Cascades - GL01873

GEO-Newberry N-1

Samples for analysis

	Depth.	2 Rock Type	4 X-Ray	5 Fluids	6 Whole Rx	7 Thin Section	8	9
1	1851'	Andesite flow?			✓			
2	3117	clay alt. tuff	X-Ray					
3	3132	dacitic? cinders		✓				
	3267	dacite dike?			✓			
4	3350	clay alt. ash	✓	smectite				
5	3118	compacted ash				T.S.		
6	3354	ash-flow		✓	✓			
7	2630	2nd. min. in vugs. clear orth.	✓	Phillipsite zeolite				
8	2802	basalt.				T.S.		
9	3424	Fine grn. ash				T.S.		
10	3427.5	basaltic ash		✓				
11	3561	Basalt				T.S.		
12	3432	Andesitic ash	✓	smectite				
13	3617	Light blue coating	✓	poss. smectite				
14	3615.5	green bedded 2nd vesicles	✓	siderite				
15	3695	Lapilli ash				T.S.		
16	~~3698~~ 3702	clay alt. Tuff	✓	smectite & at 3703				
17	3708	slight clay alt. Tuff	✓?	smectite				
18	3720	blue, Bulk	✓	smectite				
19	3786	rhyodacite?			✓			
20								
21								
22	3808		✓	smectite, K-feld, Qtz Cristobalite				
23	3902		✓	" " "				
24	3822		✓	smectite, K-Feld. Cristobelite, amorphous				
25	3811	Soil above Ash flow tuff	✓	plag. & smectite				
26	3812					T.S.		
27	3837					✓TS		
28	3854				✓	✓TS		
29	3849.5		X-Ray					
?? 30	4000	Rhyodacite dike			✓	✓TS		
31	3949.5		X-Ray	Calcite, cristobalite				

AMPAD EFFICIENCY® LINE No. 2636

EFFICIENCY® LINE NO. 6636

Newberry N-1

Unit. Point Value

Gamma-Ray	[1] Depth	[2] Rock Type	[3] Whole Rx	[4] Objective of Analysis	[7] Thin Sec.	[8] Alteration	[9]	[10]	[11]	[12]	[13]
40±5 40[1]	650	Hand sample G.-Ray	Chem. Andesite	Calibrate gamma Log and check change across 662'	T.S.	fresh,	v.f. grain-				
25±5 26[2]	669		Qtz Basalt	" "	T.S.	fresh.	v.f. grain basalt.				
80~~±75~~ 82[3]	1174.8	Ash	Rhyodacite	Check Comp. & G-R calib.	T.S.	fresh,	vitric 1mm xls	ash flow tuff,	crystal tuff		
35-50 46[4]	1851	Flow	Andesite	check Andesite? G-R calib.							
[5]	1956	[illegible]		[illegible] 5' values.							
30±5 30[6]	2090	Basalt flow	Basaltic Andesite	tuff trend with depth.	TS	fresh-	V.f. grain, 0.1mm pyx, & plag.	~1% pheno.			
11-20 11[7]	2453	Basalt flow	Basalt	basalt trend " "	TS	fresh-	pyrox. oikocrysts,	Poikilitic,	0.5mm plag lath.		
20-~~30~~ 29[8]	2802	Basal flow	Basalt	basalt trend	T.S.	fresh,	Poikilitic - pyrox oikocrysts -		1mm plag.		
20-30 24[9]	2841	basalt ash	Basalt	Compare ash to flow - ion Exc.							
~~60-104~~ [10]	3118	ash-flow	"			clay alt,	welded/compact.	ash-flow	tuff, few lapilli		
54-76 59[11]	3132	Cinders	Dacitic?								
[12]											
68-88 70[13]	3267	flow?	Dacite	Calib. G-R Thermal boundary	TS	fresh	Hyalo-ophitic	2% 1mm xls			
90-135 100[14]	3354	~~ash-flow~~ Basal flow	Rhyodacitic	mixed litho.	T.S	Lithic lapilli - no ash, clasts support.					
15-27 23[15]	3400.5	Basalt flow	Basaltic Andesite	basalt trend	T.S.	mod. clay & calc.	Sericate porphyritic plag to 1mm giving → brn+calc				
36-50 47[16]	3561	Flow	Andesite	~~Basaltic Andesite~~ ?	T.S.	minor calcite in 1mm vesicles.	0.1mm plag. xls-				
60-127 90[17]	3685	Tuff Qtz Latite	Latite	Tuff comp. Calib. GR. GR peak is 5' deeper than core.		minor Pumice lapilli ash-flow,	~2% xls,	minor clay.			
30-37 34[18]	3686	Basalt	Basaltic-Andesite	check chem. with Bishop.? Bas.	T.S.	fresh-	fine grain tabular 0.1mm plag,		aligned		
25-60 30[19]	3427.5	Lapilli Tuff	Andesite?								
110-140 130[20]	3786	Lava Flow	Rhyodacite	check high GR. lava flow-	T.S.	fresh -	devitrified matrix - like	3920 & 4000'			
120-145 134[21]	3854		Rhyodacite		T.S.	minor calc.	glass matrix.	%	plag xls		
[22]	3920'	Flow/~~Tuff~~?	Rhyodacite	check high GR unit. compare w/ 3786.	T.S.	very minor	glass matrix & microlites				
[23]	3837		Rhyodacite		TS	glass matrix - obsidian	Lava flow				
[24]	4000'	pyrix.-dacite?			TS.	fresh					
[25]	3812				T.S.	welded ash	flow - vitric				
[26]	3424	Lapilli-tuff	Andesite		TS.	strong clay alt.					
[27]	3350	Ash-flow Tuff			TS.	Ash Flow Tuff, clay alt.					
[28]											
[29]											
[30]											
[31]											

GEO-Newberry N-1

Drilling mud 50.9°F (10.5°C)
To 42.8°F (6°C)

Depth feet

Temperature °F

60 100 140 180 220 260

1000

1500

2000

2500

3000

3500

4000

4500

55°

64° 2891

82 3312

95 2578

117 3540

97 3615

137 3672

149° after 14 hr.

114 3732

128 3802

138° 3864

124 3854

140 3913

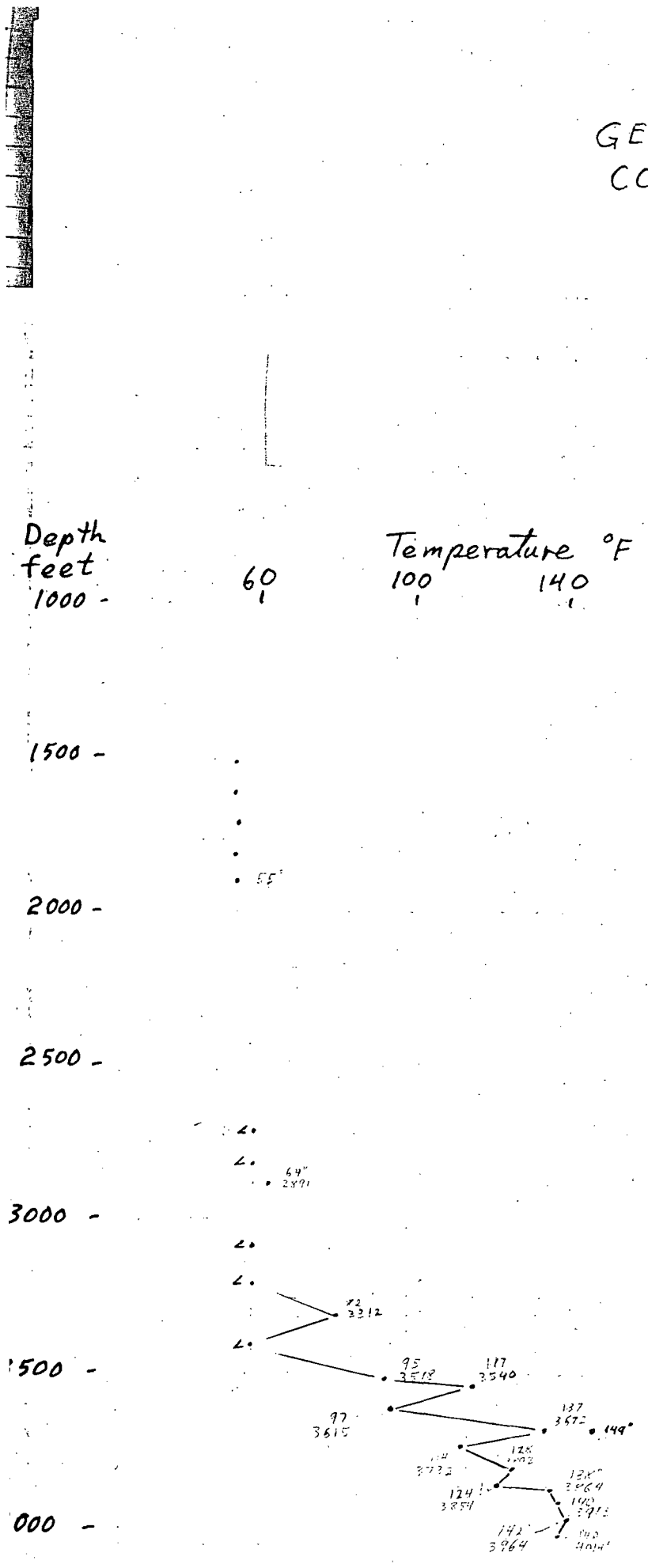
142 3964

140 4014'

4°F/100' (73°C/KM)

8°F/100' (146°C/KM)

GEO-NEWBERRY
CORE HOLE N-1



SIBBETT N-1

1 650' A.A. ?

ELEMENT		CONCENTRATION
NA	% OX.	4.41
K	% OX.	1.15
CA	% OX.	7.71
MG	% OX.	4.17
FE	% OX.	9.95
AL	% OX.	16.35
SI	% OX.	54.40
TI	% OX.	1.41
P	% OX.	0.399
SR	PPM	598
BA	% OX.	0.049
V	PPM	< 250
CR	PPM	246
MN	% OX.	0.158
CO	PPM	34
NI	PPM	107
CU	PPM	92
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	101
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	10
BE	PPM	1.9
B	PPM	< 400
ZR	PPM	140
LA	PPM	30
CE	PPM	38
TH	PPM	< 150
LOI		0
	TOTAL	100.154

669. G. I.

ELEMENT		CONCENTRATION
NA	% OX.	3.62
K	% OX.	0.779
CA	% OX.	9.54
MG	% OX.	6.42
FE	% OX.	8.51
AL	% OX.	17.69
SI	% OX.	51.70
TI	% OX.	1.06
P	% OX.	0.261
SR	% OX.	665
BA	PPM	0.035
V	% OX.	< 250
CR	PPM	203
MN	PPM	0.138
CO	% OX.	39
NI	PPM	83
CU	PPM	95
MO	PPM	50.0
PB	PPM	10.0
ZN	PPM	104
CD	PPM	5.00
AG	PPM	2.00
AU	PPM	4.00
AS	PPM	25.0
SB	PPM	30.0
BI	PPM	100
U	PPM	2500
TE	PPM	50.0
SN	PPM	5.00
W	PPM	1200
LI	PPM	7
BE	PPM	1.6
B	PPM	< 400
ZR	PPM	103
LA	PPM	26
CE	PPM	27
TH	PPM	< 150
LOI	%	.15
TOTAL		99.746

SIBBETT N-1

3 1174.6' ext.

ELEMENT			CONCENTRATION
NA	% OX.		5.43
K	% OX.		2.56
CA	% OX.		3.43
MG	% OX.		1.35
FE	% OX.		5.35
AL	% OX.		16.24
SI	% OX.		64.60
TI	% OX.		0.883
P	% OX.		0.256
SR	PPM		284
BA	% OX.		0.091
V	PPM	<	250
CR	PPM		42
MN	% OX.		0.124
CO	PPM		21
NI	PPM		19
CU	PPM		13
MO	PPM	<	50.0
PB	PPM		10
ZN	PPM		94
CD	PPM	<	5.00
AG	PPM	<	2.00
AU	PPM	<	4.00
AS	PPM	<	25.0
SB	PPM	<	30.0
BI	PPM	<	100
U	PPM	<	2500
TE	PPM	<	50.0
SN	PPM	<	5.00
W	PPM	<	1200
LI	PPM		25
BE	PPM		2.2
B	PPM	<	400
ZR	PPM		278
LA	PPM		35
CE	PPM		45
TH	PPM	<	150
LOI			0
	TOTAL		100.312

SIBBETT N-1

4 1851' A

ELEMENT		CONCENTRATION
NA	% OX.	4.41
K	% OX.	1.17
CA	% OX.	7.48
MG	% OX.	4.59
FE	% OX.	8.58
AL	% OX.	16.65
SI	% OX.	54.50
TI	% OX.	1.17
P	% OX.	0.169
SR	PPM	346
BA	% OX.	0.040
V	PPM	< 250
CR	PPM	124
MN	% OX.	0.148
CO	PPM	94
NI	PPM	43
CU	PPM	63
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	94
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	10
BE	PPM	1.8
B	PPM	< 400
ZR	PPM	151
LA	PPM	24
CE	PPM	24
TH	PPM	< 150

LOI D

TOTAL 98.910

SIBBETT N-1

5 2090'

ELEMENT		CONCENTRATION
NA	% OX.	4.44
K	% OX.	0.807
CA	% OX.	8.06
MG	% OX.	4.32
FE	% OX.	10.28
AL	% OX.	16.70
SI	% OX.	54.03
TI	% OX.	1.53
P	% OX.	0.199
SR	PPM	487
BA	% OX.	0.036
V	PPM	< 250
CR	PPM	98
MN	% OX.	0.162
CO	PPM	34
NI	PPM	39
CU	PPM	106
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	90
CD	PPM	< 5.00
AG	PPM	2
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	10
BE	PPM	1.8
B	PPM	< 400
ZR	PPM	107
LA	PPM	22
CE	PPM	21
TH	PPM	< 150
LOI		0
	TOTAL	100.564

SIBBETT N-1

6 2453'

ELEMENT		CONCENTRATION
NA	% OX.	3.84
K	% OX.	0.622
CA	% OX.	10.84
MG	% OX.	9.26
FE	% OX.	10.99
AL	% OX.	19.74
SI	% OX.	51.70
TI	% OX.	1.39
P	% OX.	0.305
SR	PPM	522
BA	% OX.	0.030
V	PPM	898
CR	PPM	277
MN	% OX.	0.176
CO	PPM	49
NI	PPM	207
CU	PPM	78
MO	PPM	< 50.0
PB	PPM	138
ZN	PPM	85
CD	PPM	5
AG	PPM	3
AU	PPM	< 4.00
AS	PPM	292
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	2977
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	6
BE	PPM	2.0
B	PPM	< 400
ZR	PPM	118
LA	PPM	27
CE	PPM	29
TH	PPM	< 150
LOI		0
TOTAL		108.880

probable hi SiO_2

SIBBETT N-1

7 2802'

ELEMENT		CONCENTRATION
NA	% OX.	3.45
K	% OX.	0.649
CA	% OX.	9.77
MG	% OX.	7.23
FE	% OX.	9.49
AL	% OX.	17.36
SI	% OX.	50.93
TI	% OX.	1.34
P	% OX.	0.249
SR	PPM	546
BA	% OX.	0.029
V	PPM	< 250
CR	PPM	167
MN	% OX.	0.153
CO	PPM	37
NI	PPM	94
CU	PPM	80
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	74
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	2682
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	7
BE	PPM	1.7
B	PPM	< 400
ZR	PPM	109
LA	PPM	24
CE	PPM	24
TH	PPM	< 150
LOI		0
	TOTAL	100.655

SIBBETT N-1

8 2841'

ELEMENT		CONCENTRATION
NA	% OX.	4.38
K	% OX.	0.775
CA	% OX.	7.97
MG	% OX.	4.33
FE	% OX.	10.40
AL	% OX.	16.70
SI	% OX.	52.63
TI	% OX.	1.57
P	% OX.	0.265
SR	PPM	438
BA	% OX.	0.052
V	PPM	< 250
CR	PPM	65
MN	% OX.	0.172
CO	PPM	37
NI	PPM	27
CU	PPM	72
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	104
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	50
W	PPM	< 1200
LI	PPM	11
BE	PPM	2.1
B	PPM	< 400
ZR	PPM	134
LA	PPM	27
CE	PPM	31
TH	PPM	< 150
LOI	%	0.47
	TOTAL	99.241

SIBBETT

47 3132' D

ELEMENT			CONCENTRATION
NA	% OX.		4.29
K	% OX.		1.73
CA	% OX.		4.99
MG	% OX.		2.62
FE	% OX.		9.16
AL	% OX.		14.93
SI	% OX.		58.20
TI	% OX.		1.36
P	% OX.		0.162
SR	PPM		281
BA	% OX.		0.068
V	PPM	<	250
CR	PPM		17
MN	% OX.		0.140
CO	PPM		47
NI	PPM		13
CU	PPM		26
MO	PPM	<	50.0
PB	PPM	<	10.0
ZN	PPM		90
CD	PPM	<	5.00
AG	PPM		3
AU	PPM	<	4.00
AS	PPM	<	25.0
SB	PPM	<	30.0
BI	PPM	<	100
U	PPM	<	2500
TE	PPM	<	50.0
SN	PPM	<	5.00
W	PPM	<	1200
LI	PPM		23
BE	PPM		2.1
B	PPM	<	400
ZR	PPM		209
LA	PPM		26
CE	PPM		30
TH	PPM	<	150
LOI	%		1.13
	TOTAL		97.660

SIBBETT N-1

9 3267'

ELEMENT		CONCENTRATION
NA	% OX.	4.57
K	% OX.	1.93
CA	% OX.	5.18
MG	% OX.	2.05
FE	% OX.	9.39
AL	% OX.	15.16
SI	% OX.	59.73
TI	% OX.	1.40
P	% OX.	0.178
SR	PPM	304
BA	% OX.	0.070
V	PPM	< 250
CR	PPM	42
MN	% OX.	0.141
CO	PPM	45
NI	PPM	22
CU	PPM	25
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	80
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	11
BE	PPM	2.1
B	PPM	< 400
ZR	PPM	172
LA	PPM	27
CE	PPM	25
TH	PPM	< 150
LOI	%	0.05
	TOTAL	99.779

SIBBETT

48 3354'

ELEMENT			CONCENTRATION
NA	% OX.		3.42
K	% OX.		2.90
CA	% OX.		3.32
MG	% OX.		1.61
FE	% OX.		4.40
AL	% OX.		14.71
SI	% OX.		64.82
TI	% OX.		0.587
P	% OX.		0.104
SR	PPM		234
BA	% OX.		0.098
V	PPM	<	250
CR	PPM		30
MN	% OX.		0.130
CO	PPM		23
NI	PPM		18
CU	PPM		20
MO	PPM	<	50.0
PB	PPM	<	10.0
ZN	PPM		69
CD	PPM	<	5.00
AG	PPM	<	2.00
AU	PPM	<	4.00
AS	PPM	<	25.0
SB	PPM	<	30.0
BI	PPM	<	100
U	PPM	<	2500
TE	PPM	<	50.0
SN	PPM	<	5.00
W	PPM	<	1200
LI	PPM		27
BE	PPM		2.1
B	PPM	<	400
ZR	PPM		218
LA	PPM		33
CE	PPM		44
TH	PPM	<	150
LOI	%		3.23
	TOTAL		96.121

SIBBETT N-1

11 3400.5'

ELEMENT		CONCENTRATION
NA	% OX.	3.69
K	% OX.	0.731
CA	% OX.	8.99
MG	% OX.	5.66
FE	% OX.	8.45
AL	% OX.	18.19
SI	% OX.	52.09
TI	% OX.	1.11
P	% OX.	0.239
SR	PPM	683
BA	% OX.	0.033
V	PPM	< 250
CR	PPM	180
MN	% OX.	0.155
CO	PPM	35
NI	PPM	99
CU	PPM	70
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	73
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	7
BE	PPM	1.5
B	PPM	< 400
ZR	PPM	106
LA	PPM	25
CE	PPM	23
TH	PPM	< 150
LOI	%	0.83
	TOTAL	99.346

SIBBETT

49

3427.5'

alt.

ELEMENT		CONCENTRATION
NA	% OX.	4.63
K	% OX.	0.950
CA	% OX.	4.64
MG	% OX.	1.98
FE	% OX.	9.31
AL	% OX.	16.31
SI	% OX.	56.48
TI	% OX.	1.44
P	% OX.	0.350
SR	% OX.	445
BA	PPM	0.071
V	% OX.	250
CR	PPM	28
MN	PPM	0.111
CO	% OX.	16
NI	PPM	18
CU	PPM	27
MO	PPM	50.0
PB	PPM	10.0
ZN	PPM	125
CD	PPM	5.00
AG	PPM	3
AU	PPM	4.00
AS	PPM	25.0
SB	PPM	30.0
BI	PPM	100
U	PPM	2500
TE	PPM	50.0
SN	PPM	5.00
W	PPM	1200
LI	PPM	28
BE	PPM	2.3
B	PPM	400
ZR	PPM	252
LA	PPM	35
CE	PPM	52
TH	PPM	150
LOI	%	2.31
TOTAL		96.257

SIBBETT N-1

12

3561'

ELEMENT		CONCENTRATION
NA	% OX.	4.33
K	% OX.	1.14
CA	% OX.	6.90
MG	% OX.	3.47
FE	% OX.	11.46
AL	% OX.	15.17
SI	% OX.	54.22
TI	% OX.	2.07
P	% OX.	0.438
SR	% OX.	379
BA	PPM	0.053
V	% OX.	< 250
CR	PPM	48
MN	PPM	0.207
CO	% OX.	31
NI	PPM	21
CU	PPM	23
MO	PPM	50.0
PB	PPM	10.0
ZN	PPM	113
CD	PPM	5.00
AG	PPM	2.00
AU	PPM	4.00
AS	PPM	25.0
SB	PPM	30.0
BI	PPM	100
U	PPM	2500
TE	PPM	50.0
SN	PPM	5.00
W	PPM	1200
LI	PPM	11
BE	PPM	2.1
B	PPM	< 400
ZR	PPM	143
LA	PPM	29
CE	PPM	37
TH	PPM	< 150
LOI	%	1.66
TOTAL		99.463

SIBBETT N-1

13 3686' Pos. John Day Series

ELEMENT		CONCENTRATION
NA	% OX.	4.51
K	% OX.	1.01
CA	% OX.	7.01
MG	% OX.	3.40
FE	% OX.	12.36
AL	% OX.	15.23
SI	% OX.	53.44
TI	% OX.	2.30
P	% OX.	0.547
SR	PPM	349
BA	% OX.	0.047
V	PPM	< 250
CR	PPM	92
MN	% OX.	0.182
CO	PPM	24
NI	PPM	46
CU	PPM	48
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	130
CD	PPM	< 5.00
AG	PPM	3
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	13
BE	PPM	2.2
B	PPM	< 400
ZR	PPM	174
LA	PPM	29
CE	PPM	39
TH	PPM	< 150
LOI	%	9.52
	TOTAL	100.038

SIBBETT N-1

14 3695'

ELEMENT		CONCENTRATION
NA	% OX.	3.62
K	% OX.	4.49
CA	% OX.	1.19
MG	% OX.	0.524
FE	% OX.	4.10
AL	% OX.	13.56
SI	% OX.	68.20
TI	% OX.	0.454
P	% OX.	0.068
SR	PPM	81
BA	% OX.	0.102
V	PPM	< 250
CR	PPM	18
MN	% OX.	0.083
CO	PPM	18
NI	PPM	12
CU	PPM	11
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	101
CD	PPM	< 5.00
AG	PPM	2
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	17
BE	PPM	3.0
B	PPM	< 400
ZR	PPM	459
LA	PPM	40
CE	PPM	63
TH	PPM	< 150
LOI	%	3.22
	TOTAL	96.398

SIBBETT N-1

15 3786'

ELEMENT			CONCENTRATION
NA	% OX.		5.80
K	% OX.		3.11
CA	% OX.		1.32
MG	% OX.		0.475
FE	% OX.		3.95
AL	% OX.		14.79
SI	% OX.		70.20
TI	% OX.		0.622
P	% OX.		0.114
SR	PPM		148
BA	% OX.		0.106
V	PPM	<	250
CR	PPM		113
MN	% OX.		0.043
CO	PPM		20
NI	PPM		50
CU	PPM		8
MO	PPM	<	50.0
PB	PPM	<	10.0
ZN	PPM		93
CD	PPM	<	5.00
AG	PPM	<	2.00
AU	PPM	<	4.00
AS	PPM	<	25.0
SB	PPM	<	30.0
BI	PPM	<	100
U	PPM	<	2500
TE	PPM	<	50.0
SN	PPM	<	5.00
W	PPM	<	1200
LI	PPM		15
BE	PPM		2.6
B	PPM	<	400
ZR	PPM		413
LA	PPM		36
CE	PPM		50
TH	PPM	<	150
LOI	%		0.45
	TOTAL		100.533

SIBBETT N-1

10 3920'

ELEMENT		CONCENTRATION
NA	% OX.	5.22
K	% OX.	3.09
CA	% OX.	1.74
MG	% OX.	0.623
FE	% OX.	4.32
AL	% OX.	14.44
SI	% OX.	69.31
TI	% OX.	0.595
P	% OX.	0.120
SR	PPM	167
BA	% OX.	0.109
V	PPM	< 250
CR	PPM	57
MN	% OX.	0.062
CO	PPM	9
NI	PPM	25
CU	PPM	10
MO	PPM	< 50.0
PB	PPM	< 10.0
ZN	PPM	78
CD	PPM	< 5.00
AG	PPM	< 2.00
AU	PPM	< 4.00
AS	PPM	< 25.0
SB	PPM	< 30.0
BI	PPM	< 100
U	PPM	< 2500
TE	PPM	< 50.0
SN	PPM	< 5.00
W	PPM	< 1200
LI	PPM	21
BE	PPM	2.6
B	PPM	< 400
ZR	PPM	367
LA	PPM	37
CE	PPM	53
TH	PPM	< 150
LOI	%	0.66
	TOTAL	99.632

EFFICIENCY® LINE NO. 6636

Sample analysis by GEO

U. of Arizona dates young rocks to 50,000 yrs. K/Ar. $750 per.

Depth	1	2	3 Hole Rx	4 K/Ar.	5 Fission Track $300	6	7	8 Depth.	10 X-Ray	11 Whole Rock	12 Thin Sec.	13
1175 1								531		✓	✓	
1212 2			✓	✓	1212			597		✓	✓	
1578 3	bas-Andesite		✓	1578				1061.6		✓	✓	
1611 4	" " same flow			1611				Tuff 1172		glass part	✓	
5	bas-And.				1625			tuff 1175			✓	
6	Vitric Tuff.		✓		2068			1212.5		✓		
2301 7	Dike-bas-		✓	2301	2301			Tuff/Soil 1375	✓			
2375 8	Host andesite,-		✓	2375				Flow-And. 1461.4		✓		
2927.5 9	bas-And.		✓	2927.5				1578		✓		
2995.6 10	" " same flow			2995.6				1956		✓		
3128 11	intrusive dike		✓	3128	ground mass-plag			2168		✓		
3238.6 12	Andesite Host.		✓	3238.6				2361		✓		
3261.4 13	" same flow			3261.4				2375		✓		
3548 14	basaltic-And.		✓	3548				bas-An 2478		✓		
3980.3 15	dac.?				3980.3			2707		✓		
16								Tuff 2889.5	✓	✓	✓	
17								2927		✓ K/Ar		
18								3090		✓		
19								Tuff 3115	✓	✓		
20								Tuff 3117	✓			
21								Intru 3128		✓		
22								Host Andi 3238.6		✓		
23								Tuff 3350	✓	✓		
24								3548.2		✓		
25								bas-An 3595.1		✓		
26								Tuff 3695.8	✓	✓		
27								Dac. 3802		✓		
28								Tuff 3816	✓	✓		
29								Dac. 3859		✓		
30												
31												

X-Ray

GEO - Mike Johnson Samples.

	1 X-Ray Samples	2	3	4	5	6	7	8	9
1	3589'	fiberous - white - pale yellow Li. brn. slight HCl reaction Friable 3-4 Hardne							
2		2nd min. botryoidal - vitric gray - transparent							
3	3589	pseudo cubic. - clear to translucent. effervesces strongly in HCl.							
4									
5	2638'	clear vitreous Moniclinic? 2 cleavage.							
6									
7	3367	Pale yellow - Leamon - translucent effervese - strongly in HCl							
8									
9	3659	clear vitreous - strong effervescs.							
10									
11	2864	li. brn to pale yellow - botryoidal -							
12									
13	3103	possible ~~calcite~~ aragonite							
14									
15	4252?	White to translucent, euh - minerals -							
16									
17	3397	Prisms & Pinicoid							
18									
19	3791	White, massive Fracture Filling - moderately HCl re							
20		poss. garts & calcite.							
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									

Oregon, 1985

GEO ~~Oregon~~ Newberry N1 Zeolite samples for X-Ray.

OR-N1-2630 - Analcime? Too soft. H-4?
1. clear orthorombic or tet. crystals, poss. Iso
2. ↳ Phillipsite - zeolite

OR-N1-3604 - 2 minerals. aragonite
~~Plag~~ — 1. white radiating masses - ~~Plag~~ filling vesicales or covers green balls.
2. botriodal yellow mineral - in balls. concentric
both plag. & green balls underlain by light blue min.

OR-N1-3613
Olive green & concentric balls with cleavage.
Siderite

OR-N1-3415 - ~~Plagioclase~~ Aragonite or calcite.
clear, "desert rose" type - radiating blades.

Note: 3424 - 3434+ looks like sampled regional lapilli tuff
brown to green lapilli, obsidian & pumice frag.