygen in most of the lakes sampled are given in Appendix E.

Uranium concentrations in the water samples are graphically portrayed within various ranges on the overlays of Plates I-A through IV-A in Part 2, and those for the sediments are shown likewise on Plates I-B through IV-B in the same envelope. Note that each series of overlay plates in Part 2 (e.g., Plates I, I-A, and I-B) are specifically provided at the scale of 1:250 000 so they can be used in conjunction with the appropriate geologic and National Topographic Map Series (NTMS) topographic maps (i.e., the Teller sheet, in the example cited).

Previous Work on Uranium Geochemical Reconnaissance

A great number of excellent papers on uranium hydrogeochemical and stream and lake sediment surveying as practiced internationally are available.^{19,23-45} The works most applicable here are those done on parts of northern Canada,^{23,29-41} Finland,¹⁹ Greenland,²² Russia,^{26,42,43} and Sweden,^{44,45} where the latitude is similar to that of the study area (above 60°N). Latitude is perhaps the most important single factor other than geology affecting uranium concentrations in waters and waterborne bottom sediments from a region because of its influence on the climate, vegetation, hydrologic regime, geomorphology, extent of permafrost, and general relationship to glaciation.⁴⁶

Most of the area from which the samples reported herein were taken is underlain by continuous permafrost.⁴⁷ Until about two decades ago, it was assumed that permafrost formed an impermeable barrier to water movement and that it greatly inhibited chemical weathering and leaching.⁴⁸ However, by 1968, Russian investigators had shown that metal ions can and do migrate through permafrost, and Pitul'ko had described the features of geochemical searches for rare-metal deposits in permafrost areas.⁴⁹ Later work further showed the effectiveness of water⁵⁰ and stream sediment⁵¹ sampling in areas of permafrost for both base metal^{49,50} and uranium exploration⁵¹ and for reconnaissance studies.⁵² The mechanisms by which metal ions move upward through permafrost and disperse into stream and lake waters are dealt with in nearly all of the early works on geochemical surveying in permafrost terrain,^{48,49,51} but one of the most detailed explanations is provided by Jonasson and Allan in their 1973 work.⁵³

Much recent discussion has centered around the use of "pathfinder" and "indicator" elements in uranium geochemical exploration. These are defined as relatively mobile elements occurring in close association with uranium, but which can be more easily found either because they form a broader halo or because they can be detected more easily by analytical techniques than uranium.⁴⁸ Since uranium in water is generally more widely dispersed over a uranium deposit than radium, radon, or helium²³ and since present analytical

techniques can accurately and economically detect uranium in the tens of parts per trillion, it seems that--even by strict definition--uranium is generally the best indicator of its deposits. Thus, it was pointed out in 1974 by Boyle⁵⁴ that "Uranium is an excellent indicator of its deposits in practically all types of geochemical surveys..." Consequently, while it is certainly recognized that a knowledge of the concentrations of common constituents and other trace elements in water and sediment samples can be useful in understanding the geochemical environment (to say nothing of their use in exploring for the other trace components themselves) and that other elements can be helpful indicators in specific geologic environments, the fact remains that evaluations of the uranium concentrations alone are primarily utilized (and have been quite successful) in the actual practice of uranium hydrogeochemical and waterborne bottom sediment reconnaissance work.^{24-26,33,35,40,55-58}

II. DESCRIPTION OF THE STUDY AREA

Among the more useful general works on the Seward Peninsula and vicinity are the 1976 edition of the Alaska Regional Profiles covering the Northwest⁵⁹ and Yukon Regions,⁶⁰ a 1976 account of the geography and general geology of Alaska,⁶¹ the reference works by Hunt and by Wahrhaftig on its physiography,^{62,63} and a pair of feasibility studies done in 1975 for the Energy Research and Development Administration (ERDA, now DOE) GJO dealing with the Seward Peninsula⁶⁴ and the whole of Alaska.⁶⁵ The first five of these provide a wealth of information on all aspects of the region, while the last two give in-depth appraisals of the terrain, climate, available communications and transportation facilities, and detailed logistics considerations. In using these or most any of the references on Alaska mentioned herein, the dictionary on Alaska place names by Orth is invaluable.⁶⁶

Location and Geographic Setting

The area sampled (Fig. 1) includes about 50 000 km² of land in the Seward Peninsula and vicinity. Barely south of the Arctic Circle, the area is bounded on the west by the waters of the Bering Strait, on the east by longitude 158°W, on the south by latitude 65°N, and on the north by latitude 66°N. It is fully covered by the Teller, Bendeleben, Candle, and western third of the Kateel River NTMS 1:250 000-scale quadrangle sheets. The entire area is remote and sparsely populated.

Only very small portions of the area, in the Kigluaik and Bendeleben Mountains (along the southern edge in the western half), rise above 1000 m in elevation. The Continental Divide passes considerably north of these mountains and traverses in a sinuous curve along the center of the area from Cape Prince of Wales on the far west to the Kateel River drainage on the far east.

Hunt put the area into the Seward Peninsula and Bering Coast Uplands and the Yukon Basin physiographic provinces.⁶² The division between the peninsula and coastal province is a roughly dissected plateau with low mountains, forming a projection westward to Bering Strait. The Yukon Basin includes the plateaus and lowlands along the Yukon River and its tributaries. Wahrhaftig put the entire area into his Intermontane Plateaus physiographic division, further dividing it into the Seward Peninsula province on the west, and the Buckland River Lowland and Nulato Hills sections of the Western Alaska province on the east.⁶³

Most upland areas range between about 160 and 600 m in elevation. They generally follow the Continental Divide, are cut by rugged V-shaped valleys, and are flanked (particularly to the south) by isolated groups of higher, glaciated mountains. Off the north and south flanks of the uplands lie coastal lowlands (on the extreme west) and numerous small- to medium-sized rivers with sluggish, meandering, lower courses (near the center of the area and eastward across the Peninsula).

Almost all of the upland and most of the lowland flats are underlain by permafrost. The permafrost is locally absent around large bodies of water and is generally between about 10 and 60 m thick.^{47,59}

Nearly all of the lowland flats of the Seward Peninsula,⁵⁹ as well as those along the Buckland River,⁶⁰ are marked by thermokarst features--caused by local melting of ground ice and the subsequent settling of the ground.^{46,67-69} Most noteworthy of these are the highly irregular thaw depressions; hundreds upon hundreds of thaw lakes, which occupy thaw depressions; and thaw sinks, closed depressions with subterranean drainage that are believed to have originated as thaw lakes.⁶⁸ An integrated stream pattern is apparently lacking over large parts of some of these lowland flats.^{59,68}

The lowland flats are generally blanketed by wet tundra, whereas moist tundra covers the predominant uplands. Alpine tundra and barren ground are found in the higher areas of more rugged terrain along the Continental Divide and in the mountains to the south and the hills to the east. High brush grows along the courses of rivers and the south and southwest flanks of the Kigluaik and Bendeleben Mountains, as well as along the west flank of the Darby Mountains.⁵⁹⁻⁶⁰ All but about the southeast third of the area is beyond the northern limit of spruce trees.^{62,67}

The Buckland River Lowland, to the east of Seward Peninsula, is marked by oxbow lakes and thermokarst features and covered by large expanses of moist tundra and upland spruce-hardwood forest.⁵⁹ The Nulato Hills, to the south and east of the Buckland River Lowland, form northeast-trending, even-crested ridges with gentle slopes and rounded summits rising from 300 to 600 m. They are cut at right angles by numerous short, narrow valleys with flat floors. The local relief is about 150 to 450 m. Most of the higher elevations exhibit alpine tundra or barren ground, and stands of upland spruce and hardwood forest are found over sizable areas between the ridges.⁶⁰

Climate

In general, the area is characterized by long, severe winters and cool to moderate summers, as shown in Table I. The months of November through April normally have daily temperatures from just below 0°C to markedly below, while June through September only occasionally see freezing temperatures. May and October are generally transitional, with the daily temperatures hovering around zero. The summers are windy and provide the major portion of the precipitation, the average annual total of which classifies the area as arid to semi-arid. Inland, the climate is mostly continental, while along the coast it is transitional. According to Hopkins, the present climate of the area is sufficiently cold to form a small thickness of perennially frozen ground in previously unfrozen ground, but the present large thicknesses of permafrost are probably unstable under the existing climatic conditions.⁶⁸

Excellent summaries of climatic data for the area are provided by Selkregg,^{59,60} but little information is available from inland stations, which lack many years of record. Stations providing pertinent climatic data

TABLE I

AVERAGE MONTHLY TEMPERATURES AND PRECIPITATION (°C and mm)
FOR STATIONS IN THE SEWARD PENINSULA AND VICINITY, ALASKA

Station:	Nome		Port Clarence		Wales		Kotzebue		Kobuk		Galena	
Elevation:	3.3 m		2.5 m		2.3 m		2.5 m		35.6 m		30.5 m	
Month	Temp.	Pcp.	Temp.	Pcp.	Temp.	Pcp.	Temp.	Pcp.	Temp.	Pcp.	Temp.	Pcp.
Jan.	-14.5	22.9	-18.1	39.1	-17.6	2.3	-19.8	7.4	-27.3	23.4	-27.7	15.2
Feb.	-14.9	21.3	-17.0	17.5	-21.4	6.4	-20.2	7.6	-25.5	10.9	-24.2	21.1
Mar.	-13.7	20.1	-20.6	15.2	-20.0	3.1	-18.1	8.4	-20.9	4.1	-19.9	14.0
Apr.	-7.3	18.5	-11.1	3.3	-14.2	4.1	-10.6	8.4	-10.0	6.9	-6.8	15.0
May	1.6	17.8	-2.5	13.5	-3.9	3.6	-0.7	10.2	4.0	5.3	6.6	13.5
June	7.5	24.1	3.9	8.1	2.7	18.5	6.4	13.2	12.2	46.7	14.3	37.1
July	10.1	51.5	8.6	53.9	8.1	46.0	11.6	39.4	14.1	92.5	15.6	42.2
Aug.	9.6	90.7	8.1	85.3	8.7	58.7	10.4	57.4	11.5	105.4	13.5	50.6
Sept.	9.1	61.0	5.3	48.3	4.8	44.5	5.1	36.3	5.3	67.3	6.6	40.4
Oct.	4.8	36.1	-1.7	29.5	-2.1	38.6	-4.7	15.5	-7.5	23.1	-5.6	38.1
Nov.	0.1	24.9	-12.0	4.6	-8.4	10.9	-13.5	10.4	-18.5	13.5	-21.4	18.3
Dec.	-2.9	18.8	-14.2	12.7	-17.0	6.1	-20.0	8.4	-23.7	14.2	-22.6	17.3
Annual	-3.6	417.6	-5.8	330.2	-6.7	242.8	-6.2	222.5	-7.2	412.0	-5.6	320.3
Ref. No.	70		72		71		70		71		71	

include Nome, Port Clarence, Wales, Shishmaref, Kotzebue, and Candle, along the coast, and Council, Galena, Kobuk, and Nulato, considerably inland.

At the coastal stations, temperatures during the winter normally range from about -25° to -14°C, and during the summer, from about 2° to 15°C. The average annual precipitation along the coast ranges from 203 mm at Shishmaref to about 418 mm at Nome, with the average from all the coastal stations being about 274 mm (10.8 in). About 40% of this precipitation occurs as snow.

At the inland stations, temperatures normally range from about -28° to -8°C during the winter and from about 4° to 20°C during the summer. The average annual precipitation ranges from 356 mm to about 410 mm, with the average for all the inland stations being 385 mm (15 in). Here also, approximately 40% of this precipitation occurs as snow. In general, calm is the exception throughout the area, and winds are particularly high through the constrictions formed by mountain passes.^{59,60}

Weather During Period of Sampling

An indication of the weather in the report area during the 55-day sampling period (July 7-August 30) is given by the data of Table II. Note also that the air temperature and general weather condition observed at each sample site at the time it was sampled are given in the data listings of

TABLE II

DAILY TEMPERATURE EXTREMES AND PRECIPITATION AT STATIONS IN THE SEWARD PENINSULA AND VICINITY, ALASKA
FOR PERIOD DURING WHICH URANIUM HSSR SAMPLING AS REPORTED HEREIN WAS DONE
(MAX. and MIN. are temperatures in °C--PCP. is precipitation in mm)⁷³

Station and Location	JULY 1976 (Day of the Month)																																
	<div><div></div><div></div></div>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Avg.
GALENA LAT. 66-44N LONG. 156-56W	MAX. MIN. PCP.	12.2 4.4 -	13.9 2.2 1.0	10.6 6.1 8.4	12.2 5.0 0.5	13.3 7.8 0.5	21.7 7.2 -	20.6 11.1 T	17.2 11.7 1.3	20.0 12.8 T	22.2 11.1 -	23.9 9.5 -	25.6 12.2 T	20.0 9.5 1.5	22.8 11.7 5.8	22.8 11.1 0.3	21.1 10.6 -	20.6 10.6 0.3	18.9 13.3 0.3	21.7 11.1 T	26.7 9.5 -	29.5 13.9 -	25.6 13.9 -	23.3 13.9 T	21.7 14.5 T	17.2 12.8 2.5	21.7 13.9 T	19.5 11.1 0.5	15.6 10.6 6.4	15.6 8.3 0.3	21.1 21.1 -	20.1 10.5 29.5	
KOBUK LAT. 66-54N LONG. 156-52W	MAX. MIN. PCP.	11.1 0.0 0.3	7.8 0.6 0.5	10.0 4.4 -	7.2 3.3 11.2	11.7 1.1 4.3	13.3 7.2 5.1	18.9 8.3 0.5	18.9 0.6 -	17.8 1.7 -	19.5 1.7 -	23.3 2.8 -	26.1 10.0 -	26.1 7.2 -	23.3 6.7 -	23.3 4.4 -	23.3 3.9 -	20.6 3.9 -	19.5 7.2 -	23.3 9.5 0.5	26.7 11.7 0.5	27.8 6.7 -	27.8 8.9 -	28.3 7.2 -	25.0 13.3 3.6	27.2 7.2 -	21.7 11.1 T	20.6 11.1 -	17.2 10.6 7.6	15.0 8.3 12.7	20.6 5.0 0.3	20.1 6.2 47.0	
KOTZEBUE LAT. 66-52N LONG. 162-33W	MAX. MIN. PCP.	2.8 0.0 T	7.2 -1.1 0.5	6.7 2.2 18.5	3.9 1.1 1.8	8.3 1.1 -	12.2 5.6 T	6.7 1.7 -	8.9 2.2 -	12.8 6.7 -	15.6 8.9 -	16.1 10.0 -	20.6 12.8 3.9	15.0 3.9 -	10.0 8.9 -	19.5 10.0 -	14.5 10.0 -	16.1 8.3 -	13.3 7.2 3.1	19.5 7.8 -	18.9 10.6 1.3	20.0 11.7 -	17.2 10.6 -	19.5 8.3 -	21.1 13.9 -	16.7 11.7 -	13.9 3.9 -	12.8 11.1 2.5	16.7 8.9 1.8	13.3 8.9 -	14.5 8.3 -	17.2 7.1 -	13.9 29.5
NOPE LAT. 64-30N LONG. 165-35W	MAX. MIN. PCP.	11.1 1.7 -	6.1 1.1 1.5	5.6 1.1 8.1	8.9 0.0 -	7.8 -0.6 T	16.7 6.7 1.0	12.8 7.2 -	12.2 5.0 -	7.2 3.3 -	14.5 1.7 -	16.1 2.8 -	23.9 8.9 -	25.0 8.9 -	16.7 7.8 -	12.8 5.6 T	9.5 7.2 1.5	7.2 6.1 1.3	8.9 5.6 0.3	13.9 7.2 0.3	15.6 10.0 1.3	18.3 6.1 T	13.9 3.3 -	17.8 1.7 T	15.0 6.1 T	15.6 7.2 T	18.9 6.1 T	15.6 3.9 1.3	12.2 8.3 3.8	10.6 7.8 4.1	8.3 6.7 T	9.5 7.2 T	13.2 5.2 24.4
WALES LAT. 65-37N LONG. 168-03W	MAX. MIN. PCP.	3.9 0.6 -	6.1 - -	4.4 - -	3.3 -0.6 0.5	5.0 0.6 0.5	7.2 3.9 T	5.0 0.0 T	3.9 0.0 T	5.6 0.0 T	11.1 0.0 T	16.7 7.2 T	16.1 6.1 -	15.6 5.6 -	6.7 1.7 -	9.5 3.3 T	9.5 5.0 T	8.3 5.0 T	6.7 4.4 1.3	13.3 5.0 T	13.3 8.9 T	17.2 9.5 T	15.6 6.1 T	13.3 6.1 -	15.6 7.8 2.5	13.3 8.3 -	13.3 7.2 -	15.0 6.1 -	14.5 8.9 2.3	10.0 6.7 0.5	8.3 6.1 T	7.8 6.7 -	10.2 4.7 19.8

Station (Location as above)	AUGUST 1976 (Day of the Month)																															Avg. Tot.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
GALENA	MAX. MIN. PCP.	25.0 10.6 -	23.9 13.9 0.3	20.0 12.8 -	20.6 7.8 -	23.9 10.0 -	26.7 10.6 -	19.5 12.8 T	17.2 12.8 1.3	20.0 12.2 0.3	19.5 11.1 0.5	21.7 8.3 -	20.6 11.7 1.3	21.1 11.7 3.1	15.0 11.7 2.0	14.5 10.0 2.3	13.3 7.8 -	16.1 5.0 -	17.2 9.5 1.3	19.5 7.8 -	19.5 7.8 -	21.7 7.3 -	21.1 7.2 -	23.3 11.1 -	22.8 6.1 -	21.1 7.2 -	21.7 3.9 -	21.7 3.9 -	21.7 8.3 -	20.6 8.3 0.3	18.9 7.8 -	18.3 7.8 0.3	20.2 9.2 12.7
KOBUK	MAX. MIN. PCP.	24.5 5.0 -	25.6 6.1 -	22.2 10.6 -	18.3 10.0 -	22.8 4.4 -	25.6 4.4 -	26.7 10.0 T	17.2 4.4 -	18.3 11.7 5.1	20.0 9.5 4.6	21.7 8.9 -	21.1 2.8 -	21.7 4.4 6.1	18.3 11.1 15.2	17.2 10.0 8.4	15.6 3.3 -	16.7 1.7 -	18.9 3.9 -	19.5 -0.6 -	18.3 0.0 -	17.2 1.1 -	18.3 7.2 T	20.6 10.0 -	21.7 6.7 -	23.3 11.1 T	23.3 3.9 -	23.9 5.0 -	24.5 3.9 -	19.5 4.4 -	16.1 6.7 0.3	18.3 3.9 -	20.6 6.0 39.6
KOTZEBUE	MAX. MIN. PCP.	15.6 10.0 -	18.3 10.0 -	12.2 10.0 -	15.0 10.6 -	17.8 12.8 -	17.2 10.6 -	17.2 10.6 -	16.1 7.8 -	16.1 11.1 -	13.3 10.6 0.8	16.7 11.1 -	17.8 11.7 0.5	14.5 11.7 2.3	16.1 11.7 6.9	13.3 7.8 1.8	14.5 8.3 -	15.0 8.3 -	15.6 6.1 -	13.3 8.3 -	13.3 10.0 -	13.3 10.0 -	17.8 8.9 T	18.3 10.0 -	16.7 9.5 -	18.3 11.1 T	16.7 11.1 -	15.6 10.0 -	13.9 11.1 -	14.5 11.7 -	14.5 8.9 -	18.9 7.8 -	15.8 10.0 12.2
NOPE	MAX. MIN. PCP.	11.1 6.7 -	11.1 7.2 0.8	9.5 6.7 0.8	14.5 7.8 0.5	23.9 7.2 -	23.3 13.9 2.0	15.6 11.7 7.9	15.0 6.7 T	16.7 4.4 -	15.0 10.0 8.9	16.1 10.0 5.5	15.6 8.9 T	13.3 10.0 1.0	12.2 8.3 3.0	8.3 6.7 14.7	10.0 7.2 1.0	12.2 6.7 1.5	18.3 6.1 -	15.6 2.2 -	13.9 2.2 -	12.2 2.8 T	11.7 4.4 T	11.7 3.9 0.3	12.2 8.3 1.3	12.8 10.0 2.3	14.5 8.3 0.3	18.9 3.3 -	16.1 6.1 T	12.8 6.7 T	15.0 5.6 0.3	15.6 9.5 -	14.3 7.1 75.9
WALES	MAX. MIN. PCP.	9.5 6.7 T	11.1 6.7 0.5	8.9 6.7 T	12.8 7.2 0.8	11.1 7.2 -	14.5 8.3 -	9.5 5.6 -	7.8 5.0 -	8.3 5.0 -	9.5 5.6 T	10.6 6.1 T	11.1 7.8 4.1	11.1 6.7 -	9.5 6.7 7.4	7.2 3.3 21.1	8.9 3.9 3.0	12.8 6.1 0.5	10.6 6.1 -	8.9 5.6 -	12.8 6.1 -	15.6 5.6 T	10.0 5.7 -	11.7 6.1 T	11.1 7.8 T	13.3 8.9 2.0	14.5 8.9 3.6	12.8 8.9 3.8	12.8 6.7 -	11.7 5.6 -	11.7 5.6 -	16.1 7.2 -	11.2 6.4 46.7

Appendixes B and C. Review of the listings shows that at the times and places that sampling actually took place, air temperatures varied between the extremes of 5° and 24°C, with the average being around 15°C. Skies were most often partly cloudy, though sometimes clear or overcast. Only a few days were lost to truly bad weather (dense, low clouds or high winds). Temperatures were essentially normal during the sampling period. Precipitation over the entire area, however, was considerably below normal during both the months of July and August, being only slightly more than half of that generally occurring during these months.⁷³

III. HYDROLOGY

The presence of permafrost markedly affects the hydrology of the study area. The lowland areas are covered by thousands of thaw lakes drained by sluggish, meandering rivers.^{67,68} The river systems north of the Continental Divide drain into Kotzebue Sound or the Chukchi Sea; those to the south drain into the Bering Sea, Imuruk Basin, or Norton Bay.

The major river systems north of the Continental Divide, from west to east, include: the Mint, Pinguk, Nuluk, Arctic, and Serpentine Rivers in the Teller quadrangle; the Goodhope, Inmachuk, and Kugruk Rivers in the Bendeleben quadrangle; the Kiwalik and Buckland Rivers in the Candle quadrangle; and the Tagaguwik River in the Kateel River quadrangle. Major drainages south of the Divide include: the Anikovich, Kanauguk, Lost, California, American, Kaviruk, and Aglapuk Rivers in the Teller quadrangle; the Kuzitrin and Koyuk Rivers in the Bendeleben quadrangle; and the Koyuk, Inglutalik, and Ungalik Rivers in the Candle quadrangle. The Kateel, Honhosa, and Gisasa Rivers in the Kateel River quadrangle drain into the Koyukuk River east of the study area. All of these rivers are fed by numerous tributaries draining the upland areas.

The surface waters throughout the study area are very pure. The streams above the tidal reaches contain water of the calcium bicarbonate type, usually with less than 200 ppm dissolved solids.^{59,74} The sediment load of the streams is low, probably because of the low relief, a lack of glaciers, and the presence of permafrost. In general, the inland lake waters are similar in chemical character to adjacent stream waters but usually contain less dissolved solids. Some coastal lowland lakes become mineralized periodically by seawater salts brought in from infiltration or overland flooding during storms.

The availability and movement of ground water in the study area is restricted by the presence of permafrost.⁷⁵ However, ground water movement does occur in areas of discontinuous permafrost such as near the Buckland and Koyuk Rivers and in the Bendeleben Mountains. Coastal ground water is usually of the sodium bicarbonate or chloride type while inland water is usually of the calcium bicarbonate or calcium-magnesium bicarbonate type.^{59,74} The dissolved solid content of ground water, which is usually less than 250 ppm, is higher than that of surface water from the same vicinity.⁷⁶

Even though continuous permafrost restricts communication between near-surface and deep aquifers, the hydrogeochemical permafrost studies referenced earlier indicate that ionic migration from subsurface mineralization is not significantly impeded.^{48,53} The conclusion of these investigations is that hydrogeochemical prospecting techniques are effective in permafrost areas.

IV. GEOLOGY

General

Among the pertinent reports specifically concerned with the geology of the Seward Peninsula are those by Lu and others on the ore reserves,⁷⁷ by Sainsbury on the structure⁷⁸ and metamorphic petrology,⁷⁹ and by T. P. Miller on the igneous geology and petrology.⁸⁰ The geology of the area sampled immediately east of the Seward Peninsula is described by Patton.⁸¹

The most recent geologic map covering the entire region is that of northern Alaska, compiled by Beikman and Lathram in 1976,⁸² while Clark and others (in 1974) provide an interpretive one in conjunction with another showing the metal provinces of Alaska.⁸³ Geologic maps published since 1966 are available at the scale of 1:250 000 for the Teller,⁸⁴ Bendeleben,⁸⁵ Candle,⁸⁶ and Kateel River⁸⁷ quadrangles and, consequently, none are furnished here. Since earlier geologic maps at this scale exist for the Candle and Kateel River quadrangles,^{88,89} and many of the existing works on the local geology and mineral occurrences in the area were published prior to 1966, it is important to note the caution set forth in 1969 by Sainsbury.⁷⁸ Referring to essentially the entire Seward Peninsula, he states (p. 2595), "...all ideas as to structural and stratigraphic relations, published before 1965... are in error in so far as the rocks of pre-Jurassic age are concerned." He further points out that the rocks of the Seward Peninsula resemble those of the Chukotsky Peninsula of Siberia more closely than those in contiguous parts of Alaska.⁷⁸ That this relationship holds for the plutonic rocks of the Seward Peninsula province as well is later suggested (1972) by Miller.⁸⁰ Therefore, to a considerable extent, the following geologic description of the area is taken from works published in 1966 and thereafter.

Stratigraphy

The complex sedimentary, metamorphic, and volcanic stratigraphy and the structure in the area of the Seward Peninsula covered by the Teller and Bendeleben quadrangles has recently (1969-74) been described at some length, largely by Sainsbury,^{78,79,84,85} while that in the area of the Yukon-Koyukuk volcanogenic province covered by the Candle and Kateel River sheets has likewise (1966-73) been dealt with by Patton.^{81,86,87} During this same period (1966-76), T. P. Miller, along with others, has provided considerable detail concerning the ages and other pertinent aspects of the plutonic rocks in the region.^{80,90-92} A stratigraphic column compiled from these sources is shown in Table III.

Precambrian rocks of the York slate and Kanauguk formation are exposed throughout much of the western part of the area within the Seward Peninsula (Bendeleben and Teller quadrangles). The York slate ranges from nearly un-metamorphosed quartz siltite to gneiss, but generally consists of graphitic phyllite with characteristic vitreous white-quartz veining. Gneissic units within the York slate were earlier termed the Kigluaik group.⁸⁵ Interbedded within the York slate are basaltic volcanic units, generally metamorphosed to greenschist (locally blueschist) facies.⁷⁹ Where these basaltic units assume significant thicknesses, they are termed the Nome group.⁸⁵ The Kanauguk formation, a rhythmically interbedded, schistose, argillaceous limestone and dolomitic limestone, overlies the York slate with apparent conformity. The minimum age for the Precambrian sequence is 750 m.y.⁸⁵ In addition, various small intrusive bodies with a wide range in chemistry (gabbros through pegmatites) are intruded into the Precambrian section. These are thought to

TABLE III

ROCK UNITS OF THE SEWARD PENINSULA AREA, ALASKA

Age	Seward Peninsula Teller and Bendeleben Quads	Yukon-Koyukuk Province Candle and Kateel River Quads	Lithologies
Holocene through Pleistocene	Surficial deposits	Surficial deposits	Cover, alluvium, silt, sand, glacial deposits, beach deposits, flood-plain deposits and terrace deposits.
Holocene through Pliocene	Basalt; conglomerate; Kougarok gravels	Basalt	Age of basalt probably early to middle Pleistocene. Locally derived gravels interbedded with basalts.
Miocene (?)	Noxapaga formation		Lignitic coal, sandstone and conglomerate.
Tertiary (?) or Late Cretaceous	Dikes Coal-bearing beds		Leucocratic and lamprophyric dikes. Sandstone, calcareous sandstone, siltstone, and fireclay.
Late and Middle Cretaceous	Spruce Creek formation; sandstone and siltstone; limestone and sandstone.	Calcareous graywacke and mudstone; Limestone conglom- erate; Nonmarine shale, siltstone, and sandstone.	Nonmarine units consisting of highly calcareous graywacke, micaceous calcareous mudstone and volcanic conglomerate. Maximum thickness 1500 m. Spruce Creek formation (limestone conglomerate in Yukon-Koyukuk province) composed chiefly of rounded clasts of Paleozoic limestone and subordinate Precambrian metamorphics at least 60 m thick.
		Volcanic graywacke, conglom- erate, and mudstone; Gray- wacke sandstone and mud- stone; Marine shale and siltstone.	Chiefly andesitic volcanic rock detritus, but locally includes granitic and fine-grained tuffaceous material. Marine shale and siltstone unit only locally contains volcanic material.
	Intrusive rocks; plutonic intrusive rocks; granites; orthogneiss	Granitic rocks	Quartz monzonite and alkalic silicic plutons and smaller intrusive bodies. Quartz monzonites (generally Late Cretaceous) more common on Seward Peninsula, and alkalic silicic rocks (generally Middle Cretaceous) more common in Yukon-Koyukuk province.
Middle Cretaceous through Jurassic (?)	Mafic volcanic rocks	Andesitic volcanic rocks	Includes a wide variety of andesitic flows and volcaniclastic rocks.
Mississippian through Ordovician	Unnamed carbonate units		Predominantly limestone, with dolomitic limestone, dolomite, and minor shale. 2000-4000 m thick.
Paleozoic or Precambrian	Map units of tectonic origin		Tectonically mixed Precambrian schist and Paleozoic carbonates.
	Limestone and shale north of Inna-chuk River	Limestone and schist	Probably equivalent in part to York slate and in part to Paleozoic carbonate. Exposed only on Seward Peninsula, west of 161° W.
Precambrian	Gabbro and metagabbro		Small plugs confined to Precambrian schist and limestone.
	Kanauguk formation		Thin-bedded schistose argillaceous and dolomitic limestone, rhythmically interbedded.
	York slate and Nome group		York slate: Carbonaceous quartz siltite with interbeds of graywacke and thick dark limestone. Generally metamorphosed to graphitic phyllite cut by numerous vitreous white quartz veinlets. Nome group: Chloritic schist, locally blueschist, derived from volcanic material intercalated with York slate. Includes higher rank metamorphics (earlier mapped as Kigluaik group).
Unknown	Rocks of unassigned age		Gabbro, marble, limestone, and pegmatite.

be late Precambrian, but might possibly be Paleozoic age. The Precambrian sequence is overlain by unnamed Paleozoic carbonate units up to 4000 m thick. These carbonates, predominately Mississippian- through Ordovician-age limestones and marbles, are generally in fault contact with each other and with earlier units; consequently, stratigraphic relationships within the sequence are poorly known.

The Paleozoic and Precambrian rocks are not exposed east of 161°W longitude within the western Candle quadrangle. Instead, a thick basinal sequence of Mesozoic volcanogenic sedimentary rocks is exposed within the Yukon-Koyukuk province (Candle and Kateel River quadrangles) and in isolated exposures within the Bendeleben quadrangle. The lower part of the Mesozoic sequence consists of predominantly early Cretaceous submarine andesitic flows and breccias succeeded by middle Cretaceous marine graywacke, siltstone, shale, and local conglomerate. The upper part includes a late Cretaceous sequence of nonmarine graywacke, mudstone, and conglomerate. Plutons of the Hogatza alkaline series have been intruded into this sequence (and into older rocks to the west) during two orogenic periods that occurred during middle and late Cretaceous periods. Members of this suite generally consist of both saturated and undersaturated silicic rocks such as quartz monzonites, syenites, granites, and alaskites, often with several facies present within a single pluton. They have been emplaced along a northeast-trending zone within the area of the Bendeleben and Candle quadrangles. Important plutons of this series within the area sampled are, from southwest to northeast, the Kuzitrin and Bendeleben batholiths and Windy Creek pluton, the Granite Mountain pluton, the Hunter Creek pluton, and the southernmost portion of the Selawik Hills pluton.⁸⁰ Numerous smaller plutons are present throughout the entire area.

Except for isolated coal-bearing Tertiary rocks exposed within the Bendeleben quadrangle, post-Cretaceous rocks consist of glacial drift in the highland areas, fluvial deposits within lowland areas, and late Tertiary and Quaternary age volcanic basalt flows spread throughout the area, particularly within the boundaries of the Bendeleben and Candle quadrangles.

Structure

The major structural domains of the region, shown in Fig. 2, consist of the Seward Peninsula positive area and the Yukon-Koyukuk basin. These areas are separated between 161°W and 162°W longitude in the area of the Candle quadrangle by a north-tracing thrust fault of Paleozoic and Precambrian rocks overriding early Cretaceous rocks to the east.^{78,80,81,86}

The structural style of the Seward Peninsula is dominated by intense east-west compressional deformation, including tight folding, low-angle thrusting, and closely-spaced high angle faulting. Thrust melanges that tectonically mix Paleozoic and Precambrian rocks are common in the Seward Peninsula, making stratigraphic interpretation in some areas a difficult matter. These compressional features have been developed during several Paleozoic and two Cretaceous orogenic periods. The rock types and structural history of the Seward Peninsula and Brooks Range are very similar, although major fold axes trend north-south in the former and east-west in the latter. Patton^{92,93} has proposed that both structural domains are part of a Cordilleran foldbelt that has been buckled into a southward-looping oroclinal flexure by compression probably associated with Cretaceous orogeny.

Cretaceous rocks of the Yukon-Koyukuk basin have been deformed in a manner similar to the older units of the Seward Peninsula. Folds trend approximately north-south, parallel to those of the Seward Peninsula (Fig. 2).

Fig. 2. Major structural features of the Seward Peninsula and vicinity, Alaska.⁹³

Within the Yukon-Koyukuk basin are two elongated mid-Cretaceous synclinal basins, the Kobuk-Koyukuk basin to the north and the lower Yukon basin to the south, separated by a structural high along which plutons of the Hogatza series were emplaced. The Kobuk-Koyukuk basin is north of the area shown in Fig. 2. The lower Yukon basin, comprising much of the area covered by the Candle and Kateel River quadrangles, is filled with between 4500 and 7500 m of mid-Cretaceous graywacke.⁸¹

V. MINERAL OCCURRENCES

Useful summaries of the mineral resources and geology of the Seward Peninsula and vicinity are included in recent works by Cobb,^{94,95} and Berg and Cobb,⁹⁶ as well as in somewhat older reports by another contingent of the United States Geological Survey (USGS),⁹⁷ Cobb and Kachadoorian,⁹⁸ and D. J. Miller and others.⁹⁹ Over the period 1960-70, Cobb has compiled maps showing the occurrences in Alaska of antimony,¹⁰⁰ bismuth,¹⁰¹ chromite, cobalt, nickel, and platinum,¹⁰² copper, lead, and zinc,¹⁰³ iron,¹⁰⁴ mercury,¹⁰⁵ molybdenum, tin, and tungsten,¹⁰⁶ lode gold and silver,¹⁰⁷ placer gold,¹⁰⁸ industrial minerals and construction materials,¹⁰⁹ and--most important to this work--uranium, thorium, and rare-earth elements.¹¹⁰ Most such occurrences are also shown in the works of Selkregg.^{59,60} A bibliography of USGS reports on uranium and thorium from 1942 through May 1958 is provided by Soister and Conklin¹¹¹ and Bates and Wedow summarized the thorium-bearing mineral occurrences in Alaska in 1953.¹¹² A compendium

of semiquantitative spectrographic analyses of minor elements in the -20 mesh, nonmagnetic fraction of 1069 heavy mineral concentrates (mineral density greater than 2.87 g/ml), collected in Alaska by the USGS between 1895 and 1953, is provided by Overstreet and others.¹¹³ Included in these analyses are all of the elements named above as being shown on the 1960-70 Alaskan Occurrence Maps of Cobb. Additional elements included are arsenic, barium, beryllium, boron, cerium, europium, indium, lanthanum, lithium, niobium, palladium, strontium, tellurium, vanadium, yttrium, and zirconium, among others. A geochemical evaluation of the anomalous results, along with literature references to the various sample sites involved--many of which are in the present study area--are also included in the work.

A number of publications deal more specifically with various parts of the study area or with specific uranium and other mineral occurrences reported there. These are set forth in Table IV for the areas of each of the four individual NTMS quadrangles involved, and in Table V for each of the reported radioactive occurrences not due solely to monazite. The known uranium occurrences in the study area are shown in Fig. 3. The ERDA (now DOE) sponsored works by G. R. Eakins,^{114,115} Forbes,¹¹⁶ and Jones and Forbes¹¹⁷ concerning the uranium potential of the Seward Peninsula. Also important to uranium exploration in the Seward Peninsula and vicinity are the results of the DOE-sponsored, high sensitivity, reconnaissance airborne gamma-ray survey of the area reported by Texas Instruments, Inc., in 1975.¹¹⁸

The reconnaissance data presented herein are specifically aimed at supplementing the above-mentioned reports funded by the DOE, as well as the many other works cited herein which relate in some way to uranium assessment and exploration in the area. The known uranium occurrences in the area will facilitate empirical evaluation of the data (Fig. 3).

VI. EVALUATION OF THE DATA

The following sections present statistical summaries and brief evaluations of the uranium data for both the water and sediment samples. Since this is the first in a series of similar HSSR reconnaissance studies eventually to cover the entire state of Alaska, it would seem valuable to demonstrate various methods for simple evaluation of future Alaskan HSSR data. In so doing, however, it should be recognized that many additional methods can be used as well and that, generally, the more detailed the evaluation (whatever the method) the more useful the conclusions reached are likely to be. The four methods dealt with below are: 1) setting of a threshold value for uranium concentrations in water and in sediment, all values above which are considered anomalous and given special study; 2) graphic, areal plotting of uranium concentrations in water and sediment within various ranges by individual sample location (as done on the Plates herewith) and study of these plots in relation to known features of the area; 3) contouring of the actual values of the uranium data (as done in the figures which follow), taking care not to put inordinate emphasis on single, isolated, possibly spurious values that differ markedly from those close around, whether relatively high or low, and studying these in the preceding manner; and 4) comparing the contoured (and otherwise portrayed) uranium data for the waters with those for the sediments (as also done--summarily--below), taking into account their inherent differences and probable controls.

In discussing geochemical data, an "anomaly threshold" value, based on a statistical summary of the data, is often selected for use. Commonly used

TABLE IV

**PRINCIPAL PUBLICATIONS PERTINENT TO INTERPRETATION
OF THE URANIUM AND FIELD DATA PRESENTED**

Topographic Maps of Area (NTMS)	Geologic and Mineral Resources Maps of Area	Geologic Reports on Area	Uranium Studies of Area	Geochemical Reports on Area	Geophysical Reports on Area	Hydrologic Reports on Area
TELLER QUAD (1:250 000 scale) plus complete coverage at 1:63 360 scale as Teller A-1 thru A-4 B-1 thru B-6 C-1 thru C-7 and D-1 thru D-6.	Ref. 59; Refs. 84 and 119 (1:250 000 scale); Ref. 120--Teller B-4 and C-4 (1:63 360 scale); Ref. 121--Teller A-1, A-2, A-3, B-1, B-2, B-3 and C-1 quads.	Refs. 59, 78, 79, 122-129, and 136	Refs. 114, 116, 118, and 130-136	Refs. 113, 121, 136, and 137	Refs. 118 and 138	Refs. 59, 67, 68, 74, 76, and 139-141
BENDELEBEN QUAD (1:250 000 scale) plus complete coverage at 1:63 360 scale as Bendeleben A-1 thru A-6 B-1 thru B-6 C-1 thru C-6 and D-1 thru D-6.	Ref. 59; Refs. 85, 153, 154 (1:250 000 scale). Ref. 121-- Bendeleben A-6, B-6, C-6, D-5 and D-6 quads. Ref. 143--Parts of Bendeleben A-5 and A-6 quads.	Refs. 59, 78-80, 136, and 143-146	Refs. 90, 114-118, 136, 147, and 148	Refs. 113, 136, 143, and 149-151	Refs. 118 and 152	Refs. 59, 67, 68, 74, and 139-141
CANDLE QUAD (1:250 000 scale) plus complete coverage at 1:63 360 scale as Candle A-1 thru A-6 B-1 thru B-6 C-1 thru C-6 and D-1 thru D-6.	Refs. 59 and 60; Refs. 86, 88, and 155 (1:250 000 scale).	Refs. 59, 60, 78-80, 91, and 156-159	Refs. 114- 118, 131, and 147	Refs. 113 and 160	Refs. 118 and 161	Refs. 59, 60, 67, 68, 74, 76, and 140-142
KATEEL RIVER QUAD (1:250 000 scale) plus complete coverage at 1:63 360 scale as Kateel River A-5 and A-6 B-5 and B-6 C-5 and C-6 and D-5 and D-6. - West third -	Ref. 60; Refs. 87 and 89 (1:250 000 scale); Ref. 162 (1:125 000 scale).	Refs. 60, 81 and 91				Refs. 60, 67, and 74

TABLE V

URANIUM AND/OR THORIUM MINERALIZATION (EXCEPT MONAZITE) IN THE AREA
(Compiled from Refs. 110, 119, 154, and 155)

Location Number ^a	NTMS Sheet	Location Name	Coordinates		Pertinent Refs.	Remarks ^b
			Lat.	Long.		
1	Teller	Brooks Mountain	65°31'N	167°10'W	78, 79, 84, 114, 119 122-125, 130-133, 137	Mz, RE, Sb, Be, Bi, Cu, Pb, Ag, Sn, W, Zn
2	Teller	Ear Mountain	65°57'N	166°13'W	78, 79, 84, 114, 119, 125, 134	Mz, Sb, Be, Cu, Au, Pb, Hg, Ag, Sn, W, Zn
3	Teller	Eldorado Creek	65°56'N	166°07'W	79, 84, 114, 119, 134	Mz, RE, Sn, W
4	Teller	Pinnacle Creek	65°55'N	166°11'W	same as above	Mz, Sn
5	Teller	Tuttle Creek	65°57'N	166°19'W	same as above	Mz, Nb, Au, Sn, W
6	Bendeleben	Hot Springs Creek	65°52'N	164°19'W	79, 85, 114, 136, 154	RE, Hg
7	Bendeleben	Candle Creek	65°51'N	162°00'W	79, 85, 114, 147, 154	Cu, Au, Pb
8	Candle	Duck Creek	65°56'N	161°26'W	79, 86, 147, 155	
9	Candle	E. Clem Creek	65°58'N	161°20'W	same as above	
10	Candle	W. Clem Creek	65°57'N	161°23'W	same as above	
11	Candle	Muck Creek	65°45'N	161°31'W	same as above	W
12	Candle	Heinzer Creek	65°47'N	161°14'W	same as above	Au(?)
13	Candle	Sugar Loaf Creek	65°44'N	161°10'W	same as above	Au(?)
14	Candle	Connolly Creek	65°40'N	161°37'W	same as above	
15	Candle	Spruce Creek	65°41'N	161°27'W	same as above	Au(?)
16	Candle	Quartz Creek	65°29'N	161°18'W	86, 115, 116, 147, 155-157	RE, Au, Pt
17	Candle	Cub Creek	65°30'N	161°02'W	86, 115, 116, 147, 155, 156, 158	Au
18	Candle	Peace River	65°27'N	161°10'W	86, 115, 116, 131, 147, 155, 156, 158	Bi, Cr, Cu, Au, Pb, Mo, Ag, W, Zn
19	Candle	Sweepstakes Creek	65°22'N	161°20'W	86, 115, 116, 147, 155, 156	Au, Pt
20	Candle	Anzac Creek	65°23'N	161°03'W	same as above	
21	Candle	Rook Creek	65°25'N	161°03'W	same as above	Au(?)
22	Candle	Syenite Gulch	65°28'N	161°13'W	same as above	
23	Candle	Boulder Creek	65°24'N	161°03'W	same as above	Au(?)

^a The general location of each occurrence is indicated by this number on Fig. 3.

^b Mz = Monazite is also present; RE = Rare-earth elements not in monazite are present.

Fig. 3. Occurrences of uranium and/or thorium mineralization (other than monazite) in the area.

thresholds are the mean (M) plus either two or three standard deviations (σ). When selecting either of these, it is important to recognize that such an anomaly threshold is an arbitrary value relating to the relative distribution of values within a single statistical population. If a population is not normally distributed (as is generally the case here and often the case with HSSR data), considerable care must be exercised when using standard deviations above the mean to set and evaluate anomalous values. The main problem is that the standard deviations are often inflated by a few exceptionally high uranium values. This can be alleviated somewhat by separate treatment of different sample populations--such as waters or sediments from different sources (e.g., streams as opposed to lakes) or from different local geologic or physiographic regimes, and so on. For any sizable area, however, such differences are likely to be numerous, complex, and often subtle, making fully satisfactory use of the method complicated and detailed for more than a general check on the validity of the data. Also, by using an anomaly threshold of $M + 2$ or 3σ , at least 95% of the data are essentially ignored.

It is due to these and other reasons, no doubt, that Grimbart and Lorient, in a paper on geochemical exploration for uranium,²⁵ have stated, "... you must stop worrying about hunting for the anomaly threshold, which has nothing to do with reality." They conclude flatly, "the fact is that there is no ideal dividing line between normal background content and truly abnormal content." According to them, the form, extent, and homogeneity of an anomalous zone, as well as relations to geology, topography, vegetation, climate, and weather are all important.

It should be understood from the outset that the occurrence of samples with uranium concentrations above any chosen anomaly threshold, alone or in clusters, does not necessarily indicate the presence of economic mineralization, but only that the potential for such mineralization is likely to be greater in the vicinity. Conversely, due to the complexity of geochemical phenomena, the absence of any relatively high values in a locality by no means altogether precludes the possibility of there being uranium concentrations of economic interest in the ground. Rather, the likelihood of such concentrations (that have gone undetected) is simply less.

Although the threshold values for the various source-types do differ within the present report area (those for waters less so than for sediments), anomaly thresholds based on $M + 2\sigma$ are about 2 ppb for uranium concentrations in all the waters (combined) and about 12.5 ppm for all sediments. At $M + 3\sigma$, of course, such thresholds are even higher. It will be shown in the following sections that in considering only uranium values above anomaly thresholds so chosen, a large amount of useful information is overlooked. Indeed, in certain areas, uranium concentrations far below these levels are fairly obviously associated with geologic features and with reported uranium mineralization.

The second method of evaluation to be considered utilizes the uranium data as plotted in the manner of Plates I-A through IV-A and in Plates I-B through IV-B, herewith. When overlain and studied on top of the appropriate topographic, geologic, or mineral resource occurrence maps at the same scale (as set forth in Table IV), such areal concentration plots allow a fair degree of straightforward correlation with local geology and known uranium showings. However, because closely similar uranium concentrations may fall on one side or another of a break in graphic symbol size, and because the reconnaissance sample density does not allow every tributary stream or catchment lake to be sampled, the trends of near-equal concentration, the areal character of uranium dispersion as reflected by changes in concentration, and the direct

correlation of one or more high-value samples with a specific known source are often difficult to discern. The method does, nevertheless, allow more detailed study of the data in relation to a number of the important features controlling them, and provides many of the benefits to be derived from contoured concentration maps--as will be shown below.

The areal distribution of uranium is best visualized by preparing contoured concentration maps from the data, and the third and fourth methods discussed utilize these. Such maps were prepared individually for the water and sediment uranium data from throughout the area by hand contouring. The data are amenable to contouring at any chosen concentration. However, only arbitrarily chosen contours which tended to close are represented in the figures within the following sections. Contours were drawn as smoothly as possible to include at least two locations with the appropriate values within the highest closed contour and are positioned by linear interpolation. Ordinarily, contours prepared from both the water and sediment data include several values within the appropriate interval and cover relatively large areas ($>100 \text{ km}^2$). Uncommonly, the contoured areas are steep sided, with two or more contours drawn between adjacent sample locations. In the present case, about 3% of the individual values included within the contours are below the proper interval (extraneous) for waters, and about 6% for sediments. Isolated values above the proper interval and not included within the proper contours comprise about 7% of the waters, and about 12% of the sediments. The inclusion of at least two values within the highest closed contour and the exclusion (or disregard) of a few individually isolated values, notably different from those surrounding, is consistent with the concept of not putting inordinate emphasis on any single, disassociated (and possibly spurious) uranium concentration. Even so, it is recognized that such contours drawn by different individuals will differ, but only in minor details.

The main purpose of the remaining discussion in the following sections, then, is to determine the relationship of uranium concentrations in both water and sediment with the geology as known and with the 23 known uranium showings in the report area. The relationship of the uncontoured and contoured concentrations with the known uranium occurrences, topography, geology, structure, and hydrology are individually examined, first for waters and then for the sediments. Finally, the areal distribution of uranium in waters versus that in sediments is examined to test the utility of this fourth evaluation method. Having established a relationship between the areal distribution of uranium for both water and sediment with geology and known uranium occurrences, guidelines may be established to direct further investigation for uranium resources where the geology and HSSR data appear favorable and uranium occurrences are not known. Note that a more extensive and detailed evaluation than is possible here would likely prove considerably more useful.

Uranium Concentrations in Waters

Frequency histograms and a summary of basic uranium statistical data for the 2026 water samples collected, including a breakdown by source (1671 from streams, 354 from small lakes, and 1 from a spring) are given in Fig. 4. The single spring water (not included in the data listings, the Plates, or separately in Fig. 4) was collected from Serpentine Hot Springs in the Bendeleben quadrangle and showed a uranium concentration of 0.12 ppb.

Using $M + 2\sigma$ as the criterion for the combined population of waters from the Seward Peninsula report area, the anomalous samples (those with >2 ppb uranium) can be picked from the listings of Appendix B. They are indicated by

(a) Uranium concentrations in all water samples taken.

(b) Uranium concentrations in water samples from streams only.

(c) Uranium concentrations in water samples from lakes only.

Fig. 4. Frequency distributions of uranium concentrations in waters from the area of the Teller, Bendeleben, Candle, and Kateel River (west third) quadrangles, Seward Peninsula and vicinity, Alaska.

the two largest symbols on Plates I-A through IV-A, where all of the water data are plotted. Note that due to rounding to two decimal places samples shown in the listings of Appendix B as containing 0.01, 0.04, 0.16, and 0.50 ppb uranium plot in some few cases on the Plates in the next higher interval of the legend (i.e., the plotted values are not rounded).

By the criterion set forth, 60 of the 2026 water samples collected are considered anomalous. In the following discussion, the anomalous water samples, the graphic concentration plots including them, and the contoured concentration maps for waters are treated in turn, area by area, from west to east, as covered by individual NTMS map sheet (Fig. 3).

In the area of the Teller NTMS map sheet, there are 11 sites providing water samples defined as anomalous (all streams). The maximum uranium concentration is 4.54 ppb. None of these samples is from near the five reported uranium occurrences around Ear or Brooks Mountain. Within the area of the Bendeleben quadrangle, anomalous water samples were collected from 41 sites (37 streams and 4 lakes). The maximum uranium concentration in these is 14.5 ppb, but the two reported uranium occurrences in the Bendeleben quadrangle are not reflected in them. Within the area of the Candle NTMS sheet are eight sites (seven streams and one lake) which have waters with anomalous uranium contents. At least 3 of the 16 reported uranium occurrences in the Candle quadrangle (Nos. 15, 17 and 22 in Table V and on Fig. 3) are associated with these anomalous water samples. No anomalous water samples as defined come from the west third of the Kateel River quadrangle, an area where no uranium showings have been reported. Only 3 of the 23 uranium occurrences reported over the entire area, then, are found directly by the water samples considered anomalous.

Utilizing the concentration overlay of Plate I-A with the appropriate maps of Table IV, it is seen that in the Teller quadrangle there are locations providing waters with considerably higher than average uranium northwest of Brooks Mountain and just east of Ear Mountain, though these are not anomalous as defined. A total of five uranium showings occur in these areas (Fig. 3). Of the 11 anomalous samples, 8 are from locations south of the Continental Divide in the American River drainage. The remaining three are from the Serpentine River drainage across the Divide from that of the American River. The majority were taken from drainages underlain by thrust-faulted rocks of the Nome group or York slate, sometimes associated with limestone.⁸⁴ Two come from separate tributaries in the headwaters of Snowshoe Creek, just north of the Continental Divide. Rocks in this area belong to the Nome group. Across the Continental Divide to the southwest, three come from small drainages below a knob near benchmark (BM) Baldya. The major rock unit in this area, also in the Nome group, is a dark schistose limestone, intercalated with subordinate chloritic schist. Three anomalous samples were collected ~25 km south of BM Baldya, from Trilb, Dome, and Joe Creeks. The creeks drain areas underlain by the Nome group, limestone, and the York slate, near mapped thrust-faults. South of BM Baldya ~10 km, a single anomalous sample was collected from Fisher Creek, which also drains areas underlain by the Nome group and York slate. Another is from Grayling Creek in the northeast of the map sheet, near exposures of the Nome group. Other samples collected nearby show no unusually high uranium concentrations. Yet another comes from a tributary of the American River near the Continental Divide, ~20 km west of BM Baldya. This area is underlain primarily by argillaceous and dolomitic limestone. Other interesting locations in the Teller quadrangle, indicated by uranium

concentrations just below 2.0 ppb, are ~20 km due west of BM Baldya, astraddle the Continental Divide, and in the Hunter-Johnson Creek area, ~20 km north of Davidson's landing.

Within the Bendeleben quadrangle (Plate II-A), 6 of the 41 anomalous water samples are from sites spread to the north of BM Arizona (northeast of Fink Creek), in the Inmachuk and Kugruk River drainages. The area is mostly underlain by the Kanauguk formation (thin-bedded schistose, argillaceous and dolomitic limestone), other lime and shale rocks, and York slate. South of the Fink Creek Landing area, another six anomalous waters come from the Inmachuk River drainage. Four are from streams again draining mostly the Kanauguk formation and York slate. Nine anomalous samples come from on or near the flanks of the site of BM Hannum. Six of these are from streams draining the York slate, the Nome group, or the Kanauguk formation. The others are from areas of limestone. Several locations southwest of BM Hannum, in the Cottonwood Creek and Esperanza Creek drainages, also show sufficiently high uranium in waters to warrant interest. Three samples from Arizona, California, and Rock Creeks, 20 km west of Harris Dome, have >2 ppb uranium. Here, units of the York slate and the Nome group are exposed. Near Harris Dome, three anomalous waters come from Portage, French, and Lorna Creeks. These are on faults in or near marble, with limestone and dolomite. Five anomalous samples occur east of Imuruk Lake, in tundra underlain by basalt.⁸⁵ Here, three lake samples have higher uranium than two stream samples, an interesting reversal of the general case (see Fig. 4). These high concentrations may originate from biotite granite and quartz monzonite outliers of the Kuzitrin batholith. A single, isolated lake-water sample, from ~10 km south of Imuruk Lake, also shows high uranium (9.14 ppb). Two anomalous stream samples were collected on the west flank of Monument Mountain in an area of York slate. Adjacent to these, 15 additional waters, from the Independence and Holtz Creek drainages to the west, show uranium >1.0 ppb. Several more water samples with >1.0 ppb uranium are from across the Continental Divide, at locations south and southwest of Monument Mountain around Kiwalik Mountain and Knowles Creek. Five of six remaining anomalous waters in the Bendeleben quadrangle come from sites in or on the flanks of the Bendeleben Mountains. One of the five, providing the overall maximum uranium value for water in the study area, is from Minnie Creek (402941, 14.50 ppb), 40 km east of Brakes Bottom. Minnie Creek flows from the north-central flank of the Bendeleben Mountains and crosses migmatic rocks derived from the York slate and the Nome group.⁸⁵ Only ~10 km south, a second anomalous water was collected from a tributary of Minnie Creek, also crossing migmatic rocks. A third comes from Flat Creek, which flows southward from the central Bendeleben Mountains in an area of York slate, while a fourth is from Windy Creek, which flows southward between the Bendeleben and Windy Creek plutons. Four other stream locations southeast of this provided waters with uranium >1.0 ppb. The fifth comes from the west fork of the Libby River in an area of glacial moraine. The remaining anomalous water sample from the Bendeleben quadrangle comes from Ballarat Creek, 20 km east of Serpentine Hot Springs. Three other stream samples within 8 km of here show uranium >1.0 ppb.

Eight anomalous water samples come from the area of the Candle quadrangle (Plate III-A). A pair of them (one from a lake) are from the Tagagawik River drainage in the northeast corner of the map sheet. The immediate area is covered by basalt flows, but in fair proximity to Cretaceous greywacke sandstone and mudstone.⁸⁶ Another pair of sites with anomalous waters are on Dome and Connelly Creeks in the Kiwalik River drainage, 30 km south of Candle.

The immediate area of these is mapped as alluvium, but Dome Creek drains a markedly faulted area of the York slate with Paleozoic marble, limestone, and dolomite nearby. The Connelly Creek site is in a marshy area ~10 km downstream from a uranium showing in the Hunter Creek pluton (No. 14 on Fig. 3). However, other waters from sites in this vicinity contained no markedly high uranium. The four remaining locations providing anomalous waters are isolated from others showing >2 ppb uranium. One is along Lava Creek, 15 km southeast of Candle, in an area of basalt but downslope from the granitic Hunter Creek pluton; another is along Hunter Creek, ~30 km southeast of Candle, on the pluton. Additional waters collected on tributaries to Hunter Creek also contained notable but subanomalous uranium. These come from 5-10 km downstream of the Spruce Creek uranium showing (No. 15 on Fig. 3). The third isolated anomalous sample comes from Cub Creek, near the occurrence by that name (No. 17 on Fig. 3) and downstream from another showing (No. 22 on Fig. 3). This location (403476, 11.8 ppb) provides the highest uranium in water of any found in the Candle quadrangle and the second highest in the report area. Cub Creek drains granitic rocks of the Granite Mountain pluton. Another stream sample in that vicinity also contained higher than normal uranium (1.06 ppb). The remaining isolated site in the Candle quadrangle providing anomalous water is in the drainage of the Koyuk River, northeast of Haycock, in an area of andesitic volcanics.

Uranium in water from the west third of the Kateel River quadrangle (Plate IV-A) is generally lower than from elsewhere over the study area and no anomalous values as defined come from samples taken there. Differences in concentration from site to site are generally more subtle in this part of the report area, and a more detailed treatment than possible here is required to benefit greatly from the uranium data for the waters collected there.

Use of the concentration overlays of Plates I-A through IV-A does allow a considerably more useful evaluation of the uranium data than simply considering samples defined as anomalous. By this means, about a third of the known occurrences (8 of the 23) are fairly readily seen to be associated with areas having relatively high to intermediate (above-average) uranium levels in the waters. But even more useful correlations--particularly with the geology and structure--are made possible by contouring the actual uranium values.

The contoured concentration maps for uranium in water from all source types are shown in Figs. 5 (Teller), 6 (Bendeleben), 7 (Candle), and 8 (Kateel River, west third). Contours are drawn, as described earlier, at concentrations of 0.5, 1.0, and 2.0 ppb uranium. An alphanumeric designator for each relatively small- to intermediate-sized area surrounded by one or more closed contours is plotted in Figs. 5 through 8, and these are tabulated by uranium concentration in Tables VI (Aw, >2 ppb), VII (Bw, 1-2 ppb), and VIII (Cw, 0.5-1 ppb). Only a single alphanumeric designator is assigned to any set of reasonably concentric contours, and this is always done for the highest contour value of the concentric series. Contours with alphanumeric designators, then, always enclose clusters of two or more water samples containing a uranium concentration equal to or above the value indicated by the contour.

Many water clusters that contain what are, relatively, very high (>2 ppb) to high (1-2 ppb) uranium values (Aw 1 and 2 and Bw 3-5 in the Teller quadrangle, Fig. 5; Aw 3, 4, 6 and 7 and Bw 8, 13 and 14 in the Bendeleben quadrangle, Fig. 6; and Aw 9 and Bw 18 in the Candle quadrangle, Fig. 7) are associated with low grade metamorphic rocks such as the Nome group, York slate, and limestone (Tables VI and VII). These units themselves would not normally be expected to contain high uranium contents, and the association of

Fig. 5. Contoured uranium concentrations in waters from the Teller quadrangle, Seward Peninsula area, Alaska.

Fig. 6. Contoured uranium concentration in waters from the Bendeleben quadrangle, Seward Peninsula area, Alaska.

Fig. 7. Contoured uranium concentrations in waters from the Candle quadrangle, Seward Peninsula area, Alaska.

Fig. 8. Contoured uranium concentrations in waters from the Kateel River quadrangle (west-third), Seward Peninsula area, Alaska.

the high-water clusters with these rocks is probably due to other factors. It is noteworthy that most of these water clusters are associated with highly faulted and fractured rocks. The increased permeability of such broken rocks could allow deeper and more effective circulation of ground water, and result in increased uranium contents in waters from such areas. It cannot be determined on the basis of available information whether secondary uranium mineralization might be associated with these fractures, but this too should be recognized as a possibility. It is also possible that, due to the presence of carbonate rocks in many cases, bicarbonate complexing might account for the increased uranium contents of waters from these areas. Sediments collected from them generally do not contain high uranium values (see following section). District-sized areas are defined by these samples associated with metamorphics and providing high uranium-in-water clusters. However, only one such cluster

TABLE VI

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING WATERS WITH VERY HIGH RELATIVE URANIUM CONCENTRATIONS (>2 ppb)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Aw 1	5	Thrust-faulted area underlain by Nome group	None
Aw 2	5	As above, with marble and York slate as well	None
<hr/>			
BENDELEBEN			
Aw 3	6	York slate and Nome group	None
Aw 4	6	Highly faulted area of York slate, marble, lms	None
Aw 5	6	Migmatic rocks	None
Aw 6	6	Highly faulted area of York slate, marble, lms	None
Aw 7	6	Faulted limestone	None
Aw 8	6	Outlier of Kuzitrin batholith?	None
<hr/>			
CANDLE			
Aw 9	7	York slate, limestone, and Hunter Creek granite?	None
Aw 10	7	Unknown; covered by surficial deposits	None

^a Designators are as used in the figure specified. The capital A indicates the contoured area to include the highest uranium concentrations found; the lower-case w, that these concentrations are in the waters. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 84 (Teller), 85 (Bendeleben), and 86 (Candle).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

TABLE VII

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING WATERS WITH RELATIVELY HIGH URANIUM CONCENTRATIONS (1-2 ppb)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Bw 1	5	Limestone	None
Bw 2	5	Limestone	None
Bw 3	5	Limestone; Ear Mountain granite?	Nos. 2, 3 and 5
Bw 4	5	Thrust-faulted; Nome grp, marble and York slate	None
Bw 5	5	Limestone, in faulted area	None
Bw 6	5	Surficial deposits; Nome group?	None
BENDELEBEN			
Bw 7	6	Thrust-faulted area of marble and York slate	None
Bw 8	6	Highly faulted area of limestone and York slate	None
Bw 9	6	Marble; migmatic rocks	None
Bw 10	6	Associated with migmatic rocks	None
Bw 11	6	Drainage basin surrounded by migmatic rocks	None
Bw 12	6	Bendeleben batholith and migmatic rocks	None
Bw 13	6	Faulted area of limestone and Spruce Creek fm	None
Bw 14	6	York slate	None
Bw 15	6	Bendeleben batholith and migmatic rocks ^d	None
Bw 16	6	Thrust-faulted area underlain by limestone	None
Bw 17	6	Thrust-faulted area of limestone and York slate	None
CANDLE			
Bw 18	7	York slate and limestone	None
Bw 19	7	Associated with Hunter Creek pluton?	None
Bw 20	7	Northern Hunter Creek pluton	Nos. 8, 9 and 10
Bw 21	7	Southwestern Hunter Creek pluton	Nos. 11, 14 and 15
Bw 22	7	Northern Granite Mountain pluton	No. 17
Bw 23	7	West Selawik Hills pluton (north of report area)	None
Bw 24	7	Volcanogenic rocks	None
Bw 25	7	Volcanogenic rocks	None
Bw 26	7	Basalt	None
Bw 28	7	Volcanogenic rocks	None

^a Designators are as used in the figure specified. The capital B indicates the contoured area to include the second highest category of above-average uranium concentrations found (using a tripart scale: A, B and C); the lower-case w, that these concentrations are in the waters. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 84 (Teller), 85 (Bendeleben), and 86 (Candle).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

^d Includes Windy Creek pluton (quartz monzonite), where a ground radiometric anomaly is reported.⁸⁵

TABLE VIII

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING WATERS WITH INTERMEDIATE URANIUM CONCENTRATIONS (0.5-1 ppb)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Cw 1	5	Limestone; York slate	None
Cw 2	5	York slate	None
<hr/>			
BENDELEBEN			
Cw 3	6	York slate; orthogneiss of Serpentine granite	None
Cw 4	6	Granitic rocks; limestone	None
<hr/>			
CANDLE			
Cw 5	7	Faulted area of York slate and limestone	None
Cw 6	7	Associated with Granite Mountain pluton?	None
Cw 7	7	Associated with Granite Mountain pluton?	None
Cw 8	7	Basalt and volcanogenic rocks	None
Cw 9	7	Basalt and volcanogenic rocks	None
Cw 10	7	Faulted area underlain by volcanogenic rocks	None
Cw 11	7	Basalt and volcanogenic rocks	None
Cw 12	7	Volcanogenic rocks	None
Cw 13	7	Basalt	None
Cw 14	7	Basalt and volcanogenic rocks	None
Cw 15	7	Faulted area underlain by volcanogenic rocks	None
Cw 16	7	Faulted area underlain by volcanogenic rocks	None
Cw 17	7	Volcanogenic rocks	None
Cw 18	7	Basalt; granite?	None
<hr/>			
KATEEL RIVER (WEST THIRD)			
Cw 19	8	Basalt and volcanogenic rocks	None
Cw 20	8	Volcanogenic rocks	None
Cw 21	8	Basalt and volcanogenic rocks	None
Cw 22	8	Faulted area underlain by volcanogenic rocks	None
Cw 23	8	Volcanogenic rocks	None
Cw 24	8	Faulted area underlain by volcanogenic rocks	None
Cw 25	8	Faulted area underlain by volcanogenic rocks	None

^a Designators are as used in the figure specified. The capital C indicates the contoured area to include the third highest uranium concentrations found, which are just above average; the lower-case w, that these concentrations are in the waters. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 84 (Teller), 85 (Bendeleben), 86 (Candle), and 87 (Kateel River).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

(Bw 3) appears to be associated with known uranium occurrences (Fig. 5), and these occurrences are related to a different rock type (the Ear Mountain Granite, Table VII).

Several additional water clusters with very high to high uranium values (Aw 5 and Bw 9, 12 and 15 in the Bendeleben quadrangle, Fig. 5; and Bw 20-23 in the Candle quadrangle, Fig. 6) are associated with granitic plutons of the Hogatza series and associated migmatitic rocks. Sediments collected from these areas do contain high uranium contents (see following section), and both ground⁸⁵ and regional airborne radiometric surveys¹¹⁸ have defined a number of anomalies in their vicinity. Therefore, these water clusters appear to indicate that the rocks in these areas contain a relatively high and at least partially soluble source of uranium. Two district-sized areas are defined by these water clusters: one associated with migmatitic and granitic rocks of the Bendeleben Mountains (Fig. 6) and the other with granitic rocks of the Hunter Creek and Granite Mountain plutons (Fig. 7). Numerous known uranium occurrences are associated with the latter and none with the former.

Water clusters with just above-average uranium values tend to form long (50-100 km), linear zones within the Yukon-Koyukuk basin (Figs. 7 and 8). One eastward-trending linear zone is formed by Cw 8, 12 and 16 (Fig. 7) and another is formed by Cw 17 and 23 (Figs. 7 and 8). Somewhat less well-defined linear zones appear to trend northeast (in the eastern half of Fig. 7 and in Fig. 8). These linear zones extend well across stratigraphic boundaries and are probably associated with fractures or fault zones. Northeastward-trending faults are common in the Yukon-Koyukuk basin,^{81, 86} and an eastward orientation is perpendicular to the regional maximum tensional axis, as inferred from the northward orientation of fold axes in the area. Water clusters that contain the highest uranium values in the Yukon-Koyukuk basin (Aw 10 and Bw 24-27, Fig. 7) appear to be at the intersection of such east- and northeast-trending fracture zones. A similar association of uranium concentrations with regional structure has been reported--but for sediments--in the Canadian Shield.³¹

Generally, all water clusters which contain high or very high uranium values are mantled by a zone of intermediate uranium values. This would appear to indicate that such clusters have a regional significance, and do not represent a collection of samples containing high uranium contents originating from isolated local sources. Therefore, such water clusters may be associated with the following regional factors (and perhaps others not recognized): enrichment in soluble uranium within bedrock; water chemistry favorable for transport of uranium; the presence of fractured zones in rock allowing increased circulation of ground water; and the possible presence of evaporation basins. Any or all these factors may operate together to influence the resultant uranium content in water. Furthermore, the supply of water is quite seasonally variable in Alaska, depending primarily on both weather and permafrost conditions. Consequently, the interpretation of water data is quite complex, particularly when used in an attempt to locate economic districts or deposits of uranium.

The relationship of the water clusters to reported uranium showings is summarized in Table IX. Note that over 43% of the known occurrences are associated with the water clusters delineated by contouring, and that all of the associated clusters contain high (1-2 ppb) uranium values. In the same areas, no known occurrences are associated with water clusters which contain only above-average uranium values. This is consistent with the principle that higher uranium values increase the likelihood of association with uranium mineralization. Conversely, over 56% of the known uranium occurrences are not

TABLE IX

SUMMARY OF KNOWN URANIUM OCCURRENCES IN THE AREA ASSOCIATED WITH
CONTOURED CLUSTERS OF WATERS AT DIFFERENT URANIUM CONCENTRATION LEVELS^a

<u>Prefix of Clusters Contoured at Different Concentrations</u>	<u>Uranium Concentration Level</u>	<u>Table From Which Data Are Summarized</u>	<u>Number of Associated Occurrences</u>	<u>Number of Clusters in Association</u>	<u>Total Number of Such Clusters</u>
Aw	>2 ppb	VI	None	None	10
Bw	>1-2 ppb	VII	10	4	28
Cw	>0.5-1 ppb	VIII	None	None	25

^a A total of 23 known uranium occurrences are reported within the study area, and 10 of these are reflected by clusters of HSSR sample locations having waters with relatively high (1-2 ppb) uranium concentrations. All 23 of the reported occurrences are numbered and dealt with in Table V and are shown by occurrence number on Fig. 3. They are also shown by the identical occurrence numbers on the appropriate quadrangles of Figs. 5-7 and 10-12.

reflected in the water data as contoured. Thus, the areal distribution of uranium in water in many cases does not appear to readily reflect all of the uranium mineralization. This may be due in part to the nature and extent of local vegetation, since uranium in water is adsorbed by organic material in bottom sediments.^{23,44,45} This does not, however, consistently appear a likely factor--though it may well account for the generally lower uranium concentrations in lake waters of the study area. Also of interest are areas of high uranium concentration in waters which are not associated with known uranium mineralization, radiometric anomalies, or high uranium values in sediment. Such areas (discussed above) are associated with low-grade, highly faulted metamorphic rocks in the Teller, Bendeleben, and western Candle quadrangles. The uranium enrichment in waters from these areas is related to unknown causes, perhaps even due to secondary uranium enrichment within highly faulted and fractured rocks. This in itself is of some considerable value. What is more, when used in conjunction with other available information (such as uranium content in sediment, geology, hydrology, and airborne radiometrics), the areal distribution of uranium in waters does appear useful in assessing the uranium favorability of a region. Again, the more detailed the method of evaluation, the more useful the obtainable information appears to be.

Uranium Concentrations in Sediments

Frequency histograms and a summary of basic statistical data for the 2085 sediment samples collected, including a breakdown by source (1661 from wet streams, 116 from dry streams, 307 from small lakes, and 1 from a spring) are given in Fig. 9. The single spring sediment (not included in the data listings, the Plates, or separately in Fig. 9) was also from Serpentine Hot Springs and showed 2.90 ppm uranium.

Using $M + 2\sigma$ as the criterion for the combined population of sediments, the anomalous samples (those with <12.5 ppm) can be picked from the listings of Appendix C. It should be noted here, however, that $M + 2\sigma$ for the

(a) Uranium concentrations in all sediment sampled. (b) Uranium concentrations in wet stream sediment only.

(c) Uranium concentrations in lake sediment only. (d) Uranium concentrations in dry stream sediment only.

Fig. 9. Frequency distributions of uranium concentrations in sediments from the area of the Teller, Bendeleben, Candle, and Kateel River (west third) quadrangles, Seward Peninsula and vicinity, Alaska.

individual sample sources are markedly different, with that for wet stream sediments (13.47 ppm) being considerably higher than for the dry stream (8.73 ppm) and lake (8.84 ppm) sediments. Because of this, the two largest symbols on Plates I-B through IV-B, where the sediment data are plotted, are made to include the uranium concentrations of 8 ppm and above (as seen in the legend).

By the >12.5 ppm uranium criterion, 49 of the 2085 sediment samples collected are considered anomalous. Of these 49, only 2 come from locations within the area of the Teller NTMS map sheet (402049 and 402157, near its south boundary). The sites are neither closely adjacent nor associated with reported uranium occurrences (Fig. 3). A total of 29 of the 49 anomalous sediments were collected from within the Bendeleben quadrangle. Three come from Rock Creek, northwest of Serpentine Hot Springs, in the vicinity of the Hot Springs uranium occurrence (No. 6, Fig. 3), while a fourth is from ~15 km northeast of these springs. A group of 19 sites providing anomalous sediment occurs over a wide area in the Bendeleben Mountains. This area is bound by a quadrilateral with locations 402917, 403097, 403333, and 403334 as the corners, but is far from reported uranium occurrences. The remaining six anomalous sediments from within the Bendeleben quadrangle come from close by, but in the Darby Mountains. They lie in or near a triangle drawn between locations 403337, 403340, and 403421. Anomalous sediments as defined come from 17 locations in the Candle quadrangle. Most of these occur in two groups near the Hunter Creek and Granite Mountain plutons (at and near locations 403930-33 and 403915-17, respectively). At least 7 of the 16 reported uranium occurrences in the quadrangle (Nos. 11, 12, 15, 17, 18, 21, and 22 on Fig. 3) are associated with these samples and most of the rest are nearby. Within the west third of the Kateel River quadrangle, only a single sediment with >12.5 ppm uranium was found (406439).

A total of 8 of the 23 reported uranium occurrences, then, are fairly obviously seen to be associated with the anomalous sediments as defined and considerably more are associated indirectly. Also, all three of the occurrences associated with anomalous waters are seen by studying the anomalous sediments, so the latter correlate with five occurrences not seen in the anomalous water data.

When the overlays of Plates I-B through IV-B are used, it is seen that one of the two anomalous sediments from the Teller quadrangle comes from Skookum Creek, in the Gold Run Creek drainage near gold placers of Sullivan Camp, and is associated with three other wet stream sediments containing notably high, but subanomalous, uranium. Rocks of the Nome group and an exposure of gabbro are in the vicinity.⁸⁴ The other is from Grand Union Creek, where it crosses the Kigluaik fault, and has the highest uranium content of any from the Teller quadrangle (16.7 ppm). Another sediment from a dry tributary of Grand Union Creek (402156, 8.0 ppm) and a wet one from Glacier Canyon (402152, 9.4 ppm), to the west, also show notable uranium. These streams all drain a complex of Precambrian and younger rocks in the Kigluaik Mountains and have granites and marble directly upslope. Another high, but subanomalous, wet sediment (402487, 10.3 ppm) comes from Tuttle Creek, about 5 km northwest of Ear Mountain, near the Tuttle Creek occurrence (No. 5, Fig. 3). Two sediments from north of Brooks Mountain (402333 and 402335) and one from the south (402260) have 6.3 to 7.0 ppm uranium, but association with the occurrence reported there is not obvious (No. 1, Fig. 3).

In the Bendeleben quadrangle, three suspect airborne radiometric anomalies are reported in the vicinity of the four locations providing anomalous sediments from northwest and northeast of Serpentine Hot Springs and the

uranium showing by that name (No. 6, Fig. 3),¹¹⁸ and the predominant rocks in the immediate area are York slate and migmatites, though the Serpentine granite is exposed close by to the southeast.⁸⁵ The group of 19 sites providing anomalous wet sediments in the Bendeleben Mountains is delineated above. The site ~50 km east of Brakes Bottom (402941) in this group produced a sediment with 25.4 ppm uranium and the water from there contained 14.5 ppb, the highest found in this study. Most of these 19 sites are in drainages underlain by highly faulted Precambrian metamorphic and migmatic rocks of the Bendeleben Mountains or the quartz monzonite of the Bendeleben batholith. Fifteen other high, but subanomalous, sediments were also collected in this general area, with some coming from over the Kuzitrin batholith. The group of six sites with anomalous sediments in the Darby Mountains has five additional locations providing high but subanomalous ones in the same vicinity. The major rock units there are similar to those in the Bendeleben Mountains, with the Windy Creek pluton (where a radiometric anomaly is reported) appearing to be a source of the high-uranium sediment.⁸⁵ The area also produced several water samples with relatively high uranium. Some 14 suspect airborne radiometric anomalies occur in the Bendeleben-Darby Mountain region.¹¹⁸

In the Candle quadrangle, the 17 anomalous sediments occur mainly in two groups associated with the Hunter Creek or Granite Mountain plutons, and--more directly--with 7 of the 16 known uranium showings there. Both anomalous waters and sediments were collected from areas near three of these occurrences and two suspect airborne anomalies are reported in the area.¹¹⁸ Some 66 sediments, selectively collected in 1976 by Eakins in areas of the quadrangle considered favorable for uranium, ranged from 10.0-91.0 ppm in the element. He sampled fairly extensively around Clem Mountain, along Hunter Creek, and over and around Granite Mountain, using a relatively high sampling density.¹¹⁵ In the present work, five noteworthy subanomalous sediments come from locations clustered south of Clem Mountain (403940-44, 9.2 ppm uranium and greater). One of these appears related to the Duck Creek uranium showing (No. 8, Fig. 3) and two other showings are nearby (Nos. 9 and 10). Ten sediment samples, selectively collected at greater density by Eakins around Clem Mountain, had uranium ranging from 10.0-17.7 ppm.¹¹⁵ A site sampled in the HSSR and providing a sediment with 34.8 ppm uranium is situated on Meinzer Creek, north of Sugar Top Mountain. It is ~5 km downstream from the Meinzer Creek occurrence (No. 12, Fig. 3) and, like most of the sites mentioned south of Clem Mountain, is underlain by granitic rocks of the Hunter Creek pluton.⁸⁶

One group of eight anomalous sediments comes from sites on or near Hunter Creek, ~25 km southeast of Candle. Three of these, along Linda, Hunter, and the left fork of Hunter Creeks, all showing >27 ppm uranium, are <10 km downstream from the Spruce Creek uranium occurrence (No. 15, Fig. 3). The water from one of these was also anomalous. These streams drain granitic rocks of the Hunter Creek pluton. Anomalous sediments also come from two additional locations on Hunter Creek, <10 km downstream from the Muck Creek uranium occurrence (No. 11, Fig. 3). There are no known uranium occurrences in the specific drainages of the final three anomalous sample locations in this group (a pair with >16.0 ppm and 403826, with 14.0 ppm), which are along streams in areas near the Hunter Creek pluton mapped as basaltic rocks. Some 16 sediments with uranium from 10.1-54.0 ppm were collected by Eakins in the Hunter Creek vicinity.¹¹⁵

Four high, subanomalous samples (403918-21, 10.1-12.0 ppm) were collected from tributaries of Quartz and Bear Creeks, which drain andesitic volcanics ~15 km north of Granite Mountain. No reported uranium occurrences

are in the near vicinity or directly upstream of these locations. Seven anomalous samples, forming a second group, come from sites on or downstream from the Granite Mountain pluton. Two of these are on Cub Creek, 3 and 8 km downstream from the Syenite Gulch uranium occurrence (No. 22, Fig. 3). One of them yielded 107.4 ppm in the sediment and one of the highest uranium concentrations found in waters. Another anomalous sediment was collected on Bear Creek, below the confluence of Cub Creek ~2 km downstream from the Cub Creek occurrence (No. 17, Fig. 3). Two more are from drainages of the Peace and Buckland Rivers within 3 km of the Peace River occurrence (No. 18, Fig. 3). Still another comes from Rock Creek, southeast of Granite Mountain, ~1.5 km downstream from the Rock Creek uranium occurrence (No. 21, Fig. 3). Here, the Anzac and Boulder Creek occurrences (Nos. 20 and 23) are close by. The last anomalous sediment in the group of seven was taken from Spring Creek, not in proximity to any reported uranium occurrence. A final location in the Candle quadrangle, providing an anomalous sediment (with 14.0 ppm uranium), is in the Sweepstakes Creek drainage, ~17 km northwest of Haycock (403282), and very near the Sweepstakes Creek occurrence (No. 19, Fig. 3). This is an area of andesitic volcanics, in proximity to the Granite Mountain pluton. Eakins, in his 1976 study, collected 40 sediments in the Granite Mountain area with uranium ranging from 10.3-91.0 ppm.¹¹⁵

The single anomalous sediment from the west third of the Kateel River quadrangle is from a dry tributary of the south fork of the Huslia River (406439, 14.6 ppm uranium), ~30 km west of the Nogahabara Sand Dunes. The area is one of andesitic volcanics but a granitic body lies 7 km northward. No other sediments with >10 ppm uranium were collected and only one other location sampled in the quadrangle provided a sediment with >8 ppm.

Once more, use of the appropriate uranium concentration overlay (of Plates I-B through IV-B) allows a much more useful evaluation of the sediment data than simply studying the anomalous samples as defined. More than half of the reported uranium showings in the study area are indicated by the sediments using this method. We can now move on to consideration of the contoured plots of uranium in sediment.

Contoured concentration maps for uranium in sediment from all source types are shown in Figs. 10 (Teller), 11 (Bendeleben), 12 (Candle), and 13 (Kateel River, west third). Contours are drawn at concentrations of 2, 4, 8, 12, and 20 ppm uranium. An alphanumeric designator is generally assigned for each area surrounded by a closed contour plotted in Figs. 10 through 13, and these are tabulated by concentration in Tables X (As, >20 ppm), XI (Bs, 12-20 ppm), XII (Cs, 8-12 ppm), XIII (Ds, 4-8 ppm), and XIV (Es, <2 ppm). Only a single alphanumeric designator is assigned to any set of reasonably concentric contours in the same general area, and this is done for the highest contour value in such a series. In all cases, contours with alphanumeric designators enclose clusters of two or more sediment samples containing a uranium concentration equal or otherwise appropriate to the value indicated by the contour, in the manner already described in earlier sections.

No sediment clusters having what are, relatively, exceptionally high (>20 ppm) or simply high (12-20 ppm) uranium values occur in the Teller quadrangle, but two such clusters with fairly high (8-12 ppm) uranium found there (Cs 1 and Cs 2, Fig. 10) may be associated with granitic rocks exposed in the Nome quadrangle to the south (Table XII).⁸² In the Bendeleben quadrangle, one cluster of sediments exceptionally high in uranium (As 1, Fig. 11) is associated with rocks of the Serpentine granite and with a reported uranium occurrence (Table X). Also, a district-sized area is defined there by sediment clusters which contain exceptionally high (>20 ppm) and high (12-20 ppm)

Fig. 10. Contoured uranium concentrations in sediments from the Teller quadrangle, Seward Peninsula area, Alaska.

Fig. 11. Contoured uranium concentrations in sediments from the Beldeleben quadrangle, Seward Peninsula area, Alaska.

Fig. 12. Contoured uranium concentrations in sediments from the Candle quadrangle, Seward Peninsula area, Alaska.

Fig. 13. Contoured uranium concentrations in sediments from the Kateel River quadrangle (west-third), Seward Peninsula area, Alaska.

uranium values (As 2 and Bs 1-6, Fig. 11). These clusters generally delineate areas underlain by granitic rocks of the Bendeleben and Kuzitrin batholiths and Windy Creek pluton or their associated migmatitic rocks (Tables X and XI). At least three of them (As 2 and Bs 4 and 5) are associated with corresponding water clusters (Aw 5 and Bw 12 and 15, Fig. 6). Radiometric anomalies are associated with nearly all of these sediment clusters,^{85,118} but no uranium occurrences are reported in this district-sized area. Sediment clusters that contain exceptionally high (>20 ppm) to fairly high (8-12 ppm) uranium values (As 3 and 4 and Cs 4-6) likewise define a district-sized area in the Candle quadrangle (Fig. 12). These clusters generally coincide with areas underlain by granitic rocks of the Hunter Creek and Granite Mountain plutons (Tables X and XII). Three of them (As 3 and 4 and Cs 6) are associated with all 16 known uranium occurrences within the Candle quadrangle (Fig. 12) and with corresponding water clusters (Bw 20, 21, and 22, respectively, Fig. 7). Airborne radiometric anomalies are also reported in the vicinity of these sediment clusters.¹¹⁸ Only three relatively small clusters of sediments (Ds 28-30), with only above-average uranium (4-8 ppm), are found in the Yukon-Koyukuk basin of the western third of the Kateel River quadrangle (Fig. 13), but even one of these (Ds 29) is near a mapped exposure of granitic rock (Table XIII).⁸⁷

TABLE X

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING SEDIMENTS WITH EXCEPTIONALLY HIGH RELATIVE URANIUM CONCENTRATIONS (>20 ppm)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
BENDELEBEN			
As 1	11	Granitic orthogneiss of the Serpentine granite	No. 6
As 2	11	Migmatitic rocks with many granitic dikes	None
CANDLE			
As 3	12	Southern Hunter Creek pluton	Nos. 11-15
As 4	12	Granite Mountain pluton	Nos. 16-23

^a Designators are as used in the figure specified. The capital A indicates the contoured area to include the highest uranium concentrations found; the lower-case s, that these concentrations are in the sediments. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 85 (Bendeleben) and 86 (Candle).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 6, 7, 11 and 12, and in Table V.

TABLE XI

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA
PROVIDING SEDIMENTS WITH RELATIVELY HIGH URANIUM CONCENTRATIONS (12-20 ppm)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
BENDELEBEN			
Bs 1	11	Migmatic rocks	None
Bs 2	11	Gneiss and plutonic rocks	None
Bs 3	11	Migmatic rocks and Bendeleben quartz-monzonite	None
Bs 4	11	Migmatic rocks and Bendeleben quartz-monzonite	None
Bs 5	11	Migmatic rocks and Bendeleben quartz-monzonite ^d	None
Bs 6	11	Migmatic rocks	None

^a Designators are as used in the figure specified. The capital B indicates the contoured area to include the second highest category of above-average uranium concentrations found (using a 4-part scale: A through D); the lower-case s, that these concentrations are in the sediments. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from the map of Ref. 85.

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 6 and 11, and in Table V.

^d Includes Windy Creek pluton (quartz monzonite), where a ground radiometric anomaly is reported.⁸⁵

Although nearly all sediment clusters with at least fairly high (>8 ppm) uranium values (Tables X-XII) are associated with granitic rocks, those having simply above-average (4-8 ppm) uranium (Table XIII) are associated with more diverse rock types. Several such above-average sediment clusters are themselves associated with granitic rocks (Ds 7, 13, 14, 17, and probably 29, in Table XIII). However, most of the 30 simply above-average sediment clusters in Table XIII, both in the Seward Peninsula and Yukon-Koyukuk basin, are associated with faulted areas. The increased uranium contents of sediments within these last areas suggests uranium enrichment within the faults and fractures.

It appears that the regional distribution of uranium in sediment is more simply related to geologic control than the corresponding distribution for water. Sediment clusters with uranium >8 ppm (Tables X through XII) are usually related to what are known to be uranium-enriched granitic rock types exposed within the area.⁹⁰ Sediment clusters which contain below-average uranium contents (Table XIV) are related to rock types such as limestone and basalt that quite probably contain lower than average uranium contents. Note that lowland areas underlain by bedrock will exhibit uranium concentrations in sediment intermediate between that of the bedrock and that of highland sources. Thus, the above-average values for uranium in sediments south of the Selawik Hills, in the Candle quadrangle (Ds 26, Table XIII), are attributed to mixing

TABLE XII

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING SEDIMENTS WITH FAIRLY HIGH RELATIVE URANIUM CONCENTRATIONS (8-12 ppm)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Cs 1	10	Kigluaik Fault? Granitic rocks? Source	None
Cs 2	10	probably in NOME quadrangle to the south	None

BENDELEBEN			
Cs 3	11	Unknown; covered by surficial deposits	None

CANDLE			
Cs 4	12	Hunter Creek or Granite Mountain plutons?	None
Cs 5	12	Hunter Creek or Granite Mountain plutons?	None
Cs 6	12	Northern Hunter Creek pluton	Nos. 8, 9 and 10

^a Designators are as used in the figure specified. The capital C indicates the contoured area to include the third highest category of above-average uranium concentrations found (using a 4-part scale: A through D); the lower-case s, that these concentrations are in the sediments. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 82 (Nome), 84 (Teller), 85 (Bendeleben), and 86 (Candle).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

of bedrock detritus containing high uranium contents from sources in the Selawik Hills and detritus containing below-average uranium contents from the basalt which underlies much of this area. Therefore, in addition to geology and mineralization, consideration of topography and other factors influencing sediment transport can be important. Chemical precipitation of iron or manganese oxides, another consideration that can be pertinent, does not appear to be an important process within the report area.

All 23 known uranium occurrences within the report area are associated with sediment clusters recognized by contouring in the manner described, and 14 of these are associated with the 4 sediment clusters containing the highest uranium values (>20 ppm), as shown in Table XV. The association of all known uranium occurrences within the report area with sediment clusters which contain at least above average (>4 ppm) uranium concentrations suggests that

TABLE XIII

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING SEDIMENTS WITH ABOVE-AVERAGE URANIUM CONCENTRATIONS (4-8 ppm)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Ds 1	10	Argillaceous limestone?	None
Ds 2	10	Thrust faults in limestone? Granite?	No. 1
Ds 3	10	Thrust faults in limestone?	None
Ds 4	10	Unknown; covered by surficial deposits	None
Ds 5	10	Faults in limestone?	None
Ds 6	10	Faults in York slate?	None
Ds 7	10	Ear Mountain granite	Nos. 2-5
Ds 8	10	Fault in Nome group?	None
Ds 9	10	Unknown; covered by surficial deposits	None
Ds 10	10	Thrust faults in metamorphic rocks?	None
Ds 11	10	Thrust faults in metamorphic rocks?	None
BENDELEBEN			
Ds 12	11	York slate?	None
Ds 13	11	Apophyses of granitic rocks	None
Ds 14	11	Migmatic rocks	None
Ds 15	11	Faults in York slate?	None
Ds 16	11	Thrust faults in metamorphics? Granite?	None
Ds 17	11	Granitic rocks	None
Ds 18	11	Unknown; covered by surficial deposits	None
Ds 19	11	Unknown; covered by surficial deposits	None
Ds 20	11	York slate?	No. 7
CANDLE			
Ds 21	12	York slate?	None
Ds 22	12	Faults in limestone?	None
Ds 23	12	Faults in limestone?	None
Ds 24	12	Faults in volcanogenic rocks?	None
Ds 25	12	Faults in volcanogenic rocks?	None
Ds 26	12	From Selawik Hills pluton, north of area	None
Ds 27	12	Faults in volcanogenic rocks?	None
KATEEL RIVER (WEST THIRD)			
Ds 28	13	Non-marine clastic rocks	None
Ds 29	13	Granitic rocks?	None
Ds 30	13	Non-marine clastic rocks?	None

^a Designators are as used in the figure specified. The capital D indicates the contoured area to include the fourth highest category of above-average uranium concentrations found (using a 4-part scale: A through D); the lower-case s, that these concentrations are in the sediments. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 84 (Teller), 85 (Bendeleben), 86 (Candle), and 87 (Kateel River).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

TABLE XIV

CONTOURED CLUSTERS OF TWO OR MORE SAMPLE LOCATIONS IN THE REPORT AREA PROVIDING SEDIMENTS WITH CONSIDERABLY BELOW-AVERAGE URANIUM CONCENTRATIONS (0-2 ppm)

<u>Contoured Area Designator^a</u>	<u>Figure Showing Contours</u>	<u>NTMS QUADRANGLE and Inferred Geologic Association^b</u>	<u>Associated Uranium Occurrence^c</u>
TELLER			
Es 1	10	Argillaceous limestone	None
Es 2	10	Argillaceous limestone; surficial cover	None
Es 3	10	Argillaceous limestone; surficial cover	None
Es 4	10	Argillaceous limestone; York slate	None
Es 5	10	Marble and Nome group	None
Es 6	10	Marble and Nome group	None
BENDELEBEN			
Es 7	11	York slate, surficial deposits	None
Es 8	11	Argillaceous limestone	None
Es 9	11	Surficial deposits	None
Es 10	11	Basalt	None
Es 11	11	Basalt; surficial cover	None
Es 12	11	Argillaceous limestone; basalt	None
Es 13	11	Surficial deposits	None
CANDLE			
Es 14	12	Unknown; covered by surficial deposits	None
KATEEL RIVER (WEST THIRD)			
Es 15	13	Basalt and diabase (geology from SHUNGNAK quadrangle, to north)	None

^a Designators are as used in the figure specified. The capital E indicates the contoured area to include the lowest uranium concentrations found; the lower-case s, that these concentrations are in the sediments. The numerical portion of each designator simply indicates a particular contoured area (as generally numbered from west to east) on the specified figure.

^b Geologic associations taken or inferred from maps of Refs. 84 (Teller), 85 (Bendeleben), 86 (Candle), 87 (Kateel River) and 163 (Shungnak).

^c Includes only reported occurrences, at the locations as shown and referred to by the identical location numbers on Figs. 3, 5-7 and 10-12, and in Table V.

areas outlined by all such clusters should be considered for more detailed evaluation of the possible uranium resources. The very strong association of known uranium occurrences with sediments forming clusters having exceptionally high (>20 ppm) uranium concentrations indicates that the strength of this correlation might be proportional to the maximum value of the uranium concentration defined by these clusters.

TABLE XV

SUMMARY OF KNOWN URANIUM OCCURRENCES IN THE AREA ASSOCIATED WITH
CONTOURED CLUSTERS OF SEDIMENTS AT DIFFERENT URANIUM CONCENTRATION LEVELS^a

Prefix of Clusters Contoured at Different Concentrations	Uranium Concentration Level	Table From Which Data Are Summarized	Number of Associated Occurrences	Number of Clusters in Association	Total Number of Such Clusters
As	>20 ppm	X	14	3	4
Bs	>12-20 ppm	XI	None	None	6
Cs	>8-12 ppm	XII	3	1	6
Ds	>4- 8 ppm	XIII	6	3	30
Es	>0- 2 ppm	XIV	None	None	15

^a A total of 23 known uranium occurrences are reported within the study area, and all 23 of them are reflected by clusters of HSSR sample locations having sediments with above average (>4-8 ppm) to exceptionally high (>20 ppm) uranium concentrations. All 23 of the reported occurrences are numbered and dealt with in Table V and are shown by occurrence number on Fig. 3. They are also shown by the identical occurrence numbers on the appropriate quadrangles of Figs. 5-7 and 10-12.

Relationship of Areal Distribution of Uranium in Waters To That in Sediments

The correspondence in areal distribution of uranium in waters to that in sediments within the study area is summarized in Table XVI, where it is seen that the correspondence is not consistently good. The majority of district-sized areas of water clusters which contain high (>1 ppb) uranium values in both the Teller (Fig. 5) and Bendeleben (Fig. 6) quadrangles are not associated with sediment clusters which contain high uranium contents (Figs. 10 and 11). However, the correspondence between sediment clusters which contain exceptionally high uranium values (>20 ppm) and water clusters at the various above-average concentration levels (>0.5 ppb) is good; all such sediment clusters are associated with a water cluster. Furthermore, known uranium occurrences are associated with three corresponding sets of water and sediment clusters (Bw 20 with Cs 6, Bw 21 with As 3, and Bw 22 with As 4). Based on these observations, it appears that areas where sediment clusters with at least fairly high relative uranium (with the designators As, Bs, or Cs) correspond to water clusters likewise having at least relatively high uranium (with designators Aw or Bw) might be of particular interest for further, more detailed investigation of their possible uranium resources. Two such areas of district size are associated with granitic and migmatitic rocks of the Kutzitrin, Bendeleben, and Windy Creek plutons in the Bendeleben quadrangle (Figs. 6 and 11) and with the Hunter Creek and Granite Mountain plutons in the Candle quadrangle (Figs. 7 and 12). It appears conclusive that more extensive examination of the uranium concentration overlays for water and sediment provided herewith, or more elaborate contouring of the uranium data as listed in the Appendixes--along with further study of the available literature of Table IV--should provide even more specific guides to the even less extensive sites of maximum favorability for field work, both in these localities and elsewhere

TABLE XVI

MATRICES SHOWING AREAL CORRESPONDENCE BETWEEN CONTOURED CLUSTERS OF WATERS AND SEDIMENTS AT DIFFERENT URANIUM CONCENTRATION LEVELS

		CONTOURED CLUSTERS OF SEDIMENTS					
		As	Bs	Cs	Ds	Es	
CONTOURED CLUSTERS OF WATERS	Aw	4	6	6	10	10	Decreasing Uranium ↓
	Bw	4	6	6	28	15	
	Cw	4	6	6	25	15	
		Decreasing Uranium →					

- a. Matrix showing number of areal overlaps of contoured clusters of waters with those of sediments at different uranium concentration levels that are possible within the study area (assuming overlap of a single water cluster with a single sediment cluster).

		CONTOURED CLUSTERS OF SEDIMENTS					
		As	Bs	Cs	Ds	Es	
CONTOURED CLUSTERS OF WATERS	Aw	1	0	0	4	0	Decreasing Uranium ↓
	Bw	2	2	1	7	0	
	Cw	1	0	0	5	1	
		Decreasing Uranium →					

- b. Matrix showing number of areal overlaps of contoured clusters of waters with those of sediments at different uranium concentration levels. Individual overlapping sets of clusters are listed in I and II of Item c, below.

I. CASES OF NEARLY FULL OVERLAP

Water Cluster	Sediment Cluster	Figure Numbers
Aw 5	As 2	6 and 11
Bw 15	Bs 5	6 and 11
Bw 20	Cs 6	7 and 12
Bw 21	As 3	7 and 12
Bw 22	As 4	7 and 12
Cw 1	Es 2	5 and 10
Cw 2	Ds 6	5 and 10
Cw 11	Ds 25	7 and 12
Cw 13	Ds 26	7 and 12

NOTE: The prefixes Aw, Bw, and Cw and As, Bs, Cs, Ds, and Es have the same significance throughout this table as they do in Tables IX and XV, as well as elsewhere herein.

II. CASES OF ONLY PARTIAL OVERLAP

Water Cluster	Sediment Cluster	Figure Numbers
Aw 2	Ds 10	5 and 10
Aw 3	Ds 12	6 and 11
Aw 6	Ds 16	6 and 11
Aw 7	Ds 18	6 and 11
Bw 1	Ds 1	5 and 10
Bw 2	Ds 5	5 and 10
Bw 3	Ds 7	5 and 10
Bw 5	Ds 9	5 and 10
Bw 5	Ds 11	5 and 10
Bw 8	Ds 15	6 and 11
Bw 12	Bs 4	6 and 11
Bw 25	Ds 27	7 and 12
Cw 3	As 1	6 and 11
Cw 18	Ds 26	7 and 12
Cw 23	Ds 30	8 and 13

- c. Tabulation of individual overlapping sets of water and sediment clusters.

within the study area. The more extensive and detailed the data evaluation, the more useful the reconnaissance uranium data are likely to be--whatever the method or application.

VII. SUMMARY AND CONCLUSIONS

Some 2026 water and 2085 sediment samples from 2209 locations were collected over a 50 000-km² area of the Seward Peninsula and vicinity, Alaska, during the summer of 1976. These samples, taken as part of the NURE HSSR program, came from the Teller, Bendeleben, Candle, and western one-third of the Kateel River NTMS quadrangles. The samples were generally collected from streams and small lakes at a nominal density of one location per 23 km². The water samples were all initially analyzed for uranium by fluorometry, using a 10X concentration technique. Those waters with >10 ppb uranium or giving spurious results were reanalyzed by DNC. All of the sediment samples were analyzed for total uranium by DNC.

The areal distribution of uranium in surface water appears to depend strongly on the following factors: 1) local topography, 2) ground and surface water mobility and mixing, 3) distribution and solubility of uranium in the ground, 4) presence or absence of fault and fracture systems, and 5) water chemistry. Also, it may depend on the type and extent of vegetation and possible evaporative concentration. These factors and probably others may operate in any combination within a given area, and the resulting uranium concentration becomes a complex product of them. Factors which tend to increase the uranium content in water are: 1) high uranium content in bedrock; 2) presence of uranium within bedrock in a soluble form (perhaps finely divided and altered intergranular material); 3) faulted, highly fractured, or ground up bedrock; 4) oxidizing conditions; 5) presence of carbonate, to complex the hexavalent uranium; 6) a relative lack of organic material, which adsorbs uranium from water; and 7) the presence of closed or constricted drainage basins with relatively high evaporation rates. Ten of the 23 uranium occurrences reported within the area are associated with contoured clusters of water samples which contain relatively high (1-2 ppb) uranium contents (Table VII). These are all associated with granitic or migmatic rocks. District-sized areas associated with such water clusters are found in both the Teller and Bendeleben quadrangles, mostly in the Arctic and American River drainages of the former and spread over the northern half of the latter. However, these areas are not generally associated with known uranium mineralization, favorable host rocks, or much more than average (or below-average) uranium in stream and lake sediments. The elevated uranium concentrations within waters from these areas probably results mostly from exposures of limestone associated with relatively high permeability of the bedrock caused by extensive faulting and fracturing. The extent of uranium mineralization within these fractured rocks, if any, is unknown. Therefore, it is concluded that the areal distribution of uranium content in waters of the study area is not generally amenable to simple interpretation. Even so, the uranium data for water appear quite useful, and their correct interpretation could be aided greatly by field investigations.

The areal distribution of uranium in sediment appears much more simply related to the geology and known uranium occurrences. Two district-sized areas of increased uranium content in sediment are located in the Bendeleben and Candle quadrangles (Figs. 11 and 12), in and around the Bendeleben and Darby Mountains in the former and around Hunter Creek and Granite Mountain in

the latter. These areas are associated with granitic and associated migmatic rocks,^{85,86} radiometric anomalies,^{85,118} and a corresponding increased uranium content in waters. Contoured clusters of sediment samples with >8 ppm uranium in the study area are usually associated with granitic or migmatic rocks (Tables X-XII). Clusters of sediment with 4-8 ppm uranium are generally associated with either granitic rocks or faulted areas (Table XIII). Those with <2 ppm uranium are commonly associated with limestone or basalt (Table XIV). All 23 known uranium occurrences in the area are associated with the sediment clusters having at least above-average uranium (>4 ppm), 14 with such clusters containing the highest uranium contents found (>20 ppm). Therefore, a strong association is seen to exist between the uranium in sediment and the bedrock uranium content. Consequently, any sediment clusters which contain uranium concentrations in sediments >4 ppm (Tables X through XIII), and especially those with the highest concentrations, may well be associated with worthwhile uranium mineralization.

The correspondence between the areal uranium distribution in water and that in sediment is not consistently good. A good correspondence, however, is found within the district-sized areas outlined by high uranium contents in sediment within the Bendeleben Mountains and the Hunter Creek-Granite Mountain pluton areas. Both of these areas are associated with numerous radiometric anomalies.^{85,118} Whereas the latter is associated with 16 known uranium occurrences, no such occurrences are reported within the former. The Bendeleben Mountains would therefore appear to be among the most promising regions within the report area for the future discovery of uranium mineralization.

It is seen from the above that the more extensive the evaluation, the more useful the information obtained can be in identifying and delineating favorable target areas for field investigation. In the Teller quadrangle, particular areas that appear to warrant more detailed evaluation are: along the Continental Divide in the headwaters of the Arctic and American Rivers and Snowshoe Creek (Aw 1, Fig. 5); along Dome, Windy, Trilb, and Joe Creeks, southwest of Kougark Mountain (Aw 2, Fig. 5); around Sullivan Camp, in the Bluestone River and Canyon Creek drainages in the south (Cs 1, Fig. 10); and along the Kigluaik fault, in the southeast (Cs 2, Fig. 10). In the Bendeleben quadrangle, several locations over a large area east of Mt. Bendeleben in the Bendeleben Mountains appear interesting. These yielded some anomalous waters (>2 ppb uranium, Fig. 6) in association with numerous high-uranium sediments (>12 ppm, Fig. 11). High-uranium sediments also come from the upper Windy and Granite Creeks, around the Windy Creek pluton in the northern Darby Mountains (Bs 6, Fig. 11). Water data alone make the areas around BM Hannum, along creeks draining away in all directions (Aw 6 and 7, Fig. 6), and east of Imuruk Lake, near granite outliers between Kettle and Blueberry Domes (Aw 8, Fig. 7), appear worthy of field investigation. The Independence and Holtz Creek drainages in the same quadrangle provided numerous water samples with high uranium and may also deserve more detailed study (Bw 13 and 14, Fig. 6). In the Candle quadrangle, the area southwest of Sugar Top Mountain provided several anomalous sediments (As 3, Fig. 7) and noteworthy water samples (Bw 21, Fig. 7), while directly to the north and northwest, equally noteworthy waters (Bw 20, Fig. 7) are associated with above-average uranium in sediment (Cs 6, Fig. 12). These areas are over and around the Hunter Creek pluton. An area around Granite Mountain, in the Peace River and Quartz and Bear Creek drainages, provided numerous high-uranium sediments (As 4, Fig. 12) and notably high uranium in water samples (Bw 22, Fig. 12). All of these areas would

appear interesting for more detailed studies. Also in the Candle quadrangle, waters with relatively very high to high uranium occur at what appear to be intersections of north- and northeast-trending sets of major fractures or fracture zones in the Yukon-Koyukuk Basin. These zones are delineated by long, linear areas exhibiting simply above-average uranium in the waters (Fig. 7). In the west third of the Kateel River quadrangle, the areas of greatest interest--though perhaps not as notable as others elsewhere--are astraddle the Continental Divide in the headwaters of Derby Creek and the South Fork of the Huslia River (Ds 28 and 29, Fig. 13). The north- and northeast-trending linear zones with above-average uranium in water, mentioned above, also cross into the Kateel River quadrangle (Fig. 8).

In this report, the study of individual samples with uranium above an arbitrary threshold, the study of areally plotted concentrations graphically portrayed within various ranges, the study of contoured concentration values, and the study of comparisons between the water and sediment data, as contoured and otherwise portrayed, are all utilized and demonstrated in a limited way. Again, this test of increasingly detailed methods of data evaluation provides the general conclusion that the more detailed the evaluation, the more useful the reconnaissance uranium data are likely to be. It should be understood, however, that even such a limited treatment as included herein cannot consistently be provided by the LASL in all HSSR reports. Rather, the main aim must generally be to validate the data and briefly assess its utility. This, it is seen, can be done fairly simply. Truly detailed evaluation, making full use of the data, demands field work--and must be left to the reader.

In the present case, the validity and potential usefulness of the uranium data, from water and sediment samples collected at a nominal density of one location per 23 km², are conclusively substantiated by the fact that evidence of all 23 of the reported uranium occurrences (or showings) in the 50 000-km² study area can be discerned (Table XV). More importantly, many locations of interest for further field investigation are identified, both close to and far removed from the known occurrences. The identification of even more new locations would likely result from truly detailed study of the data. At the same time, further study of the graphic portrayal of concentrations on the overlays or by more detailed contouring would appear equally useful in guiding field investigation of the uranium occurrences already known, as noteworthy samples often come from close by but on tributary drainages adjacent, opposite, or above them.

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APPENDIX A

SUMMARY OF STANDARD LASL HSSR FIELD AND ANALYTICAL PROCEDURES

APPENDIX A

SUMMARY OF STANDARD LASL HSSR FIELD AND ANALYTICAL PROCEDURES AS USED IN ALASKA

I. FIELD PROCEDURES

Water Sampling

Water samples are taken first, directly from the source wherever possible, in one each, prewashed and sealed, 41-ml reactor "rabbit" and 25-ml vial (both polyethylene). The contents of both the rabbit and vial are then acidified to a pH ≤ 1 with 8N, reagent-grade HNO_3 . All sample containers are doubly labeled with preprinted, adhesive labels carrying the same sample location number preprinted on the field data form. Stream waters are taken from fast-flowing current away from the bank; ponds (including small lakes) are sampled from just below the surface, near their center.

Sediment Sampling (Wet or Dry)

Enough fine-grained, organic-rich, water-transported sediment to yield a composite sample of 25 g after processing (as indicated below) is taken from beneath the water level (where water exists) at three closely adjacent spots at each stream location. This is done with a polyethylene scoop, after the water sample (if any) is taken. The sediment is put into a new, clean, and originally sealed, rip-top polyethylene bag and properly double-labeled for delivery (with the field data form) to the contractor's drying facility. After drying at $\leq 100^\circ\text{C}$, each sample is sieved through stainless steel sieves to -100 mesh. The -100-mesh fraction is put into a prewashed, 25-ml polyethylene vial, appropriately double-labeled (using labels from the data form), and sealed for shipment to the LASL. In the case of ponds or lakes sampled in Alaska, the sediment is taken by dropping a tethered, stainless steel bottom sampler overboard from a pontoon-equipped helicopter near the center of each lake. Here, only a bottom sample from a single location is taken (i.e., it is not a composite), but sampling is limited to lakes less than 10 m deep and about 0.3 to 2.0 km in least horizontal dimension. The sampler is rinsed before each use, and the raw sample is put into a polyethylene bag, labeled, and treated as above.

Field Measurements

The air temperature, taken in the shade at the time of sampling, is recorded to the nearest whole degree Celsius. The water temperature is measured in the source water and recorded to the nearest one-tenth degree Celsius. All temperature measurements are made with quality, precalibrated thermometers. The pH of the source water is measured with a calibrated, portable pH meter and recorded to the nearest one-tenth of a pH unit. The specific conductance ($\mu\text{mho/cm}$) of the source water is measured with a calibrated, temperature compensated (25°C) portable meter. The scintillometer readings, taken on a flat, dry spot within a few meters of the sample location, are measured with a portable scintillometer. Two readings are recorded, the first with a radiation shield in place (blocking out ground radiation), and the second with the shield removed. The readings (in counts/s) are converted by computer (using a calibration factor obtained from testing of the specific scintillometer on a calibration block) to give the equivalent uranium (eU) value set forth in the

data listing. Special measurements such as dissolved oxygen are made with a calibrated, portable meter and probe especially designed and commercially available for the purpose. In general, in the case of lakes, the water temperature, pH, specific conductance and (special) dissolved oxygen are all measured with a single, digital readout unit, utilizing a parameter selector switch and a composite probe lowered to just below the water surface from the sampling helicopter. Care is taken to see that this is done before the bottom sediment is disturbed.

Field Observations

These represent the best subjective judgment of the field sampler on location, and include very general descriptions of the local bedrock, sediment, water, vegetation, terrain, weather, and possible contaminants. Since these observations are subjective and made quickly in the field, they should be held subordinate to any formally documented information such as that provided by published topographic or geologic maps, etc.

Sample Location Verification

Each contractor is supplied 1:250 000-scale field maps with the desired sample types and general locations symbolically premarked at the LASL. The maps are normally original NTMS quadrangles, available through the USGS. As each location is sampled, a unique sample location number, preprinted on transparent adhesive labels (used for labeling the samples) provided with identically numbered field data forms, is inked alongside the precisely marked point representing the sample site on the field map. The latitude and longitude of each location is then computed within 48 h by the sampling contractor. Every location is later checked (and corrected if necessary) at the LASL by overlaying computer-produced location plots on the field maps used. The computer program for the Universal Transverse Mercator map projection utilized is described by Cheadle.¹⁶⁴ The latitudes and/or longitudes are corrected if the overlay locations are displaced by more than 300 m from the locations marked on the field maps. When a desired sample as specified cannot be obtained, an alternate sample type is taken, and the new sample type is marked on the field map and properly labeled as above.

II. ANALYTICAL PROCEDURES

Water Samples Analyzed for Uranium by Fluorometry

In a controlled laboratory environment, two NaF (98%)-LiF (2%) flux pellets are prepared and placed on platinum dishes. The 25-ml water vial is vigorously shaken and two 0.20-ml aliquots of water are withdrawn and dropped onto the flux pellets, then evaporated under a heat lamp. The sample fluxes are then heated until fused. After they cool, they are excited with ultraviolet radiation in the fluorometer, and the measured fluorescence of each is read, recorded, and put through a computer routine using standards and blanks run at the same time to obtain the two uranium concentrations. The single uranium concentration of the water samples given in the data listing is the average obtained from the duplicate aliquots. The lower limit of detection for each aliquot by the normal procedure is 0.2 ppb, but in high latitude areas, natural waters often have uranium concentrations below this. Consequently, when a sample run by the normal procedure is found to have <0.2 ppb

uranium, it is routinely put through another evaporative concentration step that provides a 10X concentration factor, again using duplicate aliquots. By this additional procedure, but using the same basic fluorometric method (as described by Hues and others)¹⁶⁵, the lower limit of detection of uranium in natural waters is reduced to 0.02 ppb, and when a lower concentration is found in an aliquot, it is arbitrarily averaged into the data listings as 0.01 ppb. Therefore, whenever the uranium concentration in a water sample run by fluorometry is given as some value less than 0.02 ppb, one of the two aliquots had a uranium concentration that was too low to detect. If the listed uranium value is 0.01 ppb, both aliquots were below the detectable limit. Analytical precision at the lower limit of detection is ~30%; however, it improves to ~10% one order of magnitude above the lower limit. Water samples with uranium concentrations in excess of 10 ppb (the upper limit of detection without recalibration), or which gave problems when run by fluorometry, were analyzed using the DNC technique described below.

Water Samples Analyzed for Uranium by Delayed-Neutron Counting

Only waters with >10 ppb uranium, or those with impurities that cause quenching of uranium induced fluorescence, are normally assayed using DNC. The exteriors of the 41-ml rabbits are thoroughly cleaned before analysis of the samples. Samples received in 25-ml vials (used exclusively in some of the early work) are transferred to clean, labeled, 41-ml rabbits before being analyzed. Each water sample is weighed, and its weight (less that of the rabbit) and location number are recorded. The rabbits are then loaded into a 25-sample transfer clip. The reactor pneumatic transfer system and background radiation levels are checked, and the system is calibrated using four standards. The transfer clip is installed on the pneumatic feed line, and the count control is set (typically, a 60-s irradiation, a 30-s delay, and a 60-s count sequence is used, but this can be changed to accommodate abnormally high or low uranium concentrations). The samples are cycled through the system and the uranium concentration is automatically measured, computed in ppb, and entered into the data base. Analytical precision for those few waters analyzed by the DNC method is as good or better than that by fluorometry.

Statistical treatments of uranium concentrations obtained on the same suites of samples both by fluorometry and DNC have shown that there is no significant difference between results of the two analytical methods as used at the LASL. This analytical comparability is rechecked periodically.

Uranium Analysis of Sediment Samples

All sediment samples are analyzed for total uranium by DNC. A split of each sample (dried and sieved as described) is transferred to a clean 4-ml rabbit, weighed (less the tare), and recorded along with the appropriate location number. The readied rabbits are loaded into a 50-sample transfer clip. The reactor pneumatic transfer system and background radiation levels are checked, and the system is calibrated using four standards. The transfer clip is installed and the count control is set (typically, a 20-s irradiation, a 10-s delay, and a 20-s count sequence is used). The samples are cycled through the system and the uranium concentration is automatically measured, computed in ppm, and entered into the data base. The lower limit of detection of this method is 0.5 ppb (not ppm) uranium and is so low that it has never been reached with a natural sediment sample. The precision is 4% or better for all DNC sediment analyses. The delayed-neutron detectors especially designed and built by the LASL and used for these analyses are described by Balestrini and others.¹⁶⁶

APPENDIX B

LISTINGS OF FIELD DATA AND URANIUM CONCENTRATIONS FOR WATER SAMPLES

Appendix B-I

Acidified Water Samples Analyzed by Fluorometry

Appendix B-II

Acidified Water Samples Analyzed by Delayed-Neutron Counting

(See Appendix D for Code to Listings)

APPENDIX B-I. ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						L/S/L SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (μ mho/cm)	SCINTILLOMETER (cpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
							DATE	HOUR																											
02-45	3079-144	1058-2-27	0-402001-07/07/7A-11	1A-12.0	-	6.4	410	13-1-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.17																						
02-45	3075-144	1075-2-27	0-402002-07/07/7A-11	17-9.0	-	6.0	250	16-1-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.01																						
02-65	2888-145	9916-2-27	0-402003-07/07/7A-11	1A-14.0	-	6.4	280	19-7-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.10																						
02-45	3000-145	9722-2-27	0-402004-07/07/7A-12	1A-12.5	-	7.0	80	13-1-7-4-7-2-3-1-1-4-4-3-1	-	-	-	-	0.02																						
02-45	2441-145	7988-2-27	0-402005-07/07/7A-12	17-10.5	-	7.1	90	6-1-7-5-4-2-3-1-1-4-4-3-1	-	-	-	-	0.01																						
02-45	3291-145	9133-2-27	0-402006-07/07/7A-12	1A-10.5	-	6.2	110	13-1-7-5-4-2-3-1-1-4-4-3-1	-	-	-	-	0.01																						
02-45	3133-145	9152-2-27	0-402007-07/07/7A-12	15-9.5	-	6.5	120	6-1-7-5-4-2-3-1-1-4-4-3-1	-	-	-	-	0.01																						
02-45	3319-145	9075-2-27	0-402008-07/07/7A-12	15-8.5	-	6.1	75	13-1-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.01																						
02-45	3373-144	0438-2-27	0-402009-07/07/7A-12	15-9.0	-	6.0	45	9-1-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.04																						
02-45	3444-144	2733-2-27	0-402010-07/07/7A-13	15-8.0	-	6.4	210	13-1-7-4-4-2-3-1-1-4-4-3-1	-	-	-	-	0.49																						
02-45	3777-144	2733-2-27	0-402011-07/07/7A-14	14-6.0	-	7.2	500	3-1-4-3-6-3-3-1-1-4-4-3-1	-	-	-	-	0.08																						
02-45	3014-144	0833-2-27	0-402012-07/07/7A-14	14-7.2	-	7.0	245	6-1-4-3-6-3-3-1-1-4-4-3-1	-	-	-	-	0.15																						
02-45	3783-145	9736-2-27	0-402013-07/07/7A-14	13-14.0	-	7.0	150	13-2-4-3-6-3-3-1-1-3-3-4-1	-	-	-	-	0.03																						
02-45	3883-145	8847-2-27	0-402014-07/07/7A-15	14-9.2	-	7.2	60	3-2-7-3-4-3-2-1-1-3-4-3-1	-	-	-	-	0.05																						
02-45	3845-145	8125-2-27	0-402015-07/07/7A-15	13-8.5	-	6.8	45	6-1-6-4-6-2-3-1-1-3-4-3-1	-	-	-	-	0.20																						
02-45	4075-145	7466-2-27	0-402016-07/07/7A-15	14-6.0	-	7.0	48	6-1-4-4-6-2-3-1-1-3-3-3-1	-	-	-	-	0.02																						
02-45	4152-145	9222-2-27	0-402017-07/07/7A-15	13-14.8	-	6.2	130	3-2-7-7-4-4-3-2-1-1-3-3-3-1	-	-	-	-	0.09																						
02-45	4345-144	0000-2-27	0-402018-07/07/7A-15	13-8.2	-	6.0	240	16-2-7-3-7-2-3-1-1-3-3-3-1	-	-	-	-	0.02																						
02-45	4236-144	1075-2-27	0-402019-07/07/7A-15	12-11.2	-	6.5	25	3-2-7-4-6-2-3-2-1-4-4-2-1	-	-	-	-	0.01																						
02-45	4222-144	1033-2-27	0-402020-07/07/7A-15	14-10.0	-	6.0	130	13-2-7-4-6-3-3-1-1-3-4-4-3-1	-	-	-	-	0.12																						
02-45	4083-144	3000-2-27	0-402021-07/07/7A-16	13-5.8	-	6.4	240	6-2-7-3-4-3-3-1-1-4-4-2-1	-	-	-	-	0.02																						
02-45	3845-144	3097-2-27	0-402022-07/07/7A-16	13-8.5	-	6.8	130	9-2-7-3-7-3-3-1-1-4-4-3-1	-	-	-	-	0.11																						
02-45	3347-144	3405-2-27	0-402023-07/07/7A-16	13-8.9	-	7.0	185	13-2-7-3-7-3-3-1-1-4-4-4-1	-	-	-	-	0.27																						
02-45	3472-144	3005-2-27	0-402024-07/07/7A-16	14-7.0	-	7.0	320	6-2-7-3-7-3-2-1-1-4-4-3-1	-	-	-	-	0.34																						
02-45	3454-144	3819-2-27	0-402025-07/07/7A-16	14-14.2	-	7.1	330	9-2-7-3-7-3-2-1-1-4-4-3-1	-	-	-	-	0.19																						
02-45	3513-144	4086-2-27	0-402026-07/07/7A-17	15-9.6	-	8.0	230	13-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.03																						
02-45	3744-144	5000-2-27	0-402027-07/07/7A-17	14-9.6	-	8.4	200	3-1-7-3-4-2-2-1-1-4-4-3-1	-	-	-	-	0.01																						
02-45	4111-144	6002-2-27	0-402028-07/07/7A-17	12-12.0	-	8.4	35	6-1-7-5-4-2-2-1-1-4-4-1-2	-	-	-	-	0.04																						
02-45	4111-144	6166-2-27	0-402029-07/07/7A-17	13-11.0	-	8.4	30	13-1-7-2-6-2-2-1-1-4-4-1-2	-	-	-	-	0.01																						
02-45	4483-144	3958-2-27	0-402030-07/07/7A-17	14-12.0	-	8.4	210	3-1-7-3-1-3-3-1-1-4-4-1-2	-	-	-	-	0.06																						
02-45	4466-144	2916-2-27	0-402031-07/07/7A-17	14-12.2	-	8.2	240	3-1-7-3-4-2-2-1-1-4-4-1-2	-	-	-	-	0.10																						
02-45	4541-144	2055-2-27	0-402032-07/07/7A-17	14-12.0	-	8.2	330	13-1-7-3-4-2-2-1-1-4-4-1-1	-	-	-	-	0.07																						
02-45	4625-145	9930-2-27	0-402034-07/07/7A-18	15-14.0	-	8.4	130	13-1-7-4-6-2-3-1-1-4-4-1-1	-	-	-	-	0.06																						
02-45	4500-145	8466-2-27	0-402035-07/07/7A-18	14-13.4	-	8.4	210	19-1-7-3-4-3-3-1-1-4-4-1-1	-	-	-	-	0.21																						
02-45	4541-145	7708-2-27	0-402036-07/07/7A-18	14-11.4	-	8.4	260	13-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.56																						
02-45	4450-145	6016-2-27	0-402037-07/07/7A-18	14-13.2	-	8.2	260	6-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	1.06																						
02-45	4083-145	6916-2-27	0-402038-07/07/7A-18	15-11.4	-	8.2	320	13-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.50																						
02-45	3925-145	7000-2-27	0-402039-07/07/7A-18	15-12.4	-	8.2	80	13-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.06																						
02-45	3733-145	6086-2-27	0-402040-07/07/7A-18	15-12.2	-	8.4	180	6-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.51																						
02-45	292-145	8005-2-27	0-402041-07/07/7A-18	14-11.8	-	8.4	120	6-1-7-5-4-2-3-1-1-4-4-1-1	-	-	-	-	0.01																						
02-45	2555-145	6466-2-27	0-402042-07/07/7A-18	14-12.2	-	8.8	70	6-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.01																						
02-45	2577-145	8180-2-27	0-402043-07/07/7A-19	14-12.2	-	8.8	110	24-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.20																						
02-45	2484-145	9041-2-27	0-402044-07/07/7A-19	15-11.8	-	8.8	240	26-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.01																						
02-45	2775-144	0055-2-27	0-402045-07/07/7A-19	14-12.4	-	8.2	60	13-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.01																						
02-45	2250-144	1477-2-27	0-402046-07/07/7A-19	15-12.4	-	8.1	450	19-1-7-3-4-2-3-1-1-4-4-1-1	-	-	-	-	0.22																						
02-45	0319-144	0847-2-27	0-402047-07/07/7A-12	20-11.0	-	7.2	95	18-1-8-4-4-3-3-1-2-4-3-3-2	-	-	-	-	0.22																						
02-45	0747-144	1147-2-27	0-402048-07/07/7A-13	18-8.5	-	7.0	80	7-1-8-4-4-3-3-1-2-4-3-3-2	-	-	-	-	0.22																						
02-45	0319-144	1072-2-27	0-402049-07/07/7A-13	18-9.5	-	6.7	110	19-1-6-3-6-3-3-1-2-4-3-3-2	-	-	-	-	0.07																						
02-45	0194-144	3027-2-27	0-402050-07/07/7A-14	17-10.5	-	6.4	95	11-1-6-4-6-3-3-1-2-4-3-2-2	-	-	-	-	0.06																						
02-45	0472-145	3361-2-27	0-402051-07/07/7A-14	20-11.5	-	7.4	110	28-1-6-4-6-3-3-1-2-4-3-2-2	-	-	-	-	0.27																						
02-45	0240-166	4027-2-27	0-402052-07/07/7A-14	19-10.0	-	6.8	110	23-1-7-4-6-3-3-1-2-4-3-2-2	-	-	-	-	0.05																						

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

[illegible]

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

 

STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (u mho/cm)	SCINTILLOMETER (uCi ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES IN UNITS	U CONCENTRATIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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02-65	2555-14.6	103-2-29	0-002100-07/14/7A-10	0-002100-07/14/7A-10	0-002100-07/14/7A-10	0-002100-07/14/7A-10	0-002100-07/14/7A-10	9-14-16.8	7.4	105	13-1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-6	1-7-4-

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LAST SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LABL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCHIMMOMETER (µl ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	O1 MEMSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN ppb
							DATE	HOUR																										
02-65	1201-145	1146-2-29	0-402164	07/16/74	20	15-18.0	-	-	8.1	90	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02		
02-65	1050-145	2013-2-29	0-402165	07/16/74	20	14-16.8	-	-	9.0	1800	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20		
02-65	1043-145	2008-2-29	0-402166	07/16/74	20	15-17.0	-	-	9.0	1130	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27		
02-65	1040-145	3222-2-29	0-402167	07/16/74	20	13-19.8	-	-	8.8	4500	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09		
02-65	1046-145	3222-2-29	0-402168	07/16/74	20	14-17.5	-	-	7.8	4000	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02		
02-65	1507-145	3194-2-29	0-402169	07/16/74	20	13-19.8	-	-	8.0	850	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28		
02-65	1406-145	3150-2-29	0-402170	07/16/74	20	14-18.0	-	-	8.0	350	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09		
02-65	1316-145	3027-2-29	0-402171	07/16/74	21	13-16.3	-	-	8.0	150	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04		
02-65	1243-145	3250-2-29	0-402172	07/16/74	21	17-18.0	-	-	8.0	150	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-65	1125-145	9319-2-29	0-402175	07/16/74	21	10-15.0	-	-	8.5	43	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03		
02-65	0958-145	9494-2-29	0-402176	07/16/74	21	14-17.3	-	-	8.2	500	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06		
02-65	0977-145	9333-2-29	0-402177	07/16/74	21	15-16.0	-	-	8.0	475	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-65	1043-145	0333-2-29	0-402178	07/16/74	21	12-14.7	-	-	8.0	500	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25		
02-65	0875-145	0208-2-29	0-402179	07/16/74	21	12-14.0	-	-	7.8	60	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04		
02-65	2200-145	0083-2-27	0-402182	07/16/74	10	12-11.4	-	-	5.8	180	-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02		
02-65	2001-145	077																																

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPM
02-45	9049-145	2152-2-27	0-402415-07/26/74-20	12-8.0	-	7.6	40	13-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29		
02-45	9049-145	0805-2-27	0-402450-07/27/74-16	19-12.7	-	7.6	50	23-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	9049-145	0333-2-27	0-402451-07/27/74-16	19-13.1	-	7.6	60	16-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03		
02-45	9458-145	0527-2-27	0-402452-07/27/74-16	20-12.7	-	7.6	70	16-2-7-4-4-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	0701-145	1277-2-29	0-402454-07/27/74-16	22-17.0	-	8.6	58	-2-7-4-4- - - -4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	9777-144	8497-2-29	0-402490-07/27/74-19	10-18.0	-	7.7	57	-2-7-4-4- - - -4-3-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05		
02-45	9745-144	6466-2-27	0-402491-07/27/74-19	18-11.7	-	7.6	140	16-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	9152-144	7483-2-27	0-402492-07/27/74-19	19-12.1	-	7.2	180	13-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50		
02-45	6179-144	7005-2-27	0-402493-07/28/74-13	15-11.0	-	7.6	315	13-2-7-4-4-2-3-1-2-3-4-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.22		
02-45	5845-144	7777-2-27	0-402494-07/28/74-13	15-10.0	-	7.6	365	6-2-7-4-4-3-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.89		
02-45	6745-144	6438-2-27	0-402495-07/28/74-13	12-12.4	-	8.8	400	19-2-7-4-4-3-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.58		
02-45	5507-144	6416-2-27	0-402496-07/28/74-14	12-11.4	-	8.6	325	0-2-7-4-4-3-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.16		
02-45	5916-144	6111-2-27	0-402497-07/28/74-14	12-11.4	-	7.6	320	13-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74		
02-45	5986-144	5222-2-27	0-402701-07/28/74-14	11-12.0	-	7.6	405	3-2-7-4-4-2-3-1-2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.06		
02-45	6611-144	4180-2-27	0-402702-07/28/74-14	10-11.4	-	7.6	350	13-2-7-4-4-2-3-1-2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.39		
02-45	6065-144	4497-2-27	0-402703-07/28/74-14	10-11.0	-	7.6	450	3-2-7-4-4-2-3-1-2-3-2-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.13		
02-45	6883-144	3761-2-27	0-402705-07/28/74-14	10-11.4	-	7.6	410	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.59		
02-45	6422-144	3472-2-27	0-402706-07/28/74-14	11-11.0	-	7.6	390	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.30		
02-45	5972-144	2791-2-27	0-402707-07/28/74-14	12-14.1	-	7.6	450	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.13		
02-45	6411-144	2222-2-27	0-402708-07/28/74-14	12-14.8	-	7.6	520	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46		
02-45	6119-144	1833-2-27	0-402709-07/28/74-15	11-14.6	-	7.6	410	9-2-7-5-4-2-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.93		
02-45	6438-144	1240-2-27	0-402710-07/28/74-15	11-15.0	-	7.8	410	3-2-7-5-4-2-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24		
02-45	6788-144	0916-2-29	0-402711-07/28/74-15	10-16.7	-	8.6	84	-2-7-5-4- - -1- -3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11		
02-45	6440-144	0377-2-27	0-402712-07/28/74-15	10-13.6	-	8.6	44	9-2-7-5-6-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	5819-143	7047-2-27	0-402714-07/28/74-15	14-14.6	-	8.6	210	16-2-7-5-4-2-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12		
02-45	6845-143	7022-2-27	0-402715-07/28/74-15	12-14.0	-	7.8	80	3-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02		
02-45	6841-143	6833-2-27	0-402716-07/28/74-15	13-14.0	-	8.2	50	9-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	6940-143	6416-2-29	0-402717-07/28/74-15	11-15.4	-	8.6	14	-2-7-4-4- - -1- -3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7049-143	6125-2-29	0-402718-07/28/74-15	10-16.7	-	7.6	15	-2-7-4-4- - -1- -3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15		
02-45	7144-143	7413-2-27	0-402719-07/28/74-16	10-14.9	-	8.6	60	9-2-7-5-4- - - -2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7152-143	7041-2-29	0-402720-07/28/74-16	11-16.7	-	7.1	55	-2-7-4-4- - -1- -3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7416-143	7444-2-27	0-402721-07/28/74-16	10-14.2	-	7.6	85	9-2-7-4-4-2-3-1-2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7450-143	8253-2-27	0-402722-07/28/74-16	11-15.4	-	8.2	195	13-2-7-5-4-2-2-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7414-143	8930-2-27	0-402723-07/28/74-16	11-12.9	-	8.0	495	6-2-7-4-4-2-3-1-2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19		
02-45	7277-144	0972-2-29	0-402725-07/28/74-16	10-16.0	-	7.7	200	-2-7-4-4- - -1- -3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31		
02-45	7146-144	0472-2-29	0-402726-07/28/74-16	12-14.2	-	8.6	54	-2-7-4-4- - -1- -3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7444-144	1138-2-27	0-402727-07/28/74-16	12-13.8	-	7.2	500	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00		
02-45	7472-144	0697-2-27	0-402728-07/28/74-16	12-13.8	-	8.0	41	23-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01		
02-45	7277-144	1708-2-27	0-402729-07/28/74-16	12-11.8	-	7.6	465	6-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.57		
02-45	7473-144	3086-2-27	0-402731-07/28/74-17	11-11.2	-	7.6	420	3-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.07		
02-45	7375-144	4194-2-27	0-402734-07/28/74-17	10-10.9	-	7.2	385	9-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.87		
02-45	7475-144	4333-2-27	0-402735-07/28/74-17	11-10.8	-	7.2	150	9-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09		
02-45	7748-144	5333-2-27	0-402736-07/28/74-17	11-11.2	-	7.2	190	6-2-7-4-4-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29		
02-45	7944-144	5263-2-27	0-402737-07/28/74-17	11-11.0	-	7.2	230	16-2-7-4-4-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.39		
02-45	7277-144	5250-2-27	0-402738-07/28/74-17	10-11.8	-	7.6	48																													

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER				LASL SAMPLE NUMBER AND FIELD DATA				U CONCENTRATION																										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STEAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPM
							DATE	HOUR																										
02-55	5728	1611	1048	2-27		0-402745	07/28/74	19	17-10.2	-	-	-	7.1	50	10	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03
02-55	5511	1644	044	2-29		0-402746	07/28/74	20	16-12.7	-	-	-	6.4	105	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.86
02-55	5744	1640	030	2-29		0-402747	07/28/74	20	17-11.4	-	-	-	6.8	29	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42
02-55	5194	1631	027	2-29		0-402748	07/28/74	20	17-12.7	-	-	-	6.9	60	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02
02-55	5777	1631	022	2-29		0-402749	07/28/74	20	18-11.7	-	-	-	7.4	90	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07
02-55	6227	1631	041	2-27		0-402751	07/28/74	20	17-11.1	-	-	-	7.5	40	13	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	5847	1631	040	2-29		0-402752	07/28/74	20	18-15.9	-	-	-	8.3	52	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6100	1631	041	2-29		0-402753	07/28/74	20	18-16.0	-	-	-	8.4	31	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17
02-55	6227	1631	022	2-29		0-402754	07/28/74	20	18-14.8	-	-	-	7.4	45	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6227	1631	022	2-29		0-402755	07/28/74	20	18-12.7	-	-	-	7.4	45	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6575	1631	050	2-27		0-402756	07/28/74	20	17-13.7	-	-	-	7.8	50	0	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56
02-55	7027	1631	050	2-29		0-402757	07/28/74	20	18-12.9	-	-	-	7.5	60	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02
02-55	6911	1631	094	2-27		0-402758	07/28/74	21	16-13.4	-	-	-	7.9	23	16	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18
02-55	7277	1631	200	2-29		0-402761	07/28/74	21	16-13.4	-	-	-	8.0	30	6	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06
02-55	7427	1631	296	2-27		0-402762	07/28/74	21	16-13.1	-	-	-	7.4	53	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46
02-55	7427	1631	296	2-27		0-402763	07/28/74	21	16-12.1	-	-	-	7.6	410	19	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54
02-55	7625	1631	351	2-27		0-402764	07/28/74	21	16-13.0	-	-	-	6.9	450	13	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21
02-55	6611	1631	313	2-29		0-402765	07/28/74	21	16-13.2	-	-	-	7.0	25	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06
02-55	6519	1631	350	2-29		0-402766	07/28/74	21	16-13.0	-	-	-	7.4	17	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-55	6341	1631	450	2-27		0-402767	07/28/74	21	16-14.1	-	-	-	7.7	50	6	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23
02-55	6922	1631	550	2-27		0-402768	07/28/74	21	16-11.7	-	-	-	7.3	31	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6041	1631	552	2-27		0-402769	07/28/74	21	16-11.0	-	-	-	7.8	90	0	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81
02-55	6749	1631	608	2-27		0-402770	07/28/74	21	17-14.7	-	-	-	8.1	31	3	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6919	1631	627	2-27		0-402771	07/28/74	21	17-13.2	-	-	-	7.8	44	3	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	5413	1631	683	2-29		0-402772	07/28/74	22	16-13.8	-	-	-	8.0	66	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47
02-55	5513	1631	701	2-29		0-402773	07/28/74	22	17-12.3	-	-	-	7.8	25	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	5144	1631	827	2-29		0-402774	07/28/74	22	16-14.3	-	-	-	8.3	50	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-55	5152	1631	945	2-29		0-402775	07/28/74	22	15-12.1	-	-	-	8.0	70	13	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43
02-55	5041	1631	988	2-29		0-402776	07/28/74	22	15-14.7	-	-	-	8.6	120	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04
02-55	5041	1631	988	2-29		0-402777	07/28/74	22	15-15.4	-	-	-	7.3	38	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03
02-55	5041	1631	933	2-29		0-402778	07/28/74	22	15-14.4	-	-	-	7.1	34	-	13-7-4-4-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70
02-55	6038	1644	000	2-27		0-402779	07/29/74	12	15-10.6	-	-	-	8.0	58	26	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6038	1644	000	2-27		0-402780	07/29/74	12	15-10.6	-	-	-	8.0	2200	13	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48
02-55	6038	1644	000	2-27		0-402781	07/29/74	13	11-10.8	-	-	-	7.2	85	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-55	6038	1644	000	2-27		0-402782	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6038	1644	000	2-27		0-402783	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23
02-55	6038	1644	000	2-27		0-402784	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6038	1644	000	2-27		0-402785	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15
02-55	6038	1644	000	2-27		0-402786	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29
02-55	6038	1644	000	2-27		0-402787	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25
02-55	6038	1644	000	2-27		0-402788	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19
02-55	6038	1644	000	2-27		0-402789	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6038	1644	000	2-27		0-402790	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01
02-55	6038	1644	000	2-27		0-402791	07/29/74	13	11-10.8	-	-	-	7.2	60	9	13-7-4-4-2	1-1	2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04
02-55	6038	1644	000	2-27		0-40279																												

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION												
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
							DATE	HOUR																											
NZ-45	4349	143.9038	2-29	0-402988	07/21/78	8	11-13.8	-	6.8	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	4243	143.9055	2-29	0-402987	07/21/78	8	11-13.6	-	7.7	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	4442	143.9105	2-27	0-402989	07/21/78	8	11-12.6	-	7.2	30	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
NZ-45	4744	143.7400	2-27	0-402990	07/21/78	8	11-13.4	-	6.8	28	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	4800	143.7233	2-29	0-402991	07/21/78	8	11-13.7	C-5	6.9	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
NZ-45	4920	143.6247	2-29	0-402992	07/21/78	8	11-14.0	-	7.3	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5438	143.5105	2-29	0-402994	07/21/78	8	11-14.0	-	7.3	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5635	143.5232	2-29	0-402995	07/21/78	8	11-13.9	C	6.8	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5783	143.3408	2-29	0-402996	07/21/78	8	11-11.5	-	7.8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
NZ-45	5784	143.3150	2-27	0-402997	07/21/78	8	11-11.9	-	6.4	20	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5533	143.3166	2-29	0-402998	07/21/78	9	10-10.4	C-5	7.3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5516	143.3583	2-29	0-402999	07/21/78	9	10-12.0	-	7.0	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
NZ-45	6434	143.2250	2-27	0-402900	07/21/78	9	11-12.4	-	6.2	25	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
NZ-45	6350	143.1555	2-29	0-402901	07/21/78	9	10-11.7	-	6.9	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
NZ-45	5540	143.0427	2-27	0-402902	07/21/78	9	11-13.3	-	6.3	10	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5201	143.0416	2-27	0-402904	07/21/78	9	12-13.0	-	6.3	9	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	5375	143.1833	2-29	0-402905	07/21/78	9	12-11.2	C-5	7.1	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.62	
NZ-45	5148	143.1097	2-29	0-402906	07/21/78	9	11-10.8	-	7.3	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	4740	143.2116	2-29	0-402907	07/21/78	9	10-9.3	-	7.4	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
NZ-45	4550	143.2433	2-29	0-402908	07/21/78	9	9-9.0	-	8.0	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
NZ-45	4740	143.2460	2-29	0-402909	07/21/78	9	9-9.5	-	6.8	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.14	
NZ-45	4333	143.3400	2-29	0-402910	07/21/78	10	10-9.4	-	6.3	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	
NZ-45	4416	143.3708	2-29	0-402911	07/21/78	10	10-9.4	-	7.0	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
NZ-45	4544	143.4133	2-29	0-402912	07/21/78	10	10-9.5	-	7.3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-45	4319	143.4438	2-27	0-402913	07/21/78	10	10-9.4	-	7.6	18	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	
NZ-45	4472	143.4437	2-27	0-402914	07/21/78	10	10-9.8	-	6.8	19	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	4549	143.4166	2-27	0-402916	07/21/78	10	10-10.0	-	6.8	26	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-45	4243	143.7133	2-29	0-402917	07/21/78	10	12-12.4	-	7.4	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-45	4277	143.6425	2-29	0-402918	07/21/78	10	13-14.9	-	8.0	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
NZ-45	5125	144.213	2-29	0-402919	07/21/78	10	12-14.4	-	7.2	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-45	6440	144.9450	2-27	0-402920	07/21/78	12	15-12.4	-	7.4	180	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.32	
NZ-45	6345	144.9361	2-27	0-402921	07/21/78	12	14-10.6	-	7.4	134	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	
NZ-45	6245	144.8466	2-27	0-402922	07/21/78	13	14-11.2	-	7.8	22	29	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.71	
NZ-45	5928	144.8400	2-27	0-402923	07/21/78	13	15-11.4	-	7.0	140	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	
NZ-45	5423	144.9291	2-27	0-402924	07/21/78	13	15-11.6	-	7.2	180	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.19	
NZ-45	5445	144.9146	2-27	0-402925	07/21/78	13	17-11.2	-	7.8	24	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
NZ-45	5125	144.9049	2-27	0-402926	07/21/78	14	15-10.2	-	8.0	190	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.42	
NZ-45	5423	144.8433	2-27	0-402927	07/21/78	14	15-11.4	-	7.4	180	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	
NZ-45	5375	144.7105	2-27	0-402928	07/21/78	14	16-10.8	C	7.4	90	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37	
NZ-45	5049	144.8400	2-27	0-402929	07/21/78	14	16-10.4	-	7.8	120	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
NZ-45	5227	144.5016	2-27	0-402931	07/21/78	14	16-10.4	-	7.4	200	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.09	
NZ-45	4136	144.3450	2-29	0-402933	07/21/78	15	16-13.8	-	8.4	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	
NZ-45	3445	144.3736	2-29	0-402934	07/21/78	15	16-14.1	-	7.3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
NZ-45	3616	144.2500	2-29	0-402935	07/21/78	15	16-14.4	-	7.8	76	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
NZ-45	3845	144.1886	2-29	0-402936	07/21/78	15	16-14.6	-	7.7	61	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	
NZ-45	3833	144.0750	2-29	0-402937	07/21/78	15	16-16.2	-	7.8	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.99	
NZ-45	3488	143.9733	2-29	0-402938	07/21/78	15	16-14.4	-	8.0	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	
NZ-45	3748	14																																	

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																								U CONCENTRATION					
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (40 ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES
							DATE	HOUR																										
02-45	3843-167.2627-2-29	0-402045-07/1/7A-16	13-11.8	-	7.8	7	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32	
02-45	3840-167.1897-2-27	0-402046-07/1/7A-16	13-10.4	-	7.8	9	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	3269-167.0472-2-27	0-402047-07/1/7A-16	13-9.6	-	6.8	9	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	
02-45	3560-166.3541-2-29	0-402048-07/1/7A-17	13-14.6	-	7.3	78	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	
02-45	3375-166.2458-2-29	0-402049-07/1/7A-17	15-14.5	-	7.1	34	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
02-45	3733-166.1833-2-29	0-402050-07/1/7A-17	15-14.0	-	7.3	26	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
02-45	8488-166.4750-2-27	0-402051-07/1/7A-19	14-10.2	-	100	19	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-45	8488-166.4733-2-27	0-402052-07/1/7A-19	13-10.6	-	220	3	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
02-45	9000-166.4800-2-27	0-402053-07/1/7A-19	13-10.8	-	70	6	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	9138-166.4855-2-27	0-402054-07/1/7A-19	13-11.6	-	100	9	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-45	9438-166.3888-2-27	0-402055-07/1/7A-19	14-11.6	-	70	28	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	
02-45	9438-166.3138-2-27	0-402056-07/1/7A-19	14-11.2	-	20	16	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	
02-45	9977-166.2890-2-29	0-402096-07/1/7A-21	14-11.6	-	45	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
02-45	9743-166.2866-2-29	0-402097-07/1/7A-21	14-15.1	-	59	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-45	9789-166.2847-2-29	0-402098-07/1/7A-21	14-14.8	-	7.4	23	-2-7-4-4-3-1	-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
02-45	8944-166.2438-2-27	0-402099-07/1/7A-21	14-11.6	-	37	0	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	
02-45	9027-166.2194-2-27	0-403100-07/1/7A-21	14	-	50	0	-2-7-4-4-3-1	-2-4-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-45	8013-166.2125-2-27	0-403101-08/1/7A-6	5	8.2	-	7.6	30	0	-3-7-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.67	
02-45	7970-166.2425-2-27	0-403102-08/1/7A-7	5	8.6	-	7.2	25	0	-3-7-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.38	
02-45	8527-166.2263-2-27	0-403103-08/1/7A-7	6	8.2	-	7.6	27	6	-3-4-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.77	
02-45	8430-166.2750-2-27	0-403104-08/1/7A-7	8	8.6	-	7.6	20	0	-3-4-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.15	
02-45	8268-166.1869-2-27	0-403105-08/1/7A-7	8	9.0	-	8.6	22	0	-2-7-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.60	
02-45	8416-166.1827-2-27	0-403106-08/1/7A-7	8	9.0	-	7.6	19	6	-3-4-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.15	
02-45	8419-166.0833-2-27	0-403107-08/1/7A-7	8	10.6	-	7.6	11	0	-3-4-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	8433-166.1452-2-29	0-403108-08/1/7A-7	9	10.1	-	8.2	70	-	-3-4-4-4-3-1	-3-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33	
02-45	9208-166.1305-2-27	0-403109-08/1/7A-7	10	9.6	-	7.6	60	6	-3-4-4-4-3-1	-2-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-45	9464-166.1800-2-29	0-403110-08/1/7A-7	10	15.0	-	7.6	71	-	-3-4-4-4-3-1	-3-3-3-3-2	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
02-45	9419-166.3233-2-27	0-403170-08/1/7A-12	13	13.0	-	7.6	170	0	-3-4-4-4-3-1	-2-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.59	
02-45	9433-166.3200-2-27	0-403171-08/1/7A-12	14	12.7	-	7.6	260	9	-3-4-4-4-3-1	-2-3-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.35	
02-45	9444-167.4500-2-27	0-403172-08/1/7A-13	14	14.0	-	7.6	160	13	-2-7-4-4-3-1	-2-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
02-45	9454-167.4516-2-27	0-403173-08/1/7A-13	14	11.9	-	7.8	200	13	-2-7-4-4-3-1	-2-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	
02-45	3650-166.4064-2-29	0-403174-08/1/7A-15	20	19.9	-	7.5	48	-	-2-7-4-4-3-1	-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.52	
02-45	3114-166.4022-2-29	0-403175-08/1/7A-15	21	18.2	-	7.2	150	-	-2-7-4-4-3-1	-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02-45	2527-166.4885-2-29	0-403177-08/1/7A-16	22	17.2	-	8.6	25	-	-2-7-4-4-3-1	-4-3-3-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
02-45	2146-166.4816-2-27	0-403178-08/1/7A-16	23	16.1	-	7.6	45	132	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	
02-45	2378-166.3408-2-27	0-403179-08/1/7A-16	22	17.3	-	7.2	250	3	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	
02-68	1425-166.4761-2-27	0-403181-08/1/7A-16	21	14.1	-	7.3	65	46	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	
02-45	1933-166.3916-2-27	0-403182-08/1/7A-16	22	12.1	-	7.7	50	13	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75	
02-45	1740-166.2788-2-27	0-403183-08/1/7A-16	20	14.1	-	7.3	40	19	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	0980-166.3475-2-27	0-403185-08/1/7A-16	21	15.3	-	6.8	15	13	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	1743-166.1791-2-27	0-403186-08/1/7A-16	20	15.2	-	7.1	40	33	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-45	1055-166.2916-2-27	0-403187-08/1/7A-16	21	16.2	-	7.7	55	0	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05	
02-45	0666-166.3833-2-27	0-403188-08/1/7A-16	18	18.1	-	7.3	140	6	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
02-45	0633-166.2500-2-27	0-403189-08/1/7A-16	21	15.1	-	8.3	55	13	-2-7-4-4-3-1	-2-4-3-1-1	-1	-	-	-	-																			

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LAST SAMPLE NUMBER AND FIELD DATA																		U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCHIMMOMETER (at ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
							DATE	HOUR																											
02-65	0375-144	0805-2-27	0-403197-08	01/7A-17	19-11.3	-	6.7	70	6-2-7-4-6-2-3-1-2-4-3-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07			
02-65	0397-144	0122-2-27	0-403198-08	01/7A-17	21-13.3	-	7.2	70	0-2-7-4-6-2-3-1-2-4-3-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25			
02-65	0427-144	0850-2-27	0-403199-08	01/7A-17	20-13.3	-	7.0	140	13-2-7-4-6-2-3-1-2-4-3-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76			
02-65	0430-143	0950-2-27	0-403100-08	01/7A-17	20-14.0	-	7.0	40	0-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21			
02-65	0445-143	0927-2-27	0-403101-08	01/7A-17	21-15.0	-	7.1	20	0-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01			
02-65	1472-143	0991-2-27	0-403102-08	01/7A-17	19-13.1	-	7.2	40	6-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02			
02-65	0923-143	0746-2-27	0-403103-08	01/7A-17	20-12.1	-	7.4	50	0-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11			
02-65	1041-143	0933-2-27	0-403104-08	01/7A-17	19-15.5	-	7.0	90	13-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13			
02-65	0958-144	0158-2-27	0-403105-08	01/7A-17	18-16.3	-	6.9	80	3-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15			
02-65	0845-144	0044-2-27	0-403106-08	01/7A-18	18-14.7	-	7.7	50	6-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22			
02-65	1250-144	1166-2-27	0-403107-08	01/7A-18	19-15.0	-	7.0	40	0-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20			
02-65	1472-144	0402-2-27	0-403108-08	01/7A-18	18-15.3	-	7.6	60	6-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14			
02-65	1309-143	0907-2-27	0-403109-08	01/7A-18	18-11.4	-	8.1	40	13-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06			
02-65	1466-143	0700-2-27	0-403110-08	01/7A-18	17-10.2	-	6.5	40	6-2-7-4-6-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16			
02-65	1849-143																																		

APPENDIX B-I (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																			U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN ppb
							DATE	HOUR																											
02-65	0058	-144.6755	-2-27-	0-403156	08/02/78	13	14-11.2	-	7.8	50	26-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-65	7722	-144.7791	-2-27-	0-403157	08/02/78	13	14-11.2	-	6.9	100	26-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
02-65	7441	-144.6500	-2-27-	0-403158	08/02/78	13	14-11.2	-	6.4	100	19-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	
02-65	7341	-144.5480	-2-27-	0-403160	08/02/78	13	14-10.2	-	7.2	150	13-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.45	
02-65	7105	-144.7733	-2-27-	0-403161	08/02/78	13	14-11.4	-	8.0	80	66-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.31	
02-65	6816	-144.8494	-2-27-	0-403163	08/02/78	14	14-10.2	-	7.2	90	24-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2955	-144.1333	-2-29-	0-403164	08/02/78	15	15-12.3	-	7.7	50	-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-65	2222	-144.1847	-2-29-	0-403168	08/02/78	15	15-12.1	-	6.0	60	-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
02-65	2041	-144.2483	-2-29-	0-403167	08/02/78	15	15-13.7	-	7.2	25	-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-65	2741	-144.1450	-2-27-	0-403168	08/02/78	15	14-12.6	-	7.2	40	26-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2457	-144.1708	-2-27-	0-403169	08/02/78	15	15-13.3	-	7.0	25	39-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-65	3000	-144.0905	-2-27-	0-403170	08/02/78	15	14-13.7	-	7.4	60	6-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.99	
02-65	3413	-144.0138	-2-27-	0-403171	08/02/78	15	15-12.7	-	8.1	50	53-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-65	3241	-144.0438	-2-27-	0-403172	08/02/78	15	14-13.0	-	7.1	20	13-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-65	3254	-144.0466	-2-27-	0-403173	08/02/78	15	15-10.2	-	6.2	30	53-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.57	
02-65	2927	-144.0572	-2-27-	0-403174	08/02/78	15	15-11.3	-	7.1	10	63-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	
02-65	2772	-144.7541	-2-27-	0-403175	08/02/78	14	15-11.4	-	7.1	50	59-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2333	-144.7500	-2-27-	0-403176	08/02/78	16	16-10.5	-	6.4	50	53-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2333	-144.6433	-2-27-	0-403177	08/02/78	16	14-10.9	-	7.1	30	39-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.97	
02-65	1744	-144.7733	-2-27-	0-403178	08/02/78	16	15-12.2	-	7.5	40	46-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1054	-144.7455	-2-27-	0-403179	08/02/78	16	16-11.2	-	7.1	60	59-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02-65	2027	-144.6452	-2-27-	0-403180	08/02/78	16	14-12.3	-	6.9	30	6-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02-65	1544	-144.6216	-2-27-	0-403181	08/02/78	16	15-12.7	-	7.4	30	46-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-65	1013	-144.6416	-2-27-	0-403182	08/02/78	16	14-11.9	-	7.2	40	33-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48	
02-65	1084	-144.7450	-2-27-	0-403183	08/02/78	16	15-12.4	-	6.7	30	19-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
02-65	0375	-144.6466	-2-27-	0-403184	08/02/78	16	15-10.7	-	6.7	30	19-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.24	
02-65	0473	-144.7166	-2-27-	0-403185	08/02/78	16	14-11.4	-	7.4	25	24-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
02-65	0564	-144.7766	-2-27-	0-403186	08/02/78	16	14-11.9	-	7.2	50	13-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30	
02-65	0633	-144.7450	-2-27-	0-403187	08/02/78	16	14-12.4	-	7.0	15	19-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	
02-65	0541	-144.5833	-2-27-	0-403188	08/02/78	16	14-13.7	-	7.4	30	39-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	0341	-144.5100	-2-27-	0-403190	08/02/78	17	15-12.8	-	7.3	10	24-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
02-65	0544	-144.5100	-2-27-	0-403191	08/02/78	17	15-11.9	-	7.4	10	33-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02-65	0825	-144.7733	-2-29-	0-403192	08/02/78	17	14-13.4	-	7.2	50	-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-65	0828	-144.6475	-2-27-	0-403193	08/02/78	17	15-12.1	-	8.0	40	19-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1000	-144.5450	-2-29-	0-403194	08/02/78	17	15-13.3	-	7.7	10	-2-7-4-4-2-3-1-2-4-3-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
02-65	1402	-144.5416	-2-27-	0-403195	08/02/78	17	14-12.4	-	7.2	20	159-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	
02-65	1430	-144.4466	-2-27-	0-403196	08/02/78	17	14-11.0	-	6.9	30	46-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2014	-144.5194	-2-27-	0-403197	08/02/78	17	15-11.6	-	7.3	20	59-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	
02-65	2305	-144.5140	-2-27-	0-403198	08/02/78	17	17-11.4	-	7.4	20	33-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2146	-144.4438	-2-27-	0-403199	08/02/78	17	15-12.4	-	7.0	25	49-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2445	-144.5400	-2-27-	0-403200	08/02/78	17	15-10.7	-	6.8	50	46-2-7-4-4-2-3-1-2-4-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45	
02-65	3104	-144.4205	-2-27-	0-403201	08/02/78	17	14-11.7	-	7.4	60	9-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.41	
02-65	2800	-144.5016	-2-27-	0-403202	08/02/78	18	14-11.4	-																											

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY
LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

[illegible]

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	WELL TYPE	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN DOB	U CONCENTRATION		
							DATE	HOUR																									
02-45	3444-162.740-2-27					0-403268-08/04/74-10	10-14.1	10-14.1	9.4	7.4		19	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
02-45	3443-162.740-2-29					0-403269-08/04/74-10	10-14.1	10-14.1	9.4	7.4		19	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	79	
02-45	4033-162.740-2-29					0-403270-08/04/74-10	11-14.1	11-14.1	9.4	7.4		61	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
02-45	4033-162.740-2-27					0-403271-08/04/74-10	10-11.2	10-11.2	9.4	7.4		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
02-45	4000-162.740-2-29					0-403272-08/04/74-10	10-14.1	10-14.1	9.4	7.4		52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	
02-45	4000-162.740-2-29					0-403273-08/04/74-10	10-14.1	10-14.1	9.4	7.4		13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	
02-45	4000-162.740-2-27					0-403274-08/04/74-10	10-11.2	10-11.2	9.4	7.4		60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	
02-45	4000-162.740-2-27					0-403275-08/04/74-10	13	13	9.4	7.4		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
02-45	4201-161.941-2-27					0-403276-08/04/74-10	10-10.1	10-10.1	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
02-45	4201-161.941-2-27					0-403277-08/04/74-10	12-10.1	12-10.1	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	
02-45	4133-161.716-2-27					0-403278-08/04/74-10	11-10.1	11-10.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
02-45	4100-161.293-2-27					0-403279-08/04/74-12	18-12.7	18-12.7	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	3731-161.246-2-27					0-403280-08/04/74-12	18-13.7	18-13.7	9.4	7.4		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
02-45	3440-161.344-2-27					0-403281-08/04/74-12	18-13.7	18-13.7	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	3442-161.340-2-27					0-403282-08/04/74-12	18-13.7	18-13.7	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	3442-161.340-2-27					0-403283-08/04/74-12	18-13.7	18-13.7	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	3442-161.340-2-27					0-403284-08/04/74-12	18-13.7	18-13.7	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	3442-161.340-2-27					0-403285-08/04/74-12	17-12.1	17-12.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403286-08/04/74-12	18-12.1	18-12.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403287-08/04/74-12	18-11.7	18-11.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403288-08/04/74-12	18-11.7	18-11.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403289-08/04/74-12	18-11.7	18-11.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403290-08/04/74-13	17-13.6	17-13.6	9.4	7.4		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
02-45	2819-161.293-2-27					0-403291-08/04/74-13	17-13.6	17-13.6	9.4	7.4		30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
02-45	2819-161.293-2-27					0-403292-08/04/74-13	17-12.6	17-12.6	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403293-08/04/74-13	17-15.1	17-15.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403294-08/04/74-13	19-12.7	19-12.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403295-08/04/74-13	19-11.1	19-11.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403296-08/04/74-13	19-10.7	19-10.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403297-08/04/74-13	19-10.7	19-10.7	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403298-08/04/74-13	19-13.7	19-13.7	9.4	7.4		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
02-45	2819-161.293-2-27					0-403299-08/04/74-13	18-15.0	18-15.0	9.4	7.4		105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
02-45	2819-161.293-2-27					0-403300-08/04/74-13	17-13.0	17-13.0	9.4	7.4		40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
02-45	2819-161.293-2-27					0-403301-08/04/74-13	18-12.1	18-12.1	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403302-08/04/74-13	17-13.5	17-13.5	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403303-08/04/74-13	18-12.8	18-12.8	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403304-08/04/74-13	18-15.1	18-15.1	9.4	7.4		21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
02-45	2819-161.293-2-27					0-403305-08/04/74-13	18-13.2	18-13.2	9.4	7.4		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
02-45	2819-161.293-2-27					0-403306-08/04/74-13	18-14.7	18-14.7	9.4	7.4		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
02-45	2819-161.293-2-27					0-403307-08/04/74-13	18-13.1	18-13.1	9.4	7.4		50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
02-45	2819-161.293-2-27					0-403308-08/04/74-13	19-12.5	19-12.5	9.4	7.4		20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
02-45	2819-161.293-2-27					0-403309-08/04/74-13	21-11.4	21-11.4	9.4	7.4																							

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
							DATE	HOUR																									
02-65	2541-141	1044-2-27	0-403322-0A/n4/7A-17	15-9.8-C	-	-	-	-	-	-	-	-	-	5-	0-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.65	
02-65	2419-141	1233-2-27	0-403323-0A/n4/7A-17	15-10.0-C	-	-	-	-	-	-	-	-	-	13-	11-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54	
02-65	1411-141	1249-2-29	0-403324-0A/n4/7A-17	17-15.7-C	-	-	-	-	-	-	-	-	7.4	103-	-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.44	
02-65	1211-141	1108-2-29	0-403325-0A/n4/7A-17	17-14.9-C	-	-	-	-	-	-	-	-	7.0	5-	-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1104-141	0233-2-29	0-403326-0A/n4/7A-17	18-14.4-C	-	-	-	-	-	-	-	-	7.5	5-	-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1411-141	0955-2-27	0-403327-0A/n4/7A-17	18-11.2-C	-	-	-	-	-	-	-	-	-	110-	37-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.57	
02-65	2246-141	8472-2-27	0-403328-0A/n4/7A-18	18-9.8-C	-	-	-	-	-	-	-	-	-	10-	37-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.20	
02-65	2403-141	0944-2-27	0-403329-0A/n4/7A-18	18-10.2-C	-	-	-	-	-	-	-	-	-	10-	11-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81	
02-65	1511-141	0233-2-29	0-403330-0A/n4/7A-18	18-15.7-C	-	-	-	-	-	-	-	-	6.9	18-	-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1900-141	0946-2-27	0-403331-0A/n4/7A-18	18-10.2-C	-	-	-	-	-	-	-	-	-	15-	28-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.03	
02-65	1549-141	0241-2-27	0-403332-0A/n4/7A-18	18-11.0-C	-	-	-	-	-	-	-	-	-	15-	35-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
02-65	2341-141	7500-2-27	0-403333-0A/n4/7A-18	17-10.2-C	-	-	-	-	-	-	-	-	-	10-	37-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-65	2007-141	7413-2-27	0-403334-0A/n4/7A-18	17-11.0-C	-	-	-	-	-	-	-	-	-	7-	70-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1711-141	0646-2-27	0-403335-0A/n4/7A-18	16-11.0-C	-	-	-	-	-	-	-	-	-	10-	70-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	
02-65	1523-141	7433-2-27	0-403336-0A/n4/7A-18	17-10.8-C	-	-	-	-	-	-	-	-	-	15-	23-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	
02-65	1700-141	5166-2-27	0-403337-0A/n4/7A-18	17-12.0-C	-	-	-	-	-	-	-	-	-	20-	23-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.78	
02-65	1700-141	5166-2-27	0-403338-0A/n4/7A-19	17-11.8-C	-	-	-	-	-	-	-	-	-	50-	28-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
02-65	1066-141	0572-2-27	0-403339-0A/n4/7A-19	18-15.1-C	-	-	-	-	-	-	-	-	7.7	27-	-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18	
02-65	1848-141	0450-2-29	0-403340-0A/n4/7A-19	18-14.0-C	-	-	-	-	-	-	-	-	7.6	42-	-3-7-5-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1723-141	0477-2-29	0-403341-0A/n4/7A-19	17-15.5-C	-	-	-	-	-	-	-	-	7.7	41-	-3-7-4-4-3-1-2-3-3-4-3-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02-65	1846-141	3000-2-29	0-403342-0A/n4/7A-19	17-15.0-C	-	-	-	-	-	-	-	-	8.4	5-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1572-141	2077-2-29	0-403343-0A/n5/7A-7	11-13.0-C	-	-	-	-	-	-	-	-	7.6	58-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2116-141	3400-2-29	0-403344-0A/n4/7A-7	11-14.0-C	-	-	-	-	-	-	-	-	7.3	58-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
02-65	2138-141	4736-2-29	0-403345-0A/n4/7A-7	11-14.7-C	-	-	-	-	-	-	-	-	6.4	18-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-65	2155-141	5000-2-29	0-403346-0A/n5/7A-7	11-14.7-C	-	-	-	-	-	-	-	-	6.4	25-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	
02-65	1972-141	6494-2-29	0-403347-0A/n5/7A-7	11-15.4-C	-	-	-	-	-	-	-	-	7.3	25-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36	
02-65	1933-141	8022-2-29	0-403348-0A/n5/7A-7	10-14.5-C	-	-	-	-	-	-	-	-	7.3	27-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-65	2041-141	9033-2-29	0-403349-0A/n5/7A-7	10-14.7-C	-	-	-	-	-	-	-	-	7.4	9-	-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	2049-141	0750-2-27	0-403350-0A/n5/7A-7	11-12.7-C	-	-	-	-	-	-	-	-	6.4	35-	9-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74	
02-65	1950-141	1016-2-27	0-403351-0A/n5/7A-8	12-12.1-C	-	-	-	-	-	-	-	-	6.0	32-	4-4-3-1-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	
02-65	1533-141	2046-2-27	0-403352-0A/n5/7A-8	12-11.8-C	-	-	-	-	-	-	-	-	6.7	23-	2-2-7-4-4-3-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.74	
02-65	1411-141	0944-2-27	0-403353-0A/n5/7A-8	13-11.4-C	-	-	-	-	-	-	-	-	7.3	58-	23-2-4-4-3-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
02-65	1401-141	0700-2-29	0-403354-0A/n5/7A-8	14-14.5-C	-	-	-	-	-	-	-	-	7.3	7-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
02-65	1411-141	0946-2-29	0-403355-0A/n5/7A-8	14-15.7-C	-	-	-	-	-	-	-	-	6.8	7-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1544-141	7746-2-29	0-403356-0A/n5/7A-8	14-14.0-C	-	-	-	-	-	-	-	-	6.6	34-	-5-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1411-141	0633-2-29	0-403357-0A/n5/7A-8	14-15.4-C	-	-	-	-	-	-	-	-	7.2	43-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1503-141	5816-2-29	0-403358-0A/n5/7A-8	14-15.1-C	-	-	-	-	-	-	-	-	7.2	14-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1458-141	0405-2-29	0-403359-0A/n5/7A-8	14-16.0-C	-	-	-	-	-	-	-	-	6.9	22-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.11	
02-65	1544-141	3243-2-29	0-403360-0A/n5/7A-8	14-14.7-C	-	-	-	-	-	-	-	-	7.2	18-	-4-7-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	
02-65	1722-141	2494-2-29	0-403361-0A/n5/7A-9	14-15.3-C	-	-	-	-	-	-	-	-	7.1	12-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02-65	1408-141	1344-2-29	0-403362-0A/n5/7A-9	14-15.3-C	-	-	-	-	-	-	-	-	7.3	33-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-65	1544-141	0250-2-27	0-403363-0A/n5/7A-9	14-12.8-C	-	-	-	-	-	-	-	-	7.4	60-	14-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1541-141	0200-2-29	0-403364-0A/n5/7A-9	14-15.3-C	-	-	-	-	-	-	-	-	7.5	23-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-65	1403-141	0922-2-29	0-403365-0A/n5/7A-9	17-15.3-C	-	-	-	-	-	-	-	-	7.3	52-	-4-4-3-1-1-1-1-1-1-1-1-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02-65	1404-141	7550-2-27																															

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER				LASL SAMPLE NUMBER AND FIELD DATA																					U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (dU ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPB
02-65	4604-161	7016-2-27			0-403375-08/05/77A-10	18-12-7	-	6.5	24	9-2-7-4-4-3-3-1-1-3-4-3-1	1	0.40																							
02-65	4700-161	7744-2-27			0-403377-08/05/77A-10	18-13-0	-	6.1	30	7-2-7-4-4-3-3-1-1-3-4-3-1	1	0.41																							
02-65	4533-161	5438-2-27			0-403377-08/05/77A-10	18-13-0	-	6.1	30	7-2-7-4-4-3-3-1-1-3-4-3-1	1	0.41																							
02-65	4000-161	2000-2-27			0-403378-08/05/77A-10	18-10-4	-	7.1	9	0-3-7-4-4-3-3-1-1-3-4-3-1	1	0.73																							
02-65	3445-161	1458-2-27			0-403379-08/05/77A-11	18-10-4	-	8.0	160	9-7-7-4-4-3-3-1-1-3-4-3-1	1	0.79																							
02-65	2473-161	1211-2-27			0-403381-08/05/77A-12	19-13-5	-	6.1	180	14-2-7-4-4-3-3-1-1-3-4-3-1	1	0.73																							
02-65	2146-161	1733-2-27			0-403382-08/05/77A-12	20-11-2	-	6.0	190	0-4-6-6-2-2-1-1-4-4-3-3-1	1	0.46																							
02-65	1055-161	1505-2-27			0-403383-08/05/77A-12	19-16-8	-	7.8	19	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.01																							
02-65	1041-161	2433-2-27			0-403384-08/05/77A-12	19-16-8	-	7.8	132	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.41																							
02-65	1200-161	3466-2-27			0-403385-08/05/77A-12	18-17-0	-	8.4	13	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.70																							
02-65	1333-161	5000-2-27			0-403387-08/05/77A-12	19-14-0	-	7.4	24	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.01																							
02-65	1104-161	6064-2-27			0-403389-08/05/77A-12	19-16-0	-	7.2	30	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.01																							
02-65	1316-161	8456-2-27			0-403390-08/05/77A-13	20-13-8	-	6.4	290	4-2-7-4-4-3-3-1-1-3-4-3-1	1	0.22																							
02-65	1260-161	0800-2-27			0-403391-08/05/77A-13	20-13-8	-	6.1	290	4-2-7-4-4-3-3-1-1-3-4-3-1	1	0.31																							
02-65	0875-162	0861-2-27			0-403392-08/05/77A-13	20-9-8	-	6.4	290	0-4-6-6-2-2-1-1-3-4-3-1	1	0.25																							
02-65	1133-162	0016-2-27			0-403393-08/05/77A-13	20-14-2	-	6.4	420	4-6-6-2-2-1-1-3-4-3-1	1	0.61																							
02-65	1130-162	2222-2-27			0-403394-08/05/77A-13	20-12-4	-	6.8	310	4-4-6-6-2-2-1-1-3-4-3-1	1	1.19																							
02-65	1216-162	4000-2-27			0-403395-08/05/77A-13	21-11-7	-	6.8	240	2-4-6-6-3-3-1-1-3-3-2-1	1	1.08																							
02-65	1222-162	4302-2-27			0-403397-08/05/77A-13	19-12-0	-	7.2	240	28-4-6-6-2-2-1-1-3-3-3-1	1	1.05																							
02-65	1244-162	5750-2-27			0-403398-08/05/77A-14	19-11-8	-	7.2	200	18-7-7-4-4-3-3-1-1-3-3-3-1	1	0.95																							
02-65	0841-162	7555-2-27			0-403399-08/05/77A-14	20-12-5	-	7.0	180	7-7-7-4-4-3-3-1-1-3-3-3-1	1	1.90																							
02-65	0731-162	8433-2-27			0-403400-08/05/77A-14	20-15-4	-	8.1	32	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.01																							
02-65	0977-162	9455-2-27			0-403401-08/05/77A-14	20-15-4	-	7.7	34	-4-6-6-2-2-1-1-4-4-3-3-1	1	0.01																							
02-65	0416-162	8033-2-27			0-403402-08/05/77A-14	21-12-8	-	7.5	220	4-2-7-4-4-3-3-1-1-3-3-2-1	1	0.26																							
02-65	0203-162	7450-2-27			0-403403-08/05/77A-14	19-12-4	-	7.6	210	9-2-7-4-4-3-3-1-1-3-3-4-1	1	0.01																							
02-65	0840-162	5055-2-27			0-403404-08/05/77A-14	19-18-7	-	8.7	12	-7-7-4-4-3-3-1-1-1-2-3-1	1	0.01																							
02-65	0701-161	2283-2-27			0-403407-08/05/77A-16	19-19-2	-	7.9	10	-7-7-4-4-3-3-1-1-1-2-3-1	1	0.01																							
02-65	0716-161	3705-2-27			0-403408-08/05/77A-16	20-11-4	-	7.9	200	7-7-7-4-4-3-3-1-1-2-1-3-3-1	1	0.70																							
02-65	0516-161	4456-2-27			0-403409-08/05/77A-16	20-12-2	-	8.1	200	0-7-7-4-4-3-3-1-1-2-3-3-3-1	1	1.34																							
02-65	0504-161	5533-2-27			0-403410-08/05/77A-16	20-16-4	-	7.4	100	7-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.19																							
02-65	0705-161	6246-2-27			0-403411-08/05/77A-16	20-15-4	-	7.4	50	0-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.01																							
02-65	0700-161	7283-2-27			0-403412-08/05/77A-16	20-12-4	-	7.4	200	6-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.19																							
02-65	0833-161	8466-2-27			0-403413-08/05/77A-16	20-11-9	-	7.4	300	0-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.19																							
02-65	0820-161	9033-2-27			0-403414-08/05/77A-16	21-11-3	-	7.6	420	4-7-7-4-4-3-3-1-1-2-1-2-3-1	1	0.83																							
02-65	0722-162	1513-2-27			0-403415-08/05/77A-17	20-12-4	-	7.2	390	9-7-7-4-4-3-3-1-1-2-1-3-3-1	1	0.97																							
02-65	0708-162	2033-2-27			0-403416-08/05/77A-17	21-13-0	-	7.4	360	6-7-7-4-4-3-3-1-1-2-1-3-3-1	1	0.23																							
02-65	0640-162	3697-2-27			0-403417-08/05/77A-17	20-12-4	-	6.9	180	23-7-7-4-4-3-3-1-1-2-1-3-3-1	1	0.23																							
02-65	0648-162	4533-2-27			0-403418-08/05/77A-17	20-12-4	-	7.5	100	9-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.61																							
02-65	0775-162	5266-2-27			0-403419-08/05/77A-17	20-11-9	-	7.4	90	9-7-7-4-4-3-3-1-1-2-3-3-3-1	1	0.61																							
02-65	0721-162	4056-2-27			0-403420-08/05/77A-17	19-11-0	-	8.1	220	4-7-7-4-4-3-3-1-1-2-4-3-4-1	1	0.56																							
02-65	0722-162	4056-2-27			0-403421-08/05/77A-17	19-12-4	-	7.8	40	4-7-7-4-4-3-3-1-1-2-1-3-4-1	1	0.62																							
02-65	0145-162	3940-2-27			0-403422-08/05/77A-17	20-14-1	-	7.8	40	0-7-7-4-4-3-3-1-1-2-1-3-3-1	1	0.15																							
02-65	0108-162	2202-2-27			0-403423-08/05/77A-17	20-12-8	-	7.8	350	7-7-6-4-4-3-3-1-1-2-1-3-3-1	1	0.17																							
02-65	0216-162	1466-2-27			0-403424-08/05/77A-17	20-11-4	-	7.4	320	9-3-6-4-4-3-3-1-1-2-1-3-3-1	1	0.46																							
02-65	0125-162	0480-2-27			0-403425-08/05/77A-18	20-11-9	-	7.8	380	4-3-6-4-4-3-3-1-1-2-1-3-3-1	1	0.25																							
02-65	0345-161	9260-2-27			0-403426-08/05/77A-18	20-12-8	-	7.8	200	9-3-6-4-4-3-3-1-1-2-1-3-3-1	1	0.25																							
02-65	0333-161	8766-2-27			0-403427-08/05/77A-18	20-12-8	-	8.2	210	4-3-6-4-4-3-3-1-1-2-1-3-3-1	1	0.15																							

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION													
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCINTILLOMETER ($\mu\text{d ppm}$)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN ppb
							DATE	HOUR																											
02-65	0223-161	7233-2-27	0-403420-08/05/76-18			20-11.0			7.2	230			14-3-6-5-2-2-1-2-1-3-3-1																					0.31	
02-65	0149-161	6500-2-27	0-403420-08/05/76-18			20-11.0			8.1	130			0-3-6-5-2-2-1-2-3-3-3-1																					0.01	
02-65	0241-161	5150-2-27	0-403430-08/05/76-18			20-15.2			8.9	100			4-3-6-5-2-2-1-2-1-3-3-1																					0.02	
02-65	0216-161	4066-2-27	0-403431-08/05/76-18			19-12.4			7.6	240			4-3-6-5-2-2-1-2-1-3-3-1																					0.15	
02-65	0155-161	3333-2-27	0-403432-08/05/76-18			20-2.0			7.2	240			4-3-6-5-2-2-1-2-3-3-3-1																					0.29	
02-65	0300-161	2266-2-27	0-403433-08/05/76-18			20-11.0			7.2	200			4-3-6-5-2-2-1-2-3-3-1																					0.14	
02-65	0200-161	1316-2-27	0-403434-08/05/76-18			20-12.6			7.8	200			4-3-7-6-5-2-2-1-2-3-3-1																					0.09	
02-65	0266-160	0966-2-29	0-403435-08/05/76-18			20-18.4-C-5			7.9	25			-3-7- - - -3-1- -1-2-3-1																					0.01	
02-65	0300-160	0963-2-29	0-403436-08/05/76-18			20-19.0-C-5			7.8	13			-3-6- - - -3-1- -1-3-3-1																					0.01	
02-65	0423-160	8193-2-27	0-403437-08/05/76-19			20-15.2			8.0	200			9-3-7-6-5-2-2-1-2-3-3-1																					0.24	
02-65	0361-160	7203-2-27	0-403438-08/05/76-19			20-13.4			8.2	40			9-3-7-6-5-2-2-2-2-4-3-3-1																					0.01	
02-65	0450-160	7500-2-27	0-403439-08/05/76-19			20-13.2-C			-	30			9-3-7-6-5-2-2-2-2-4-3-3-1																					0.01	
02-65	1100-160	7738-2-27	0-403440-08/05/76-19			20-13.7-C			-	30			9-3-7-6-5-2-2-2-2-4-3-3-1																					0.01	
02-65	5434-161	0133-2-27	0-403441-08/05/76-7			11-7.0			7.7	100			4-3-7-5-6-2-2-1-2-3-3-3-2																					0.20	
02-65	5700-160	0900-2-27	0-403442-04/06/76-7			11-9.5			7.8	150			0-3-6-5-6-2-2-2-1-2-3-3-3-2																					0.01	
02-65	5916-160	0916-2-27	0-403443-06/06/76-7			11-9.3-C			7.4	500			4-3-7-7-6-2-2-1-2-3-3-3-2																					0.07	
02-65	6150-160	0466-2-27	0-403444-08/06/76-7			11-12.0			8.1	160			4-3-7-6-6-2-2-1-2-3-3-3-1																					0.39	
02-65	6377-160	0977-2-27	0-403445-08/06/76-7			12-12.0			8.2	60			7-3-7-6-6-2-2-1-2-3-3-3-1																					0.95	
02-65	6819-161	0263-2-27	0-403447-08/06/76-7			11-12.0			7.9	100			4-3-7-6-6-2-2-1-2-3-3-3-1																					0.43	
02-65	6800-161	0805-2-27	0-403448-08/06/76-8			10-11.0			7.2	112			18-3-7-6-6-2-2-1-2-3-3-3-1																					1.42	
02-65	7286-161	1300-2-27	0-403449-08/06/76-8			10-11.7			7.5	60			14-3-7-6-6-2-2-1-2-3-3-3-1																					0.57	
02-65	7372-161	1780-2-27	0-403450-08/06/76-8			10-12.0			7.5	150			4-3-7- - - -2-2-1-2-3-3-3-1																					0.44	
02-65	7241-161	0305-2-27	0-403451-08/06/76-8			11-13.0			7.8	60			4-3-7-6-6-2-2-1-2-3-3-3-2																					0.01	
02-65	7202-160	0908-2-27	0-403452-08/06/76-8			11-12.0			7.8	90			11-3-7-6-6-2-2-1-2-3-3-3-2																					0.01	
02-65	7606-161	0013-2-27	0-403454-08/06/76-8			11-13.0-C			8.4	145			9-3-7-7-6-2-2-5-2-4-3-1-2																					0.01	
02-65	7404-161	0916-2-27	0-403455-08/05/76-8			10-12.9			8.0	60			2-3-7-7-1-1-3-5-1-4-3-3-3																					0.01	
02-65	7041-161	1033-2-27	0-403456-08/06/76-8			10-13.6			7.6	60			4-3-7-6-6-2-2-2-2-3-3-3-2																					0.29	
02-65	8233-161	0466-2-27	0-403457-08/06/76-8			10-12.4			7.4	80			14-3-7-5-6-3-2-2-2-4-3-3-2																					0.04	
02-65	8433-161	1283-2-27	0-403458-08/06/76-8			10-12.6			7.0	30			9-3-7-6-6-1-2-5-2-4-3-3-3																					0.01	
02-65	8599-161	0533-2-27	0-403459-08/06/76-8			11-11.2			7.6	80			30-3-7-6-6-2-2-1-2-3-3-3-2																					0.59	
02-65	8933-161	1533-2-27	0-403460-08/06/76-8			11-11.8			7.6	110			16-3-7- - - -2-4-3-3-3-2																					0.32	
02-65	9366-161	1503-2-29	0-403461-08/06/76-9			11-16.8			8.4	37			-3-7-6-6- -3-1- -3-3-3-2																					0.01	
02-65	9077-161	1225-2-29	0-403462-08/06/76-9			11-16.2			8.2	96			-3-7-6-6- -3-2- -3-3-3-2																					0.01	
02-65	9744-161	2200-2-29	0-403463-08/06/76-9			11-16.3			8.5	30			-3-7-5-7- -3-1- -3-3-3-2																					0.01	
02-65	9427-161	2233-2-29	0-403464-08/06/76-9			10-15.4			7.9	32			-3-7-6-6- -3-1- -3-3-3-1																					0.45	
02-65	8766-161	1469-2-27	0-403465-08/06/76-9			11-11.9			8.2	105			28-3-6-6-4-2-3-1-2-4-3-3-2																					0.15	
02-65	8534-161	2433-2-27	0-403466-08/06/76-9			11-11.8			7.5	85			21-3-6-6-4-2-2-1-2-3-3-3-2																					0.43	
02-65	8180-161	2466-2-27	0-403467-08/06/76-9			10-9.7			7.0	85			9-3-6-6-4-2-2-1-2-3-3-3-2																					0.21	
02-65	7805-161	2733-2-27	0-403468-08/06/76-9			11-12.4			8.1	120			4-3-7-6-6-2-2-1-2-3-3-3-2																					0.43	
02-65	7300-161	2072-2-27	0-403469-08/06/76-10			12-12.0			7.9	85			28-3-7-6-6-2-3-1-2-3-6-3-2																					0.01	
02-65	5405-161	2766-2-27	0-403470-08/06/76-10			10-9.1			7.9	110			16-3-7-5-6-4-2-1-2-3-3-3-1																					0.74	
02-65	6644-161	2233-2-27	0-403471-08/06/76-10			12-3.8			7.8	160			2-3-7-5-6-4-3-2-1-2-3-3-3-1																					0.17	
02-65	6104-161	1466-2-27	0-403472-08/05/76-10			11-12.0			8.1	130			9-3-7-6-6-4-2-1-2-3-3-3-1																					0.39	
02-65	6311-161	1488-2-27	0-403473-08/05/76-10			15- - - -			8.1	180			4-3-7-6-6-2-2-1-2-3-3-3-2																					0.15	
02-65	5822-161	0833-2-27	0-403474-08/06/76-10			14-11.6			8.1	210			4-3-7-6-6-4-2-1-2-3-3-3-1																					0.06	
02-65	5203-161	0833-2-27	0-403475-08/06/76-10			14-11.4			7.2	125			18-3-7-6-6-4-2-1-2-3-3-3-1																					0.48	
02-65	5133-160	0933-2-27	0-403477-08/06/76-10			15-9.8			7.4	70			23-3-7-6-6-4-3-1-2-3-3-3-1																						

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCINTILLOMETER (cpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN ppb
							DATE	HOUR																									
02	4247-152	3466-2-27	0-403539-08/06/7A-16	23-11.8	-	350	9-2-2-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	
02	4272-150	2550-2-27	0-403540-08/06/7A-16	23-10.5	-	290	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	
02	4236-152	1333-2-27	0-403541-08/06/7A-16	23-10.5	-	270	18-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.73	
02	4216-152	0466-2-27	0-403542-08/06/7A-16	3-11.0	-	360	11-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	
02	4250-150	9275-2-27	0-403543-08/06/7A-17	23-8.0	-	110	39-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4222-150	0333-2-27	0-403544-08/06/7A-16	23-8.2	-	110	25-2-7-4-4-2-2-1-2-4-1-1-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4201-150	0527-2-27	0-403545-08/06/7A-16	23-9.0	-	140	25-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4257-150	1116-2-27	0-403546-08/06/7A-18	23-15.2	-	460	9-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
02	4266-150	2466-2-27	0-403546-08/06/7A-18	22-13.5	-	460	18-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
02	4244-150	3533-2-27	0-403550-08/06/7A-18	22-12.0	-	450	9-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.39	
02	4200-150	4266-2-27	0-403551-08/06/7A-18	21-14.5	-	450	14-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
02	4247-150	5541-2-27	0-403552-08/06/7A-18	20-12.5	-	300	23-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
02	4247-150	6305-2-27	0-403553-08/06/7A-10	20-13.6	-	360	7-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46	
02	4249-152	7500-2-27	0-403554-08/06/7A-18	20-14.2	-	230	23-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4247-150	8300-2-27	0-403555-08/06/7A-19	19-15.0	-	250	9-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
02	4204-150	0466-2-27	0-403556-08/06/7A-19	19-10.0	-	370	28-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
02	4232-150	0466-2-27	0-403557-08/06/7A-19	19-13.8	-	270	11-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02	4277-161	0250-2-29	0-403558-08/07/7A-13	14-8.0	-	68	2-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02	4211-160	0750-2-29	0-403559-08/07/7A-13	14-17.8	-	7.6	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4212-160	0333-2-27	0-403560-08/07/7A-13	14-15.2	-	8.1	18-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4201-160	0416-2-27	0-403561-08/07/7A-13	14-13.8	-	7.8	9-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02	4222-160	0425-2-27	0-403562-08/07/7A-13	14-12.2	-	7.6	65-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09	
02	4233-160	5000-2-29	0-403563-08/07/7A-13	14-17.4	-	7.6	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02	4203-160	6152-2-29	0-403564-08/07/7A-14	14-18.0	-	7.6	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4204-160	7500-2-29	0-403565-08/07/7A-14	14-19.4	-	7.6	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4203-160	6433-2-29	0-403567-08/07/7A-14	14-17.0	-	7.6	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02	4246-160	4450-2-29	0-403568-08/07/7A-14	14-12.8	-	7.8	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	
02	4203-160	2555-2-27	0-403569-08/07/7A-14	14-10.2	-	7.2	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
02	4216-160	2983-2-27	0-403570-08/07/7A-14	14-10.2	-	7.8	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.60	
02	4244-160	2133-2-27	0-403571-08/07/7A-14	14-10.8	-	7.6	9-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	
02	4277-160	3093-2-27	0-403572-08/07/7A-14	14-11.2	-	7.0	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47	
02	4210-160	3033-2-27	0-403573-08/07/7A-14	15-13.0	-	7.6	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
02	4272-160	4216-2-27	0-403574-08/07/7A-15	15-12.8	-	300	28-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
02	4275-160	4266-2-29	0-403575-08/06/7A-15	15-17.0	-	58	3-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02	4204-160	2016-2-27	0-403576-08/06/7A-15	14-18.2	-	7.6	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
02	4272-160	2430-2-27	0-403577-08/07/7A-15	15-11.6	-	7.6	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.97	
02	4276-160	1416-2-27	0-403579-08/07/7A-15	15-10.8	-	7.0	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.78	
02	4272-160	1566-2-27	0-403580-08/06/7A-15	15-10.4	-	7.8	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59	
02	4275-160	0900-2-27	0-403581-08/06/7A-15	15-10.8	-	7.2	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.35	
02	4273-160	0111-2-27	0-403582-08/06/7A-15	15-11.8	-	7.2	4-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.99	
02	4203-160	0442-2-27	0-403584-08/07/7A-16	14-11.6	-	7.8	28-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.22	
02	4241-152	0152-2-27	0-403585-08/07/7A-16	17-12.4	-	450	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46	
02	4250-150	9138-2-27	0-403586-08/07/7A-16	14-12.6	-	450	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.55	
02	4275-150	9333-2-27	0-403587-08/07/7A-15	16-12.2	-	7.2	0-2-7-4-4-2-2-1-2-4-1-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.97	
02	4203-160	0000-2-27	0-403588-08/07/7A-16	16-13.2	-	7.6	4-2-7-4-4-2-2-1-2-4-1-2-2	-																									

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																						U CONCENTRATION					
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (dpm/gm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPB
NZ-65	0625	-161.0111	-2-29			0-403590	08/09/74	8	11-15.2	-2	A.1		64.8																			0.03	
NZ-65	0625	-161.0433	-2-29			0-403590	08/09/74	8	11-16.0	-2	A.2		54.8																			0.20	
NZ-65	0625	-161.0766	-2-27			0-403590	08/09/74	8	12-10.8	-2	A.1		32.0																			0.16	
NZ-65	0625	-161.3004	-2-27			0-403401	08/09/74	8	10-9.8	-2	7.0		35.0																			0.51	
NZ-65	0103	-161.2233	-2-27			0-403402	08/09/74	8	11-11.4	-2	A.1		32.0																			0.45	
NZ-65	0601	-161.2100	-2-27			0-403403	08/09/74	8	11-11.4	-2	A.1		35.0																			0.29	
NZ-65	0546	-161.1833	-2-27			0-403404	08/09/74	8	12-12.4	-2	A.1		34.0																			0.10	
NZ-65	0333	-161.1388	-2-27			0-403405	08/09/74	8	12-11.9	-2	A.1		32.0																			0.44	
NZ-65	0946	-159.9446	-2-27			0-403406	08/09/74	9	10-12.8	-2	A.1		34.0																			0.35	
NZ-65	1033	-159.8513	-2-27			0-403407	08/09/74	9	10-12.0	-2	A.1		30.0																			0.11	
NZ-65	0609	-159.8016	-2-27			0-403408	08/09/74	9	11-11.8	-2	A.1		30.0																			0.10	
NZ-65	1146	-160.0258	-2-29			0-403409	08/09/74	9	11-12.4	-2	A.1		23.4																			0.17	
NZ-65	0446	-160.0111	-2-27			0-403410	08/09/74	9	11-12.4	-2	7.0		34.0																			0.14	
NZ-65	0201	-159.9433	-2-27			0-403411	08/09/74	9	11-10.4	-2	7.0		34.0																			0.31	
NZ-65	1946	-160.5444	-2-29			0-403412	08/09/74	10	12-9.4	-2	A.1		23.4																			0.17	
NZ-65	1447	-160.6843	-2-27			0-403413	08/09/74	10	12-11.0	-2	7.0		25.0																			0.41	
NZ-65	2025	-160.6900	-2-27			0-403414	08/09/74	10	12-12.0	-2	A.1		45.0																			0.46	
NZ-65	2716	-161.5908	-2-27			0-403415	08/09/74	10	12-10.8	-2	A.1		30.0																			0.17	
NZ-65	2501	-160.5766	-2-27			0-403416	08/09/74	10	12-12.8	-2	A.1		34.0																			0.43	
NZ-65	2408	-161.6566	-2-29			0-403417	08/09/74	10	12-16.7	-5	9.1		52																			1.08	
NZ-65	2846	-160.6501	-2-27			0-403418	08/09/74	10	11-11.0	-2	7.0		20.0																			0.01	
NZ-65	3200	-160.6041	-2-27			0-403419	08/09/74	10	12-13.4	-2	7.0		20.0																			0.19	
NZ-65	3446	-160.6350	-2-27			0-403420	08/09/74	10	12-12.8	-2	A.1		20.0																			0.58	
NZ-65	3250	-160.8708	-2-29			0-403421	08/09/74	11	12-13.4	-5	A.1		92																			0.06	
NZ-65	3346	-160.9805	-2-29			0-403422	08/09/74	11	12-14.4	-5	7.1		8																			0.10	
NZ-65	3433	-161.0533	-2-27			0-403423	08/09/74	11	12-13.8	-2	7.0		90																			0.19	
NZ-65	3503	-161.0722	-2-27			0-403424	08/09/74	11	15-14.0	-2	A.2		90																			0.01	
NZ-65	3638	-161.0332	-2-27			0-403425	08/09/74	11	15-12.4	-2	7.0		50																			0.29	
NZ-65	2870	-161.9966	-2-27			0-403426	08/09/74	14	18-12.4	-2	7.0		90																			2.28	
NZ-65	2700	-161.8800	-2-27			0-403427	08/09/74	14	18-13.4	-2	A.1		100																			0.26	
NZ-65	2441	-161.9501	-2-27			0-403428	08/09/74	14	18-14.2	-2	7.0		110																			0.64	
NZ-65	2546	-160.8500	-2-27			0-403429	08/09/74	14	18-14.0	-2	7.0		150																			0.09	
NZ-65	0003	-161.0466	-2-27			0-403430	08/09/74	14	19-13.4	-2	A.2		360																			2.47	
NZ-65	0208	-159.9166	-2-27			0-403431	08/09/74	14	19-13.2	-2	A.1		250																			0.43	
NZ-65	0708	-159.8200	-2-27			0-403432	08/09/74	14	18-14.2	-2	7.0		280																			0.58	
NZ-65	0244	-159.7266	-2-27			0-403433	08/09/74	14	19-12.4	-2	7.0		130																			0.02	
NZ-65	0708	-159.7411	-2-27			0-403434	08/09/74	15	18-13.2	-2	7.0		95																			0.16	
NZ-65	0800	-159.6433	-2-27			0-403435	08/09/74	15	18-12.4	-2	7.0		120																			0.01	
NZ-65	0301	-159.6266	-2-27			0-403436	08/09/74	15	19-14.0	-2	7.0		80																			0.01	
NZ-65	0845	-159.5416	-2-27			0-403437	08/09/74	15	19-14.2	-2	A.2		200																			0.22	
NZ-65	0245	-159.5200	-2-27			0-403438	08/09/74	15	19-13.2	-2	7.0		160																			0.29	
NZ-65	0833	-159.4716	-2-27			0-403439	08/09/74	15	19-12.8	-2	6.8		120																			0.44	
NZ-65	0319	-159.3068	-2-27			0-403440	08/09/74	15	19-12.8	-2	7.0		190																			0.06	
NZ-65	0246	-159.3000	-2-27			0-403441	08/09/74	15	19-12.4	-2	7.0		145																			0.24	
NZ-65	0611	-159.3222	-2-27			0-403442	08/09/74	15	19-12.8	-2	7.0		120																			0.04	
NZ-65	0700	-159.2467	-2-27			0-403443	08/09/74	15	19-13.2	-2	A.1		70																			0.02	
NZ-65	0416	-159.2300	-2-27			0-403444	08/09/74	15	20-10.5	-2	7.0		420																			0.08	
NZ-65	0441	-159.1433	-2-27			0-403445	08/09/74	15	18-12.8	-2	7.0		280																			1.14	
NZ-65	0200	-159.1400	-2-27			0-403446	08/09/74	15	18-12.8	-2	6.8		220																			1.10	
NZ-65	0750	-159.0300	-2-27			0-403447	08/09/74	15	18-10.8	-2	6.8		180																			0.08	
NZ-65	0347	-159.0266	-2-27			0-403448	08/09/74	15	18-11.2	-2	7.0		190																			0.09	

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY
LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION									
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SCINTILLATION	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (µm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPM
02-65	0904-150	1277-2-27	0-403700-08/10/74-19			14-10.8			7.8	225		14-3-6-5-4-2-3-1-2-3-3-3-2																					0.80		
02-65	0913-150	1275-2-27	0-403701-08/10/74-7			12-11.2			7.1	32		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.48		
02-65	0913-150	1275-2-27	0-403702-08/10/74-7			13-11.0			6.8	42		4-2-7-4-6-2-3-1-2-4-3-2-2																					0.32		
02-65	0913-150	1275-2-27	0-403703-08/10/74-7			14-12.2			7.4	65		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.35		
02-65	0913-150	1275-2-27	0-403704-08/10/74-7			14-12.7			7.8	40		9-2-7-4-6-2-3-1-2-4-3-2-2																					0.49		
02-65	0913-150	1275-2-27	0-403705-08/10/74-7			14-11.7			7.4	57		0-2-7-4-6-2-3-1-2-4-3-2-2																					0.40		
02-65	0913-150	1275-2-27	0-403707-08/10/74-7			15-10.3			7.0	24		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.52		
02-65	0913-150	1275-2-27	0-403708-08/10/74-7			14-11.0			7.5	38		14-2-7-4-6-2-3-1-2-4-3-2-2																					0.05		
02-65	0913-150	1275-2-27	0-403709-08/10/74-8			15-11.8			6.0	47		16-2-7-4-6-2-3-1-2-4-3-2-2																					0.49		
02-65	0913-150	1275-2-27	0-403710-08/10/74-8			15-11.0			8.1	57		9-2-7-4-6-2-3-1-2-4-3-2-2																					0.61		
02-65	0913-150	1275-2-27	0-403711-08/10/74-8			14-12.3			6.9	31		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.78		
02-65	0913-150	1275-2-27	0-403712-08/10/74-8			13-12.0			7.2	38		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.70		
02-65	0913-150	1275-2-27	0-403713-08/10/74-8			14-12.4			7.4	28		9-2-7-4-6-2-3-1-2-4-3-2-2																					0.58		
02-65	0913-150	1275-2-27	0-403714-08/10/74-8			14-11.2			7.7	62		4-2-7-4-6-2-3-1-2-4-3-2-2																					0.31		
02-65	0913-150	1275-2-27	0-403715-08/10/74-8			14-10.7			7.2	30		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.31		
02-65	0913-150	1275-2-27	0-403716-08/10/74-8			13-11.1			7.0	40		2-2-7-4-6-2-3-1-2-4-3-2-2																					0.31		
02-65	0913-150	1275-2-27	0-403717-08/10/74-8			14-11.3			7.8	52		9-2-7-4-6-2-3-1-2-4-3-2-2																					0.35		
02-65	0913-150	1275-2-27	0-403718-08/10/74-8			15-11.0			7.0	32		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.95		
02-65	0913-150	1275-2-27	0-403719-08/10/74-8			14-11.2			7.1	50		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.87		
02-65	0913-150	1275-2-27	0-403720-08/10/74-8			14-11.3			7.7	35		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.61		
02-65	0913-150	1275-2-27	0-403721-08/10/74-8			15-12.0			7.5	43		0-2-7-4-6-2-3-1-2-4-3-2-2																					0.45		
02-65	0913-150	1275-2-27	0-403722-08/10/74-8			15-11.8			7.0	33		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.91		
02-65	0913-150	1275-2-27	0-403723-08/10/74-8			14-12.7			7.4	46		14-2-7-4-6-2-3-1-2-4-3-2-2																					0.32		
02-65	0913-150	1275-2-27	0-403724-08/10/74-9			14-11.7			7.4	37		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.06		
02-65	0913-150	1275-2-27	0-403725-08/10/74-9			14-11.1			7.7	32		9-2-7-4-6-2-3-1-2-4-3-2-2																					0.03		
02-65	0913-150	1275-2-27	0-403726-08/10/74-9			14-10.7			7.0	26		14-2-7-4-6-2-3-1-2-4-3-2-2																					0.16		
02-65	0913-150	1275-2-27	0-403727-08/10/74-9			14-11.3			7.5	32		7-2-7-4-6-2-3-1-2-4-3-2-2																					0.01		
02-65	0913-150	1275-2-27	0-403728-08/10/74-9			15-10.7			7.0	48		14-2-7-4-6-2-3-1-2-4-3-2-2																					0.29		
02-65	0913-150	1275-2-27	0-403729-08/10/74-9			15-11.8			6.0	43		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.17		
02-65	0913-150	1275-2-27	0-403730-08/10/74-9			14-11.4			8.0	55		4-2-7-4-6-2-3-1-2-4-3-2-2																					0.18		
02-65	0913-150	1275-2-27	0-403731-08/10/74-9			15-10.9			7.4	51		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.18		
02-65	0913-150	1275-2-27	0-403732-08/10/74-9			15-12.8			7.2	43		11-2-7-4-6-2-3-1-2-4-3-2-2																					0.36		
02-65	0913-150	1275-2-27	0-403733-08/10/74-9			14-11.8			7.7	33		11-2-7-4-6-2-3-1-2-4-3-2-2																					1.10		
02-65	0913-150	1275-2-27	0-403734-08/10/74-9			14-10.7			7.3	34		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.51		
02-65	0913-150	1275-2-27	0-403735-08/10/74-9			14-11.2			7.0	45		16-2-7-4-6-2-3-1-2-4-3-2-2																					0.61		
02-65	0913-150	1275-2-27	0-403736-08/10/74-9			14-11.7			7.4	37		9-2-7-4-6-2-3-1-2-4-3-2-1																					0.25		
02-65	0913-150	1275-2-27	0-403737-08/10/74-9			15-11.9			7.3	47		21-2-7-4-6-2-3-1-2-4-3-2-1																					0.23		
02-65	0913-150	1275-2-27	0-403738-08/10/74-9			14-11.5			7.8	33		7-2-7-4-6-2-3-1-2-4-3-2-1																					0.16		
02-65	0913-150	1275-2-27	0-403739-08/10/74-9			15-12.7			7.3	42		9-2-7-4-6-2-3-1-2-4-3-2-1																					0.39		
02-65	0913-150	1275-2-27	0-403740-08/10/74-10			14-11.4			7.4	47		14-2-7-4-6-2-3-1-2-4-3-2-1																					0.14		
02-65	0913-150	1275-2-27	0-403741-08/10/74-10			14-12.2			7.1	34		25-2-7-4-6-2-3-1-2-4-3-2-1																					0.16		
02-65	0913-150	1275-2-27	0-403742-08/10/74-10			14-12.4			7.4	42		4-2-7-4-6-2-3-1-2-4-3-2-1																					0.16		
02-65	0913-150	1275-2-27	0-403743-08/10/74-10			15-12.5			7.8	36		21-2-7-4-6-2-3-1-2-4-3-2-2																					0.14		
02-65	0913-150	1275-2-27	0-403744-08/10/74-12			15-11.8			7.0	28		7-2-7-4-6-2-3-1-2-4-3-2-2																					0.26		
02-65	0913-150	1275-2-27	0-403745-08/10/74-12			14-12.7			8.1	48		16-2-7-4-6-2-3-1-2-4-3-2-2																					0.10		
02-65	0913-150	1275-2-27	0-403746-08/10/74-12			15-12.2			7.4	43		16-2-7-4-6-2-3-1-2-4-3-2-1																					0.23		
02-65	0913-150	1275-2-27	0-403747-08/10/74-12			14-11.8			7.8	38		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.42		
02-65	0913-150	1275-2-27	0-403748-08/10/74-13			14-12.1			7.8	49		21-2-7-4-6-2-3-1-2-4-3-2-2																					0.72		
02-65	0913-150	1275-2-27	0-403749-08/10/74-13			15-16.8			7.7	111		7-2-7-4-6-2-3-1-2-4-3-2-2																					0.01		
02-65	0913-150	1275-2-27	0-403750-08/10/74-13			14-13.3			7.2	57		18-2-7-4-6-2-3-1-2-4-3-2-2																					0.31		
02-65	0913-150	1275-2-2																																	

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION												
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
							DATE	HOUR																										
02-45	2907-150.9100-2-27-	0-403752-09/10/74-13-	16-12.3-	-	7.5-	35-	9-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.76	
02-45	2700-150.0565-2-27-	0-403753-09/10/74-13-	15-12.3-	-	7.6-	39-	9-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70	
02-45	2841-150.1277-2-27-	0-403754-09/10/74-13-	15-11.7-	-	7.6-	52-	16-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
02-45	2916-150.1833-2-27-	0-403755-09/10/74-13-	15-12.3-	-	7.8-	42-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
02-45	3222-150.1100-2-27-	0-403756-09/10/74-13-	16-12.0-	-	6.9-	37-	21-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	
02-45	3111-150.2133-2-27-	0-403757-09/10/74-13-	14-11.7-	-	7.5-	49-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	
02-45	3144-150.3246-2-27-	0-403758-09/10/74-13-	14-12.8-	-	7.6-	41-	9-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
02-45	2819-150.3533-2-27-	0-403759-09/10/74-13-	15-12.9-	-	7.7-	57-	7-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	3222-150.3044-2-27-	0-403760-09/10/74-13-	14-11.5-	-	8.2-	50-	10-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	
02-45	2916-150.3916-2-27-	0-403761-09/10/74-13-	14-11.6-	-	7.6-	51-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16	
02-45	2743-150.5166-2-27-	0-403762-09/10/74-13-	15-12.1-	-	7.6-	32-	9-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25	
02-45	3216-150.4033-2-27-	0-403763-09/10/74-13-	14-12.5-	-	7.8-	51-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
02-45	2916-150.5116-2-27-	0-403764-09/10/74-14-	15-12.3-	-	7.7-	40-	42-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.58	
02-45	3243-150.5750-2-27-	0-403765-09/10/74-14-	15-11.7-	-	7.7-	150-	11-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74	
02-45	3104-150.7600-2-27-	0-403766-09/10/74-14-	16-12.5-	-	7.3-	92-	11-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40	
02-45	3413-150.8843-2-27-	0-403767-09/10/74-14-	13-11.6-	-	7.3-	71-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41	
02-45	3248-150.9277-2-27-	0-403768-09/10/74-14-	14-11.7-	-	7.2-	68-	14-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49	
02-45	3104-160.0733-2-27-	0-403769-09/10/74-14-	14-12.7-	-	6.9-	75-	16-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.12	
02-45	3846-161.1425-2-27-	0-403770-09/10/74-14-	14-11.0-	-	7.6-	55-	25-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17	
02-45	3847-160.1861-2-27-	0-403771-09/10/74-14-	14-12.2-	-	7.0-	110-	7-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
02-45	3543-160.2500-2-27-	0-403772-09/10/74-14-	14-11.3-	-	6.9-	80-	16-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
02-45	3104-160.3333-2-27-	0-403773-09/10/74-14-	14-12.1-	-	7.8-	73-	9-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	
02-45	3104-160.2843-2-27-	0-403774-09/10/74-14-	15-12.6-	-	7.2-	91-	16-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.12	
02-45	3708-160.3777-2-27-	0-403775-09/10/74-14-	14-12.0-	-	7.7-	68-	7-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
02-45	3616-160.4105-2-27-	0-403776-09/10/74-14-	14-11.8-	-	7.4-	59-	21-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.29	
02-45	3243-160.4722-2-27-	0-403777-09/10/74-14-	15-11.9-	-	7.3-	54-	16-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	
02-45	3243-161.5316-2-27-	0-403778-09/10/74-14-	14-12.3-	-	7.4-	48-	21-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.72	
02-45	3425-160.5400-2-27-	0-403779-09/10/74-14-	15-11.4-	-	8.0-	62-	11-2-7-4-4-2-3-1-2-4-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	
02-45	4518-161.5850-2-27-	0-403780-09/10/74-17-	23-11.6-	-	6.6-	220-	18-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43	
02-45	5049-161.5843-2-27-	0-403781-09/10/74-17-	22-11.2-	-	7.2-	100-	18-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-45	5048-161.5843-2-27-	0-403782-09/10/74-17-	22-11.8-	-	7.0-	145-	2-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
02-45	4750-161.5833-2-27-	0-403783-09/10/74-17-	23-12.6-	-	7.4-	255-	11-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02-45	4446-161.7116-2-27-	0-403784-09/10/74-17-	23-12.4-	-	7.8-	224-	28-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
02-45	4940-161.7700-2-27-	0-403785-09/10/74-17-	23-10.9-	-	7.4-	310-	32-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
02-45	4872-161.8444-2-27-	0-403786-09/10/74-17-	23-12.2-	-	8.2-	410-	4-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-45	4747-161.8500-2-27-	0-403787-09/10/74-17-	22-12.4-	-	6.9-	185-	14-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-45	4449-161.9333-2-27-	0-403788-09/10/74-17-	22-14.2-	-	7.8-	410-	14-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-45	5125-161.9816-2-27-	0-403789-09/10/74-17-	22-13.8-	-	7.8-	325-	4-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
02-45	5527-161.9461-2-27-	0-403790-09/10/74-17-	22-14.0-	-	7.4-	210-	9-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-45	5072-161.9438-2-27-	0-403791-09/10/74-17-	22-13.8-	-	7.2-	300-	0-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
02-45	5416-161.8527-2-27-	0-403792-09/10/74-17-	22-14.6-	-	7.6-	220-	18-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	
02-45	5916-161.8433-2-27-	0-403793-09/10/74-17-	22-13.8-	-	7.6-	220-	9-3-4-4-4-2-3-1-2-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
02-45	5916-161.7277-2-27-	0-403794-09/10/74-17-	22-13.4-	-	7.4-	210-	14-3-4-4-4-2-3-1-2-3-3-2-2-																											

8

[illegible]

APPENDIX B-I (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																		U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCHIMMOMETER (40 ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN ppb
							DATE	HOUR																										
NZ-65	3333-150	5933-2-27	0-403957-08/11/7A	9		14-10.6	-	7.2	110	21-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.83	
NZ-65	3316-150	5966-2-27	0-403958-08/11/7A	9		14-10.6	-	7.2	190	16-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-65	3533-150	5933-2-27	0-403959-08/11/7A	9		14-10.6	-	6.2	54	18-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.09	
NZ-65	3630-150	6233-2-27	0-403960-08/11/7A	9		14-12.6	-	7.4	110	18-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	
NZ-65	4316-150	5733-2-27	0-403961-08/11/7A	9		14-12.6	-	7.4	194	21-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
NZ-65	4133-150	5266-2-27	0-403962-08/11/7A	9		14-13.0	-	7.4	180	4-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
NZ-65	4430-150	6461-2-29	0-403963-08/11/7A	9		14-15.6-C	-	8.3	324	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	
NZ-65	4500-150	6483-2-29	0-403964-08/11/7A	9		14-15.9	-	8.4	35	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
NZ-65	4609-150	3266-2-27	0-403965-08/11/7A	9		14-12.6	-	8.2	470	9-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61	
NZ-65	3900-150	3083-2-27	0-403966-08/11/7A	9		14-12.8	-	7.2	258	4-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.89	
NZ-65	3633-150	2016-2-27	0-403967-08/11/7A	9		15-12.4	-	7.0	215	18-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	
NZ-65	3603-150	3000-2-27	0-403968-08/11/7A	10		15-10.6	-	6.2	50	4-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.67	
NZ-65	3300-150	1893-2-27	0-403969-08/11/7A	10		15-12.8	-	8.4	360	18-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
NZ-65	3239-150	0700-2-27	0-403970-08/11/7A	10		14-12.6	-	7.2	325	28-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39	
NZ-65	3640-150	0433-2-27	0-403971-08/11/7A	10		15-12.6	-	7.0	165	18-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-65	4646-150	0058-2-27	0-403972-08/11/7A	12		14-11.6	-	7.2	194	32-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.14	
NZ-65	4211-150	1000-2-27	0-403973-08/11/7A	12		14-11.8	-	7.8	210	18-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.27	
NZ-65	4144-150	1058-2-27	0-403974-08/11/7A	12		14-11.8	-	7.8	220	9-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21	
NZ-65	4066-150	2063-2-27	0-403975-08/11/7A	12		14-12.6	-	7.8	125	23-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20	
NZ-65	5050-150	1100-2-29	0-403976-08/11/7A	12		14-18.6	-	8.6	35	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07	
NZ-65	5472-150	1600-2-29	0-403977-08/11/7A	12		14-17.8-C	-	7.8	30	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5061-150	2033-2-29	0-403978-08/11/7A	12		14-18.3	-	7.8	30	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	4700-150	2033-2-29	0-403979-08/11/7A	12		14-17.2	-	7.8	27	-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	
NZ-65	4066-150	3000-2-29	0-403980-08/11/7A	12		14-17.2	-	7.8	30	-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
NZ-65	5203-150	3094-2-27	0-403981-08/11/7A	12		14-16.6	-	7.4	40	18-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5100-150	1466-2-29	0-403982-08/11/7A	12		14-12.3	-	6.2	123	-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5050-150	1133-2-29	0-403983-08/11/7A	12		14-13.1-C	-	7.3	130	-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5177-150	4088-2-29	0-403984-08/11/7A	12		14-17.1-C	-	7.7	110	-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	
NZ-65	5250-150	4058-2-29	0-403985-08/11/7A	12		14-16.3	-	8.5	10	-3-6-6-5-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.42	
NZ-65	5800-150	6233-2-27	0-403986-08/11/7A	13		14-12.6	-	7.8	130	18-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	
NZ-65	5600-150	6000-2-27	0-403989-08/11/7A	13		14-12.6	-	7.8	190	4-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
NZ-65	5050-150	5833-2-27	0-403990-08/11/7A	13		14-13.2	-	7.8	210	14-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.51	
NZ-65	4733-150	6027-2-27	0-403991-08/11/7A	13		14-12.6	-	8.8	45	14-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22	
NZ-65	4733-150	5000-2-27	0-403992-08/11/7A	13		14-12.6	-	7.8	125	28-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28	
NZ-65	5166-150	6000-2-27	0-403993-08/11/7A	13		14-13.2	-	8.0	125	23-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	
NZ-65	5027-150	9133-2-27	0-403994-08/11/7A	13		14-12.6	-	7.8	120	16-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.56	
NZ-65	4733-150	8066-2-27	0-403995-08/11/7A	13		17-11.8	-	7.2	215	18-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	
NZ-65	4638-150	9033-2-27	0-403996-08/11/7A	13		14-12.2	-	7.6	180	4-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	
NZ-65	5003-150	9033-2-27	0-403997-08/11/7A	13		17-12.2	-	6.8	85	4-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	
NZ-65	4733-150	8033-2-29	0-403998-08/11/7A	13		17-17.1	-	7.0	51	-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5616-150	9033-2-27	0-403999-08/11/7A	13		17-12.8	-	7.8	110	16-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5614-150	9022-2-27	0-404000-08/11/7A	13		17-13.2	-	8.0	115	9-3-6-5-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5303-150	0216-2-27	0-404001-08/11/7A	13		17-12.6	-	7.8	120	11-3-6-4-6-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	
NZ-65	5527-150	1404-2-27																																

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LAST SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCHILLONMETER (µl ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES
							DATE	HOUR																										
02-65	5348	152.6250	-2-27-	0-403010	08/11/74	14	17-11.8	-	7.2	115	9-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19			
02-65	5144	152.8513	-2-27-	0-403011	08/11/74	14	17	-	7.0	114	2-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.18			
02-65	5404	150.8411	-2-27-	0-403012	08/11/74	14	18-12.4	-	6.8	110	14-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16			
02-65	5875	150.4205	-2-27-	0-403013	08/11/74	14	18-12.5	-	7.2	95	11-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.74			
02-65	5083	161.2205	-2-27-	0-403014	08/11/74	15	15-12.5	-	7.8	90	14-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32			
02-65	4701	161.1466	-2-27-	0-403015	08/11/74	15	15-12.0	-	7.2	71	14-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22			
02-65	4507	161.1427	-2-27-	0-403016	08/11/74	16	15-11.9	-	6.9	53	21-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09			
02-65	4744	161.0146	-2-27-	0-403017	08/11/74	16	15-12.7	-	7.7	40	7-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05			
02-65	5472	161.1058	-2-27-	0-403018	08/11/74	16	15-11.7	-	8.1	37	14-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31			
02-65	5743	161.1058	-2-27-	0-403019	08/11/74	16	14-12.1	-	7.4	33	9-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01			
02-65	5404	161.2211	-2-27-	0-403020	08/11/74	16	14-12.5	-	7.1	82	14-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01			
02-65	5900	161.3144	-2-27-	0-403021	08/11/74	16	15-12.3	-	7.5	49	7-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43			
02-65	5458	161.2408	-2-27-	0-403022	08/11/74	16	14-12.2	-	7.3	69	4-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48			
02-65	5627	161.3433	-2-27-	0-403023	08/11/74	16	14-11.8	-	6.9	48	9-3-7-4-4-2-3-1-2-1-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.49			
02-65	5933	161.3056	-2-27-	0-403024	08/11/74	16	14-12.7	-	7.9	43	4-3-7-4-4-2-																							

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																		U CONCENTRATION											
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCHIMMLOMETER (µl ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DEPTH (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN ppb
							DATE	HOUR																											
02-45	7748	140.3446	2-27	0-403962	08/11/74	19	17-12	0	-	7.2	47	21-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.21			
02-45	7111	140.3555	2-27	0-403963	08/11/74	19	18-11	7	-	7.8	48	30-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01				
02-45	6640	140.4633	2-27	0-403964	08/11/74	19	17-12	3	-	7.0	48	14-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.47				
02-45	6319	140.4641	2-27	0-403965	08/11/74	19	18-11	6	-	7.1	76	25-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48				
02-45	6411	140.3433	2-27	0-403966	08/11/74	19	17-12	8	-	7.4	58	18-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54				
02-45	6458	141.3016	2-27	0-403967	08/11/74	19	17-12	3	-	7.5	84	9-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.36				
02-65	5007	141.3044	2-27	0-403968	08/11/74	19	16-12	0	-	7.4	53	21-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19				
02-65	5125	141.3347	2-27	0-403969	08/11/74	19	15-11	8	-	6.9	58	21-2-7-4-4-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32				
02-65	9701	142.7413	2-27	0-406369	08/28/74	15	12-17	5	-	9.2	80	12-2-7-4-4-2-3-1-1-4-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61				
02-65	9777	142.7858	2-27	0-406370	08/28/74	15	13-16	4	-	9.2	114	19-2-7-4-4-2-3-1-1-4-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.07				
02-65	9513	142.7866	2-27	0-406371	08/28/74	15	13-16	2	-	8.7	87	22-2-7-5-4-2-3-1-1-4-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19				
02-65	9484	142.8441	2-27	0-406372	08/28/74	15	12-16	4	-	9.2	122	16-2-7-4-4-2-3-1-1-4-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.07				
02-65	9475	142.8438	2-27	0-406373	08/28/74	15	12-13	2	-	9.1	911	12-2-7-4-4-2-3-1-1-3-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.36				
02-65	9411	142.9843	2-27	0-406374	08/28/74	15	12-13	0	-	8.8	614	0-2-7-3-4-3-2-1-1-3-4-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.36				
02-65	9444	143.0166	2-27	0-406375	08/28/74	15	12-13	4	-	9.1	542	6																							

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (d/psm)	ROCK TYPE	SEDIMENT COLOR	SEDIMENT TYPE	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPM	U CONCENTRATION
							DATE	HOUR																								
02-45	9444-184	1136-2-27	0-404417-0A/26/7A-12			0-404417-0A/26/7A-12	12-15	12-0					7.0	48	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.10
02-45	9440-150	1101-2-27	0-404418-0A/26/7A-13			0-404418-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.20
02-45	9440-150	1101-2-27	0-404419-0A/26/7A-13			0-404419-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.02
02-45	9440-150	1101-2-27	0-404420-0A/26/7A-13			0-404420-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.01
02-45	9440-150	1101-2-27	0-404421-0A/26/7A-13			0-404421-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.01
02-45	9442-150	1104-2-27	0-404422-0A/26/7A-13			0-404422-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.70
02-45	9442-150	1104-2-27	0-404423-0A/26/7A-13			0-404423-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.24
02-45	9442-150	1104-2-27	0-404424-0A/26/7A-13			0-404424-0A/26/7A-13	13-14	11-6					6.9	40	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	4-7	0.01
 															

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY
LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION												
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLATOR (µi ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES	UNITS IN PPB
02-45	6877-150	6775-2-27	0-406495-08	/27/7A-8	12-11.0-C	-	6.0-	55	3-4-7-4-4-2-2-1-1-3-3-4-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02		
02-45	7509-150	6036-2-27	0-406496-08	/27/7A-8	12-11.6-C	-	6.6-	70	8-4-7-4-4-2-2-1-1-3-3-4-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15		
02-45	8A52-142	3416-2-27	0-406500-08	/27/7A-16	13-14.8-A	-	8.7-	187	19-2-7-3-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25		
02-45	9007-142	3333-2-27	0-406501-08	/27/7A-16	13-14.8-A	-	8.0-	211	12-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.09		
02-45	9263-142	3216-2-27	0-406502-08	/27/7A-16	12-15.0-	-	10.2-	147	12-2-7-4-4-2-2-1-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34		
02-45	9777-142	3494-2-27	0-406503-08	/27/7A-16	12-12.7-	-	7.8-	52	57-2-7-4-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.16		
02-45	9701-142	3263-2-27	0-406504-08	/27/7A-16	12-12.6-	-	7.6-	87	41-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19		
02-45	9800-142	1474-2-27	0-406505-08	/27/7A-17	12-9.6-	-	7.3-	75	25-2-7- - - -2-2-2-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07		
02-45	9701-142	1125-2-27	0-406506-08	/27/7A-17	12-10.0-	-	7.9-	82	32-2-7-4-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.07		
02-45	9319-142	1527-2-27	0-406507-08	/27/7A-17	13-12.0-	-	7.8-	114	19-2-7-4-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.22		
02-45	9416-142	1250-2-27	0-406508-08	/27/7A-17	13-12.6-	-	7.5-	77	12-2-7-4-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13		
02-45	9041-142	1430-2-27	0-406509-08	/27/7A-17	12-11.2-	-	8.1-	50	18-2-7-4-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10		
02-45	9111-142	1250-2-27	0-406510-08	/27/7A-17	13-11.2-	-	7.6-	72	19-2-7-5-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.25		
02-45	8444-142	1091-2-27	0-406511-08	/27/7A-17	12-12.0-	-	7.6-	60	22-2-7-5-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26		
02-45	8341-142	1500-2-27	0-406512-08	/27/7A-17	12-12.3-	-	7.7-	74	28-2-7-4-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.28		
02-45	8016-142	1433-2-27	0-406513-08	/27/7A-17	14-12.6-	-	7.6-	127	19-2-7-5-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39		
02-45	8013-142	1250-2-27	0-406514-08	/27/7A-17	14-10.6-	-	7.8-	211	9-2-7-5-4-2-2-2-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17		
02-45	7428-142	0472-2-27	0-406515-08	/27/7A-17	13-11.6-	-	8.1-	97	3-2-7-5-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08		
02-45	7716-142	1469-2-27	0-406516-08	/27/7A-17	13-11.1-	-	7.7-	222	6-2-7- - - - - - - - - - - - -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17		
02-45	7341-142	1033-2-27	0-406517-08	/27/7A-17	13-11.7-	-	7.6-	71	6-2-7-5-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31		
02-45	7341-142	0055-2-27	0-406518-08	/27/7A-17	13-9.0-	-	7.6-	114	3-2-7-5-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.45		
02-45	6923-142	0025-2-27	0-406519-08	/27/7A-17	13-11.7-	-	7.0-	171	22-2-7-5-4-2-2-2-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.33		
02-45	6923-142	1300-2-27	0-406520-08	/27/7A-18	13-11.6-	-	7.7-	160	19-2-7-5-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.46		
02-45	6849-142	2233-2-27	0-406521-08	/27/7A-18	13-11.2-	-	7.6-	147	6-2-7-4-4-2-2-2-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.54		
02-45	7241-142	2769-2-27	0-406522-08	/27/7A-18	12-13.7-	-	8.5-	154	19-2-7-3-4-2-2-1-1-3-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43		
02-45	7600-142	2041-2-27	0-406523-08	/27/7A-18	12-13.6-	-	8.0-	210	9-2-7-3-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.32		
02-45	8004-142	3222-2-27	0-406524-08	/27/7A-18	12-13.0-	-	9.4-	127	28-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13		
02-45	8041-142	3466-2-27	0-406525-08	/27/7A-18	12-14.1-	-	9.4-	214	25-2-7-5-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15		
02-45	7741-142	3841-2-27	0-406526-08	/27/7A-18	12-13.7-	-	8.4-	222	6-2-7-4-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.37		
02-45	7346-142	3043-2-27	0-406527-08	/27/7A-18	12-14.2-	-	9.1-	117	25-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13		
02-45	6925-142	3764-2-27	0-406528-08	/27/7A-18	12-14.0-	-	8.8-	94	12-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20		
02-45	6725-142	4277-2-27	0-406529-08	/27/7A-18	12-14.0-	-	8.3-	211	3-2-7-4-4-2-2-1-1-3-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.13		
02-45	7358-142	6098-2-27	0-406530-08	/27/7A-18	12-13.6-	-	9.2-	118	19-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.15		
02-45	7546-142	6450-2-27	0-406531-08	/27/7A-18	11-13.9-	-	8.4-	124	3-2-7-3-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.48		
02-45	8111-142	6030-2-27	0-406532-08	/27/7A-18	13-14.0-	-	10.1-	70	16-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.34		
02-45	7993-142	6000-2-27	0-406533-08	/27/7A-18	12-14.2-	-	9.6-	167	9-2-7-5-4-2-2-1-1-3-3-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.43		
02-45	7897-142	5450-2-27	0-406534-08	/27/7A-18	12-13.8-	-	8.7-	154	6-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39		
02-45	7708-142	5416-2-27	0-406535-08	/27/7A-18	12-14.6-	-	8.4-	187	19-2-7-5-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.81		
02-45	6705-142	5461-2-27	0-406536-08	/27/7A-18	13-14.1-	-	9.1-	137	16-2-7-5-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.59		
02-45	8048-142	6493-2-27	0-406537-08	/27/7A-18	13-14.8-	-	8.2-	144	24-2-7-5-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.39		
02-45	7705-142	6527-2-27	0-406538-08	/27/7A-18	13-14.1-	-	8.0-	146	25-2-7-3-4-2-2-1-1-4-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.77		
02-45	7694-142	6458-2-27	0-406539-08	/27/7A-18	12-14.3-	-	9.3-	157	12-2-7-5-4-2-2-1-1-3-4-3-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.41		
02-45	8100-142	7000-2-27	0-406540-08	/27/7A-18	12- - - -	-	7.7-	140	6-2-7-5-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.89		
02-45	7996-142	7019-2-27	0-406541-08	/27/7A-18	12- - - -	-	7.2-	147	3-2-7-5-4-2-2-2-1-4-4-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.17		
02-45	7616-142	7408-2-27	0-406542-08	/27/7A-18	13- - - -	-	7.7-	127	12-2-7-4-4-2-2-2-1-3-3-2-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06		
02-45	6993-142	8116-2-29	0-406543-08	/27/7A-19	12-15.0-	-	9.1-</																												

APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY
LASL Urcium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER				TIME SAMPLED				LAST SAMPLE NUMBER AND FIELD DATA				U CONCENTRATION																							
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (d/p)	ROCK TYPE	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN pop			
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	0400000-08/29/74-19	12-14.0	12-14.0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02-65	77400-143	0000-2-29	0400000-08/29/74-19	0400																															

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX B-1 (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

[illegible]

APPENDIX B-I (continued). ACIDIFIED WATER SAMPLES ANALYZED BY FLUOROMETRY

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION							
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPM
							DATE	HOUR																									
02-45	3607-141	4003-2-27-	0-400067-00/10/74-17-	17-11.2-	-	8.0-	141-	22-2-7-5-4-2-2-1-1-3-4-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	
02-65	4200-141	4002-2-27-	0-400068-00/10/74-17-	17-11.4-	-	8.4-	144-	3-2-7-3-4-2-2-1-1-2-4-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26

APPENDIX B-II. ACIDIFIED WATER SAMPLES ANALYZED BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION							
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	WATER SAMPLES UNITS IN PPM
							DATE	HOUR																									
02-45	4500-144	4014-2-27-	0-402131-07/17/74-18-	15-13.2-	-	8.4-	110-	6-1-1-5-4-2-2-1-1-1-4-4-1-1-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70	
02-45	2139-144	4008-2-27-	0-402171-07/19/74-12-	24-12.2-	-	8.7-	70-	1-1-7-4-4-2-2-1-1-3-4-3-2-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-65	0000-144	4013-2-27-	0-402630-07/21/74-10-	15-16.8-C-	-	7.2-	174-	9-7-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.50
02-45	3941-141	4000-2-27-	0-402901-07/21/74-15-	14-10.8-	-	7.0-	150-	6-2-7-4-4-2-2-1-1-2-4-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.00
02-65	2400-141	4016-2-27-	0-403008-00/11/74-16-	23-14.7-	-	7.8-	250-	3-2-7-4-4-2-2-1-1-2-4-3-1-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
02-45	7222-141	4033-2-27-	0-403162-00/12/74-14-	14-10.4-	-	7.4-	100-	10-2-7-4-4-2-2-1-1-2-4-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.00
02-45	2010-144	4033-2-29-	0-403164-00/12/74-15-	15-14.7-	-	7.6-	30-	2-7-4-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.90
02-65	3627-152	4033-2-27-	0-403255-00/14/74-8-	10-12.0-	-	8.0-	10-	0-2-7-4-4-2-2-1-1-2-4-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70
02-65	1000-142	4006-2-27-	0-403337-00/14/74-10-	17-11.0-C-	-	50-	14-	1-7-4-4-4-2-2-1-1-2-3-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.50
02-45	4001-141	4001-2-27-	0-403367-00/14/74-10-	14-10.4-	-	7.2-	60-	23-2-7-4-4-2-2-1-1-2-3-3-3-1-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.00
02-65	7101-141	4058-2-29-	0-403494-00/14/74-13-	24-17.4-	-	7.4-	10-	-3-0-4-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
02-45	5414-140	4014-2-27-	0-403500-00/14/74-14-	24-13.4-	-	7.8-	100-	0-2-4-4-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-45	0400-140	4033-2-29-	0-403510-00/14/74-14-	24-16.2-C-9-	-	7.1-	0-	-3-0-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-65	3441-140	4033-2-27-	0-403547-00/14/74-16-	23-10.2-	-	150-	14-	1-2-7-4-4-2-2-1-1-2-4-1-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.40
02-45	0048-140	4056-2-29-	0-403560-00/17/74-14-	14-11.1-C-9-	-	8.4-	77-	-1-4-4-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-65	2744-141	4013-2-27-	0-403592-00/17/74-7-	10-5.0-	-	8.0-	00-	0-2-7-4-4-2-2-2-2-3-3-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
02-45	1041-141	4000-2-27-	0-403594-00/19/74-7-	11-10.2-	-	7.8-	100-	0-2-7-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70
02-45	4525-140	4033-2-27-	0-403643-00/11/74-0-	14-10.2-	-	7.8-	104-	7-2-4-4-4-2-2-1-1-2-3-2-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-45	4000-140	4000-2-27-	0-403644-00/11/74-0-	14-12.0-	-	7.8-	210-	14-2-4-4-4-2-2-1-1-2-1-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-45	5546-140	4046-2-29-	0-403680-00/11/74-13-	10-16.6-	-	7.4-	20-	-3-0-4-4-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-45	5303-154	4000-2-27-	0-403707-00/11/74-13-	10-12.0-	-	7.4-	90-	10-2-4-4-4-2-2-1-1-2-1-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70
02-45	0073-141	4052-2-27-	0-403708-00/17/74-16-	13-12.0-	-	8.2-	220-	10-2-7-4-4-2-2-1-1-3-3-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70
02-45	0070-142	4006-2-27-	0-403709-00/17/74-16-	13-13.7-	-	0.9-	147-	32-2-7-4-4-4-2-2-1-1-4-4-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.70
02-45	0043-142	4008-2-27-	0-403700-00/17/74-16-	14-14.4-	-	0.9-	145-	12-2-7-4-4-4-2-2-1-1-4-4-2-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-45	7433-147	4000-2-27-	0-403700-00/17/74-9-	14-11.0-C-	-	7.1-	120-	3-4-7-4-4-2-2-1-1-1-3-3-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.30
02-45	6175-142	4046-2-27-	0-403700-00/17/74-6-	10-10.4-C-	-	6.0-	00-	1-4-7-4-4-2-2-1-1-1-3-3-4-2-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-45	4225-142	7000-2-27-	0-403700-00/17/74-6-	10-11.0-	-	7.0-	00-	0-4-7-5-4-2-2-1-1-1-3-1-4-2-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-45	4244-152	4066-2-27-	0-403700-00/17/74-6-	11-10.0-	-	6.4-	00-	3-4-7-4-4-2-2-1-1-1-3-3-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-45	7019-140	4016-2-27-	0-403700-00/17/74-6-	10-11.0-	-	6.4-	70-	4-4-7-4-4-2-2-1-1-1-3-3-4-2-	-2-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-65	0011-140	4066-2-27-	0-403700-00/17/74-7-	11-10.0-C-	-	7.0-	00-	4-4-7-4-4-2-2-1-1-1-3-3-4-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-45	0106-140	4066-2-27-	0-403700-00/19/74-17-	14-11.4-	-	8.1-	214-	0-2-7-4-4-2-2-1-1-1-3-4-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.20
02-65	0103-140	4000-2-27-	0-403700-00/19/74-17-	14-12.2-	-	7.2-	50-	0-2-7-4-4-2-2-1-1-1-4-4-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
02-65	0070-141	4000-2-27-	0-403700-00/10/74-11-	12-9.7-	-	8.2-	150-	10-2-7-4-4-2-2-1-1-3-4-2-3-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.10
02-65	0001-141	4050-2-27-	0-403700-00/10/74-14-	14-11.2-	-	0.9-	124-	14-2-7-4-4-2-2-1-1-1-3-3-2-	-1-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.90

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing105

[illegible]

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER				LASL SAMPLE NUMBER AND FIELD DATA										U CONCENTRATION																				
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LAST SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILLOMETER (cpm)	ROCK TYPE	ROCK COLOR	SEGMENT TYPE	SEGMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES UNITS IN SAMPLE
							DATE	HOUR																										
02-55	6472-145	1072-2-15				0-402551-07/25/74-12	12		14							13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.50		
02-55	6052-145	2941-2-12				0-402551-07/25/74-12	12		14	12.4-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	6010-145	2936-2-12				0-402552-07/25/74-12	12		14	12.2-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.20	
02-55	6119-145	3750-2-15				0-402553-07/25/74-12	12		14							6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.90	
02-55	6028-145	3425-2-12				0-402554-07/25/74-13	13		14	12.0-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-55	6543-145	4750-2-12				0-402555-07/25/74-13	13		14	11.8-C						3-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	6543-145	5458-2-12				0-402556-07/25/74-13	13		14							9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	6541-145	4204-2-12				0-402557-07/25/74-13	13		14							6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	
02-55	6543-145	3472-2-12				0-402558-07/25/74-13	13		14	10.2-C						16-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70	
02-55	6513-145	5533-2-12				0-402559-07/25/74-13	13		14	11.2-C						9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.40	
02-55	6123-145	6916-2-12				0-402560-07/25/74-13	13		14	11.4-C						3-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	6080-145	7430-2-12				0-402561-07/25/74-13	13		14	11.4-C						0-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	6548-145	7777-2-12				0-402562-07/25/74-13	13		14	10.8-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	5546-145	7583-2-12				0-402563-07/25/74-13	13		14	10.8-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70	
02-55	5444-145	8777-2-12				0-402564-07/25/74-13	13		14	11.4-C						9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.90	
02-55	6080-145	6466-2-12				0-402565-07/25/74-14	14		14	10.4-C						3-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.40	
02-55	5175-145	1527-2-15				0-402566-07/25/74-14	14		14							0-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.40	
02-55	5375-145	1627-2-15				0-402567-07/25/74-14	14		14							9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	5541-145	0175-2-12				0-402568-07/25/74-14	14		14	8.4-C						9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.20	
02-55	5847-145	0480-2-12				0-402569-07/25/74-14	14		14	7.4-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	6041-145	1208-2-12				0-402570-07/25/74-14	14		14	10.8-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70	
02-55	6100-145	0722-2-12				0-402571-07/25/74-14	14		14	11.2-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-55	8152-145	4139-2-12				0-402572-07/26/74-17	10		10	10.1-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-55	8291-145	7058-2-12				0-402573-07/26/74-17	10		10	10.0-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-55	8291-145	9464-2-15				0-402574-07/26/74-17	18		18							6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	7119-145	0164-2-12				0-402575-07/26/74-18	18		18	9.7-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	7825-145	0124-2-12				0-402576-07/26/74-18	19		19	9.5-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	8172-145	0275-2-12				0-402577-07/26/74-18	19		19	10.3-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-55	7077-145	1450-2-12				0-402578-07/26/74-18	18		18	12.2-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.70	
02-55	7452-145	3201-2-12				0-402579-07/26/74-18	18		18	9.1-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.80	
02-55	8011-145	2458-2-12				0-402580-07/26/74-18	17		17	9.0-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	8101-145	3183-2-12				0-402581-07/26/74-18	17		17	10.1-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-55	8037-145	3200-2-13				0-402582-07/26/74-18	17		17	8.7-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	
02-55	0250-145	3164-2-12				0-402584-07/26/74-19	17		17	9.7-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-55	0743-145	2400-2-12				0-402585-07/26/74-19	19		17	10.0-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	
02-55	0745-145	2400-2-12				0-402586-07/26/74-19	19		17	10.0-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.00	
02-55	0755-145	3188-2-13				0-402587-07/26/74-19	19		19	17.4-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.30	
02-55	0914-145	0927-2-12				0-402604-07/26/74-20	18		18	11.2-C						19-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17.10	
02-55	0947-145	4800-2-12				0-402605-07/26/74-20	18		17	12.1-C						13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-55	0933-145	0833-2-12				0-402606-07/26/74-20	17		17	12.1-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-55	0855-144	0833-2-15				0-402607-07/26/74-22	16		16							13-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	0848-144	0830-2-12				0-402608-07/26/74-22	16		16							6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-55	0841-144	0872-2-12				0-402609-07/26/74-22	17		16	8.4-C						9-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.20	
02-55	0937-145	1455-2-12				0-402610-07/26/74-20	12		12	7.8-C						6-2-7-4-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.10	
02-55	0924-145	0475-2-12				0-402611-07/26/74-20	13		13																									

APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER					LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION													
STATE	LATITUDE	LONGITUDE	DOT LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (µmho/cm)	SCINTILOMETER (µl/ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES	UNITS IN ppm
							DATE	HOUR																											
02-65	9458-145	0827-2-12	0-402452	07/27/74	1A	20-12.7	-	7.6	70	16-2-7-4-A-2-3-1-2-4-3-2-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.80			
02-65	9701-145	1277-2-13	0-402453	07/27/74	1A	22-17.2	-	8.6	58	-2-7-4-A-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50			
02-65	9977-144	8007-2-13	0-402490	07/27/74	19	19-18.0	-	7.7	57	-2-7-4-A-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50			
02-65	9365-144	6466-2-12	0-402491	07/27/74	19	18-11.3	-	7.6	140	16-2-7-4-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60			
02-65	9152-144	7003-2-12	0-402492	07/27/74	19	19-12.1	-	7.2	180	13-2-7-4-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30			
02-65	6134-144	7005-2-12	0-402493	07/28/74	13	15-11.0	-	7.6	314	13-2-7-4-A-2-3-1-2-3-4-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50			
02-65	5865-144	7777-2-12	0-402494	07/28/74	13	15-10.8	-	7.6	365	6-2-7-4-A-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.60			
02-65	6365-144	6438-2-12	0-402495	07/28/74	13	12-12.6	-	8.6	400	19-2-7-4-A-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90			
02-65	5507-164	6416-2-12	0-402496	07/28/74	14	12-11.4	-	8.6	325	0-2-7-4-A-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50			
02-65	5016-144	6111-2-12	0-402497	07/28/74	14	12-11.4	-	7.6	320	13-2-7-4-A-2-3-1-2-3-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30			
02-65	6365-144	5000-2-15	0-402498	07/28/74	14	12-	-	-	-	13-2-7-4-A-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.50		
02-65	6507-144	6016-3-15	0-402499	07/28/74	14	12-	-	-	-	6-2-7-4-A-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.30		
02-65	5638-144	5597-2-15	0-402700	07/28/74	14	11-	-	-	-	9-2-7-4-A-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20		
02-65	5086-144	5222-2-12	0-402701	07/28/74	14	11-12.0	-	7.6	405	3-2-7-4-A-2-3-1-2-4-3-3-3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.90		
02-65	6411-144	6100-2-12	0-402702	07/28/74	14	10-11.6	-	7.6	350	13-2-7-4-A-2-3-1-2-4-3-3-3</																									

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing[illegible]

APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION								
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES	UNITS IN ppm
							DATE	HOUR																										
02-65	1423-150	0116-2-12	0-403686-08	09/7A-19	14-12.4	-	-	6.8	220	32-3-6-5-A-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10		
02-65	1517-150	1114-2-12	0-403687-08	09/7A-19	14-10.8	-	-	7.2	105	7-3-6-5-A-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	1116-150	1066-2-12	0-403688-08	09/7A-19	14-11.2	-	-	7.2	180	18-3-6-5-A-2-3-1-2-1-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	0941-150	2600-2-12	0-403689-08	09/7A-19	15-10.6	-	-	7.8	310	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	1475-150	2333-2-12	0-403690-08	09/7A-19	15-10.2	-	-	7.2	220	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	1458-150	3208-2-12	0-403691-08	09/7A-19	15-10.2	-	-	7.8	225	18-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	1100-150	3133-2-12	0-403692-08	09/7A-19	15-10.8	-	-	8.0	210	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	1200-150	6393-2-12	0-403693-08	09/7A-19	15-9.8	-	-	8.0	210	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	1452-150	3033-2-12	0-403694-08	09/7A-19	15-10.2	-	-	7.2	265	0-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	1500-150	5183-2-12	0-403695-08	09/7A-19	15-10.6	-	-	7.8	210	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	1049-150	5402-2-12	0-403696-08	09/7A-19	15-10.8	-	-	7.8	210	9-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	1050-150	4555-2-12	0-403697-08	09/7A-19	15-10.8	-	-	7.2	310	9-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.40	
02-65	1550-150	6355-2-12	0-403698-08	09/7A-19	15-11.2	-	-	7.6	110	4-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.80	
02-65	1383-150	7183-2-12	0-403699-08	09/7A-19	14-10.8	-	-	7.0	220	9-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.80	
02-65	0906-150	7277-2-12	0-403700-08	09/7A-19	14-10.8	-	-	7.8	225	14-3-6-5-A-2-3-1-2-3-3-3-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
02-65	2513-160	3875-2-12	0-403701-08	10/7A-19	7-12-11.2	-	-	7.1	32	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-65	2709-160	4466-2-12	0-403702-08	10/7A-19	7-13-11.0	-	-	6.8	40	4-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	2916-160	2166-2-12	0-403704-08	10/7A-19	7-14-12.7	-	-	7.8	40	9-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-65	2833-160	1450-2-12	0-403705-08	10/7A-19	7-14-11.7	-	-	7.6	53	0-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	2544-160	1433-2-12	0-403706-08	10/7A-19	7-14-12.2	-	-	7.1	48	18-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	2611-160	0513-2-12	0-403707-08	10/7A-19	7-15-10.3	-	-	7.0	25	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.30	
02-65	2783-160	0656-2-12	0-403708-08	10/7A-19	7-14-	-	-	7.8	38	14-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	2747-150	9827-2-12	0-403709-08	10/7A-19	8-15-11.8	-	-	6.0	47	16-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	2950-150	8133-2-12	0-403710-08	10/7A-19	8-15-11.0	-	-	8.1	57	9-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	2958-150	7180-2-12	0-403711-08	10/7A-19	8-14-12.3	-	-	6.0	31	18-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
02-65	2933-150	4450-2-12	0-403712-08	10/7A-19	8-13-12.0	-	-	7.2	38	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.20	
02-65	2683-150	7133-2-12	0-403713-08	10/7A-19	8-14-12.6	-	-	7.6	28	9-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
02-65	2277-150	6700-2-12	0-403714-08	10/7A-19	8-14-11.2	-	-	7.7	62	4-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
02-65	1833-150	7116-2-12	0-403715-08	10/7A-19	8-14-10.7	-	-	7.2	30	18-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-65	2033-150	6388-2-12	0-403716-08	10/7A-19	8-13-11.1	-	-	7.0	40	2-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.10	
02-65	2080-150	5616-2-12	0-403717-08	10/7A-19	8-14-11.3	-	-	7.8	52	9-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-65	2116-150	4441-2-12	0-403718-08	10/7A-19	8-15-11.0	-	-	7.8	33	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.60	
02-65	2033-150	3466-2-12	0-403719-08	10/7A-19	8-14-11.2	-	-	7.1	58	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
02-65	2150-150	2500-2-12	0-403720-08	10/7A-19	8-14-11.3	-	-	7.7	35	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-65	2411-150	3527-2-12	0-403721-08	10/7A-19	8-15-12.0	-	-	7.8	43	0-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.50	
02-65	2516-150	4533-2-12	0-403722-08	10/7A-19	8-15-11.8	-	-	7.0	33	18-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.70	
02-65	2450-150	2146-2-12	0-403723-08	10/7A-19	8-14-12.7	-	-	7.6	48	16-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.60	
02-65	2255-150	1555-2-12	0-403724-08	10/7A-19	8-14-11.7	-	-	7.6	37	11-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.70	
02-65	2310-150	0966-2-12	0-403725-08	10/7A-19	8-14-11.1	-	-	7.7	32	9-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.60	
02-65	2044-150	0200-2-12	0-403726-08	10/7A-19	8-14-10.7	-	-	6.7	26	14-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	2444-150	0166-2-12	0-403727-08	10/7A-19	8-14-11.3	-	-	7.6	32	7-2-7-6-A-2-3-1-2-4-3-2-2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.00	
02-65	1966-15																																	

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

STATE	DOE SAMPLE NUMBER			LASL SAMPLE NUMBER AND FIELD DATA	U CONCENTRATION			
	LATITUDE	LONGITUDE	DOE LAB SAMPLE TYPE REPLICATE	TIME SAMPLED DATE HOUR AIR TEMPERATURE WATER TEMPERATURE COMMENTS SPECIAL MEASUREMENTS pH SPECIFIC CONDUCTANCE (µmho/cm) SCINTILLOMETER (dpm) ROCK TYPE ROCK COLOR SEDIMENT TYPE SEDIMENT COLOR WATER FLOW WATER LEVEL WATER COLOR STREAM CHANNEL VEGETATION TYPE VEGETATION DENSITY RELIEF WEATHER OWNERSHIP CONTAMINANTS WELL TYPE WELL DIAMETER (INCHES) WELL DEPTH (FEET) WATER DEPTH (FEET) SEDIMENT SAMPLES UNITS IN ppm				
02-65	4479-150	9033-2-12	0-403994-08/11/7A-13	18-12.2	7.6	180	4-3-6-6-2-3-1-2-1-3-3-2	3.10
02-65	5093-152	9233-2-12	0-403997-08/11/7A-13	17-12.2	7.6	85	4-3-6-6-2-3-1-2-1-3-3-2	3.20
02-65	4731-150	8983-2-13	0-403998-08/11/7A-13	17-17.1	7.0	51	3-6-6-6-2-3-1-1-3-3-2	3.10
02-65	5416-150	8933-2-12	0-403999-08/11/7A-13	17-12.0	7.0	110	16-3-6-6-2-3-1-2-1-3-3-2	3.60
02-65	5416-152	9022-2-12	0-403999-08/11/7A-13	17-13.2	8.0	115	9-3-6-6-2-3-1-2-1-3-3-2	3.60
02-65	5393-152	9216-2-12	0-403999-08/11/7A-13	17-12.6	7.6	120	11-3-6-6-2-3-1-2-3-3-3-2	3.30
02-65	5527-150	1496-2-12	0-403999-08/11/7A-14	18-12.8	7.6	225	14-3-6-6-2-3-1-2-3-3-3-2	5.40
02-65	5346-152	2266-2-12	0-403999-08/11/7A-14	18-12.6	6.0	210	9-3-6-6-2-3-1-2-3-3-3-2	3.40
02-65	5393-152	3066-2-12	0-403999-08/11/7A-14	18-12.6	7.2	195	14-3-6-6-2-3-1-2-3-3-3-2	3.60
02-65	5127-150	2033-2-12	0-403999-08/11/7A-14	18-12.6	7.6	200	9-3-6-6-2-3-1-2-3-3-3-2	3.10
02-65	5422-150	4708-2-12	0-403999-08/11/7A-14	18-12.6	7.0	180	14-3-6-6-2-3-1-2-1-3-3-2	2.90
02-65	5472-152	5708-2-12	0-403999-08/11/7A-14	18	7.8	125	14-3-6-6-2-3-1-2-1-3-3-2	3.20
02-65	5152-152	5196-2-12	0-403999-08/11/7A-14	18	8.0	85	9-3-6-6-2-3-1-2-1-3-3-2	7.90
02-65	5222-150	6459-2-12	0-403999-08/11/7A-14	18-12.6	7.0	105	14-3-6-6-2-3-1-2-1-3-3-2	2.70
02-65	5398-150	5250-2-12	0-403999-08/11/7A-14	17-11.8	7.6	115	9-3-6-6-2-3-1-2-1-3-3-2	2.80
02-65	5146-152	8513-2-12	0-403999-08/11/7A-14	17	7.0	114	2-3-6-6-2-3-1-2-1-3-3-2	2.80
02-65	5406-152	8411-2-12	0-403999-08/11/7A-14	18-12.6	6.8	110	14-3-6-6-2-3-1-2-1-3-3-2	3.00
02-65	5475-152	8905-2-12	0-403999-08/11/7A-14	18-12.8	7.2	95	11-3-6-6-2-3-1-2-1-3-3-2	2.80
02-65	5476-161	2305-2-12	0-403999-08/11/7A-15	15-12.5	7.8	90	14-3-7-6-6-2-3-1-2-4-3-2-2	3.30
02-65	4791-161	1466-2-12	0-403999-08/11/7A-15	15-12.0	7.2	71	14-3-7-6-6-2-3-1-2-4-3-2-2	24.00
02-65	4507-161	1027-2-12	0-403999-08/11/7A-16	15-11.0	6.0	53	21-3-7-6-6-2-3-1-2-4-3-2-2	22.30
02-65	4736-161	0166-2-12	0-403999-08/11/7A-16	15-12.7	7.7	40	7-3-7-6-6-2-3-1-2-4-3-2-2	21.40
02-65	5472-161	1050-2-12	0-403999-08/11/7A-16	15-11.7	8.1	37	14-3-7-6-6-2-3-1-2-4-3-2-2	10.30
02-65	5763-161	1058-2-12	0-403999-08/11/7A-16	14-12.1	7.6	33	9-3-7-6-6-2-3-1-2-4-3-2-2	10.10
02-65	5406-161	2311-2-12	0-403999-08/11/7A-16	14-12.5	7.1	82	16-3-7-6-6-2-3-1-2-4-3-2-2	11.00
02-65	5407-161	3146-2-12	0-403999-08/11/7A-16	15-12.3	7.6	48	7-3-7-6-6-2-3-1-2-4-3-2-2	12.00
02-65	5459-161	2998-2-12	0-403999-08/11/7A-16	14-12.2	7.3	49	4-3-7-6-6-2-3-1-2-4-3-2-2	4.30
02-65	5427-161	3873-2-12	0-403999-08/11/7A-16	14-11.9	6.0	43	9-3-7-6-6-2-3-1-2-4-3-2-2	3.50
02-65	5073-161	3065-2-12	0-403999-08/11/7A-16	14-12.7	7.0	42	4-3-7-6-6-2-3-1-2-4-3-2-2	4.70
02-65	6200-161	4100-2-12	0-403999-08/11/7A-16	14-12.5	7.2	71	21-3-7-6-6-2-3-1-2-4-3-2-2	4.00
02-65	6201-161	3013-2-12	0-403999-08/11/7A-16	14-12.3	7.0	56	18-3-7-6-6-2-3-1-2-4-3-2-2	3.80
02-65	6708-161	4083-2-12	0-403999-08/11/7A-16	14-11.8	7.3	56	14-3-7-6-6-2-3-1-2-4-3-2-2	3.60
02-65	5402-161	5500-2-12	0-403999-08/11/7A-16	15-12.1	8.2	65	2-3-7-6-6-2-3-1-2-4-3-2-2	3.40
02-65	6425-161	5430-2-12	0-403999-08/11/7A-16	14-12.1	7.8	59	16-3-7-6-6-2-3-1-2-4-3-2-2	4.10
02-65	7097-161	5198-2-12	0-403999-08/11/7A-16	15-12.3	7.3	48	14-3-7-6-6-2-3-1-2-4-3-2-2	25.40
02-65	7196-161	4761-2-12	0-403999-08/11/7A-16	15-11.7	7.1	59	21-3-7-6-6-2-3-1-2-4-3-2-2	27.10
02-65	7555-161	5166-2-12	0-403999-08/11/7A-16	15-12.3	7.2	63	14-3-7-6-6-2-3-1-2-4-3-2-2	30.70
02-65	7561-161	4375-2-12	0-403999-08/11/7A-16	14-12.5	7.3	60	16-3-7-6-6-2-3-1-2-4-3-2-2	27.50
02-65	8055-161	3777-2-12	0-403999-08/11/7A-16	15-12.8	7.3	34	4-3-7-6-6-2-3-1-2-4-3-2-2	5.40
02-65	8196-161	5402-2-12	0-403999-08/11/7A-16	15-12.8	7.2	34	11-3-7-6-6-2-3-1-2-4-3-2-2	5.30
02-65	8520-161	5708-2-12	0-403999-08/11/7A-16	18-12.7	8.1	73	16-3-7-6-6-2-3-1-2-4-3-2-2	5.50
02-65	8561-161	4458-2-12	0-403999-08/11/7A-17	18-13.2	8.0	71	18-3-7-6-6-2-3-1-2-4-3-2-2	5.00
02-65	8573-161	3777-2-12	0-403999-08/11/7A-17	18-12.6	6.0	73	16-3-7-6-6-2-3-1-2-4-3-2-2	5.60
02-65	9000-161	3466-2-12	0-403999-08/11/7A-17	18-13.5	7.6	62	14-3-7-6-6-2-3-1-2-4-3-2-2	11.90
02-65	8958-161	4466-2-12	0-403999-08/11/7A-17	18-12.8	7.1	55	11-3-7-6-6-2-3-1-2-4-3-2-2	3.20
02-65	8916-161	5500-2-12	0-403999-08/11/7A-17	18-12.5	7.6	66	18-3-7-6-6-2-3-1-2-4-3-2-2	9.30
02-65	9228-161	3016-2-12	0-403999-08/11/7A-17	18-12.0	7.2	71	7-3-7-6-6-2-3-1-2-4-3-2-2	9.60
02-65	9277-161	4250-2-12	0-403999-08/11/7A-17	18-12.3	7.2	67	11-3-7-6-6-2-3-1-2-4-3-2-2	9.70
02-65	9416-161	5708-2-12	0-403999-08/11/7A-17	18-13.2	7.0	45	9-3-7-6-6-2-3-1-2-4-3-2-2	5.80
02-65	9946-161	5750-2-12	0-403999-08/11/7A-17	18-12.1	7.6	54	14-3-7-6-6-2-3-1-2-4-3-2-2	4.60
02-65	9946-161	4755-2-12	0-403999-08/11/7A-17	18-12.7	7.1	63	9-3-7-6-6-2-3-1-2-4-3-2-2	4.60

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

[illegible]

DOE SAMPLE NUMBER						LAST SAMPLE NUMBER AND FIELD DATA																				U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED			AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE ($\mu\text{mho/cm}$)	SCINTILLIMETER (40 ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES	UNITS IN ppm
02-65	0944-161	3708-2-12				0-403740-09/11/7A-17				10-11.7				7.8	47		2-2-7-4-A-2-3-1-2-4-3-2-2																			4.60
02-65	0947-161	0761-2-12				0-403960-09/11/7A-17				12-12.2				7.4	21		7-2-7-4-A-2-3-1-2-4-3-2-2																			3.90
02-65	0752-161	0250-2-12				0-403950-09/11/7A-18				14-11.0				7.3	25		4-2-7-4-A-2-3-1-2-4-3-2-2																			3.60
02-65	0560-161	0872-2-12				0-403951-09/11/7A-18				14-12.5				7.4	18		0-2-7-4-A-2-3-1-2-4-3-2-2																			3.50
02-65	0333-161	0346-2-12				0-403952-09/11/7A-18				17-12.9				7.2	25		4-2-7-4-A-2-3-1-2-4-3-2-2																			3.40
02-65	0807-161	0933-2-12				0-403953-09/11/7A-18				17-							9-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	0907-161	0472-2-12				0-403954-09/11/7A-18				17-12.4				7.5	30		4-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	0831-161	0988-2-12				0-403955-09/11/7A-18				17-12.5				7.9	31		4-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	0875-161	7041-2-12				0-403957-09/11/7A-18				17-11.9				6.0	0		0-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	0853-161	7736-2-12				0-403958-09/11/7A-18				18-12.5				7.4	21		0-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	0855-161	0960-2-12				0-403959-09/11/7A-18				17-12.6				7.0	30		7-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	7736-161	0461-2-12				0-403960-09/11/7A-19				17-12.1				6.3	38		18-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	7250-161	0458-2-12				0-403961-09/11/7A-19				18-12.8				7.4	67		18-2-7-4-A-2-3-1-2-4-3-2-2																			3.00
02-65	7749-161	0386-2-12				0-403962-09/11/7A-19				17-12.0				7.2	43		21-2-7-4-A-2-3-1-2-4-3-2-2																			2.80
02-65	7111-161	0355-2-12				0-403963-09/11/7A-19				18-11.7				7.8	48		30-2-7-4-A-2-3-1-2-4-3-2-2																			2.80
02-65	6688-161	0433-2-12				0-403964-09/11/7A-19				17-12.3				7.0	68		14-2-7-4-A-2-3-1-2-4-3-2-2																			4.50
02-65	6310-161	0441-2-12				0-403965-09/11/7A-19				18-11.4				7.1	78		25-2-7-4-A-2-3-1-2-4-3-2-2																			4.30
02-65	6489-161	3916-2-12				0-403967-09/11/7A-19				17-12.9				7.5	84		9-2-7-4-A-2-3-1-2-4-3-2-2																			4.60
02-65	5097-161	3944-2-12				0-403968-09/11/7A-19				16-12.0				7.4	53		21-2-7-4-A-2-3-1-2-4-3-2-2																			3.50
02-65	5135-161	7347-2-12				0-403969-09/11/7A-19				15-11.9				6.0	58		21-2-7-4-A-2-3-1-2-4-3-2-2																			3.60
02-65	9701-162	7013-2-12				0-404369-09/28/7A-15				12-17.5				9.2	80		12-2-7-4-A-2-3-1-1-4-4-3-2																			4.00
02-65	9777-162	7058-2-12				0-404370-09/28/7A-15				13-16.4				9.2	114		19-2-7-4-A-2-3-1-1-4-4-3-2																			4.50
02-65	9513-162	7566-2-12				0-404371-09/28/7A-15				13-16.2				8.7	97		22-2-7-5-A-2-3-1-1-4-4-3-2																			3.20
02-65	9484-162	8061-2-12				0-404372-09/28/7A-15				12-16.4				9.2	122		16-2-7-4-A-2-3-1-1-4-4-3-2																			3.20
02-65	9475-162	9438-2-12				0-404373-09/28/7A-15				12-13.2				9.3	511		12-2-7-4-A-2-3-1-1-3-4-3-2																			2.90
02-65	9611-162	3543-2-12				0-404374-09/28/7A-15				12-13.0				8.8	614		0-2-7-3-A-2-3-1-1-3-4-3-2																			2.30
02-65	9688-162	0146-2-12				0-404375-09/28/7A-15				12-13.4				9.1	542		6-2-7-3-A-2-3-1-1-3-3-3-2																			4.40
02-65	0472-162	0736-2-12				0-404376-09/28/7A-15				12-13.4				7.9	487		6-2-7-4-A-2-3-1-1-4-4-3-2																			4.00
02-65	0500-162	1466-2-12				0-404377-09/28/7A-15				12-9.7				7.9	180		22-2-7-5-A-2-3-2-1-3-4-3-2																			3.40
02-65	0411-162	1425-2-12				0-404378-09/28/7A-15				12-10.2				7.8	167		4-2-7-5-A-2-3-2-1-3-3-3-2																			3.20
02-65	0513-162	2305-2-12				0-404379-09/28/7A-15				12-10.1				8.1	210		32-2-7-4-A-2-3-2-1-3-4-3-2																			8.40
02-65	0972-162	2000-2-12				0-404380-09/28/7A-16				12-12.9				9.2	514		6-2-7-3-A-2-3-1-1-3-4-3-2																			2.10
02-65	0452-162	2138-2-12				0-404381-09/28/7A-16				12-13.0				9.0	121		12-2-7-5-A-2-3-1-1-3-4-3-2																			5.90
02-65	0819-162	0000-2-12				0-404383-09/28/7A-16				12-13.2				9.2	97		6-2-7-4-A-2-3-1-1-3-4-3-2																			2.20
02-65	0833-162	0452-2-12				0-404384-09/28/7A-16				12-12.9				8.9	222		19-2-7-5-A-2-3-1-1-3-4-3-2																			2.60
02-65	0811-162	0716-2-12				0-404385-09/28/7A-16				12-13.4				8.8	121		28-2-7-4-A-2-3-1-1-3-4-3-2																			2.40
02-65	0808-162	0446-2-12				0-404384-09/28/7A-16				12-12.0				9.2	114		28-2-7-5-A-2-3-1-1-3-4-3-2																			2.10
02-65	0888-162	0955-2-12				0-404387-09/28/7A-16				12-12.0				8.9	124		6-2-7-3-A-2-3-1-1-3-4-3-2																			2.20
02-65	0714-162	7777-2-12				0-404388-09/28/7A-16				12-14.0				10.0	145		32-2-7-4-A-2-3-1-1-4-4-2-2																			2.70
02-65	0848-162	7731-2-12				0-474389-09/28/7A-16				12-15.2				9.4	150		16-2-7-3-A-2-3-1-1-4-4-2-2																			2.70
02-65	0452-162	7630-2-12				0-404390-09/28/7A-16				12-15.8				9.0	144		6-2-7-5-A-2-3-1-1-4-4-2-2																			8.00
02-65	0722-162	7041-2-12				0-404391-09/28/7A-16				12-14.7				9.8	194		12-2-7-4-A-2-3-1-1-3-4-2-2																			2.00
02-65	0208-162	6146-2-12				0-404393-09/28/7A-16				12-14.0				8.9	127		3-2-7-8-A-2-3-1-1-4-4-3-2																			3.10
02-65	0425-162	6483-2-12				0-404394-09/28/7A-16				12-14.0				9.7	122		0-2-7-5-A-2-3-1-1-4-4-3-2																			3.10
02-65	0425-162	5250-2-12				0-404395-09/28/7A-16				12-15.0				9.4	207		51-2-7-4-A-2-3-2-1-1-4-4-2-2																			4.70
02-65	0910-162	0486-2-12				0-404396-09/28/7A-16				13-13.7				9.7	147		32-2-7-4-A-2-3-2-1-1-4-4-2-2																			3.10
02-65	0277-162	0446-2-12				0-404397-09/28/7A-16				12-13.9				10.2	160		6-2-7-4-A-2-3-2-1-1-3-4-3-2																			2.00
02-65	0208-162	3483-2-12				0-404398-09/28/7A-16				12-14.7				8.7	188		22-2-7-4-A-2-3-2-1-1-4-4-2-2																			4.00
02-65	0808-162	3483-2-12				0-404399-09/28/7A-16				14-13.9				9.4	214		6-2-7-3-A-2-3-2-1-1-3-4-3-2																			3.00
02-65	0813-162	3808-2-12				0-404600-09																														

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

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APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER				LASL SAMPLE NUMBER AND FIELD DATA																	U CONCENTRATION										
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED	DATE	HOUR	AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	PH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (dpm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	WELL	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDI-MENT SAMPLES	UNITS IN ppm
02-65	8513-159	6425-2-12	0-406770-09	10/74-10	11-8.4	130	12-2-7-4-4-3-2-1-1-1-4-3-3-3	3.10																							
02-65	8425-159	6366-2-12	0-406771-09	10/74-10	11-8.0	172	19-2-7-4-4-3-2-1-1-1-4-3-3-3	3.10																							
02-65	8543-159	6305-2-12	0-406772-09	10/74-10	11-10.0	275	16-2-7-4-4-3-2-1-1-1-3-3-3-3	3.20																							
02-65	8241-159	6466-2-12	0-406773-09	10/74-10	11-10.3	314	32-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	7801-153	6102-2-12	0-406774-09	10/74-10	11-9.7	242	12-2-7-4-4-3-2-1-1-3-4-3-3-3	3.20																							
02-65	8152-159	6416-2-12	0-406775-09	10/74-10	11-10.1	247	22-2-7-4-4-3-2-1-1-2-3-3-3-3	1.10																							
02-65	7043-159	6455-2-12	0-406776-09	10/74-10	11-9.7	252	9-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	8161-159	7116-2-12	0-406777-09	10/74-10	11-10.2	210	16-2-7-4-4-3-2-1-1-1-3-3-3-3	3.10																							
02-65	7527-159	6944-2-12	0-406778-09	10/74-11	11-9.7	211	14-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	7528-159	7033-2-12	0-406779-09	10/74-11	11-10.2	222	19-2-7-4-4-3-2-1-1-1-3-3-3-3	3.20																							
02-65	7704-159	6922-2-12	0-406780-09	10/74-11	11-10.0	237	16-2-7-4-4-3-2-1-1-2-3-3-3-3	3.10																							
02-65	8152-159	7100-2-12	0-406781-09	10/74-11	10-11.3	75	19-2-7-4-4-3-2-1-1-3-4-3-3-3	4.60																							
02-65	7920-160	1398-2-12	0-406782-09	10/74-11	11-10.9	51	19-2-7-4-4-3-2-1-1-3-4-3-3-3	4.60																							
02-65	7404-160	1250-2-12	0-406783-09	10/74-11	10-11.1	77	9-2-7-4-4-3-2-1-1-5-2-3-3-3	5.70																							
02-65	7805-160	2111-2-12	0-406784-09	10/74-11	10-11.2	78	28-2-7-4-4-3-2-1-1-3-4-3-3-3	5.80																							
02-65	8199-160	1555-2-12	0-406785-09	10/74-11	11-9.0	80	12-2-7-4-4-3-2-1-1-3-4-3-3-3	4.70																							
02-65	8726-160	2850-2-12	0-406786-09	10/74-11	11-8.7	114	19-2-7-4-4-3-2-1-1-3-4-3-3-3	4.60																							
02-65	8072-160	1425-2-12	0-406787-09	10/74-11	11-9.2	77	3-2-7-4-4-3-2-1-1-3-4-3-3-3	5.60																							
02-65	8743-160	2750-2-12	0-406788-09	10/74-11	11-9.0	96	22-2-7-4-4-3-2-1-1-3-4-3-3-3	4.30																							
02-65	8446-160	3000-2-12	0-406789-09	10/74-11	11-9.3	86	25-2-7-4-4-3-2-1-1-3-4-3-3-3	4.60																							
02-65	8406-160	1861-2-12	0-406790-09	10/74-11	12-9.4	120	19-2-7-4-4-3-2-1-1-3-4-3-3-3	4.90																							
02-65	8750-160	2246-2-12	0-406791-09	10/74-11	12-10.2	97	16-2-7-4-4-3-2-1-1-3-4-3-3-3	7.10																							
02-65	8628-160	2486-2-12	0-406792-09	10/74-11	12-9.7	152	16-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	8628-160	2733-2-12	0-406793-09	10/74-11	12-9.7	90	35-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	8275-160	3480-2-12	0-406794-09	10/74-11	11-9.0	147	19-2-7-4-4-3-2-1-1-3-4-3-3-3	3.60																							
02-65	8083-160	3743-2-12	0-406795-09	10/74-11	11-11.2	49	19-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	8646-160	4216-2-12	0-406796-09	10/74-12	11-10.9	44	3-2-7-4-4-3-2-1-1-3-4-3-3-3	3.20																							
02-65	8128-160	4314-2-12	0-406797-09	10/74-12	11-11.2	97	12-2-7-4-4-3-2-1-1-3-4-3-3-3	3.10																							
02-65	7946-160	4405-2-12	0-406798-09	10/74-12	11-10.7	27	22-2-7-4-4-3-2-1-1-3-4-3-3-3	3.00																							
02-65	8549-160	4902-2-12	0-406799-09	10/74-12	11-11.0	40	19-2-7-4-4-3-2-1-1-3-4-3-3-3	2.00																							
02-65	8777-160	4750-2-12	0-406800-09	10/74-12	11-10.0	42	6-2-7-4-4-3-2-1-1-4-4-3-3-3	1.60																							
02-65	8027-160	5172-2-12	0-406801-09	10/74-12	11-10.2	50	12-2-7-4-4-3-2-1-1-3-3-3-3-3	2.20																							
02-65	8208-160	5444-2-12	0-406802-09	10/74-12	11-9.8	47	6-2-7-4-4-3-2-1-1-3-4-3-3-3	2.60																							
02-65	8458-160	5458-2-12	0-406803-09	10/74-12	11-10.2	60	3-2-7-4-4-3-2-1-1-4-4-3-3-3	4.60																							
02-65	8743-160	5555-2-12	0-406804-09	10/74-12	11-11.1	121	16-2-7-4-4-3-2-1-1-3-3-3-3-3	2.90																							
02-65	8920-160	4708-2-12	0-406805-09	10/74-12	11-10.5	60	9-2-7-4-4-3-2-1-1-4-4-3-3-3	3.10																							
02-65	8841-160	5284-2-12	0-406806-09	10/74-12	11-11.0	44	12-2-7-4-4-3-2-1-1-3-3-3-3-3	2.90																							
02-65	8622-160	6294-2-12	0-406807-09	10/74-12	11-10.4	63	12-2-7-4-4-3-2-1-1-3-4-3-3-3	3.30																							
02-65	8050-160	5972-2-12	0-406808-09	10/74-12	11-9.9	78	25-2-7-4-4-3-2-1-1-4-4-3-3-3	3.80																							
02-65	8777-160	6416-2-12	0-406809-09	10/74-12	11-10.4	37	3-2-7-4-4-3-2-1-1-4-4-3-3-3	2.80																							
02-65	8634-160	6000-2-12	0-406810-09	10/74-12	11-10.2	62	6-2-7-4-4-3-2-1-1-4-4-3-3-3	3.20																							
02-65	8633-160	6180-2-12	0-406811-09	10/74-12	11-9.8	27	3-2-7-4-4-3-2-1-1-4-4-3-3-3	3.60																							
02-65	8950-160	7138-2-12	0-406812-09	10/74-12	11-10.2	48	9-2-7-4-4-3-2-1-1-3-3-3-3-3	3.20																							
02-65	8733-160	7166-2-12	0-406813-09	10/74-12	11-10.0	40	6-2-7-4-4-3-2-1-1-4-4-3-3-3	3.10																							
02-65	8750-160	7861-2-12	0-406814-09	10/74-12	11-10.3	52	9-2-7-4-4-3-2-1-1-4-4-3-3-3	3.10																							
02-65	8746-160	9233-2-12	0-406815-09	10/74-12	11-10.5	90	22-2-7-4-4-3-2-1-1-3-4-3-3-3	2.80																							
02-65	8201-160	8425-2-12	0-406816-09	10/74-12	11-10.7	110	9-2-7-4-4-3-2-1-1-3-4-3-3-3	6.10																							
02-65	8886-161	8933-2-12	0-406817-09	10/74-14	14-11.7	140	4-2-7-4-4-3-2-1-1-3-4-3-3-3	4.60																							
02-65	8543-161	9422-2-12	0-406818-09	10/74-14	14-12.0	147	9-2-7-4-4-3-2-1-1-3-4-3-3-3	4.70																							
02-65	8446-161	8791-2-12	0-406819-09	10/74-14	14-11.3	157	25-2-7-4-4-3-2-1-1-3-4-3-3-3	3.60																							
02-65	8216-161	8400-2-12	0-406820-09	10/74-14	14-11.3	127	9-2-7-4-4-3-2-1-1-4-4-3-3-3	4.80																							

APPENDIX C (continued). SEDIMENT SAMPLES ANALYZED FOR TOTAL URANIUM BY DELAYED-NEUTRON COUNTING

LASL Uranium Hydrogeochemical and Stream Sediment Reconnaissance Data Listing

DOE SAMPLE NUMBER						LASL SAMPLE NUMBER AND FIELD DATA																								U CONCENTRATION							
STATE	LATITUDE	LONGITUDE	DOE LAB	SAMPLE TYPE	REPLICATE	LASL SAMPLE NUMBER	TIME SAMPLED		AIR TEMPERATURE	WATER TEMPERATURE	COMMENTS	SPECIAL MEASUREMENTS	pH	SPECIFIC CONDUCTANCE (umho/cm)	SCINTILLOMETER (40 ppm)	ROCK TYPE	ROCK COLOR	SEDIMENT TYPE	SEDIMENT COLOR	WATER FLOW	WATER LEVEL	WATER COLOR	STREAM CHANNEL	VEGETATION TYPE	VEGETATION DENSITY	RELIEF	WEATHER	OWNERSHIP	CONTAMINANTS	WELL TYPE	WELL DIAMETER (INCHES)	WELL DEPTH (FEET)	WATER DEPTH (FEET)	SEDIMENT SAMPLES	UNITS IN ppm		
							DATE	HOUR																													
02	45	8223-161	8200-2-12			0-40624-08/30/76-14		14-12.0		9.2				150		28-2-7-3-4-3-2-1-1-3-4-2-2-1																			3.00		
02	45	8220-161	8233-2-12			0-40625-08/30/76-14		14-11.1		8.7				152		6-2-7-4-4-3-2-1-1-3-4-3-2-1																				4.80	
02	45	8201-161	8550-2-12			0-40626-08/30/76-14		14-11.2		9.2				124		16-2-7-3-4-3-2-1-1-1-3-3-3-2-1																				3.80	
02	45	8223-161	8455-2-12			0-40627-08/30/76-14		14-12.2		8.5				172		16-2-7-4-4-3-2-1-1-3-4-2-2-1																					5.60
02	45	7745-161	8455-2-12			0-40628-08/30/76-14		14-11.7		9.1				152		19-2-7-5-4-3-2-1-1-4-4-2-2-1																					5.00
02	45	7446-161	7100-2-12			0-40629-08/30/76-14		14-11.4		8.2				192		3-2-7-5-4-3-2-1-1-3-4-2-2-1																					4.70
02	45	7544-161	8480-2-12			0-40630-08/30/76-14		14-12.0		9.0				157		12-2-7-3-4-3-2-1-1-3-4-3-2-1																					5.10
02	45	7444-161	8444-2-12			0-40631-08/30/76-15		14-13.1		8.7				172		3-2-7-3-4-3-2-1-1-3-4-3-2-1																					3.40
02	45	7118-161	8222-2-12			0-40632-08/30/76-15		14-13.4		9.0				155		16-2-7-5-4-3-2-1-1-3-4-2-2-1																					3.30
02	45	7118-161	8555-2-12			0-40633-08/30/76-15		17-13.4		8.4				175		6-2-7-3-4-3-2-1-1-3-4-3-2-1																					3.40
02	45	7045-161	7277-2-12			0-40634-08/30/76-15		14-13.2		8.2				210		16-2-7-4-4-3-2-1-1-4-4-2-2-1																					3.40
02	45	7243-161	8222-2-12			0-40635-08/30/76-15		17-14.0		8.2				182		3-2-7-5-4-3-2-1-1-3-4-2-2-1																					3.70
02	45	6777-161	8425-2-12			0-40636-08/30/76-15		17-13.1		7.9				145		16-2-7-3-4-3-2-1-1-3-3-2-2-1																					3.50
02	45	6845-161	7500-2-12			0-40637-08/30/76-15		17-14.2		8.7				177		25-2-7-5-4-3-2-1-1-3-3-2-2-1																					3.80
02	45	6841-161	8166-2-12			0-40638-08/30/76-15		14-14.0		9.1				167		22-2-7-3-4-3-2-1-1-3-4-3-2-1																					2.90
02	45	6106-161	9233-2-12			0-40639-08/30/76-15		17-11.4		8.7				153		25-2-7-3-4-3-2-1-1-1-3-2-2-1																					4.70
02	45	6144-161	8250-2-12			0-40640-08/30/76-15		17-11.6		9.0				145		6-2-7-3-4-3-2-1-1-3-4-3-2-1																					4.00
02	45	6541-161	8875-2-12			0-40641-08/30/76-15		17-10.9		8.0				125		16-2-7-4-4-3-2-1-1-3-3-2-2-1																					3.40
02	45	6347-161	8545-2-12			0-40642-08/30/76-15		17-11.7		9.2				155		19-2-7-5-4-3-2-1-1-3-4-2-2-1																					3.00
02	45	5843-161	8556-2-12			0-40643-08/30/76-15		14-13.7		8.0				150		3-2-7-3-4-3-2-1-1-3-4-2-2-1																					5.00
02	45	5777-161	7222-2-12			0-40644-08/30/76-15		14-13.7		9.0				110		16-2-7-5-4-3-2-1-1-4-4-2-2-1																					3.30
02	45	5749-161	8441-2-12			0-40645-08/30/76-15		17-14.2		8.2				147		9-2-7-5-4-3-2-1-1-3-3-2-2-1																					3.50
02	45	5247-161	8552-2-12			0-40646-08/30/76-15		14-13.4		8.0				141		22-2-7-3-4-3-2-1-1-2-4-3-2-1																					3.20
02	45	5443-161	8866-2-12			0-40647-08/30/76-15		17-14.0		8.4				177		19-2-7-4-4-3-2-1-1-3-4-2-2-1																					3.30
02	45	5440-161	8111-2-12			0-40648-08/30/76-15		17-13.7		8.4				162		3-2-7-3-4-3-2-1-1-3-4-2-2-1																					3.60
02	45	5245-161	7233-2-12			0-40649-08/30/76-15		17-11.4		8.7				142		25-2-7-3-4-3-2-1-1-3-4-2-2-1																					3.50
02	45	5672-161	6233-2-12			0-40650-08/30/76-15		17-11.2		8.5				123		9-2-7-5-4-3-2-1-1-3-4-2-2-1																					3.00
02	45	5046-161	8461-2-12			0-40651-08/30/76-15		17-12.0		8.2				157		3-2-7-5-4-3-2-1-1-4-4-2-2-1																					3.20
02	45	5125-161	7177-2-12			0-40652-08/30/76-15		17-11.4		8.4				152		32-2-7-5-4-3-2-1-1-3-3-3-2-1																					9.50
02	45	4840-161	7833-2-12			0-40653-08/30/76-15		14-11.4		9.1				121		9-2-7-5-4-3-2-1-1-4-4-2-2-1																					3.50
02	45	4916-161	9000-2-12			0-40654-08/30/76-15		14-11.4		8.2				141		12-2-7-5-4-3-2-1-1-4-4-2-2-1																					3.20
02	45	4850-161	9141-2-12			0-40655-08/30/76-16		14-11.4		8.0				197		16-2-7-5-4-3-2-1-1-3-4-3-2-1																					3.00
02	45	4641-161	8750-2-12			0-40656-08/30/76-16		14-12.2		8.4				125		16-2-7-3-4-3-2-1-1-3-4-2-2-1																					3.20
02	45	4458-161	8527-2-12			0-40657-08/30/76-16		10-12.4		9.1				111		6-2-7-5-4-3-2-1-1-3-3-3-2-1																					3.30
02	45	4241-161	5614-2-12			0-40658-08/30/76-16		17-13.7		8.7				136		22-2-7-5-4-3-2-1-1-3-4-2-2-1																					3.20
02	45	4514-161	4507-2-12			0-40659-08/30/76-16		14-11.0		8.8				163		19-2-7-4-4-3-2-1-1-3-4-3-2-1																					5.80
02	45	4178-161	3902-2-12			0-40660-08/30/76-16		17-11.2		9.1				210		19-2-7-3-4-3-2-1-1-2-3-3-2-1																					6.60
02	45	4140-161	4555-2-12			0-40661-08/30/76-16		17-11.0		8.4				157		19-2-7-5-4-3-2-1-1-3-3-3-2-1																					2.90
02	45	4241-161	5433-2-12			0-40662-08/30/76-17		14-10.0		8.0				147		6-2-7-5-4-3-2-1-1-3-4-3-2-1																					5.70
02	45	3777-161	5455-2-12			0-40663-08/30/76-17		14-12.1		8.2				124		3-2-7-5-4-3-2-1-1-3-3-2-2-1																					4.90
02	45	3472-161	5500-2-12			0-40664-08/30/76-17		17-11.2		8.7				147		19-2-7-5-4-3-2-1-1-3-3-3-2-1																					5.20
02	45	3353-161	5160-2-12			0-40665-08/30/76-17		14-11.2		8.4				146		28-2-7-3-4-3-2-1-1-2-3-3-2-1																					5.30
02	45	3607-161	4083-2-12			0-40666-08/30/76-17		17-11.2		8.0				141		22-2-7-5-4-3-2-1-1-3-4-2-2-1																					5.20
02	45	4246-161	3402-2-12			0-40667-08/30/76-17		17-11.4		8.4				146		3-2-7-3-4-3-2-1-1-2-4-3-2-1																					5.10

APPENDIX D

CODE TO DATA LISTINGS

Appendix D-I

Explanation of Codes Used

Appendix D-II

Key to Sample Types

APPENDIX D-I

EXPLANATION OF CODES USED IN APPENDIXES B AND C

DOE SAMPLE NUMBER

STATE: A two-digit Federal Information Processing Standards (FIPS) code, designating the state from which each sample came. For the states being covered by the LASL, the code numbers are:

Alaska	= 02	New Mexico	= 35
Colorado	= 08	Wyoming	= 56
Montana	= 30		

LATITUDE AND LONGITUDE: Sample location, in degrees and decimal degrees to four places. Although generally much better, locational accuracy cannot be guaranteed closer than about 300 m (1000 ft).

DOE LAB: A Department of Energy (DOE) one-digit identifier designating the DOE laboratory responsible for taking the samples and data shown in the listings, as well as providing the analyses of the uranium and other elemental concentrations, if any. The LASL is designated by the numeral 2.

SAMPLE TYPE: A two-digit identifier which specifically designates the pertinent properties defining the sample type to which the listed data relate. For explanation of the code used, refer to the attached "Key to Sample Types," Appendix D-II.

REPLICATE: A three-digit sequential number assigned to indicate a multiple sample of a single sample type from a single location. The largest number in use indicates the most recent sample taken, and there will always be smaller sequential numbers representing earlier samples back to 000, which is the initial sample from any given location. Except in the case of special studies, there will be no replicate samples and this entry will therefore be 000.

LASL SAMPLE LOCATION NUMBER AND FIELD DATA

LASL SAMPLE LOCATION NUMBER: A unique six-digit number permanently assigned by the LASL to every location sampled in each state. For internal use, these numbers are assigned in blocks to the various areas individually treated and reported upon, and therefore serve to generally locate the samples within the various states as follows.

<u>Location Numbers</u>	<u>State</u>
from 000 001 through 099 999	= New Mexico
from 100 001 through 199 999	= Colorado
from 200 001 through 299 999	= Wyoming
from 300 001 through 399 999	= Montana
from 400 001 and above	= Alaska

TIME SAMPLED: The DATE that the sample was taken, in terms of the number of the MONTH, followed by the DAY and finally the YEAR, separated by slashes, and then the TIME it was taken on that date to the nearest whole HOUR on a 24-hour clock.

AIR TEMPERATURE: The temperature that was measured in the shade at the time of sampling, to the nearest whole degree Celsius (°C).

WATER TEMPERATURE: The temperature that was measured in the sample water (in situ whenever possible) at the time of sampling, to the nearest one-tenth of a degree Celsius (0.1°C).

COMMENTS: A "C" in this column indicates that some secondary comment not included in the listing was recorded at the sample location. This information will be used by the LASL in evaluating the data, and if appropriate, it will be mentioned in the final report.

SPECIAL MEASUREMENTS: An "S" in this column indicates that one or more field measurements in addition to those listed were made at the sample location. A description of any special parameters measured and the measured value at each sample location will be included in the final HSSR report on the surrounding area. In the area of this report, dissolved oxygen was taken as a special measurement at most lakes and some few streams. These dissolved oxygen data are presented in Appendix E.

pH: The pH, to the nearest one-tenth (0.1) of a pH unit, that was measured in the water at the sample location at the time of sampling.

SPECIFIC CONDUCTANCE: The conductivity, in $\mu\text{mho/cm}$, that was measured in the water at the sample location at the time of sampling.

SCINTILLOMETER: The equivalent uranium (eU), in ppm, as measured on a flat ground surface within 10 m of the sample location using a scintillometer fitted with a differential gamma sampler (DGS). The effect of the DGS is to introduce a fixed geometry into the measurement and remove the background.

ROCK TYPE: The single digit in this column provides a general description of the dominant lithologic regime at or near the sample location, as given below.

1 = Sedimentary
2 = Metamorphic

3 = Igneous
4 = Unknown

ROCK COLOR: The single digit in this column provides an indication of the observed dominant color of local bedrock exposures at or near the sample location, as given below.

1 = White/Buff
2 = Yellow
3 = Orange

4 = Pink/Red
5 = Green
6 = Brown

7 = Gray
8 = Black
9 = Other

SEDIMENT TYPE: The single digit in this column provides a subjective evaluation of the dominant sediment type at the sample location, as given below.

1 = Boulders
2 = Cobbles
3 = Gravel

4 = Sand
5 = Mud
6 = Muck

7 = Other

SEDIMENT COLOR: The single digit in this column indicates the observed dominant color of the bottom sediment (stream channel, lake bed, etc.) at the sample location at the time of sampling, as given below.

1 = White/Buff
2 = Yellow
3 = Orange

4 = Pink/Red
5 = Green
6 = Brown

7 = Gray
8 = Black
9 = Other

WATER FLOW: The single digit in this column provides a subjective evaluation of the water movement at the sample location at the time of sampling, as given below.

1 = Stagnant
2 = Slow

3 = Moderate
4 = Fast

5 = Torrent

WATER LEVEL: The single digit in this column provides a subjective estimate of water quantity at the time of sampling, relative to its usual condition at the sample location, as given below.

1 = Dry
2 = Low

3 = Normal
4 = High

5 Flood

WATER COLOR: The single digit in this column provides a subjective evaluation of suspended load in the sample water as, given below.

1 = Clear
2 = Murky

3 = Cloudy
4 = Muddy

5 = Algal
6 = Other

STREAM CHANNEL: The single digit here gives a subjective evaluation of stream channel character at the sample location at the time of sampling, as given below.

1 = Depositing

2 = Eroding

3 = Unknown

VEGETATION TYPE: The single digit in this column provides a subjective evaluation of the dominant plant type in the vicinity of the sample location, as given below.

1 = Conifers
2 = Deciduous
3 = Brush

4 = Grass
5 = Moss
6 = Marsh

7 = Other

VEGETATION DENSITY: The single digit in this column provides a subjective estimate of the amount of plant cover in the vicinity of the sample location, as given below.

1 = Barren
2 = Sparse

3 = Moderate
4 = Dense

5 = Very Dense

RELIEF: The single digit in this column provides a subjective evaluation of the topography within a few hundred meters of the sample location, as given below.

1 = Flat
2 = Low (<15 m)

3 = Gentle (15-60 m)
4 = Moderate (60-300 m)

5 = High (>300 m)
6 = Other

WEATHER: The single digit in this column gives the observed climatic condition at the sample location at the time of sampling, as given below.

1 = Clear
2 = Partly cloudy

3 = Overcast
4 = Rainy

5 = Snowy
6 = Other

OWNERSHIP: When shown, the single digit here gives a broad classification of administrative responsibility or general ownership of the land at the sample location, as given below.

1 = Federal
2 = State

3 = Private
4 = Indian

5 = Other

CONTAMINANTS: The single digit here indicates known or suspected local factors likely to influence analytical results, as given below.

1 = None	4 = Industry	7 = Urban
2 = Mining	5 = Sewage	8 = Recreation
3 = Agriculture	6 = Power generation	9 = Other

WELL TYPE: If a well water sample, the single digit in this column provides a general description of the type of well from which the sample was taken as given below.

1 = Windmill-stock	4 = Suction pump	7 = Hand bail
2 = Windmill-domestic	5 = Jet pump	8 = Unknown
3 = Submersible pump	6 = Large turbine	9 = Other

WELL DIAMETER: When shown, the one or two digits in this column give the measured or estimated inside diameter, in inches, of the well casing from which the water sample came.

WELL DEPTH: When shown, the one, two, or three digits in this column give the total drilled depth from the surface, in feet, of the well from which the sample came. Three 9s in this column indicates a well depth greater than 1000 ft.

WATER DEPTH: When shown, the one, two, or three digits in this column give the known depth, in feet, from the surface to the standing water in the well. A -1 in this column indicates a flowing artesian well.

URANIUM CONCENTRATION: The value given in this column is the analytically derived value of the uranium concentration found in the water sample in ppb, or in the sediment sample in ppm. Sample Types No. 1 through 10 and 21 through 30 are water samples, with their uranium concentrations given in ppb, while Sample Types No. 11 through 20 and 31 through 40 are sediment samples, with their uranium concentration given in ppm.

KEY TO SAMPLE TYPES

This numerical key provides the necessary tie between the specific type or form of each sample taken and each individual suite of field and laboratory data to which the sample relates. It defines the various sample types collected by the LASL in the DOE HSSR for uranium.

The two-digit key number assigned to each sample type designates three distinct properties of the samples taken. These properties are: (a) The general sample source (spring or stream or dry stream, etc.); (b) The sample medium (water or sediment, etc.); and (c) The treatment given the sample in the field or laboratory prior to its analysis by the LASL.

The key numbers are inserted in the appropriate columns of the specially formatted DOE sample numbering system to positively identify the sample type for all LASL sample data submitted.

<u>KEY NO.</u>	<u>SOURCE / MEDIUM / TREATMENT</u>
12 -	<u>Wet stream sediment</u> sample <u>dried</u> at $\leq 100^{\circ}\text{C}$ <u>and sieved to -100 mesh</u> through stainless steel sieves.
13 -	<u>Wet natural lake sediment</u> sample <u>dried</u> at $\leq 100^{\circ}\text{C}$ <u>and sieved to -100 mesh</u> through stainless steel sieves.
15 -	<u>Dry stream sediment</u> sample <u>dried</u> at $\leq 100^{\circ}\text{C}$ (if necessary) <u>and sieved to -100 mesh</u> through stainless steel sieves.
27 -	<u>Stream water</u> sample <u>acidified</u> to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).
29 -	<u>Natural lake water</u> sample <u>acidified</u> to a pH of ≤ 1 with reagent-grade nitric acid (HNO_3).

APPENDIX E

DISSOLVED OXYGEN IN LAKE WATERS OF THE TELLER, BELDELEBEN,
CANDLE, AND KATEEL RIVER (WEST THIRD) QUADRANGLES,
SEWARD PENINSULA AND VICINITY, ALASKA

APPENDIX E

DISSOLVED OXYGEN IN LAKE WATERS OF THE TELLER, BENDELEBEN, CANDLE, AND KATEEL RIVER (WEST THIRD)
QUADRANGLES, SEWARD PENINSULA AND VICINITY, ALASKA

LASL Location Number	Dissolved Oxygen (ppm)	LASL Location Number	Dissolved Oxygen (ppm)	LASL Location Number	Dissolved Oxygen (ppm)	LASL Location Number	Dissolved Oxygen (ppm)	LASL Location Number	Dissolved Oxygen (ppm)	LASL Location Number	Dissolved Oxygen (ppm)
402187	11.4	402400	11.9	402906	12.3	403311	10.6	403461	9.5	403621	7.0
402188	11.3	402420	12.1	402907	12.9	403312	11.6	403462	10.1	403622	8.0
402189	10.3	402421	12.4	402912	13.2	403314	11.3	403463	10.0	403744	4.3
402190	9.8	402422	11.8	402919	11.6	403315	11.7	403464	8.3	403749	7.9
402191	10.2	402423	12.4	402933	12.6	403317	12.1	403478	9.8	403851	9.0
402194	9.3	402424	12.6	402934	12.4	403324	11.7	403479	10.5	403854	5.8
402195	7.8	402425	12.6	402935	12.4	403325	9.7	403490	10.7	403863	11.2
402202	10.3	402426	12.2	402936	12.1	403326	10.9	403491	10.3	403864	9.5
402203	9.1	402431	13.1	402937	13.2	403330	10.9	403492	10.0	403876	6.3
402204	9.8	402433	11.7	402938	12.2	403341	11.6	403493	11.0	403877	7.8
402205	8.9	402434	11.1	402940	11.6	403342	9.5	403494	10.1	403878	7.0
402208	11.0	402435	11.5	402945	12.3	403343	11.9	403495	10.5	403879	9.5
402209	10.0	402436	11.9	402948	12.0	403344	10.3	403496	9.3	403880	9.6
402212	9.3	402437	11.9	402949	11.8	403347	9.7	403497	9.9	403882	5.6
402215	9.8	402581	11.1	402950	11.7	403348	10.4	403498	10.4	403883	6.0
402218	9.5	402583	11.5	402997	11.5	403349	10.0	403499	9.9	403884	9.6
402219	9.5	402587	10.6	402998	11.8	403350	6.9	403500	9.6	403885	9.6
402220	9.8	402653	10.8	403010	11.3	403351	10.1	403501	8.9	403886	5.8
402241	6.1	402690	10.6	403074	11.2	403356	9.1	403502	10.1	403898	8.2
402284	12.7	402711	11.4	403238	10.6	403357	9.6	403503	10.2	406543	4.7
402288	12.9	402717	10.0	403239	10.1	403358	9.4	403504	9.9	406545	4.7
402294	12.8	402718	11.6	403241	10.4	403359	10.0	403505	10.0	406546	6.6
402295	12.6	402720	10.5	403247	10.2	403360	8.4	403506	10.1	406547	6.0
402296	12.8	402725	11.4	403248	10.3	403362	10.0	403508	10.1	406548	4.5
402297	12.8	402726	11.6	403249	10.2	403366	9.8	403510	9.0	406549	5.5
402298	12.9	402752	11.0	403250	10.2	403367	10.1	403558	8.9	406550	8.4
402299	12.9	402753	10.5	403254	10.3	403377	9.5	403559	9.7	406569	8.6
402300	12.8	402758	10.9	403259	9.4	403383	10.1	403563	8.4	406570	9.0
402301	13.7	402761	11.9	403260	10.2	403384	10.8	403564	9.6	406571	8.4
402302	13.2	402762	11.3	403261	10.4	403386	10.1	403565	10.1	406573	4.7
402303	12.9	402765	11.4	403262	10.3	403387	9.0	403566	9.8	406574	4.5
402304	12.6	402766	11.2	403266	11.0	403388	10.1	403567	8.6	406575	5.1
402336	12.2	402777	10.8	403269	9.9	403389	10.4	403575	9.6	406576	4.8
402337	12.6	402778	11.8	403270	10.4	403400	11.2	403596	9.4	406577	5.7
402338	11.5	402884	11.6	403272	8.1	403401	10.6	403597	9.5	406578	6.1
402341	12.3	402887	11.3	403273	9.4	403402	11.7	403598	9.2	406591	9.2
402349	12.2	402891	11.9	403291	10.7	403406	9.6	403599	9.3	406592	8.4
402368	2.1	402896	12.1	403293	10.0	403407	10.0	403609	8.3	406593	9.9
402397	11.4	402898	12.1	403299	10.4	403435	9.9	403612	9.9	406594	9.1
402398	11.4	402901	11.9	403304	9.9	403436	9.8	403617	10.4	406713	5.8
402399	11.6	402905	11.6								

NOTE: The LASL location numbers can be used to locate the lake where each dissolved oxygen measurement was made by using the sample location overlays of Plates I, II, III or IV with the appropriate 1:250 000 scale topographic sheet. Note that the first two digits of the location numbers are dropped from the overlay plates. See text for description of how measurements were made.

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66°00'

CHUKCHI SEA

45'

30'

BED

ING SEA

PLATE I
NURE HYDROGEOCHEMICAL AND STREAM / LAKE
SAMPLE LOCATIONS
IN
THE AREA OF THE TELLER QUADRAN
SEWARD PENINSULA, ALASKA

66°00'

45'

30'

TELLER

PLATE I-A

15'

30'

168°

30'

LEGEND

NATURAL LAKE WATERS	SURFACE STREAM WATERS	U (ppb)
▲	◻	0 - 0.01
△	◻	> 0.01 - 0.04
△	◻	> 0.04 - 0.16
△	◻	> 0.16 - 0.50
△	◻	> 0.50 - 1.0
△	◻	> 1.0 - 2.0
△	◻	> 2.0 - 3.0
△	◻	> 3.0

PLATE I-A

URANIUM CONCENTRATIONS (ppb) IN WATERS
IN
THE AREA OF THE TELLER QUADRANGLE
SEWARD PENINSULA, ALASKA

5 MILES

66° 00'

45'

30'

TELLER

PLATE I-B

LEGEND

NATURAL LAKE SEDIMENT	WET STREAM SEDIMENT	DRY STREAM SEDIMENT	U (ppm)
△	□	■	< 1.25
△	□	⊠	1.25 - 2.49
△	□	⊠	2.50 - 3.24
△	□	⊠	3.25 - 3.99
△	□	⊠	4.00 - 5.49
△	□	⊠	5.50 - 7.99
△	□	⊠	8.00 - 15.99
△	□	⊠	≥ 16.00

PLATE I-B

URANIUM CONCENTRATIONS (ppm) IN SEDIMENTS
IN
THE AREA OF THE TELLER QUADRANGLE
SEWARD PENINSULA, ALASKA

ES

165° 00'
66° 00'

BENDELEBEN

PLATE II

NURE HYDR
THE AR

PLATE II
HYDROGEOCHEMICAL AND STREAM/LAKE SEDIMENT
SAMPLE LOCATIONS
IN
AREA OF THE BENDELEBEN QUADRANGLE
SEWARD PENINSULA, ALASKA

LAKE SEDIMENT

ADRANGLE

BENDELEBEN

PLATE II-A

LEGEND

NATURAL LAKE WATERS	SURFACE STREAM WATERS	U (ppb)
▲	◻	0 - 0.01
△	◻	> 0.01 - 0.04
△	◻	> 0.04 - 0.16
△	◻	> 0.16 - 0.50
△	◻	> 0.50 - 1.0
△	◻	> 1.0 - 2.0
△	◻	> 2.0 - 3.0
△	◻	> 3.0

5

URA
THE AR

PLATE II-A

URANIUM CONCENTRATIONS (ppb) IN WATERS
IN
AREA OF THE BENDELEBEN QUADRANGLE
SEWARD PENINSULA, ALASKA

20 25 MILES
5 KILOMETERS

WATERS
QUADRANGLE
A

BENDELEBEN

LEGEND

NATURAL LAKE SEDIMENT	WET STREAM SEDIMENT	DRY STREAM SEDIMENT	U (ppm)
△	□	■	< 1.25
△	□	■	1.25 - 2.49
△	□	⊗	2.50 - 3.24
△	□	⊗	3.25 - 3.99
△	□	⊗	4.00 - 5.49
△	□	⊗	5.50 - 7.99
△	□	⊗	8.00 - 15.99
△	□	⊗	≥ 16.00

5

URANIUM
THE ARCTIC

PLATE II-B

LEAD CONCENTRATIONS (ppm) IN SEDIMENTS
IN
AREA OF THE BENDELEBEN QUADRANGLE
SEWARD PENINSULA, ALASKA

20 25 MILES
5 KILOMETERS

DIMENTS

QUADRANGLE

A

CANDLE

PLATE III

PLATE III

GEOCHEMICAL AND STREAM / LAKE SEDIMENT
SAMPLE LOCATIONS
IN
AREA OF THE CANDLE QUADRANGLE
SEWARD PENINSULA, ALASKA

3557

3556

3554

3553

3552

3551

3550

3555

3549

3548

3547

3767

3769

3768

3765

3766

3763

3760

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3635

3637

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3643

3645

3647

3610

3608

3632

3634

3642

3604

3644

3648

3605

3611

3636

3638

3640

3641

3646

3630

3631

3633

160°

30'

159°0

20 25 MILES
KILOMETERS

LAKE SEDIMENT

ORANGE

A

CANDLE

PLATE III-A

LEGEND

NATURAL LAKE WATERS	SURFACE STREAM WATERS	U (ppb)
▲	■	0 - 0.01
△	□	> 0.01 - 0.04
△	□	> 0.04 - 0.16
△	□	> 0.16 - 0.50
△	□	> 0.50 - 1.0
△	□	> 1.0 - 2.0
△	□	> 2.0 - 3.0
△	□	> 3.0

5

URA
THE A

PLATE III-A

UM CONCENTRATIONS (ppb) IN WATERS
IN
REA OF THE CANDLE QUADRANGLE
SEWARD PENINSULA, ALASKA

20
25 MILES
KILOMETERS

TERS
RANGLE

CANDLE

PLATE III-B

LEGEND

NATURAL LAKE SEDIMENT	WET STREAM SEDIMENT	DRY STREAM SEDIMENT	U (ppm)
▲	□	■	< 1.25
△	□	▣	1.25 - 2.49
△	□	▤	2.50 - 3.24
△	□	▥	3.25 - 3.99
△	□	▦	4.00 - 5.49
△	□	▧	5.50 - 7.99
△	□	▨	8.00 - 15.99
△	□	▩	≥ 16.00

5

URANIUM

THE

PLATE III-B

NIUM CONCENTRATIONS (ppm) IN SEDIMENTS
IN
AREA OF THE CANDLE QUADRANGLE
SEWARD PENINSULA, ALASKA

20 25 MILES
KILOMETERS

IMENTS
RANGLE

153°00'

66° 00'

30'

KATEEL RIVER

PLATE IV

SCALE 1

PLA
NURE HYDROGEOCHEMICAL
SAMPLE
THE AREA OF THE KATEEL R
SEWARD PENN

#3671

#3669

#3670

#3714

#3713

#3711

#3717

#3712

#367C

#3658

#3669

#3667

#363

#3666

#3665

158°

30'

157°

SCALE 1:250 000

5 10 15 20 25 MILES

5 10 15 20 25 KILOMETERS

PLATE IV

CHEMICAL AND STREAM/LAKE SEDIMENT
SAMPLE LOCATIONS
IN

TEEL RIVER QUADRANGLE (WEST THIRD)
RD PENINSULA. ALASKA

KATEEL RIVER

KATEEL RIVER

PLATE IV-A

PLATE IV-

URANIUM CONCENTRATIONS (IN
THE AREA OF THE KATEEL RIVER
SEWARD PENINSULA)

LEGEND

NATURAL LAKE WATERS	SURFACE STREAM WATERS	U (ppb)
▲	◻	0 - 0.01
△	◻	> 0.01 - 0.04
△	◻	> 0.04 - 0.16
△	◻	> 0.16 - 0.50
△	◻	> 0.50 - 1.0
△	◻	> 1.0 - 2.0
△	◻	> 2.0 - 3.0
△	◻	> 3.0

158°

30'

15

SCALE 1: 250 000

5

10

15

20

25 MILES

5

10

15

20

25 KILOMETERS

PLATE IV-A

CONCENTRATIONS (ppb) IN WATERS
IN

KATEEL RIVER QUADRANGLE (WEST THIRD)
SEWARD PENINSULA, ALASKA

KATEEL RIV

159°00'
66°00'

KATEEL RIVER

PLATE IV-B

PLATE IV

URANIUM CONCENTRATIONS (ppm)
IN
THE AREA OF THE KATEEL RIVER Q
SEWARD PENINSULA

LEGEND

NATURAL LAKE SEDIMENT	WET STREAM SEDIMENT	DRY STREAM SEDIMENT	U (ppm)
△	□	■	< 1.25
△	□	⊗	1.25 - 2.49
△	□	⊗	2.50 - 3.24
△	□	⊗	3.25 - 3.99
△	□	⊗	4.00 - 5.49
△	□	⊗	5.50 - 7.99
△	□	⊗	8.00 - 15.99
△	□	⊗	≥ 16.00

158°

30'

157°

SCALE 1: 250 000

PLATE IV-B

CONCENTRATIONS (ppm) IN SEDIMENTS
IN
EEL RIVER QUADRANGLE (WEST THIRD)
PENINSULA, ALASKA