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A tabulation of meteorological variables and concentrations of
helium, carbon dioxide, oxygen, and nitrogen in soil gases collected
regularly from four sites at the Roosevelt Hot Springs Known
Geothermal Resource Area, Utah

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

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ABSTRACT

Concentrations of helium, carbon dioxide, oxygen, and nitrogen were measured regularly over periods of 10 to 16 months from four sites at the Roosevelt Hot Springs geothermal area. Soil temperature, air temperature, percent humidity, barometric pressure, rain, and snowfall were also measured. Sampling and analysis of the soil gases are described and gas and meteorological measurements are listed.

INTRODUCTION

Measurement of concentrations of He, CO₂, O₂, and N₂ in soil gases is often used in geochemical exploration for ore deposits and geothermal resources. However, interpretation of anomalies of the gases measured is not always straightforward. For example, soil moisture and high concentrations of other volatiles present in a soil gas sample may affect the concentrations of the species of interest for exploration (Hinkle and Ryder, 1987). Meteorological changes may also affect the concentrations measured (Hinkle and Ryder, 1988; Reimer, 1979; McCarthy and Reimer, 1986).

The purpose of this study was to examine the effect of meteorological parameters on concentrations of He, CO₂, O₂, and N₂ in an area where anomalous concentrations of gases are known to occur. The Roosevelt Hot Springs Known Geothermal Resource Area (KGRA) was selected for the study because anomalous concentrations of He and CO₂ had been measured in the same locations on more than one occasion (Hinkle, 1980; Hinkle and Botinelly, 1988), and because employees of the Chevron Resources Company were available to collect the samples on a regular basis.

Roosevelt Hot Springs KGRA is located about 20 km northeast of the town of Milford, in Beaver County, southwestern Utah (fig. 1). The KGRA is associated with Quaternary silicic volcanic rocks, which occur as domes, flows, and tuffs. The hot-water-dominated system was named for a group of hot springs that discharged silica-rich waters until about 1966, when the flow stopped (Mundorff, 1970). The location of the hot springs is at the northern end of a wide north-south-trending fault zone called the Opal Mound fault. The producing part of the geothermal field is bounded by the Opal Mound fault on the west and the foothills of the Mineral Mountains on the east (Ross and others, 1982). The environment of the Roosevelt Hot Springs KGRA is arid.

Two sites were originally selected for this study. Site A (fig. 1) was located near geothermal well 28-3, where concentrations of both He and CO₂ are highly anomalous. Site B was located near the eastern edge of the geothermal field, where concentrations of He and CO₂ are much lower than at site A. After measuring the concentrations of gases collected at sites A and B for approximately 6 months, it was determined that collection and analysis of soil gases from an additional two sites would help in the interpretation of effects of meteorological changes on soil gas concentrations. Site C was located southeast of injection well 14-2, and site D was located north of site B (fig. 1); concentrations of He and CO₂ are slightly higher at these sites than at site B, but much lower than at site A.

This report lists concentrations of He, CO₂, O₂, and N₂ collected regularly at sites A and B from May 12, 1987 to August 30, 1988, and at sites C and D from November 17, 1987 to August 30, 1988.

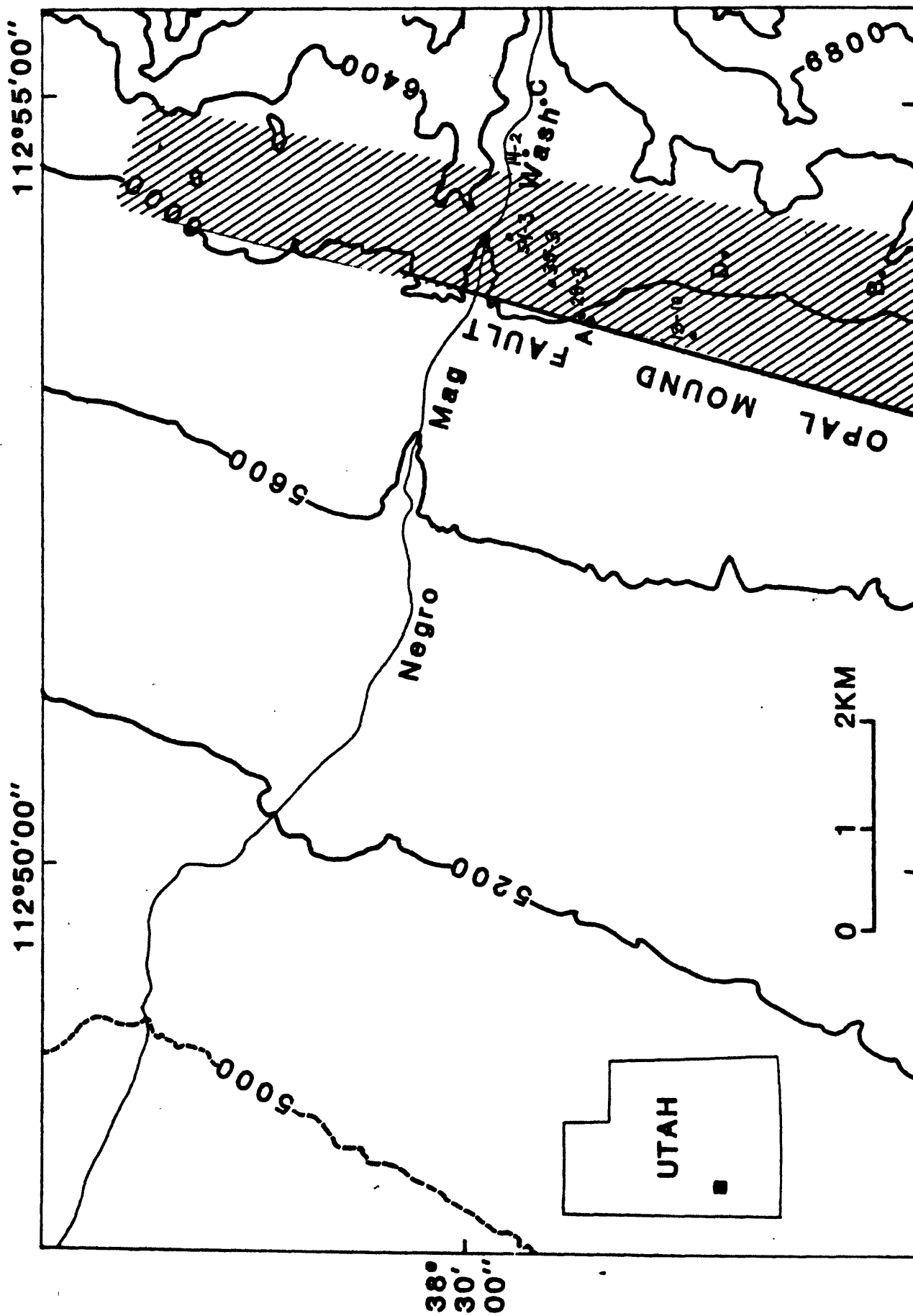


Fig. 1. Location map of Roosevelt Hot Springs, Beaver County, Utah. Striped area approximates the geothermal field. 28-3, 35-3, 54-3, 13-10, 14-2 are geothermal wells. A, B, C, D, are sample sites.

ACKNOWLEDGMENTS

I thank the Chevron Resources Company, San Ramon, California, for permission to publish the results of this study, and Stuart D. Johnson, geothermal division, for making arrangements for sample collection. Terry Allen and Ron Dorovi supervised the sample collection at Roosevelt Hot Springs. Gary Malchus at the National Oceanographic and Atmospheric Administration weather station, Milford, Utah, supplied relative humidity data.

SAMPLE COLLECTION AND ANALYSIS

Samples were collected from hollow probes driven 0.75 m into the ground. The hollow probes used in this study were described by Reimer and Bowles (1979) and have been widely used in collecting soil gas samples. Each probe was driven into the ground by means of a sliding hammer attached to the shaft of the probe. After it was driven into the ground, the probe was fitted with an airtight cap and septum for withdrawal of the soil gas sample. A PVC pipe was placed over the probe and cap, and the pipe was covered with an inverted plastic beaker to protect the probe from the weather.

Before removal of the first sample, 10 ml of air were withdrawn from the probe to remove air introduced when the probe was emplaced in the ground; 10 ml of air were also removed from the probes whenever the rubber septa were changed. All soil gas samples, except those of the first day, had equilibrated a minimum of 24 hours before collection. Samples were collected from the hollow probe by inserting the needle of a syringe through the septum in the cap and withdrawing 10 ml of the soil gas. The soil gas samples were transferred to evacuated blood sampling vials for storage, by inserting the needle of the syringe containing the gas sample through the rubber cap of the evacuated vial and allowing the sample in the syringe to be drawn inside. The needle hole was covered with silicone glue. Soil gas samples can be stored in these evacuated vials for as long as 2 months without leakage (Hinkle and Kilburn, 1979).

Samples were collected daily, when possible. However, poor road conditions in the winter and spring prevented the collection of samples on several occasions; no samples were collected between December 11, 1987, and February 2, 1988. Replicate samples were not collected because previous studies had determined them to be unnecessary (Hinkle and Ryder, 1988). The total number of samples collected at sites A, B, C, and D were 164, 164, 58, and 65, respectively.

Barometric pressure was measured by a barometer located inside the Chevron Company office near Site A. Air temperature and rainfall were measured by a thermometer and rain gauge located outside the office. Snowfall was measured by a ruler. Soil temperature was measured by a metal dial-type thermometer located next to each probe; the tip of the thermometer stem was buried at 20-cm depth. Relative humidity was measured by a humidity gauge for the first 9 months until it was accidentally broken; after that, the relative humidity was obtained from the National Oceanic and Atmospheric Administration weather station at Milford.

Gas in the vials was removed by injecting a volume of air equal to the volume of the vial into the vial and removing the mixture of air and soil gas. The samples were analyzed for helium using mass spectrometry (Reimer and Denton, 1978). Standard samples of air containing known concentrations of helium were run several times per day to insure stability of the instrument.

Concentrations of helium were reported as differences compared to the concentrations of helium in air; these differences were positive or negative, depending on whether the measured concentration was above or below the concentration of helium in air (5,240 parts per billion) (Glueckhauf, 1946; Oliver and others, 1984). The reproducibility of measurement was 30 ppb above or below the concentration of helium in air for sites B, C, and D, and 250 ppb above or below the concentration of helium in air at site A. The tubes used for sample storage were approximately 80 percent evacuated. They contained a residual concentration of He, introduced during the manufacturing process, that was the same for all the tubes in each lot produced by the manufacturer. This residual He concentration was measured and subtracted from the raw measurement of He in the soil gas.

Samples were analyzed for CO₂, O₂, and N₂ using gas chromatography; operating conditions for the gas chromatograph are shown in table 1. Concentrations of CO₂, O₂, and N₂ were measured compared to standard curves, and are reported as volume percents of the total gas sample. Standard samples containing known concentrations of the gases were analyzed several times per day to insure stability of the instrument.

DESCRIPTION OF DATA TABLES

Data from the analyses were entered into an IBM personal computer and stored on disks, using STATPAC programs developed for personal computers by the U.S. Geological Survey (1986). Data for all measurements obtained during the study are listed in tables 2-5.

Data listed in the tables include: date of sample collection, number of days after beginning of sample collection, time of day of sample collection (standard time), soil temperature (°C), air temperature (°C), percent humidity, rainfall (inches), depth of snow on the ground (inches), barometric pressure (inches), percent CO₂, percent O₂, percent N₂, and parts per billion He above or below the concentration of He in air. Because of the formatting used in the computer program that produced tables 2-5, the data listed carry zero to two nonsignificant digits to the right of the measurements listed; these data were not determined to the accuracy suggested by the extra zeros. The letter B following two zeros in the data indicates that no analysis was performed for that particular parameter.

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Table 1.--Operating conditions for the gas chromatograph

Type of gas chromatograph	Carle AGC-100
Detector	thermister detector
Lower limit of detection	0.03% CO ₂ /approximately 0.1% O ₂ and 1.0% N ₂ (vol/vol)
Reproducibility	+/-10%
Column	concentric stainless steel, outer column 72 in x 1/4 in molecular sieve inner column 72 in x 1/8 in porapak mixture (Alltech Associates, Deerfield, IL)
Carrier gas	helium at 90 mL/minute
Temperature	column: 60°C detector: "low" mode

Table 2. Data for Site A

ROW ID	Day	Date	Time	Soil(C)	Air(C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
1 A-1	1.00	51287.00	1140.00	18.00	28.00	22.00	.00	.00	28.86	.00B
2 A-2	2.00	51387.00	830.00	17.00	26.00	30.50	.00	.00	28.82	16.60
3 A-3	3.00	51487.00	750.00	18.00	26.00	30.50	.00	.00	28.85	15.00
4 A-4	4.00	51587.00	740.00	17.60	16.50	33.00	.00	.00	28.84	16.20
5 A-5	9.00	52087.00	1135.00	15.50	17.50	33.00	.30	.00	28.65	17.20
6 A-6	10.00	52187.00	1245.00	15.50	20.00	33.00	.00	.00	28.73	15.40
7 A-7	11.00	52287.00	1325.00	15.00	24.00	22.00	.00	.00	28.78	18.00
8 A-8	16.00	52787.00	1330.00	14.50	19.00	27.00	.00	.00	28.60	19.40
9 A-9	18.00	52987.00	940.00	14.50	24.00	30.50	.05	.00	28.76	17.20
10 A-10	21.00	60187.00	1300.00	17.90	22.40	12.00	.00	.00	28.85	15.80
11 A-11	22.00	60287.00	825.00	17.00	20.40	17.20	.00	.00	28.84	14.40
12 A-12	23.00	60387.00	1255.00	17.50	28.20	9.10	.00	.00	28.83	15.60
13 A-13	24.00	60487.00	1412.00	19.80	32.20	3.50	.00	.00	28.83	13.00
14 A-14	25.00	60587.00	1400.00	20.00	30.80	7.00	.00	.00	28.80	14.20
15 A-15	28.00	60887.00	1630.00	19.50	34.00	11.50	.30	.00	28.75	.00B
16 A-16	29.00	60987.00	1000.00	18.80	27.00	19.20	.00	.00	28.76	13.20
17 A-17	30.00	61087.00	1006.00	18.60	33.50	18.80	.00	.00	28.77	12.60
18 A-18	31.00	61187.00	1500.00	20.00	28.00	14.50	.00	.00	28.77	15.40
19 A-19	32.00	61287.00	1252.00	20.20	30.00	13.00	.00	.00	28.88	14.60
20 A-20	35.00	61587.00	722.00	21.10	24.80	17.80	.00	.00	28.15	15.40
21 A-21	36.00	61687.00	730.00	21.10	22.30	12.20	.00	.00	28.75	13.00
22 A-22	37.00	61787.00	715.00	21.40	23.20	12.00	.00	.00	28.76	14.00
23 A-23	38.00	61887.00	745.00	21.30	23.30	8.10	.00	.00	28.76	.00B
24 A-24	42.00	62287.00	730.00	22.50	14.00	14.00	.00	.00	28.76	12.80
25 A-25	43.00	62387.00	720.00	21.80	22.00	11.80	.00	.00	28.76	.00B
26 A-26	44.00	62487.00	717.00	22.40	21.80	10.30	.00	.00	28.79	.00B
27 A-27	45.00	62587.00	717.00	22.70	21.00	11.80	.00	.00	28.78	22.80
28 A-28	46.00	62687.00	745.00	23.00	25.80	9.70	.00	.00	28.79	.00B
29 A-29	49.00	62987.00	805.00	23.30	25.00	20.80	.00	.00	28.80	12.40
30 A-30	50.00	63087.00	1345.00	23.90	35.00	17.20	.00	.00	28.75	15.20
31 A-31	51.00	70187.00	1410.00	24.10	36.00	4.80	.00	.00	28.76	13.40
32 A-32	52.00	70287.00	805.00	23.80	25.50	4.80	.00	.00	28.78	14.40
33 A-33	56.00	70687.00	845.00	24.00	29.50	3.00	.00	.00	28.75	21.80
34 A-34	58.00	70887.00	730.00	24.00	25.20	7.20	.00	.00	28.72	15.80
35 A-35	59.00	.00B	.00B	.00B	.00B	.00B	.00B	.00	.00B	16.20
36 A-36	60.00	71087.00	715.00	24.50	23.20	8.50	.00	.00	28.71	17.80
37 A-37	63.00	71387.00	1020.00	21.70	33.80	13.10	.52	.00	28.85	14.20
38 A-38	64.00	71487.00	1510.00	23.20	40.20	9.30	.00	.00	28.50	10.00
39 A-39	65.00	71587.00	1505.00	23.70	27.90	10.00	.00	.00	28.60	12.60
40 A-40	66.00	71687.00	1045.00	23.20	27.80	16.80	.00	.00	28.69	16.00
41 A-41	67.00	71787.00	1310.00	22.20	25.60	28.00	.08	.00	28.61	15.80
42 A-42	71.00	72187.00	1225.00	20.10	25.20	41.20	.70	.00	28.71	16.40
43 A-43	72.00	72287.00	930.00	19.60	36.00	23.00	.00	.00	28.56	16.40
44 A-44	73.00	72387.00	739.00	19.20	20.90	21.90	.00	.00	28.78	13.00
45 A-45	74.00	72487.00	745.00	20.40	23.20	14.87	.00	.00	28.77	14.80
46 A-46	77.00	72787.00	718.00	22.00	24.70	29.80	.00	.00	28.78	11.80
47 A-47	78.00	72887.00	734.00	21.90	23.30	34.60	.00	.00	28.79	12.20
48 A-48	79.00	72987.00	1255.00	21.60	24.80	40.80	.00	.00	28.78	19.40
49 A-49	80.00	73087.00	755.00	21.90	24.80	33.30	.00	.00	28.74	18.20
50 A-50	81.00	73187.00	835.00	22.40	27.30	33.30	.00	.00	28.73	14.60

Data for Site A

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
51 A-51	84.00	80387.00	725.00	24.20	23.70	30.00	.00	.00	28.74	10.40
52 A-52	86.00	80587.00	725.00	24.60	24.80	23.60	.00	.00	28.74	16.30
53 A-53	87.00	80687.00	730.00	24.70	23.30	32.00	.00	.00	28.73	16.20
54 A-54	88.00	80787.00	845.00	21.70	24.30	51.80	1.47	.00	28.73	21.50
55 A-55	91.00	81087.00	740.00	21.30	24.80	37.00	.40	.00	28.79	16.00
56 A-56	92.00	81187.00	745.00	21.50	24.80	26.00	.00	.00	28.87	17.40
57 A-57	93.00	81287.00	800.00	21.10	22.80	37.30	.05	.00	28.82	15.50
58 A-58	94.00	81387.00	730.00	21.20	22.80	34.50	.00	.00	.00B	16.60
59 A-59	95.00	81487.00	700.00	20.50	21.00	28.00	.00	.00	.00B	34.00
60 A-60	98.00	81787.00	730.00	21.20	23.70	14.00	.00	.00	.00B	17.20
61 A-61	99.00	81887.00	755.00	21.60	27.20	14.00	.00	.00	.00B	18.70
62 A-62	100.00	81987.00	730.00	22.50	25.50	13.80	.00	.00	.00B	24.80
63 A-63	101.00	82087.00	725.00	23.20	23.00	16.00	.00	.00	.00B	23.60
64 A-64	102.00	82187.00	1005.00	20.00	31.00	29.20	.10	.00	.00B	19.40
65 A-65	105.00	82487.00	755.00	21.60	20.20	48.00	.00	.00	.00B	20.40
66 A-66	106.00	82587.00	740.00	20.80	20.70	41.20	.00	.00	.00B	20.10
67 A-67	108.00	82787.00	755.00	21.00	21.00	26.90	.00	.00	.00B	14.70
68 A-68	109.00	82887.00	925.00	21.40	29.70	18.20	.00	.00	.00B	17.30
69 A-69	112.00	83187.00	713.00	22.20	22.00	16.00	.00	.00	.00B	13.30
70 A-70	113.00	90187.00	750.00	22.40	21.80	17.80	.00	.00	.00B	12.90
71 A-71	114.00	90287.00	720.00	23.20	23.20	17.70	.00	.00	.00B	13.60
72 A-72	115.00	90387.00	735.00	23.30	22.90	21.00	.00	.00	.00B	14.30
73 A-73	116.00	90487.00	938.00	22.40	24.20	29.10	.00	.00	.00B	12.60
74 A-74	120.00	90887.00	825.00	21.20	21.20	27.50	.00	.00	.00B	13.00
75 A-75	121.00	90987.00	850.00	21.60	24.60	19.10	.00	.00	.00B	10.60
76 A-76	122.00	91087.00	825.00	21.60	23.10	16.50	.00	.00	.00B	16.00
77 A-77	127.00	91587.00	730.00	18.40	19.50	24.00	.11	.00	.00B	7.90
78 A-78	128.00	91687.00	753.00	19.10	18.00	25.80	.00	.00	.00B	12.20
79 A-79	129.00	91787.00	730.00	19.00	18.70	24.70	.00	.00	.00B	20.20
80 A-80	130.00	91887.00	730.00	18.70	17.50	20.00	.00	.00	30.05	12.60
81 A-81	133.00	92187.00	800.00	19.80	19.10	8.70	.00	.00	30.00	11.50
82 A-82	140.00	92887.00	1335.00	19.10	25.20	15.00	.00	.00	30.04	12.40
83 A-83	141.00	92987.00	1020.00	18.50	24.50	13.80	.00	.00	29.80	15.20
84 A-84	142.00	93087.00	850.00	18.50	24.80	11.00	.00	.00	30.00	12.70
85 A-85	143.00	100187.00	730.00	19.10	18.20	9.00	.00	.00	30.02	14.00
86 A-86	147.00	100587.00	1155.00	19.60	28.20	10.00	.00	.00	30.02	11.90
87 A-87	148.00	100687.00	730.00	19.40	16.90	12.00	.00	.00	29.90	13.10
88 A-88	155.00	101387.00	825.00	17.50	13.20	42.30	.26	.00	29.50	14.10
89 A-89	156.00	101487.00	1140.00	14.40	13.00	49.80	.79	.00	29.50	14.40
90 A-90	158.00	101687.00	745.00	12.50	20.00	34.00	.00	.00	30.52	21.30
91 A-91	162.00	102087.00	740.00	12.50	14.70	24.20	.00	.00	30.03	28.40
92 A-92	163.00	102187.00	752.00	12.70	16.80	22.80	.00	.00	29.91	24.00
93 A-93	164.00	102287.00	842.00	13.50	20.80	18.80	.00	.00	29.97	30.20
94 A-94	165.00	102387.00	700.00	13.90	14.00	37.00	.17	.00	29.92	23.40
95 A-95	169.00	102787.00	840.00	12.50	18.50	31.20	.00	.00	30.01	14.90
96 A-96	170.00	102887.00	850.00	12.80	22.30	29.50	.00	.00	29.97	23.50
97 A-97	171.00	102987.00	830.00	13.10	14.50	45.10	.10	.00	29.96	29.00
98 A-98	172.00	103087.00	840.00	12.10	16.00	41.00	.12	.00	29.96	.00B
99 A-99	175.00	110287.00	855.00	10.20	16.90	39.00	.70	.00	29.90	11.60
100 A-100	190.00	111787.00	1130.00	2.00	4.00	48.00	1.40	.00	29.92	37.50

Data for Site A

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
101 A-101	192.00	111987.00	945.00	1.30	-1.80	.008	.00	.00	30.80	25.60
102 A-102	193.00	112087.00	1544.00	4.00	15.90	20.70	.00	.00	29.98	32.20
103 A-103	196.00	112387.00	1112.00	4.50	21.80	23.00	.00	.00	29.85	29.80
104 A-104	197.00	112487.00	1134.00	4.30	13.00	23.20	.00	.00	29.99	30.20
105 A-105	198.00	112587.00	1032.00	4.00	2.80	45.00	.00	.00	29.94	37.00
106 A-106	199.00	113087.00	940.00	.00	3.00	12.80	.10	.00	29.95	30.60
107 A-107	200.00	120187.00	955.00	.00	5.00	16.80	.00	.00	29.91	33.10
108 A-108	206.00	120387.00	1130.00	.00	8.00	18.50	.00	.00	29.97	32.80
109 A-109	207.00	120487.00	1140.00	.00	13.20	25.20	.00	.00	29.93	42.30
110 A-110	210.00	120787.00	940.00	.00	7.00	26.00	.10	.00	29.83	40.10
111 A-111	213.00	121087.00	1000.00	.00	10.00	22.00	.00	.00	29.94	31.90
112 A-112	214.00	121187.00	1100.00	.00	.00	23.20	.00	.00	30.53	32.20
113 A-113	267.00	20288.00	1435.00	-5.00	-1.00	63.00	.10	.008	30.49	49.50
114 A-114	268.00	20388.00	945.00	-5.00	-1.00	88.00	.00	.008	29.99	44.80
115 A-115	269.00	20488.00	1011.00	-5.00	-4.50	62.00	.00	.008	29.97	35.00
116 A-116	270.00	20588.00	1025.00	-5.00	-2.00	69.00	.00	3.75	30.05	.008
117 A-117	273.00	20888.00	1337.00	-5.00	12.10	60.00	.00	.00	29.95	38.80
118 A-118	274.00	20988.00	1040.00	-5.00	12.10	76.00	.00	.00	29.98	37.80
119 A-119	275.00	21088.00	1502.00	-5.00	4.50	70.00	.00	.00	29.96	33.70
120 A-120	276.00	21188.00	1035.00	-5.00	10.20	74.00	.00	.00	29.97	43.90
121 A-121	277.00	21288.00	940.00	-5.00	12.10	82.00	.00	.00	29.94	39.10
122 A-122	281.00	21688.00	1515.00	.00	11.00	55.00	.00	2.50	29.95	50.10
123 A-123	282.00	21788.00	.008	.008	.008	73.00	.008	.008	.008	.008
124 A-124	284.00	21988.00	1500.00	.00	11.00	56.00	.00	1.50	30.00	35.00
125 A-125	287.00	22288.00	1005.00	.00	21.20	77.00	.00	.00	29.64	.008
126 A-126	288.00	22388.00	955.00	.00	17.80	66.00	.00	.00	29.80	36.70
127 A-127	289.00	22488.00	1125.00	.00	16.70	53.00	.00	.00	29.80	26.20
128 A-128	294.00	22988.00	935.00	.00	19.00	72.00	.00	.00	29.80	38.50
129 A-129	295.00	30188.00	1032.00	.00	18.80	80.00	.05	.00	29.77	37.50
130 A-130	302.00	30888.00	1015.00	.00	11.00	42.00	.00	.00	29.76	33.30
131 A-131	303.00	30988.00	1150.00	.008	16.40	19.00	.00	.00	29.87	35.30
132 A-132	304.00	31088.00	1105.00	.008	11.50	87.00	.00	1.00	29.95	35.90
133 A-133	305.00	31188.00	1430.00	.008	12.50	67.00	.00	3.00	29.88	16.90
134 A-134	308.00	31488.00	1015.00	.008	14.20	45.00	.00	.00	29.88	12.30
135 A-135	309.00	31588.00	1215.00	.008	19.00	26.00	.00	.00	29.73	13.30
136 A-136	316.00	32288.00	1044.00	.008	20.00	.008	.00	.00	29.80	.008
137 A-137	317.00	32388.00	1510.00	6.50	21.30	.008	.00	.00	29.72	39.30
138 A-138	318.00	32488.00	1035.00	5.50	17.80	.008	.00	.00	29.83	32.80
139 A-139	329.00	40488.00	1205.00	8.00	22.00	16.00	.00	.00	29.82	69.70
140 A-140	330.00	40588.00	840.00	7.50	19.00	73.00	.00	.00	29.98	.008
141 A-141	332.00	40788.00	1310.00	10.50	29.30	12.00	.00	.00	29.80	41.50
142 A-142	344.00	41988.00	1425.00	9.00	18.60	46.00	.00	.00	29.83	50.50
143 A-143	345.00	42088.00	1230.00	9.00	22.00	37.00	.00	.00	29.82	40.70
144 A-144	351.00	42688.00	1030.00	7.40	21.70	50.00	.00	.00	29.91	41.80
145 A-145	361.00	50688.00	905.00	9.50	.00	88.00	.00	.00	29.74	44.30
146 A-146	367.00	51288.00	1230.00	14.30	28.20	13.00	.00	.00	29.85	27.90
147 A-147	380.00	52588.00	1305.00	18.50	34.00	13.00	.00	.00	29.83	35.10
148 A-148	387.00	60188.00	755.00	13.10	22.70	40.00	.00	.00	29.84	31.70
149 A-149	388.00	60288.00	810.00	13.20	19.60	73.00	.00	.00	29.84	.008
150 A-150	389.00	60388.00	700.00	15.60	22.30	62.00	1.00	.00	29.86	29.60

Data for Site A

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
151 A-151	392.00	60688.00	755.00	18.20	20.30	27.00	.00	.00	29.83	29.30
152 A-152	393.00	60788.00	645.00	17.60	15.20	24.00	.00	.00	29.94	38.00
153 A-153	417.00	70188.00	900.00	23.90	29.50	12.00	.00	.00	29.85	24.70
154 A-154	421.00	70588.00	1010.00	24.20	29.50	.00B	.00	.00	30.42	12.30
155 A-155	423.00	70788.00	835.00	24.00	26.00	.00B	.00	.00	30.47	12.10
156 A-156	428.00	71288.00	1050.00	25.50	32.00	14.00	.00	.00	30.44	32.50
157 A-157	429.00	71388.00	1108.00	25.50	34.00	8.00	.00	.00	30.44	32.60
158 A-158	431.00	71588.00	700.00	26.00	24.20	16.00	.00	.00	30.21	18.20
159 A-159	435.00	71988.00	845.00	26.40	28.50	14.00	.00	.00	29.81	11.50
160 A-160	455.00	80888.00	933.00	22.20	29.20	37.00	.00	.00	29.81	10.00
161 A-161	459.00	81288.00	827.00	22.30	22.80	55.00	.00	.00	29.80	18.00
162 A-162	464.00	81788.00	840.00	25.00	24.20	21.00	.00	.00	29.00	23.70
163 A-163	466.00	81988.00	725.00	27.00	24.80	37.00	.00	.00	29.88	21.50
164 A-164	477.00	83088.00	846.00	27.00	26.80	37.00	.00	.00	29.95	20.00

Data for Site A

ROW ID	O2(%)	N2(%)	He(ppb)
1 A-1	.00B	.00B	.00B
2 A-2	16.50	63.00	.00B
3 A-3	16.90	63.30	.00B
4 A-4	16.10	62.70	.00B
5 A-5	16.30	61.50	2424.00
6 A-6	16.10	62.10	1764.00
7 A-7	15.50	59.80	2364.00
8 A-8	15.50	59.30	2424.00
9 A-9	16.10	60.10	2784.00
10 A-10	16.30	61.10	1044.00
11 A-11	16.50	62.00	1704.00
12 A-12	16.10	60.70	1584.00
13 A-13	16.90	62.90	2244.00
14 A-14	16.50	62.00	2364.00
15 A-15	.00B	.00B	2784.00
16 A-16	8.50	52.80	1854.00
17 A-17	10.30	56.40	1614.00
18 A-18	12.90	61.30	1224.00
19 A-19	13.70	63.20	504.00
20 A-20	13.70	63.40	.00B
21 A-21	15.30	66.60	1044.00
22 A-22	14.50	66.10	1224.00
23 A-23	.00B	.00B	1224.00
24 A-24	17.90	67.30	924.00
25 A-25	.00B	.00B	2964.00
26 A-26	.00B	.00B	2064.00
27 A-27	15.50	60.10	.00B
28 A-28	.00B	.00B	2724.00
29 A-29	18.30	68.70	984.00
30 A-30	17.50	66.10	804.00
31 A-31	17.70	67.60	1164.00
32 A-32	17.70	66.90	864.00
33 A-33	16.10	61.70	2064.00
34 A-34	17.50	66.50	1044.00
35 A-35	17.50	66.30	624.00
36 A-36	17.10	65.30	1284.00
37 A-37	17.70	67.40	1644.00
38 A-38	16.30	64.20	1344.00
39 A-39	16.10	63.70	1344.00
40 A-40	14.90	61.40	1764.00
41 A-41	15.00	61.40	1284.00
42 A-42	14.70	60.90	2304.00
43 A-43	14.90	61.20	1164.00
44 A-44	15.90	63.40	1704.00
45 A-45	17.00	66.20	1284.00
46 A-46	17.80	68.40	864.00
47 A-47	17.70	68.00	984.00
48 A-48	15.20	61.60	2844.00
49 A-49	16.00	62.80	2244.00
50 A-50	15.50	65.80	2136.00

Data for Site A

ROW ID	O2(%)	N2(%)	He(ppb)
51 A-51	18.90	71.50	1036.00
52 A-52	9.80	61.70	1828.00
53 A-53	9.10	61.20	1652.00
54 A-54	12.10	58.30	2960.00
55 A-55	14.30	62.90	3036.00
56 A-56	13.70	62.20	2352.00
57 A-57	14.40	60.60	2656.00
58 A-58	14.50	62.00	2504.00
59 A-59	8.10	48.80	4176.00
60 A-60	14.80	63.80	1440.00
61 A-61	10.10	64.60	1516.00
62 A-62	12.00	57.00	3112.00
63 A-63	13.00	59.30	2724.00
64 A-64	14.40	62.00	984.00
65 A-65	13.10	57.50	1524.00
66 A-66	13.70	60.90	1884.00
67 A-67	15.30	65.30	1284.00
68 A-68	14.30	62.80	1644.00
69 A-69	16.00	66.50	1404.00
70 A-70	16.00	66.70	1224.00
71 A-71	16.30	68.10	924.00
72 A-72	16.70	68.70	1944.00
73 A-73	17.00	68.40	1764.00
74 A-74	16.80	67.60	1164.00
75 A-75	18.40	73.00	804.00
76 A-76	18.30	68.90	.00B
77 A-77	21.90	76.40	257.00
78 A-78	19.40	54.10	804.00
79 A-79	14.00	60.80	944.00
80 A-80	16.00	.00B	1014.00
81 A-81	16.70	.00B	257.00
82 A-82	15.80	.00B	1368.00
83 A-83	15.10	.00B	1294.00
84 A-84	16.20	.00B	.00B
85 A-85	15.90	.00B	524.00
86 A-86	16.60	66.90	720.00
87 A-87	16.30	65.90	1656.00
88 A-88	16.10	65.00	1656.00
89 A-89	15.80	64.80	1800.00
90 A-90	13.20	59.50	3528.00
91 A-91	10.60	52.50	2304.00
92 A-92	12.30	56.40	5184.00
93 A-93	18.60	50.70	3384.00
94 A-94	12.80	58.70	3960.00
95 A-95	15.80	65.40	792.00
96 A-96	12.30	57.40	3528.00
97 A-97	10.30	52.40	2204.00
98 A-98	.00B	.00B	2064.00
99 A-99	16.40	66.50	1824.00
100 A-100	5.90	42.10	5904.00

Data for Site A

ROW ID	O2(%)	N2(%)	He(ppb)
101 A-101	10.90	54.70	4868.00
102 A-102	8.20	47.90	7076.00
103 A-103	9.50	50.90	3856.00
104 A-104	9.60	50.60	3948.00
105 A-105	6.10	42.90	5972.00
106 A-106	8.70	49.50	4776.00
107 A-107	8.10	47.20	6156.00
108 A-108	8.90	48.70	6248.00
109 A-109	4.60	38.10	9744.00
110 A-110	5.30	40.60	8004.00
111 A-111	8.60	48.50	5304.00
112 A-112	10.40	49.70	5304.00
113 A-113	4.40	32.60	.00B
114 A-114	6.00	37.50	10104.00
115 A-115	9.80	47.20	6204.00
116 A-116	.00B	.00B	8604.00
117 A-117	4.60	39.20	13704.00
118 A-118	5.60	42.10	11454.00
119 A-119	7.40	45.90	16704.00
120 A-120	2.60	34.80	14482.00
121 A-121	4.80	39.70	13676.00
122 A-122	.00	27.50	11312.00
123 A-123	.00B	.00B	.00B
124 A-124	6.90	44.10	5796.00
125 A-125	.00B	.00B	.00B
126 A-126	6.10	42.60	.00B
127 A-127	10.80	53.70	8128.00
128 A-128	5.30	40.50	7064.00
129 A-129	5.90	41.60	5696.00
130 A-130	10.00	47.90	6864.00
131 A-131	9.30	46.50	7248.00
132 A-132	9.00	44.90	7104.00
133 A-133	16.00	63.90	5904.00
134 A-134	17.10	67.00	4944.00
135 A-135	16.90	65.70	3144.00
136 A-136	.00B	78.30	.00B
137 A-137	7.70	42.20	8560.00
138 A-138	10.10	48.80	4528.00
139 A-139	.00	.00B	.00B
140 A-140	.00B	.00B	.00B
141 A-141	7.10	38.90	10044.00
142 A-142	2.90	29.10	10044.00
143 A-143	7.80	39.50	12276.00
144 A-144	7.60	37.80	7596.00
145 A-145	6.40	35.80	10872.00
146 A-146	12.00	52.30	8104.00
147 A-147	9.60	44.90	5754.00
148 A-148	10.60	48.60	5284.00
149 A-149	.00B	.00B	5566.00
150 A-150	11.60	51.80	9044.00

Data for Site A

ROW ID	O2(%)	N2(%)	He(ppb)
151 A-151	12.10	51.70	5754.00
152 A-152	8.60	43.40	5284.00
153 A-153	12.80	53.50	2016.00
154 A-154	17.60	66.80	1188.00
155 A-155	17.70	67.00	544.00
156 A-156	10.40	50.00	.008
157 A-157	10.00	48.10	4944.00
158 A-158	15.60	61.30	1836.00
159 A-159	17.80	68.30	908.00
160 A-160	17.10	64.70	1024.00
161 A-161	14.10	56.70	2996.00
162 A-162	15.80	61.40	3456.00
163 A-163	16.30	63.70	2664.00
164 A-164	17.10	65.40	2136.00

Table 3. Data for Site B

ROW ID	Day	Date	Time	Soil(C)	Air(C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
1 B-1	1.00	51287.00	1445.00	22.00	26.00	20.50	.00	.00	28.76	.33
2 B-2	2.00	51387.00	840.00	18.00	26.00	31.00	.00	.00	28.82	.29
3 B-3	3.00	51487.00	850.00	19.00	26.00	23.00	.00	.00	28.85	.31
4 B-4	4.00	51587.00	750.00	19.50	16.50	34.00	.00	.00	28.84	.33
5 B-5	9.00	52087.00	1145.00	16.00	17.50	30.00	.30	.00	28.65	.00B
6 B-6	10.00	52187.00	1255.00	14.50	20.00	29.00	.00	.00	28.78	.37
7 B-7	11.00	52287.00	1315.00	16.50	24.00	23.00	.00	.00	28.78	.21
8 B-8	16.00	52787.00	1350.00	15.00	21.00	26.00	.00	.00	28.68	.29
9 B-9	18.00	52987.00	950.00	13.50	30.00	24.00	.05	.00	28.76	.27
10 B-10	21.00	60187.00	1315.00	19.10	26.80	12.00	.00	.00	28.85	.33
11 B-11	22.00	60287.00	835.00	19.10	20.20	15.20	.00	.00	28.84	.29
12 B-12	23.00	60387.00	1308.00	20.90	31.90	7.30	.00	.00	28.83	.00B
13 B-13	24.00	60487.00	1425.00	22.40	35.70	.50	.00	.00	28.83	.00B
14 B-14	25.00	60587.00	1420.00	24.20	32.80	6.00	.00	.00	28.80	.00B
15 B-15	28.00	60887.00	1645.00	23.00	27.00	12.50	.30	.00	28.75	.43
16 B-16	29.00	60987.00	1025.00	18.70	35.00	14.50	.00	.00	28.76	.27
17 B-17	30.00	61087.00	1020.00	18.90	30.80	18.10	.00	.00	28.77	.39
18 B-18	31.00	61187.00	1512.00	24.60	31.90	7.00	.00	.00	28.77	.00B
19 B-19	32.00	61287.00	1402.00	23.90	36.00	8.00	.00	.00	28.88	.39
20 B-20	35.00	61587.00	740.00	24.10	25.20	17.70	.00	.00	28.75	.00B
21 B-21	36.00	61687.00	740.00	22.90	22.90	10.30	.00	.00	28.75	.47
22 B-22	37.00	61787.00	727.00	23.20	23.30	9.30	.00	.00	28.76	.29
23 B-23	38.00	61887.00	755.00	22.30	23.30	6.80	.00	.00	28.76	.00B
24 B-24	42.00	62287.00	740.00	24.80	14.00	14.80	.00	.00	28.76	.35
25 B-25	43.00	62387.00	740.00	24.00	22.00	12.00	.00	.00	28.76	.00B
26 B-26	44.00	62487.00	737.00	25.10	21.80	10.80	.00	.00	28.79	.00B
27 B-27	45.00	62587.00	730.00	26.00	21.00	12.80	.00	.00	28.78	.39
28 B-28	46.00	62687.00	800.00	26.40	25.80	10.90	.00	.00	28.79	.03
29 B-29	49.00	62987.00	817.00	22.40	25.00	20.80	.00	.00	28.80	.41
30 B-30	50.00	63087.00	1400.00	25.00	35.00	10.20	.00	.00	28.75	.27
31 B-31	51.00	70187.00	1420.00	26.30	36.00	4.80	.00	.00	28.76	.31
32 B-32	52.00	70287.00	815.00	25.20	25.50	5.20	.00	.00	28.78	.31
33 B-33	56.00	70687.00	745.00	26.20	29.00	2.00	.00	.00	28.75	.31
34 B-34	58.00	70887.00	750.00	27.50	27.30	6.80	.00	.00	28.72	.39
35 B-35	59.00	.00B	.00B	.00B	.00B	.00B	.00B	.00	.00B	.35
36 B-36	60.00	71087.00	735.00	26.70	22.50	10.00	.00	.00	28.71	.37
37 B-37	63.00	71387.00	1050.00	22.30	34.80	9.90	.52	.00	28.85	.31
38 B-38	64.00	71487.00	1500.00	27.40	33.20	9.30	.00	.00	28.50	.27
39 B-39	65.00	71587.00	1430.00	28.00	25.40	14.00	.00	.00	28.60	.23
40 B-40	66.00	71687.00	945.00	24.90	27.80	17.00	.00	.00	28.69	.27
41 B-41	67.00	71787.00	1325.00	22.60	26.20	24.20	.08	.00	28.61	.32
42 B-42	71.00	72187.00	1255.00	19.70	27.20	35.20	.70	.00	28.71	.30
43 B-43	72.00	72287.00	721.00	18.40	21.00	32.20	.00	.00	28.56	.31
44 B-44	73.00	72387.00	753.00	20.30	22.10	22.00	.00	.00	28.78	.00B
45 B-45	74.00	72487.00	755.00	22.00	24.50	14.50	.00	.00	28.77	.35
46 B-46	77.00	72787.00	730.00	22.70	24.70	31.90	.00	.00	28.78	.32
47 B-47	78.00	72887.00	755.00	22.90	24.10	34.70	.00	.00	28.79	.53
48 B-48	79.00	72987.00	1305.00	21.80	26.00	39.20	.00	.00	28.78	.35
49 B-49	80.00	73087.00	824.00	23.60	28.70	26.20	.00	.00	28.74	.43
50 B-50	81.00	73187.00	900.00	23.60	28.20	29.00	.00	.00	28.73	.00B

Data for Site B

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
51 B-51	84.00	80387.00	810.00	25.40	26.20	29.80	.00	.00	28.74	.22
52 B-52	86.00	80587.00	735.00	27.10	24.90	23.90	.00	.00	28.74	.34
53 B-53	87.00	80687.00	810.00	26.00	25.40	32.10	.00	.00	28.73	.32
54 B-54	88.00	80787.00	800.00	20.30	22.50	48.90	1.47	.00	28.73	.40
55 B-55	91.00	81087.00	810.00	20.40	24.80	34.80	.40	.00	28.79	.29
56 B-56	92.00	81187.00	755.00	21.50	25.00	27.90	.00	.00	28.87	.38
57 B-57	93.00	81287.00	810.00	19.90	24.00	38.50	.05	.00	28.82	.35
58 B-58	94.00	81387.00	740.00	20.30	22.80	34.50	.00	.00	.00B	.31
59 B-59	95.00	81487.00	720.00	20.60	21.50	28.20	.00	.00	.00B	.52
60 B-60	98.00	81787.00	755.00	21.10	24.40	12.70	.00	.00	.00B	.46
61 B-61	99.00	81887.00	820.00	21.60	25.10	16.20	.00	.00	.00B	.40
62 B-62	100.00	81987.00	745.00	23.20	26.00	13.80	.00	.00	.00B	.34
63 B-63	101.00	82087.00	735.00	23.70	22.50	19.00	.00	.00	.00B	.42
64 B-64	102.00	82187.00	1005.00	20.00	31.00	29.20	.10	.00	.00B	.59
65 B-65	105.00	82487.00	830.00	21.50	21.00	50.40	.00	.00	.00B	.35
66 B-66	106.00	82587.00	750.00	20.40	19.70	43.90	.00	.00	.00B	.44
67 B-67	108.00	82787.00	830.00	19.90	22.00	27.00	.00	.00	.00B	.61
68 B-68	109.00	82887.00	900.00	20.60	26.20	24.90	.00	.00	.00B	.36
69 B-69	112.00	83187.00	726.00	22.40	23.00	17.20	.00	.00	.00B	.32
70 B-70	113.00	90187.00	805.00	22.40	23.00	18.00	.00	.00	.00B	.46
71 B-71	114.00	90287.00	730.00	23.20	23.80	18.30	.00	.00	.00B	.29
72 B-72	115.00	90387.00	746.00	23.40	23.80	21.90	.00	.00	.00B	.54
73 B-73	116.00	90487.00	948.00	20.60	26.80	28.90	.00	.00	.00B	.36
74 B-74	120.00	90887.00	740.00	20.00	22.00	26.00	.00	.00	.00B	.26
75 B-75	121.00	90987.00	745.00	20.90	22.80	20.00	.00	.00	.00B	.30
76 B-76	122.00	91087.00	850.00	20.50	25.30	13.20	.00	.00	.00B	.26
77 B-77	127.00	91587.00	740.00	17.00	19.80	24.20	.11	.00	.00B	.26
78 B-78	128.00	91687.00	733.00	18.60	19.80	23.00	.00	.00	.00B	.29
79 B-79	129.00	91787.00	740.00	18.10	17.80	23.80	.00	.00	.00B	.27
80 B-80	130.00	91887.00	745.00	17.70	16.10	20.50	.00	.00	30.05	.27
81 B-81	133.00	92187.00	820.00	19.20	18.10	12.80	.00	.00	30.00	.24
82 B-82	140.00	92887.00	1400.00	17.80	29.10	8.80	.00	.00	29.30	.28
83 B-83	141.00	92987.00	1035.00	15.80	26.00	10.00	.00	.00	29.80	.39
84 B-84	142.00	93087.00	910.00	16.30	25.50	8.80	.00	.00	30.00	.25
85 B-85	143.00	100187.00	800.00	17.20	18.00	10.80	.00	.00	30.03	.27
86 B-86	147.00	100587.00	1205.00	17.70	32.10	6.80	.00	.00	30.02	.00B
87 B-87	148.00	100687.00	740.00	17.30	13.10	16.00	.00	.00	29.98	.35
88 B-88	155.00	101387.00	750.00	17.80	14.80	29.00	.26	.00	29.45	.28
89 B-89	156.00	101487.00	810.00	11.60	15.00	43.00	.79	.00	29.48	.28
90 B-90	158.00	101687.00	800.00	8.70	15.00	33.50	.00	.00	30.52	.24
91 B-91	162.00	102087.00	740.00	9.10	17.00	22.20	.00	.00	30.03	.00B
92 B-92	163.00	102187.00	733.00	10.00	17.90	19.50	.00	.00	29.90	.26
93 B-93	164.00	102287.00	830.00	11.40	21.70	18.00	.00	.00	29.96	.26
94 B-94	165.00	102387.00	713.00	11.60	13.00	41.80	.17	.00	29.90	.26
95 B-95	169.00	102787.00	940.00	8.40	19.20	31.50	.00	.00	29.58	.24
96 B-96	170.00	102887.00	920.00	11.00	20.40	31.00	.00	.00	29.94	.25
97 B-97	171.00	102987.00	858.00	10.30	15.20	52.80	.10	.00	29.95	.26
98 B-98	172.00	103087.00	910.00	8.00	17.00	44.00	.12	.00	29.92	.25
99 B-99	175.00	110287.00	930.00	6.80	16.00	41.00	.70	.00	29.90	.25
100 B-100	190.00	111787.00	1155.00	2.00	4.00	48.00	1.40	.00	29.92	.25

Data for Site B

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
101 B-101	192.00	111987.00	1145.00	.90	.00B	.00B	.00	.00	29.98	.38
102 B-102	193.00	112087.00	1519.00	1.30	16.20	21.00	.00	.00	29.98	.40
103 B-103	196.00	112387.00	1026.00	1.00	16.20	25.00	.00	.00	29.85	.26
104 B-104	197.00	112487.00	1031.00	.60	13.80	23.50	.00	.00	29.97	.26
105 B-105	198.00	112587.00	954.00	.90	9.20	35.00	.00	.00	29.89	.30
106 B-106	199.00	113087.00	1020.00	.40	3.00	16.80	.10	.00	29.95	.44
107 B-107	200.00	120187.00	1040.00	.00	5.00	16.80	.00	.00	29.91	.21
108 B-108	206.00	120387.00	1048.00	.40	8.00	18.50	.00	.00	29.97	.23
109 B-109	207.00	120487.00	1103.00	1.30	13.20	25.20	.00	.00	29.93	.26
110 B-110	210.00	120787.00	950.00	1.30	7.00	26.00	.10	.00	29.83	.30
111 B-111	213.00	121087.00	1035.00	1.40	10.00	19.50	.00	.00	29.95	.22
112 B-112	214.00	121187.00	1100.00	2.00	.00	23.00	.00	.00	30.49	.29
113 B-113	267.00	20288.00	1415.00	-2.00	3.00	18.00	.10	.00B	30.42	.34
114 B-114	268.00	20388.00	932.00	-1.00	11.00	84.00	.00	.00B	29.94	.52
115 B-115	269.00	20488.00	925.00	-2.00	.00	72.00	.00	.00B	29.95	.19
116 B-116	270.00	20588.00	1005.00	-2.00	-3.00	69.00	.00	7.00	29.97	.26
117 B-117	273.00	20888.00	1326.00	-2.00	8.00	60.00	.00	6.50	29.95	.24
118 B-118	274.00	20988.00	1012.00	-2.00	10.50	78.00	.00	1.00	29.87	.34
119 B-119	275.00	21088.00	1420.00	-2.00	3.00	72.00	.00	.00	29.86	.26
120 B-120	276.00	21188.00	1000.00	-2.00	12.20	78.00	.00	.00	29.95	.30
121 B-121	277.00	21288.00	905.00	-2.00	14.20	88.00	.00	.00	29.92	.32
122 B-122	281.00	21688.00	1536.00	-1.00	10.20	55.00	.00	2.00	29.98	.27
123 B-123	282.00	21788.00	1040.00	.00	9.80	73.00	.00	1.75	30.04	.31
124 B-124	284.00	21988.00	1425.00	.00	9.00	60.00	.00	1.75	29.98	.24
125 B-125	287.00	22288.00	1035.00	.00	20.90	73.00	.00	.00	29.31	.00B
126 B-126	288.00	22388.00	1018.00	.00	14.00	63.00	.00	.00	29.80	.33
127 B-127	289.00	22488.00	1320.00	.60	17.90	27.00	.00	.00	29.79	.34
128 B-128	294.00	22988.00	1014.00	3.70	22.00	62.00	.07	.00	29.80	.33
129 B-129	295.00	30188.00	1110.00	3.20	19.60	72.00	.05	.00	29.76	.37
130 B-130	302.00	30888.00	945.00	1.30	10.50	49.00	.00	.00	29.76	.31
131 B-131	303.00	30988.00	1115.00	2.50	14.70	21.00	.00	.00	29.88	.37
132 B-132	304.00	31088.00	1015.00	2.50	5.00	81.00	.00	1.00	29.87	.34
133 B-133	305.00	31188.00	1355.00	.80	6.00	70.00	.00	3.00	29.86	.27
134 B-134	308.00	31488.00	940.00	.30	14.80	52.00	.00	.00	29.87	.29
135 B-135	309.00	31588.00	1200.00	1.00	18.50	26.00	.00	.00	29.70	.27
136 B-136	316.00	32288.00	1017.00	2.70	19.50	.00B	.00	.00	29.80	.29
137 B-137	317.00	32388.00	1445.00	5.50	23.40	.00B	.00	.00	29.71	.28
138 B-138	318.00	32488.00	1020.00	2.90	15.20	.00B	.00	.00	29.82	.46
139 B-139	329.00	40488.00	1445.00	8.00	22.00	16.00	.00	.00	29.80	.31
140 B-140	330.00	40588.00	918.00	5.00	21.00	55.00	.00	.00	29.90	.32
141 B-141	332.00	40788.00	1250.00	9.50	30.50	9.00	.00	.00	29.79	.34
142 B-142	344.00	41988.00	1400.00	8.50	19.70	47.00	.00	.00	29.81	.35
143 B-143	345.00	42088.00	1255.00	8.00	22.80	36.00	.00	.00	29.81	.40
144 B-144	351.00	42688.00	940.00	5.50	21.00	47.00	.00	.00	29.90	.36
145 B-145	361.00	50688.00	905.00	9.50	11.00	88.00	.00	.00	29.74	.43
146 B-146	367.00	51288.00	1220.00	14.00	27.20	14.00	.00	.00	29.82	.40
147 B-147	380.00	52588.00	1255.00	18.50	32.00	13.00	.00	.00	29.82	.37
148 B-148	387.00	60188.00	730.00	14.20	21.20	47.00	.00	.00	29.83	.44
149 B-149	388.00	60288.00	920.00	13.40	26.00	42.00	.00	.00	29.84	.54
150 B-150	389.00	60388.00	745.00	16.40	25.50	53.00	1.00	.00	29.88	.40

Data for Site B

ROW ID	Day	Date	Time	Soil(C)	Air(C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
151 B-151	392.00	60688.00	940.00	18.10	27.30	15.00	.00	.00	29.83	.45
152 B-152	393.00	60788.00	740.00	17.60	19.50	21.00	.00	.00	29.87	.40
153 B-153	417.00	70188.00	820.00	24.70	29.80	13.00	.00	.00	29.85	.42
154 B-154	421.00	70588.00	925.00	24.50	31.20	.00B	.00	.00	30.40	.40
155 B-155	423.00	70788.00	750.00	24.80	27.50	.00B	.00	.00	30.46	.33
156 B-156	428.00	71288.00	1124.00	26.20	37.00	14.00	.00	.00	30.40	.44
157 B-157	429.00	71388.00	1030.00	26.00	39.00	9.00	.00	.00	30.36	.35
158 B-158	431.00	71588.00	755.00	27.10	29.00	12.00	.00	.00	30.24	.32
159 B-159	435.00	71988.00	805.00	27.70	28.20	15.00	.00	.00	29.84	.29
160 B-160	455.00	80888.00	843.00	18.40	26.80	45.00	.00	.00	29.76	.35
161 B-161	459.00	81288.00	744.00	18.00	21.80	61.00	.00	.00	29.75	.38
162 B-162	464.00	81788.00	815.00	22.50	22.00	22.00	.00	.00	29.98	.45
163 B-163	466.00	81988.00	810.00	25.20	24.90	34.00	.00	.00	29.88	.37
164 B-164	477.00	83088.00	805.00	22.70	25.50	43.00	.00	.00	29.85	.35

Data for Site B

ROW ID	O2(%)	N2(%)	He(ppb)
1 B-1	19.90	76.10	.008
2 B-2	19.90	74.60	.008
3 B-3	20.10	75.00	.008
4 B-4	20.10	75.40	.008
5 B-5	20.10	75.00	-996.00
6 B-6	20.10	75.20	-936.00
7 B-7	20.70	77.90	-996.00
8 B-8	20.10	75.90	-816.00
9 B-9	20.90	78.90	-996.00
10 B-10	20.30	77.00	-906.00
11 B-11	20.30	76.90	-966.00
12 B-12	20.10	76.30	-846.00
13 B-13	20.30	75.80	-876.00
14 B-14	19.70	73.80	-876.00
15 B-15	20.70	81.40	-996.00
16 B-16	21.10	81.30	-996.00
17 B-17	20.70	80.30	-816.00
18 B-18	20.10	78.30	-456.00
19 B-19	20.50	78.70	-936.00
20 B-20	.008	.008	-876.00
21 B-21	21.10	81.90	-816.00
22 B-22	21.30	82.20	-756.00
23 B-23	.008	.008	-816.00
24 B-24	20.90	79.00	-876.00
25 B-25	.008	.008	-816.00
26 B-26	.008	.008	-936.00
27 B-27	20.90	79.40	.008
28 B-28	21.30	78.90	.008
29 B-29	20.90	78.50	-696.00
30 B-30	20.90	78.80	-816.00
31 B-31	20.90	78.70	-816.00
32 B-32	20.90	78.80	-816.00
33 B-33	21.10	79.70	-876.00
34 B-34	20.90	78.90	-876.00
35 B-35	20.90	79.00	-756.00
36 B-36	20.70	78.20	-876.00
37 B-37	20.00	73.80	-936.00
38 B-38	20.30	74.70	-816.00
39 B-39	20.50	74.80	-756.00
40 B-40	20.40	74.90	-756.00
41 B-41	20.10	74.20	-876.00
42 B-42	20.10	74.20	-696.00
43 B-43	20.20	75.00	-756.00
44 B-44	.008	.008	-696.00
45 B-45	20.40	76.50	-576.00
46 B-46	19.90	75.40	-696.00
47 B-47	20.00	76.00	-816.00
48 B-48	20.50	77.10	-936.00
49 B-49	20.70	78.30	-696.00
50 B-50	23.50	80.40	-944.00

Data for Site B

ROW ID	O2(%)	N2(%)	He(ppb)
51 B-51	22.30	78.60	-816.00
52 B-52	19.50	77.60	-680.00
53 B-53	19.30	77.30	-768.00
54 B-54	20.10	77.10	-840.00
55 B-55	19.30	.00B	-840.00
56 B-56	20.20	75.40	-764.00
57 B-57	20.70	78.30	-764.00
58 B-58	20.30	75.60	-764.00
59 B-59	20.60	79.00	-769.00
60 B-60	20.70	78.80	-893.00
61 B-61	20.40	77.50	-769.00
62 B-62	21.30	80.50	-769.00
63 B-63	21.00	79.20	-912.00
64 B-64	20.60	78.60	-816.00
65 B-65	20.80	79.10	-816.00
66 B-66	20.90	79.70	-752.00
67 B-67	19.30	74.30	-784.00
68 B-68	20.60	78.00	-848.00
69 B-69	20.20	75.10	-784.00
70 B-70	20.70	79.60	-560.00
71 B-71	20.90	79.40	-624.00
72 B-72	20.80	80.00	-464.00
73 B-73	21.40	81.30	-464.00
74 B-74	21.20	79.50	-624.00
75 B-75	24.80	83.10	-509.00
76 B-76	24.70	83.20	-1106.00
77 B-77	24.70	82.70	-498.00
78 B-78	21.10	77.30	-688.00
79 B-79	20.50	75.10	-1258.00
80 B-80	20.70	.00B	-840.00
81 B-81	20.90	.00B	-680.00
82 B-82	21.10	.00B	-878.00
83 B-83	20.80	.00B	-878.00
84 B-84	22.50	78.60	-840.00
85 B-85	20.20	75.70	-720.00
86 B-86	20.00	75.60	-576.00
87 B-87	20.60	77.10	-576.00
88 B-88	20.80	77.30	-624.00
89 B-89	20.70	77.60	-624.00
90 B-90	20.90	78.30	-816.00
91 B-91	.00B	.00B	-624.00
92 B-92	20.80	78.00	-384.00
93 B-93	20.70	78.40	-960.00
94 B-94	20.90	78.80	.00B
95 B-95	20.70	77.80	-576.00
96 B-96	20.80	78.90	-816.00
97 B-97	20.60	77.70	-667.00
98 B-98	21.00	79.10	-741.00
99 B-99	20.90	78.00	-445.00
100 B-100	20.80	77.10	-636.00

Data for Site B

ROW ID	O2(%)	N2(%)	He(ppb)
101 B-101	20.70	77.40	-446.00
102 B-102	20.70	77.50	-246.00
103 B-103	20.90	77.50	-96.00
104 B-104	21.00	77.60	-496.00
105 B-105	21.20	77.50	-296.00
106 B-106	20.90	77.40	-296.00
107 B-107	21.40	77.80	54.00
108 B-108	20.80	77.30	-422.00
109 B-109	20.70	77.50	-330.00
110 B-110	20.50	76.90	-336.00
111 B-111	20.90	77.40	-376.00
112 B-112	20.50	76.60	-346.00
113 B-113	20.70	76.60	-396.00
114 B-114	20.30	76.30	-396.00
115 B-115	21.20	77.00	-296.00
116 B-116	21.50	78.90	-196.00
117 B-117	21.20	77.90	4.00
118 B-118	21.40	78.60	-146.00
119 B-119	21.30	77.90	104.00
120 B-120	21.10	77.80	-308.00
121 B-121	21.30	78.80	-308.00
122 B-122	21.30	78.80	-232.00
123 B-123	21.10	77.40	-156.00
124 B-124	21.30	77.60	-156.00
125 B-125	.00B	.00B	.00B
126 B-126	20.90	76.40	-156.00
127 B-127	21.00	77.40	-80.00
128 B-128	21.20	77.30	-4.00
129 B-129	20.90	77.20	-460.00
130 B-130	21.30	78.40	-192.00
131 B-131	21.40	78.60	144.00
132 B-132	21.40	78.50	-96.00
133 B-133	21.50	78.50	144.00
134 B-134	21.00	76.80	288.00
135 B-135	20.90	76.20	504.00
136 B-136	20.70	77.50	84.00
137 B-137	21.00	77.20	-512.00
138 B-138	21.00	78.10	-512.00
139 B-139	21.60	78.70	.00B
140 B-140	20.80	76.80	-288.00
141 B-141	21.00	76.10	48.00
142 B-142	20.60	76.10	-514.00
143 B-143	17.20	66.80	-208.00
144 B-144	20.80	75.00	-242.00
145 B-145	20.90	77.40	-344.00
146 B-146	21.10	76.10	316.00
147 B-147	20.80	76.70	.00B
148 B-148	20.70	76.70	-152.00
149 B-149	21.00	77.60	104.00
150 B-150	20.90	78.40	-96.00

Data for Site B

ROW ID	O2(%)	N2(%)	He(ppb)
151 B-151	21.00	77.30	64.00
152 B-152	20.50	75.80	-422.00
153 B-153	21.20	76.90	-100.00
154 B-154	21.20	76.70	108.00
155 B-155	21.40	76.80	-100.00
156 B-156	21.00	78.40	-256.00
157 B-157	21.20	77.00	-438.00
158 B-158	21.50	78.00	.008
159 B-159	21.40	76.70	154.00
160 B-160	20.70	74.90	212.00
161 B-161	20.80	75.60	-20.00
162 B-162	22.50	80.40	-108.00
163 B-163	22.70	80.50	90.00
164 B-164	22.50	80.80	90.00

Table 4.

Data for Site C

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
1 C-1	190.00	111787.00	1143.00	2.00	4.00	48.00	1.40	.00	29.87	.29
2 C-2	192.00	111987.00	1300.00	.90	.00B	.00B	.00	.00	29.92	.33
3 C-3	193.00	112087.00	1508.00	1.00	17.50	19.20	.00	.00	29.93	.34
4 C-4	196.00	112387.00	904.00	2.00	17.80	18.80	.00	.00	29.85	.38
5 C-5	197.00	112487.00	921.00	1.50	11.50	19.80	.00	.00	29.95	.32
6 C-6	198.00	112587.00	906.00	1.30	18.10	17.00	.00	.00	29.81	.41
7 C-7	199.00	113087.00	1045.00	.50	3.00	17.20	.10	.00	29.95	.43
8 C-8	200.00	120187.00	1100.00	.50	5.00	16.80	.00	.00	29.91	.42
9 C-9	206.00	120387.00	1030.00	.50	8.00	18.50	.00	.00	29.97	.38
10 C-10	207.00	120487.00	1017.00	1.00	13.20	25.20	.00	.00	29.93	.38
11 C-11	210.00	120787.00	1000.00	2.00	7.00	25.20	.10	.00	29.83	.35
12 C-12	213.00	121087.00	1015.00	1.20	10.00	21.80	.00	.00	29.94	.45
13 C-13	214.00	121187.00	1008.00	2.20	.00	20.00	.00	.00	30.47	.49
14 C-14	267.00	20288.00	1350.00	2.00	-2.00	38.00	.10	.00	30.40	.58
15 C-15	268.00	20388.00	900.00	-2.00	-2.00	88.00	.00	.00	29.89	.47
16 C-16	269.00	20488.00	853.00	-2.00	-1.00	82.00	.00	.00	29.87	.56
17 C-17	270.00	20588.00	930.00	-2.00	.00	74.00	.00	4.00	29.91	.60
18 C-18	273.00	20888.00	1310.00	-2.00	14.50	58.00	.00	2.00	29.84	.49
19 C-19	274.00	20988.00	950.00	-2.00	8.50	74.00	.00	6.00	29.84	.50
20 C-20	275.00	21088.00	1340.00	-2.00	11.00	71.00	.00	.00	29.90	.42
21 C-21	276.00	21188.00	904.00	-2.00	9.20	86.00	.00	.00	29.94	.49
22 C-22	277.00	21288.00	845.00	-2.00	14.10	88.00	.00	.00	29.91	.47
23 C-23	281.00	21688.00	1442.00	-2.00	14.00	55.00	.00	3.00	29.85	.37
24 C-24	282.00	21788.00	1006.00	.00	9.00	75.00	.00	2.75	29.89	.42
25 C-25	284.00	21988.00	1350.00	.00	13.20	63.00	.00	3.00	29.98	.49
26 C-26	287.00	22288.00	1110.00	.00	20.80	69.00	.00	.00	29.64	.00B
27 C-27	288.00	22388.00	1043.00	.00	15.70	59.00	.00	.00	29.79	.45
28 C-28	289.00	22488.00	1145.00	.00	16.20	44.00	.00	.00	29.79	.52
29 C-29	294.00	22988.00	1036.00	4.10	20.30	79.00	.07	.00	29.79	.51
30 C-30	295.00	30188.00	1134.00	3.50	14.00	70.00	.05	.00	29.76	.48
31 C-31	302.00	30888.00	915.00	1.50	16.80	49.00	.00	.00	29.73	.46
32 C-32	303.00	30988.00	1045.00	2.00	18.30	24.00	.00	.00	29.80	.49
33 C-33	304.00	31088.00	945.00	2.50	14.00	85.00	.00	.75	29.77	.51
34 C-34	305.00	31188.00	1325.00	1.20	4.00	62.00	.00	3.00	29.79	.28
35 C-35	308.00	31488.00	920.00	.00	16.00	60.00	.00	.00	29.82	.28
36 C-36	309.00	31588.00	905.00	.50	9.80	34.00	.00	.00	29.68	.34
37 C-37	316.00	32288.00	955.00	2.50	23.80	.00B	.00	.00	29.70	.39
38 C-38	317.00	32388.00	1420.00	4.30	25.80	.00B	.00	.00	29.66	.56
39 C-39	318.00	32488.00	955.00	3.00	17.00	.00B	.00	.00	29.81	.40
40 C-40	329.00	40488.00	1507.00	7.00	28.40	16.00	.00	.00	29.75	.41
41 C-41	330.00	40588.00	937.00	5.50	22.00	50.00	.00	.00	28.90	.47
42 C-42	332.00	40788.00	1230.00	9.00	27.00	11.00	.00	.00	29.80	.53
43 C-43	344.00	41988.00	1325.00	7.50	22.00	49.00	.00	.00	29.76	.44
44 C-44	345.00	42088.00	1325.00	7.50	24.00	37.00	.00	.00	29.73	.51
45 C-45	392.00	60688.00	1010.00	16.40	26.60	34.00	.00	.00	29.83	.41
46 C-46	393.00	60788.00	710.00	16.00	17.30	22.00	.00	.00	29.87	.45
47 C-47	417.00	70188.00	800.00	21.50	24.20	13.00	.00	.00	29.74	.34
48 C-48	421.00	70588.00	900.00	22.00	27.00	.00B	.00	.00	30.36	.56
49 C-49	423.00	70788.00	730.00	22.20	24.50	.00B	.00	.00	30.41	.44
50 C-50	428.00	71288.00	1140.00	23.00	41.00	13.00	.00	.00	30.34	.70

Data for Site C

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
51 C-51	429.00	71388.00	1000.00	23.00	30.00	10.00	.00	.00	30.38	.66
52 C-52	431.00	71588.00	913.00	23.90	28.50	12.00	.00	.00	30.24	.48
53 C-53	435.00	71988.00	748.00	24.00	23.40	14.00	.00	.00	29.71	.37
54 C-54	455.00	80888.00	826.00	17.00	22.80	49.00	.00	.00	29.78	.008
55 C-55	459.00	81288.00	720.00	16.50	18.90	71.00	.00	.00	29.80	.42
56 C-56	464.00	81788.00	910.00	20.50	24.70	20.00	.00	.00	29.81	.44
57 C-57	466.00	81988.00	835.00	23.40	26.90	31.00	.00	.00	29.80	.50
58 C-58	477.00	83088.00	745.00	21.60	23.80	48.00	.00	.00	29.82	.41

Data for Site C

ROW ID	O2(%)	N2(%)	He(ppb)
1 C-1	20.70	76.40	-336.00
2 C-2	20.60	76.40	-416.00
3 C-3	20.70	76.50	-240.00
4 C-4	20.90	77.40	-548.00
5 C-5	21.00	77.90	-196.00
6 C-6	20.80	76.90	-596.00
7 C-7	20.90	77.20	-596.00
8 C-8	21.00	77.00	-296.00
9 C-9	20.60	77.80	-284.00
10 C-10	20.60	78.10	-284.00
11 C-11	20.60	77.10	-256.00
12 C-12	20.70	77.40	-256.00
13 C-13	20.40	77.20	-176.00
14 C-14	20.40	76.50	-346.00
15 C-15	20.70	76.90	-196.00
16 C-16	20.50	76.60	4.00
17 C-17	20.80	77.90	104.00
18 C-18	21.00	77.50	154.00
19 C-19	21.10	77.80	254.00
20 C-20	21.00	77.90	-46.00
21 C-21	21.30	79.00	224.00
22 C-22	21.10	78.80	300.00
23 C-23	21.50	78.90	376.00
24 C-24	21.50	78.90	72.00
25 C-25	20.70	76.40	-4.00
26 C-26	.00B	.00B	.00B
27 C-27	21.00	77.70	.00B
28 C-28	21.00	77.20	72.00
29 C-29	21.00	77.60	-4.00
30 C-30	21.20	77.70	224.00
31 C-31	21.30	78.50	240.00
32 C-32	21.20	78.50	480.00
33 C-33	21.20	78.30	720.00
34 C-34	21.30	78.30	624.00
35 C-35	21.00	77.20	.00
36 C-36	21.10	76.50	564.00
37 C-37	20.90	78.60	-156.00
38 C-38	21.00	77.90	-64.00
39 C-39	21.30	77.40	-64.00
40 C-40	21.30	79.00	-96.00
41 C-41	21.10	78.80	-498.00
42 C-42	21.20	78.20	216.00
43 C-43	21.20	77.30	48.00
44 C-44	20.60	76.10	336.00
45 C-45	21.20	77.20	144.00
46 C-46	20.60	75.20	-338.00
47 C-47	21.20	76.90	56.00
48 C-48	21.10	76.70	-204.00
49 C-49	21.30	76.90	56.00
50 C-50	21.10	78.70	.00B

Data for Site C

ROW ID	O2(%)	N2(%)	He(ppb)
51 C-51	20.90	78.30	-360.00
52 C-52	21.40	77.60	96.00
53 C-53	20.80	75.80	270.00
54 C-54	.008	.008	-78.00
55 C-55	20.20	73.90	212.00
56 C-56	22.60	81.20	-42.00
57 C-57	22.60	80.70	420.00
58 C-58	22.80	81.30	288.00

Table 5.

Data for Site D

ROW ID	Day	Date	Time	Soil(C)	Air(C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
1 D-1	190.00	111787.00	1150.00	2.50	4.00	48.00	1.40	.00	29.92	.35
2 D-2	192.00	111987.00	1240.00	1.10	.00B	.00B	.00	.00	30.00	.40
3 D-3	193.00	112087.00	1500.00	1.00	19.20	18.00	.00	.00	29.89	.47
4 D-4	196.00	112387.00	1009.00	1.70	17.90	23.90	.00	.00	29.85	.34
5 D-5	197.00	112487.00	1015.00	1.50	15.00	19.90	.00	.00	29.98	.24
6 D-6	198.00	112587.00	942.00	1.50	13.00	24.80	.00	.00	29.88	.31
7 D-7	199.00	113087.00	1035.00	1.20	3.00	19.50	.10	.00	29.95	.31
8 D-8	200.00	120187.00	1048.00	.90	5.00	16.80	.00	.00	29.91	.33
9 D-9	206.00	120387.00	1036.00	1.00	8.00	18.50	.00	.00	29.97	.30
10 D-10	207.00	120487.00	1052.00	1.30	13.20	25.20	.00	.00	29.93	.34
11 D-11	210.00	120787.00	1008.00	2.40	7.00	26.00	.10	.00	29.83	.43
12 D-12	213.00	121087.00	1025.00	2.10	10.00	20.00	.00	.00	29.95	.36
13 D-13	214.00	121187.00	1017.00	2.70	.00	21.70	.00	.00	30.51	.31
14 D-14	267.00	20288.00	1400.00	.00	-2.00	40.00	.10	.00	30.45	.59
15 D-15	268.00	20388.00	912.00	.00	3.00	88.00	.00	.00	29.97	.33
16 D-16	269.00	20488.00	906.00	-6.00	.00	82.00	.00	.00	29.95	.33
17 D-17	270.00	20588.00	945.00	.00	-3.00	70.00	.00	7.50	29.96	.31
18 D-18	273.00	20888.00	1317.00	-1.00	12.00	59.00	.00	6.50	29.88	.28
19 D-19	274.00	20988.00	1000.00	-1.00	11.00	78.00	.00	.00	29.88	.29
20 D-20	275.00	21088.00	1400.00	.00	11.00	73.00	.00	.00	29.89	.33
21 D-21	276.00	21188.00	945.00	-1.00	9.00	72.00	.00	.00	30.09	.33
22 D-22	277.00	21288.00	850.00	-1.00	11.30	88.00	.00	.00	29.93	.32
23 D-23	281.00	21688.00	1525.00	.00	9.20	55.00	.00	6.00	29.97	.29
24 D-24	282.00	21788.00	1023.00	.00	8.90	74.00	.00	5.50	30.01	.29
25 D-25	284.00	21988.00	1410.00	.00	8.50	63.00	.00	6.00	29.98	.42
26 D-26	287.00	22288.00	1100.00	.00	19.50	69.00	.00	.00	29.64	.00B
27 D-27	288.00	22388.00	1035.00	.00	15.50	66.00	.00	.00	29.79	.34
28 D-28	289.00	22488.00	1245.00	.00	18.10	30.00	.00	.00	29.79	.56
29 D-29	294.00	22988.00	1025.00	4.40	21.70	58.00	.07	.00	29.79	.30
30 D-30	295.00	30188.00	1125.00	3.90	14.80	70.00	.05	.00	29.76	.39
31 D-31	302.00	30888.00	930.00	2.00	12.00	46.00	.00	.00	29.76	.32
32 D-32	303.00	30988.00	1100.00	3.00	14.00	26.00	.00	.00	29.86	.32
33 D-33	304.00	31088.00	1000.00	3.00	7.30	79.00	.00	1.00	29.88	.38
34 D-34	305.00	31188.00	1340.00	1.50	9.50	65.00	.00	3.00	29.87	.24
35 D-35	308.00	31488.00	930.00	.80	14.80	56.00	.00	.00	29.88	.33
36 D-36	309.00	31588.00	1145.00	1.50	17.20	26.00	.00	.00	29.74	.32
37 D-37	316.00	32288.00	1000.00	3.50	23.70	.00B	.00	.00	29.90	.35
38 D-38	317.00	32388.00	1430.00	6.00	26.90	.00B	.00	.00	29.72	.43
39 D-39	318.00	32488.00	1005.00	4.20	15.30	.00B	.00	.00	29.83	.34
40 D-40	329.00	40488.00	1500.00	7.50	28.00	16.00	.00	.00	29.80	.00B
41 D-41	330.00	40588.00	930.00	5.00	22.00	51.00	.00	.00	29.90	.30
42 D-42	332.00	40788.00	1240.00	10.00	28.30	10.00	.00	.00	29.81	.36
43 D-43	344.00	41988.00	1345.00	9.00	21.00	48.00	.00	.00	29.80	.45
44 D-44	345.00	42088.00	1315.00	8.80	23.50	36.00	.00	.00	29.80	.40
45 D-45	351.00	42688.00	930.00	6.50	20.30	50.00	.00	.00	29.92	.35
46 D-46	361.00	50688.00	1000.00	9.00	9.00	84.00	.00	.00	29.72	.00B
47 D-47	367.00	51288.00	1215.00	13.80	26.30	14.00	.00	.00	29.81	.41
48 D-48	380.00	52588.00	1245.00	18.30	28.00	13.00	.00	.00	29.82	.43
49 D-49	387.00	60188.00	720.00	16.10	19.00	50.00	.00	.00	29.86	.57
50 D-50	388.00	60288.00	935.00	13.60	29.50	59.00	.00	.00	29.85	.48

Data for Site D

ROW ID	Day	Date	Time	Soil (C)	Air (C)	Humid(%)	Rain(in)	Snow(in)	Pres(in)	CO2(%)
51 D-51	389.00	60388.00	800.00	16.60	26.80	51.00	1.00	.00	29.86	.42
52 D-52	392.00	60688.00	850.00	18.60	26.80	19.00	.00	.00	29.82	.43
53 D-53	393.00	60788.00	725.00	18.30	17.20	22.00	.00	.00	29.90	.56
54 D-54	417.00	70188.00	810.00	24.50	27.00	12.00	.00	.00	29.81	.55
55 D-55	421.00	70588.00	910.00	24.30	29.80	.008	.00	.00	30.40	.53
56 D-56	423.00	70788.00	740.00	25.00	26.00	.008	.00	.00	30.48	.39
57 D-57	428.00	71288.00	1150.00	25.50	37.00	13.00	.00	.00	30.40	.51
58 D-58	429.00	71388.00	1010.00	25.50	34.00	10.00	.00	.00	30.38	.49
59 D-59	431.00	71588.00	802.00	26.60	29.40	12.00	.00	.00	30.24	.38
60 D-60	435.00	71988.00	756.00	26.70	26.00	15.00	.00	.00	29.85	.36
61 D-61	455.00	80888.00	833.00	19.00	24.50	49.00	.00	.00	29.85	.46
62 D-62	459.00	81288.00	733.00	18.50	20.50	67.00	.00	.00	29.86	.34
63 D-63	464.00	81788.00	900.00	22.50	24.80	20.00	.00	.00	29.89	.45
64 D-64	466.00	81988.00	825.00	25.00	26.30	31.00	.00	.00	29.87	.52
65 D-65	477.00	83088.00	753.00	22.60	243.00	46.00	.00	.00	29.86	.36

Data for Site D

ROW ID	O2(%)	N2(%)	He(ppb)
1 D-1	20.40	75.80	-516.00
2 D-2	20.90	77.30	-496.00
3 D-3	20.90	76.90	-296.00
4 D-4	20.90	77.80	-246.00
5 D-5	21.20	78.10	-546.00
6 D-6	21.20	77.40	-246.00
7 D-7	21.10	77.50	-446.00
8 D-8	21.20	77.70	-296.00
9 D-9	21.20	78.50	-514.00
10 D-10	21.00	78.40	-238.00
11 D-11	20.60	77.10	-216.00
12 D-12	20.50	77.00	-296.00
13 D-13	20.70	77.30	-336.00
14 D-14	20.40	76.90	54.00
15 D-15	21.20	77.70	-196.00
16 D-16	21.20	77.40	-46.00
17 D-17	21.20	78.50	-246.00
18 D-18	21.20	78.40	104.00
19 D-19	21.30	78.40	4.00
20 D-20	21.10	77.40	-156.00
21 D-21	21.20	78.40	-156.00
22 D-22	21.20	77.80	-4.00
23 D-23	21.00	77.50	-308.00
24 D-24	21.00	78.60	-4.00
25 D-25	21.10	77.80	224.00
26 D-26	.00B	.00B	.00B
27 D-27	21.10	76.60	72.00
28 D-28	20.60	77.30	-80.00
29 D-29	21.10	76.80	-308.00
30 D-30	21.00	77.60	-308.00
31 D-31	21.20	78.40	336.00
32 D-32	21.20	77.70	576.00
33 D-33	21.20	78.20	-144.00
34 D-34	20.90	77.10	384.00
35 D-35	20.60	75.90	480.00
36 D-36	21.00	76.90	744.00
37 D-37	20.70	77.60	.00B
38 D-38	21.10	78.20	.00B
39 D-39	21.30	78.70	-64.00
40 D-40	.00B	.00B	-384.00
41 D-41	21.20	78.80	.00B
42 D-42	21.30	77.90	90.00
43 D-43	20.90	76.90	-140.00
44 D-44	20.90	75.40	-4.00
45 D-45	20.80	75.20	-344.00
46 D-46	.00B	.00B	-344.00
47 D-47	20.70	76.20	212.00
48 D-48	20.90	76.80	108.00
49 D-49	20.90	76.90	4.00
50 D-50	21.00	76.40	24.00

Data for Site D

ROW ID	O2(%)	N2(%)	He(ppb)
51 D-51	21.20	77.30	-216.00
52 D-52	21.40	78.20	104.00
53 D-53	20.00	76.70	-8.00
54 D-54	21.30	76.80	4.00
55 D-55	20.90	77.60	-256.00
56 D-56	21.20	77.00	128.00
57 D-57	21.10	78.80	-360.00
58 D-58	20.90	77.90	-282.00
59 D-59	21.00	75.70	-368.00
60 D-60	20.20	73.50	270.00
61 D-61	20.20	74.50	-136.00
62 D-62	20.20	72.40	212.00
63 D-63	22.70	81.80	-42.00
64 D-64	22.70	81.50	-240.00
65 D-65	22.60	81.20	-240.00