

A	B	C	D	E	F	G	H	I
1	Table 7.2; Sample type Log				Flow			Crystallinity
2					morphology	Glassiness	Glass quality	a=aphyric
3					p=pillow	n=no glass	vg = very good	sp=sparse phyric (2-3%)
4	Total wt. at sta. (kg)	Station glass?	Total # Rock types	Rock Types numbered	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
5					m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
6					g=glass only	a=all glass	pal=palagonite only	more = >15%
7	D01	y	4	1	p	t	vg-pd	sp
8				2	p	1-9 mm	vg-pd	sp
9				3	g	a		phy
10				4	g	a	vg	
11	D02	y	6	1	s	5 mm		sp
12				2	p	t	vg	sp
13				3	p	t	vg	sp
14				4	p	t	pd	sp
15				5	p	t	p	sp
16				6	g	a	vg	
17	D03	<1 y	2	1	p	3 mm	vg	sp
18				2	g	a	vg	a
19	D04	y	5	1	p	<1-1 mm	pd	phy
20				2	p	t	vg	sp
21				3	m	n		phy
22				4	g	a	vg-pd	a
23				5	p	a	p	sp
24	D05	y	7	1	s	1-5 mm	pd	sp
25				2	s	5-10 mm	p	sp
26				3	p	t	p	sp
27				4	p	t	pd	sp
28				5	p	2-10 mm	p	sp
29				6	p	5 mm	pd	sp
30				7	g	a		a
31	D06	y	2	1	p	1-2 mm	vg	sp
32				2	m	n		sp
33	D07	y	3	1	p	t	pd	sp

A	B	C	D	E	F	G	H	I
34	Table 7.2; Sample type Log				Flow			Crystallinity
35					morphology	Glassiness	Glass quality	a=aphyric
36					p=pillow	n=no glass	vg = very good	sp=sparse phyric (2-3%)
37	Total wt. at sta.	Station	Total # Rock	Rock Types	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
38	Sta. #	glass?	types	numbered	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
39					g=glass only	a=all glass	pal=palagonite	only more = >15%
40				3	p	8-10 mm	vg-pd	
41	D08	y	5	1	s	5-10 mm	pd	a
42				2	s	5 mm		a
43				3	p	t	pd	phy
44				4	p	t	p	sp
45				5	p	t	p	sp
46	D09	y	6	1	p	<1-2 mm	pd	a
47				2	p	t	pd	sp
48				3	p	t	pd	sp
49				4	p	n		sp
50				5	p	n		sp
51				6	g	a	pd	
52	D10	y	3	1	p	a	pd	a
53				2	p	t	p	p
54				3	s	n		sp
55	D11	y	0					
56	D12	n	1	1	s	3 mm, a	vg	a
57	D13	y	7	1	m	n		sp
58				2	s	1-3 mm	p	sp
59				3	p	1-3 mm	vg	sp
60				4	p	2-5 mm	pd	sp
61				5	m	n		sp
62				6	g	a	pd	
63				7	g	a	vg	
64	D14	y	4	1	g	a	vg	a
65				2	p	3 mm	pd	sp
66				3	p	3 mm	pd-p	a

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67	Table 7.2; Sample type Log				Flow			Crystallinity
68					morphology	Glassiness	Glass quality	a=aphyric
69					p=pillow	n=no glass	vg = very good	sp=sparse phytic (2-3%)
70	Total wt.		Total #	Rock	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
71	Sta. at sta.	Station	Rock	Types	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
72	(kg)	glass?	types	numbered	g=glass only	a=all glass	pal=palagonite	only more = >15%
73				4	s	n		sp
74	D15	y	1	1	p	5-10 mm	vg	por
75	D16	y	11	1	p	4 mm	vg	sp
76				2	p	t		sp
77				3	g	a		a
78				4	g	a	p	a
79				5	s	t	p	a
80				6	p	t	p	a
81				7	p	t	p	sp
82				8	m	n		a
83				9	p	5 mm	p	a
84				10	p	n		a
85				11	p	t		sp
86	D17	n	1	1	s	a	p	a
87	D18	y	7	1	p	3 mm		sp
88				2	p	10 mm	vg	a
89				3	p	t	vg	p
90				4	s	a	p	a
91				5	p	t	pd	p
92				6	g	a	pd	a
93				7	g	a	p	a
94	D19	y	5	1	p	t	pd	a
95				2	p	t	pd	a
96				3	p	t	p	a
97				4	p	2-10 mm	pd	a
98				5	g	a	p	a
99	D20	y	6	1	s	20 mm	pd	a

	A	B	C	D	E	F	G	H	I
100	Table 7.2; Sample type Log								
101						Flow			Crystallinity
102						morphology	Glassiness	Glass quality	a=aphyric
103				Total #	Rock	p=pillow	n=no glass	vg = very good	sp=sparse phytic (2-3%)
104	Sta.	at sta.	Station	Rock	Types	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
105	#	(kg)	glass?	types	numbered	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
106					2	g=glass only	a=all glass	pal=palagonite only	more = >15%
107					3	p	t		a
108					4	p	2-5 mm	vg	a
109					5	p	7 mm	pd	a
110					6	g	30 mm	vg	a
111	D21	3	y	4	1	p	a	pd-p	a
112					2	s	t	vg	a
113					3	s	a		a
114					4	s	a	p	a
115									por
116									
117									
118									
119	D22	15	y	7	1	p	1-2 mm	pd	sp
120					2	p	8 mm	pd	sp
121					3	p	20 mm	pd	a
122					4	s	40 mm	pd	a
123					5	p	t	pd	a
124					6	m	n		sp
125					7	p	t	p	a
126	D23	15	y	7	1	p	2 mm	pd	sp
127					2	p	2-5 mm	pd	a
128					3	p	1 mm	vg	sp
129					4	p	t	pd	sp
130					5	s	a	vg	a
131					6	s	a		a
132					7	s	g	pal	a

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133	Table 7.2; Sample type Log								
134						Flow			
135						morphology	Glassiness	Glass quality	Crystallinity
136		Total wt.		Total #	Rock	p=pillow	n=no glass	vg = very good	a=aphyric
137		at sta.	Station	Rock	Types	s=sheet	t=thin veneer	pd=partial devit.	sp=sparse phytic (2-3%)
138	Sta. #	(kg)	glass?	types	numbered	m=massive	# = mm rind	p=poor	phy=phyric (5-7%)
139	D24	<.1	n	1	1	g=glass only	a=all glass	pal=palagonite only	por=porphyritic (10-15%)
140	D25	0	n	0		g	a	pd	a
141	D26	0.25	y	1	1	g	a	pd	a
142	D27	2.0	y	8	1	p	1 mm	pd	phy
143					2	s	5-10 mm	p	phy
144					3	p	5-10 mm	pd	sp
145					4	p	t	p	sp
146					5	s	a	p	a
147					6	p	t	p	sp
148					7	p	1 mm	p	sp
149					8	p	t	p	sp
150	D28	0.01	y	0					
151	D29	0	y	0					
152	D30	0	y	0					
153	D31	1	y	3	1	s,g	a	pd	a
154					2	s,g	a	pd	a
155					3	p	20 m	vg	a
156	D32	<.5	y	1	1	s,g	a	p	a
157	D33	<0.1	y	0					
158	D34	0	y	0					
159	D35	1.5	y	10	1	s	5-10 mm	pd	a
160					2	s	20-60		a
161					3	s	5-12 mm	pd	a
162					4	p	2-4 mm	vg	a
163					5	p	2 mm	vg	a
164					6	p	n		sp
165					7	p	2-10 mm	pd	a

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Table 7.2; Sample type Log								
166					Flow			Crystallinity
167					morphology			a=aphyric
168					p=pillow	n=no glass	Glass quality	sp=sparse phytic (2-3%)
169	Total wt.		Total #	Rock	s=sheet	t=thin veneer	vg = very good	phy=phyric (5-7%)
170	at sta.	Station	Rock	Types	m=massive	# = mm rind	pd=partial devit.	por=porphyritic (10-15%)
171	(kg)	glass?	types	numbered	g=glass only	a=all glass	p=poor	pal=palagonite only more = >15%
172				8	g	a	vg	a
173				9	p	t	vg	a
174				10	m	n		a
175	40	y	9	1	g	a	vg/pf	a
176				2	m	n		a
177				3	s	7-10 mm to all	pd	a
178				4	p	a	pd	a
179				5	p	10-20 mm	pd	sp
180				6	p	t	vg	a
181				7	p	t	pd	a
182				8	p	n		sp
183				9	m	n		a
184	40	y	7	1	s	2-10 mm	pd	sp
185				2	s	n		phy
186				3	p	1 mm	vg	phy
187				4	p	t	pd/p	phy
188				5	p	1-2 mm	pd	phy
189				6	m	n		a
190				7	g	a	pd/p	a
191	5	y	5	1	s,g	a	p	por
192				2	s,g	a	p	por
193				3	s	5 mm	p	por
194				4	s	n		por
195				5	s	2 mm	p	a
196	50	y	6	1	p,g	a	vg	sp
197				2	g	a	p	a
198				3	m	n		a

	A	B	C	D	E	F	G	H	I
199	Table 7.2; Sample type Log								
200						Flow			Crystallinity
201						morphology	Glassiness	Glass quality	a=aphyric
202	Total wt.			Total #	Rock	p=pillow	n=no glass	vg = very good	sp=sparse phyric (2-3%)
203	Sta. at sta.	Station		Rock	Types	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
204	#	(kg)	glass?	types	numbered	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
205					4	g=glass only	a=all glass	pal=palagonite only	more = >15%
206					5	p	t	pd	a
207					6	p	2-5 mm	vg	sp
208	D40	50	y	13	1	s	3-10 mm	pd	a
209					2	s	3-10 mm	pd	a
210					3	s	5-10 mm	pd	a
211					4	s	n		sp
212					5	p	10-20 mm	pd	a
213					6	p	<10 mm	pd	sp
214					7	p	3 mm	vg	sp
215					8	m	t	p	sp
216					9	m	n		a
217					10	p	n		a
218					11	s,g	t	pd	a
219					12	g	a	pd	a
220					13	g	a	vg	a
221	D41	40	y	7	1	m	a	pd	a
222					2	p	n		sp
223					3	p	t	pal	sp
224					4	p	t	pd	phy
225					5	p	t	vg/pd	phy
226					6	p	3 mm	pd	phy
227					7	s	3 mm	pd/p	phy
228	D42	20	y	3	1	s	10 mm	vg/pd	sp
229					2	s	n		phy
230					3	s	n		a
231	D43	35	y	5	1	s	t	pd	sp
							3 mm	pal	sp

A	B	C	D	E	F	G	H	I
232	Table 7.2; Sample type Log				Flow			Crystallinity
233					morphology	Glassiness	Glass quality	a=aphyric
234					p=pillow	n=no glass	vg = very good	sp=sparse phytic (2-3%)
235	Total wt.		Total #	Rock	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
236	at sta.	Station	Rock	Types	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
237	(kg)	glass?	types	numbered	g=glass only	a=all glass	pal=palagonite only	more = >15%
238				2	p	10+ mm	p	phy
239				3	p	t	p	por
240				4	p	5 mm	p	phy
241				5	m	n		sp
242	1	y	2	1	p	2 mm	p	phy
243				2	s,g	a	pal	sp
244	<0.01	y	0	0				
245	50	y	9	1	p	5-10mm rind	p	phy
246				2	p	1-2mm rind	p	phy
247				3	p	t	p	phy
248				4	p	5mm rind	p	phy
249				5	p,s,m	n		
250				6	g	a	p	a
251				7	p	t	p	por
252				8	g	a	p-pal	a
253				9	p	1 mm	p	phy
254	80	y	3	1	g	a	p	a
255				2	p	4 mm rind	p	sp
256				3	m	n		p
257	D48	0	y	0				
258	D49	0	y	0				
259	D50	50	y	2	1	3 mm	p	
260				2	p	n		a
261	D51	0	y	0				
262	D52	10	y	3	1	a	p-pal	a
263				2	s	3 mm	p-pal	
264				3	p	1 mm	p-pal	phy

A	B	C	D	E	F	G	H	I
265	Table 7.2; Sample type Log				Flow			Crystallinity
266					morphology	Glassiness	Glass quality	a=aphyric
267					p=pillow	n=no glass	vg = very good	sp=sparse phyric (2-3%)
268	Total wt.		Total #	Rock	s=sheet	t=thin veneer	pd=partial devit.	phy=phyric (5-7%)
269	Sta. at sta.	Station	Rock	Types	m=massive	# = mm rind	p=poor	por=porphyritic (10-15%)
270	(kg)	glass?	types	numbered	g=glass only	a=all glass	pal=palagonite	onlymore = >15%
271	0	y	0					
272								
273	WC01	y	1	1	g	a	vg-pd	sp
274	WC02	y	1	1	g	a	vg-pd	a
275	WC03	y	1	1	g	a	vg	a
276	WC04	y	1	1	g	a		a
277	WC05	y	1	1	g	a		

J	K	L	M	N	O	P	Q	R	S	T
1	Table 7.2; Sample type Log									
2										
3		Phenocrysts								
4	Rock							Vesicles	Filling	Alteration
5	Sta. Types	ol	ol	plag.	plag.	cpx	cpx	no= no vesc.	un= unfilled	vf= very fresh
6	# numbered	%	mm	%	mm long	%	mm	%, mm	fl=filled	os=oxidized surfaces
7	D01			100	<1			<1%, <1	u	hr=hydration rind ??? m
8				100	<1			2%, <1	u	ex= extensively alt.
9				100	<1			<1%, <1 mm	u	os
10										
11	D02			100				2%, 1 mm	u	os
12				100	1			5%, 2 mm	u	vf
13				100	2			2-3%, 1 mm	u	os
14				100	1			3%, 1 mm	u	os
15				100	1			no		os
16										os
17	D03			100	1			no		os
18								no		vf
19	D04			100	2			2%, .4 mm	u	os
20				100	1-2			5%, .7 mm	u	os
21				100	2-3			2%, .3 mm	u	os
22								no		vf
23				100	1			no		os
24	D05			100	<1			2%, 1 mm	u	os
25				100	<1			2%, 1 mm	u	os
26				100	1			2%, 1 mm	u	os
27				100	1			2%, 1 mm	u	vf
28				100	<1			2%, 2 mm	u	os
29				100	1			5%, 1 mm	u	os
30								no		ex
31	D06			100	0.25			<1%, <1 mm	u	os
32				100	0.5-1			1%, .25 mm	u	os
33	D07			100	1			4%, 1 mm	u	os

J	K	L	M	N	O	P	Q	R	S	T
34	Table 7.2; Sample type Log									
35										
36		Phenocrysts								
37	Rock							Vesicles	Filling	Alteration
38	Sta. #	ol %	ol mm	plag. %	plag. mm long	cpx %	cpx mm	no= no vesc. %, mm	un= unfilled fl=filled with WHAT?	vf= very fresh os=oxidized surfaces hr=hydration rind ??? m ex= extensively alt.
39										
40	3							no		os
41	D08							50%, 20 mm	u	os
42	2							50%, 20 mm	u	os
43	3			100	<1			1%, <1 mm	u	os
44	4			100	<1			<5%, 2 mm	u	ex
45	5			100				no		ex
46	D09							no		os
47	2	5	<1	95	~1			no		os
48	3	5	<1	95	~1			no		vf
49	4			100	~1			no		os
50	5	5	<1	95	~1			3%	u	os
51	6									
52	D10							no		os
53	2			100	0.5			1%, .25 mm	u	os
54	3			100	1			5-10%, 2 mm	u	os, ex
55	D11									
56	D12							no		os
57	D13			100	<1			5%, 1-15 mm	u	ex
58	2			100	<1			5%, 1 mm	u	ex
59	3			100	<1			5%, <1 mm	u	vf
60	4			100	<1			5%, 1-10 mm	u	os
61	5			100	<1			5%, 1-2 mm		ex
62	6									os
63	7									vf
64	D14							no		vf,os
65	2	<1%	2	>99%	1			2%, 1 mm		os
66	3							3%, 1mm	u	os

J	K	L	M	N	O	P	Q	R	S	T
67	Table 7.2; Sample type Log									
68										
69										
70	Rock	Phenocrysts								
71	Sta. Types	ol	ol	plag.	plag.	cpx	cpx			Alteration
72	# numbered	%	mm	%	mm long	%	mm			vf= very fresh
73	4	<1%	<1	>99%	1			2%, .75-2 mmu		os=oxidized surfaces
74	D15	5%	1	95%	2-3			n o		hr=hydration rind ??? m
75	D16			100	<1			3%	u	ex= extensively alt.
76	2			100				4%, 1-2 mm	u	os-ex
77	3							n o		os
78	4							n o		vf
79	5							1%, <1 mm	u	os-ex
80	6							5%	u	ex
81	7			100				5%	fl, Mn	os-ex
82	8							5%	u	ex
83	9							3%, <1 mm	fl, Mn	ex
84	10							<1%, <1 mm	u	ex
85	11			100				2%, 1 mm	u	ex
86	D17							n o		os
87	D18			100	1			n o		vf
88	2							n o		vf
89	3	1	<1	99	1			n o		vf
90	4							n o		ex
91	5			100	<1			3%, <1 mm	u	os
92	6							n o		os
93	7							n o		os
94	D19							2%, 1 mm	u	os
95	2							3%, <1 mm	u	os
96	3							3%, <1 mm	fl, Mn	ex
97	4							5%, 1 mm	u	ex
98	5							n o		os
99	D20							n o		os

J	K	L	M	N	O	P	Q	R	S	T
100	Table 7.2; Sample type Log									
101										
102		Phenocrysts								
103	Rock							Vesicles	Filling	Alteration
104	Sta. #	ol %	ol mm	plag. %	plag. mm	cpx %	cpx mm	no= no vesc.	un= unfilled	vf= very fresh
105	Types numbered				long			% , mm	fl=filled	os=oxidized surfaces
106	2							5%, 15 mm	with WHAT?	hr=hydration rind ??? m
107	3							3%, <1-20 mm	u	ex= extensively alt.
108	4							no		os
109	5							no		vf
110	6							no		os
111	D21	1						no		vf
112	2							no		os
113	3							no		ex
114	4			100				no		ex
115										
116										
117										
118										
119	D22	1		100	<1			3%, <1 mm		ex
120	2			100	<1			3%, <1 mm		ex
121	3							no		os
122	4							no		os
123	5							no		os
124	6			100				no		os
125	7							no		os
126	D23	1		100	<1			2%, 1 mm	un	os
127	2							2%, 1 mm	un	os
128	3			100				1%, 1 mm	un	vf
129	4			100				1%, <1 mm	un	os
130	5							no		vf
131	6							no		os
132	7							no		ex

J	K	L	M	N	O	P	Q	R	S	T
133	Table 7.2; Sample type Log									
134										
135		Phenocrysts								
136	Rock							Vesicles	Filling	Alteration
137	Sta. #	ol %	ol mm	plag. %	plag. mm	cpx %	cpx mm	no= no vesc.	un= unfilled	vf= very fresh
138	numbered				long			%, mm	fl=filled	os=oxidized surfaces
139	D24							no	with WHAT?	hr=hydration rind ??? m
140	D25									ex= extensively alt.
141	D26							no		ex
142	D27	10	1	90	<1			no		os
143				100	<1			5%, <1 mm	un	os
144				100	<1			no		os
145				100	<1			2%, <1 mm	un	ex
146								no		ex
147				100	<1			no		ex
148				100	<1			no		ex
149				100	<1			no		ex
150	D28									
151	D29									
152	D30									
153	D31							no		os
154								no		os
155								no		os
156	D32							no		vf
157	D33									
158	D34									
159	D35							no		os
160								no		os
161								no		os
162								no		os
163								no		os
164				100	1			no		vf
165								no		os

J	K	L	M	N	O	P	Q	R	S	T
166	Table 7.2; Sample type Log									
167										
168		Phenocrysts								
169	Rock							Vesicles	Filling	Alteration
170	Sta. Types	ol	ol	plag.	plag.	cpx	cpx	no= no vesc.	un= unfilled	vf= very fresh
171	# numbered	%	mm	%	mm long	%	mm	%, mm	fl=filled	os=oxidized surfaces
172	8							no	with WHAT?	hr=hydration rind ??? m
173	9							no		ex= extensively alt.
174	10							2, <1	fl, Mn	os
175	D36	1		100	0.5			no		os/ex
176	2							1, 1		vf
177	3							no	un	vf
178	4							no		os
179	5			100	0.5			no		os
180	6							4, 1	un	os
181	7							no		vf
182	8			100	<1			4, 1	un	os
183	9							2, 1	un	os
184	D37	1		100	<1			4-6, 1	un	os
185	2	30	<1	70	<1			no		ex
186	3			100	<1			no		ex
187	4			100	<1			no		os
188	5			100	1-2 mm			no		ex
189	6							3, <1	fl, Mn	os
190	7							5, <1-1	un	ex
191	D38	1		100	1			no		os
192	2			100	1			no		ex
193	3			100	1			no		ex
194	4			100	1			no		ex
195	5							no		ex
196	D39	1		100	0.5			no		ex
197	2							no		vf
198	3							no		os
								3, 1-2	un	os

J	K	L	M	N	O	P	Q	R	S	T
199	Table 7.2; Sample type Log									
200										
201		Phenocrysts								
202	Rock							Vesicles	Filling	Alteration
203	Sta. Types	ol	ol	plag.	plag.	cpx	cpx	no= no vesc.	un= unfilled	vf= very fresh
204	# numbered	%	mm	%	mm long	%	mm	%, mm	fl=filled	os=oxidized surfaces
205	4							5, 1-3	un	hr=hydration rind ??? m
206	5			100	<1			1, <1	un	ex= extensively alt.
207	6							6, 1	un	os
208	D40							no		ex
209	2							no		os
210	3			100	<1			no		ex
211	4							no		os
212	5			100	<1			no		ex
213	6			100	<1			2, <1	fl, Mn	os
214	7			100	<1			no		ex
215	8							no		ex
216	9							2, <1	un	ex
217	10							no		ex
218	11							no		os
219	12							no		os
220	13							no		os
221	D41			100	1			5, 1	un	os/ex
222	2			100	<1			no		os
223	3			100	2			1, 1	un	os/ex
224	4			100	1-2 mm			3, <1	un	os
225	5			100	1			2, 1	un	os
226	6			100	1			1, <1	un	os/ex
227	7			100	1			6, 1	un	ex
228	D42			100	<1			no		ex
229	2							no		ex
230	3			100	<1			no		ex
231	D43			100	4			7, 1-2	un	ex

J	K	L	M	N	O	P	Q	R	S	T
232	Table 7.2; Sample type Log									
233		Phenocrysts								
234										
235	Rock									Alteration
236	Sta. Types	ol	ol	plag.	plag.	cpx	cpx	Vesicles	Filling	vf= very fresh
237	# numbered	%	mm	%	mm	long	mm	%, mm	un= unfilled	os=oxidized surfaces
238	2	3	1	97	1-2	mm		2, 1	un	os
239	3	5	1	95	1-2	mm		4, 1	un	os
240	4			100	1			2, <1	un	ex
241	5			100	1			7, 2	un	ex
242	D44			100	1			6, 1	fl, Mn	ex
243	2			100	<1			no		ex
244	D45									
245	D46			100	1-2	mm		no		ex
246	2			100	2-3	mm		no		ex
247	3			100	2	mm		2, 1mm	black?	ex
248	4			100	1	mm		no		ex
249	5							5%, 1mm	un	ex
250	6							no		ex
251	7			100	2-4	mm		no		os
252	8							no		ex
253	9			100	1	mm		no		ex
254	D47							no		ex
255	2			100	<1	mm		no		ex
256	3			100	1-2	mm		no		ex
257	D48									
258	D49									
259	D50	1						5%, 1 mm	un	ex
260	2							3%, 1 mm	un	ex
261	D51									
262	D52	1						no		ex
263	2									ex
264	3			100	1			1%, 1 mm	un	ex

	U	V	W	X	Y	Z
1						
2	Mn crust			Other key features	Samples taken	
3	n=none					
4	___=mm thick		Rock Types			
5	m	Sta. #	Types numbered			
6						
7	n	D01	1	white and rust coating on whole rock surfaces	D01-01,D01-02	
8	<1 mm		2	krinkley glass; white rust alt on wr surfaces	D01-03	
9	<1		3	krinkley glass	D01-04,D01-05,D01-06	
10			4		D01-station glass	
11	1 mm	D02	1	some crystal clots of plagioclase	D02-01,D02-02	
12	n		2		D02-03,D02-04	
13	n		3	crystal clumps ~ 5 mm wide	D02-05	
14	n		4	some crystal clumps	D02-06	
15	n		5		D02-07	
16	n		6	one with some oxidation, other very fresh	D02-08,D02-09	
17	n	D03	1		D03-01,D03-02	
18	n		2		D03-03,D03-04	
19	n	D04	1		D04-01,D04-02	
20	n		2		D04-03,D04-04	
21	n		3		D04-05	
22	n		4		D04-06,D04-07	
23	n		5		D04-08	
24	thin coating	D05	1	mang on bottom of flow; sheets ~ 1 in thick	D05-01	
25	coating		2	flows ~ 4 cm thick	D05-02	
26	coating		3		D05-03	
27	n		4		D05-04	
28	thick coating		5	mang looks fuzzy, very weathered	D05-05	
29	on few places		6	overall fresher than type 5	D05-06,D05-07	
30	n		7	sample relatively fresh, rest of type 8 more altered	D05-08	
31	n	D06	1		D06-01,D06-02	
32	n		2		D06-03	
33	n	D07	1		D07-01,D07-02	

	U	V	W	X	Y	Z
34						
	Table 7.2; Sample type Log					
35	Mn crust			Other key features	Samples taken	
36	n=none					
37	___=mm thick		Rock			
38	m	Sta. #	Types			
39			numbered			
40	3 mm		3	clay shaped lava tube with glass rind and mang	D07-05	
41	3 mm	D08	1	giant laval flow with large tubes (vesicles)	D08-01	
42	3 mm		2	whitish surface	D08-02,D08-03	
43	n		3	dark manganese surface	D08-04,D08-05	
44	1 mm		4	thin, pathcy velvet dusting of manganese	D08-06	
45	1 mm		5	whitish patches on surface, patchy thin mang veneer	D08-07	
46	2-3 mm	D09	1		D09-01,D09-02	
47	n		2		D09-03	
48	n		3	some slag clots	D09-04,D09-05	
49	n		4		D09-06	
50	3 mm		5	mang crust, no glass underneath	D09-07	
51	~1 mm		6		D09-08	
52	2-3 mm	D10	1		D10-01,D10-02	
53	n		2		D10-03,D10-04	
54	2 mm		3	looks like sheet flow, end of sample looks like pillow	D10-05,D10-06	
55		D11				
56	2 mm	D12	1	almost all glass with sparse rock, mang crust	D12-01,D12-02	
57	dusting	D13	1		D13-01	
58	<1 mm		2	some good glass	D13-02	
59	n		3		D13-03,D13-04,D13-05	
60	coating		4		D13-06,D13-07	
61	coating		5	old looking, loose fragments without glass	D13-08	
62			6	older looking glass chunks	D13-09	
63			7	good fresh glass	D13-10,D13-11	
64	1 mm	D14	1		D14-01,D14-02,D14-03,D14-04	
65	n		2		D14-5,D14-06,D14-07	
66	n		3	very oxidized, rare crystals are plag < 1 mm	D14-08,D14-09	

	U	V	W	X	Y	Z
67				Table 7.2; Sample type Log		
68	Mn crust			Other key features	Samples taken	
69	n=none					
70	___=mm thick		Rock			
71	m	Sta.	Types			
72		#	numbered			
73	.75 mm		4		D14-10,D14-11	
74	<1 mm patchy	D15	1	plag crystals in glass	D15-01,D15-02,D15-03,D15-04,	
75	<1 mm patchy	D16	1		D16-01,D16-02	
76	n		2	whitish discoloring on surface glass	D16-03	
77			3	all glass, just 1 piece	D16-04	
78	1 mm		4	thin old pieces of glass	D16-05	
79	<1 mm		5	some ropy surfaces	D16-06	
80	n		6	vesicles have mn coating	D16-07	
81	1 mm		7	whitish sides, partial Mn coating	D16-08	
82	1 mm		8	leftover worthless material	D16-09	
83	<1 mm patchy		9		D16-10	
84	1 mm		10	very furry, just 1 rock for type	D16-11	
85	2 mm		11	very furry, dark rust-colored	D16-12	
86	2 mm	D17	1	1-2 cm thick glass rind, no rock, lots of Mn	D17-01,D17-02,D17-03	
87	n	D18	1	no rest of sample type	D18-01,D18-02,D18-03	
88	<1 mm		2	no rest of sample type	D18-04,D18-05	
89	n		3	less fresh than type 1	D18-06	
90		1	4		D18-07	
91	n		5	less fresh than type 3	D18-08	
92	1 mm		6		D18-09	
93	2 mm		7	older than type 6	D18-10	
94	n	D19	1	few oxidized surfaces, looks fairly fresh	D19-01	
95	n		2	similar to type 1 but less fresh	D19-02	
96	~1 mm		3	similar to types 1 and 2 but much older looking	D19-03	
97	1-2 mm		4		D19-04,D19-05	
98	0-3 mm		5	large, older glass chunks	D19-06	
99	1-3 mm	D20	1		D20-01	

	U	V	W	X	Y	Z
100						
	Table 7.2; Sample type Log					
101	Mn crust			Other key features	Samples taken	
102	n=none					
103	___=mm thick		Rock Types			
104	m	Sta. #	Types numbered			
105						
106	n		2	only a few lightly oxidized surfaces, pretty fresh	D20-02,D20-03	
107	n		3	freshest in dredge	D20-04,D20-05	
108	<1 mm		4	very thin Mn	D20-06	
109	1 mm		5	huge pieces of glass, very little rock just 3 samples	D20-07,D20-08,D20-09	
110	<1 mm		6	older looking glass	D20-10	
111	n	D21	1		D21-01,D21-02	
112	<1 mm		2		D21-03,D21-04,D21-05	
113	1-2 mm		3	thickness ~3-4 cm, all glass	D21-06	
114	2 mm		4		D21-07,D21-08	
115						
116						
117						
118						
119	<1 mm	D22	1		D22-01	
120	1 mm		2	only 1 rock in this type	D22-02	
121	1 mmm		3	nearly all glass "antlers"	D22-03,D22-04,D22-05	
122	<1 mm		4	sheet flows nearly all glass	D22-06,D22-07	
123			5		D22-08,D22-09	
124			6		D22-10	
125	<1 mm		7		D22-11	
126		D23	1	egg shaped, smoloth, mn only on few surfaces not on gla	D23-01,D23-02,D23-03	
127	n		2		D23-04,D23-05	
128	n		3		D23-06,D23-07,D23-08	
129	n		4		D23-09,D23-10	
130	2 mm		5		D23-11,D23-12	
131	<1 mm		6		D23-13	
132	<1 mm		7		D23-14	

	U	V	W	X	Y	Z
133						
	Table 7.2; Sample type Log					
134	Mn crust			Other key features	Samples taken	
135	n=none					
136	___=mm thick		Rock Types			
137	m	Sta. #	Types numbered			
138						
139		D24	1	very sad little dredge	D24-01,D24-02,D24-03,D24-04	
140		D25		empty		
141	2-5 mm	D26	1		D26-01,D26-02,D26-03	
142	<1 mm	D27	1	little glass knobs protruding from surface	D27-01	
143	1 mm		2		D27-02	
144	1-2 mm		3		D27-03,D27-04,D27-05	
145	n		4	very little patches of mn	D27-06	
146	1-2 mm		5		D27-07	
147	1 mm		6		D27-08	
148	1 mm		7		D27-09	
149	1 mm		8	just one in this type	D27-10	
150		D28		station glass only		
151		D29		station glass only; a few small pieces in small vial		
152		D30		station glass only; a few small pieces in small vial		
153	1 mm	D31	1	glass ~8 mm thick, looks slightly younger	D31-01,D31-02	
154	2 mm		2	~10-15 mm thick	D31-03,D31-04	
155	3-4 mm		3	just a little rock in center of "antler," just one sample in	D31-05	
156	2-3 mm	D32	1		D32-01,D32-02,D32-03,D32-04	
157		D33		station glass only; a few small pieces in small vial		
158		D34		station glass only; a few small pieces in small vial		
159	coating	D35	1		D35-01, 02	
160			2		D35-03, 04	
161	coating		3		D35-05, 06	
162	n		4		D35-07, 08	
163	n		5	slightly older than Type 4	D35-09, 10	
164	n		6	fresher-looking than Type 5	D35-11, 12	
165	coating		7		D35-13, 14	

	U	V	W	X			Y	Z
Table 7.2; Sample type Log								
	Mn crust			Other key features		Samples taken		
166	n=none							
167	___=mm thick							
168								
169								
170	m							
171								
172	<1 mm		8			D35-15, D35-16, D35-17, D35-18		
173	n		9	white coating on surfaces		D35-20, 21		
174	<1 mm		10	white coating on surfaces, not very fresh		D35-22, 23		
175	n	D36	1	fairly fresh glass; non-samples bagged with station glass		D36-01, 02, 03, 04		
176	n		2	some oxidized surfaces		D36-05, 06, 07		
177	2 mm		3	some lava chambers in rock		D36-08, 09		
178	1 mm		4	some without Mn coating		D36-10, 11, 12, 13		
179	2 mm		5	some without Mn coating, not very fresh		D36-14, 15, 16		
180	n		6	some oxidized surfaces, smooth lava "buds"		D36-17, 18, 19		
181	n		7	very few of type 7 w/Mn dusting		D36-20, 21, 22		
182	1-2 mm		8	some with very thin, very poor glass veneer, most highly oxidized, massive rubble		D36-23, 24		
183	n		9			D36-25, 26		
184	coating	D37	1			D37-01, 02		
185	1 mm		2			D37-03, 04		
186	n		3	freshest type in dredge		D37-05, 06, 07		
187	1 mm		4			D37-08, 09		
188	coating		5	fresher (a bit), slightly thicker, fresher glass than Type 4		D37-10, 11, 12		
189	1 mm		6			D37-13		
190	coating		7			D37-14, 15, 16		
191	2 mm	D38	1			D38-01, 02, 03		
192	4 mm		2	little chunks of rocks still attached		D38-04, 05		
193	1 mm		3			D38-06, 07		
194	n		4	very thin, like exfoliation scabs		D38-08, 09		
195	1 mm		5			D38-10		
196	n	D39	1			D39-01, 02, 03		
197	1 mm		2	very altered glass, not very fresh		D39-04, 05		
198	n		3	some with very thin glass veneer		D39-06, 07		

	U	V	W	X	Y	Z
199						
	Table 7.2; Sample type Log					
200	Mn crust			Other key features	Samples taken	
201	n=none					
202	___=mm thick		Rock Types			
203	m	Sta. #	Types numbered			
204						
205	n		4		D39-08, 09	
206	n		5	nice glass, fairly fresh but some oxidized surfaces	D39-10, 11, 12	
207	1-2 mm		6	highly altered, lots of glass	D39-13, 14	
208	1 mm	D40	1		D40-01, 02	
209	coating		2	fresher-looking than Type 1	D40-03, 04	
210	2 mm		3		D40-05	
211	n		4		D40-06, 07	
212	1 mm		5		D40-08, 09, 10	
213	n		6		D40-11, 12	
214	coating		7	coating only on some surfaces	D40-13	
215	coating		8	coating only on some surfaces	D40-14	
216	1-2 mm		9		D40-15	
217	coating		10	old-looking; very little glass; Mn coating only in places	D40-16	
218	n		11		D40-17, 18, 19	
219	n		12	pretty fresh	D40-20, 21, 22	
220	<1 mm		13	rosette-shaped, mostly	D40-23, 24, 25	
221	1 mm	D41	1	some without Mn crust	D41-01, 02	
222	1 mm		2		D41-03, 04	
223	<1 mm		3		D41-05, 06	
224	n		4	fresher glass than Type 3	D41-07, 08	
225	n		5	some with Mn dusting	D41-09-10	
226	1 mm		6		D41-11, 12	
227	1 mm		7		D41-13, 14	
228	4 mm	D42	1	both samples from same larger parent rock; possible zoned	D42-01, 02	
229	2-4 mm		2	very old, furry; 03 and 04 from same larger parent rock	D42-03, 04	
230	n		3		D42-05	
231	3 mm	D43	1		D43-01, 02	

U	V	W	X	Y	Z
232			Table 7.2; Sample type Log		
233	Mn crust		Other key features	Samples taken	
234	n=none				
235	___=mm thick	Rock Types			
236	m	Sta. #			
237		numbered			
238	n	2	glass completely devitrified	D43-03, 04	
239	n	3	glass completely devitrified	D43-05, 06	
240	1-3 mm	4	glass rind not completely over surface of rock	D43-07, 08	
241	1-3 mm	5		D43-09, 10	
242	1 mm	D44	only 1 sample, no rest of sample	D44-01	
243	1 mm	2		D44-02, 03	
244		D45	station glass only - might not actually be glass		
245	1-2 mm	D46	graphic texture	D46-01,02,03	
246	n	2		D46-04,05,06	
247	1-2 mm	3	orange surfaces-very little old glass	D46-07,08	
248	1 m m	4	orange surfaces: alteration halo areas	D46-09,10	
249	1-4 mm	5	rest of dredge-no glass, very old looking rock	D46-11,12,13,14	
250	<1 mm	6	old looking chunks of glass, no rest of type	D46-15,D46-16	
251	n	7	coating of mn, "exfoliation sheets"	D46-17,D46-18	
252	n	8	coating of mn in places, no rest of type	D46-19,D46-20	
253	2-5 mm	9	just one sample, very old looking, glass only in a few pla	D46-21	
254	2 m m	D47	very altered and old, no extra type 1	D47-01	
255	1 mm	2		D46-02,D47-03,D47-04,D47-05	
256	2 mm	3	some only with oxidized surfaces	D47-06	
257		D48	station glass only, plus sediment		
258		D49	station glass only, very few, very tiny chips		
259	<1 mm	D50	very old, weathered, with some glass	D50-01,D50-02,D50-03,D50-04,	
260	1 mm	2	very old, weathered, no glass	D50-06,D50-07,D50-08	
261		D51	station glass only, one large chip		
262	2 mm	D52	very old, no rest of type	D52-01	
263	4 mm	2	Mn covers almost all of sample, no rest of type	D52-02	
264	2 mm	3	very old, 1 huge chunk left for rest of type	D52-03	

	U	V	W	X	Y	Z
265		Table 7.2; Sample type Log				
266	Mn crust			Other key features	Samples taken	
267	n = none					
268	_____ = mm thick		Rock			
269	m	Sta.	Types			
270		#	numbered			
271		D53		few chips of station glass only		
272						
273	n	WC01	1		WC01-01	
274	n	WC02	1		WC02-01, WC02-02	
275	n	WC03	1		WC03-01	
276	n	WC04	1		WC04-01	
277		WC05	1	glass and sediment, <1 gm	WC05-01	