

Samples collected on July 6 and August 12, 2010, by D. Tucker, Mount Baker Volcano Research Center. Analyses by W. Evans, USGS, on Aug. 8 and Aug. 26. Sample locations below

20100803	Baker 1*	Baker 2	Baker 3		20100826	Sherman	Sherman	Sherman
6-Jul-2010	Smiley Gp	Smiley Gp	Smiley Gp		12-Aug-2010	Smiley #1	Smiley #2	NW rim
flask #	151.29	166.4	170.71		flask #	172.79	176.36	170.89
Temp C <sup>1</sup>	93.4	96.2	93.5		Temp C	89.7	90.1	86.4 ?
vol-%					vol-%			
He	0.0004	0.0005	0.0006		He	0.0005	0.0005	0.0004
H2	0.1945	0.7299	0.6597		H2	0.8759	0.8603	1.2409
Ar	0.6706	0.1104	0.2117		Ar	0.0315	0.0181	0.0295
O2	13.4076	2.5287	4.5300		O2	0.6670	0.4026	0.6549
N2	56.5136	9.8664	17.8840		N2	2.8109	1.9159	2.7906
CH4	0.1871	0.6383	0.5749		CH4	0.6900	0.6875	0.6622
CO2	27.9099	83.0106	73.1812		CO2	91.3643	91.2247	91.6533
C2H6	<0.0002	<0.0002	<0.0002		C2H6	<0.0002	<0.0002	<0.0002
H2S	<0.0005	3.6937	3.1862		H2S	3.7706	4.0780	3.6846
CO	<0.001	<0.001	<0.001		CO	<0.001	<0.001	<0.001
C3H8	<0.0005	<0.0005	<0.0005		C3H8	<0.0005	<0.0005	<0.0005
C4H10	<0.0005	<0.0005	<0.0005		C4H10	<0.0005	<0.0005	<0.0005
SO2	<0.05	<0.05	<0.05					
Sum	98.8837	100.5784	100.2283		Sum	100.2107	99.1876	100.7164
N2/Ar	84.3	89.4	84.5		N2/Ar	89.2	106.1	94.7
air-cor.	89.8	-188.8	102.9		air-cor.	182.2	3605.9	1253.9
N2/O2	4.22	3.90	3.95		N2/O2	4.21	4.76	4.26
t(D'A,P)	na	241	241		t(D'A,P)	242	243	252
CO2 term	na	1	1	Forced value due to air contamination	CO2 term	1	1	1
d13C-CO2					d13C-CO2	-7.26	-7.62	-7.87
					d13C-CH4			
gas/steam	0.010	0.046	0.003					
normalized					normalized			
vol-%					vol-%			
He	0.0004	0.0005	0.0006		He	0.0005	0.0005	0.0004
H2	0.1967	0.7257	0.6582		H2	0.8741	0.8673	1.2321
Ar	0.6782	0.1098	0.2112		Ar	0.0315	0.0182	0.0293
O2	13.5590	2.5142	4.5196		O2	0.6656	0.4059	0.6502
N2	57.1516	9.8097	17.8433		N2	2.8050	1.9316	2.7708
CH4	0.1892	0.6346	0.5736		CH4	0.6885	0.6932	0.6575
CO2	28.2250	82.5332	73.0145		CO2	91.1722	91.9719	91.0013

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6-Jul-2010	Smiley Gp	Smiley Gp	Smiley Gp		12-Aug-2010	Smiley #1	Smiley #2	NW rim
C2H6	<0.0002	<0.0002	<0.0002		C2H6	<0.0002	<0.0002	<0.0002
H2S	<0.0005	3.6724	3.1790		H2S	3.7627	4.1114	3.6584
CO	<0.001	<0.001	<0.001		CO	<0.001	<0.001	<0.001
C3H8	<0.0005	<0.0005	<0.0005		C3H8	<0.0005	<0.0005	<0.0005
C4H10	<0.0005	<0.0005	<0.0005		C4H10	<0.0005	<0.0005	<0.0005
SO2	<0.05	<0.05	<0.05					
CO2/H2S	error	22.47367541	22.96811186			24.23053604	22.36975682	24.87444253
<sup>1</sup> All are superheated (above boiling for the elevation)								
*Baker 1 contaminated during collection (e.g. O2, N2, CO2 values)					All samples good quality, no evident contamination			
UTM NAD 83	N48°46.187'	N48°46.187'	NA			N48°46.187'	N48°46.187'	N48°46.247'
	W121°49.168'	W121°49.167'				W121°49.168'	W121°49.167'	W121°49.132'
						10 m S of Smiley #1		