

BUFF #2 46TM-1

Fe  $24.1 \pm 0.4$

N=20

S  $20.5 \pm 0.2$

N=10

W  $1.4 \pm 0.1$

QUANTITATIVE MICROPROBE ANALYSIS - ON LINE MODE  
RSX11-PAP-Vers. D - JSC-VL) Variable background-time.

YOUR ANALYSIS LABEL: 100294

03-OCT-94 08154155

DATA STD. :

ELT.	SPC	XTAL	POS.	BG OFFSET	BG SLOPE	PK-BG C/S/nA	SIGMA C.	TIM S	% REQ. ACCUR.	BEAM
CA	1	PET	38369.	500	0.00	44.69	0.5	30	0.1	30.3
FE	2	LIF	48089.	1000	0.00	17.83	0.8	30	0.1	30.3
MN	2	LIF	52197.	500	0.00	29.76	0.6	30	0.1	30.3
SI	3	TAP	27745.	600	0.00	229.59	0.2	30	0.1	30.3
MG	3	TAP	38499.	600	0.00	64.94	0.4	30	0.1	30.3

POINT # : 1

Label: KAER STD  
X=35564. Y=35661. Z= 2904.  
30 30 30 30 30

ELT.	PFAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
FE	48089.	553.04	4.80	1.01021	0.07701	1.1	30.3
SI	27745.	7054.86	70.41	1.00317	0.13988	0.3	
CA	38369.	1368.17	21.10	0.99395	0.06259	0.7	
MG	38499.	2046.04	45.10	1.01601	0.04477	0.6	
MN	52197.	10.67	5.10	* 0.00617	0.00086	14.2	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.9939	6.986	2.1609	CaO	9.774	0.070
FE :	1.0102	9.491	2.1069	FeO	12.210	0.137
MN :	0.0062	0.107	0.0241	MnO	0.138	0.020
SI :	1.0032	18.056	7.9702	SiO2	38.627	0.121

MG : 1.0160 7.388 3.7676 MG0 12.250 0.072  
 O 30.971 24.0000

TOTAL : 72.999 72.999  
 ITERATION : 3

POINT # : 2

Label: K&ER STD  
 X=35564, Y=35557, Z= 2904.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K,RATIO	SIG %	BEAM
							30.3
FE	48089.	558.29	8.70	1.01679	0.07751	1.1	
SI	27745.	7050.57	72.21	1.00268	0.13981	0.3	
CA	38369.	1383.55	22.60	1.00458	0.06326	0.7	
MG	38499.	2048.05	50.30	1.01478	0.04471	0.6	
MN	52197.	11.13	4.88	0.00693	0.00097	12.6	

ELEMENT	I,X./I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	1.0046	7.060	2.1813	CA0	9.878	0.070
FE :	1.0168	9.552	2.1180	FEO	12.288	0.138
MN :	0.0069	0.120	0.0271	MNO	0.155	0.020
SI :	1.0027	18.047	7.9574	SI02	38.608	0.121
MG :	1.0148	7.380	3.7589	MG0	12.236	0.072
O		31.007	24.0000			

TOTAL : 73.166 73.166  
 ITERATION : 0

POINT # : 3

Label: MARJ  
 X=41993, Y=39033, Z= 2865.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K,RATIO	SIG %	BEAM
							30.3
SI	27745.	6852.92	67.91	0.97468	0.13591	0.3	
FE	48089.	529.46	7.00	0.96638	0.07367	1.1	
CA	38369.	18.03	14.48	0.00262	0.00017	30.2	
MG	38499.	9228.41	144.85	4.61309	0.20325	0.5	
MN	52197.	16.97	5.07	0.01318	0.00184	7.8	

ELEMENT	I,X./I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0026	0.019	0.0040	CA0	0.026	0.008
FE :	0.9664	8.985	1.4018	FEO	11.559	0.131
MN :	0.0132	0.226	0.0359	MNO	0.292	0.023
SI :	0.9747	19.172	5.9479	SI02	41.015	0.130
MG :	4.6131	29.751	10.6625	MG0	49.329	0.224
O		44.068	24.0000			

TOTAL : 102.220 102.220  
 ITERATION : 4

POINT # : 4

Label: BLUFF #2 46TM-1  
 X= 7832, Y=26798, Z= 2704.

30 30 30 30 30

ELT. PEAK PEAK BACKGR. I,X./I,STD. K,RATIO SIG % BEAM

30.3

FE	48089.	1063.69	9.30	1.95157	0.14877	1.0
SI	27745.	6494.13	64.51	0.92424	0.12887	0.3
CA	38369.	30.80	15.70	0.01115	0.00070	8.8
MG	38499.	6754.43	108.53	3.37735	0.14881	0.5
MN	52197.	25.83	6.13	0.02185	0.00305	5.7

ELEMENT	I,X/I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0112	0.077	0.0180	CaO	0.108	0.010
FE :	1.9516	17.860	2.9742	FeO	22.976	0.222
MN :	0.0218	0.367	0.0621	MnO	0.474	0.027
SI :	0.9242	17.956	5.9459	SiO2	38.412	0.123
MG :	3.3773	23.668	9.0539	MgO	39.243	0.184
O		41.286	24.0000			
TOTAL :		101.213			101.213	
ITERATION :	4					

Fe 24.7

POINT # : 5

Label: BLUFF #2 46TM-1  
X= 8168. Y=26337. Z= 2705.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG %	BEAM
SI	27745.	6539.73	70.01	0.93009	0.12969	0.3	30.3
FE	48089.	1031.22	7.30	1.89537	0.14448	1.0	
CA	38369.	25.77	16.13	0.00712	0.00045	12.8	
MG	38499.	6923.60	108.33	3.46377	0.15261	0.5	
MN	52197.	27.60	5.88	0.02409	0.00336	5.4	

ELEMENT	I,X/I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0071	0.049	0.0114	CaO	0.069	0.009
FE :	1.8954	17.360	2.8665	FeO	22.333	0.217
MN :	0.0241	0.405	0.0679	MnO	0.523	0.028
SI :	0.9301	18.065	5.9313	SiO2	38.645	0.124
MG :	3.4638	24.233	9.1916	MgO	40.180	0.188
O		41.639	24.0000			
TOTAL :		101.750			101.750	
ITERATION :	0					

Fe 23.8

POINT # : 6

Label: BLUFF #2 46TM-1  
X= 8347. Y=25867. Z= 2712.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG %	BEAM
SI	27745.	6520.95	65.71	0.92815	0.12942	0.3	30.3
FE	48089.	1027.98	8.20	1.88798	0.14392	1.0	
CA	38369.	24.17	16.80	0.00544	0.00034	16.5	
MG	38499.	6927.98	111.03	3.46515	0.15268	0.5	
MN	52197.	26.33	6.33	0.02218	0.00309	5.7	

ELEMENT	I,X/I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0054	0.038	0.0087	CaO	0.053	0.009
FE :	1.8880	17.294	2.8603	FeO	22.249	0.217

Fe 23.7

N : 0.0222 0.373 0.0627 KNO 0.481 0.028  
 I : 0.9282 18.029 5.9291 SiO2 38.568 0.124  
 G : 3.4651 24.242 9.2101 MgO 40.195 0.188  
 41.571 24.0000  
 TOTAL : 101.546 101.546  
 ITERATION : 0

POINT # : 7

Label: BLUFF #2 46TM-1  
 X= 9012, Y=26631, Z= 2703.

30 30 30 30 30

T.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	1027.54	7.80	1.88812	0.14393	1.0	
SI	27745.	6518.69	63.91	0.92819	0.12942	0.3	
CA	38369.	26.13	15.93	0.00754	0.00047	12.4	
MG	38499.	6956.29	108.13	3.48140	0.15339	0.5	
MN	52197.	24.67	5.64	0.02111	0.00294	5.8	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0075	0.052	0.0120	CAO	0.073	0.009
FE :	1.8881	17.295	2.8556	FE0	22.250	0.217
MN :	0.0211	0.355	0.0595	MNO	0.458	0.027
SI :	0.9282	18.029	5.9191	SI02	38.570	0.124
MG :	3.4814	24.348	9.2345	MGO	40.371	0.189
O		41.642	24.0000			

Fe<sub>23.6</sub>

TOTAL : 101.722 101.722  
 ITERATION : 0

POINT # : 8

Label: BLUFF #2 46TMM1  
 X= 9101, Y=27182, Z= 2697.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6555.23	63.91	0.93350	0.13016	0.3	
FE	48089.	1037.78	9.50	1.90406	0.14515	1.0	
CA	38369.	25.20	15.97	0.00682	0.00043	13.2	
MG	38499.	6981.40	107.23	3.49485	0.15398	0.5	
MN	52197.	26.63	6.68	0.02214	0.00309	5.8	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0068	0.047	0.0108	CAO	0.066	0.009
FE :	1.9041	17.437	2.8643	FE0	22.433	0.218
MN :	0.0221	0.372	0.0621	MNO	0.480	0.028
SI :	0.9335	18.128	5.9212	SI02	38.781	0.124
MG :	3.4948	24.436	9.2204	MGO	40.516	0.189
O		41.856	24.0000			

Fe<sub>23.7</sub>

TOTAL : 102.277 102.277  
 ITERATION : 0

POINT # : 9

Label: BLUFF #2 46TM-1  
 X= 9001, Y=27278, Z= 2697.

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	646.64	6.20	1.18592	0.09040	1.1	
SI	27745.	9948.66	81.31	1.41904	0.19787	0.3	
CA	38369.	127.00	16.70	0.08149	0.00513	2.2	
MG	38499.	5347.62	88.62	2.67376	0.11781	0.5	
MN	52197.	24.87	6.68	0.02018	0.00281	6.3	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0815	0.575	0.1218	CAO	0.804	0.018
FE :	1.1859	10.998	1.6729	FEO	14.149	0.152
MN :	0.0202	0.345	0.0534	MNO	0.446	0.028
SI :	1.4190	26.267	7.9443	SI02	56.193	0.163
MG :	2.6738	17.927	6.2634	MGO	29.724	0.144
O		45.203	24.0000			
TOTAL :		101.315			101.315	
ITERATION :	4					

*F<sub>s</sub> 20.8*  
*W<sub>o</sub> 1.5*

POINT # : 10

Label: BLUFF #2 46TM-1  
X= 8276, Y=27890, Z= 2697.

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	9913.47	87.11	1.41278	0.19699	0.3	
CA	38369.	116.93	15.28	0.07508	0.00473	2.3	
FE	48089.	639.42	7.10	1.17058	0.08923	1.1	
MG	38499.	5384.81	92.92	2.68979	0.11851	0.5	
MN	52197.	26.90	4.48	0.02486	0.00347	5.3	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0751	0.529	0.1124	CAO	0.741	0.017
FE :	1.1706	10.859	1.6550	FEO	13.970	0.151
MN :	0.0249	0.425	0.0659	MNO	0.549	0.029
SI :	1.4128	26.158	7.9274	SI02	55.960	0.162
MG :	2.6898	18.029	6.3120	MGO	29.894	0.145
O		45.112	24.0000			
TOTAL :		101.113			101.113	
ITERATION :	0					

*F<sub>s</sub> 20.5*  
*W<sub>o</sub> 1.4*

POINT # : 11

Label: BLUFF #2 46TM-1  
X= 8244, Y=27266, Z= 2697.

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6298.11	63.31	0.89638	0.12499	0.3	
FE	48089.	1045.15	7.70	1.92053	0.14640	1.0	
CA	38369.	32.87	15.86	0.01257	0.00079	8.1	
MG	38499.	6626.27	105.63	3.31425	0.14603	0.5	
MN	52197.	26.10	6.93	0.02126	0.00296	6.0	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
---------	-------------	---------------	-----------------------	----------	---------------	---------------



ELEMENT	I,X/I,STD.	CONCEN.	ATOM.	CON.	COMPOUND	CONCEN.	ERROR
CA :	0.0126	0.087	0.0207	CAO	0.122	0.010	
FE :	1.9205	17.600	2.9984	FEO	22.642	0.220	
MN :	0.0213	0.358	0.0620	MNO	0.462	0.028	
SI :	0.8964	17.414	5.8992	SI02	37.254	0.120	
MG :	3.3143	23.305	9.1204	MGO	38.642	0.182	
O		40.357	24.0000				

Fe<sub>24.7</sub>

TOTAL : 99.121  
 ITERATION : 4

POINT # : 12

Label: BLUFF #2 46TM-1  
 X= 8152, Y=27109, Z= 2697.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG Z	BEAM
							30.3
SI	27745.	6549.41	69.71	0.93171	0.12991	0.3	
FE	48089.	1047.92	6.50	1.92814	0.14698	1.0	
CA	38369.	26.07	15.61	0.00773	0.00049	11.8	
MG	38499.	6895.16	111.73	3.44826	0.15193	0.5	
MN	52197.	27.43	5.58	0.02424	0.00338	5.4	

ELEMENT	I,X/I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0077	0.054	0.0123	CAO	0.075	0.009
FE :	1.9281	17.668	2.9126	FEO	22.729	0.220
MN :	0.0242	0.408	0.0683	MNO	0.527	0.028
SI :	0.9317	18.072	5.9240	SI02	38.660	0.124
MG :	3.4483	24.185	9.1587	MGO	40.100	0.188
O		41.706	24.0000			

Fe<sub>24.1</sub>

TOTAL : 102.091  
 ITERATION : 0

POINT # : 13

Label: BLUFF #2 46TM-1  
 X= 8287, Y=26846, Z= 2700.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG Z	BEAM
							30.3
FE	48089.	1058.00	8.50	1.94373	0.14817	1.0	
SI	27745.	6517.87	66.41	0.92795	0.12939	0.3	
CA	38369.	28.40	14.90	0.00998	0.00063	9.4	
MG	38499.	6880.43	114.63	3.44042	0.15159	0.5	
MN	52197.	26.40	5.27	0.02344	0.00327	5.4	

ELEMENT	I,X/I,STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0100	0.069	0.0159	CAO	0.097	0.009
FE :	1.9437	17.806	2.9405	FEO	22.907	0.222
MN :	0.0234	0.394	0.0662	MNO	0.509	0.028
SI :	0.9280	18.002	5.9112	SI02	38.511	0.123
MG :	3.4404	24.134	9.1549	MGO	40.015	0.187
O		41.634	24.0000			

Fe<sub>24.3</sub>

TOTAL : 102.040  
 ITERATION : 0

POINT # : 14

Label: BLUFF #2 46TM-1  
X= 8386, Y=26526, Z= 2705.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6559.99	61.20	0.93446	0.13030	0.3	
FE	48089.	1020.85	8.00	1.87525	0.14295	1.0	
CA	38369.	27.13	17.32	0.00725	0.00046	13.0	
MG	38499.	6962.18	112.33	3.48205	0.15342	0.5	
MN	52197.	25.50	6.50	0.02108	0.00294	6.0	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0072	0.050	0.0115	CAO	0.070	0.009
FE :	1.8752	17.197	2.8315	FEO	22.123	0.216
MN :	0.0211	0.355	0.0594	MNO	0.458	0.028
SI :	0.9345	18.123	5.9334	SI02	38.770	0.124
MG :	3.4821	24.406	9.2309	MGO	40.467	0.189
O		41.758	24.0000			

TOTAL : 101.888  
ITERATION : 0

POINT # : 15

Label: BLUFF #2 46TM-1  
X= 8329, Y=26319, Z= 2705.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	646.97	7.50	1.18392	0.09025	1.1	
SI	27745.	10029.60	78.71	1.43080	0.19951	0.3	
CA	38369.	120.16	15.10	0.07761	0.00489	2.3	
MG	38499.	5394.89	93.32	2.69492	0.11874	0.5	
MN	52197.	26.33	5.23	0.02341	0.00326	5.4	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0776	0.547	0.1152	CAO	0.766	0.018
FE :	1.1839	10.976	1.6579	FEO	14.121	0.152
MN :	0.0234	0.400	0.0615	MNO	0.517	0.028
SI :	1.4308	26.481	7.9533	SI02	56.651	0.164
MG :	2.6949	18.039	6.2589	MGO	29.911	0.145
O		45.520	24.0000			

TOTAL : 101.965  
ITERATION : 4

POINT # : 16

Label: BLUFF #2 46TM-1  
X= 8388, Y=26097, Z= 2705.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	1039.46	9.00	1.90805	0.14545	1.0	
SI	27745.	6478.26	71.51	0.92133	0.12847	0.3	
CA	38369.	27.07	15.91	0.00825	0.00052	11.4	
MG	38499.	6841.69	109.23	3.42274	0.15081	0.5	

Fa 23.5

FS 20.6  
Wo 1.4

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0082	0.057	0.0133	CaO	0.080	0.009
FE :	1.9081	17.475	2.9104	FeO	22.481	0.219
MN :	0.0218	0.367	0.0621	MnO	0.474	0.028
SI :	0.9213	17.913	5.9320	SiO2	38.320	0.123
MG :	3.4227	23.917	9.1501	MgO	39.656	0.186
O		41.283	24.0000			
TOTAL :		101.012			101.012	
ITERATION :	4					

Fe<sub>24.1</sub>

POINT # : 17

Label: BLUFF #2 46TM-1  
 X= 8137, Y=25826, Z= 2713.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	1028.88	7.70	1.89080	0.14413	1.0	
SI	27745.	6533.10	63.91	0.93027	0.12971	0.3	
CA	38369.	26.83	15.24	0.00857	0.00054	10.9	
MG	38499.	6933.53	114.03	3.46685	0.15275	0.5	
MN	52197.	26.97	5.50	0.02381	0.00332	5.4	

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0084	0.059	0.0137	CaO	0.083	0.009
FE :	1.8908	17.322	2.8609	FeO	22.284	0.217
MN :	0.0238	0.400	0.0672	MnO	0.517	0.028
SI :	0.9303	18.079	5.9375	SiO2	38.676	0.124
MG :	3.4668	24.205	9.1833	MgO	40.133	0.188
O		41.628	24.0000			
TOTAL :		101.694			101.694	
ITERATION :	0					

Fe<sub>23.8</sub>

POINT # : 18

Label: BLUFF #2 46TM-1  
 X= 8146, Y=25583, Z= 2713.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	9960.13	82.61	1.42045	0.19806	0.3	
CA	38369.	122.00	14.57	0.07936	0.00500	2.2	
FE	48089.	637.78	6.90	1.16818	0.08905	1.1	
MG	38499.	5415.46	88.72	2.70809	0.11932	0.5	
MN	52197.	25.17	3.00	0.02459	0.00343	4.9	

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0794	0.560	0.1182	CaO	0.782	0.017
FE :	1.1682	10.834	1.6427	FeO	13.938	0.150
MN :	0.0246	0.421	0.0648	MnO	0.543	0.026
SI :	1.4204	26.306	7.9310	SiO2	56.277	0.163
MG :	2.7081	18.124	6.3123	MgO	30.051	0.145
O		45.347	24.0000			
TOTAL :		101.592			101.592	

Fe<sub>20.3</sub>  
 Wo<sub>1.5</sub>



POINT # : 19

Label: BLUFF #2 46TM-1  
X= 8162, Y=25275, Z= 2713.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6528.99	62.10	0.92991	0.12966	0.3	
FE	48089.	1052.08	6.90	1.93518	0.14752	1.0	
CA	38369.	24.67	16.65	0.00592	0.00037	15.6	
MG	38499.	6898.45	113.83	3.44903	0.15197	0.5	
MN	52197.	26.13	6.65	0.02161	0.00301	6.0	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0059	0.041	0.0095	CAO	0.057	0.009
FE :	1.9352	17.709	2.9235	FEO	22.782	0.221
MN :	0.0216	0.363	0.0609	MNO	0.469	0.028
SI :	0.9299	18.085	5.9365	SI02	38.689	0.124
MG :	3.4490	24.085	9.1331	MGO	39.934	0.187
O		41.649	24.0000			

Fe<sub>24.2</sub>

TOTAL : 101.932 101.932

ITERATION : 4

POINT # : 20

Label: BLUFF #2 46TM-1  
X= 8365, Y=26008, Z= 2706.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6548.80	66.51	0.93233	0.13000	0.3	
FE	48089.	1044.34	7.40	1.92036	0.14639	1.0	
CA	38369.	26.60	15.09	0.00850	0.00054	11.1	
MG	38499.	6900.92	105.73	3.45516	0.15224	0.5	
MN	52197.	25.97	6.66	0.02143	0.00299	6.0	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0085	0.059	0.0136	CAO	0.083	0.009
FE :	1.9204	17.577	2.8985	FEO	22.613	0.219
MN :	0.0214	0.360	0.0604	MNO	0.465	0.028
SI :	0.9323	18.130	5.9447	SI02	38.786	0.124
MG :	3.4552	24.125	9.1381	MGO	40.000	0.187
O		41.695	24.0000			

Fe<sub>24.1</sub>

TOTAL : 101.946 101.946

ITERATION : 0

POINT # : 21

Label: BLUFF #2 46TM-1  
X= 8453, Y=26965, Z= 2698.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6530.26	61.51	0.93044	0.12974	0.3	

FE	48089.	1028.22	7.80	1.72338	0.14883	1.0
CA	38369.	26.50	16.82	0.00715	0.00045	13.1
MG	38499.	6928.05	106.93	3.46856	0.15283	0.5
MN	52197.	27.50	5.52	0.02439	0.00340	5.3

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0072	0.050	0.0114	CAO	0.069	0.009
FE :	1.9236	17.604	2.9007	FEO	22.650	0.220
MN :	0.0244	0.410	0.0686	MNO	0.529	0.028
SI :	0.9304	18.095	5.9280	SI02	38.711	0.124
MG :	3.4686	24.212	9.1632	MGO	40.145	0.188
O		41.732	24.0000			

Fe<sub>24.0</sub>

TOTAL : 102.104  
ITERATION : 0

POINT # : 22

Label: BLUFF #2 46TM-1  
X= 8842, Y=27028, Z= 2698.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	R.RATIO	SIG %	BEAM
SI	27745.	9961.10	79.41	1.42137	0.19819	0.3	30.3
FE	48089.	633.57	7.50	1.15953	0.08839	1.1	
CA	38369.	95.65	13.71	0.06055	0.00381	2.6	
MG	38499.	5428.88	90.42	2.71467	0.11961	0.5	
MN	52197.	24.23	5.37	0.02093	0.00292	5.8	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0606	0.427	0.0904	CAO	0.598	0.016
FE :	1.1595	10.759	1.6329	FEO	13.841	0.150
MN :	0.0209	0.358	0.0553	MNO	0.463	0.027
SI :	1.4214	26.329	7.9458	SI02	56.325	0.163
MG :	2.7147	18.156	6.3299	MGO	30.104	0.145
O		45.301	24.0000			

Fe<sub>20.3</sub>  
Wo<sub>1.1</sub>

TOTAL : 101.330  
ITERATION : 4

POINT # : 23

Label: BLUFF #2 46TM-1  
X= 9095, Y=27213, Z= 2697.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	R.RATIO	SIG %	BEAM
SI	27745.	6537.71	65.11	0.93124	0.12985	0.3	30.3
FE	48089.	1028.88	7.20	1.89270	0.14428	1.0	
CA	38369.	27.60	16.41	0.00827	0.00052	11.4	
MG	38499.	6941.24	113.73	3.47272	0.15301	0.5	
MN	52197.	25.97	5.09	0.02317	0.00323	5.4	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0083	0.057	0.0132	CAO	0.080	0.009
FE :	1.8927	17.333	2.8608	FEO	22.298	0.217
MN :	0.0232	0.390	0.0654	MNO	0.503	0.027
SI :	0.9312	18.112	5.9441	SI02	38.746	0.124
MG :	3.4727	24.192	9.1723	MGO	40.112	0.188

Fe<sub>23.8</sub>

41.636 24.0000  
 TOTAL : 101.740 101.740  
 ITERATION : 4

POINT # : 24  
 Label: BLUFF #2 46TM-1  
 X= 9251, Y=26723, Z= 2697.  
 30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6539.29	62.91	0.93156	0.12989	0.3	
FE	48089.	1032.73	9.30	1.89549	0.14449	1.0	
CA	38369.	25.57	16.51	0.00670	0.00042	13.8	
MG	38499.	6917.36	109.73	3.46178	0.15253	0.5	
MN	52197.	24.83	5.81	0.02111	0.00294	5.7	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0067	0.046	0.0107	CAO	0.065	0.009
FE :	1.8955	17.358	2.8682	FEO	22.330	0.217
MN :	0.0211	0.355	0.0597	MNO	0.459	0.026
SI :	0.9316	18.117	5.9529	SI02	38.758	0.124
MG :	3.4618	24.121	9.1557	MGO	39.994	0.187
O		41.609	24.0000			

Fe<sub>23.9</sub>

TOTAL : 101.607 101.607  
 ITERATION : 0

POINT # : 25  
 Label: BLUFF #2 46TM-1  
 X= 9229, Y=26634, Z= 2697.  
 30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6529.61	65.61	0.92975	0.12964	0.3	
FE	48089.	1061.92	7.80	1.95226	0.14882	1.0	
CA	38369.	25.80	17.50	0.00613	0.00039	14.9	
MN	52197.	27.20	3.70	0.02608	0.00363	4.8	
MG	38499.	6845.45	111.83	3.42402	0.15086	0.5	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0061	0.043	0.0098	CAO	0.060	0.009
FE :	1.9523	17.862	2.9539	FEO	22.980	0.222
MN :	0.0261	0.439	0.0737	MNO	0.566	0.027
SI :	0.9297	18.084	5.9465	SI02	38.686	0.124
MG :	3.4240	23.875	9.0696	MGO	39.587	0.185
O		41.576	24.0000			

Fe<sub>24.6</sub>

TOTAL : 101.878 101.878  
 ITERATION : 0

POINT # : 26  
 Label: BLUFF #2 46TM-1  
 X= 9235, Y=26459, Z= 2699.  
 30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
------	-----------	------------	---------------	-------------	---------	-------	------

	(C/S)	(C/S)				
FE 48089.	717.66	7.40	1.31541	0.10027	1.0	30.3
SI 27745.	9565.50	79.61	1.36438	0.19024	0.3	
CA 38369.	537.58	18.00	0.38392	0.02418	1.0	
MG 38499.	4489.38	77.61	2.24335	0.09884	0.5	
MN 52197.	21.67	5.15	0.01833	0.00255	6.4	

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON,	COMPOUND	WT. % CONCEN,	1 SIGMA ERROR
CA :	0.3839	2.694	0.5959	CAO	3.770	0.037
FE :	1.3154	12.178	1.9332	FEO	15.667	0.164
MN :	0.0183	0.313	0.0505	MNO	0.404	0.026
SI :	1.3644	25.046	7.9059	SI02	53.580	0.156
MG :	2.2433	15.380	5.6085	MGO	25.501	0.127
O		43.311	24.0000			
TOTAL :		98.922			98.922	
ITERATION :	4					
Comment :	HIGH-CA PX					

HL-Ca  
Px

POINT # : 27  
 Label: BLUFF #2 46TM-1  
 X= 9221, Y=26266, Z= 2699.  
 30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD,	K.RATIO	SIG %	BEAM
							30.3
FE 48089.	643.76	7.50	1.17847	0.08983	1.1		
SI 27745.	9904.80	81.21	1.41309	0.19704	0.3		
CA 38369.	123.56	14.20	0.08082	0.00509	2.2		
MG 38499.	5301.42	86.42	2.65203	0.11685	0.5		
MN 52197.	25.17	5.15	0.02222	0.00310	5.6		

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON,	COMPOUND	WT. % CONCEN,	1 SIGMA ERROR
CA :	0.0808	0.570	0.1214	CAO	0.797	0.018
FE :	1.1785	10.932	1.6711	FEO	14.064	0.151
MN :	0.0222	0.380	0.0591	MNO	0.491	0.028
SI :	1.4131	26.152	7.9490	SI02	55.946	0.162
MG :	2.6520	17.801	6.2505	MGO	29.515	0.143
O		44.979	24.0000			
TOTAL :		100.813			100.813	
ITERATION :	4					

Fe 20.8  
Wo 1.5

POINT # : 28  
 Label: BLUFF #2 46TM-1  
 X= 7529, Y=26909, Z= 2701.  
 30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD,	K.RATIO	SIG %	BEAM
							30.3
SI 27745.	9952.23	83.61	1.41949	0.19793	0.3		
FE 48089.	636.78	7.20	1.16603	0.08889	1.1		
CA 38369.	113.43	15.69	0.07222	0.00455	2.4		
MG 38499.	5375.85	91.62	2.68708	0.11839	0.5		
MN 52197.	25.67	5.29	0.02262	0.00315	5.7		

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM. CON,	COMPOUND	WT. % CONCEN,	1 SIGMA ERROR
CA :	0.0722	0.509	0.1080	CAO	0.713	0.017

FE :	1.1660	10.819	1.6458	FEO	13.918	0.150
MN :	0.0226	0.387	0.0598	MNO	0.500	0.028
SI :	1.4195	26.263	7.9440	SI02	56.184	0.163
MG :	2.6871	18.025	6.2985	MGO	29.887	0.145
O		45.198	24.0000			

FS<sub>20.4</sub>  
Wo<sub>1.3</sub>

TOTAL : 101.201 101.201  
ITERATION : 0

POINT # : 29

Label: BLUFF #2 46TM-1  
X= 7696, Y=27394, Z= 2696.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	9879.46	84.91	1.40875	0.19643	0.3	
FE	48089.	648.01	7.80	1.18565	0.09038	1.1	
CA	38369.	102.62	17.06	0.06322	0.00398	2.6	
MG	38499.	5409.29	91.92	2.70378	0.11913	0.5	
MN	52197.	25.33	5.89	0.02157	0.00301	5.8	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0632	0.446	0.0948	CAO	0.624	0.017
FE :	1.1856	10.998	1.6775	FEO	14.148	0.152
MN :	0.0216	0.369	0.0572	MNO	0.477	0.028
SI :	1.4088	26.076	7.9088	SI02	55.785	0.162
MG :	2.7038	18.132	6.3529	MGO	30.064	0.145
O		45.077	24.0000			

FS<sub>20.6</sub>  
Wo<sub>1.2</sub>

TOTAL : 101.098 101.098  
ITERATION : 0

POINT # : 30

Label: BLUFF #2 46TM-1  
X= 7966, Y=28625, Z= 2687.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
FE	48089.	635.14	8.00	1.16163	0.08855	1.1	
SI	27745.	9969.70	83.31	1.42219	0.19831	0.3	
CA	38369.	122.66	15.50	0.07920	0.00499	2.3	
MG	38499.	5386.20	113.62	2.68144	0.11815	0.5	
MN	52197.	24.60	10.67	0.01545	0.00215	8.0	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0792	0.558	0.1184	CAO	0.781	0.018
FE :	1.1616	10.779	1.6396	FEO	13.867	0.150
MN :	0.0155	0.264	0.0409	MNO	0.341	0.027
SI :	1.4222	26.310	7.9578	SI02	56.285	0.163
MG :	2.6814	17.989	6.2856	MGO	29.827	0.145
O		45.201	24.0000			

FS<sub>20.4</sub>  
Wo<sub>1.5</sub>

TOTAL : 101.101 101.101  
ITERATION : 0

POINT # : 31

Label: BLUFF #2 46TM-1



X=7798, Y=28831, Z=2587.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6507.61	65.01	0.92674	0.12922	0.3	
FE	48089.	1059.64	9.20	1.94560	0.14831	1.0	
CA	38369.	27.37	17.37	0.00739	0.00047	12.7	
MG	38499.	6799.18	111.73	3.40081	0.14984	0.5	
MN	52197.	24.70	6.03	0.02072	0.00289	6.1	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0074	0.051	0.0119	CAO	0.072	0.009
FE :	1.9456	17.806	2.9568	FEO	22.907	0.222
MN :	0.0207	0.348	0.0588	MNO	0.450	0.027
SI :	0.9267	18.010	5.9467	SI02	38.529	0.124
MG :	3.4008	23.802	9.0791	MGO	39.465	0.185
O		41.405	24.0000			

Fe<sub>24.6</sub>

TOTAL : 101.423  
ITERATION : 4

POINT # : 32

Label: BLUFF #2 46TM-1  
X= 7403, Y=28899, Z= 2687.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	9979.93	88.81	1.42284	0.19840	0.3	
FE	48089.	624.75	5.50	1.14699	0.08743	1.1	
CA	38369.	115.63	15.55	0.07396	0.00466	2.3	
MG	38499.	5380.99	90.02	2.69073	0.11855	0.5	
MN	52197.	27.70	5.87	0.02422	0.00338	5.3	

ELEMENT	I.X./I.STD.	WT. % CONCEN.	NORMALIZED ATOM. CON.	COMPOUND	WT. % CONCEN.	1 SIGMA ERROR
CA :	0.0740	0.522	0.1105	CAO	0.730	0.017
FE :	1.1470	10.644	1.6181	FEO	13.693	0.148
MN :	0.0242	0.415	0.0641	MNO	0.535	0.029
SI :	1.4228	26.334	7.9605	SI02	56.337	0.163
MG :	2.6907	18.001	6.2863	MGO	29.848	0.144
O		45.227	24.0000			

Fe<sub>20.2</sub>

W<sub>0.4</sub>

TOTAL : 101.143  
ITERATION : 4

POINT # : 33

Label: BLUFF #2 46TM-1  
X= 7464, Y=29215, Z= 2684.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I.X./I.STD.	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6491.46	67.41	0.92445	0.12890	0.3	
FE	48089.	1060.68	9.30	1.94812	0.14850	1.0	
CA	38369.	26.70	16.24	0.00774	0.00049	12.1	
MG	38499.	6795.49	108.23	3.40208	0.14990	0.5	
MN	52197.	26.70	6.62	0.02229	0.00311	5.7	

ELEMENT	I,X/I,STD,	CONCEN,	ATOM, CON,	COMPOUND	CONCEN,	ERROR
CA :	0.0077	0.054	0.0124	CAO	0.075	0.009
FE :	1.9481	17.827	2.9619	FEO	22.934	0.222
MN :	0.0223	0.375	0.0633	MNO	0.484	0.028
SI :	0.9244	17.949	5.9362	SI02	38.440	0.123
MG :	3.4021	23.818	9.0900	MGO	39.492	0.185
O		41.383	24.0000			

*Fe<sub>24.6</sub>*

TOTAL : 101.425 101.425  
 ITERATION : 4

POINT # : 34

Label: BLUFF #2 46TM-1  
 X= 7541, Y=29289, Z= 2684.

30 30 30 30 30

ELT.	PEAK POS.	PEAK (C/S)	BACKGR. (C/S)	I,X./I,STD,	K.RATIO	SIG %	BEAM
							30.3
SI	27745.	6446.15	64.51	0.91807	0.12801	0.3	
FE	48089.	1064.29	8.30	1.95610	0.14911	1.0	
CA	38369.	28.83	17.71	0.00822	0.00052	12.2	
MG	38499.	6714.13	104.33	3.36169	0.14812	0.5	
MN	52197.	26.90	5.99	0.02320	0.00323	5.6	

ELEMENT	I,X/I,STD,	WT. % CONCEN,	NORMALIZED ATOM, CON,	COMPOUND	WT. % CONCEN,	1 SIGMA ERROR
CA :	0.0082	0.057	0.0133	CAO	0.080	0.010
FE :	1.9561	17.898	2.9941	FEO	23.026	0.223
MN :	0.0232	0.390	0.0663	MNO	0.503	0.028
SI :	0.9181	17.850	5.9376	SI02	38.186	0.123
MG :	3.3617	23.554	9.0510	MGO	39.053	0.183
O		41.100	24.0000			

*Fe<sub>24.9</sub>*

TOTAL : 100.849 100.849  
 ITERATION : 0