SDMS # 2146410

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2146410

Response of RJ Lee Group to EPA Region 9 (Meer) Letter dated March 9, 2006

Regarding Evaluation of EPA's Analytical Data from the El Dorado Hills Asbestos Evaluation Project

Exhibit C *1.2.4i*

Lab/Cor SAED patterns identifed as actinolite but consistent with pryoxenes

Date: July 2006

Prepared by:
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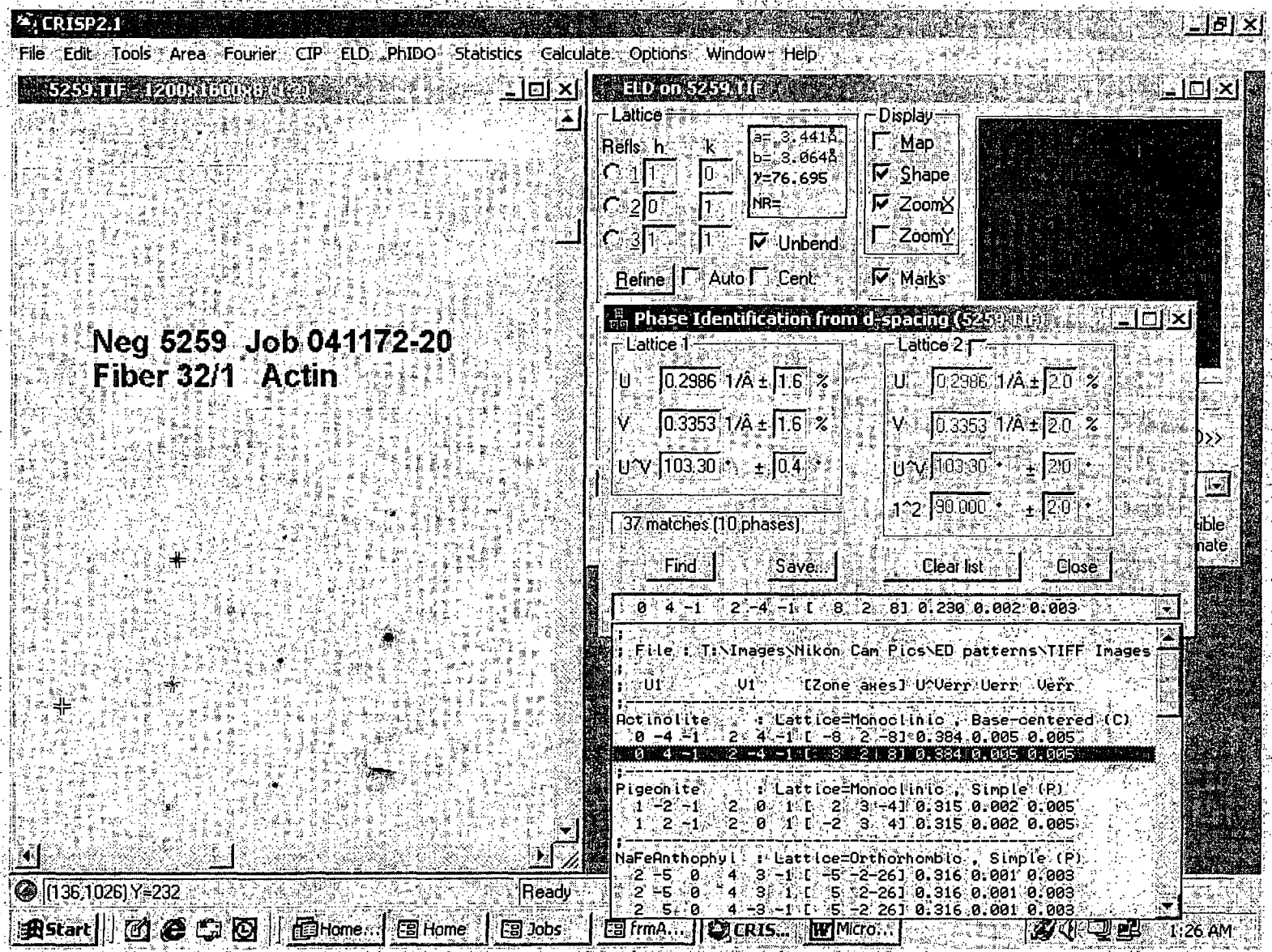
ACTINOLITE
[414]



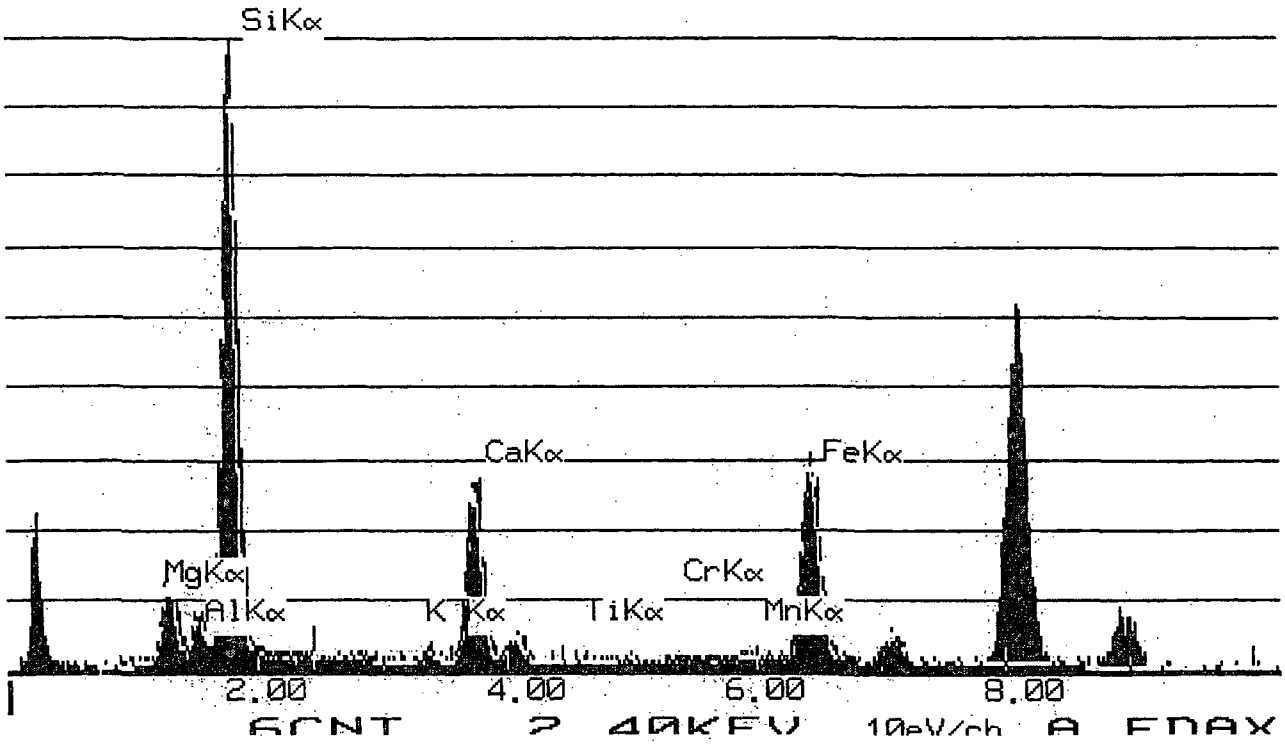
INTE-% :
LABEL = 041172-20 32/1 15177
23-NOV-72 01:58:48
125.885 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
NAK	0.143	0.437	0.589
MGK	4.687	6.767	11.220
ALK	1.891	1.640	3.098
SIK	30.822	25.028	53.543
K K	0.493	0.665	0.801
CAK	10.533	8.155	11.410
MNK	0.151	0.169	0.218
FEK	13.004	13.374	19.121

TOTAL			100.000

USED PEIF: USER

22-NOV-04 01:59:09 SUPER QUANT
RATE= 0CPS TIME= 125LSEC
FS= 446/ 446 PRST= 200LSEC
A =041172-20 32/1 15177



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	53.543	Si+4	7.7429	7.7429							
Al2O3	3.098	Al+3	0.5280	0.2571	0.2708						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	19.121	Fe+3	0.1040			0.1040	0.0000				
MgO	11.22	Mg+2	2.4189			2.4189	0.0000				
MnO	0.218	Fe+2	2.1965			2.1965	0.0000				
CaO	11.41	Mn+2	0.0267			0.0097	0.0170				
Na2O	0.589	Ca+2	1.7677					1.7677	0.0000		
K2O	0.801	Na+	0.1651					0.1651	0.0000	0.0000	0.0000
		K+	0.1478							0.1478	0.0000
Total	100		Excess	T site	0.2708	C site	0.0170	B site	0	A site	0
			Total	8		5.0000		1.9328		0.1478	0.0000
			%Fill	100		100		96.6411			

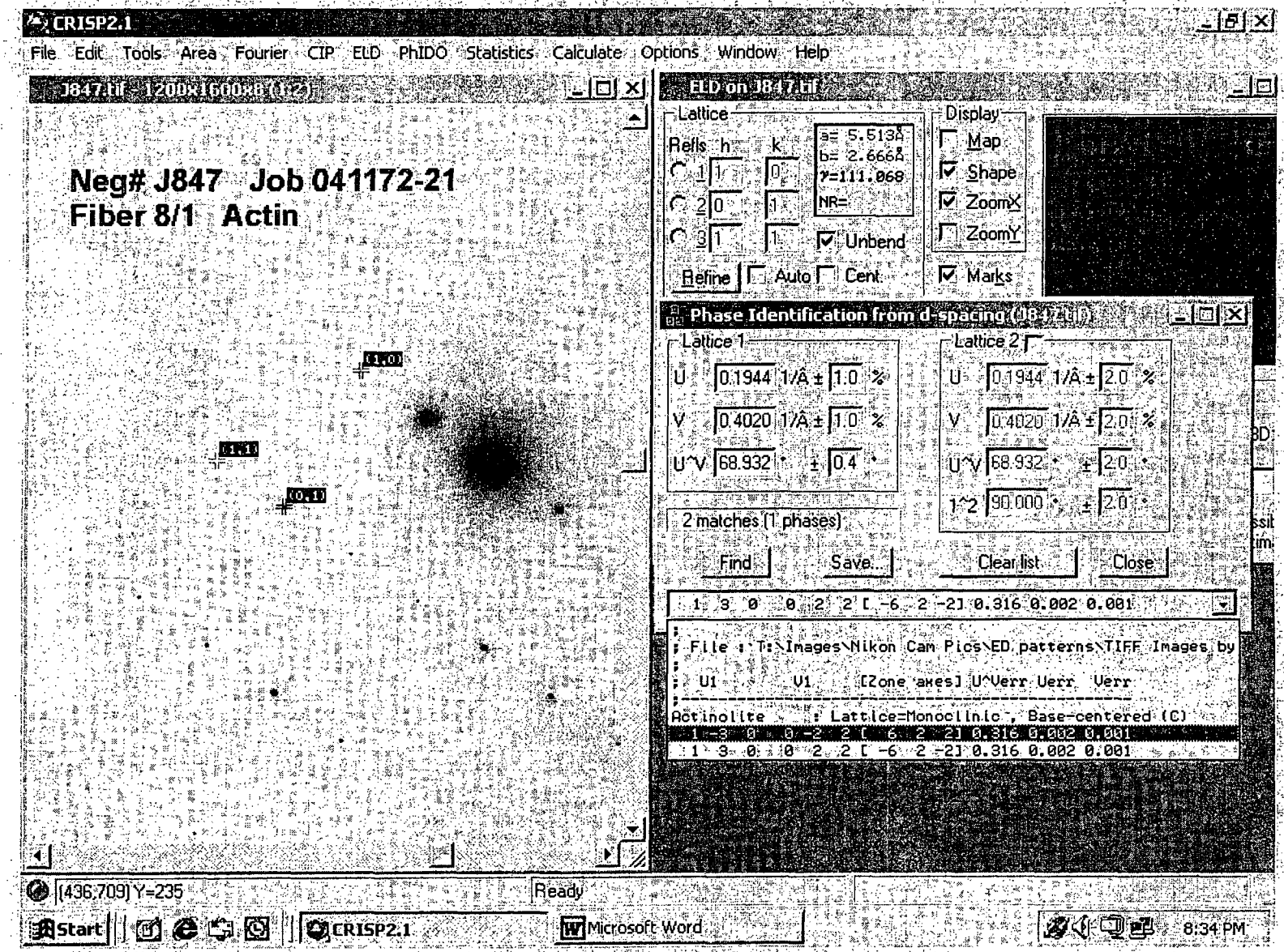
Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

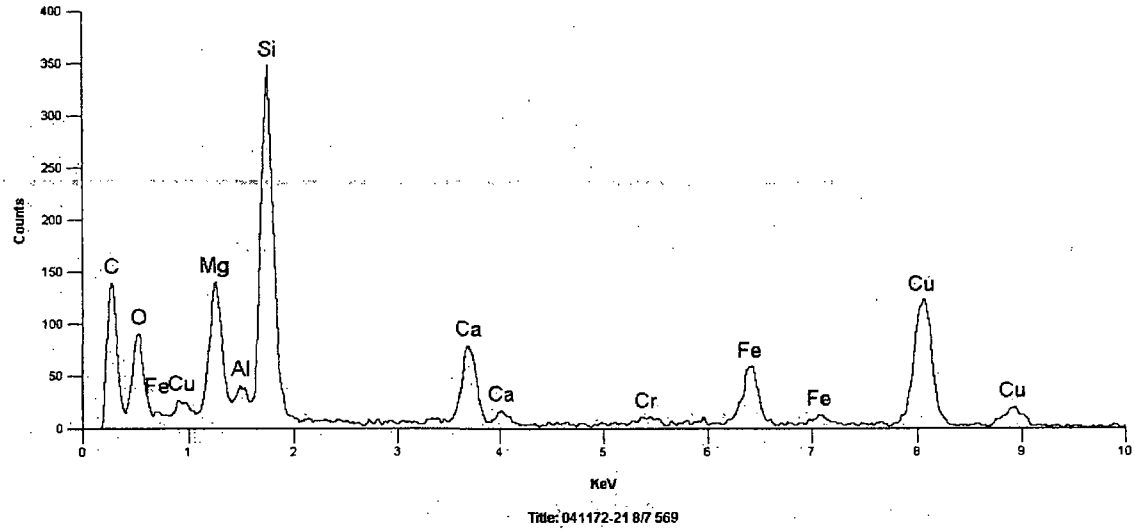
Sample # 041172-20-15177

Values		Satisfied Conditions
(Ca,Na)@B	1.93	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.17	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.77	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.15	Si > 7.5
Mg/(Mg+Fe2)	0.52	(Mg/(Mg+Fe2))< 0.9
Si	7.74	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[3 1 1]





Quantitative Analysis Results - Standardless Analysis :
Spectrum4 041172-21 8/7 569 Jan 1, 1997
EDS Parameters - 18KV, Takeoff Angle: 28.2°, Fit Index: 96.90
Correction: CLIFF LORIMER, Cycles: 1

Element	Atoms%	Compound	Weight%	Error(±)	Norm%
Mg	30.07	MgO	39.92	0.21	21.90
Al	1.54	Al2O3	2.58	0.06	1.42
Si	51.27	SiO2	101.46	0.31	55.66
K	0.52	K2O	0.80	0.03	0.44
Ca	7.88	CaO	14.55	0.11	7.98
Fe	8.73	Fe2O3	22.97	0.20	12.60
<Total>	100.00		182.28		100.00

	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	55.66	Si+4	7.6360	7.6360							
Al2O3	1.42	Al+3	0.2296	0.2296	**0.0000**						
TiO2	0	Ti+4	0.0000	0.0000	**0.0000**						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	12.6	Fe+3	0.6373			0.6373	0.0000				
MgO	21.9	Mg+2	4.4791			4.3627	**0.1164**				
MnO	0	Fe+2	0.7372			0.0000	**0.7372**				
CaO	7.98	Mn+2	0.0000			0.0000	**0.0000**				
Na2O	0	Ca+2	1.1729					1.1464	0.0265		
K2O	0.44	Na+	0.0000					0.0000	**0.0000**	0.0000	0.0000
		K+	0.0770							0.0770	0.0000
Total	**100**		**Excess**	T site	**0.0000**	C site	**0.8536**	B site	**0.0264738**	A site	**0**
			Total	**7.8656**		**5.0000**		**1.1464**		**0.0770**	**0.0000**
			%Fill	**98.32**		**100**		**57.3194**			

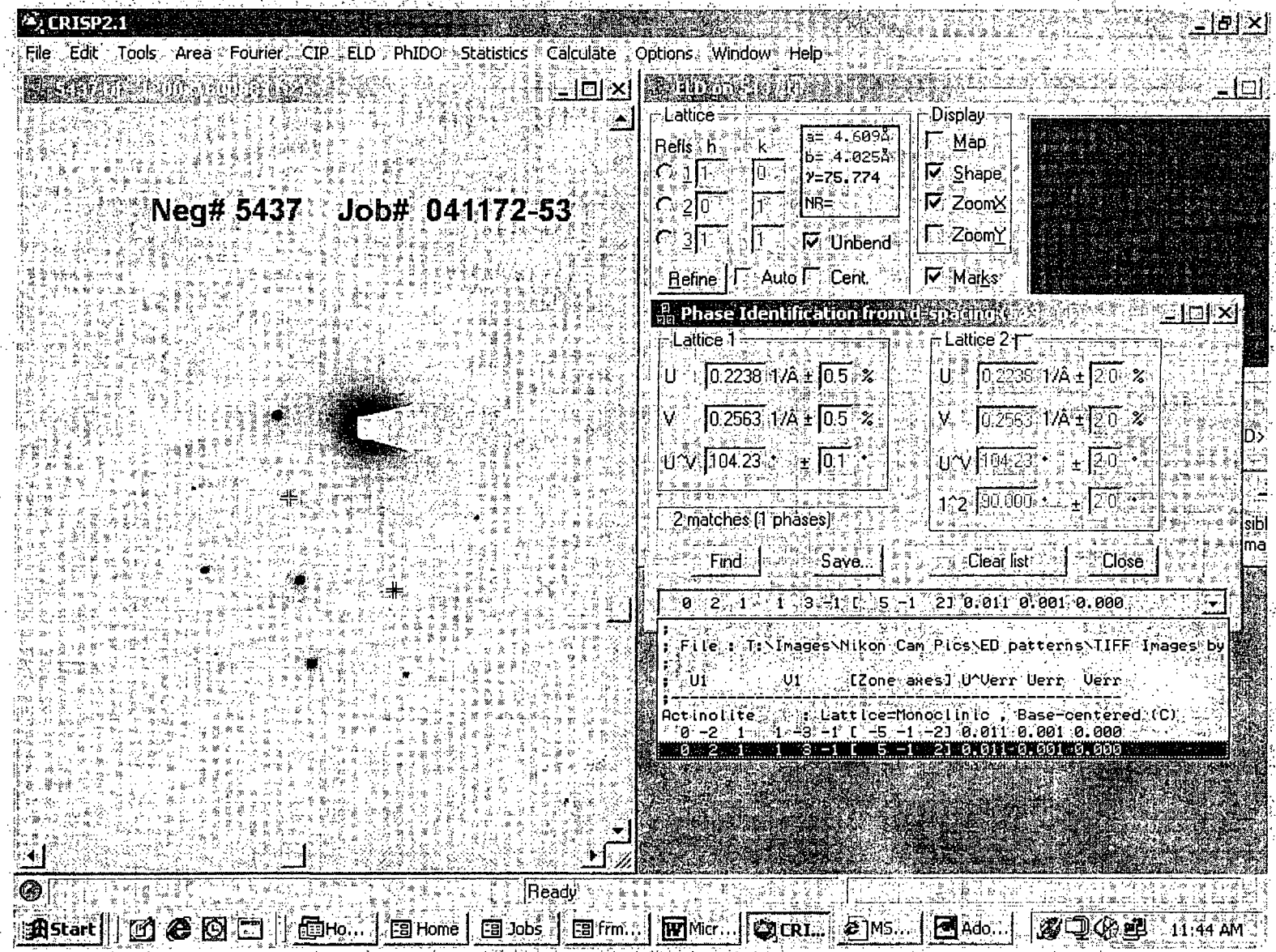
Prefix none
Name probable actinolite Ca values below optimal levels
Modifier none
Group Calcic Amphibole

Sample # 041172-21-8

Values		Satisfied Conditions
(Ca,Na)@B	1.15	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	1 < Ca@B < 1.5 and (Na,K)@A < 0.5
Ca@B	1.15	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.08	Si > 7.5
Mg/(Mg+Fe2)	0.86	(Mg/(Mg+Fe2))< 0.9
Si	7.64	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[5-1 2]



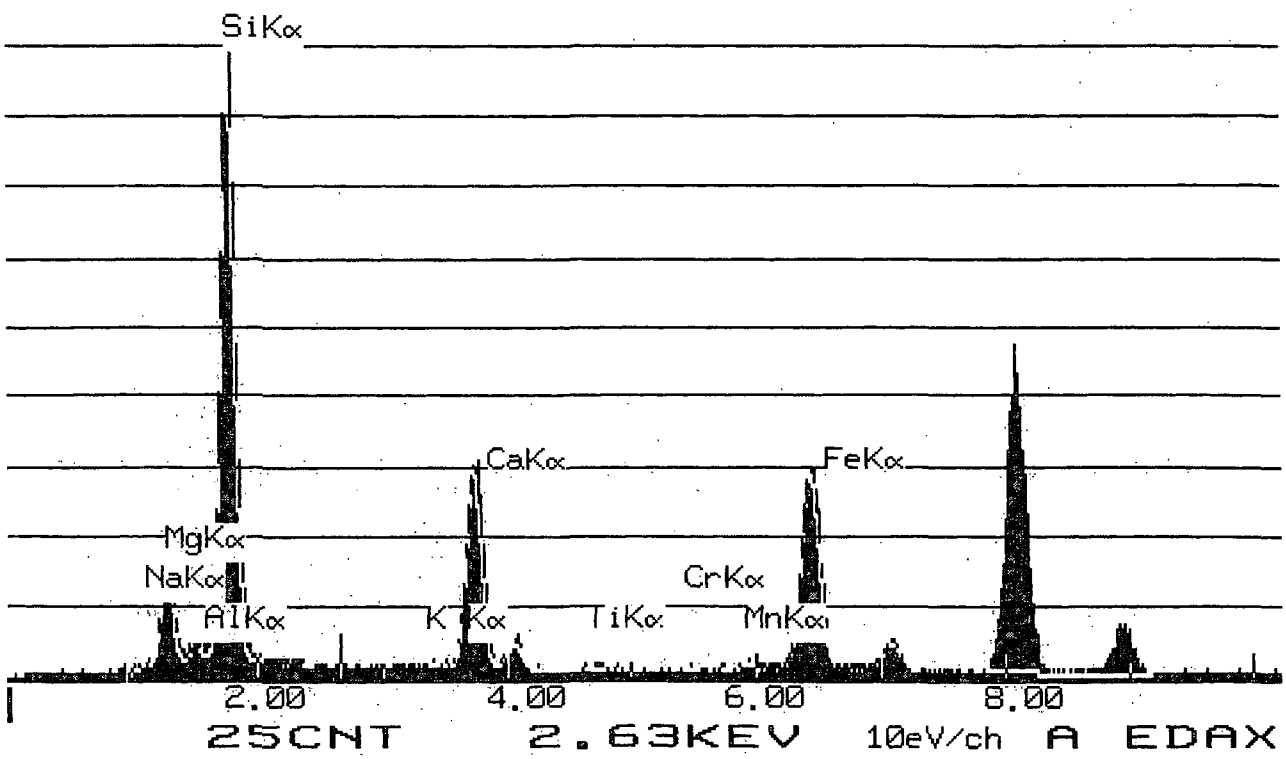
INTE-% :
LABEL = 041172-53 15333
09-NOV-72 11:22:13
35.040 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
NAK	0.656	0.180	0.243
MGK	54.909	7.125	11.814
ALK	9.504	0.741	1.400
SIK	349.432	25.501	54.555
CAK	126.571	8.806	12.322
MNK	0.599	0.060	0.078
FEK	148.232	13.701	19.589
TOTAL			100.000

USED PEIF: USER

BE Hand
Attached

08-NOV-04 11:22:38 SUPER QUANT
RATE= 43CPS TIME= 35LSEC
FS= 1312/ 1312 PRST= 200LSEC
A =041172-53 15333



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	54.555	Si+4	7.8735	7.8735							
Al2O3	1.4	Al+3	0.2381	0.1265	0.1116						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	19.589	Fe+3	0.1064			0.1064	0.0000				
MgO	11.814	Mg+2	2.5419			2.5419	0.0000				
MnO	0.078	Fe+2	2.2458			2.2402	0.0056				
CaO	12.322	Mn+2	0.0095			0.0000	0.0095				
Na2O	0.243	Ca+2	1.9052					1.9052	0.0000		
K2O	0	Na+	0.0680					0.0680	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	100.001		Excess	T site	0.1116	C site	0.0151	B site	0	A site	0
			Total	8		5.0000		1.9732		0.0000	0.0000
			%Fill	100		100		98.6581			

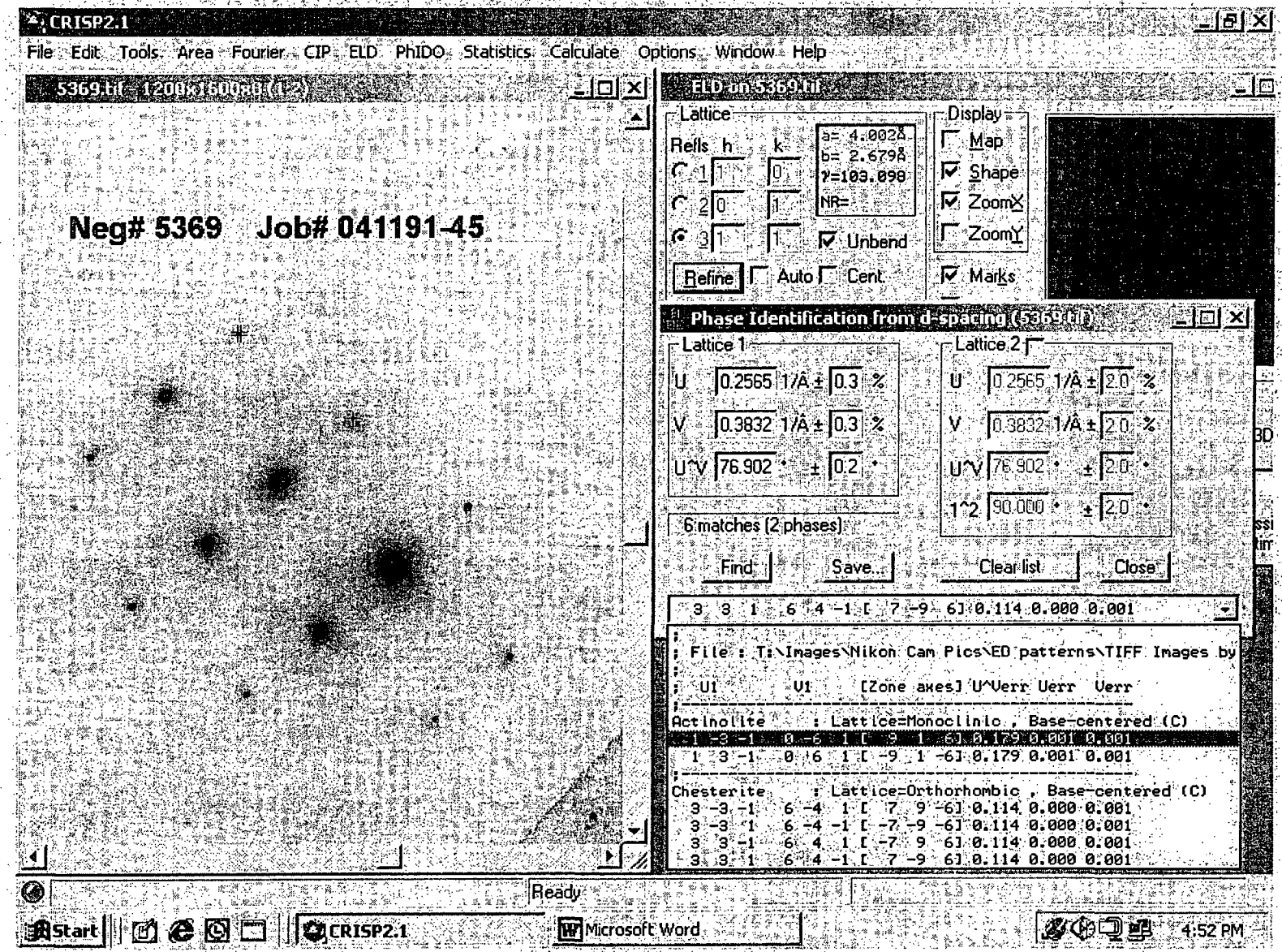
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # 041172-53-15333

Values		Satisfied Conditions
(Ca,Na)@B	1.97	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.07	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.91	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.53	(Mg/(Mg+Fe2))< 0.9
Si	7.87	

Mineral Analysis Program (Version 5.0)

ACTINOLITE
[916]

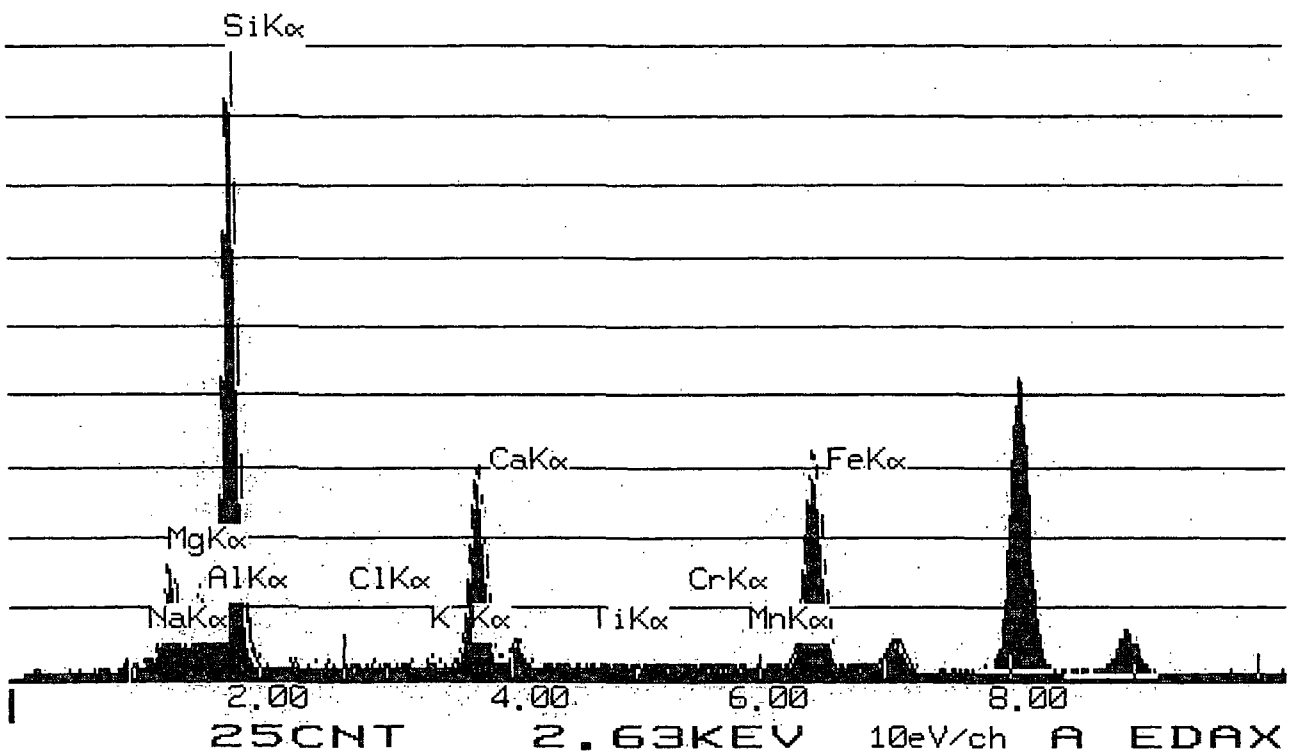


INTE-% :
LABEL = 041191-45 15271
11-JAN-73 15:06:39
49.469 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	43.340	6.615	10.968
ALK	30.686	2.813	5.316
SIK	287.290	24.661	52.759
K K	1.759	0.251	0.302
CAK	101.417	8.300	11.613
FEK	122.501	13.318	19.042
TOTAL			100.000

USED PEIF: USER

10-JAN-05 15:07:08 SUPER QUANT
RATE= 481CPS TIME= 49LSEC
FS= 1471/ 1471 PRST= 200LSEC
A =041191-45 15271



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	52.759	Si+4	7.5452	7.5452							
Al2O3	5.316	Al+3	0.8960	0.4548	**0.4411**						
TiO2	0	Ti+4	0.0000	0.0000	**0.0000**						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	19.042	Fe+3	0.3688			0.3688	0.0000				
MgO	10.968	Mg+2	2.3384			2.3384	**0.0000**				
MnO	0	Fe+2	1.8672			1.8516	**0.0156**				
CaO	11.613	Mn+2	0.0000			0.0000	**0.0000**				
Na2O	0	Ca+2	1.7793					1.7793	0.0000		
K2O	0.302	Na+	0.0000					0.0000	**0.0000**	0.0000	0.0000
		K+	0.0551							0.0551	0.0000
Total	**100**		**Excess**	T site	**0.4411**	C site	**0.0156**	B site	**0**	A site	**0**
			Total	**8**		**5.0000**		**1.7793**		**0.0551**	**0.0000**
			%Fill	**100**		**100**		**88.9628**			

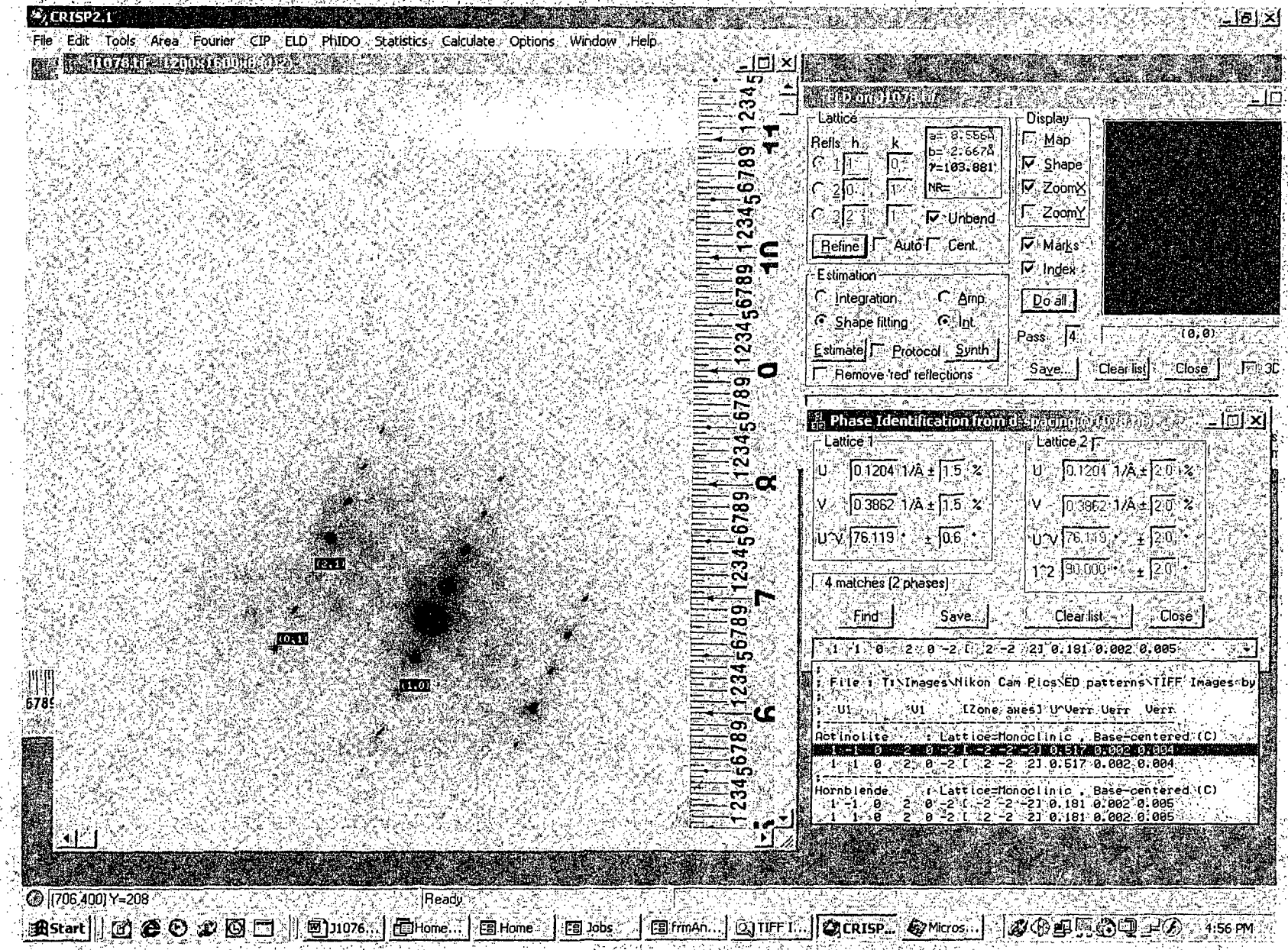
Prefix none
Name actinolite
Modifier none
Group Calcic Amphibole

Sample # **041191-45-15271**

Values		Satisfied Conditions
(Ca,Na)@B	1.78	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	1.78	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.06	Si > 7.5
Mg/(Mg+Fe2)	0.56	(Mg/(Mg+Fe2))< 0.9
Si	7.55	

Mineral Analysis Program (Version 5.0)

Neg # J1078, Sample #041191-103
ACTINOLITE
[1 1 1]

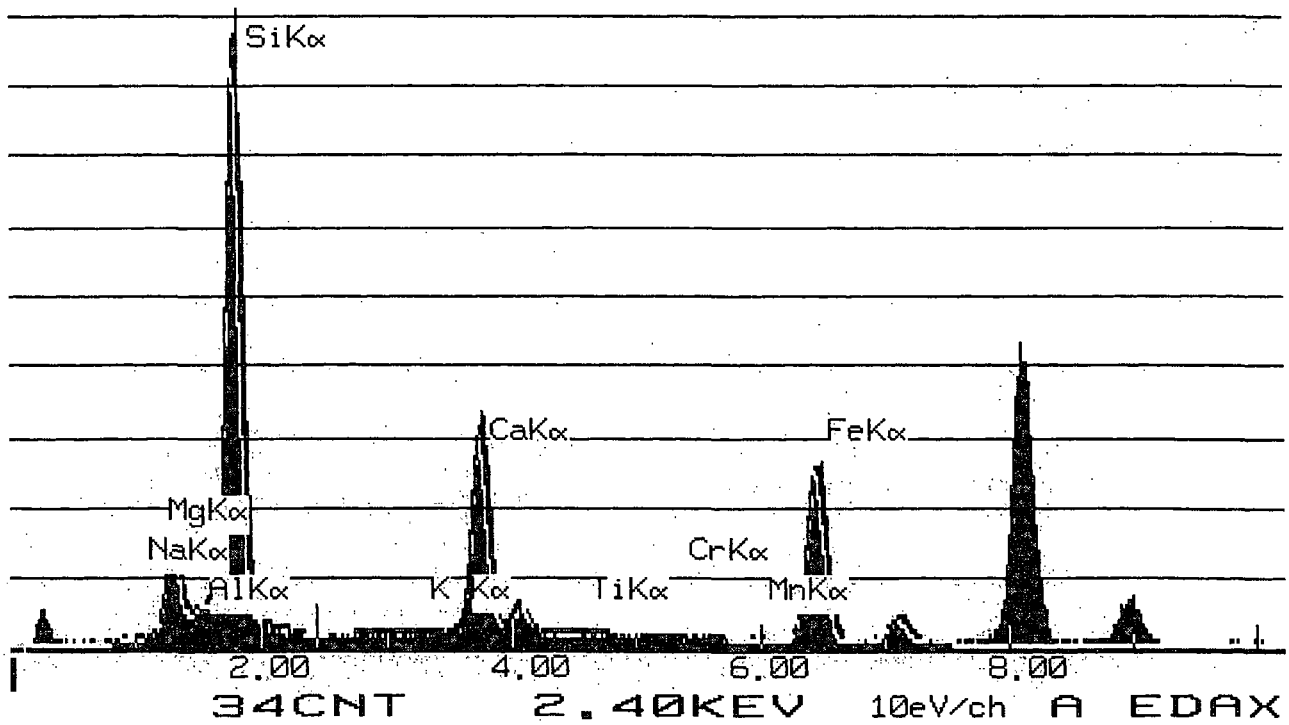


INTE-% :
LABEL = 041191-103 15400
22-NOV-72 03:47:15
20.061 LIVE SECONDS

ELEM	CPS	WT % ELEM	WT % OXIDE
MGK	124.022	7.675	12.725
ALK	6.779	0.252	0.476
SIK	735.960	25.614	54.797
CAK	288.671	9.579	13.402
MNK	1.745	0.084	0.108
FEK	293.407	12.933	18.491
TOTAL			100.000

USED PEIF: USER

21-NOV-04 03:47:32 SUPER QUANT
RATE= 190CPS TIME= 20LSEC
FS= 1779/ 1779 PRST= 200LSEC
A =041191-103 15400



	Wt Percent		ions	T site	Leftover	C site	Leftover	B site	Leftover	A site	Leftover
SiO2	54.797	Si+4	7.9081	7.9081							
Al2O3	0.476	Al+3	0.0810	0.0810	0.0000						
TiO2	0	Ti+4	0.0000	0.0000	0.0000						
Cr2O3	0	Cr+3	0.0000			0.0000	0.0000				
Fe(total)O	18.491	Fe+3	0.0201			0.0201	0.0000				
MgO	12.725	Mg+2	2.7378			2.7378	0.0000				
MnO	0.108	Fe+2	2.2091			2.2091	0.0000				
CaO	13.402	Mn+2	0.0132			0.0132	0.0000				
Na2O	0	Ca+2	2.0721					2.0000	0.0721		
K2O	0	Na+	0.0000					0.0000	0.0000	0.0000	0.0000
		K+	0.0000							0.0000	0.0000
Total	99.999		Excess	T site	0.0000	C site	0.0000	B site	0.0720902	A site	0
			Total	7.9891		4.9802		2.0000		0.0000	0.0000
			%Fill	99.864		99.6034		100			

Prefix	none
Name	actinolite
Modifier	none
Group	Calcic Amphibole

Sample # 041191-103-15400

Values		Satisfied Conditions
(Ca,Na)@B	2.00	(Ca,Na)@B >= 1 and Na@B < 0.5
Na@B	0.00	Ca@B >= 1.5 and (Na,K)@A < 0.5
Ca@B	2.00	(Mg/(Mg+Fe2))>= 0.5
(Na,K)@A	0.00	Si > 7.5
Mg/(Mg+Fe2)	0.55	(Mg/(Mg+Fe2))< 0.9
Si	7.91	

Mineral Analysis Program (Version 5.0)