# REPORT ON THE THIRD SAMPLING OF THE OMAHA MONITORING AREA



# ARKANSAS AMBIENT GROUND WATER MONITORING PROGRAM

Arkansas Department of Pollution Control & Ecology WQ97-06-3 June 1997

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#### INTRODUCTION

The Arkansas Ambient Ground Water Monitoring Program was initiated in order to obtain background data in areas across Arkansas, with emphasis placed on those areas which are sensitive to ground-water contamination from anthropogenic impacts. The areas are sampled on approximate three-year intervals to evaluate whether regional activities are impacting ground-water quality.

The Omaha monitoring area occupies an approximate 160 square mile area surrounding the town of Omaha in northwestern Boone County, Arkansas (Figure 1). This area will be referred to as the study area in the remainder of this report. The study area straddles portions of the Springfield Plateau and the Salem Plateau of the Ozark Plateaus Physiographic Province. Area topography exhibits moderate relief with elevations ranging from approximately 700 feet above mean sea level (msl) in the northeastern portion of the area to approximately 1,600 feet above msl near the center of the area (Leidy and Morris, 1990). The study area is underlain by gently-dipping sedimentary rocks which have been deeply dissected by erosion. The predominantly carbonate rocks of the study area are readily weathered by dissolution. This process forms large fractures and solution channels which are conduits for ground water and contaminants. The study area also contains a relatively shallow regolith which increases ground-water contamination susceptibility. The study area was selected primarily because of increased animal production and contamination from a former wood-treatment plant Superfund site. Specific sources of ground-water contamination include leaking underground storage tanks, septic tanks, poultry and livestock farms, and the wood-treatment plant.

The study area is underlain by the Ozark Plateaus Aquifer System. Ground-water sampling of the Springfield Plateau Aquifer and the Ozark Aquifer has continued at three year intervals since the initial sampling event during the winter of 1989-90. The second sampling event was conducted during the winter of 1992-93. The third and most recent sampling event was completed during February, 1996. Ground-water samples were obtained from a combination of springs and wells in both aquifers during all sampling events. The number of sampling sites has remained relatively constant throughout the sampling periods.

Ground-water monitoring in the study area is an outgrowth of an investigation conducted by the United States Geological Survey (USGS) in cooperation with the Arkansas Department of Pollution Control and Ecology (Department). The ambient ground-water quality of the two aquifers was described initially by Leidy and Morris (1990) and was based on water samples from springs and wells in the Boone Formation and the Cotter Dolomite collected from March to October of 1987. This work resulted in USGS report WRIR 90-4066. Other publications describing the geology and/or water quality of the area include Adamski and others (1995), Bell and others (1996), Caplan (1960), Croneis (1930), and Imes and Emmett (1994).

#### STUDY OBJECTIVES

As referenced above, numerous potential contaminant sources exist in the study area. Dissolution of the carbonate rock from precipitation infiltration and groundwater movement creates complex ground-water flow paths which are highly irregular and unpredictable. The objectives of this program are to monitor potential changes in ground-water chemistry over time, examine the feasibility of long-

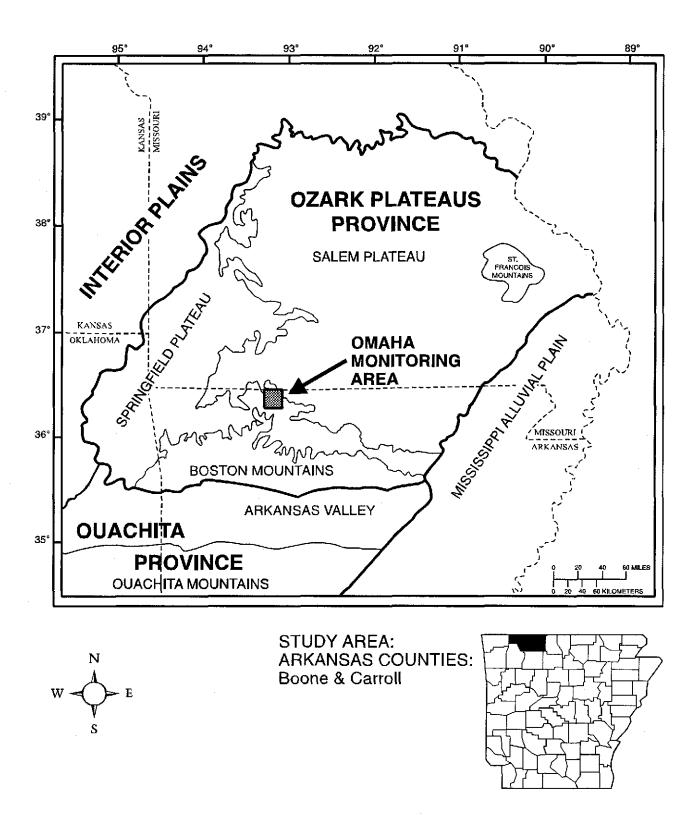


Figure 1 - Regional physiographic map and location of Omaha monitoring area. (after Imes and Emmett, 1994)

term monitoring in carbonate terrains, and to describe and compare the ambient ground-water quality in the Springfield Plateau aquifer and the Ozark aquifer.

#### AREA GEOLOGY

The study area is located in the Ozark Plateaus physiographic province which extends north into Missouri and west into Oklahoma and Kansas. The majority of the study area is located on the Springfield Plateau; however, large portions to the north, east and west are located on the Salem Plateau. According to Imes and Emmett (1994), the Ozark Plateau is an elliptical-shaped structural dome with a northeast trending axis. The study area is located south of the axis and is underlain by south-dipping Paleozoic rocks. The exposed rock units in the study area are characterized predominantly by Ordovician to Mississippian-aged limestones and dolostones. The geology of the study area is represented by the generalized stratigraphic column of northern Arkansas shown in Table 1.

The youngest unit exposed in the study area is the Mississippian-aged Batesville Sandstone, which has been mapped at the highest elevations in the western portions of the study area. The Batesville Sandstone is a coarse- to medium-grained, buff-colored calcareous sandstone (Croneis, 1930). This unit overlies the Mississippian Boone Formation which crops out over most of the central and southern portions of the study area and which coincides approximately with the Springfield Plateau. The Boone Formation consists of fine- to coarsely-crystalline bedded limestone with an abundant quantity of gray chert in the form of nodules or as massive beds. The St. Joe Limestone member comprises the lower portion of the Boone Formation and consists of a medium- to coarsely-crystalline limestone. The thickness of the Boone Formation in the Omaha area ranges from zero to 200 feet (Imes, 1990). The Boone Formation overlies the Mississippian and Devonian-aged Chattanooga Shale which is highly irregular in the study area. According to Leidy and Morris (1990), the Chattanooga Shale is a black, carbonaceous, highly-jointed fissile shale, which is very thin and discontinuous over the extent of the study area.

The Chattanooga Shale unconformably overlies thin exposures of the Ordovician-aged St. Peter Sandstone, Everton Formation and the Powell Dolomite. The Powell Dolomite overlies the Ordovician Cotter Dolomite which consists of massive, medium-grained, gray rock or fine-grained earthy, white to buff rock (Caplan, 1960) with minor amounts of shale, chert, and sandstone (Croneis, 1930). The Cotter Dolomite crops out in the east, northeast and northwest areas of the study area and approximately coincides with the Salem Plateau. The Cotter Dolomite may be as much as 500 feet thick and is the oldest exposed unit in the study area. Older units underlying the Cotter Dolomite include the Jefferson City Dolomite, Roubidoux Formation, Gasconade Dolomite and the Van Buren Formation (which includes the Gunter Sandstone Member).

#### Table 1 - Generalized Stratigraphic Column of Northern Arkansas and Geohydrologic Units (modified from Imes and Emmett, 1994)

Era	System	Formation	Geoliydrologic unit	Geolydrologic system
	Pennsylvanian	McAlester Formation Hartshorne Sandstone Atoka Sandstone Bloyd Shale Hale Formation		Western Interior Plains
	Mississippian	Pitkin Limestone Fayetteville Shale Batesville Sandstone Moorefield Formation		Confining System
		Boone Formation -Reeds Spring Member -St. Joe Limestone Member	Springfield Plateau Aquifer	
	Devonian	Chattanooga Shale	Ozark Confining Unit	
		Clifty Limestone Penters Chert		
Paleozoic	Silurian	Lafferty Limestone St. Clair Limestone Brassfield Limestone		
	Ordovician	Cason Shale Fernvale Limestone Kimmswick Limestone Plattin Limestone Joachim Dolomite St. Peter Sandstone Everton Formation Smithville Formation Powell Dolomite Cotter Dolomite Jefferson City Dolomite Roubidoux Formation Gasconade Dolomite Van Buren Formation - Gunter Sandstone Member	Ozark Aquifer	Ozark Plateaus Aquifer System
		Eminence Dolomite Potosi Dolomite		
	Cambrian	Doe Run Dolomite Derby Dolomite Davis Formation	St. Francois Confining Unit	
		Bonneterre Dolomite Reagan Sandstone Lamotte Sandstone	St. Francois Aquifer	
Precambrian Igneous	and Metamorphic Road	ks	Basement Confining Unit	

#### AREA HYDROGEOLOGY

Three aquifers, which are part of the Ozark Plateaus Aquifer System, are located within the study area. These geohydrologic units and their associated confining units are indicated on the stratigraphic column (Table 1). The uppermost Springfield Plateau aquifer is contained within the Boone Formation. This aquifer is underlain by the Ozark confining unit which is comprised of the Chattanooga Shale. The Ozark confining unit overlies the Ozark aquifer, which consists of several formations, including the St. Peter Sandstone, Everton Formation, Powell Dolomite, Cotter Dolomite, Jefferson City Dolomite, Roubidoux Formation, Gasconade Dolomite, Van Buren Formation (which includes the Gunter Sandstone Member), Eminence Dolomite and the Potosi Dolomite. The St. Francois Aquifer and its confining unit underlie the Ozark aquifer and consists of the Bonneterre Dolomite, Reagan Sandstone and Lamotte Sandstone. This study investigated the Springfield Plateau and Ozark aquifers only. The St. Francois aquifer does not crop out in the study area and no wells are known to penetrate this aquifer in the study area.

The Springfield Plateau aquifer is generally under unconfined conditions. Recharge occurs from precipitation infiltration over the area. Ground-water movement occurs predominantly through fractures and solution cavities formed by dissolution and is also controlled by streams, topography and geology (Leidy and Morris, 1990). Local discharge from this aquifer is through springs and streams. The sampling points in the Springfield Plateau aquifer consist of one well and several springs emanating from the Boone Formation. Discharge rates of springs may range from 1.5 to 1,400 gallons per minute.

The Ozark confining unit generally separates the two aquifers, however, according to Leidy and Morris (1990), this unit is thin or may be absent in some of the study area, indicating probable gravity-driven, vertical movement of ground water from the Springfield Plateau aquifer to the underlying Ozark Aquifer. The Ozark aquifer is generally under confined conditions. Recharge of this aquifer occurs by precipitation infiltration in outcrop areas and by leakage from overlying beds (Leidy and Morris, 1990). Ground-water movement occurs primarily through fractures and solution cavities. Discharge occurs through springs and streams in outcrop areas and to deeper underlying beds. Most of the sampling points in the Ozark aquifer are wells drilled to the Cotter Dolomite; however, one sampling point was a well drilled to the Roubidoux-Gunter interval of the Ozark aquifer. Wells drilled into the Cotter Dolomite may yield 5 to 10 gallons per minute (Leidy and Morris, 1990).

#### METHODOLOGY

Ground-water samples collected for the present study were obtained from both natural spring sources and water-supply wells. Sampling sites included ten springs discharging from the Springfield Plateau aquifer, one spring discharging from the Ozark aquifer, one well drilled to the Springfield Plateau aquifer and thirteen wells drilled to the Ozark aquifer. The fourteen wells were drilled to depths ranging from 160 to 1,340 feet below the existing ground surface. Figure 2 shows the location of springs and wells sampled during the current sampling period. The location and description of the current sampling sites are listed in Table 2. For statistical purposes, the data has been divided into two groupings consisting of sampling points in the Springfield Plateau aquifer and the Ozark aquifer.

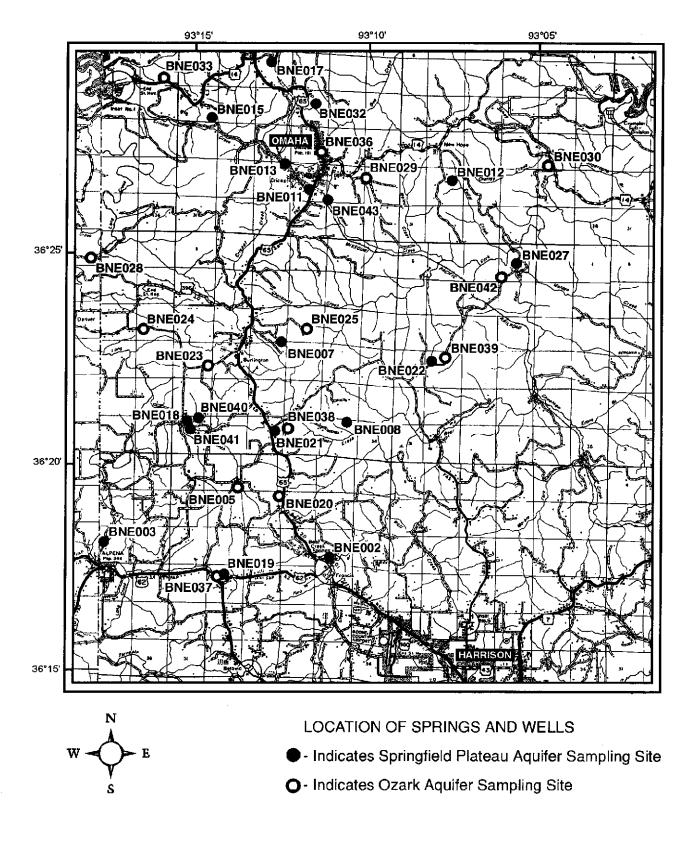


Figure 2 - Omaha monitoring area sampling locations.

Table 2 - Summary of Current Sampling Locations

						_									_										_
Use	Ω	D	Šŧ	D	Q	Ω	Ω	D	D	Ω	Ω	Д	Ω	Ω	Ω	Ω	Д	Д	Ω	Ω	Ω	Ω	Ω	n	Ω
Depth	NA	550'	565'	460'	455'	400	6751	755'	705'	550'	1340'	450	~425'	~300,	~160′	NA	NA	NA							
Type	S	S	S	Ø	S	S	S	S	M	M	M	×	×	W	W	M	W	M	W	Μ	W	M	SO	S	S
Aquifer	SP	SP	SP	SP	SS	SP	SP	SP	0	0	0	0	0	0	0	0	0	0	0	0	0	SP	SP	0	SP
Formation	Mb	Mb	Mb	Mb	Mo	ΜP	Mb	ΜP	၀	၀င	ဝိ	රි	ဝိ	ဝိ	၀၀	၀	oc	Org	၀	၀၀	၀	Mb	Mb	၀	Mb
Longitude	93 11 05.9	93 16 24.7	93 13 46.1	93 12 29.0	93 07 31.0	93 12 09.3	93 14 24.0	93 12 46.0	93 12 19.9	93 14 29.5	93 16 24.4	93 11 52.0	93 17 50.9	93 10 10.0	93 04 36.0	93 11 49.2	93 16 00.0	93 11 19.4	93 14 14.8	93 12 19.9	93 07 38.0	93 14 58.0	93 15 02.0	93 06 18.0	93 11 12.0
Latitude	36 17 53.1	36 19 00.6	36 19 43.6	36 23 02.0	36 26 47.0	36 26 58.1	36 28 19.0	36 29 45.0	36 19 15.2	36 22 31.0	36 23 20.6	36 23 18.0	36 25 01.0	36 26 54.0	36 27 05.0	36 28 43.2	36 29 10.0	36 27 24.0	36 17 22.2	36 20 57.7	36 22 36.0	36 21 05.0	36 20 59,0	36 24 22.0	36 26 38.0
T/R Location	19N21W14CDA1	19N22W12CAB1	19N21W05DDB1	19N21W31ACB1	21N20W29ACD1	21N21W27BCB1	21N21W17CCB1	21N21W09BAD1	19N21W10BCB1	20N21W33ACA1	20N22W13CBD1	20N21W15CAD1	20N22W03DDA1	21N21W26ADA1	21N20W23CDD1	21N21W15BDA1	21N22W12DCC1	21N21W22DDA1	19N21W20BDC1	20N21W33ACA1	20N20W20ABC1	20N21W31ABC1	19N21W31ACB1	20N20W09AAA1	21N21W27DAD1
Sample Date	02/13/96	02/13/96	02/13/96	02/13/96	02/14/96	02/14/96	02/14/96	02/14/96	02/13/96	02/13/96	02/13/96	02/13/96	02/13/96	02/14/96	02/14/96	02/13/96	02/14/96	02/14/96	02/13/96	02/13/96	02/14/96	02/13/96	02/13/96	02/14/96	02/14/96
Sampling Site	BNE002	BNE003	BNE005	BNE007	BNE012	BNE013	BNE015	BNE017	BNE020	BNE023	BNE024	BNE025	BNE028	BNE029	BNE030	BNE032	BNE033	BNE036	BNE037	BNE038	BNE039	BNE040	BNE041	BNE042	BNE043

Notes: "T/R" indicates township and range; "Mb" indicates Mississippian-aged Boone Formation; "Oc" indicates Ordovician-aged Cotter Dolomite; "Org" indicates Ordovician-aged Roubidoux-Gunter interval; "SP" indicates Springfield Plateau Aquifer; "O" indicates Ozark Aquifer; "S" indicates spring; "W" indicates well; "NA" indicates domestic supply; "P" indicates public supply; "St" indicates stock supply; "U" indicates currently unused for water supply.

Conductivity, temperature and pH were measured in the field until stabilized prior to obtaining all ground-water samples. Water samples were obtained by generally-accepted sampling methods, placed on ice, and transported to the Department laboratory in Little Rock. All ground-water samples were analyzed in the laboratory for total alkalinity, major and trace inorganic constituents, metals, nutrients and total organic carbon. In addition, volatile organic compound (VOC) analysis and semi-volatile organic compound (SVOC) analysis was conducted on selected ground-water samples. The results of the current and previous chemical analyses are listed in Tables 5 through 10 in Appendix A of this report.

Domestic wells in the study area are generally cased through the overburden until competent bedrock is reached. The remainder of the borehole is left open. Driller's logs were obtained, whenever possible, to verify the presence of grout, depth of wells, water-bearing intervals, and well-construction information.

Ground-water quality analyses from the current and previous sampling events, and complete site descriptions have been placed in the Federal Environmental Protection Agency (EPA) Storage and Retrieval (STORET) database. This information is available to all interested parties with access to STORET. In addition, copies of the laboratory analyses have been provided to all interested well or spring owners. For the purposes of GIS data collection, all sample sites have been surveyed with the Magellan NAV 5000 PRO; a hand-held GPS C/A-code and carrier phase code receiver. This instrument generally has a horizontal accuracy of approximately 12 meters.

#### **GROUND WATER QUALITY**

Many of the parameters analyzed during the third sampling event were not analyzed during the two previous sampling events. In addition, several sampling points have been added since the two previous sampling events. Analyses to date demonstrate that water quality is very good, though moderately hard. The parameters which have been consistently analyzed over time include chloride, nitrate-nitrogen, ammonia-nitrogen, ortho-phosphate and sulfate. The following percentages and maximum and average concentrations are listed for sampling locations over the three sampling periods.

Chloride (Cl) was detected in 100 percent of the Springfield Plateau aquifer samples with a maximum concentration of 16.6 milligrams per liter (mg/l) and an average concentration of 8.6 mg/l. Cl was also detected in 100 percent of the Ozark aquifer samples with a maximum concentration of 7.6 mg/l and an average concentration of 3.6 mg/l. The detection limit of Cl for all samples was 1.2 mg/l. The Springfield Plateau aquifer exhibited higher maximum and average Cl concentrations than the Ozark aquifer. This situation possibly reflects the susceptibility of the Springfield Plateau aquifer to contaminants as a result of a thinner regolith and/or exposed, fractured bedrock. Also, the water quality of the Springfield Plateau aquifer was described according to mainly spring-water samples, as there was only one well sampled in the Springfield Plateau aquifer. Generally, springs are connected more closely to surface influence than wells. They are developed in larger fracture sets and are much more susceptible to contamination.

Nitrate-nitrogen (NO<sub>3</sub>-N) was detected in 100 percent of the Springfield Plateau aquifer samples with a maximum concentration of 8.5 mg/l and an average concentration of 2.4 mg/l. NO<sub>3</sub>-N was detected in 75 percent of the Ozark aquifer samples with a maximum concentration of 1.2 mg/l and an average concentration of 0.3 mg/l. The detection limit of NO<sub>3</sub>-N for all samples was 0.02 mg/l. The higher NO<sub>3</sub>-N concentrations in the Springfield Plateau aquifer are attributable to the same factors referenced above in the section on Cl.

Ammonia-nitrogen (NH<sub>3</sub>-N) was detected in 40 percent of the Springfield Plateau aquifer samples with a maximum concentration of 0.113 mg/l and an average concentration of 0.070 mg/l. NH<sub>3</sub>-N was detected in 24 percent of the Ozark aquifer samples with a maximum concentration of 0.2 mg/l and an average concentration of 0.081 mg/l. The detection limit of NH<sub>3</sub>-N for all samples was 0.05 mg/l.

Ortho-phosphate (O-phosphate) was detected in 30 percent of the Springfield Plateau aquifer samples with a maximum concentration of 0.081 mg/l and an average concentration of 0.04 mg/l. O-phosphate was not detected in any of the Ozark aquifer samples above the detection limit of 0.03 mg/l. The low O-phosphate concentrations detected may be due to nearby septic systems; however, no direct link between O-phosphate detections and nitrate detections was observed.

Sulfate (SO<sub>4</sub>) was detected in 100 percent of the Springfield Plateau aquifer samples with a maximum concentration of 12.4 mg/l and an average concentration of 5.8 mg/l. SO<sub>4</sub> was also detected in 100 percent of the Ozark aquifer samples with a maximum concentration of 62.0 mg/l and an average concentration of 28.2 mg/l. The detection limit of SO<sub>4</sub> for all samples was 1.0 mg/l.

Several of the sampling points have shown increases over time, while several sampling points have shown decreases. None of these changes over time appear to be significant. In addition, none of the detected concentrations were above the EPA's drinking water maximum contaminant levels (MCLs). This report substantiates findings by Adamski and others (1995) who found that the Springfield Plateau aquifer is generally higher in chlorides and nitrates. Where confined, the Ozark aquifer is increasingly protected from surface impacts.

Additional parameters that were analyzed during the current sampling event included pH, conductivity, alkalinity, carbon dioxide, total organic carbon (TOC), total hardness, total phosphate, total dissolved solids (TDS) and total suspended solids (TSS). Common ions and metals were also analyzed. These included aluminum, arsenic, boron, barium, beryllium, bicarbonate, cadmium, calcium, carbonate, chromium, copper, iron, fluoride, potassium, magnesium, manganese, sodium, nickel, lead, selenium, silica, vanadium and zinc. These data are listed in Tables 5 through 10 in Appendix A of this report. Minimum, maximum and mean values were calculated for some selected parameters for both aquifers from the current sampling event data. Tables 3 and 4 list the descriptive statistics for the selected parameters.

Leidy and Morris (1990) gathered data for both "wet" and "dry" seasons and calculated descriptive statistics for both seasons. The current data was collected in February 1996 which is considered a "wet" season, although it was during a period of minor precipitation. The calculated means for the Springfield Plateau aquifer correlated well with Leidy and Morris' tabulated data for the Boone Formation with the exception of iron which was skewed by samples BNE013, BNE040 and BNE043.

Table 3 - Springfield Plateau Aquifer - Descriptive Statistics

	, and	<b>5</b>	NH.N	NO.	'os	SE	Ва	đ	Fe	¥	Mg	a Z	OS
Location	mg/l	mg/l	mg/I	mg/l	ing/l	nag/l	l/gn	mg/l	ug/l	mg/l	lığılı 💮	mg/l	IR 2/1
BNE002	305	7.99	0.104	1.42	9.6	221	33.7	6.77	5	62.0	1.57	3.11	10.6
BNE003	255	7.57	0.025	1.51	11.4	251.5	44.4	68	2.3	0.92	1.63	3.43	10.8
BNE005	245.2	9.8	0.051	1.68	6.5	241	39.2	85.2	5.7	86.0	1.37	3.14	11.3
BNE007	203.7	14.94	0.05K	1.91	8.6	228.5	35.2	73.1	2.3	96.0	1.61	4.8	11.6
BNE012	115.9	8.49	0.051	8.46	9.8	177.5	31.1	47.2	4.7	1.56	2.55	2.97	11.8
BNE013	222	7.52	0.065	0.03	12.4	210	61.4	8.79	1670	0.93	2.36	2.95	10
BNE015	117.1	16.65	0.05K	7.88	5.4	204	36.8	49.1	1.8K	1.67	3.25	5.96	11.11
BNE017	106.1	13.16	0.05K	1.88	4.2	131	40.1	35.5	1.8K	0.97	2.17	9	6.6
BNE040	225.7	4.58	0.052	2.3	4.2	219.5	33.8	78.4	9.78	0.67	1.39	2.1	11.9
BNE041	228.1	6.61	0.052	1.89	4.2	224.5	33.9	6.77	4.8	0.97	1.28	2.57	10.1
BNE043	74.4	8.38	0.05K	1.79	1.7	105.5	18.2	25.6	193	0.55	1.25	4.28	11.1
Min.	74.4	4.58	0.05K*	0.03	1.7	105.5	18.2	25.6	1.8K*	0.55	1.25	2.1	6'6
Max.	305	16.65	0.104	8,46	12.4	251.5	61.4	68	1670	1.67	3.25	9	13
Mean	181.1	9.49	0.045	2.79	86.9	201.3	37.1	64.2	179.7	0.98	1.86	3.76	10.9

\* indicates actual value is less than the given value

Table 4 - Ozark Aquifer - Descriptive Statistics

<b>)</b>	-	<b>4</b> -		TDS	Вя	ď	Fe	Α,	Mg	Na	SIO,
YY Y	7500			210	210	1111	1/ <b>5n</b>	17211	<b>mg/I</b>	mgvi	mg/l
? ?				710	0.1.0	111	(77	0.0	4.17	÷ ;	
Ž.				188	10.7	44.]	8	1.13	17.7	1.78	9.6
83	0.058			245.5	10.2	9.05	17.1	2.9	26.1	6.11	9.1
<b>[</b>		5 0.34		285	13.7	62.3	1.8	1.11	31.3	1.85	10.9
=				216	7.5	47.7	24.6	2.62	19.5	5.87	9.2
$\mathcal{L}$				332	23.7	70.9	46.2	2.17	33.2	1.39	8.9
$\mathcal{Z}_{i}$				292.5	4.6	58.9	29.8	2.22	32.9	1.83	9.1
1.5	0.05K			183	14.3	38.1	36.7	1.48	70	0.91	9.1
$\approx$				179.5	6	36.6	1.8K	0.77	20.2	1.51	10.6
7.				176	4K	39.2	174	96.0	18.9	92.0	8.6
7.55				295	22.7	76.4	21.1	0.82	18.7	11.1	10.1
2.96				209	43.7	42.9	1600	3.36	20.3	10.2	6
1.97				290	33.8	9.08	9.9	0.87	17.6	1.39	12
3.68	3 0.05K	$\dashv$	$\dashv$	319	30.1	62.9	222	0.7	39.9	1.54	13
1.5	0.05K*	<u> </u>	* 7.6	176	4K*	36.6	1.8	0.67	4.19	92.0	6.8
7.55	5 0.2			332	43.7	111	1600	3.36	39.9	11.1	13
3.48	3 0.047	7 0.36		252.1	18.4	58.9	173.2	1.56	22.9	3.63	10

\* indicates actual value is less than the given value

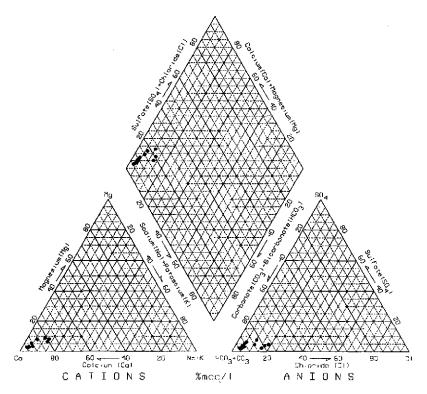
Similarly, the calculated means for the Ozark aquifer also correlated well with Leidy and Morris' tabulated data for the Cotter Dolomite with the exception of iron which was skewed by samples BNE020, BNE036, BNE038 and BNE042.

According to Adamski and others (1995), water type, dissolved solids concentration, and various chemical constituents can differ among the aquifers, and between confined and unconfined parts of the same aquifer. The Ozark aquifer generally had higher TDS concentrations which is consistent with longer resident time for the ground water in the aquifer. The Springfield Plateau aquifer is characterized by calcium bicarbonate water, while the Ozark aquifer is characterized by calcium-magnesium bicarbonate water. As expected, calcium is the dominant cation in the ground water of the Springfield Plateau aquifer, whereas, calcium and magnesium are the dominant cations in the ground water of the Ozark Aquifer. Bicarbonate is the dominant anion in the ground water of both aquifers. Figures 3 and 4 illustrate the dominant cations and anions in piper diagram format.

Least-squares linear regression analysis using QuattroPro was conducted to compare the relationships between various chemical parameters. This method tests the variance between a set of independent and dependent variables. The r-squared value represents the reliability of the regression with a value between zero and unity. The linear relationship of the data set is more reliable as the r-squared value approaches unity.

Plots of calcium versus bicarbonate, magnesium versus bicarbonate and calcium+magnesium versus bicarbonate indicate several relationships and significant differences between the two aquifers. The plot of calcium versus bicarbonate (Figure 5) for the Springfield Plateau aquifer shows a strong linear relationship between the major cation and anion with an r-squared value of 0.87. The similar plot for the Ozark aquifer (Figure 6) shows a much less defined linear relationship with an r-squared value of 0.59. This is readily explained by the fact that the Springfield Plateau aquifer is comprised of limestone (CaCO<sub>3</sub>); whereas, the Ozark aquifer is comprised of dolostone (CaMg(CO<sub>3</sub>)<sub>2</sub>) and varying amounts of the calcium have been replaced by magnesium. Although calcium concentrations for the Ozark aquifer are similar to the Springfield Plateau aquifer, bicarbonate concentrations are generally higher as a result of the increase in magnesium.

Plots of magnesium versus bicarbonate for both aquifers (Figures 7 and 8) show poor linear relationships. Low concentrations of magnesium in the Springfield Plateau aquifer have caused a random scattering of data points. The Ozark aquifer shows a slightly more linear relationship, although those points are also widely scattered. Plots of calcium + magnesium versus bicarbonate for both aquifers (Figures 9 and 10) show strong linear relationships. This is to be expected given the equilibrium relationship of both calcium and magnesium to bicarbonate in carbonate terrains. Sampling location BNE020 (#20 on Figure 8) is displaced to the far left by a very low magnesium concentration, which deviates considerably from the other wells. The magnesium concentration and ratio of magnesium to calcium would suggest that BNE020 derives a large part of its water from the Springfield Plateau aquifer; however, the high TDS, HCO<sub>3</sub>, Zn and SO<sub>4</sub> concentrations are similar to the other wells in the Ozark aquifer. It is therefore possible that the magnesium analysis is in error. In addition, BNE002 (#2 on Figures 5, 7 and 9) shows a large deviation from the best-fit lines. Figure 9 suggests that either the bicarbonate is too high or the calcium + magnesium is to low. An inspection of the total cations (4.17 meq/L) versus the total anions (5.45 meq/L) confirms this



**Figure 3** - Springfield Plateau aquifer piper diagram. Note the dominance of the calcium cation.

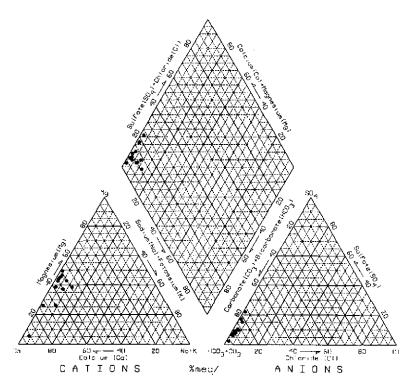


Figure 4 - Ozark aquifer piper diagram. Note the increase in the magnesium cation percentage.

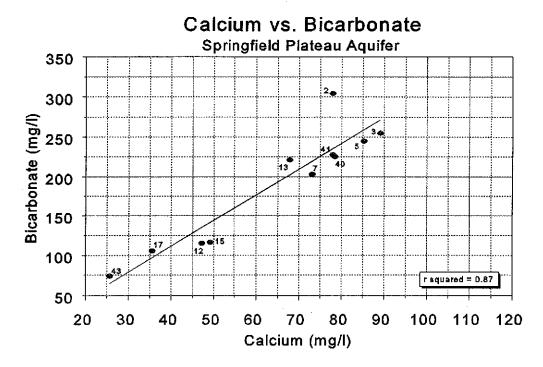
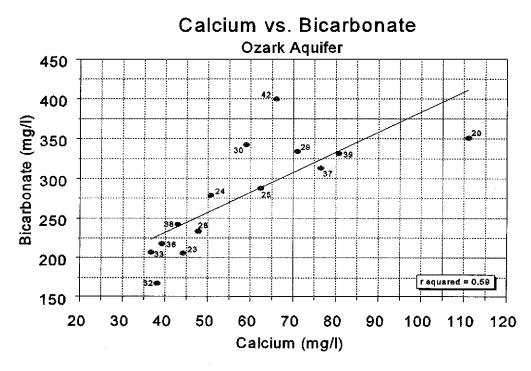


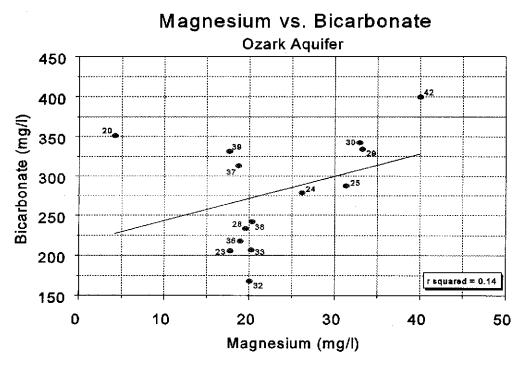
Figure 5 - Plot of calcium versus bicarbonate for the Springfield Plateau aquifer showing best fit linear regression. Numbers next to symbols indicate sampling locations.



**Figure 6** - Plot of calcium versus bicarbonate for the Ozark aquifer showing best fit linear regression. Numbers next to symbols indicate sampling locations.

#### Magnesium vs. Bicarbonate Springfield Plateau Aquifer Bicarbonate (mg/l) squared = 0.18 Magnesium (mg/l)

Figure 7 - Plot of magnesium versus bicarbonate for the Springfield Plateau aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.



**Figure 8** - Plot of magnesium versus bicarbonate for the Ozark aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

#### Calcium + Magnesium vs. Bicarbonate Springfield Plateau Aquifer Bicarbonate (meq/I) r squared = 0.86 Calcium + Magnesium (meq/l)

**Figure 9 -** Plot of calcium + magnesium versus bicarbonate for the Springfield Plateau aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

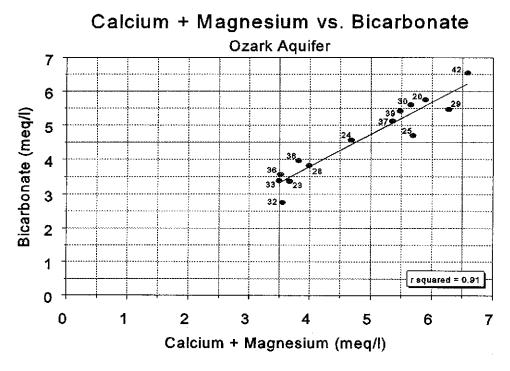


Figure 10 - Plot of calcium + magnesium versus bicarbonate for the Ozark aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

situation. A further inspection of the ratios of total cations and total anions to the measured conductivity (see Appendix B) would indicate that the calcium concentration is in error.

The plot of sodium versus chloride for the Springfield Plateau aquifer (Figure 11) shows a strong linear relationship while the similar plot for the Ozark aquifer (Figure 12) is much more scattered. Because sodium is expected to correlate closely with chloride, the weaker relationship in the Ozark aquifer data set possibly reflects cation exchange processes between calcium and sodium. Also, the values for both sodium and chloride were significantly lower in the Ozark aquifer and might reflect the effect of normal deviation (+/-) on the lower values.

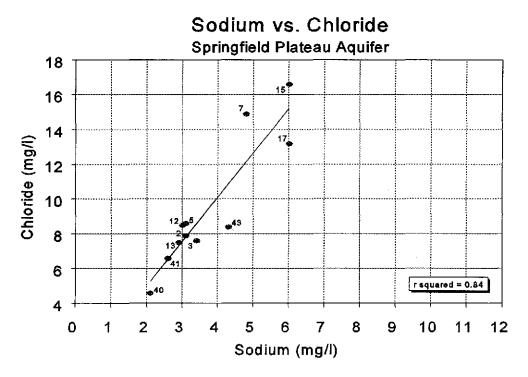
VOC analysis was conducted on samples from several springs emanating from the Boone Formation. Methylene chloride, a common laboratory chemical, was detected in three of the samples at low concentrations. These detections are most likely due to laboratory contamination and probably do not reflect actual ground water conditions. No other VOC constituents were detected above their respective detection limits in any of the samples. Table 9 in Appendix A lists the analyzed VOC constituents.

SVOC analysis was conducted on the sample obtained from the spring located down gradient of the Superfund site (BNE013). Previous documentation (Leidy and Morris, 1990) indicated a pentachlorophenol concentration of 1200 ug/l in the ground water. Several SVOC constituents were detected in the current sample including substantially elevated levels of pentachlorophenol and 2-3-4-6-tetrachlorophenol. The concentration of pentachlorophenol had increased slightly since the previous analysis by Leidy and Morris. Several of the constituents detected during this sampling event were not detected by Leidy and Morris, however, detection limits at the time were noticeably higher. Table 10 in Appendix A lists the analyzed and detected SVOC constituents along with the reported detection limits.

#### QUALITY CONTROL

A procedure for checking correctness of analyses was used for quality control which was based on Section 1030 F of Standard Methods for the Examination of Water and Wastewater, 18th edition (Standard Methods). The procedure involved calculating the TDS, conductivity and cation/anion balance for each sample. The calculated TDS and conductivity were based on methods outlined in Standard Methods. Cations used for the calculations were Ca<sup>2+</sup>, Mg<sup>2+</sup>, K<sup>+</sup> and Na<sup>+</sup>. Anions used were Cl<sup>-</sup>, F<sup>-</sup>, HCO<sub>3</sub><sup>-</sup>, NO<sub>3</sub><sup>-</sup> and SO<sub>4</sub><sup>2-</sup>. Ratios of measured TDS/calculated TDS, calculated conductivity/measured conductivity, calculated TDS/calculated conductivity, measured TDS/measured conductivity, cations/conductivity and anions/conductivity were calculated for each sample. These ratios were then compared to recommended ranges of values (Standard Methods) to evaluate laboratory efficiency. The calculations for each sampling point are listed in Appendix B.

Probably the most useful indicator of laboratory efficiency is the percent difference between the cation and anion sums. Hem (1989) states that the percent difference should be less than 2 percent. According to Standard Methods, the error can be raised to five percent if the cation and anion sum is greater than 10 meq/l. Most of the values were within the recommended 2 to 5 percent error. The samples obtained from BNE002, BNE012, BNE013, BNE015, BNE033, BNE036, BNE039 and



**Figure 11** - Plot of sodium versus chloride for the Springfield Plateau aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

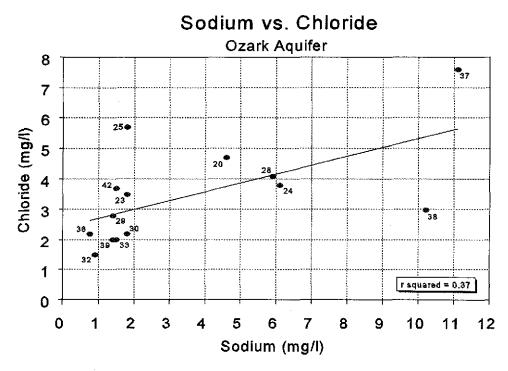


Figure 12 - Plot of sodium versus chloride for the Ozark aquifer showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

BNE040 were calculated at 13.29, 5.33, 4.90, 6.88, 2.47, 5.87, 3.01 and 2.21 percents, respectively. These percentages indicate a net loss of either cations or anions during the analysis procedure. The analysis indicates a net loss of cations for samples BNE002 and BNE013 and a net loss of anions for samples BNE012 and BNE015. No obvious loss could be determined for samples BNE033, BNE036, BNE039 and BNE040. No re-analysis on the samples could be conducted to assess these discrepancies due to the elapsed time since the original analysis; however, these discrepancies are small except for BNE002. This well, with the corresponding low calcium concentration, was explained in the previous section. A strong linear relationship is evident in the plot of calculated TDS versus laboratory-derived (weighted) TDS (Figure 13), which indicates the overall accuracy of the analyses. Figures 14 through 16, indicating total cations, total anions, and TDS versus conductivity showed moderate to strong linear relationships, which also indicate the overall accuracy of the analyses.

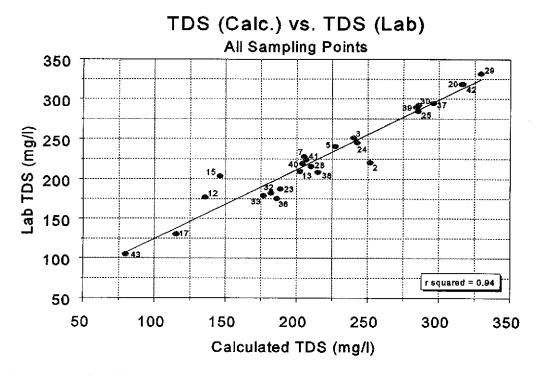
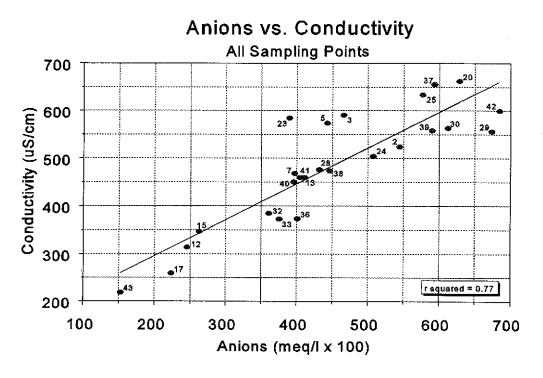


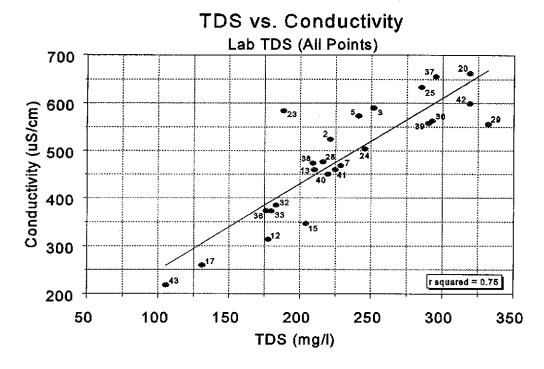
Figure 13 - Plot of calculated total dissolved solids versus laboratory total dissolved solids for all sampling points showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

#### Cations vs. Conductivity All Sampling Points Conductivity (uS/cm) **\***23 **⊕**12 r = 0.80Cations (meg/l x 100)

**Figure 14 -** Plot of cations versus conductivity showing best-fit linear regression. Numbers next to points indicate sampling locations.



**Figure 15 -** Plot of anions versus conductivity showing best-fit linear regression. Numbers next to points indicate sampling locations.



**Figure 16** - Plot of total dissolved solids versus conductivity for all sampling points showing best-fit linear regression. Numbers next to symbols indicate sampling locations.

#### SUMMARY AND CONCLUSIONS

The Omaha Monitoring area is underlain by the Ozark Aquifer system which is comprised of two primary aquifers. The upper, unconfined aquifer is the Springfield Plateau Aquifer which is located within the Boone Formation. The lower, confined aquifer is the Ozark Aquifer which is dominantly comprised of the Cotter Dolomite. Ground-water quality is generally good in both aquifers, however, the Ozark aquifer was found to contain generally higher total dissolved solids. Nutrient levels were generally higher in the Springfield Plateau aquifer. Several SVOC constituents were detected in sampling site BNE013, located adjacent to an abandoned (Superfund) wood treatment facility. Several of the detected parameters were at concentrations above the EPA's drinking water MCLs. The source of the contamination appears to be a cave which had been backfilled with hazardous waste (Leidy and Morris, 1990). The extent and volume of the waste is currently unknown. An increase in pentachlorophenol since the 1990 Leidy and Morris report indicates a residual contaminant source still exists at the site. The present data has been turned over to the Hazardous Waste Division of the Department.

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Appendix A: Summary of Analytical Data

				Total Blearb.	Blcarb.	Carbonate		<u>≅</u>	CO3		Fecal	Total								
Sample	Sample	퓚	Cond.	Alkalinity	Alkalinity	Alkalinity	Ç05	Bicarb,	Carbonate	200	Coliform	Hardness	ច	NH3-N	NO3-N	O-Phos.	T-Phos.	\$0	TDS	755
Location	Date		uS/cm	mg/l	mg/i	mg/l	l/gm	l/bm	mg/l	mg/l	cols./100ml	l/gm	l/gm	MgA		₩g/I	l/gm	Van	ПgЛ	l/bu
BNE002	12/89	•	•	*	•	•				,		*	5	0.05K	1.24	0.030		3.0	*	-
	12/92	*	•	•	•	•		•	•		49	•	ဖ	0.070		0.04K	•	6.0	,	•
	2/96	7.64	525	250	249	-	230.9	305	9.0	1.21		201	7.99	0.104		0.031	D.03K	9.6	221	¥
BNE003	12/89	•		*	*	•			*		•		6	0.05K		0.03K	,	8.0	*	,
	12/92	•	•		•		•	•			13		7	0.05K		0.081	•	4.0		•
	2/96	6.20	591	209	209	0	447.6	255	0	1.64	c <b>i</b> r	229	7.57	0.05 X	1.51	0.03K	0.03K	4	251.5	¥
BNE005	12/89		•	*			*		*		•		7	0.05K		0.030		3.0		
	12/92	*		•	*	•	*	•	٠	•	8	•	Ξ	0.113	0.74	0.038	٠	2.0	*	٠
	2/96	7.64	574	201	200	-	185.7	245.2	0.5	3.14	•	218	8,60	0.051		0.03K	0.03K	6.5	241	¥
BNE007	12/89		*				*	*	*					١		,		.	*	
	12/92	•	•	•		•		•	•	•	24	•	*	•	*	٠	•	٠	•	*
	2/96	7.98	469	167	165.5	1.5	149.7	203.7	6.0	<u>2</u>	•	189	14,94	0.05K	<u>9</u>	0.03K	0.03K	8.6	228.5	¥
BNE012	12/89			٠			,		*			•	9	l	ļ	0,03K		2	١.	-
	12/92	*	*	•	*-	*	•	•	•	٠	•	*	*	. *		*	*	*	*	*
	2/96	8.13	314	95	93.7	1.2	84.4	115.9	0.7	1.62	•	128	8.49	0.051	8.46	0.03K	0.03K	8.6	178	¥
BNE013	12/89	•	•	*					*			•		-		*	*			*
	12/92	•	*	*	*	*	*	•	•		*	•	*	•	•	•	•	٠	•	٠
	2/96	7.01	460	182	181.8	0.2	195.6	222	0.1	4.33	•	179	7.52	0.065	0.03	0.031	0.03K	12.4	210	9
BNE015	12/89			*	*	*						•	8	0.05K		0.03K	*	4.0	*	*
	12/92	•	*	,	*	*	•	•	•		•	٠	٠	•		•	•	•	•	•
	2/96	8.08	347	96	94.9	1.1	85.5	117.1	0.6	1.48	•	136	16,65	0.05K	7.88	0.03K	0.03K	5,4	204	12
<b>BNE017</b>	12/89			*	*	ŧ	*	*	*		٠	*	æ			0.03K	٠	3.0		*
	12/92	*	•		•	•				•	•	•	٠	•		•	•	•	•	•
	2/96	8.13	260	87	85.8	1.1	77.3	106.1	0.7	1.17	•	96	13,16	0.05 X	1.88	0.03K	0.03K	4.2	131	芜
BNE040	12/89		-	•	•	*			*			•	*	١		,	,			٠
	12/92	*	*		•	•	*	•	*	•	•	•	•	*	•	•	•	•	•	*
	2/96	7.52	451	185	184.4	0.6	173.7	225.7	0,3	1.12	*	504	4.58	0.052	2.30	0.03K	0.03K	4.2	219.5	-
BNE041	12/89		•	*	*	*	*		•		*	٠	•	•	l		•			
	12/92	•	•	*	•	*	*	*	*	•	٠	•	•	•	•	•	*	*	٠	*
	2/96	7.74	460	187	186	1	170.9	228.1	9.0	1.04	*	200	6.61	0.052	1.89	0.03K	0.03K	4.2	224.5	¥
BNE043	12/89			٠	٠	•			*		•		*	•		+	,	٠		
	12/92	*	•	•	•	•		•	*	*	•		•	٠	•	•	*	•	•	٠
	2796	8.03	219	61	60.3	9.0	54.5	74.4	0.4	1.93		8	8.38	0.05K	1.79	0.03K	0.0	1.7	105.5	5.
		!												1						

Notes: \* indicates no analyses conducted for the sample or no sample obtained on the given date "K" indicates actual value is less than the given value

Table 6 - Springfield Plateau Aquifer - Total Metals, Cations & Anions

Notes:  $\,^{\star}$  indicates no analyses conducted for the sample or no sample obtained on the given date " $\kappa$ " indicates actual value is less than the given value

Sample	Sample	Hď	Cond.	Total Alkalinity	Bicarb. Alkalinity	Carbonate Alkalinity	<b>CO</b> 2	HC03 Bicarb.	CO3 Carbonate	700	Fecal Coliform	Total Hardness	ប	NH3-N	N03-N	O-Phos.	T-Phos.	Š	TDS
Location	Date		m2/sn	l/gm	mg/l	mg/l	l/gm	l/gm	mg/l	l/bu	cols./100ml	₩	шgЛ	l/gm	mg/l	mg/l	mg/l	l/gm	₩
BNE020	12/89				•	•	*		•		*	*	5	0.05K	0.02K	0.03K	*	25.0	
	12/92	•	•	*	*	*	٠	•	*	*	±.0K	*	9	0.068	0.210	0.03K	•	22.0	•
	2/96	7.25	663	288	287.5	0.5	285.6	351.4	0.3	1.99	•	294	4.65	0.05K	0.410	0.03K	0.03K	18.3	319
BNE023	12/89		,		•	•	*		*			*	4	0.05K	0.02K	0.03K	*	25.0	•
	12/92			•	•	•	•			•	* 5	•	4	0.068	0.290	0.03K	*	39.0	*
	2/96	7.71	585	169	168.2	0.8	154.9	206.2	0.5	0.91	'n.oĸ	183	3.52	0.05K	0.024	0.03K	0.03K	19.8	188
BNE024	12/89				٠	*		*	•	٠	•	٠	4	0.05K	0.120	0.03K	*	19.0	*
	12/92	•	•	*	•	•		•	•		1.0K	٠	ო	0.05K	0, 150	0.03K	•	19.0	*
	2/96	7.90	505	229	227.3	1.7	206.5	279.4	. 1	1.12	•	234	3.83	0.058	0.193	0.03K	0.03K	18.3	245.5
BNE025	12/89	•					*		•	*	•	*	4	0.05K	0.02K	0.03K	*	46.0	٠
	12/92	•			•	.•	*	*	•	•	*	*	•	•	•	÷	*	•	*
	2/96	7.72	634	236	234.8	1.2	216.1	287.9	0.7	1.17	*	284	5.70	0.050	0.336	0.03K	0.03K	42.2	285
BNE028	12/89				*	*					*	•	4	0.05K	0.140	0.03K	*	17.0	*
	12/92		•	*	•	*	•	•	*	٠	•	*	•	•	•		٠	*	*
	2/96	7.79	477	192	190.9	1.1	174.6	234.2	0.7	0.77	•	198	4.1	0.075	1.143	0.03K	0.03K	16.6	216
BNE029	12/89					*		*	*		•	Ŧ	9	0.05K	0,370	0.03K		62.0	*
	12/92	•	•	*	*	•	•		•	•	1.0K	*	₹	0.05K	0.550	0.03K	*	57.0	*
	2/96	8.1	227	274	270.7	3,3	243.8	334.3	2	0.95	•	314	2.76	0.05K	0.419	0.03K	0.03K	56.1	332
BNE030	12/89					٠		*	•	*	•	٠	3	0.05K	٠	٠	*	22.0	*
	12/92	*		•	•	•	*		•	*	*	•	•	•		•		•	•
	2/96	8.03	564	281	278.1	2.8	251.2	342.8	1.7	1.09	•	283	2.22	0.05K	0.481	0.03K	0.03K	20.6	292.5
BNE032	12/89	٠		*	٠	•	*	•	*	•	*	•	က	0.05 <del>X</del>	0.02K	0.03K	*	42.0	*
	12/92	•	*		•	•	•	•	•	*	1.0X	•	7	0.05 <del>X</del>	0.030	0.03K	•	45.0	*
	2/96	7.99	382	138	136.7	1.3	123.6	168.4	0.8	1.08	•	177	1.50	0.05K	0.042	0.03K	0.03K	38.5	183
BNE033	12/89	٠	٠	•	•	•	•	*	•	•	•	•	4	0.05K	0.080	0.03K	٠	14.0	•
	12/92	٠	*	•	*		ŧ			•	- 8	*	7	0.05K	0,02K	0.03K	*	29.0	•
	2/96	8.01	373	170	168.3	1.6	152.1	207.4	1	0.77	•	175	8	0.05 X	0.158	0.03X	0.03 <del>X</del>	14.1	179.5
BNE036	12/89	•	*	•	•	•	•	•	•	•	*	•	•	*	•	•	•	•	*
	12/92	*	•	*	•	•	•	•	*	•		*	•	•	•	•	•	•	*
	2/96	7.95	374	179	177.5	1.5	160.8	218.4	0.9	1.02	*	176	2.24	0.050	0.02K	0.03K	0.03 <del>X</del>	17.5	126
BNE037	12/89	*	*	•	•	*	*	*	*	•	•	•	•	*	•	*	•	•	*
	12/92	•	*	*	•	*	*	*	*	•	•	•	*	*	٠.	*	*	4	•
	2/96	6.20	929	757	257	0	550.4	313.5	0	0.94	*	268	7.55	0.05 F	0.487	0.03 <del>X</del>	9.8¥	27.4	終
BNE038	12/89	•	•	*	•		•	*	•	•	•	•	•	+	•	•	•	*	*
	12/92	٠	•	*	*	*	*	٠	•	•	•	*	*	*	•	*	*	•	•
	2/96	7.82	474	199	197.7	1.3	180.5	242.8	0.7	1.26	•	191	2.96	0.200	0.02K	0.03K	0.03K	19.1	33
BNE039	12/89	*		*	•	•	•	•	•	•	•	*	٠	•	•	•	•	٠	•
	12/92	•		•	•	•	*	•		•	•	•	•	•	•	•	*	•	•
	2/96	8.12	559	272	268.6	3.3	241.9	331.8	2	0.78	٠	274	1.97	0.05K	0.153	0.03K	0.03K	19.1	230
BNE042	12/89	*	*		*	•	•	•	*	٠	•	•	•	•	٠	٠	*	٠	•
	12/92	*	•	•	*	•	•	•	•	•	*	•	•	•	•	*	•	٠	•
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Notes: \* indicates no analyses conducted for the sample or no sample obtained on the given date "K" indicates actual value is less than the given value

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Supplication Date and a series of a series of a color o																								
1282   1484   1497	Sample	Sample	₹	As	<b>6</b>	æ	Be	នឹ	Ö	ပိ	ច	ភី	£	ш.	¥	Μg	ž	ğ	Z	2	Se	Si02	>	Z
12889 14K 50K 201 318 2K 111 05K 816 1K 123 225 021 067 419 158 460 5K 2K 50K 83 5K 1288 1288 18K 50K 201 318 2K 111 05K 329 1K 105 30 023 113 177 20K 178 6K 41 50K 89 6K 127 1289 18K 50K 127 17 2 K 441 05K 329 1K 105 30 023 113 177 20K 178 6K 41 50K 89 6K 128 128 128 128 128 128 128 128 128 128	Location	Date	ng/l	ng/l	ng/I	ug/J	ng/l	₩	/Bn	√bn	ug/I	l/bn	ng/l	mg/l	mg/l	mg/l	ng/l	твЛ	ı/g⊓	ng∕l	ng/i	mg/l	l/gu	υgη
1989 1989 1989 1989 1989 1989 1989 1989	BNE020	12/89	*	•	*	•	*		•		*	*			•	*			•		•		*	
1,286		12/92	•	•	*	•	•	•	*	•	*	•					•	•	•	•	•	*		
12982		2/96	16K	5.0K	20.1	31.8	X	111	0.5K	8.16	¥	12.3	225	0.21	29.0	4.19	15.8	4.60	뜻	X	5.0K	9.3	쏫	100
1288 18K 50K 127 5K 102 ZK 441 0 SK 329 1K 105 20 023 113 177 2 DK 178 SK 41 5 DK 99 5K 1288 1 SK 188 102 ZK 606 0 SK 329 1K 221 171 0 SS 29 251 2 DK 178 SK 17 S DK 91 SK 17 S DK 91 SK 178 SK 17 S DK 91 SK 91 S DK 91 SK 91 S DK 91 SK 91 S DK 91 S DK 91 S DK 91 S DK 91 SK 91 S DK 91 S DK 91 SK	BNE023	12/89	*	4	*	*	*			*	•	*		*		*		•		•	*	*	*	
1289 14 5 6 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		12/92	*	*	•	*	*	•		*	*				ş)	•	•	*	•	•	•	•	*	*
1289 1289 1289 1289 1289 1289 1289 1289		2/96	, ¥9,	5 UK	19,0	10.7	쏬	44.1	0.5K	3.28	1K	10.5	20	0.23	1.13	17.7	2.0K	1.78	5X	4.1	5.0K	9.9	ž	1090
1986 16K 50K 1275 10.2 2K 506 0.5K 352 1K 221 171 0.55 29 261 20K 511 6K 79 50K 91 5K 79 5	BNE024	12/89	•		*		*	*							,				*	*		*	*	*
2966         16K         60K         217.5         10.2         2K         60K         10.5K         10.5K         10.5K         20.9         20.9         60K         21.7         10.5K         11.7         10.5K         20.9         20.7         10.5K         10.5K         10.9         5K         10.9         10.0		12/92	•	•	•		•		•		*		*	*		*		•	*	•	•	•	•	•
1289 1487 1589 1487 1589 1589 1589 1589 1589 1589 1589 1589		2/96	16K	5.0K	127.5	10.2	X	50.6	0.5K	3.52		22.1	17.1	0.65	2.9	26.1	2.0K	6.11	5 <del>K</del>	7.9	5.0K	9.1	5K	1420
1289 16K 5.0K 217 137 2K 623 05K 416 1K 21 18 011 111 313 20K 186 5K 2K 9 109 5K 1289 16K 138 170 1 75 2K 477 05K 356 1K 72 246 097 262 185 42 587 5K 2K 5.0K 9 1 6K 1289 17282 185 1K 138 170 1 75 2K 477 05K 356 1K 72 246 097 262 185 42 587 5K 5.K 5.K 5.K 5.K 5.K 5.K 5.K 5.K 5.K	BNE025	12/89	•		*	*	*	•											*			*	•	*
296e         16K         50K         217         13.7         2K         62.3         0.5K         416         1K         21         18         0.11         11.11         31.3         20K         165         9K         9         6K           1289         1789         1789         178         17.8         17         2.66         18.7         2.4         5.8         18.7         2.6         8.7         5.8         10.9         5.8           1289         16K         13.6         17         2.4         0.9         1.2         1.2         1.8         1.1         31.2         2.6         1.8         1.8         4.2         5.8         1.6         7.8         1.		12/92				•	*	*	*	•	•			•			•			*	*	*	*	*
1289   148   138   1701   15   214   477   054   356   14   72   246   037   262   185   42   587		2/96	, ¥91	5.0K	21.7	13.7	X	62.3	0.5K	4.16	¥	2.1		0 11	1.11	31.3	2.0K	1,85	χ	2K	6	10.9	<del>2</del>	21
1289 184 1701 175 24 477 05K 356 1K 72 246 097 262 185 42 587 5K 50K 89 5 K 1289 17289 185 1K 50K 617 23.7 2K 70 9 05K 469 1K 74 462 024 217 332 20K 139 5K 2K 50K 89 5 K 1289 17289 185 185 185 185 185 185 185 185 185 185	BNE028	12/89				.	٠	*	*	*	*					*	*	•						
2006         16K         175         204         477         0.84         3.56         14         72         246         0.97         262         485         42         587         387         38         50         68         69         68           12089         18         18         18         18         18         18         18         28         18         8         18         8         18         8         18		12/92	*	*		*	*	*	•	•		•		•	•	•	•	•	*	•	٠.	*		
1289 16K 50K 617 23.7 ZK 709 05K 46B 1K 74 46.2 024 217 33.2 20K 139 5K 2K 50K 69 5K 70 246 12K 50K 617 23.7 ZK 709 05K 46B 1K 74 46.2 024 217 33.2 20K 139 5K 2K 50K 69 5K 70 1289 1		2/96	16K	13.8	170.1	7.5	X	47.7	0.5K	3.56	¥.	7.2	24.6	0.97	2.62	19.5	4.2	5.87	ξ	2K	5.0K	9.2	옷	84.3
1289 16K 50K 617 237 2K 709 05K 468 1K 74 462 024 217 332 20K 139 5K 2K 50K 89 5K 1289 1289 1289 16K 50K 550 46 2K 568 05K 550 1K 22 298 037 222 329 20K 183 5K 2K 50K 91 5K 50K 91 1289 1289 16K 50K 163 143 2K 381 05K 328 1K 55 367 036 148 20 2K 031 5K 2K 50K 91 5K 1289 1289 16K 50K 163 143 2K 381 05K 328 1K 55 367 036 148 20 2K 031 5K 2K 50K 91 5K 1289 1289 16K 50K 67 4K 2K 392 05K 361 1K 649 1600 105 386 203 89 102 5K 50K 101 5K 1289 1289 16K 50K 31 2K 2K 50K 414 1K 649 1600 105 386 203 89 102 5K 50K 101 5K 1289 1289 16K 50K 31 2K 50K 414 1K 649 1600 105 386 203 89 102 5K 50K 101 5K 1289 1289 16K 50K 31 2K 659 05K 414 1K 56 66 007 077 089 20 1K 139 5K 2K 50K 101 5K 1289 1289 16K 50K 31 2K 659 05K 414 1K 56 66 007 070 389 20 5K 1289 1289 1289 1289 1289 1289 16K 50K 31 2K 659 05K 414 1K 56 66 007 070 389 20 5K 1289 1289 1289 1289 1289 1289 1289 1289	BNE029	12/89					٠		٠	*	£	*	*	×	*	*	*		*	•	*	π	•	•
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12/89 16 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2/96	16K	5.0K	61.7	23.7	X	6.07	0.5K	4.68	¥	7.4	46.2	0.24	2.17	33.2	2.0K	1.39	5K	2K	5.0K	8.9	χ	571
12/92         16K         50K         25C         40B         67K         25C         29B         67X         222         32.9         20K         18B         7K         20K         18K         20K         18B         7K	BNE030	12/89		*			•			*			*			*	*	*	*					*
2966         16K         50K         25C         46         27K         50S         50K         50S         40S         50S         40S         50S         50S         51K         22         298         0.37         222         32.9         20K         188         51K         50K         50F         50F <td></td> <td>12/92</td> <td>•</td> <td></td> <td>*</td> <td>*</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td></td> <td>•</td> <td></td> <td></td> <td>•</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>•</td> <td>•</td>		12/92	•		*	*	•	•	•	•	•		•			•	*	*	*	*	*	*	•	•
1289 16K 5.0K 16.3 14.3 2K 38.1 0.5K 3.28 1K 5.5 36.7 0.36 14.8 20 2.0K 0.91 5K 2K 5.0K 9.1 5K 12.89 12.89 14.8 5.0K 16.3 14.3 2K 38.1 0.5K 3.28 1K 5.5 36.7 0.36 14.8 20 2.0K 0.91 5K 2K 5.0K 9.1 5K 12.89 12.89 14.8 5.0K 18.1 5.0K 18.2 18.2 18.2 18.2 18.2 18.2 18.2 18.2		2/96	16K	5.0K	25.0	4.6	×	58.9	0.5K	5.05	¥	22	29.8	0.37	2.22	32.9	2.0K	1.83	뜻	×	5.0K	9.1	뜻	24.8
1289 16K 5.0K 16.3 14.3 2K 38.1 0.5K 3.28 1K 5.5 38.7 0.36 1.48 20 2.0K 0.31 5K 2K 5.0K 8.1 5K 1288 12.82 12.83 12.83 18.1 0.5K 3.2 1.8K 0.07 0.77 20.2 2.0K 1.51 5K 2.6 5.0K 10.6 5K 12.89 12.82 12.89 18.1 5.0K 5.0K 6.7 4K 2.K 38.2 0.5K 3.6 1 1.K 2.K 174 0.13 0.96 18.9 2.4 0.76 5K 8.6 5.0K 10.1 5K 12.89 12.89 12.89 18.1 5.0K 3.8 1 2.7 2.K 7.64 0.53 3.K 1.K 8.8 2.1 0.66 0.82 18.7 2.0K 11.1 5K 4.6 5.0K 10.1 5K 12.89 12.89 18.1 5.0K 3.8 1 2.7 2.K 4.2 0.5K 4.14 1K 6.4 16.0 1.05 3.96 20.5 19.1 5K 2.K 5.0K 10.1 5K 12.89 12.89 18.1 5.0K 3.8 1 2.7 2.K 4.2 0.5K 4.14 1K 6.4 16.0 1.05 3.96 20.5 19.1 5K 2.K 5.0K 12.89 18.1 5.0K 12.8 19.1 5K 2.K 5.0K 12.89 18.1 5.0K 12.89 19.2 5K 2.K 5.0K 12.89 19.2 5K 2.K 5.0K 12.89 19.2 5K 2.K 5.0K 12.89 12.89 18.1 5.0K 12.8 19.1 5K 2.K 5	BNE032	12/89	*	*	•		•	*	*				*	*	¥		*	*		*			*	
296         16K         50K         14.3         2K         38.1         0.5K         36.7         0.36         1.48         20         20K         0.91         5K         5K         6K         6K         10.08         17.08         7         7         20         20K         1.51         5K         5K         5K         10.6		12/92	•	•	*	*	*	•	•		•	•		•	*		*	*	*	*	*	*	•	•
12892 16K 5.0K 3K 3K 9.0 2K 366 0.5K 4.22 1K 5.3 1.8K 0.07 0.77 20.2 2.0K 1.51 5K 2.6 5.0K 10.6 5K 12992 12992 16K 5.0K 6.7 4K 2K 38.2 0.5K 3.61 1K 5.3 1.8K 0.07 0.77 20.2 2.0K 1.51 5K 2.6 5.0K 10.6 5K 12992 12992 16K 5.0K 6.7 4K 2K 38.2 0.5K 3.61 1K 88 2.1 0.66 0.82 18.9 2.4 0.76 5K 8.6 5.0K 10.1 5K 12992 12992 16K 5.0K 38.1 22.7 2K 76.4 0.53 3K 1K 88 2.1 0.66 0.82 18.7 2.0K 11.1 5K 4.6 5.0K 10.1 5K 12992 12992 16K 5.0K 3.1 2K 4.2 0.5K 4.14 1K 6.4 160 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.		2/96	16K	5.0K	16.3	14.3	χ	38.1	0.5K	3.28	놋	5.5	36.7	0.36	1.48	20	2.0K	0.91	꾯	¥	5.0K	9.1	쏤	170
12/92         15/95 <th< td=""><td>BNE033</td><td>12/89</td><td>*</td><td>*</td><td>*</td><td>*</td><td></td><td>*</td><td></td><td></td><td></td><td>•</td><td></td><td></td><td><b>*</b></td><td></td><td>*</td><td>*</td><td>*</td><td>*</td><td></td><td></td><td>٠</td><td>•</td></th<>	BNE033	12/89	*	*	*	*		*				•			<b>*</b>		*	*	*	*			٠	•
296         16k         5.0K         3K         6.0 GeK         422         17k         6.3         1.8K         0.07         0.77         20.2         2.0K         1.51         5K         2.6         50K         10.6         5K           1289         1.289         1.289         1.289         1.286         1.89         2.4         0.76         5K         8.6         5.0K         9.8         7 </td <td></td> <td>12/92</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td>*</td> <td>*</td> <td>•</td> <td></td> <td>•</td> <td>•</td> <td>,</td> <td>•</td> <td></td> <td>•</td> <td>•</td> <td>•</td> <td></td> <td></td> <td></td> <td>*</td> <td>*</td>		12/92	•	•	•	•	•	*	*	•		•	•	,	•		•	•	•				*	*
1289 * * * * * * * * * * * * * * * * * * *		2/96	<del>,</del>	5.0K	¥	9.0	χ	36.6	0.5K	4.22	1,	5.3	1.8K	0.07	0.77	20.2	2.0K	1.51	쏬	2.6	5.0K	10.6	쏬	429
12/92 16K 5.0K 6.7 4K 2K 39.2 0.5K 3.61 1K 2K 174 0.13 0.96 18.9 2.4 0.76 5K 86 5.0K 9.8 5K 12/89 1.2    12/89 16K 5.0K 6.7 4K 2K 38.1 22.7 2K 76.4 0.53 3K 1K 88 21.1 0.66 0.82 18.7 2.0K 11.1 5K 4.6 5.0K 10.1 5K 12/89 1.2    12/89 16K 5.0K 212 43.7 2K 42.9 0.5K 4.14 1K 64.9 1600 1.05 3.36 20.3 8.9 10.2 5K 5.0K 9 5K 12/89 1.2    12/89 16K 5.0K 3.8 3.8 2K 80.6 0.5K 4.14 1K 5.6 6.6 0.07 0.87 17.6 2.0K 1.39 5K 2K 5.0K 12 5K 12/89 1.2    12/89 16K 5.0K 3.8 3.8 2K 80.6 0.5K 4.31 1K 5.6 6.6 0.07 0.87 17.6 2.0K 1.39 5K 2K 5.0K 12 5K 12/89 1.2    12/89 16K 5.0K 3.6 3.8 3.8 2K 80.6 0.5K 4.66 1K 2.1 222 0.07 0.70 39.9 24.5 15.4 5K 2.1 5.0K 13 5K 14 5K 14	BNE036	12/89	*	*	*		*	*	*	*		•	*	*	*			•	*	•	•	•	•	•
296         16K         5.0K         6.7         4K         2K         396         174         0.13         0.96         18.9         2.4         0.76         5K         8.6         5.0K         9.8         5K           12/89         * <td></td> <td>12/92</td> <td>*</td> <td>*</td> <td>*</td> <td>•</td> <td>*</td> <td>*</td> <td>•</td> <td>•</td> <td></td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td></td> <td>*</td> <td>•</td> <td>*</td> <td>-</td> <td>*</td> <td>*</td> <td>•</td> <td>*</td>		12/92	*	*	*	•	*	*	•	•		•	•	•	•		*	•	*	-	*	*	•	*
12/89 12/80 16/80		2/96	16Ķ	5.0K	6.7	<del>\$</del>	X	39.2	0.5K	3.61	¥	*	174	0.13	0.96	18.9	2.4	0.76	꽃	9.6	5.0K	9.8	뽔	<del>1</del>
12/92 16K 5.0K 38.1 22.7 2K 76.4 0.53 3K 1K 8.8 21.1 0.66 0.82 18.7 2.0K 11.1 5K 4.6 5.0K 10.1 5K 12/89 12/92 16K 5.0K 212 43.7 2K 42.9 0.5K 4.14 1K 64.9 1600 1.05 8.36 20.3 8.9 10.2 5K 2K 5.0K 9 5K 12/89 12/92 16K 5.0K 3.8 2K 80.6 0.5K 4.31 1K 5.6 6.6 0.07 0.87 17.6 2.0K 1.39 5K 2K 5.0K 12 5K 12/89	BNE037	12/89	*	*	*	*	•	•	*	•	•	*		*		*	*		+		•	•	-	
2/96         16K         5.0K         38.1         22.7         2K         76.4         0.53         3K         1K         8.8         21.1         0.66         0.82         18.7         2.0K         11.1         5K         4.6         5.0K         10.1         5K           12/89         12/89         16K         5.0K         42.9         0.5K         41.4         1K         64.9         1600         1.05         3.6         20.3         8.9         10.2         5K         2K         5.0K         9         5K           12/89         12/89         1.2         43.7         1K         6.6         0.07         0.87         17.6         2.0K         1.39         5K         5.0K         12         5K           12/89         12/89         1.2         3.8         2K         80.6         0.5K         4.66         1K         2.1         2.0         0.7 </td <td></td> <td>12/92</td> <td>*</td> <td>*</td> <td>•</td> <td>*</td> <td>٠</td> <td>*</td> <td>*</td> <td>•</td> <td>*</td> <td>•</td> <td>*</td> <td>æ</td> <td>*</td> <td>*</td> <td>*</td> <td>-</td> <td>*</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td>		12/92	*	*	•	*	٠	*	*	•	*	•	*	æ	*	*	*	-	*	•	•	•	•	•
12/89 12/80 12/80 16/80		2/96	16K	5.0K	38.1	22.7	X	76.4	0.53	ž	¥	8.8	21.1	99.0	0.82	18.7	2.0K	11.1	뜻	4.6	5.0K	10.1	ž	2020 2020
12/92 16K 5.0K 212 437 2K 42.9 0.5K 4.14 1K 64.9 1600 1.05 3.36 20.3 8.9 10.2 5K 2K 5.0K 9 5K 12/89 12/92 18/9 16K 5.0K 3.6 33.8 2K 80.6 0.5K 4.31 1K 5.6 6.6 0.07 0.87 17.6 2.0K 1.39 5K 2K 5.0K 12 5K 12/89 12/92 12/92 12/92 12/92 12/92 12/92 12/92 12/92 12/95 254.8 5.0K 3K 30.1 2K 65.9 0.5K 4.66 1K 2.1 222 0.07 0.70 39.9 24.5 1.54 5K 2.1 5.0K 13 5K	BNE038	12/89	•	*	*	*	•	•	•	•	*	•	•	•	*	•	*	*	*	•				•
2/96         16K         5.0K         212         43.7         2K         42.9         0.5K         414         1K         64.9         1600         105         33.6         20.3         8.9         10.2         5K         2K         5.0K         9         5K           12/89         12/89         12/89         12/89         1K         2K         65.9         0.5K         4.66         1K         2Z         0.07         0.70         0.70         0.70         39.9         24.5         1.54         5K         13         5K		12/92	•	•	*	•	•	4	*	•	•	•	•		•	*	*	•	* .	*	•	*	*	•
12/89 12/82		2/96	ξ	5.0K	212	43.7	¥	42.9	0.5K	4.14	눚	64.9	1600	1.05	3.36	20.3	8.9	10.2	뜻	쏬	5.0K	6	쯧	36
12/92 * * * * * * * * * * * * * * * * * * *	BNE039	12/89	•	•	•	٠.	•	•	•	•	*	-	*	*	•	*	*	*		•	•	•	•	
296 16K 5.0K 3.6 33.8 2K 80.6 0.5K 4.31 1K 5.6 6.6 0.07 0.87 17.6 2.0K 1.39 5K 2K 5.0K 12 5K 1 12/89 *** *** *** *** *** *** *** *** *** *		12/92	•	•	•	•	•	*	*	•	•	*	*	*		•	•	•	-	•	*	•		•
12/89 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		2/96	16 <del>X</del>	5.0K	3.6	33.8	×	80.6	0.5K	4.31	¥	5.6	6,6	0.07	0.87	17.6	2.gK	1.39	쏬	X	ν. K	12	쏬	13.4
254.8 5.0K 3K 30.1 2K 65.9 0.5K 4.66 1K 2.1 222 0.07 0.70 39.9 24.5 1.54 5K 2.1 5.0K 13 5K	BNE042	12/89	•			*	•	*	*	*	*	•	•	•	•	•	•	•	*	-	•	•	*	•
254.8 5.0K 3K 30,1 2K 65,9 0.5K 4.66 1K 2.1 222 0.07 0.70 39.9 24.5 1.54 5K 2.1 5.0K 13 5K		12/92	•	•	•	•	•	•	*	•	•	*	*	•		•	٠		•	•	•	•	•	•
		2/96	254.8	5.0K	š	30.1	×	62.9	0.5K	4.66	¥	2.1	222	0.07	0.70	39.9	24.5	7.	S,	2.1	5.0K	13	9K	3.3

Notes: \* indicates no analyses conducted for the sample or no sample obtained on the given date "K" indicates actual value is less than the given value

Table 10 - Semi-Volatile Organic Compound Analyses

Parameter	D.L.	Units	BNE013	Parameter	D.L.	Units	BNE013
Acenapthene	0.0036	ug/l	9.3126	1-2-Diphenylhydrazine	0.00845	ug/i	*
Acenapthylene	0.00443	ug/l	0.68173	Ethyl-dimethyl-benzenes	0.1	ug/l	220
Acetophenone	0.00834	ug/l	0.67366	Flouranthrene	0.00214	ug/i	1.4392
4-Aminobiphenyl	0.00668	ug/I	•	Flourene	0.00428	ug/l	2.5897
Aniline	0.01734	ug/l	*	Hexachlorobenzene	0.00856	ug/l	•
Anthracene	0.00321	ug/l	•	Hexachlorobutadiene	0.00689	ug/l	*
Benzo(a)anthracene	0.00179	ug/l	•	Hexachlorocyclopentadiene	0.02488	ug/l	*
Benzo(b)flouranthene	0.00292	ug/l	•	Hexachloroethane	0.02303	ug/l	*
Benzo(k)flouranthene	0.00242	ug/l	*	Indane	0.1	ug/l	10
Benzo(g-h-i)perylene	0.00391	ug/l	•	Indeno(1-2-3-cd)pyrene	0,00423	ug/l	*
Benzo(a)pyrene	0.0031	ug/l	•	Isophorone	0.00841	ug/l	*
Bis(2-chloroethyl)-ether	0.04232	ug/l	*	3-Methylcholanthrene	0.00389	ug/l	*
Bis(2-chloroethoxy)-methane	0,02164	ug/l	*	2-Methylnapthalene	0.00708	ug/l	•
Bis(2-ethylhexyl) phthalate	0.00449	ug/l	2.1297	2-Methylphenol	0.0157	ug/l	•
4-Bromophenyl-phenyl-ether	0.00243	ug/l	•	4-Methylphenol	0.01076	ug/ī	0.12195
Butyl-benzyl-phthalate	0.00685	ug/l	0.55546	Napthalene	0.0044	ug/l	1.0569
4-Chloro-3-methylphenol	0.00909	ug/l	*	1-Napthylamine	0.00766	ug/l	•
1-Chloronapthalene	0.00328	ug/l	•	2-Napthylamine	0.00683	ug/i	•
2-Chloronapthalene	0.00281	ug/l	*	2-Nitroaniline	0.04671	ug/l	*
2-Chlorophenol	0.01349	ug/l	0.1535	3-Nitroaniline	0.01327	ug/l	•
4-Chlorophenyl-phenyl-ether	0.0035	ug/l	•	4-Nitroaniline	0.01536	ug/l	•
Chrysene	0.00181	ug/l	•	Nitrobenzene	0.03596	ug/l	•
Dibenz(a-h)anthracene	0.00326	ug/l	•	2-Nitrophenol	0.0188	ug/l	*
Dibenzo(a-j)acridine	0.00404	ug/t	*	4-Nitrophenol	0.01737	ug/l	*
Dibenzofuran	0.0023	ug/i	3.2407	N-Nitrosodibutylamine	0.05213	ug/l	*
1-2-Dichlorobenzene	0.00768	ug/l	•	N-Nitroso-di-n-propylamine	0.08976	ug/l	*
1-3-Dichlorobenzene	0.00736	ug/l	*	N-Nitrosopiperidine	0.01361	ug/l	•
1-4-Dichlorobenzene	0.00673	ug/l	0.04892	Pentachlorobenzene	0.00754	ug/l	•
3-3'-Dichlorobenzidine	0.00591	ug/l	*	Pentachloronitrobenzene	0.0142	ug/l	*
2-4-Dichlorophenol	0.0084	ug/l	•	Pentachlorophenol	2.3842	ug/i	1446.8
2-6-Dichlorophenol	0.00862	ug/i	•	Phenacetin .	0.00661	ug/l	*
Diethyl-phthalate	0.00524	ug/l	•	Phenanthrene	0.0029	ug/i	•
Dihydro-dimethyl-indenes	0.1	ug/l	60	Phenol	0.0971	ug/l	•
Dimethylaminoazobenzene	0.00384	ug/l	•	2-Picoline	0.05809	ug/l	•
Dimethylbenzo(a)anthracene	0.00435	ug/l	•	Pronamide	0.00461	ug/l	•
Dimethyl-Napthalenes	0.1	ug/l	60	Pyrene	0.00264	ug/l	1.5798
2-4-Dimethylphenol	0.00961	ug/l	*	1-2-4-5-Tetrachlorobenzene	0.0059	ug/l	*
Dimethyl-phthalate	0.00387	ug/l	*	2-3-4-6-Tetrachlorophenol	1.1144	ug/l	118.83
Di-n-butyl-phthalate	0.00268	ug/l	0.34037	1-2-4-Trichlorobenzene	0.00588	ug/l	*
Di-n-octyl-phthalate	0.00255	ug/l	3.0 .007	2-4-5-Trichlorophenol	0.00408	ug/i	1.4584
4-6-Dinitro-2-methylphenol	0.00331	ug/l	•	2-4-6-Trichlorophenol	0.00435	ug/l	*
2-4-Dinitrotoluene	0.01217	ug/l	•	Trimethyl-benzenes	0.00403	ug/l	30
2-6-Dinitrotoluene	0.01705	ug/l	*	Trimethyl-napthalenes	0.1	ug/l	180
Diphenylamine	0.0027	ug/i	*	Tarried y-napalalenes	0.1	ugn	100

Note: \* indicates constituent not detected for the sample

Table 9 - Volatile Organic Compound Analyses

Beremeter	ים	I inlea	Samle Loc BNE002	BNE003	BNE005	BNE007	BNE012	BNE013	BNE015	BNE017	BNE042	BNE043
Parameter Acetons	D.L. 2.00	Units	BNE002	- DNE003	\$14E005	PME00/	BNE012	BNEU13	PINEA.12	BNEU1/	BNEU42	DIVEU43
Acetone		ug/l			•		•			-	•	•
Benzene	2.00	ug/l		_	-	_				-	-	
Bromobenzene	2.00	ug/l	•	_	-	-	-	-	-	-	-	-
Bromochloromethane	2.00	ug/l		-	-		-	_			-	•
Bromodichloromethane	2.00	ug/l					•					
Bromoform	2.00	ug/l				*	-	-				
Bromomethane	2.00	ug/l			•		*				•	•
Carbon Tetrachloride	2.00	ug/l			•	•	•			•	•	•
Chlorobenzene	2.00	ug/l	•	*	•		•				*	•
Chloroethane	2.00	ug/l			*	*		*				*
Chloroform	2.00	ug/l	*	*	*	•	•	*	*		*	*
Chloromethane	2.00	ug/l		*								
2-Chlorotoluene	2.00	ug/l	*	•	•	•	•	*				•
4-Chiorotoluene	2.00	ug/l	*	•	•	*	•	*	*	*	*	*
Dibromochloromethane	2.00	ug/l	*	*	*	•	•	*	* -	*	•	*
1,2-Dibromo-3-chloropropane	2.00	ug/l	*	*	*	*	*	*	*	*	•	•
1,2-Dibromoethane	2.00	ug/i	•	*	*	•	•	•	•	*	•	•
Dibromomethane	2.00	ug/l	*	*	*	*	*	*	*	*	*	. •
1,2-Dichlorobenzene	2.00	ug/l	*	*	*	•	•	•	•	*	•	•
1,3-Dichlorobenzene	2.00	ug/l	*	*	*	*	*	*	*	*	*	*
1,4-Dichlorobenzene	2.00	ug/l	*	*	*	*	*	*	*	*	•	
1,1-Dichloroethane	2.00	ug/l	*	*	*	*	*	*	*	. *	*	*
1,2-Dichloroethane	2.00	ug/l	•		•	•	*	• .	*	*	•	*
1,1-Dichloroethene	2.00	ug/l	•		•	*	*	*	*	*	•	*
Cis-1,2-Dichloroethene	2.00	ug/l	*	*	*	*	*	•	*	*	•	*
Trans-1,2-Dichloroethene	2.00	ug/l	•		*	*	*	*	*	*	*	*
1,2-Dichloropropane	2.00	ug/l	*	* '		*		*		•	•	*
1,3-Dichloropropane	2.00	ug/l	•	•	•	•	*	*	•	*	*	*
2,2-Dichloropropane	2.00	ug/l	•	•	*	•	*	*	•	*	•	•
1,1-Dichloropropene	2.00	ug/l	*	*		*	*	*	*	*	*	*
Cis-1,3-Dichloropropene	2.00	ug/l	*	*		*	*	*	•	•	•	•
Trans-1,3-Dichloropropene	2.00	ug/l	*	*	•	*	*	*	*	*	*	
Ethylbenzene	2.00	ug/l	*	*	•	*	*	*	*	•	•	*
Hexachlorobutadiene	2.00	ug/l	•	• .		•	•	•	*	*	*	*
Isopropyibenzene	2.00	ug/l	*	*		*	*	*		*	*	*
Meta-xylene	2.00	ug/l	*		*	*		*		*	•	*
Methyl ethyl ketone	2.00	ug/l				•			*	*	*	
Methylene Chloride	2.00	ug/l	*	2.27	•	•		1.09	0.97			*
N-Butyl benzene	2.00	ug/l	•	* .		*	*	*	*	•		*
N-Propyl benzene	2.00	ug/l	•	•			*				•	*
Napthalene	2.00	ug/l	*						•			*
Orthoxylene	2.00	ug/i ug/l	•		*	*				*		*
P-Isopropyl toluene	2.00	ug/l ug/l	•	•	•	•						
Para-xylene	2.00	ug/i ug/l	•		*	*			*	*	*	
•	2.00	ug/i ug/l	*	*	*		*	•	*	•		*
Sec-butyl benzene		-	*						•	*		*
Styrene	2.00	ug/l			*		*	•	•			
Tert-butyl benzene	2.00	ug/l	- *	•	•			•	*	*	*	•
1,1,1,2-Tetrachlorethane	2.00	ug/l		•	•	•		•				
1,1,2,2-Tetrachloroethane	2.00	ug/l						<u>.</u>	-		•	-
Tetrachloroethene	2.00	ug/l	<u>.</u>	-	_		_	_	-	_		-
Toluene	2.00	ug/l	-	-	-	-	•	*	<u>-</u>	-	-	-
1,2,3-Trichlorobenzene	2.00	ug/l	•	*	*	*	*	*	*	*	*	-
1,2,4-Trichlorobenzene	2.00	ug/l	•	*	*	*	*	*	# _	-	*	
1,1,1-Trichloroethane	2.00	ug/l	* -	*				<del>.</del>	# -	* -	-	•
1,1,2-Trichloroethane	2.00	ug/l		*	•	•	•	*		*	•	•
Trichloroethene	2.00	ug/l		•	•		*		•	•	*	•
Trichloroflouromethane	2.00	ug/l	•	•	•	•	*	*	*	•	*	*
1,2,3-Trichloropropane	2.00	ug/l	*	*	•	*	*	*	*	*	*	•
1,2,4-Trimethylbenzene	2.00	ug/l	•	*	*	*	*	*	*	*	•	*
1,3,5-Trimethylbenzene	2.00	ug/l	*		*	•	*	•	*	* '	*	•
Vinyl Chloride	2.00	ug/l		•	•	•	*	•	•	•	•	*

Notes: \* indicates constituent not detected for the sample

**Appendix B: Quality Control Checks** 

Sample Location:	BNE002	Sample Da	te: 02	-13-96					
Alkalinity (mg/l)	250					•			
SIO2 (mg/l)	10.6								
Measured conductivity (umho/cm)	525								
Infinite dilution conductivity (umho/cm)	503.87								
Ionic strength (M) Monovalent ion activity coefficient	0.0069 0.92								
Calculated conductivity (umho/cm)	424.23								
Measured TDS	221								
Calculated TDS	263.00								
Ratio: Meas TDS/Calc TDS	0,84	Should be b	etween 0.9 a	and 1.1					
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond	0.42	Should be b	etween 0.55	and 0.7					
	Constituer		_					_	
Concentration (mail.)	Na 3.11	K	Ca	Mg	CI	SO4	NO3	F	HCO3
Concentration (mg/L) Concentration (meg/L)	0.1353	<b>0.79</b> 0.0202	<b>77.9</b> 3.8872	<b>1.57</b> 0.1292	<b>7.99</b> 0.2253	<b>9.6</b> 0.1999	<b>1.42</b> 0.0229	0.06 0.0032	<b>305</b> 4.9990
Molecular weight (mg/mM)	22,9898	39.0983	40.0780	24.3050	35.4527	96,0636	62.0049	18.9984	61.0171
Concentration (mM)	0.1353	0.0202	1.9436	0.0646	0.2253	0.0999	0.0229	0.0032	4.9990
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	6.78	1.48	231,29	6.86	17.21	15.99	1.64	0.17	222.45
lonic strength	6.76E-05	1.01E-05	3.89E-03	1.29E-04	1.13E-04	2.00E-04	1.15E-05	1.58E-06	2.50E-03
Cation sum (meq/L)	4.17								
Anion sum (meq/L)	5.45								
% Difference		Should be <	2%						
lon Difference	-1.28	Charlette t							
Ratio: Cation sum*(100)/Measured conductivity Ratio: Anion sum*(100)/Measured conductivity		Should be b Should be b							
` ,									
Sample Location:	BNE003	Sample Da	te: 02	-13-96					
• •	BNE003 209	Sample Da	te: 02	-13-96	<del></del>				
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l)	209 10.8	Sample Da	te: 02	-13-96	<del></del>				
Sample Location:  Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm)	209 10.8 591	Sample Da	te: 02	-13-96					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	209 10.8 591 503.79	Sample Da	te: 02	-13-96					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	209 10.8 591 503.79 0.0071	Sample Da	te: 02	-13-96	· · · · · · · · · · · · · · · · · · ·				
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	209 10.8 591 503.79 0.0071 0.92	Sample Da	te: 02	-13-96					
Sample Location:  Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	209 10.8 591 503.79 0.0071	Sample Da	te: 02	-13-96					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	209 10.8 591 503.79 0.0071 0.92 423.27	Sample Da	te: 02	-13-96	·····				
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71	Should be b	etween 0.9 a	and 1.1	······································				
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72	Should be b	etween 0.9 a	and 1.1 and 1.1					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59	Should be b Should be b Should be b	etween 0.9 a etween 0.9 a etween 0.55	and 1.1 and 1.1 i and 0.7					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59	Should be b	etween 0.9 a etween 0.9 a etween 0.55	and 1.1 and 1.1 i and 0.7					
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43	Should be b Should be b Should be b Should be b	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 i and 0.7 i and 0.7					
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constituer	Should be b Should be b Should be b Should be b nt:	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg	CI	SO4	NO3	F	нсоз
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constituer Na 3.43	Should be b Should be b Should be b Should be b nt: K 0.92	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg 1.63	7.57	11.4	1.51	0.07	255
Sample Location:  Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (meq/L)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constituer	Should be b Should be b Should be b Should be b nt: K 0.92 0.0236	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg 1.63 0.1341	<b>7.57</b> 0.2135	<b>11.4</b> 0.2373	1.51 0.0244	<b>0.07</b> 0.0037	<b>255</b> 4.1791
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constitues Na 3.43 0.1492	Should be be Should be be Should be be should be bent:  K 0.92 0.0236 39.0983	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg 1.63	7.57	11.4	1.51	0.07	255
Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constituel Na 3.43 0.1492 22.9898	Should be be Should be be Should be be be better K 0.92 0.0236 39.0983	etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg 1.63 0.1341 24.3050	<b>7.57</b> 0.2135 35.4527	11.4 0.2373 96.0636	1.51 0.0244 62.0049	<b>0.07</b> 0.0037 18.9984	<b>255</b> 4.1791 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1	Should be b Should be b Should be b Should be b nt: K 0.92 0.0236 39.0983 0.0236 1 73.5	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1	7.57 0.2135 35.4527 0.2135 1 76.4	11.4 0.2373 96.0636 0.1187 2 80	1.51 0.0244 62.0049 0.0244 1 71.4	0.07 0.0037 18.9984 0.0037 1 54.4	255 4.1791 61.0171 4.1791 1 44.5
Sample Location:  Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1 7.48	Should be be Should be be Should be be should be be better to the should be be better to the should be be better to the should be be should be be the should be the should be be the should b	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5 264.25	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1 7.12	7.57 0.2135 35.4527 0.2135 1 76.4 16.31	11.4 0.2373 96.0636 0.1187 2 80 18.99	1.51 0.0244 62.0049 0.0244 1 71.4 1.74	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	255 4.1791 61.0171 4.1791 1 44.5 185.97
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1	Should be be Should be be Should be be should be be better to the should be be better to the should be be better to the should be be should be be the should be the should be be the should b	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1	7.57 0.2135 35.4527 0.2135 1 76.4	11.4 0.2373 96.0636 0.1187 2 80	1.51 0.0244 62.0049 0.0244 1 71.4	0.07 0.0037 18.9984 0.0037 1 54.4	255 4.1791 61.0171 4.1791 1 44.5
Sample Location:  Alkalinity (mg/l) SIO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1 7.48	Should be be should be sho	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5 264.25	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1 7.12	7.57 0.2135 35.4527 0.2135 1 76.4 16.31	11.4 0.2373 96.0636 0.1187 2 80 18.99	1.51 0.0244 62.0049 0.0244 1 71.4 1.74	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	255 4.1791 61.0171 4.1791 1 44.5 185.97
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43 Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1 7.48 7.46E-05	Should be be should be sho	etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5 264.25 4.44E-03	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1 7.12	7.57 0.2135 35.4527 0.2135 1 76.4 16.31	11.4 0.2373 96.0636 0.1187 2 80 18.99	1.51 0.0244 62.0049 0.0244 1 71.4 1.74	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	255 4.1791 61.0171 4.1791 1 44.5 185.97
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) S Difference	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constituer Na 3.43 0.1492 22.9898 0.1492 1 50.1 7.48 7.46E-05 4.75 4.66 0.96	Should be be should be sho	etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5 264.25 4.44E-03	and 1.1 and 1.1 and 0.7 and 0.7 1.63 0.1341 24.3050 0.0671 2 53.1 7.12	7.57 0.2135 35.4527 0.2135 1 76.4 16.31	11.4 0.2373 96.0636 0.1187 2 80 18.99	1.51 0.0244 62.0049 0.0244 1 71.4 1.74	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	255 4.1791 61.0171 4.1791 1 44.5 185.97
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	209 10.8 591 503.79 0.0071 0.92 423.27 251.5 251.71 1.00 0.72 0.59 0.43  Constitue Na 3.43 0.1492 22.9898 0.1492 1 50.1 7.48 7.46E-05 4.75 4.66 0.96 0.09	Should be be should be sho	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 89 4.4411 40.0780 2.2206 2 59.5 264.25 4.44E-03	and 1.1 and 1.1 i and 0.7 i and 0.7 Mg 1.63 0.1341 24.3050 0.0671 2 53.1 7.12 1.34E-04	7.57 0.2135 35.4527 0.2135 1 76.4 16.31	11.4 0.2373 96.0636 0.1187 2 80 18.99	1.51 0.0244 62.0049 0.0244 1 71.4 1.74	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	255 4.1791 61.0171 4.1791 1 44.5 185.97

Sample Location:	BNE005	Sample Dat	te: 02	-13-96					
Alkalinity (mg/l)	201								
SiO2 (mg/l)	11.3								
Measured conductivity (umho/cm)	574								
Infinite dilution conductivity (umho/cm)	477.89								
Ionic strength (M)	0.0067								
Monovalent ion activity coefficient Calculated conductivity (umho/cm)	0.92 <b>403.23</b>								
Measured TDS	241	•							
Calculated TDS	239.38								
Ratio: Meas TDS/Calc TDS	1.01	Should be b	etween 0.9 a	and 1.1					
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond	0.42	Should be b	etween 0.55	and 0.7					
	Constitue				<b>0</b> 1	224	NOS	-	HOOF
Concentration (mail )	Na 3.14	K 0.98	Ca 85.2	Mg 1.37	Cl 8,60	SO4 6.5	NO3 1.68	F 0.04	HCO3 245.2
Concentration (mg/L) Concentration (meg/L)	0.1365		4.2515	0.1127	0.2425	0.1353	0.0271	0.0021	4.0192
Molecular weight (mg/mM)	22.9898		40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.1365		2.1257	0.0564	0.2425	0.0677	0.0271	0.0021	4.0192
Charge z (absolute value)	1		2	2	1	2	1	· 1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1		59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	6.84		252.96	5.99	18.53	10.83	1.93	0.11 1.05E-06	178.85 2.01E-03
lonic strength	6.83E-05	1.25E-05	4.25E-03	1.13E-04	1.21E-04	1.35E-04	1.35E-05	1.05E-06	2.01E-03
Cation sum (meq/L)	4.53								· 4.
Anion sum (meq/L)	4.43								
% Difference		Should be <	2%						
Ion Difference	0.10	Should be b	atuaan A A	and 1 1					
Ratio: Cation sum*(100)/Measured conductivity Ratio: Anion sum*(100)/Measured conductivity		Should be b							
Sample Location:	BNE007	Sample Da	te: 02	-13-96			·		
	BNE007 167		te: 02	-13-96			·		
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l)			te: 02	-13-96			· · · · · · · · · · · · · · · · · · ·		<del></del>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	167 11.6 469		te: 02	-13-96			· 	· .	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	167 11.6 469 433.80		<u>te: 02</u>	-13-96				· .	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	167 11.6 469 433.80 0.0060		<u>te: 02</u>	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	167 11.6 469 433.80 0.0060 0.92		te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	167 11.6 469 433.80 0.0060 0.92 369.26		te: 02	<u>-13-96</u>			<u> </u>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	167 11.6 469 433.80 0.0060 0.92		te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05	Should be b	etween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79	Should be b	etween 0.9 etween 0.9	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79	Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59	Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7			NO		HOO2
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49	Should be to should be to should be to should be to the s	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg	CI 14 94	SO4	NO3	F 0.05	HCO3
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49 Constitue	Should be be Should be be Should be be should be be but:	etween 0.9 etween 0.55 etween 0.55 Ca 73.1	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 1.61	14.94	8.6	1.91	0.05	203.7
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49	Should be be Should be be Should be be should be be to the should b	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49 Constitue Na 4.80 0.2087 22.9898 0.2087	Should be be should be shoul	etween 0.9 etween 0.5 etween 0.55 etween 0.55 73.1 3.6477 40.0780 1.8238	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 1.61 0.1325 24.3050 0.0662	<b>14.94</b> 0.4215	<b>8.6</b> 0.1791 96.0636 0.0895	1.91 0.0308 62.0049 0.0308	0.05 0.0026 18.9984 0.0026	<b>203.7</b> 3.3393 61.0171 3.3393
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087	Should be be should b	etween 0.9 etween 0.5 etween 0.55 etween 0.55 73.1 3.6477 40.0780 1.8238 2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 1.61 0.1325 24.3050 0.0662 2	14.94 0.4215 35.4527 0.4215 1	8.6 0.1791 96.0636 0.0895 2	1.91 0.0308 62.0049 0.0308 1	0.05 0.0026 18.9984 0.0026	203.7 3.3393 61.0171 3.3393 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1	s Should be to	etween 0.9 etween 0.55 etween 0.55 etween 0.55 2 73.1 3.6477 40.0780 1.8238 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 0.1325 24.3050 0.0662 2 53.1	14.94 0.4215 35.4527 0.4215 1 76.4	8.6 0.1791 96.0636 0.0895 2 80	1.91 0.0308 62.0049 0.0308 1 71.4	0.05 0.0026 18.9984 0.0026 1 54.4	203.7 3.3393 61.0171 3.3393 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1	Should be it is should be it is should be it is should be it is it	etween 0.9 etween 0.9 etween 0.55 etween 0.55 2 73.1 3.6477 40.0780 1.8238 2 59.5 217.04	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 24.3050 0.0662 2 53.1 7.03	14.94 0.4215 35.4527 0.4215 1 76.4 32.21	8.6 0.1791 96.0636 0.0895 2 80 14.32	1.91 0.0308 62.0049 0.0308 1 71.4 2.20	0.05 0.0026 18.9984 0.0026 1 54.4 0.14	203.7 3.3393 61.0171 3.3393 1 44.5 148.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1 10.46 1.04E-04	Should be to Shoul	etween 0.9 etween 0.55 etween 0.55 etween 0.55 2 73.1 3.6477 40.0780 1.8238 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 0.1325 24.3050 0.0662 2 53.1	14.94 0.4215 35.4527 0.4215 1 76.4	8.6 0.1791 96.0636 0.0895 2 80	1.91 0.0308 62.0049 0.0308 1 71.4	0.05 0.0026 18.9984 0.0026 1 54.4	203.7 3.3393 61.0171 3.3393 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength  Cation sum (meq/L)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.11 10.46 1.04E-04	Should be keep to should be ke	etween 0.9 etween 0.9 etween 0.55 etween 0.55 2 73.1 3.6477 40.0780 1.8238 2 59.5 217.04	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 24.3050 0.0662 2 53.1 7.03	14.94 0.4215 35.4527 0.4215 1 76.4 32.21	8.6 0.1791 96.0636 0.0895 2 80 14.32	1.91 0.0308 62.0049 0.0308 1 71.4 2.20	0.05 0.0026 18.9984 0.0026 1 54.4 0.14	203.7 3.3393 61.0171 3.3393 1 44.5 148.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1 10.46 1.04E-04 4.01 3.97	Should be to Shoul	etween 0.9 etween 0.55 etween 0.55 etween 0.55 73.1 3.6477 40.0780 1.8238 2 59.5 217.04 3.65E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 24.3050 0.0662 2 53.1 7.03	14.94 0.4215 35.4527 0.4215 1 76.4 32.21	8.6 0.1791 96.0636 0.0895 2 80 14.32	1.91 0.0308 62.0049 0.0308 1 71.4 2.20	0.05 0.0026 18.9984 0.0026 1 54.4 0.14	203.7 3.3393 61.0171 3.3393 1 44.5 148.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) M Difference	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1 10.46 1.04E-04 4.01 3.97 0.50	Should be be should b	etween 0.9 etween 0.55 etween 0.55 etween 0.55 73.1 3.6477 40.0780 1.8238 2 59.5 217.04 3.65E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 24.3050 0.0662 2 53.1 7.03	14.94 0.4215 35.4527 0.4215 1 76.4 32.21	8.6 0.1791 96.0636 0.0895 2 80 14.32	1.91 0.0308 62.0049 0.0308 1 71.4 2.20	0.05 0.0026 18.9984 0.0026 1 54.4 0.14	203.7 3.3393 61.0171 3.3393 1 44.5 148.60
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	167 11.6 469 433.80 0.0060 0.92 369.26 228.5 217.74 1.05 0.79 0.59 0.49  Constitue Na 4.80 0.2087 22.9898 0.2087 1 50.1 10.46 1.04E-04 4.01 3.97 0.50	Should be be should b	etween 0.9 etween 0.55 etween 0.55 etween 0.55 73.1 3.6477 40.0780 1.8238 2 59.5 217.04 3.65E-03	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.61 0.1325 24.3050 0.0662 2 53.1 7.03 1.32E-04	14.94 0.4215 35.4527 0.4215 1 76.4 32.21	8.6 0.1791 96.0636 0.0895 2 80 14.32	1.91 0.0308 62.0049 0.0308 1 71.4 2.20	0.05 0.0026 18.9984 0.0026 1 54.4 0.14	203.7 3.3393 61.0171 3.3393 1 44.5 148.60

Sample Location:	BNE012	Sample Da	te: 02	-14-96					
Alkalinity (mg/l)	95						•		
SiO2 (mg/l)	11.8								
Measured conductivity (umho/cm)	314								
Infinite dilution conductivity (umho/cm)	287.72								
Ionic strength (M)	0.0040								
Monovalent ion activity coefficient	0.94								
Calculated conductivity (umho/cm)	251.71								
Measured TDS	177.5								
Calculated TDS	148.67	Oh-114	0.0						
Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond		Should be b Should be b							
Ratio: Calc Conditivess Condi Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond		Should be b							
, , , , , , , , , , , , , , , , , , , ,									
	Constituer Na	nt: K	Ca	1.0	C	SO4	NO3	F	НСО3
Concentration (mg/L)	Na 2.97	1.56	Ca 47.2	Mg 2.55	CI 8,49	304 8,6	8.46	0.05	115.9
Concentration (meg/L)	0.1291	0.0399	2.3553	0.2098	0.2395	0.1791	0.1365	0.0026	1.8996
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35,4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.1291	0.0399	1.1776	0.1049	0.2395	0.0895	0.1365	0.0026	1.8996
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	6.47	2.93	140.14	11.14	18,30	14.32	9.74	0.14	84.53
Ionic strength	6.46E-05	2.00E-05	2.36E-03	2.10E-04	1.20E-04	1.79E-04	6.82E-05	1.32E-06	9.50E-04
Cation sum (meq/L)	2.73								
Anion sum (man/l )	2.46								
% Difference	5.33	Should be <	2%						
Ion Difference	0.28								
Ratio: Cation sum*(100)/Measured conductivity		Should be b							
Ratio: Anion sum*(100)/Measured conductivity	0.78	Should be b	etween U.9	and 1.1					
Sample Location:	BNE013	Sample Da	te: 02	-14-96			<del></del>		
Sample Location: Alkalinity (mg/l)	182	Sample Da	te: 02	-14-96	· · · · · · · · · · · · · · · · · · ·			<del></del>	<del></del>
Alkalinity (mg/l) SiO2 (mg/l)	182 10	Sample Da	te: 02	-14-96				<del></del>	<del></del>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	182 10 460		te: 02	-14-96	1				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	182 10 460 418.82		te: 02	-14-96			<del> </del>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	182 10 460 418.82 0.0058		te: 02	<u>-14-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	182 10 460 418.82 0.0058 0.92		te: 02	<u>-14-96</u>	, <u> </u>				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	182 10 460 418.82 0.0058 0.92 357.10		te: 02	<u>-14-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	182 10 460 418.82 0.0058 0.92		te: 02	<u>-14-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	182 10 460 418.82 0.0058 0.92 357.10 210 213.24								
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	182 10 460 418.82 0.0058 0.92 357.10 210 213.24 0.98 0.78	Should be be	etween 0.9 etween 0.9	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	182 10 460 418.82 0.0058 0.92 357.10 210 213.24 0.98 0.78 0.60	Should be be Should be be Should be be	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	182 10 460 418.82 0.0058 0.92 357.10 210 213.24 0.98 0.78 0.60	Should be be	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	182 10 460 418.82 0.0058 0.92 357.10 210 213.24 0.98 0.78 0.60	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel	Should be b Should be b Should be b Should be b nt:	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg	CI	\$04	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel	Should be be Should be be Should be be that:  K 0.929	etween 0.9 etween 0.55 etween 0.55 Ca 67.8	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 2.36	7.517	12.4	0.034	0.07	222
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282	Should be be Should be be Should be be should be be to the control of the control	etween 0.9 etween 0.55 etween 0.55 Ca 67.8 3.3832	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942	<b>7.517</b> 0.2121	<b>12.4</b> 0.2582	<b>0.034</b> 0.0005	<b>0.07</b> 0.0037	<b>222</b> 3.6392
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898	Should be be Should be be Should be be that:  K 0.929 0.0238 39.0983	etween 0.9 etween 0.55 etween 0.55 Ca 67.8 3.3832 40.0780	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050	<b>7.517</b> 0.2121 35.4527	<b>12.4</b> 0.2582 96.0636	<b>0.034</b> 0.0005 62.0049	<b>0.07</b> 0.0037 18.9984	<b>222</b> 3.6392 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898 0.1282	Should be be Should be be Should be be that:  K 0.929 0.0238 39.0983	etween 0.9 etween 0.55 etween 0.55 Ca 67.8 3.3832 40.0780 1.6916	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971	<b>7.517</b> 0.2121 35.4527 0.2121	12.4 0.2582 96.0636 0.1291	0,034 0,0005 62,0049 0,0005	0.07 0.0037 18.9984 0.0037	<b>222</b> 3.6392
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898	Should be be Should be be Should be be that:  K 0.929 0.0238 39.0983	etween 0.9 etween 0.55 etween 0.55 Ca 67.8 3.3832 40.0780	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971 2	<b>7.517</b> 0.2121 35.4527	<b>12.4</b> 0.2582 96.0636	<b>0.034</b> 0.0005 62.0049	<b>0.07</b> 0.0037 18.9984	<b>222</b> 3.6392 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constifuel Na 2.948 0.1282 22.9898 0.1282	Should be be Should be be Should be be should be	etween 0.9 : etween 0.9 : etween 0.55 etween 0.55 Ca 67.8 3.3832 40.0780 1.6916 2	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971	7.517 0.2121 35.4527 0.2121 1	12.4 0.2582 96.0636 0.1291 2	0,034 0.0005 62.0049 0.0005	0.07 0.0037 18.9984 0.0037 1	3.6392 61.0171 3.6392
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constifuel Na 2.948 0.1282 22.9898 0.1282 1 50.1	Should be be Should be be Should be be should be	etween 0.9 : etween 0.9 : etween 0.55 etween 0.55 Ca 67.8 3.3832 40.0780 1.6916 2 59.5	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971 2 53.1	7.517 0.2121 35.4527 0.2121 1 76.4	12.4 0.2582 96.0636 0.1291 2 80	0.034 0.0005 62.0049 0.0005 1 71.4	0.07 0.0037 18.9984 0.0037 1 54.4	3.6392 61.0171 3.6392 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898 0.1282 1 50.1 6.42 6.41E-05	Should be be should be	etween 0.9 : etween 0.9 : etween 0.55 etween 0.55 2 40.0780 1.6916 2 59.5 201.30	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 Mg 2.36 0.1942 24,3050 0.0971 2 53.1 10.31	7.517 0.2121 35.4527 0.2121 1 76.4 16.20	12.4 0.2582 96.0636 0.1291 2 80 20.65	0,034 0,0005 62,0049 0,0005 1 71,4 0,04	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	222 3.6392 61.0171 3.6392 1 44.5 161.95
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituer Na 2.948 0.1282 22.9898 0.1282 22.9898 0.1282 6.41E-05	Should be be should be	etween 0.9 : etween 0.9 : etween 0.55 etween 0.55 2 40.0780 1.6916 2 59.5 201.30	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 Mg 2.36 0.1942 24,3050 0.0971 2 53.1 10.31	7.517 0.2121 35.4527 0.2121 1 76.4 16.20	12.4 0.2582 96.0636 0.1291 2 80 20.65	0,034 0,0005 62,0049 0,0005 1 71,4 0,04	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	222 3.6392 61.0171 3.6392 1 44.5 161.95
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituer Na 2.948 0.1282 22.9898 0.1282 22.9898 0.1282 6.41E-05	Should be be should be	etween 0.9: etween 0.55 etween 0.55 etween 0.55 40.0780 1.6916 2 59.5 201.30 3.38E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 Mg 2.36 0.1942 24,3050 0.0971 2 53.1 10.31	7.517 0.2121 35.4527 0.2121 1 76.4 16.20	12.4 0.2582 96.0636 0.1291 2 80 20.65	0,034 0,0005 62,0049 0,0005 1 71,4 0,04	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	222 3.6392 61.0171 3.6392 1 44.5 161.95
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	182 10 460 418.82 0.0058 0.92 357.10 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898 0.1282 22.9898 0.1282 3.73 6.42 6.41E-05	Should be be should b	etween 0.9: etween 0.9: etween 0.55 etween 0.55  Ca 67.8 3.3832 40.0780 1.6916 2 59.5 201.30 3.38E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971 2 53.1 10.31 1.94E-04	7.517 0.2121 35.4527 0.2121 1 76.4 16.20	12.4 0.2582 96.0636 0.1291 2 80 20.65	0,034 0,0005 62,0049 0,0005 1 71,4 0,04	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	222 3.6392 61.0171 3.6392 1 44.5 161.95
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) Difference	182 10 460 418.82 0.0058 0.92 357.10 210 213.24 0.98 0.78 0.60 0.46 Constituel Na 2.948 0.1282 22.9898 0.1282 22.9898 0.1282 3.50.1 6.42 6.41E-05 3.73 4.11 -4.90 -0.38 0.81	Should be be should be s	etween 0.9: etween 0.5: etween 0.55 etween 0.55 240.0780 1.6916 2 59.5 201.30 3.38E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.36 0.1942 24.3050 0.0971 2 53.1 10.31 1.94E-04	7.517 0.2121 35.4527 0.2121 1 76.4 16.20	12.4 0.2582 96.0636 0.1291 2 80 20.65	0,034 0,0005 62,0049 0,0005 1 71,4 0,04	0.07 0.0037 18.9984 0.0037 1 54.4 0.20	222 3.6392 61.0171 3.6392 1 44.5 161.95

Sample Location:	BNE015	Sample Dat	e: 02	-14-96					_
Alkalinity (mg/l)	96								
SiO2 (mg/l)	11.1								
Measured conductivity (umho/cm)	347								
Infinite dilution conductivity (umho/cm)	315.58				•				
lonic strength (M)	0.0042								
Monovalent ion activity coefficient	0.93								
Calculated conductivity (umho/cm)	274.95								
Measured TDS	204								
Calculated TDS	158.63	Should be be	O O -						
Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond		Should be be							
Ratio: Calc Condinates Cond		Should be be							
Ratio: Meas TDS/Meas cond		Should be be							
•	Constituer Na	ıt: K	Ca	Ma	CI	SO4	NO3	F	нсоз
Concentration (mg/L)	5.96	1,67	49.1	Mg 3.25	16.65	5.4	7.88	0.04	117.1
Concentration (mg/L)	0.2592	0.0427	2.4501	0.2674	0.4696	0.1124	• 0.1271	0.0021	1.9196
Molecular weight (mg/mM)	22,9898	39.0983	40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.2592	0.0427	1.2250	0.1337	0.4696	0.0562	0.1271	0.0021	1.9196
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	12.98	3.14	145.78	14.20	35.87	8.99	9.08	0.11	85.42
Ionic strength	1.30E-04	2.14E-05	2.45E-03	2.67E-04	2.35E-04	1.12E-04	6.36E-05	1.05E-06	9.60E-04
Cation sum (meg/L)	3.02						-		
Anion sum (med/L)	2.63								
% Difference	6.88	Should be <	2%						
Ion Difference	0.39								
Ratio: Cation sum*(100)/Measured conductivity		Should be b							
Ratio: Anion sum*(100)/Measured conductivity	0.76	Should be b	etween 0.9 a	and 1.1					
Sample Location:	BNE017	Sample Da	te: 02	-14-96				·	···
		Sample Da	te: 02	-14-96				·	**************************************
Sample Location:  Alkalinity (mg/l) SiO2 (mg/l)	BNE017 87 9.9	Sample Da	te: 02	-14-96					
Alkalinity (mg/l)	87	Sample Da	te: 02	-14-96				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	87 9.9 260 244.84	Sample Da	te: 02	-14-96				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	87 9.9 260 244.84 0.0033	Sample Da	te: 02	-14-96				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	87 9.9 260 244.84 0.0033 0.94	Sample Da	te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	87 9.9 260 244.84 0.0033 0.94 216.72	Sample Da	te: 02	-14-96				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	87 9.9 260 244.84 0.0033 0.94 216.72	Sample Da	te: 02	-14-96				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01							•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83	Should be b Should be b	etween 0.9 aetween 0.9	and 1.1				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58	Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58	Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7				•	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50	Should be b Should be b Should be b Should be b at: K 0.97	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 s and 0.7 s and 0.7	13.16	SO4 4.2	1.88	0.04	106.1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0	Should be b Should be b Should be b Should be b at: K 0.97 0.0247	etween 0.9 a etween 0.55 etween 0.55 ctween 0.55 Ca 35.5 1.7715	and 1.1 and 1.1 and 0.7 and 0.7 <b>Mg</b> <b>2.17</b> 0.1786	<b>13.16</b> 0.3713	<b>4.2</b> 0.0874	<b>1.88</b> 0.0303	<b>0.04</b> 0.0021	<b>106.1</b> 1.7396
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 35.5 1.7715 40.0780	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.17 0.1786 24.3050	13.16 0.3713 35.4527	<b>4.2</b> 0.0874 96.0636	<b>1.88</b> 0.0303 62.0049	<b>0.04</b> 0.0021 18.9984	<b>106.1</b> 1.7396 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610	Should be b Should be b Should be b should be b at: K 0.97 0.0247 39.0983 0.0247	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.17 0.1786 24.3050 0.0893	13.16 0.3713 35.4527 0.3713	4.2 0.0874 96.0636 0.0437	1.88 0.0303 62.0049 0.0303	0.04 0.0021 18.9984 0.0021	<b>106.1</b> 1.7396
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constituel Na 6.0 0.2610 22.9898 0.2610	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.17 0.1786 24.3050 0.0893 2	13.16 0.3713 35.4527 0.3713 1	4.2 0.0874 96.0636 0.0437 2	1.88 0.0303 62.0049 0.0303 1	0.04 0.0021 18.9984 0.0021 1	106.1 1.7396 61.0171 1.7396
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610 1	Should be b Should be b Should be b Should be b nt: K 0.97 0.0247 39.0983 0.0247 1 73.5	etween 0.9 : etween 0.9 : etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5	and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1	13.16 0.3713 35.4527 0.3713 1 76.4	4.2 0.0874 96.0636 0.0437 2 80	1.88 0.0303 62.0049 0.0303 1 71.4	0.04 0.0021 18.9984 0.0021 1 54.4	106.1 1.7396 61.0171 1.7396 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constituel Na 6.0 0.2610 22.9898 0.2610	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2	and 1.1 and 0.7 and 0.7 and 0.7 Mg 2.17 0.1786 24.3050 0.0893 2	13.16 0.3713 35.4527 0.3713 1	4.2 0.0874 96.0636 0.0437 2	1.88 0.0303 62.0049 0.0303 1	0.04 0.0021 18.9984 0.0021 1	106.1 1.7396 61.0171 1.7396
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610 1 50.1 13.08 1.31E-04	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40	and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/m) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constituente Na 6.0 0.2610 22.9898 0.2610 1 1 50.1 13.08 1.31E-04	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40	and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Holecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610 1 50.1 13.08 1.31E-04 2.24 2.23	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40 1.77E-03	and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc CDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/m) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) M Difference	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610 1 3.08 1.31E-04 2.24 2.23 0.11	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40 1.77E-03	and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference Ion Difference	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.50 Constitue Na 6.0 0.2610 22.9898 0.2610 1 3.08 1.31E-04 2.24 2.23 0.11 0.00	Should be b Should be b Should be b Should be b at:  K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.55 etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40 1.77E-03	and 1.1 and 1.1 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48 1.79E-04	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference	87 9.9 260 244.84 0.0033 0.94 216.72 131 126.01 1.04 0.83 0.58 0.50  Constitue Na 6.0 0.2610 22.9898 0.2610 13.08 1.31E-04 2.23 0.11 0.00 0.86	Should be b Should be b Should be b Should be b at: K 0.97 0.0247 39.0983 0.0247 1 73.5 1.82 1.24E-05	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 1.7715 40.0780 0.8857 2 59.5 105.40 1.77E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 0.1786 24.3050 0.0893 2 53.1 9.48 1.79E-04	13.16 0.3713 35.4527 0.3713 1 76.4 28.37	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.88 0.0303 62.0049 0.0303 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	106.1 1.7396 61.0171 1.7396 1 44.5 77.41

Sample Location:	BNE040	Sample Da	te: 02	-13- <del>9</del> 6				100 - 5.000	
Alkalinity (mg/l)	185								
SiO2 (mg/l)	11.9								
Measured conductivity (umho/cm)	451								
Infinite dilution conductivity (umho/cm)	428.98								
Ionic strength (M)	0.0061								
Monovalent ion activity coefficient	0.92								
Calculated conductivity (umho/cm) Measured TDS	364.59 219.5								
Calculated TDS	216.57								
Ratio: Meas TDS/Calc TDS		Should be b	etween 0.9	and 1.1					
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond	0.49	Should be b	etween 0.55	and U./				•	
	Constituer		_				NOS	_	11002
Concentration (mail )	Na 2.1	K 0.67	Ca 78.4	Mg 1,39	CI 4.58	SO4 4.2	NO3 2.30	0.06	HCO3 225.7
Concentration (mg/L) Concentration (meq/L)	0.0915	0.0170	3.9122	0.1144	0.1291	0.0874	0.0370	0.0032	3.6992
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.0915	0.0170	1.9561	0.0572	0.1291	0.0437	0.0370	0.0032	3.6992
Charge z (absolute value)	1	1	2	2	1	2	_ 1	_ 1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	4.59	1.25	232.77	6.07	9.87	7.00	2.64	0,17	164.62
Ionic strength	4.58E-05	8.51E-06	3.91E-03	1.14E-04	6.46E-05	8.74E-05	1.85E-05	1.58E-06	1.85E-03
Cation sum (meq/L)	4.14								
Anion sum (meq/L)	3.96								
% Difference		Should be <	2%						
Ion Difference	0.18								
Ratio: Cation sum*(100)/Measured conductivity		Should be b Should be b							
Ratio: Anion sum*(100)/Measured conductivity	0.56	Sticula be b	elween 0.5	211U 1.1					
_									
Sample Location:	BNE041	Sample Da	te: 02	-13-96	·····			. <del> </del>	<u> </u>
Sample Location: Alkalinity (mg/l)	187	Sample Da	te: 02	-13-96				· = 8/4 - 1/12 · ·	<u></u>
Alkalinity (mg/l) SiO2 (mg/l)	187 10.1	Sample Da	<u>te: 02</u>	-13-96				Aug	<u></u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	187 10.1 460	Sample Da	<u>te: 02</u>	-13-96					<u></u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	187 10.1 460 434.22	Sample Da	<u>te: 02</u>	-13-96	· · · · · · · · · · · · · · · · · · ·				<u>.</u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	187 10.1 460 434.22 0.0061	Sample Da	<u>te: 02</u>	-13-96					<u></u>
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	187 10.1 460 434.22	Sample Da	<u>te: 02</u>	<u>-13-96</u>					······································
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	187 10.1 460 434.22 0.0061 0.92 368.94 224.5	Sample Da	<u>02</u>	<u>-13-96</u>					· · · · · · · · · · · · · · · · · · ·
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	187 10.1 460 434.22 0.0061 0.92 368.94 224.5	·		****					······································
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73	Should be b	etween 0.9	and 1.1					······································
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80	Should be b	etween 0.9	and 1.1 and 1.1					······································
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59	Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					· · · · · · · · · · · · · · · · · · ·
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					· · · · · · · · · · · · · · · · · · ·
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7	CI	SO4	NO3	F	НСОЗ
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7	C1 6.61	SO4 4.2	NO3 1.89	F 0.04	HCO3 228.1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer	Should be b Should be b Should be b Should be b nt:	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg		<b>4.2</b> 0.0874	<b>1.89</b> 0.0305	<b>0.04</b> 0.0021	<b>228.1</b> 3.7392
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898	Should be be Should be be Should be be should be be better K 0.97 0.0249 39.0983	etween 0.9 etween 0.5 etween 0.55 Ca 77.9 3.8872 40.0780	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.28 0.1053 24.3050	<b>6.61</b> 0.1864 35.4527	<b>4.2</b> 0.0874 96.0636	<b>1.89</b> 0.0305 62.0049	<b>0.04</b> 0.0021 18.9984	<b>228.1</b> 3.7392 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116	Should be be should be be should be be should be be better K 0.97 0.0249 39.0983 0.0249	etween 0.9 etween 0.55 etween 0.55 Ca 77.9 3.8872 40.0780 1.9436	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.28 0.1053 24.3050 0.0527	<b>6.61</b> 0.1864 35.4527 0.1864	<b>4.2</b> 0.0874 96.0636 0.0437	1.89 0.0305 62.0049 0.0305	0.04 0.0021 18.9984 0.0021	<b>228.1</b> 3.7392
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249	etween 0.9 etween 0.55 etween 0.55 Ca 77.9 3.8872 40.0780 1.9436 2	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.28 0.1053 24.3050 0.0527 2	<b>6.61</b> 0.1864 35.4527 0.1864 1	4.2 0.0874 96.0636 0.0437 2	1.89 0.0305 62.0049 0.0305	0.04 0.0021 18.9984 0.0021 1	228.1 3.7392 61.0171 3.7392 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituel Na 2.57 0.1116 22.9898 0.1116 1 50.1	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5	etween 0.9 etween 0.5 etween 0.55 etween 0.55 2 3.8872 40.0780 1.9436 2 59.5	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.28 0.1053 24.3050 0.0527 2 53.1	6.61 0.1864 35.4527 0.1864 1 76.4	4.2 0.0874 96.0636 0.0437 2 80	1.89 0.0305 62.0049 0.0305 1 71.4	0.04 0.0021 18.9984 0.0021 1 54.4	228.1 3.7392 61.0171 3.7392 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mM/l) Charge z (absolute value) Equivalent conductivity (umho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83	etween 0.9 etween 0.55 etween 0.55 Ca 77.9 3.8872 40.0780 1.9436 2	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 1.28 0.1053 24.3050 0.0527 2	<b>6.61</b> 0.1864 35.4527 0.1864 1	4.2 0.0874 96.0636 0.0437 2	1.89 0.0305 62.0049 0.0305	0.04 0.0021 18.9984 0.0021 1	228.1 3.7392 61.0171 3.7392 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho/cm) Ionic strength	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116 1 50.1 5.59 5.58E-05	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83 1.24E-05	etween 0.9 etween 0.5 etween 0.55 etween 0.55 3.8872 40.0780 1.9436 2 59.5 231.29	and 1.1 and 1.1 5 and 0.7 6 and 0.7 7 and 0.7 8 0.1053 24.3050 0.0527 2 53.1 5.59	6.61 0.1864 35.4527 0.1864 1 76.4 14.24	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.89 0.0305 62.0049 0.0305 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	228.1 3.7392 61.0171 3.7392 1 44.5 166.40
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength  Cation sum (meq/L)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116 1 50.1 5.59 5.58E-05	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83 1.24E-05	etween 0.9 etween 0.5 etween 0.55 etween 0.55 3.8872 40.0780 1.9436 2 59.5 231.29	and 1.1 and 1.1 5 and 0.7 6 and 0.7 7 and 0.7 8 0.1053 24.3050 0.0527 2 53.1 5.59	6.61 0.1864 35.4527 0.1864 1 76.4 14.24	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.89 0.0305 62.0049 0.0305 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	228.1 3.7392 61.0171 3.7392 1 44.5 166.40
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116 1 50.1 5.59 5.58E-05	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83 1.24E-05	etween 0.9 etween 0.55 etween 0.55 etween 0.55 2 3.8872 40.0780 1.9436 2 59.5 231.29 3.89E-03	and 1.1 and 1.1 5 and 0.7 6 and 0.7 7 and 0.7 8 0.1053 24.3050 0.0527 2 53.1 5.59	6.61 0.1864 35.4527 0.1864 1 76.4 14.24	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.89 0.0305 62.0049 0.0305 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	228.1 3.7392 61.0171 3.7392 1 44.5 166.40
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49 Constituer Na 2.57 0.1116 22.9898 0.1116 1 50.1 5.59 5.58E-05	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83 1.24E-05	etween 0.9 etween 0.55 etween 0.55 etween 0.55 2 3.8872 40.0780 1.9436 2 59.5 231.29 3.89E-03	and 1.1 and 1.1 5 and 0.7 6 and 0.7 7 and 0.7 8 0.1053 24.3050 0.0527 2 53.1 5.59	6.61 0.1864 35.4527 0.1864 1 76.4 14.24	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.89 0.0305 62.0049 0.0305 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	228.1 3.7392 61.0171 3.7392 1 44.5 166.40
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	187 10.1 460 434.22 0.0061 0.92 368.94 224.5 217.73 1.03 0.80 0.59 0.49  Constituer Na 2.57 0.1116 22.9898 0.1116 50.1 5.59 5.58E-05 4.13 4.05 1.02 0.08	Should be b Should be b Should be b Should be b nt: K 0.97 0.0249 39.0983 0.0249 1 73.5 1.83 1.24E-05	etween 0.9 etween 0.9 etween 0.55 etween 0.55 Ca 77.9 3.8872 40.0780 1.9436 2 59.5 231.29 3.89E-03	and 1.1 and 1.1 5 and 0.7 6 and 0.7 6 and 0.7 6 2.3 6 0.1053 24.3050 0.0527 2 53.1 5.59 1.05E-04	6.61 0.1864 35.4527 0.1864 1 76.4 14.24	4.2 0.0874 96.0636 0.0437 2 80 7.00	1.89 0.0305 62.0049 0.0305 1 71.4 2.17	0.04 0.0021 18.9984 0.0021 1 54.4 0.11	228.1 3.7392 61.0171 3.7392 1 44.5 166.40

Sample Location:	BNE043	Sample Da	te: 02	-14-96					
Alkalinity (mg/l)	61			- "'		•			
SiO2 (mg/l)	11.1								
Measured conductivity (umho/cm)	219								
Infinite dilution conductivity (umho/cm)	169.14						4		
Ionic strength (M)	0.0023								
Monovalent ion activity coefficient	0.95								
Calculated conductivity (umho/cm)	152.60								
Measured TDS	105.5								
Calculated TDS	91.26								
Ratio: Meas TDS/Calc TDS	1.16	Should be b	etween 0.9	and 1.1					
Ratio: Calc cond/Meas cond	0.70	Should be b	etween 0.9	and 1.1					
Ratio: Calc TDS/Calc cond	0.60	Should be b	etween 0.55	and 0.7					
Ratio: Meas TDS/Meas cond	0.48	Should be b	etween 0.55	and 0.7					
	Constitue	nt:							
	Na	K	Ca	Mg	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	4.28	0.55	25.6	1.25	8,38	. 1.7	1.79	0.03	74.4
Concentration (meq/L)	0.18605	0.013941	1.27744	0.102863	0.236513	0.035394	0.028792	0.001579	1.219744
Molecular weight (mg/mM)	22,9898	39.0983	40.078	24.305	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.18605	0.013941	0.63872	0.051425	0.236513	0.017697	0.028792	0.001579	1.219744
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	9.32	1.02	76.01	5.46	18.07	2.83	2.06	0.09	54.28
lonic strength	9.30E-05	6.97E-06	1.28E-03	1.03E-04	1.18E-04	3.54E-05	1.44E-05	7.90E-07	6.10E-04
Cation sum (meg/L)	1.58				,				
Anion sum (meg/L)	1.52								
% Difference		Should be <	2%						
Ion Difference	0.06	0,,04,4,00							
Ratio: Cation sum*(100)/Measured conductivity		Should be b	etween 0.9	and 1.1					
Ratio: Anion sum*(100)/Measured conductivity		Should be b							

Sample Location:	BNE020	Sample Da	te: 02	-13-96			<u></u>		
Alkalinity (mg/l)	288								
SiO2 (mg/l)	9.3								
Measured conductivity (umho/cm)	663						•		
Infinite dilution conductivity (umho/cm)	656.99								
Ionic strength (M)	0.0093								
Monovalent ion activity coefficient	0.91								
Calculated conductivity (umho/cm)	539.87								
Measured TDS	319					•			
Calculated TDS Ratio: Meas TDS/Calc TDS	326.09	Should be b	atwach (10 c	and 1.1					
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond		Should be b							
	Constituer	nt:							
	Na	K	Ca	Mg	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	4.60	0.67	111	4.19	4.65	18.3	0.41	0.21	351.4
Concentration (meg/L)	0.2000 22.9898	0.0171 39.0983	5.5389 40.0780	0,3448 24,3050	0.1312 35.4527	0.3810 96.0636	0.0066 62.0049	0.0111 18.9984	5.7588 61.0171
Molecular weight (mg/mM) Concentration (mM)	0.2000	0.0171	2.7695	0.1724	0.1312	0.1905	0.0066	0.0111	5.7588
Charge z (absolute value)	0.2000	0.0171	2.7033	2	0.1012	2.1303	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	10.02	1.26	329.56	18.31	10.03	30.48	0.47	0.60	256.27
lonic strength	1.00E-04	8.54E-06	5.54E-03	3.45E-04	6.56E-05	3.81E-04	3.31E-06	5.53E-06	2.88E-03
Cation sum (meq/L)	6.10								
Anian cum /mag/L\	6.29						•		
% Difference	-1.52	Should be <	5%						
lon Difference	-0.19								
Ratio: Cation sum*(100)/Measured conductivity Ratio: Anion sum*(100)/Measured conductivity		Should be b Should be b							
,									
Sample Location:	BNE023	Sample Da	te: 02	-13-96					
		Sample Da	te: 02	-13-96		<del>-</del>			
Alkalinity (mg/l)	169	Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l)		Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	169 9.9	Sample Da	te: 02	-13-96		•			
Alkalinity (mg/l) SiO2 (mg/l)	169 9.9 585	Sample Da	<u>te: 02</u>	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	169 9.9 585 405.90 0.0059 0.92	Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	169 9.9 585 405.90 0.0059 0.92 345.96	Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	169 9.9 585 405.90 0.0059 0.92 345.96 188	Sample Da	<u>te: 02</u>	-13-96			- <del>N°</del> -		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56	-					- <del>N</del>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56	Should be b	etween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59	Should be b	etween 0.9 etween 0.9	and 1.1 and 1.1				. ,	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59	Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7			- H	· ,	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 i and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.32 Constitue	Should be be Should be be Should be be Should be be at:	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg	CI	SO4	NO3	· ,	НСО3
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.32 Constitue:	Should be be Should be be Should be be should be be at:  K 1.13	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 44.1	and 1.1 and 1.1 and 0.7 and 0.7 Mg 17.7	3.52	19.8	0.024	0.23	206.2
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32 Constituei	Should be be Should be be Should be be should be be better K.  1.13 0.0289	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 44.1 2.2006	and 1.1 and 0.7 and 0.7 and 0.7 Mg 17.7 1.4565	<b>3.52</b> 0.0993	1 <b>9.8</b> 0.4122	<b>0.024</b> 0,0004	<b>0.23</b> 0.0121	<b>206.2</b> 3.3793
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32 Constitue Na 1.78 0.0774 22.9898	Should be be Should be be Should be be should be be better K.  1.13  0.0289  39.0983	etween 0.9 setween 0.55 etween 0.55 etween 0.55 Ca 44.1 2.2006 40.0780	and 1.1 and 0.7 and 0.7 and 0.7 mg 17.7 1.4565 24.3050	<b>3.52</b> 0.0993 35.4527	1 <b>9.8</b> 0.4122 96.0636	<b>0.024</b> 0,0004 62.0049	<b>0.23</b> 0.0121 18.9984	<b>206.2</b> 3.3793 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32 Constitue Na 1.78 0.0774 22.9898 0.0774	Should be be Should be be Should be be better K 1.13 0.0289 39.0983 0.0289	etween 0.9 setween 0.55 etween 0.55 etween 0.55 Ca 44.1 2.2006 40.0780 1.1003	and 1.1 and 0.7 and 0.7 and 0.7 mg 17.7 1.4565 24.3050 0.7282	3.52 0.0993 35.4527 0.0993	1 <b>9.8</b> 0.4122 96.0636 0.2061	0.024 0.0004 62.0049 0.0004	0.23 0.0121 18.9984 0.0121	206.2 3.3793 61.0171 3.3793
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32 Constitue Na 1.78 0.0774 22.9898 0.0774	Should be be Should be be Should be be should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 44.1 2.2006 40.0780 1.1003 2	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2	3.52 0.0993 35.4527 0.0993 1	1 <b>9.8</b> 0.4122 96.0636	<b>0.024</b> 0,0004 62.0049	<b>0.23</b> 0.0121 18.9984	206.2 3.3793 61.0171 3.3793
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32 Constitue Na 1.78 0.0774 22.9898 0.0774	Should be be Should be be Should be be better K 1.13 0.0289 39.0983 0.0289	etween 0.9 setween 0.55 etween 0.55 etween 0.55 Ca 44.1 2.2006 40.0780 1.1003	and 1.1 and 0.7 and 0.7 and 0.7 mg 17.7 1.4565 24.3050 0.7282	3.52 0.0993 35.4527 0.0993	19.8 0.4122 96.0636 0.2061 2	0.024 0,0004 62.0049 0.0004 1	0.23 0.0121 18.9984 0.0121	206.2 3.3793 61.0171 3.3793
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32  Constituent Na 1.78 0.0774 22.9898 0.0774 1 50.1	Should be be Should be be Should be be should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 44.1 2.2006 40.0780 1.1003 2 59.5	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2 53.1	3.52 0.0993 35.4527 0.0993 1 76.4	19.8 0.4122 96.0636 0.2061 2 80	0.024 0,0004 62.0049 0.0004 1 71.4	0.23 0.0121 18.9984 0.0121 1 54.4	206.2 3.3793 61.0171 3.3793 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/M) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32  Constituer Na 1.78 0.0774 22.9898 0.0774 1 50.1 3.88	Should be be should	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.2006 40.0780 1.1003 2 59.5 130.94	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2 53.1 77.33	3.52 0.0993 35.4527 0.0993 1 76.4 7.58	19.8 0.4122 96.0636 0.2061 2 80 32.98	0.024 0.0004 62.0049 0.0004 1 71.4 0.03	0.23 0.0121 18.9984 0.0121 1 54.4 0.66	206.2 3.3793 61.0171 3.3793 1 44.5 150.38
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (umho-cm^2/equivalent) Infinite dilution conductivity (umho-cm)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32  Constituer Na 1.78 0.0774 22.9898 0.0774 1 50.1 3.88 3.87E-05	Should be be should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.2006 40.0780 1.1003 2 59.5 130.94	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2 53.1 77.33	3.52 0.0993 35.4527 0.0993 1 76.4 7.58	19.8 0.4122 96.0636 0.2061 2 80 32.98	0.024 0.0004 62.0049 0.0004 1 71.4 0.03	0.23 0.0121 18.9984 0.0121 1 54.4 0.66	206.2 3.3793 61.0171 3.3793 1 44.5 150.38
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Infinite dilution conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.58 0.32  Constituent Na 1.78 0.0774 22.9898 0.0774 1 50.1 3.88 3.87E-05	Should be be should be	etween 0.9 a letween 0.55 etween 0.55 etween 0.55 etween 0.55 etween 0.55 1.1003	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2 53.1 77.33	3.52 0.0993 35.4527 0.0993 1 76.4 7.58	19.8 0.4122 96.0636 0.2061 2 80 32.98	0.024 0.0004 62.0049 0.0004 1 71.4 0.03	0.23 0.0121 18.9984 0.0121 1 54.4 0.66	206.2 3.3793 61.0171 3.3793 1 44.5 150.38
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference Ion Difference	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.32  Constituer Na 1.78 0.0774 22.9898 0.0774 1 50.1 3.88 3.87E-05 3.76 3.90 -1.82 -0.14	Should be be should b	etween 0.9 aletween 0.55 etween 0.55 etween 0.55 etween 0.55 etween 0.55 1.1003	and 1.1 and 0.7 and 0.7 and 0.7 1.4565 24.3050 0.7282 2 53.1 77.33 1.46E-03	3.52 0.0993 35.4527 0.0993 1 76.4 7.58	19.8 0.4122 96.0636 0.2061 2 80 32.98	0.024 0.0004 62.0049 0.0004 1 71.4 0.03	0.23 0.0121 18.9984 0.0121 1 54.4 0.66	206.2 3.3793 61.0171 3.3793 1 44.5 150.38
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc cond Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) S Difference	169 9.9 585 405.90 0.0059 0.92 345.96 188 199.56 0.94 0.59 0.32 Constitue Na 1.78 0.0774 22.9898 0.0774 1 50.1 3.88 3.87E-05 3.76 3.90 -1.82 -0.14 0.64	Should be be should b	etween 0.9 aletween 0.9 aletween 0.55 etween 0.55 etween 0.55 etween 0.55 1.1003	and 1.1 and 0.7 and 0.7 and 0.7 17.7 1.4565 24.3050 0.7282 2 53.1 77.33 1.46E-03	3.52 0.0993 35.4527 0.0993 1 76.4 7.58	19.8 0.4122 96.0636 0.2061 2 80 32.98	0.024 0.0004 62.0049 0.0004 1 71.4 0.03	0.23 0.0121 18.9984 0.0121 1 54.4 0.66	206.2 3.3793 61.0171 3.3793 1 44.5 150.38

Sample Location:	BNE024	Sample Da	te: 02	-13-96					
Alkalinity (mg/i)	229								
SiO2 (mg/l)	9.1								
Measured conductivity (umho/cm)	505								
Infinite dilution conductivity (umho/cm)	527.62								
lonic strength (M)	0.0076								
Monovalent ion activity coefficient	0.91								
Calculated conductivity (umho/cm)	441,04								
Measured TDS	245.5								
Calculated TDS	255.15								
Ratio: Meas TDS/Calc TDS		Should be b	etween 0.9 :	and 1.1					
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond	0.49	Should be b	etween 0.55	and 0.7					
	Constitue								
	Na		Ca	Mg	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	6.11	2.9	50.6	26.1	3.83	18.3	0,193	0.65	279.4
Concentration (meq/L)	0.2657	0.0742	2.5249	2.1478	0.1080	0.3810	0.0031	0.0342	4.5790
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.2657	0.0742	1.2625	1.0738	0.1080	0.1905	0.0031	0.0342	4.5790
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	13.31	5.45	150.23	114.03	8.25	30.48	0.22	1.86	203.77
lonic strength	1.33E-04	3.71E-05	2.52E-03	2.15E-03	5.40E-05	3.81E-04	1.56E-06	1.71E-05	2.29E-03
Cation sum (meq/L)	5.01								
Anion sum (meq/L)	5.11								
% Difference		Should be <	5%						
Ion Difference	-0.09		<b>4</b>						
Ratio: Cation sum*(100)/Measured conductivity		Should be b	etween 0.9	and 1.1					
Ratio: Anion sum*(100)/Measured conductivity		Should be b							
Sample Location:	BNE025	Sample Da	te: 02	-13-96					
Sample Location:  Alkalinity (mg/l)	BNE025 236	Sample Da	te: 02	-13-96			<del></del>		
The second secon	236 10.9	Sample Da	te: 02	-13-96				10)	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	236	Sample Da	te: 02	-13-96				- 19 <u>- 18-24</u> ;	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	236 10.9 634 621.09	Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	236 10.9 634 621.09 0.0091	Sample Da	te: 02	<u>-13-96</u>				·· - 107-18241	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	236 10.9 634 621.09 0.0091 0.91	Sample Da	te: 02	<u>-13-96</u>				·· - Op - 18241	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	236 10.9 634 621.09 0.0091 0.91 511.63	Sample Da	te: 02	<u>-13-96</u>				0.00	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	236 10.9 634 621.09 0.0091 0.91 511.63	Sample Da	te: 02	-13-96				00.00	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37							00.00	
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37	Should be b	etween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81	Should be b Should be b	etween 0.9 etween 0.9	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81	Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81	Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7					llee-
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel	Should be b Should be b Should be b Should be b nt:	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg	CI	SO4	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel	Should be b Should be b Should be b Should be b nt: K 1.11	etween 0.9 etween 0.9 etween 0.55 etween 0.55 Ca 62.3	and 1.1 and 1.1 and 0.7 and 0.7 Mg 31.3	5.70	42.2	0.34	0.11	287.9
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284	etween 0.9 etween 0.9 etween 0.55 Ca 62.3 3.1088	and 1.1 and 1.1 and 0.7 and 0.7 Mg 31.3 2.5757	<b>5.70</b> 0.1607	<b>42.2</b> 0.8786	<b>0.34</b> 0.0054	<b>0.11</b> 0.0058	<b>287.9</b> 4.7190
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284 39.0983	etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 31.3 2.5757 24.3050	<b>5.70</b> 0.1607 35.4527	<b>42.2</b> 0.8786 96.0636	<b>0.34</b> 0.0054 62.0049	<b>0.11</b> 0.0058 18.9984	<b>287.9</b> 4.7190 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284 39.0983 0.0284	etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 <b>Mg</b> <b>31.3</b> 2.5757 24.3050 1.2877	<b>5.70</b> 0.1607 35.4527 0.1607	<b>42.2</b> 0.8786 96.0636 0.4393	0.34 0.0054 62.0049 0.0054	<b>0.11</b> 0.0058 18.9984 0.0058	<b>287.9</b> 4.7190
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803	Should be b Should be b Should be b Should be b at: K 1.11 0.0284 39.0983 0.0284 1	etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544 2	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 <b>Mg</b> <b>31.3</b> 2.5757 24.3050 1.2877 2	5.70 0.1607 35.4527 0.1607 1	42.2 0.8786 96.0636 0.4393 2	0,34 0.0054 62.0049 0.0054 1	0.11 0.0058 18,9984 0.0058 1	287.9 4.7190 61.0171 4.7190 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284 39.0983 0.0284 1 73.5	etween 0.9 etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544 2 59.5	and 1.1 and 0.7 and 0.7 and 0.7 31.3 2.5757 24.3050 1.2877 2 53.1	5.70 0.1607 35.4527 0.1607 1 76.4	42.2 0.8786 96.0636 0.4393 2 80	0.34 0.0054 62.0049 0.0054 1 71.4	0.11 0.0058 18.9984 0.0058 1 54.4	287.9 4.7190 61.0171 4.7190 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284 39.0983 0.0284 1 73.5 2.09	etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544 2	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 <b>Mg</b> <b>31.3</b> 2.5757 24.3050 1.2877 2	5.70 0.1607 35.4527 0.1607 1	42.2 0.8786 96.0636 0.4393 2	0,34 0.0054 62.0049 0.0054 1	0.11 0.0058 18,9984 0.0058 1	287.9 4.7190 61.0171 4.7190 1
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9893 0.0803 1 50.1 4.02E-05	Should be b Should be b Should be b Should be b 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544 2 59.5 184.97	and 1.1 and 0.7 and 0.7 and 0.7 31.3 2.5757 24.3050 1.2877 2 53.1 136.75	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength Cation sum (meq/L)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803 1 50.1 4.02E-05	Should be b Should be b Should be b Should be b 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.9 etween 0.55 etween 0.55 Ca 62.3 3.1088 40.0780 1.5544 2 59.5 184.97	and 1.1 and 0.7 and 0.7 and 0.7 31.3 2.5757 24.3050 1.2877 2 53.1 136.75	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L)	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803 1 50.1 4.02E-05	Should be b Should be b Should be b Should be b nt: K 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.55 etween 0.55 etween 0.55 0.3 3.1088 40.0780 1.5544 2 59.5 184.97 3.11E-03	and 1.1 and 0.7 and 0.7 and 0.7 31.3 2.5757 24.3050 1.2877 2 53.1 136.75	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45 Constituel Na 1.85 0.0803 22.9898 0.0803 1 50.1 4.02E-05 5.79 5.77	Should be b Should be b Should be b Should be b nt:  K 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.55 etween 0.55 etween 0.55 0.3 3.1088 40.0780 1.5544 2 59.5 184.97 3.11E-03	and 1.1 and 0.7 and 0.7 and 0.7 31.3 2.5757 24.3050 1.2877 2 53.1 136.75	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference lon Difference	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45  Constituel Na 1.85 0.0803 22.9898 0.0803 1 50.1 4.02E-05 5.79 5.77 0.20 0.02	Should be b Should be b Should be b Should be b at:  K 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.95 etween 0.55 etween 0.55 etween 0.55 1.5544 2 59.5 184.97 3.11E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 2.5757 24.3050 1.2877 2 53.1 136.75 2.58E-03	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference	236 10.9 634 621.09 0.0091 0.91 511.63 285 297.37 0.96 0.81 0.58 0.45  Constitue Na 1.85 0.0803 22.9898 0.0803 1 50.1 4.02 4.02E-05 5.79 5.77 0.20 0.02 0.91	Should be b Should be b Should be b Should be b nt:  K 1.11 0.0284 39.0983 0.0284 1 73.5 2.09 1.42E-05	etween 0.9 etween 0.9 etween 0.55 etween 0.55 etween 0.55 1.5544 2 59.5 184.97 3.11E-03	and 1.1 and 1.1 5 and 0.7 6 and 0.7 2.5757 24.3050 1.2877 2 53.1 136.75 2.58E-03	5.70 0.1607 35.4527 0.1607 1 76.4 12.27	42.2 0.8786 96.0636 0.4393 2 80 70.29	0.34 0.0054 62.0049 0.0054 1 71.4 0.39	0.11 0.0058 18.9984 0.0058 1 54.4 0.31	287.9 4.7190 61.0171 4.7190 1 44.5 210.00

Alkalinity (mg/l) 192 SiO2 (mg/l) 9.2 Measured conductivity (umho/cm) 477 Infinite dilution conductivity (umho/cm) 455.97 Ionic strength (M) 0.0065 Monovalent ion activity coefficient 0.92 Calculated conductivity (umho/cm) 385.71 Measured TDS 222.88 Ratic: Meas TDS/Calc TDS 0.97 Should be between 0.9 and 1.1 Ratic: Calc cond/Meas cond 0.81 Should be between 0.9 and 1.1 Ratic: Calc TDS/Calc cond 0.58 Should be between 0.55 and 0.7 Ratic: Meas TDS/Meas cond 0.45 Should be between 0.55 and 0.7 Ratic: Meas TDS/Meas cond 0.58 Should be between 0.55 and 0.7
SiO2 (mg/l) 9.2  Measured conductivity (umho/cm) 455 97 Infinite dilution conductivity (umho/cm) 385.71 Measured TDS 216 Calculated TDS 222.88 Ratio: Meas TDS/Calc TDS 0.97 Should be between 0.9 and 1.1 Ratio: Calc cond/Meas cond 0.81 Should be between 0.9 and 1.1 Ratio: Calc TDS/Calc cond 0.58 Should be between 0.55 and 0.7 Ratio: Calc TDS/Meas cond 0.45 Should be between 0.55 and 0.7  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 0.2551 0.0670 2.3802 1.6047 0.1159 0.3456 0.0184 0.0511 3.839 Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017 Concentration (mM) 0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.839 Charge z (absolute value) 1 1 2 2 2 1 1 2 1 1 Equivalent conductivity (mho-cm^2/equivalent) 1.278 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.6 Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.6 Indic strength
Measured conductivity (umho/cm)
Infinite dilution conductivity (umho/cm)   455.97   10nic strength (M)   0.0065   Monovalent ion activity coefficient   0.92   216   22.88   222.88   Ratio: Meas TDS/Calc TDS   0.97   Should be between 0.9 and 1.1   Ratio: Calc cond/Meas cond   0.81   Should be between 0.9 and 1.1   Ratio: Calc cond/Meas cond   0.81   Should be between 0.55 and 0.7   Ratio: Meas TDS/Calc cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.55 and 0.7   Ratio: Meas TDS/Meas cond   0.45   Should be between 0.9 and 1.1   Ratio: Meas TDS/Meas cond   0.55   Novice of the conductive of the
Ionic strength (M)
Monovalent ion activity coefficient   0.92   385.71
Calculated conductivity (umho/cm) Measured TDS Calculated TDS 222.88 Ratio: Meas TDS/Calc TDS 0.97 Should be between 0.9 and 1.1 Ratio: Calc cond/Meas cond 0.81 Should be between 0.9 and 1.1 Ratio: Calc TDS/Calc cond 0.85 Should be between 0.9 and 1.1 Ratio: Calc TDS/Calc cond 0.85 Should be between 0.95 and 0.7 Ratio: Meas TDS/Meas cond 0.45 Should be between 0.55 and 0.7  Constituent:  Na K Ca Mg CI SO4 NO3 F HCO Concentration (mg/L) Concentration (mg/L) 0.2551 0.0670 2.3802 1.6047 0.1159 0.3456 0.0184 0.0511 3.835 Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017 Concentration (mM) 0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.835 Charge z (absolute value) 1 1 1 2 2 2 1 1 2 1 1 Equivalent conductivity (mho-cm^2/equivalent) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8 1.926-04
Calculated TDS       222.88         Ratio: Meas TDS/Calc TDS       0.97       Should be between 0.9 and 1.1         Ratio: Calc cond/Meas cond       0.81       Should be between 0.55 and 0.7         Ratio: Meas TDS/Meas cond       0.45       Should be between 0.55 and 0.7         Constituent:         Na       K       Ca       Mg       Cl       SO4       NO3       F       HCO         Concentration (mg/L)       5.87       2.62       47.7       19.5       4.11       16.6       1.14       0.97       234         Concentration (meq/L)       0.2551       0.0670       2.3802       1.6047       0.1159       0.3456       0.0184       0.0511       3.839         Molecular weight (mg/mM)       22.9898       39.0983       40.0780       24.3050       35.4527       96.0636       62.0049       18.9984       61.017         Concentration (mM)       0.2551       0.0670       1.1901       0.8022       0.1159       0.1728       0.0184       0.0511       3.839         Charge z (absolute value)       1       1       1       2       2       1       2       1       1       1       1         Equivalent conduc
Ratio: Meas TDS/Calc TDS
Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Constituent:  Na  K  Ca  Mg  CI  SO4  NO3  F  HCO  Concentration (mg/L)  Concentration (mg/L)  Concentration (mg/mM)  Concentration (mg/mM)  Concentration (mM)  Concentration (meq/L)  Concentration (meq
Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCO Concentration (mg/L) 5.87 2.62 47.7 19.5 4.11 16.6 1.14 0.97 234.  Concentration (meq/L) 0.2551 0.0670 2.3802 1.6047 0.1159 0.3456 0.0184 0.0511 3.839.  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017.  Concentration (mM) 0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.839.  Charge z (absolute value) 1 1 1 2 2 2 1 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44.  Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8  Inspection (inspection of the conductivity (umho/cm) 1.28E-04 3.35E-05 2.38E-03 1.60E-03 5.80E-05 3.46E-04 9.22E-06 2.55E-05 1.92E-06
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCO  Concentration (mg/L) 5.87 2.62 47.7 19.5 4.11 16.6 1.14 0.97 234.  Concentration (meq/L) 0.2551 0.0670 2.3802 1.6047 0.1159 0.3456 0.0184 0.0511 3.839  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.839  Charge z (absolute value) 1 1 2 2 2 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44.  Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8  lonic strength 1.28E-04 3.35E-05 2.38E-03 1.60E-03 5.80E-05 3.46E-04 9.22E-06 2.55E-05 1.92E-06
Concentration (mg/L)  Na K Ca Mg Cl SO4 NO3 F HCO Concentration (meg/L)  5.87 2.62 47.7 19.5 4.11 16.6 1.14 0.97 234.  Concentration (meg/L)  0.2551 0.0670 2.3802 1.6047 0.1159 0.3456 0.0184 0.0511 3.839  Molecular weight (mg/mM)  22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM)  0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.839  Charge z (absolute value)  1 1 2 2 2 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent)  Infinite dilution conductivity (mho-cm^2/equivalent)  12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8  lonic strength
Concentration (mg/L)         Na         K         Ca         Mg         CI         SO4         NO3         F         HCO           Concentration (meq/L)         5.87         2.62         47.7         19.5         4.11         16.6         1.14         0.97         234.           Concentration (meq/L)         0.2551         0.0670         2.3802         1.6047         0.1159         0.3456         0.0184         0.0511         3.839           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.2551         0.0670         1.1901         0.8022         0.1159         0.1728         0.0184         0.0511         3.839           Charge z (absolute value)         1         1         2         2         1         2         1         1         1         1         1         1         2         2         1         2         1         1         1         1         1         1         1         2         1         2         1         1         1         1         1         1         1         1         1
Concentration (mg/L)         5.87         2.62         47.7         19.5         4.11         16.6         1.14         0.97         234           Concentration (meq/L)         0.2551         0.0670         2.3802         1.6047         0.1159         0.3456         0.0184         0.0511         3.839           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.2551         0.0670         1.1901         0.8022         0.1159         0.1728         0.0184         0.0511         3.839           Charge z (absolute value)         1         1         2         2         1         2         1         1         1         1         1         2         2         1         2         1         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         1         2         2         1
Concentration (meq/L)         0.2551         0.0670         2.3802         1.6047         0.1159         0.3456         0.0184         0.0511         3.839           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.2551         0.0670         1.1901         0.8022         0.1159         0.1728         0.0184         0.0511         3.839           Charge z (absolute value)         1         1         2         2         1         2         1         1         1         1         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         2         1         1         1         1         2         2         1         3         3         3         3         3         3         3         3         4
Molecular weight (mg/mM)  22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM)  0.2551 0.0670 1.1901 0.8022 0.1159 0.1728 0.0184 0.0511 3.839  Charge z (absolute value)  1 1 2 2 1 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent)  Infinite dilution conductivity (umho/cm)  12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8  lonic strength
Concentration (mM)         0.2551         0.0670         1.1901         0.8022         0.1159         0.1728         0.0184         0.0511         3.839           Charge z (absolute value)         1         1         2         2         1         2         1         1           Equivalent conductivity (mho-cm^2/equivalent)         50.1         73.5         59.5         53.1         76.4         80         71.4         54.4         44           Infinite dilution conductivity (umho/cm)         12.78         4.93         141.62         85.20         8.86         27.65         1.32         2.78         170.8           Ionic strength         1.28E-04         3.35E-05         2.38E-03         1.60E-03         5.80E-05         3.46E-04         9.22E-06         2.55E-05         1.92E-0
Charge z (absolute value) 1 1 2 2 1 1 2 1 1 Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44. Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8 lonic strength 1.28E-04 3.35E-05 2.38E-03 1.60E-03 5.80E-05 3.46E-04 9.22E-06 2.55E-05 1.92E-06
Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44. Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8 lonic strength 1.28E-04 3.35E-05 2.38E-03 1.60E-03 5.80E-05 3.46E-04 9.22E-06 2.55E-05 1.92E-06
Infinite dilution conductivity (umho/cm) 12.78 4.93 141.62 85.20 8.86 27.65 1.32 2.78 170.8 lonic strength 1.28E-04 3.35E-05 2.38E-03 1.60E-03 5.80E-05 3.46E-04 9.22E-06 2.55E-05 1.92E-0
Cation sum (meq/L) 4.31
Anion sum (meg/L) 4.37
% Difference -0.73 Should be < 2%
Ion Difference -0.06
Ratio: Cation sum*(100)/Measured conductivity 0.90 Should be between 0.9 and 1.1
Ratio: Anion sum*(100)/Measured conductivity 0.92 Should be between 0.9 and 1.1
Sample Location: BNE029 Sample Date: 02-14-96
Alkalinity (mg/l) 274
SiO2 (mg/i) 8.9
Measured conductivity (umho/cm) 557
Infinite dilution conductivity (umho/cm) 707.04
Ionic strength (M) 0.0103
Monovalent ion activity coefficient 0.90
Calculated conductivity (umho/cm) 576.05 Measured TDS 332
Measured TDS 332 Calculated TDS 340.45
Ratio: Meas TDS/Calc TDS 0.98 Should be between 0.9 and 1.1
Ratio: Calc cond/Meas cond 1.03 Should be between 0.9 and 1.1
Ratio: Calc TDS/Calc cond 0.59 Should be between 0.55 and 0.7
Ratio: Calc TDS/Calc cond 0.59 Should be between 0.55 and 0.7 Ratio: Meas TDS/Meas cond 0.60 Should be between 0.55 and 0.7
Ratio: Meas TDS/Meas cond 0.60 Should be between 0.55 and 0.7
Ratio: Meas TDS/Meas cond 0.60 Should be between 0.55 and 0.7  Constituent:
Ratio: Meas TDS/Meas cond 0.60 Should be between 0.55 and 0.7  Constituent:
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L)  1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L)  0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017
Ratio: Meas TDS/Meas cond         Constituent:           Na K Ca Mg CI SO4 NO3 F HCC           Concentration (mg/L)         1.39         2.17         70.9         33.2         2.76         56.1         0.42         0.24         334.           Concentration (meq/L)         0.0606         0.0555         3.5379         2.7320         0.0779         1.1680         0.0068         0.0126         5.478           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.0606         0.0555         1.7690         1.3658         0.0779         0.5840         0.0068         0.0126         5.478
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 2 2 2 1 2 1 1
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 2 2 1 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 2 2 2 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44  Infinite dilution conductivity (umho/cm) 3.03 4.08 210.51 145.05 5.95 93.44 0.48 0.69 243.8
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 2 2 2 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44  Infinite dilution conductivity (umho/cm) 3.03 4.08 210.51 145.05 5.95 93.44 0.48 0.69 243.8  lonic strength 3.03E-05 2.78E-05 3.54E-03 2.73E-03 3.89E-05 1.17E-03 3.38E-06 6.32E-06 2.74E-05
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg Cl SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70,9 33,2 2.76 56.1 0.42 0.24 334.  Concentration (meq/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 1 2 2 2 1 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44  Infinite dilution conductivity (umho/cm) 3.03 4.08 210.51 145.05 5.95 93.44 0.48 0.69 243.8  lonic strength 3.03E-05 2.78E-05 3.54E-03 2.73E-03 3.89E-05 1.17E-03 3.38E-06 6.32E-06 2.74E-05  Cation sum (meq/L) 6.39
Constituent:           Na         K         Ca         Mg         CI         SO4         NO3         F         HCC           Concentration (mg/L)         1.39         2.17         70.9         33.2         2.76         56.1         0.42         0.24         334           Concentration (meq/L)         0.0606         0.0555         3.5379         2.7320         0.0779         1.1680         0.0068         0.0126         5.478           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.0606         0.0555         1.7690         1.3658         0.0779         0.5840         0.0068         0.0126         5.478           Charge z (absolute value)         1         1         2         2         1         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         2         2
Ratio: Meas TDS/Meas cond  Constituent:  Na K Ca Mg CI SO4 NO3 F HCC  Concentration (mg/L) 1.39 2.17 70.9 33.2 2.76 56.1 0.42 0.24 334.  Concentration (meg/L) 0.0606 0.0555 3.5379 2.7320 0.0779 1.1680 0.0068 0.0126 5.478  Molecular weight (mg/mM) 22.9898 39.0983 40.0780 24.3050 35.4527 96.0636 62.0049 18.9984 61.017  Concentration (mM) 0.0606 0.0555 1.7690 1.3658 0.0779 0.5840 0.0068 0.0126 5.478  Charge z (absolute value) 1 1 1 2 2 2 1 1 2 1 1  Equivalent conductivity (mho-cm^2/equivalent) 50.1 73.5 59.5 53.1 76.4 80 71.4 54.4 44  Infinite dilution conductivity (umho/cm) 3.03 4.08 210.51 145.05 5.95 93.44 0.48 0.69 243.8  lonic strength 3.03E-05 2.78E-05 3.54E-03 2.73E-03 3.89E-05 1.17E-03 3.38E-06 6.32E-06 2.74E-05  Cation sum (meq/L) 6.39  Anion sum (meq/L) 6.74  % Difference -2.73 Should be < 5%
Constituent:           Na         K         Ca         Mg         CI         SO4         NO3         F         HCC           Concentration (mg/L)         1.39         2.17         70.9         33.2         2.76         56.1         0.42         0.24         334           Concentration (meq/L)         0.0606         0.0555         3.5379         2.7320         0.0779         1.1680         0.0068         0.0126         5.478           Molecular weight (mg/mM)         22.9898         39.0983         40.0780         24.3050         35.4527         96.0636         62.0049         18.9984         61.017           Concentration (mM)         0.0606         0.0555         1.7690         1.3658         0.0779         0.5840         0.0068         0.0126         5.478           Charge z (absolute value)         1         1         2         2         1         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         1         1         2         2         1         1         2         2

Sample Location:	BNE030	Sample Dat	e: 02	-14-96					
Alkalinity (mg/l)	281								
SiO2 (mg/l) Measured conductivity (umho/cm)	9.1 564								
Infinite dilution conductivity (umho/cm)	617.53								
Ionic strength (M)	0.0090								
Monovalent ion activity coefficient	0.91		•						
Calculated conductivity (umho/cm)	509.00								
Measured TDS	292.5						-		
Calculated TDS	297.19								
Ratio: Meas TDS/Calc TDS		Should be b					•		
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond		Should be b							
Ratio: Meas TDS/Meas cond	0.52	Should be b	etween U.55	and U.7					
	Constituer	it:							
	Na	K	Ca	Mg	CI	SO4	NO3	F	HCO3
Concentration (mg/L)	1.83	2.22	58.9	32.9	2.22	20.6	0.48	0.37	342.8
Concentration (meq/L)	0.0798	0.0568	2.9391	2.7073	0.0626	0.4289	0.0078 62.0049	0.0195	5.6188
Molecular weight (mg/mM) Concentration (mM)	22.9898 0.0798	39.0983 0.0568	40.0780 1.4696	24.3050 1.3535	35.4527 0.0626	96.0636 0.2144	0.0078	18.9984 0.0195	61.0171 5.6188
Charge z (absolute value)	0.0730	1	1.4030	1.3333	0.0020	2	1	0.0133	3.0700
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm)	4.00	4.17	174.88	143.74	4.78	34.31	0.55	1.06	250.04
Ionic strength	3.99E-05	2.84E-05	2.94E-03	2.71E-03	3.13E-05	4.29E-04	3.88E-06	9.74E-06	2.81E-03
Cation sum (meq/L)	5.78 6.14								
Anion sum (meq/L)		Should be <	5%						
Ion Difference	-0.35	Official pe	570						
Ratio: Cation sum*(100)/Measured conductivity		Should be b	etween 0.9	and 1.1					
Ratio: Anion sum*(100)/Measured conductivity	1.09	Should be b	etween 0.9	and 1.1					
Sample Location:	BNE032	Sample Da	te: 02	-13-96			· · · · · · · · · · · · · · · · · · ·		
		Sample Da	te: 02	-13-96			· · · · · · · · · · · · · · · · · · ·		
Alkalinity (mg/l)	BNE032 138 9.1	Sample Da	te: 02	-13-96			<u> </u>		
	138	Sample Da	te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l)	138 9.1 385 396.50	Sample Da	te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	138 9.1 385	Sample Da	te: 02	-13-96			,		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	138 9.1 385 396.50 0.0058 0.92	Sample Da	te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	138 9.1 385 396.50 0.0058 0.92 338.25		te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	138 9.1 385 396.50 0.0058 0.92 338.25 183		te: 02	-13-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78								
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95	Should be b	etween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88		etween 0.9 etween 0.9	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57	Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 5 and 0.7	CI	SO4	NO3	F	HCO3
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7	CI 1.50	SO4 38.5	NO3 0.042	F 0.36	HCO3 168.4
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constitue Na 0.91	Should be b Should be b Should be b Should be b nt: K 1.48 0.0379	etween 0.9 etween 0.5 etween 0.55 Ca 38.1 1.9012	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 20 1.6458	<b>1.50</b> 0.0424	<b>38.5</b> 0.8016	<b>0.042</b> 0.0007	<b>0.36</b> 0.0190	<b>168.4</b> 2.7594
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constitue Na 0.91 0.0395 22.9898	Should be b Should be b Should be b Should be b nt: K 1.48 0.0379 39.0983	etween 0.9 etween 0.55 etween 0.55 <b>Ca</b> <b>38.1</b> 1.9012 40.0780	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 20 1.6458 24.3050	<b>1.50</b> 0.0424 35.4527	<b>38.5</b> 0.8016 96.0636	<b>0.042</b> 0.0007 62.0049	<b>0.36</b> 0.0190 18.9984	<b>168.4</b> 2.7594 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constitue Na 0.91 0.0395 22.9898 0.0395	Should be be Should be be Should be be better K. 1.48 0.0379 39.0983 0.0379	etween 0.9 etween 0.55 etween 0.55 <b>Ca</b> <b>38.1</b> 1.9012 40.0780 0.9506	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg 20 1.6458 24.3050 0.8228	1.50 0.0424 35.4527 0.0424	38.5 0.8016 96.0636 0.4008	0.042 0.0007 62.0049 0.0007	<b>0.36</b> 0.0190 18.9984 0.0190	168.4 2.7594 61.0171 2.7594
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constituel Na 0.91 0.0395 22.9898 0.0395	Should be b Should be b Should be b Should be b at: K 1.48 0.0379 39.0983 0.0379 1	etween 0.9 etween 0.5 etween 0.55 etween 0.55 Ca 38.1 1.9012 40.0780 0.9506 2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 20 1.6458 24.3050 0.8228 2	1.50 0.0424 35.4527 0.0424 1	38.5 0.8016 96.0636 0.4008 2	0.042 0.0007 62.0049 0.0007 1	<b>0.36</b> 0.0190 18.9984 0.0190 1	168.4 2.7594 61.0171 2.7594
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constituel Na 0.91 0.0395 22.9898 0.0395	Should be b Should be b Should be b Should be b 1.48 0.0379 39.0983 0.0379 1 73.5	etween 0.9 etween 0.5 etween 0.55 etween 0.55 Ca 38.1 1.9012 40.0780 0.9506 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 20 1.6458 24.3050 0.8228 2 53.1	1.50 0.0424 35.4527 0.0424 1 76.4	38.5 0.8016 96.0636 0.4008 2 80	0.042 0.0007 62.0049 0.0007 1 71.4	0.36 0.0190 18.9984 0.0190 1 54.4	168.4 2.7594 61.0171 2.7594 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mm/l) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (umho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constituel Na 0.91 0.0395 22.9898 0.0395	Should be b Should be b Should be b Should be b 1.48 0.0379 39.0983 0.0379 1 73.5 2.78	etween 0.9 etween 0.5 etween 0.55 etween 0.55 Ca 38.1 1.9012 40.0780 0.9506 2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 20 1.6458 24.3050 0.8228 2	1.50 0.0424 35.4527 0.0424 1	38.5 0.8016 96.0636 0.4008 2	0.042 0.0007 62.0049 0.0007 1	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constituel Na 0.91 0.0395 22.9898 0.0395 1 50.1 1.98E-05	Should be be should be	etween 0.9; etween 0.55 etween 0.55 Ca 38.1 1.9012 40.0780 0.9506 2 59.5 113.12	and 1.1 and 1.1 5 and 0.7 5 and 0.7 4 and 0.7 0.825 0.8228 2 53.1 87.38	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4	168.4 2.7594 61.0171 2.7594 1 44.5 122.79
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constituel Na 0.91 0.0395 22.9898 0.0395 22.9898 1.985 1.98	Should be be should be sho	etween 0.9; etween 0.55 etween 0.55 Ca 38.1 1.9012 40.0780 0.9506 2 59.5 113.12	and 1.1 and 1.1 5 and 0.7 5 and 0.7 4 and 0.7 0.825 0.8228 2 53.1 87.38	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594 1 44.5 122.79
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constitue Na 0.91 0.0395 22.9898 0.0395 22.9898 1.98E-05 1.98E-05 3.62 3.62	Should be be should be sho	etween 0.9 etween 0.55 etween 0.55 etween 0.55 etween 0.55 ft. 1.9012 40.0780 0.9506 2 59.5 113.12 1.90E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 4 and 0.7 0.825 0.8228 2 53.1 87.38	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594 1 44.5 122.79
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.48 Constitue Na 0.91 0.0395 22.9898 0.0395 1 50.1 1.98E-05 3.62 3.62 0.02	Should be be should be s	etween 0.9 etween 0.55 etween 0.55 etween 0.55 etween 0.55 ft. 1.9012 40.0780 0.9506 2 59.5 113.12 1.90E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 4 and 0.7 0.825 0.8228 2 53.1 87.38	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594 1 44.5 122.79
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength  Cation sum (meq/L) Anion sum (meq/L) % Difference lon Difference	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.88 0.57 0.48 Constitue Na 0.91 0.0395 22.9898 0.0395 1 50.1 1.98E-05 3.62 3.62 0.02	Should be be should b	etween 0.9 etween 0.55 etween 0.55 etween 0.55 etween 0.55 11.9012 40.0780 0.9506 2 59.5 113.12 1.90E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 6 and 0.7 0.6458 24.3050 0.8228 2 53.1 87.38 1.65E-03	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594 1 44.5 122.79
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference	138 9.1 385 396.50 0.0058 0.92 338.25 183 192.78 0.95 0.48 Constitue Na 0.91 0.0395 22.9898 0.0395 1.98E-05 3.62 3.62 0.02 0.00 0.94	Should be be should be s	etween 0.9: etween 0.55 etween 0.55  Ca 38.1 1.9012 40.0780 0.9506 2 59.5 113.12 1.90E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 5 and 0.7 5 3.1 6.458 24.3050 0.8228 2 53.1 87.38 1.65E-03	1.50 0.0424 35.4527 0.0424 1 76.4 3.24	38.5 0.8016 96.0636 0.4008 2 80 64.13	0.042 0.0007 62.0049 0.0007 1 71.4 0.05	0.36 0.0190 18.9984 0.0190 1 54.4 1.03	168.4 2.7594 61.0171 2.7594 1 44.5 122.79

Sample Location:	BNE033	Sample Dat	e: 02	-14-96		·	<del> </del>		
Alkalinity (mg/l)	170								
SiO2 (mg/l)	10.6								
Measured conductivity (umho/cm)	373								
Infinite dilution conductivity (umho/cm)	381.06								
Ionic strength (M)  Monovalent ion activity coefficient	0.0056 0.93								
Calculated conductivity (umho/cm)	326.06								
Measured TDS	179.5								
Calculated TDS	187.96								
Ratio: Meas TDS/Calc TDS		Should be b							
Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond		Should be b Should be b							
Ratio: Meas TDS/Meas cond		Should be b							
Tallo. Weds 120/Weds oslid			31113311313	and c.					
	Constitue		0-	8.4 ···	-	004	NOS	_	UCOS
Concentration (mail )	Na 1.505	K 0.768	Ca 36.6	Mg 20.2	CI 1.985	SO4 14.1	NO3 0.158	F 0.07	HCO3 207.4
Concentration (mg/L) Concentration (meq/L)	0.0655	0.0196	1.8263	1.6623	0.0560	0.2936	0.0025	0.0037	3.3993
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.0655	0.0196	0.9132	0.8310	0.0560	0.1468	0.0025	0,0037	3.3993
Charge z (absolute value)	_ 1	1	_ 2	2	_ 1	2	_ 1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59,5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/cm) Ionic strength	3.28 3.27E-05	1.44 9.82E-06	108.67 1.83E-03	88.26 1.66E-03	4.28 2.80E-05	23.48 2.94E-04	0.18 1.27E-06	0.20 1.84E-06	151.27 1.70E-03
ionic suchgar	G.E. E 00	5.022 00	1.002 00	1.002.00	2.000 00	<b>2</b> .07 <b>L</b> 0 7	1.272 00	1.012 00	1.702 00
Cation sum (meq/L)	3.57								
Anion sum (meq/L)	3.76		007						
% Difference Ion Difference	-2.47 -0.18	Should be <	2%						
Ratio: Cation sum*(100)/Measured conductivity		Should be b	etween 0.9	and 1.1					
Ratio: Anion sum*(100)/Measured conductivity		Should be b							
Sample Location:	BNE036	Sample Da	te: 02	-14-96		<del></del>	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
Sample Location:  Alkalinity (mg/l)	179	Sample Da	te: 02	-14-96	<del> </del>				
Alkalinity (mg/l) SiO2 (mg/l)	179 9.8		te: 02	-14-96			<del> </del>		
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	179 9.8 374		te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	179 9.8 374 396.07		te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	179 9.8 374		te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	179 9.8 374 396.07 0.0057		te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	179 9.8 374 396.07 0.0057 0.92 338.16		te: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	179 9.8 374 396.07 0.0057 0.92 338.16 176								
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89	Should be b	etween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89		etween 0.9 a	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90	Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47	Should be b Should be b Should be b Should be b	etween 0.9 etween 0.9 etween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Calc cond	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47 Constitue	Should be b Should be b Should be b Should be b nt:	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg	CI	<b>SO4</b>	NO3	F	нсоз
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47 Constitue	Should be b Should be b Should be b Should be b nt: K 0.96	etween 0.9 a etween 0.55 etween 0.55 Ca 39.2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 18.9	2.24	17.5	0.02	0.13	218.4
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47 Constitue Na 0.76	Should be be Should be be Should be be should be bent:  K 0.96 0.0246	etween 0.9 a etween 0.55 etween 0.55 Ca 39.2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 18.9 1.5553	<b>2.24</b> 0.0631	<b>17.5</b> 0.3644	<b>0.02</b> 0.0003	<b>0.13</b> 0.0068	<b>218.4</b> 3.5792
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Calc TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47 Constitue	Should be be Should be be Should be be should be be better K 0.96 0.0246 39.0983	etween 0.9 a etween 0.55 etween 0.55 Ca 39.2	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 18.9	<b>2.24</b> 0.0631 35.4527	17.5	0.02	0.13	218.4
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47 Constitue Na 0.76 0.0330 22.9898	Should be be should be be should be	etween 0.9 a etween 0.55 etween 0.55 Ca 39.2 1.9561 40.0780	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 18.9 1.5553 24.3050	<b>2.24</b> 0.0631	17.5 0.3644 96.0636	0.02 0.0003 62.0049	<b>0.13</b> 0.0068 18.9984	<b>218.4</b> 3.5792 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.90 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.00330	Should be be Should be be Should be be should be	etween 0.9; etween 0.9; etween 0.55 etween 0.55 2 1.9561 40.0780 0.9780 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 24.3050 0.7775 2 53.1	2.24 0.0631 35.4527 0.0631 1 76.4	17.5 0.3644 96.0636 0.1822 2 80	0.02 0.0003 62.0049 0.0003 1 71.4	0.13 0.0068 18.9984 0.0068 1 54.4	218.4 3.5792 61.0171 3.5792 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.90 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.0330 1 50.1	Should be be should be be should be be should be be	etween 0.9; etween 0.9; etween 0.55 etween 0.55 1.9561 40.0780 0.9780 2 59.5 116.39	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 2 1.5553 24.3050 0.7775 2 53.1 82.58	2.24 0.0631 35.4527 0.0631 1 76.4 4.82	17.5 0.3644 96.0636 0.1822 2 80 29.15	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	0.13 0.0068 18.9984 0.0068 1 54.4 0.37	218.4 3.5792 61.0171 3.5792 1 44.5 159.28
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.90 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.00330	Should be be should be be should be be should be	etween 0.9; etween 0.9; etween 0.55 etween 0.55 2 1.9561 40.0780 0.9780 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 24.3050 0.7775 2 53.1	2.24 0.0631 35.4527 0.0631 1 76.4	17.5 0.3644 96.0636 0.1822 2 80	0.02 0.0003 62.0049 0.0003 1 71.4	0.13 0.0068 18.9984 0.0068 1 54.4	218.4 3.5792 61.0171 3.5792 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.0330 1 50.1 1.65E-05	Should be be should be	etween 0.9; etween 0.9; etween 0.55 etween 0.55 1.9561 40.0780 0.9780 2 59.5 116.39	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 2 1.5553 24.3050 0.7775 2 53.1 82.58	2.24 0.0631 35.4527 0.0631 1 76.4 4.82	17.5 0.3644 96.0636 0.1822 2 80 29.15	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	0.13 0.0068 18.9984 0.0068 1 54.4 0.37	218.4 3.5792 61.0171 3.5792 1 44.5 159.28
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.0330 1 50.1 1.65E-05	Should be be should be should be be should be sh	etween 0.9 etween 0.55 etween 0.55 etween 0.55 0.9561 40.0780 0.9780 1.965-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 2 1.5553 24.3050 0.7775 2 53.1 82.58	2.24 0.0631 35.4527 0.0631 1 76.4 4.82	17.5 0.3644 96.0636 0.1822 2 80 29.15	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	0.13 0.0068 18.9984 0.0068 1 54.4 0.37	218.4 3.5792 61.0171 3.5792 1 44.5 159.28
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (meq/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength  Cation sum (meq/L) Anion sum (meq/L) Molfference	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.0330 1 50.1 1.65E-05 1.65E-05	Should be be should be s	etween 0.9 etween 0.55 etween 0.55 etween 0.55 0.9561 40.0780 0.9780 1.965-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 7 and 0.7 2 1.5553 24.3050 0.7775 2 53.1 82.58	2.24 0.0631 35.4527 0.0631 1 76.4 4.82	17.5 0.3644 96.0636 0.1822 2 80 29.15	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	0.13 0.0068 18.9984 0.0068 1 54.4 0.37	218.4 3.5792 61.0171 3.5792 1 44.5 159.28
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc Cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	179 9.8 374 396.07 0.0057 0.92 338.16 176 196.89 0.89 0.90 0.58 0.47  Constitue Na 0.76 0.0330 22.9898 0.0330 1 50.1 1.65E-05 1.65E-05	Should be be should be s	etween 0.9 a etween 0.55 etween 0.55 etween 0.55 1.9561 40.0780 0.9780 2 59.5 116.39 1.96E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 2 1.5553 24.3050 0.7775 2 53.1 82.58 1.56E-03	2.24 0.0631 35.4527 0.0631 1 76.4 4.82	17.5 0.3644 96.0636 0.1822 2 80 29.15	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	0.13 0.0068 18.9984 0.0068 1 54.4 0.37	218.4 3.5792 61.0171 3.5792 1 44.5 159.28

Sample Location:	BNE037	Sample Da	te: 02	-13-96			····	1	······································
Alkalinity (mg/l)	257								
SiO2 (mg/l)	10.1								
Measured conductivity (umho/cm)	656				•				
Infinite dilution conductivity (umho/cm)	627.25								
Ionic strength (M)	0.0089								
Monovalent ion activity coefficient Calculated conductivity (umho/cm)	0.91 <b>517.64</b>								
Measured TDS	295								
Calculated TDS	307.36								
Ratio: Meas TDS/Calc TDS		Should be b							
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond		Should be b							
Natio. Meas 1 Donneas cond			CINCCIT 0.00	and o.r					
	Constitue Na	nt: .K	Ca	Mg	CI	SO4	NO3	F	нсоз
Concentration (mg/L)	11.07	0.82	76.4	18.7	7.55	27.4	0.49	0.66	313.5
Concentration (meg/L)	0.4815		3.8124	1.5388	0.2130	0.5705	0.0079	0.0347	5.1389
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35.4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.4815		1.9062	0.7693	0.2130	0.2852	0.0079	0.0347	5.1389
Charge z (absolute value)	50.1	73.5	2	2 53.1	1 76.4	2 80	71.4	1 54.4	1 44.5
Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	24.13	1.55	59.5 226.84	81.70	16.28	45.64	0.56	1.89	228.68
Ionic strength	2.41E-04		3.81E-03	1.54E-03	1.07E-04	5.70E-04	3.93E-06	1.74E-05	2.57E-03
-	5.05								
Cation sum (meq/L) Anion sum (meq/L)	5.85 5.97								
% Difference		Should be <	: 5%	-					
ion Difference	-0.11		•						
Ratio: Cation sum*(100)/Measured conductivity		Should be b							
Ratio: Anion sum*(100)/Measured conductivity	0.91	Should be b	etween 0.9 a	and 1.1					
Sample Location:	BNE038	Sample Da	te: 02	-13-96	75				
Alkalinity (mg/l)	199	Sample Da	te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l)	199 9		te: 02	<u>-13-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	199		te: 02	<u>-13-96</u>				*****	
Alkalinity (mg/l) SiO2 (mg/l)	199 9 474		te: 02	<u>-13</u> -96		· · · · · · · · · · · · · · · · · · ·			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	199 9 474 462.90 0.0065 0.92		te: 02	<u>-13</u> -96	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	199 9 474 462.90 0.0065 0.92 391.44		te: 02	<u>-13</u> -96		·			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS	199 9 474 462.90 0.0065 0.92 391.44 209		te: 02	-13-96		·			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26								
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92		etween 0.9 a	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58	Should be b Should be b Should be b	etween 0.9 a etween 0.9 a etween 0.55	and 1.1 and 1.1 i and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58	Should be b	etween 0.9 a etween 0.9 a etween 0.55	and 1.1 and 1.1 i and 0.7		·			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44	Should be b Should be b Should be b Should be b	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 i and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44 Constitue	Should be b Should be b Should be b Should be b nt:	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 5 and 0.7 6 and 0.7 Mg	CI	\$O4	NO3	F	HCO3
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44 Constitue	Should be b Should be b Should be b Should be b nt: K 3.36	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 42.9	and 1.1 and 1.1 and 0.7 and 0.7 Mg 20.3	2.959	19.1	0.02	1.05	242.8
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44 Constitue	Should be be Should be be Should be be be to should be to should be be to should be to sh	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 20.3 1.6705	<b>2.959</b> 0.0835	<b>19.1</b> 0.3977			
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44 Constitue Na 10.2	Should be be Should be be Should be be be to should be to should be be to should be to sh	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 Ca 42.9 2.1407	and 1.1 and 1.1 and 0.7 and 0.7 Mg 20.3	2.959	19.1	<b>0.02</b> 0.0003	<b>1.05</b> 0.0553	<b>242.8</b> 3.9792
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437	Should be be Should be be Should be be be better to the should be be be better to the should be better to the should be be be be better to the should be be be better to the should be be be be better to the should be be better to the should be be be better to the should be be better to the should be be be be better to the should be be be better to the should be be be be better to the should be be be be be better to the should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.1407 40.0780 1.0704	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 20.3 1.6705 24.3050 0.8351 2	2.959 0.0835 35.4527 0.0835 1	19.1 0.3977 96.0636 0.1988 2	0.02 0.0003 62.0049 0.0003 1	1.05 0.0553 18.9984 0.0553 1	242.8 3.9792 61.0171 3.9792
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437	Should be b Should be b Should be b Should be b nt: K 3.36 0.0859 39.0983 0.0859 1 73.5	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.1407 40.0780 1.0704 2 59.5	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 4.3050 0.8351 2 53.1	2,959 0.0835 35,4527 0.0835 1 76,4	19.1 0.3977 96.0636 0.1988 2 80	0.02 0.0003 62.0049 0.0003 1 71.4	1.05 0.0553 18.9984 0.0553 1 54.4	242.8 3.9792 61.0171 3.9792 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value)	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437	Should be b Should be b Should be b Should be b nt: K 3.36 0.0859 39.0983 0.0859 1 73.5 6.32	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.1407 40.0780 1.0704	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 20.3 1.6705 24.3050 0.8351 2	2.959 0.0835 35.4527 0.0835 1 76.4 6.38	19.1 0.3977 96.0636 0.1988 2	0.02 0.0003 62.0049 0.0003 1	1.05 0.0553 18.9984 0.0553 1	242.8 3.9792 61.0171 3.9792
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength	199 9 474 462.90 0.0065 0.992 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437 50.1 22.23 2.22E-04	Should be be should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.1407 40.0780 1.0704 2 59.5 127.37	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 4.3050 0.8351 2 53.1 88.69	2,959 0.0835 35,4527 0.0835 1 76,4	19.1 0.3977 96.0636 0.1988 2 80 31.81	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	1.05 0.0553 18.9984 0.0553 1 54.4 3.01	242.8 3.9792 61.0171 3.9792 1 44.5 177.07
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength Cation sum (meq/L)	199 9 474 462.90 0.0065 0.922 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437 1 50.1 22.23 2.22E-04	Should be be should be	etween 0.9 a etween 0.9 a etween 0.55 etween 0.55 2.1407 40.0780 1.0704 2 59.5 127.37	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 4.3050 0.8351 2 53.1 88.69	2.959 0.0835 35.4527 0.0835 1 76.4 6.38	19.1 0.3977 96.0636 0.1988 2 80 31.81	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	1.05 0.0553 18.9984 0.0553 1 54.4 3.01	242.8 3.9792 61.0171 3.9792 1 44.5 177.07
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L)	199 9 474 462.90 0.0065 0.922 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437 1 50.1 22.23 2.22E-04 4.34 4.52	Should be be should be sho	etween 0.9 a etween 0.55 etween 0.55 etween 0.55 2.1407 40.0780 1.0704 2 59.5 127.37 2.14E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 4.3050 0.8351 2 53.1 88.69	2.959 0.0835 35.4527 0.0835 1 76.4 6.38	19.1 0.3977 96.0636 0.1988 2 80 31.81	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	1.05 0.0553 18.9984 0.0553 1 54.4 3.01	242.8 3.9792 61.0171 3.9792 1 44.5 177.07
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) lonic strength Cation sum (meq/L)	199 9 474 462.90 0.0065 0.922 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437 1 50.1 22.23 2.22E-04 4.34 4.52	Should be be should be	etween 0.9 a etween 0.55 etween 0.55 etween 0.55 2.1407 40.0780 1.0704 2 59.5 127.37 2.14E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 4.3050 0.8351 2 53.1 88.69	2.959 0.0835 35.4527 0.0835 1 76.4 6.38	19.1 0.3977 96.0636 0.1988 2 80 31.81	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	1.05 0.0553 18.9984 0.0553 1 54.4 3.01	242.8 3.9792 61.0171 3.9792 1 44.5 177.07
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Molfference	199 9 474 462.90 0.0065 0.92 391.44 209 228.26 0.92 0.83 0.58 0.44  Constitue Na 10.2 0.4437 22.9898 0.4437 1 50.1 22.23 2.22E-04 4.34 4.52 -1.98 -0.18 0.92	Should be be should be sho	etween 0.9 a etween 0.55 etween 0.55 etween 0.55 1.0704 2.59.5 127.37 2.14E-03	and 1.1 and 1.1 and 0.7 and 0.7 and 0.7 Mg 20.3 1.6705 24.3050 0.8351 2 53.1 88.69 1.67E-03	2.959 0.0835 35.4527 0.0835 1 76.4 6.38	19.1 0.3977 96.0636 0.1988 2 80 31.81	0.02 0.0003 62.0049 0.0003 1 71.4 0.02	1.05 0.0553 18.9984 0.0553 1 54.4 3.01	242.8 3.9792 61.0171 3.9792 1 44.5 177.07

Sample Location:	BNE039	Sample Da	te: 02	-14-96		<del>,</del>			
Alkalinity (mg/l)	272								
SiO2 (mg/l)	12								
Measured conductivity (umho/cm)	559								
Infinite dilution conductivity (umho/cm)	599.32								
lonic strength (M)  Monovalent ion activity coefficient	0.0087 0.91								
Calculated conductivity (umho/cm)	495.59								
Measured TDS	290								
Calculated TDS	296.91						•		
Ratio: Meas TDS/Calc TDS		Should be b							
Ratio: Calc cond/Meas cond		Should be b							
Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond		Should be b							
Natio. Meas 103/Meas Colid			etween 0.50	and b.r					
	Constitue Na	nt: K	Ca	Ma	CI	SO4	NO3	F	нсоз
Concentration (mg/L)	1.39	0.87	80.6	Mg 17.6	1.97	19.1	0.15	0.07	331.8
Concentration (meg/L)	0.0606		4.0219	1.4483	0.0554	0.3977	0.0025	0,0037	5.4389
Molecular weight (mg/mM)	22.9898	39.0983	40.0780	24.3050	35,4527	96.0636	62.0049	18.9984	61.0171
Concentration (mM)	0.0606	0.0222	2.0110	0.7241	0.0554	0.1988	0.0025	0.0037	5.4389
Charge z (absolute value)	1	1	2	2	1	2	1	1	1
Equivalent conductivity (mho-cm^2/equivalent)	50.1	73.5	59.5	53.1	76.4	80	71.4	54.4	44.5
Infinite dilution conductivity (umho/сті) Ionic strength	3.04 3.03E-05	1.63 1.11E-05	239.31 4.02E-03	76.90 1.45E-03	4.24 2.77E-05	31.81 3.98E-04	0.18 1.23E-06	0.20 1.84E-06	242.03 2.72E-03
ione strength	3.03L-03	1.112-05	4.026-03	1.456-05	2,176-03	J.30L-04	1.23L*00	1.042-00	2.7 ZL-00
Cation sum (meq/L)	5.55								
Anion sum (meq/L)	5.90								
% Difference		Should be <	÷5%						•
fon Difference Ratio: Cation sum*(100)/Measured conductivity	-0.35	Should be b	otwoon 0 0	and 1.1					
Ratio: Anion sum*(100)/Measured conductivity		Should be b							
Sample Location:	BNE042	Sample Da	ite: 02	!-14-96	****				
the contract of the state of th	BNE042 328	Sample Da	te: 02	-14-96					•=
Alkalinity (mg/l) SiO2 (mg/l)		-	ite: 02	-14-96	Marine				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm)	328 13 600	•	ite: 02	2-14-96	<b>18</b> (19 )				
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm)	328 13 600 688.64	•	ite: 02	<u>-14-96</u>					121112
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	328 13 600 688.64 0.0101	•	te: 02	<u>-14-96</u>					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient	328 13 600 688.64	•	ite: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M)	328 13 600 688.64 0.0101 0.90	•	ite: 02	-14-96					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS	328 13 600 688.64 0.0101 0.90 561.88 319	•							
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS	328 13 600 688.64 0.0101 0.90 561.88 319 330.31	Should be b	petween 0.9	and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97	Should be to Should be to	petween 0.9 petween 0.9	and 1.1 and 1.1					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94	Should be be Should be be	petween 0.9 petween 0.9 petween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94	Should be be should be be should be be	petween 0.9 petween 0.9 petween 0.55	and 1.1 and 1.1 5 and 0.7					
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94 0.59 0.53	Should be be Should be be Should be be Should be be nt:	petween 0.9 petween 0.55 petween 0.55 Ca	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg	CI	SO4	NO3	F	НСОЗ
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94 0.59 0.53 Constitue	Should be be Should be be Should be be Should be be nt: K 0.70	petween 0.9 petween 0.55 petween 0.55 petween 0.55 Ca 65.9	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 39.9	3.68	7.6	1.17	0.07	400.16
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94 0.53 Constitue Na 1.54	Should be to Should be to Should be to Should be to the s	petween 0.9 petween 0.55 petween 0.55 Ca 65.9 3.28841	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 39.9 3.283371	<b>3.68</b> 0.103728	7.6 0.158232	<b>1.17</b> 0.018791	<b>0.07</b> 0.003685	<b>400.16</b> 6.558622
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.94 0.59 0.53 Constitue Na 1.54 0.06686 22.9898	Should be to Should be to Should be to Should be to the s	petween 0.9 petween 0.55 petween 0.55 Ca 65.9 3.28841 40.078	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 39.9 3.283371 24.305	<b>3.68</b> 0.103728 35.4527	<b>7.6</b> 0.158232 96.0636	<b>1.17</b> 0.018791 62.0049	0.07 0.003685 18.9984	<b>400.16</b> 6.558622 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.94 0.53 Constitue Na 1.54	Should be to Should be to Should be to Should be to the s	cetween 0.9 between 0.55 between 0.55 Ca 65.9 3.28841 40.078 1.644205	and 1.1 and 0.7 5 and 0.7 5 and 0.7 Mg 39.9 3.283371 24.305 1.641486	3.68 0.103728 35.4527 0.103728	7.6 0.158232 96.0636 0.079116	<b>1.17</b> 0.018791	<b>0.07</b> 0.003685	<b>400.16</b> 6.558622
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.94 0.59 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686	Should be to Should be to Should be to Should be to the s	petween 0.9 petween 0.55 petween 0.55 Ca 65.9 3.28841 40.078	and 1.1 and 1.1 5 and 0.7 5 and 0.7 Mg 39.9 3.283371 24.305	<b>3.68</b> 0.103728 35.4527	<b>7.6</b> 0.158232 96.0636	1.17 0.018791 62.0049 0.018791	0.07 0.003685 18.9984 0.003685	<b>400.16</b> 6.558622 61.0171
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mM/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.59 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686	Should be to Should be to Should be to Should be to 1.70 0.017983 39.0983 0.017983 1 73.5 1.32	cetween 0.9 petween 0.55 petween 0.55 petween 0.55 3.28841 40.078 1.644205 2 59.5 195.66	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 1.641486 2 53.1 174.33	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Molecular weight (mg/mM) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.59 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686	Should be to Should be to Should be to Should be to 1.70 0.017983 39.0983 0.017983 1 73.5 1.32	cetween 0.9 petween 0.55 petween 0.55 cetween 0.55 3.28841 40.078 1.644205 2 59.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 Mg 39.9 3.283371 24.305 1.641486 2 53.1	3.68 0.103728 35.4527 0.103728 1 76.4	7.6 0.158232 96.0636 0.079116 2 80	1.17 0.018791 62.0049 0.018791 1 71.4	0.07 0.003685 18.9984 0.003685 1 54.4	400.16 6.558622 61.0171 6.558622 1 44.5
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Ionic strength (M) Monovalent ion activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mM) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.59 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686	Should be to Shoul	cetween 0.9 petween 0.55 petween 0.55 petween 0.55 3.28841 40.078 1.644205 2 59.5 195.66	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 1.641486 2 53.1 174.33	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Calc TDS/Calc cond Ratio: Meas TDS/Meas cond  Concentration (mg/L) Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Concentration (mM/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm)	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.59 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686 1 50.1 3.35 3.34E-05	Should be be should be sho	cetween 0.9 petween 0.55 petween 0.55 petween 0.55 3.28841 40.078 1.644205 2 59.5 195.66	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 1.641486 2 53.1 174.33	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) S Difference	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686 1 50.1 3.35 3.34E-05	Should be be should be s	Detween 0.9 Detween 0.55 Detween 0.9 Detween 0.5	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 1.641486 2 53.1 174.33	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) % Difference Ion Difference	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686 1 50.1 3.35 3.34E-05	Should be be should be s	cetween 0.9 between 0.55 between 0.55 cetween 0.55 a.28841 40.078 1.644205 2 59.5 195.66 3.29E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 Mg 39.9 3.283371 24.305 1.641486 2 53.1 174.33 3.28E-03	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86
Alkalinity (mg/l) SiO2 (mg/l) Measured conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution conductivity (umho/cm) Infinite dilution activity coefficient Calculated conductivity (umho/cm) Measured TDS Calculated TDS Ratio: Meas TDS/Calc TDS Ratio: Meas TDS/Calc TDS Ratio: Calc cond/Meas cond Ratio: Meas TDS/Meas cond Concentration (mg/L) Concentration (mg/L) Concentration (mm/l) Charge z (absolute value) Equivalent conductivity (mho-cm^2/equivalent) Infinite dilution conductivity (umho/cm) Ionic strength Cation sum (meq/L) Anion sum (meq/L) Anion sum (meq/L) S Difference	328 13 600 688.64 0.0101 0.90 561.88 319 330.31 0.97 0.53 Constitue Na 1.54 0.06686 22.9898 0.06686 1 50.1 3.35 3.34E-05	Should be be should be s	cetween 0.9 between 0.55 between 0.55 cetween 0.55 2 3.28841 40.078 1.644205 2 59.5 195.66 3.29E-03	and 1.1 and 1.1 5 and 0.7 5 and 0.7 5 and 0.7 1.24.305 1.641486 2 53.1 174.33 3.28E-03	3.68 0.103728 35.4527 0.103728 1 76.4 7.92	7.6 0.158232 96.0636 0.079116 2 80 12.66	1.17 0.018791 62.0049 0.018791 1 71.4 1.34	0.07 0.003685 18.9984 0.003685 1 54.4 0.20	400.16 6.558622 61.0171 6.558622 1 44.5 291.86