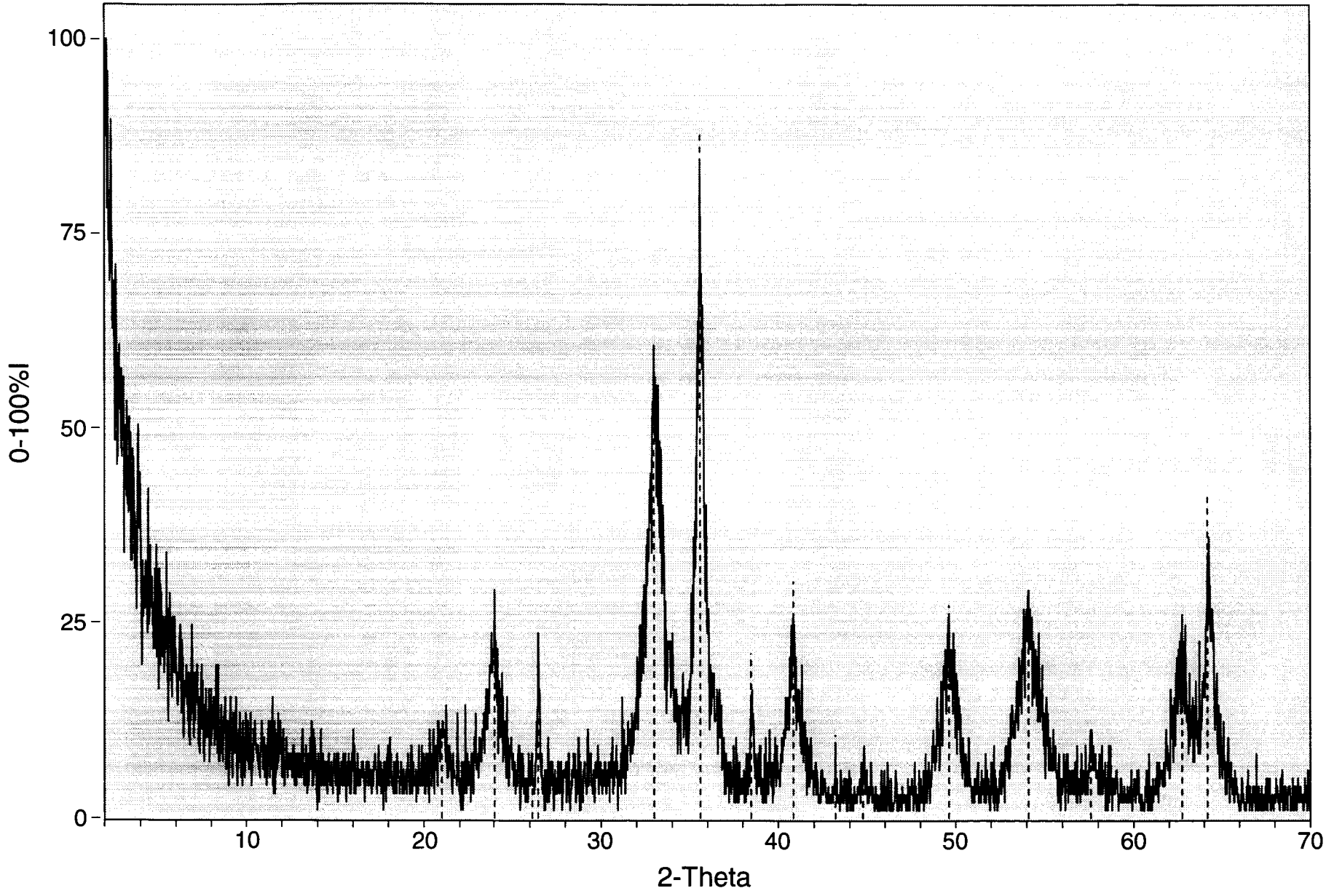
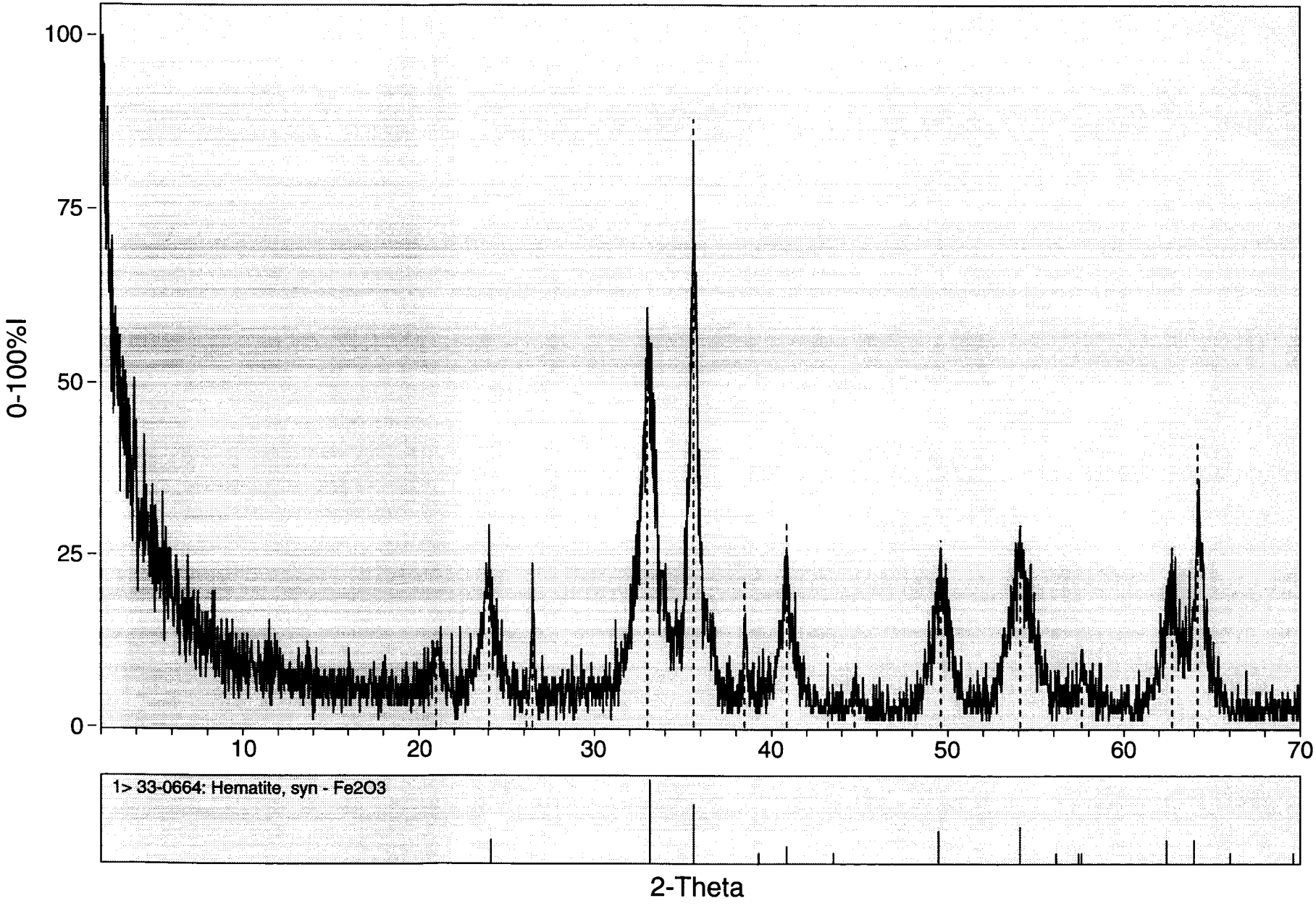
ID: 1/7/94 - NOPI-268-XRD2

File: NOPI2682.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/7/94 - NOPI-268-XRD2

File: NOPI2682.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Fri Jan 14 1994 @3:11pm

File: NOPI2682.MDI> 1/7/94 - NOPI-268-XRD2

Scan Parameters:		Search Parameters:	
Radiation	= CU_1.540598	Filter length(pts)	= 25
Scan Range	= 2 - 70	Noise level(sigmas)	= 2.0
Step Size	= .02	Intensity cutoff(%)	= .5-100
Count Time	= 1 sec.	2-Theta Zero (degs)	= 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	20.987	4.2295	20.994	4.2281	2	9	11.5	216	9.3	0.432
2:	24.036	3.6995	24.022	3.7015	2	27	34.6	1021	43.7	0.681
3:	26.134	3.4070	26.126	3.4080	2	7	9.0	40	1.7	0.103
4:	26.480	3.3633	26.492	3.3618	2	21	26.9	175	7.5	0.150
5:	33.000	2.7121	33.011	2.7113	7	52	66.7	2334	100.0	0.808
6:	35.604	2.5195	35.613	2.5190	8	78	100.0	1740	74.6	0.402
7:	38.473	2.3380	38.492	2.3369	3	18	23.1	115	4.9	0.115
8:	40.852	2.2072	40.849	2.2073	2	28	35.9	832	35.6	0.535
9:	43.194	2.0928	43.194	2.0928	3	8	10.3	8	0.3	0.020
10:	44.739	2.0240	44.739	2.0240	3	4	5.1	8	0.3	0.036
11:	49.615	1.8359	49.614	1.8360	2	25	32.1	1058	45.3	0.762
12:	54.095	1.6940	54.093	1.6940	2	27	34.6	1616	69.2	1.077
13:	57.589	1.5992	57.608	1.5987	2	9	11.5	94	4.0	0.188
14:	62.736	1.4798	62.721	1.4801	7	19	24.4	292	12.5	0.277
15:	64.191	1.4498	64.231	1.4489	7	34	43.6	474	20.3	0.251

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Fri Jan 14 1994 @3:18pm

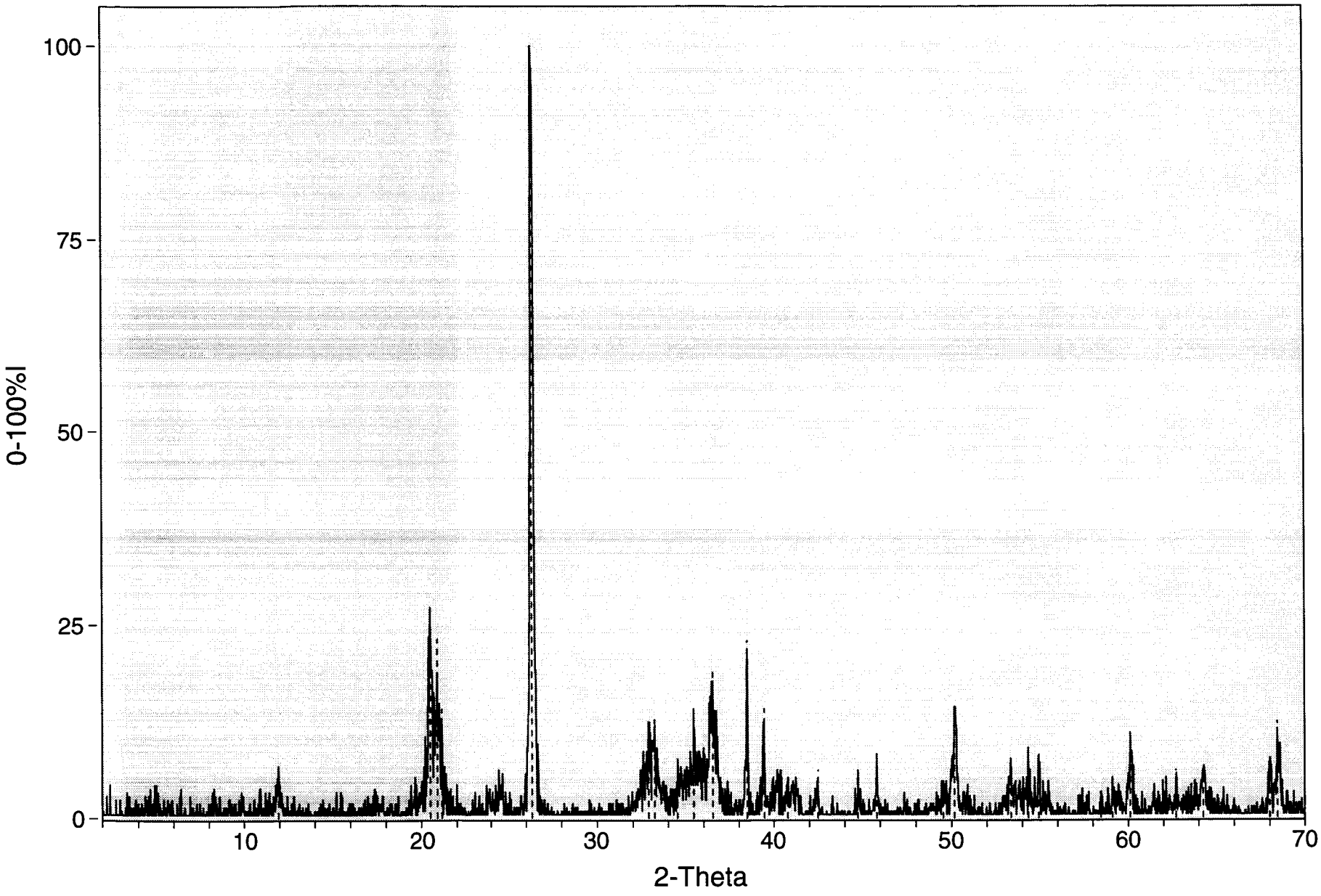
NOPI2682.MDI> 1/7/94 - NOPI-268-XRD2

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Macaulayite - Fe24Si4O43(OH)2		42- 596	0.9	0.00	80		A ()	36.34	8.73	5.04	798	2	4.523
2>( ) Qingheiite - Na3Mn3Mg2Al2(PO4)6	+	41- 588	1.0	0.00	42	4.0	P21/a (14)	10.90	12.41	6.42	860	2	3.499
3>( ) Larnite, syn - Ca2SiO4	+	29- 371	1.1	0.00	39	0.6	P21/n (14)	9.28	6.76	5.48	343	4	3.338
4>( ) Ferrowyllieite - Na2Fe2Al(PO4)3	+	39- 409	1.2	0.00	54		P21/a (14)	10.88	12.29	6.32	839	4	3.719
5>( ) Prosperite - HCaZn2(AsO4)2(OH)	+	33- 599	1.3	0.00	40		C*/c (15)	19.24	7.72	9.76	702	8	4.414
6>( ) Winchite - NaCa(Mg,Fe,Mn,Al)5Si8		20-1390	1.3	0.00	48		C2/m (12)	9.83	18.06	5.30	456	2	2.970
7>( ) Heneuite - CaMg5(CO3)(PO4)3(OH)	+	39- 362	1.4	0.00	52		P-1 (2)	8.67	10.84	6.31	578	2	3.008
8>( ) Geikielite, syn - MgTiO3	+	6- 494	1.4	0.00	40		R-3 (148)	5.05	5.05	13.90	102	6	3.895
9>( ) Paramendozavilite - NaAl4[Fe7(PO		41-1438	1.4	0.06	22								3.350
10>( ) Mendipite, syn - Pb3O2Cl2	+	25- 448	1.4	0.06	20		Pbnm (62)	9.51	11.87	5.81	655	4	7.342
11>( ) Spurrite - Ca5(SiO4)2CO3	+	13- 496	1.4	0.00	51		P21/c (14)	14.15	6.70	10.49	976	4	3.026
12>( ) Amicite - K2Na2Al4Si4O16!5H2O	+	33-1273	1.5	0.00	40		I2 (5)	10.23	10.42	9.88	526	2	2.060
13>( ) Richterite, potassian, syn - Na(	+	42-1481	1.5	0.06	52		C2/m (12)	10.06	18.00	5.28	461	2	3.003
14>( ) Zoisite, syn - Ca2Al3(SiO4)(Si2O	+	13- 562	1.6	0.00	45		Pbnm (62)	10.06	16.15	5.58	907	4	3.150
15>( ) Kaersutite - Ca2(Na,K)(Mg,Mn,Fe,	+	17- 478	1.6	0.00	45		C2/m (12)	9.83	17.99	5.30	452	2	3.215
16>( ) Rankinite - Ca3Si2O7	+	22- 539	1.6	0.00	52		P21/n (14)	9.54	8.91	7.85	643	4	2.979
17>( ) Epidote - Ca2Al2Fe(SiO4)(Si2O7)(	+	17- 514	1.6	0.00	35		P21/m (11)	10.20	5.63	8.90	462	2	3.500
18>( ) Clinochlore-\IT1M#I#I#b\RG - (Mg		7- 165	1.6	0.00	32		A2/m (12)	14.06	9.23	5.33	343	2	2.696
19>( ) Cebollite - Ca5Al2(OH)4Si3O12		16- 695	1.6	0.00	41								2.960
20>( ) Varulite - NaMn(Mn,Fe)2(PO4)3		6- 487	1.6	0.00	33		P ()	11.00	12.57	6.46	885	4	3.581
21>( ) Forsterite, ferroan - (Mg,Fe)2Si	+	31- 795	1.6	0.12	20		Pmnb (62)	6.03	10.32	4.78	298	4	3.690
22>( ) Trechmannite, syn - AgAsS2	+	42- 555	1.6	0.00	48		R3 (146)	13.94	13.94	9.12	512	18	4.808
23>( ) Hematite, syn - Fe2O3	+	33- 664	1.6	0.00	51	2.4	R-3c (167)	5.04	5.04	13.75	101	6	5.270
24>( ) Mayenite, syn - Ca12Al14O33	+	9- 413	1.7	0.00	38		I-43d (220)	11.98	11.98	11.98	860	2	2.677
25>( ) Ferropyrosmalite - (Mn,Fe)8Si6O1	+	12- 268	1.7	0.00	42		P-3m1 (164)	13.36	13.36	7.16	1107	2	3.060
26>( ) Lawsonite, syn - CaAl2Si2O7(OH)2	+	13- 567	1.7	0.00	44		Bbmm (63)	8.79	13.12	5.84	336	4	3.102
27>( ) Richterite, syn - Na2CaMg5Si8O22		25- 808	1.7	0.00	55		C ()	9.91	17.98	5.27	455	2	2.988
28>( ) Hydrohalite - NaCl!2H2O	?	29-1197	1.7	0.00	71		P21/a (14)	6.50	10.12	6.33	379	4	1.654
29>( ) Gaitite - Ca2Zn(AsO4)2!2H2O	+	33- 598	1.7	0.00	20		P-1 (2)	5.90	6.97	5.57	199	1	3.832
30>( ) Molybdophyllite-18A - Pb3Mg2Si2O		42-1385	1.7	0.00	25		P ()	9.34	9.34	36.79	2779	10	5.415
31>( ) Phosgenite - Pb2(CO3)Cl2		12- 218	1.7	0.12	20		P4/mbm (127)	8.11	8.11	8.82	581	4	6.239
32>( ) Glaucophane, syn - Na2Mg3Al2Si8O	+	15- 58	1.7	0.00	56		C2/m (12)	9.71	17.92	5.27	447	2	2.908
33>( ) Ferro-alluaudite - NaFe(Fe,Mn)2(		39- 377	1.7	0.00	47		I2/a (15)	11.00	12.53	6.41	438	4	
34>( ) Neltnerite - CaMn6SiO12		35- 666	1.7	0.00	42		I41/acd (142)	9.46	9.46	18.85	844	8	4.640
35>( ) Andradite, syn - Ca3Fe2(SiO4)3	+	10- 288	1.7	0.00	48	1.3	Ia3d (230)	12.06	12.06	12.06	877	8	3.850
36>( ) Babingtonite - Ca2Fe2Si5O14(OH)		14- 321	1.7	0.00	26		P-1 (2)	7.56	11.85	6.74	585	2	3.257
37>( ) Loseyite - (Mn,Zn)7(OH)10(CO3)2		17- 206	1.7	-.06	20		A2/a (15)	16.23	5.51	14.95	666	4	3.270
38>( ) Cesanite - Ca2Na3(SO4)3(OH)	+	35- 506	1.8	0.00	42		P63/m (176)	9.44	9.44	6.90	533	2	2.831
39>( ) Barbosalite - FeFe2(PO4)2(OH)2	+	33- 668	1.8	0.00	20		P21/n (14)	7.40	7.49	7.31	356	2	3.652
40>( ) Vesuvianite, ferrian - Ca19(Al,M	+	38- 474	1.8	0.00	28		P4/nnc (126)	15.57	15.57	11.84	2869	2	3.400

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

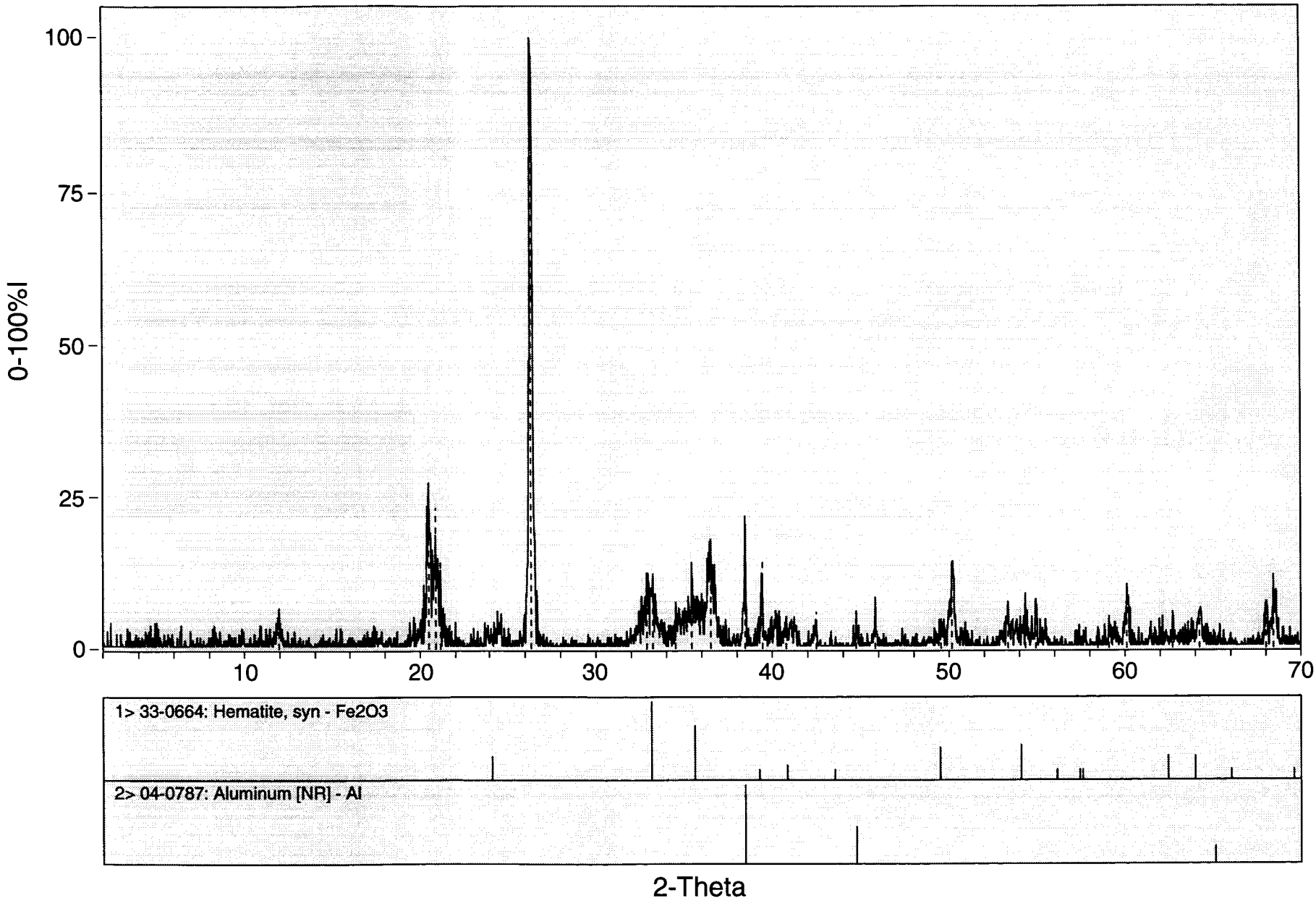
ID: 1/14/94 - NOPI-268-XRD3

File: NOPI2683.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/14/94 - NOPI-268-XRD3

File: NOPI2683.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Fri Jan 14 1994 @3:23pm

File: NOPI2683.MDI> 1/14/94 - NOPI-268-XRD3

Scan Parameters:		Search Parameters:	
Radiation	= CU_1.540598	Filter length(pts)	= 25
Scan Range	= 2 - 70	Noise level(sigmas)	= 2.0
Step Size	= .02	Intensity cutoff(%)	= .5-100
Count Time	= 1 sec.	2-Theta Zero (degs)	= 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	11.935	7.4091	11.923	7.4166	1	13	6.3	133	5.1	0.184
2:	20.526	4.3234	20.550	4.3184	1	57	27.4	1449	55.8	0.458
3:	20.912	4.2446	20.880	4.2510	1	49	23.6	1363	52.5	0.501
4:	21.159	4.1956	21.159	4.1956	6	25	12.0	69	2.7	0.050
5:	26.343	3.3805	26.363	3.3780	1	208	100.0	2596	100.0	0.225
6:	32.885	2.7214	32.920	2.7186	2	25	12.0	787	30.3	0.567
7:	33.225	2.6943	33.225	2.6943	11	17	8.2	43	1.7	0.046
8:	34.524	2.5959	34.524	2.5959	7	10	4.8	13	0.5	0.023
9:	35.439	2.5309	35.456	2.5297	2	29	13.9	1140	43.9	0.708
10:	36.510	2.4591	36.504	2.4595	3	38	18.3	808	31.1	0.383
11:	38.474	2.3380	38.453	2.3391	1	48	23.1	268	10.3	0.100
12:	39.446	2.2825	39.426	2.2837	1	30	14.4	160	6.2	0.096
13:	40.786	2.2106	40.819	2.2089	1	10	4.8	108	4.2	0.194
14:	42.483	2.1261	42.465	2.1270	1	13	6.3	54	2.1	0.075
15:	44.739	2.0240	44.752	2.0235	1	13	6.3	60	2.3	0.083
16:	45.809	1.9792	45.806	1.9793	1	19	9.1	91	3.5	0.086
17:	49.540	1.8385	49.550	1.8382	1	9	4.3	161	6.2	0.322
18:	50.167	1.8170	50.169	1.8169	1	31	14.9	396	15.3	0.230
19:	53.365	1.7154	53.380	1.7150	1	15	7.2	279	10.7	0.335
20:	54.340	1.6869	54.322	1.6874	1	18	8.7	412	15.9	0.412
21:	54.928	1.6702	54.930	1.6702	2	16	7.7	99	3.8	0.111
22:	58.452	1.5777	58.455	1.5776	1	7	3.4	22	0.8	0.057
23:	59.098	1.5619	59.099	1.5619	1	11	5.3	28	1.1	0.046
24:	60.113	1.5380	60.111	1.5380	1	23	11.1	219	8.4	0.171
25:	62.706	1.4805	62.706	1.4805	1	13	6.3	59	2.3	0.082
26:	64.246	1.4486	64.247	1.4486	1	13	6.3	169	6.5	0.234
27:	68.013	1.3773	68.024	1.3771	1	15	7.2	146	5.6	0.175
28:	68.442	1.3697	68.462	1.3693	1	26	12.5	287	11.1	0.199

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Fri Jan 14 1994 @3:28pm

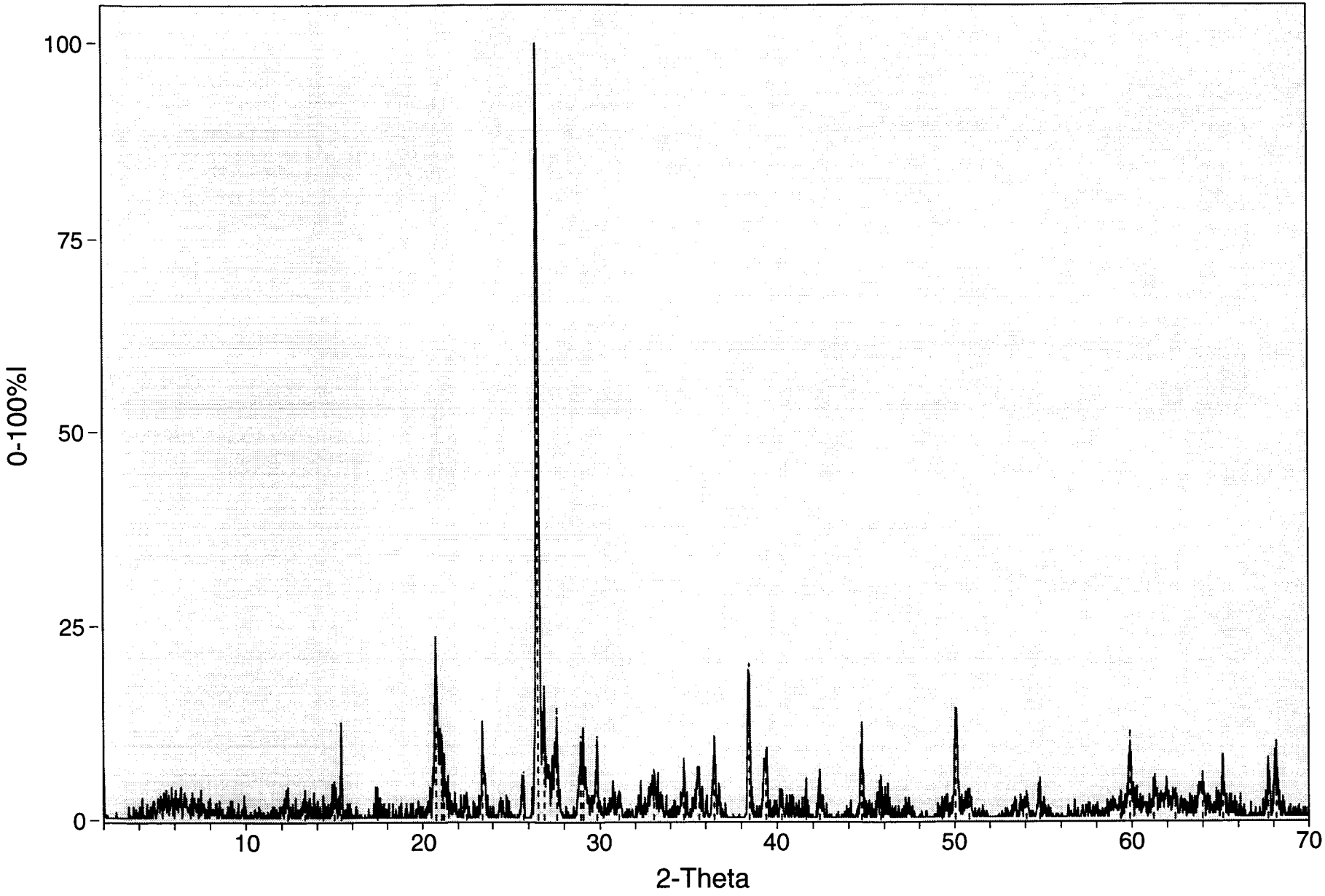
NOPI2683.MDI> 1/14/94 - NOPI-268-XRD3

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Berlinite, syn - AlPO4	+	10- 423	3.7	0.06	47		P31,212 (151)	4.94	4.94	10.97	232	3	2.618
2>( ) Kinoshitalite-\IT1M\RG - BaMg3Al	+	29- 180	4.6	-.06	100		A2/m (12)	10.26	9.25	5.34	250	2	3.421
3>( ) Sidorenkite - Na3Mn(PO4)(CO3)	+	33-1266	4.7	0.00	32		P21/* (11)	8.98	6.73	5.15	311	2	2.977
4>( ) Orthoericssonite - BaMn2FeSi2O8(	+	29- 185	4.7	0.00	92		Pmmn (59)	6.99	20.30	5.39	764	4	4.384
5>( ) Mullite, syn - Al6Si2O13	+	15- 776	7.3	0.06	80		Pbam (55)	7.55	7.69	2.88	167	1	3.171
6>( ) Geikielite, syn - MgTiO3	+	6- 494	10.4	0.06	11		R-3 (148)	5.05	5.05	13.90	102	6	3.895
7>( ) Barbosalite - FeFe2(PO4)2(OH)2	+	33- 668	10.5	0.00	32		P21/n (14)	7.40	7.49	7.31	356	2	3.652
8>( ) Souzalite - (Mg,Fe)3(Al,Fe)4(PO4	+	33- 863	11.1	0.00	69		P*,-1 (2)	11.74	13.58	5.11	804	2	3.087
9>( ) Foggite - CaAl(PO4)(OH)2!H2O		29- 282	11.5	0.06	12		A2122 (20)	9.27	21.32	5.19	513	8	2.772
10>( ) Ferrowyllieite - Na2Fe2Al(PO4)3	+	39- 409	12.0	-.06	11		P21/a (14)	10.88	12.29	6.32	839	4	3.719
11>( ) Richterite, syn - Na2CaMg5Si8O22		25- 808	13.0	0.06	10		C ()	9.91	17.98	5.27	455	2	2.988
12>( ) Winchite - NaCa(Mg,Fe,Mn,Al)5Si8		20-1390	13.3	0.06	10		C2/m (12)	9.83	18.06	5.30	456	2	2.970
13>( ) Amicite - K2Na2Al4Si4O16!5H2O	+	33-1273	13.4	0.06	11		I2 (5)	10.23	10.42	9.88	526	2	2.060
14>( ) Holtedahlite - Mg2PO4(OH)	+	33- 879	13.9	-.06	10		P3*1 (164)	11.19	11.19	4.97	539	6	2.967
15>( ) Sapphirine-\IT2M\RG - (Mg4Al4)(A		19- 750	14.3	0.00	11	3.5	P21/c (14)	9.94	14.43	9.79	1317	4	3.476
16>( ) Magnesium astrophyllite - Na2K2(		29-1042	14.6	0.06	100		A2/m (12)	10.56	23.00	5.35	636	2	
17>( ) Lawsonite, syn - CaAl2Si2O7(OH)2	+	13- 567	14.6	0.00	12		Bbmm (63)	8.79	13.12	5.84	336	4	3.102
18>( ) Hematite, syn - Fe2O3	+	33- 664	14.6	0.06	10	2.4	R-3c (167)	5.04	5.04	13.75	101	6	5.270
19>( ) Forsterite, syn - Mg2SiO4	+	34- 189	15.0	0.06	11		Pmnb (62)	5.98	10.20	4.76	290	4	3.222
20>( ) Widenmannite - Pb2UO2(CO3)3		27- 281	15.5	0.00	14		Pn** (59)	8.99	9.36	4.95	417	2	6.893
21>( ) Halloysite-7A - Al2Si2O5(OH)4		9- 453	15.6	-.06	3		P ()	5.12	5.12	7.30	166	1	2.582
22>( ) Jagoite - Pb3FeSi3O10(Cl,OH)	+	36- 417	16.8	0.00	80		P-62c (190)	8.53	8.53	33.33	2099	6	5.430
23>( ) Kraisslite - (Mn,Mg)24Zn4(AsO4)4		29-1432	16.8	-.06	7		P6322 (182)	8.22	8.22	43.88	2568	2	3.876
24>( ) Richterite, potassian, syn - Na(	+	42-1481	17.6	0.06	10		C2/m (12)	10.06	18.00	5.28	461	2	3.003
25>( ) Epsomite, syn - MgSO4!7H2O	+	36- 419	17.7	-.06	12		P212121 (19)	11.87	11.98	6.85	974	4	1.681
26>( ) Celadonite-\IT1M\RG - K(Mg,Fe,Al	+	17- 521	17.8	0.00	6		A2/m (12)	10.13	9.06	5.23	236	2	2.950
27>( ) Khademite - Al(SO4)(OH)!5H2O	+	26-1011	17.8	0.00	14		Pcab (61)	11.18	13.06	10.89	1589	8	1.924
28>( ) Hydrohetaerolite - Zn2Mn4O8!H2O		9- 459	17.9	0.06	13		I41/amd (141)	5.74	5.74	9.01	148	2	5.568
29>( ) Aluminum [NR] - Al	+	4- 787	18.0	0.00	15	3.6	Fm3m (225)	4.05	4.05	4.05	17	4	2.699
30>( ) Halloysite-10A - Al2Si2O5(OH)4!2		9- 451	19.2	0.06	3		P ()	5.12	5.12	10.03	228	1	2.144
31>( ) Tungusite - Ca4Fe2Si6O15(OH)6		19- 231	19.6	0.06	13								2.590
32>( ) Murmanite - Na3Ti4(Si2O7)2O4!4H2		40- 479	19.8	-.06	13		P*,-1 (2)	8.73	11.69	8.70	839	2	2.902
33>( ) Tridymite-\IT20H\RG, syn - SiO2		14- 260	19.8	-.06	11		P ()	9.92	9.92	81.50	6946	160	2.298
34>( ) Braunite-2\ITQ\RG - CaMn14SiO24	+	41-1368	19.9	0.06	11		I41/acd (142)	9.42	9.42	37.78	1678	8	4.835
35>( ) Orientite - Ca2Mn3Si3O10(OH)4	+	18- 941	20.1	-.06	7		Bbmm (63)	9.05	19.16	6.13	531	4	3.484
36>( ) Northupite - Na3Mg(CO3)2Cl		19-1213	20.3	0.06	14		Fd3 (203)	13.98	13.98	13.98	683	16	2.419
37>( ) Natrophilite - NaMnPO4	+	25- 846	20.3	-.06	4		Pmnb (62)	6.31	10.52	4.99	331	4	3.467
38>( ) Hetaerolite, syn - ZnMn2O4	+	24-1133	20.6	0.00	13	2.7	I41/amd (141)	5.72	5.72	9.24	151	4	5.253
39>( ) Groutite - MnO(OH)		12- 733	20.6	-.06	8		Pbnm (62)	4.57	10.69	2.85	139	4	4.195
40>( ) Lotharmeyerite - CaZnMn(AsO4)2(O	+	35- 620	21.2	0.06	4		C*/c (15)	13.43	6.24	9.06	374	4	4.365

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

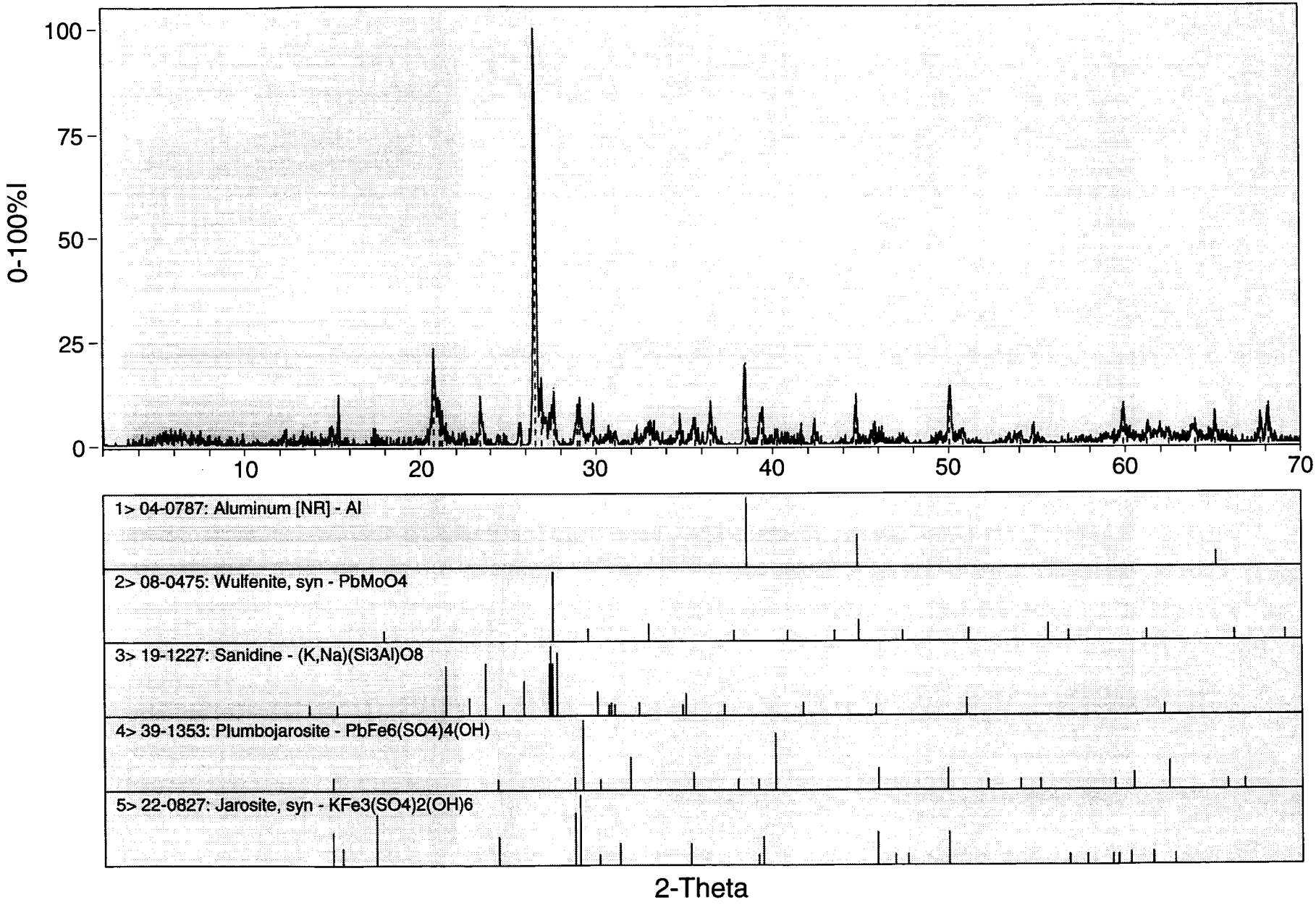
ID: 1/17/94 - NOPI-294-XRD2

File: NOPI2942.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



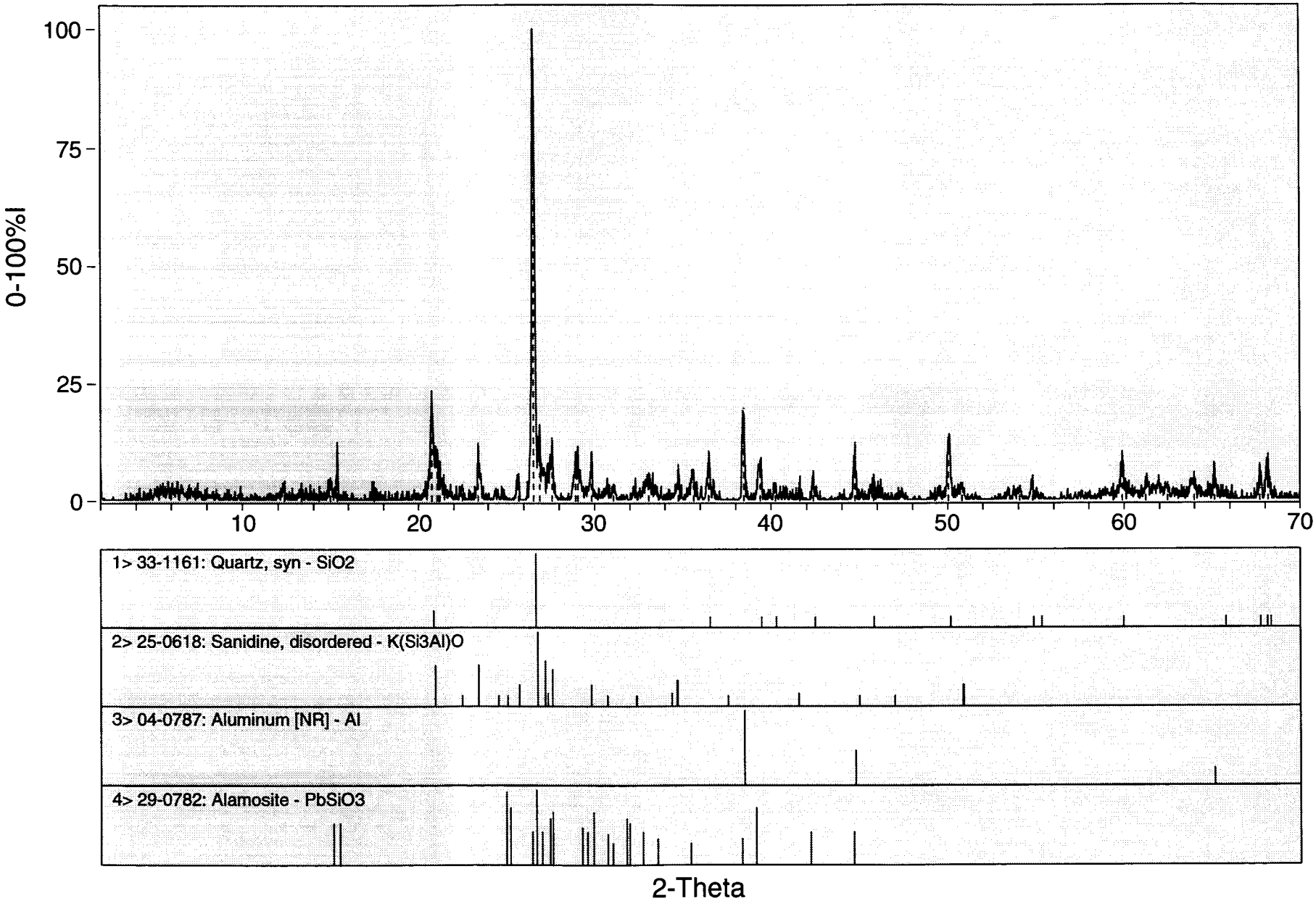
ID: 1/17/94 - NOPI-294-XRD2

File: NOPI2942.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/17/94 - NOPI-294-XRD2

File: NOPI2942.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Mon Jan 17 1994 @2:39pm

File: NOPI2942.MDI> 1/17/94 - NOPI-294-XRD2

Scan Parameters:		Search Parameters:	
Radiation	= CU_1.540598	Filter length(pts)	= 25
Scan Range	= 2 - 70	Noise level(sigmas)	= 2.0
Step Size	= .02	Intensity cutoff(%)	= .5-100
Count Time	= 1 sec.	2-Theta Zero (degs)	= 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	12.355	7.1583	12.331	7.1719	1	12	4.3	74	2.5	0.111
2:	13.311	6.6462	13.311	6.6462	2	10	3.6	20	0.7	0.036
3:	14.320	6.1799	14.320	6.1799	1	8	2.9	15	0.5	0.034
4:	14.958	5.9180	14.951	5.9205	1	13	4.6	146	4.8	0.202
5:	15.358	5.7647	15.350	5.7676	1	34	12.1	166	5.5	0.088
6:	17.428	5.0843	17.428	5.0843	2	10	3.6	17	0.6	0.031
7:	20.764	4.2745	20.798	4.2675	1	67	23.9	1008	33.5	0.271
8:	21.065	4.2140	21.056	4.2158	5	27	9.6	120	4.0	0.080
9:	21.197	4.1881	21.197	4.1880	5	19	6.8	78	2.6	0.074
10:	22.503	3.9479	22.490	3.9502	1	9	3.2	67	2.2	0.134
11:	23.447	3.7910	23.465	3.7882	1	36	12.9	273	9.1	0.136
12:	25.721	3.4608	25.703	3.4632	1	18	6.4	89	3.0	0.089
13:	26.548	3.3549	26.557	3.3537	1	280	100.0	3012	100.0	0.194
14:	26.893	3.3126	26.882	3.3139	8	42	15.0	190	6.3	0.081
15:	27.605	3.2287	27.560	3.2340	1	42	15.0	386	12.8	0.165
16:	28.932	3.0836	28.933	3.0835	4	28	10.0	149	4.9	0.096
17:	29.068	3.0695	29.035	3.0729	1	33	11.8	504	16.7	0.275
18:	29.829	2.9929	29.809	2.9948	1	31	11.1	238	7.9	0.138
19:	31.072	2.8759	31.066	2.8765	1	12	4.3	94	3.1	0.141
20:	33.070	2.7066	33.071	2.7065	1	19	6.8	389	12.9	0.369
21:	34.753	2.5793	34.752	2.5794	1	22	7.9	150	5.0	0.123
22:	35.632	2.5177	35.594	2.5202	1	21	7.5	228	7.6	0.195
23:	36.494	2.4601	36.501	2.4597	1	29	10.4	267	8.9	0.166
24:	38.473	2.3380	38.446	2.3396	2	56	20.0	438	14.5	0.141
25:	39.394	2.2854	39.366	2.2870	1	26	9.3	268	8.9	0.186
26:	40.261	2.2382	40.246	2.2390	1	10	3.6	64	2.1	0.115
27:	41.618	2.1683	41.608	2.1688	1	15	5.4	63	2.1	0.076
28:	42.379	2.1311	42.382	2.1310	1	17	6.1	127	4.2	0.134
29:	44.740	2.0240	44.725	2.0246	1	35	12.5	239	7.9	0.123
30:	45.801	1.9795	45.795	1.9798	1	16	5.7	174	5.8	0.196
31:	49.285	1.8474	49.304	1.8468	1	8	2.9	48	1.6	0.108
32:	50.047	1.8211	50.069	1.8203	1	41	14.6	422	14.0	0.185
33:	50.826	1.7950	50.809	1.7955	1	11	3.9	108	3.6	0.177
34:	54.068	1.6948	54.056	1.6951	1	11	3.9	79	2.6	0.129
35:	54.825	1.6731	54.814	1.6735	1	17	6.1	118	3.9	0.125
36:	59.372	1.5554	59.383	1.5551	1	11	3.9	454	15.1	0.743
37:	59.892	1.5431	59.889	1.5432	2	31	11.1	336	11.2	0.195
38:	61.217	1.5128	61.233	1.5125	3	14	5.0	73	2.4	0.094
39:	62.453	1.4858	62.446	1.4860	3	10	3.6	50	1.7	0.090
40:	63.975	1.4541	63.943	1.4548	2	16	5.7	243	8.1	0.273
41:	65.135	1.4310	65.127	1.4312	2	23	8.2	161	5.3	0.126
42:	67.700	1.3829	67.711	1.3827	1	22	7.9	151	5.0	0.124
43:	68.177	1.3744	68.150	1.3749	1	28	10.0	249	8.3	0.160

#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Mon Jan 17 1994 @2:49pm

NOPI2942.MDI> 1/17/94 - NOPI-294-XRD2

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Aluminum [NR] - Al	+	4- 787	1.2	0.00	17	3.6	Fm3m (225)	4.05	4.05	4.05	17	4	2.699
2>( ) Sanidine, disordered - K(Si3Al)O	+	25- 618	1.2	0.06	10		I2/m (12)	8.45	13.03	7.18	362	4	2.556
3>( ) Allophane - Al2O3!2SiO2!3H2O		38- 449	1.3	-.06	12								1.870
4>( ) Orthoclase - KAlSi3O8	+	31- 966	1.5	0.00	14		I2/m (12)	8.43	12.98	7.20	360	4	2.571
5>( ) Microcline, intermediate - KAlSi	+	19- 932	1.7	0.00	9		P-1 (2)	7.71	7.83	7.21	359	2	2.572
6>( ) Microcline, ordered - KAlSi3O8	+	22- 687	1.7	0.06	9		P-1 (2)	7.62	7.91	7.22	360	2	2.567
7>( ) Osumilite-(Mg), syn - KMg2Al3(Si	+	29-1016	1.9	-.12	9		P6/mcc (192)	10.08	10.08	14.32	1259	2	2.641
8>( ) Bloedite - Na2Mg(SO4)2!4H2O	+	19-1215	2.0	-.06	7	1.0	P21/a (14)	11.13	8.25	5.54	500	2	2.223
9>( ) Orthoclase, barian - (K,Ba,Na)(S	+	19- 2	2.0	0.00	9		I2/m (12)	8.46	13.04	7.20	362	4	2.880
10>( ) Melonjosephite - Ca(Fe,Mg)Fe(PO4	+	25-1454	2.1	-.12	6		Pbam (55)	9.55	10.85	6.38	661	4	3.650
11>( ) Khademite - Al(SO4)(OH)!5H2O	+	26-1011	2.1	-.06	14		Pcab (61)	11.18	13.06	10.89	1589	8	1.924
12>( ) Wollastonite-\IT1A\RG - CaSiO3		27-1064	2.1	0.06	10		P-1 (2)	7.33	7.93	7.07	399	6	2.903
13>( ) Microcline, ordered - KAlSi3O8	+	19- 926	2.1	0.00	9		P-1 (2)	7.62	7.92	7.22	361	2	2.561
14>( ) Orthoclase, barian - (K,Ba)(Si,A		19- 3	2.2	0.06	10		I2/m (12)	8.50	13.06	7.20	365	4	
15>( ) Wulfenite, syn - PbMoO4	+	8- 475	2.2	-.12	7		I41/a (88)	5.43	5.43	12.11	179	4	6.817
16>( ) Sanidine - (K,Na)(Si3Al)O8		19-1227	2.2	-.12	5		I2/m (12)	8.32	13.00	7.17	353	4	
17>( ) Yagiite - (Na3,K)3Mg4(Al,Mg)6(Si		21-1365	2.3	-.06	9		P6/mcc (192)	10.09	10.09	14.29	1260	1	
18>( ) Osumilite-(Mg) - (K,Na)(Mg,Fe)2(	+	30- 942	2.3	-.06	10		P6/mcc (192)	10.12	10.12	14.26	1264	2	2.630
19>( ) Widenmannite - Pb2UO2(CO3)3		27- 281	2.3	-.06	14		Pn** (59)	8.99	9.36	4.95	417	2	6.893
20>( ) Hedenbergite, magnesian, syn - C		24- 205	2.3	0.00	9		C2/c (15)	9.80	8.98	5.25	223	4	
21>( ) Natrojarosite, syn - NaFe3(SO4)2	+	36- 425	2.3	-.06	9		R3m (160)	7.34	7.34	16.75	260	3	3.095
22>( ) Parsonsite - Pb2UO2(PO4)2!2H2O	+	12- 259	2.4	-.06	6		P-1 (2)	6.86	10.43	6.68	464	2	6.523
23>( ) Crocoite, syn - PbCrO4	+	8- 209	2.4	0.00	6		P21/n (14)	7.12	7.44	6.80	352	4	6.102
24>( ) Sidwillite - MoO3!2H2O	+	39- 363	2.4	0.00	10		P21/n (14)	10.62	13.82	10.48	1538	16	3.109
25>( ) Xonotlite, syn - Ca6Si6O17(OH)2	+	23- 125	2.5	-.06	8		P2/a (13)	17.02	7.35	7.00	877	2	2.709
26>( ) Paragonite-2\ITM\RG#1, syn - NaA	+	42- 602	2.5	-.12	6		A2/a (15)	19.30	8.89	5.14	440	4	2.885
27>( ) Talmessite - Ca2Mg(AsO4)2!2H2O		38- 451	2.5	0.06	10		P-1 (2)	5.87	6.94	5.54	197	1	3.530
28>( ) Lopezite, syn - K2Cr2O7	+	27- 380	2.5	0.12	6	0.6	P-1 (2)	7.47	13.41	7.39	728	4	2.685
29>( ) Titanite, syn - CaTiSiO5	+	25- 177	2.5	0.06	10		A2/a (15)	7.07	8.70	6.56	184	4	3.530
30>( ) Coalingite - Mg10Fe2CO3(OH)24!2H		26-1217	2.6	-.06	14		R-3m (166)	3.12	3.12	37.40	105	1	2.262
31>( ) Alacranite - AsS		42- 537	2.6	0.00	6		C2/c (15)	9.89	9.73	9.13	430	16	3.305
32>( ) Plumbojarosite - PbFe6(SO4)4(OH)	+	39-1353	2.6	-.06	9		R-3m (166)	7.31	7.31	33.69	520	3	3.613
33>( ) Panunzite - (K,Na)AlSiO4	+	31-1081	2.6	-.06	7		P63 (173)	20.51	20.51	8.55	3117	32	2.590
[illegible]( ) Paulmooreite - Pb2As2O5	+	33- 735	2.6	0.06	6	27.6	P21/n (14)	13.49	5.65	8.55	620	4	6.905
[illegible]>( ) Moluranite, heated - U4Mo7O32!20		29-1371	2.7	-.12	6								4.000
36>( ) Diopside, aluminian - Ca(Mg,Al)(	+	41-1370	2.7	-.06	8	0.8	I2/a (15)	9.72	8.87	5.28	219	4	3.291
37>( ) Jarosite, syn - KFe3(SO4)2(OH)6	+	22- 827	2.7	0.12	9		R-3m (166)	7.29	7.29	17.16	263	3	3.159
38>( ) Guyanaite - Cr2O3!1.5H2O		25-1437	2.8	0.06	9		B ()	8.61	9.73	5.92	248	4	2.399
39>( ) Celestine, barian, syn - Ba0.25S	+	39-1467	2.8	0.12	10		Pbnm (62)	6.94	8.48	5.39	317	4	4.107
40>( ) Wollastonite-\IT1A\RG, ferroan -		27-1056	2.8	-.06	6		P-1 (2)	7.26	7.86	6.99	387	6	3.070

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

Jade: Hit List from Search/Match — Mon Jan 17 1994 @2:57pm

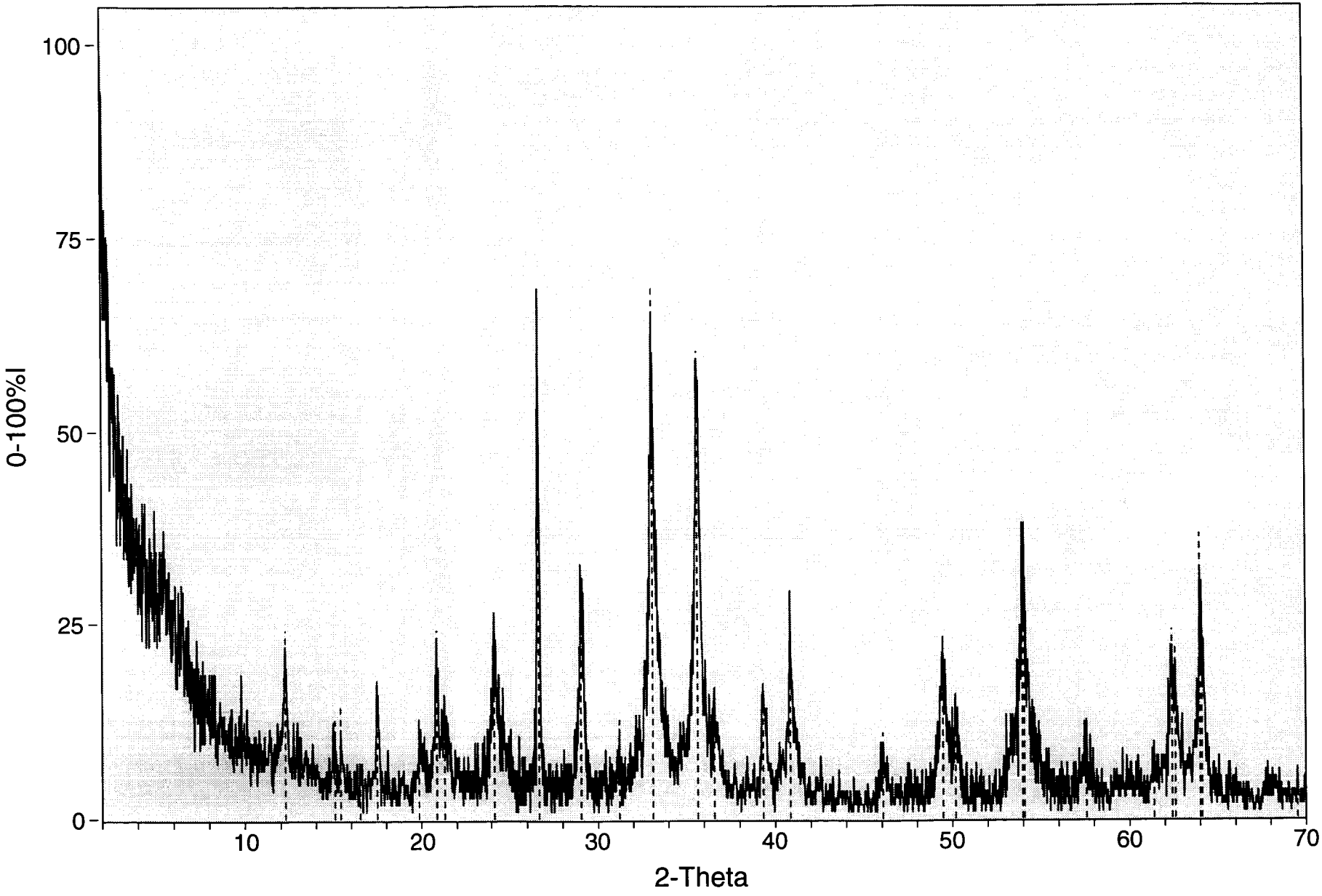
NOPI2942.MDI> 1/17/94 - NOPI-294-XRD2

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Quartz, syn - SiO2	+	33-1161	1.1	0.00	54	3.6	P3221 (154)	4.91	4.91	5.41	113	3	2.649
2>( ) Sidorenkite - Na3Mn(PO4)(CO3)	+	33-1266	2.5	0.00	79		P21/* (11)	8.98	6.73	5.15	311	2	2.977
3>( ) Gismondine - CaAl2Si2O8!4H2O	+	20- 452	2.5	-.12	97		P21/c (14)	10.02	10.61	9.84	1046	4	2.224
4>( ) Unnamed mineral, syn [NR] - Fe3(	+	37- 481	3.4	-.12	48		P21/n (14)	9.10	10.05	8.02	672	4	3.710
5>( ) Sanidine, disordered - K(Si3Al)O	+	25- 618	3.5	-.12	67		I2/m (12)	8.45	13.03	7.18	362	4	2.556
6>( ) Celestine, barian - (Sr,Ba)SO4	+	41-1387	4.3	0.00	97		Pbnm (62)	6.96	8.51	5.41	320	4	4.223
7>( ) Orthoericssonite - BaMn2FeSi2O8(	+	29- 185	4.4	0.12	48		Pmmn (59)	6.99	20.30	5.39	764	4	4.384
8>( ) Minium,syn - Pb3O4	+	41-1493	4.7	0.12	48	4.3	P42/mbc (135)	8.81	8.81	6.57	510	4	8.926
9>( ) Potassium alum, syn - KAl(SO4)2!	+	7- 17	4.9	0.12	20		Pa3 (205)	12.16	12.16	12.16	1797	4	1.754
10>( ) Berlinite, syn - AlPO4	+	10- 423	4.9	0.06	64		P31,212 (151)	4.94	4.94	10.97	232	3	2.618
11>( ) Orthoclase, barian - (K,Ba)(Si,A		19- 3	5.1	-.12	67		I2/m (12)	8.50	13.06	7.20	365	4	
12>( ) Celestine, barian, syn - Ba0.50S	+	39-1468	5.4	0.06	64		Pbnm (62)	7.01	8.60	5.42	327	4	4.238
13>( ) Celestine, barian, syn - Ba0.25S	+	39-1467	5.7	-.06	54		Pbnm (62)	6.94	8.48	5.39	317	4	4.107
14>( ) Orthoclase - KAlSi3O8	+	31- 966	6.3	-.06	10		I2/m (12)	8.43	12.98	7.20	360	4	2.571
15>( ) Lanarkite, syn - Pb2OSO4	+	37- 516	6.4	0.00	54		I2/m (12)	12.43	5.70	7.08	250	4	6.999
16>( ) Aluminum [NR] - Al	+	4- 787	6.5	-.06	16	3.6	Fm3m (225)	4.05	4.05	4.05	17	4	2.699
17>( ) Dumontite - Pb2(UO2)3(PO4)2(OH)4		12- 158	6.8	0.00	20		P21/m (11)	8.16	16.73	7.02	901	2	5.666
18>( ) Khademite - Al(SO4)(OH)!5H2O	+	26-1011	6.8	-.12	20		Pcab (61)	11.18	13.06	10.89	1589	8	1.924
19>( ) Celsian, syn - BaAl2Si2O8	+	38-1450	7.7	0.06	79		I2/m (12)	8.59	13.05	7.20	368	4	3.390
20>( ) Dorfmanite, syn - Na2HPO4!2H2O		10- 190	7.8	-.06	35		P ()	10.34	16.82	6.60	1148	8	2.060
21>( ) Rostite - Al(SO4)(OH)!5H2O	+	41-1382	8.3	-.06	20		Pcab (61)	11.19	13.06	10.89	1591	8	1.921
22>( ) Orthoclase, barian - (K,Ba,Na)(S	+	19- 2	8.5	0.06	10		I2/m (12)	8.46	13.04	7.20	362	4	2.880
23>( ) Lanarkite, syn - Pb2(SO4)O	+	33-1486	8.6	-.06	89		I2/m (12)	12.42	5.70	7.07	249	4	7.019
24>( ) Foggite - CaAl(PO4)(OH)2!H2O		29- 282	8.8	0.12	10		A2122 (20)	9.27	21.32	5.19	513	8	2.772
25>( ) Curetonite - Ba4Al3Ti(PO4)4(O,OH	+	33- 134	8.8	0.00	10		P21/m (11)	6.96	12.55	5.22	446	1	4.420
26>( ) Kinoshitalite-\IT1M\RG - BaMg3Al	+	29- 180	8.9	0.06	64		A2/m (12)	10.26	9.25	5.34	250	2	3.421
27>( ) Magnesium astrophyllite - Na2K2(		29-1042	9.0	0.12	48		A2/m (12)	10.56	23.00	5.35	636	2	
28>( ) Douglasite - K2FeCl4!2H2O		41-1358	9.4	0.12	10			11.80	16.27	8.23	1526		2.160
29>( ) Tridymite-\IT2OH\RG, syn - SiO2		14- 260	9.5	0.00	20		P ()	9.92	9.92	81.50	6946	160	2.298
30>( ) Barbosalite - FeFe2(PO4)2(OH)2	+	33- 668	9.5	-.06	35		P21/n (14)	7.40	7.49	7.31	356	2	3.652
31>( ) Giniite - FeFe4(PO4)4(OH)2!2H2O		33- 669	9.6	-.06	35		C*** (65)	10.36	26.58	5.16	711	4	3.405
32>( ) Jagoite - Pb3FeSi3O10(Cl,OH)	+	36- 417	9.8	0.12	35		P-62c (190)	8.53	8.53	33.33	2099	6	5.430
33>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	9.9	-.06	79		P-62c (190)	8.56	8.56	10.76	683	2	2.546
34>( ) Paulmooreite - Pb2As2O5	+	33- 736	10.2	-.06	12		P21 (4)	13.53	5.65	8.56	623	4	6.869
35>( ) Slawsonite - (Sr0.87Ca0.13)Al2Si	+	37- 462	10.6	-.06	10		P21/a (14)	8.90	9.36	8.33	694	4	3.060
36>( ) Microcline, intermediate - KAlSi	+	22- 675	10.9	-.12	10		P-1 (2)	7.72	7.82	7.21	360	2	2.565
37>( ) Caminite - Mg3(SO4)2(OH)2	+	39- 359	11.2	0.00	67		I41/amd (141)	5.25	5.25	12.99	179	2	2.775
38>( ) Alamosite - PbSiO3		29- 782	11.4	-.06	79		Pn (7)	12.25	7.06	11.24	893	12	6.319
39>( ) Osumilite-(Fe) - (K,Na,Ca)(Mg,Fe	+	25- 658	11.8	-.06	10		P6/mcc (192)	10.15	10.15	14.26	1273	2	2.640
40>( ) Allophane - Al2O3!2SiO2!3H2O		38- 449	12.0	-.06	12								1.870

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

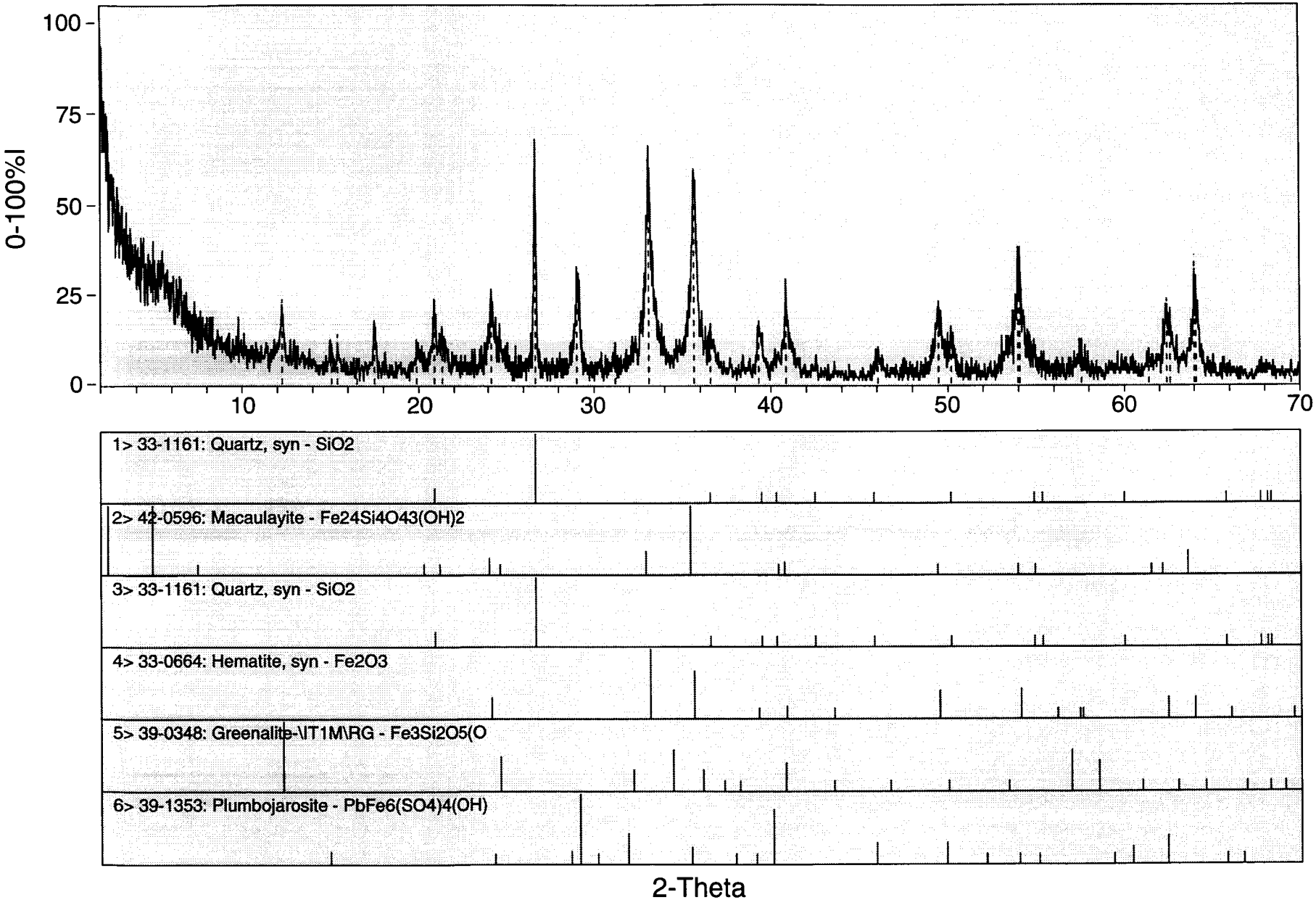
ID: 1/20/94 - NOPI-296-XRD1

File: NOPI2961.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/20/94 - NOPI-296-XRD1

File: NOPI2961.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Fri Jan 21 1994 @1:06pm

File: NOPI2961.MDI> 1/20/94 - NOPI-296-XRD1

Scan Parameters:		Search Parameters:	
Radiation	= CU_1.540598	Filter length(pts)	= 25
Scan Range	= 2 - 70	Noise level(sigmas)	= 2.0
Step Size	= .02	Intensity cutoff(%)	= .5-100
Count Time	= 1 sec.	2-Theta Zero (degs)	= 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	12.271	7.2069	12.262	7.2124	6	22	29.3	226	14.8	0.185
2:	15.068	5.8749	15.051	5.8815	3	12	16.0	79	5.2	0.118
3:	15.407	5.7467	15.407	5.7467	5	12	16.0	16	1.0	0.024
4:	16.488	5.3720	16.488	5.3720	3	6	8.0	10	0.7	0.030
5:	17.489	5.0668	17.498	5.0641	2	18	24.0	213	13.9	0.213
6:	19.867	4.4653	19.885	4.4614	3	13	17.3	101	6.6	0.140
7:	20.865	4.2540	20.880	4.2510	3	25	33.3	354	23.1	0.255
8:	21.299	4.1682	21.305	4.1671	3	14	18.7	139	9.1	0.179
9:	24.183	3.6773	24.194	3.6757	3	27	36.0	555	36.3	0.370
10:	26.679	3.3386	26.666	3.3402	3	75	100.0	606	39.6	0.145
11:	29.041	3.0723	29.066	3.0697	3	34	45.3	558	36.5	0.295
12:	31.216	2.8630	31.216	2.8630	4	11	14.7	18	1.2	0.029
13:	33.116	2.7030	33.124	2.7023	6	72	96.0	1530	100.0	0.382
14:	35.655	2.5161	35.663	2.5155	5	64	85.3	1431	93.5	0.402
15:	36.589	2.4540	36.592	2.4538	6	13	17.3	60	3.9	0.083
16:	39.312	2.2900	39.343	2.2883	2	19	25.3	240	15.7	0.227
17:	40.870	2.2062	40.882	2.2057	2	32	42.7	663	43.3	0.373
18:	46.068	1.9687	46.078	1.9683	2	11	14.7	56	3.7	0.092
19:	49.483	1.8405	49.487	1.8404	2	25	33.3	592	38.7	0.426
20:	50.183	1.8165	50.182	1.8165	2	16	21.3	318	20.8	0.358
21:	53.981	1.6973	53.999	1.6968	3	40	53.3	1212	79.2	0.545
22:	54.080	1.6944	54.072	1.6946	2	41	54.7	722	47.2	0.317
23:	57.573	1.5996	57.554	1.6001	2	13	17.3	210	13.7	0.291
24:	61.394	1.5089	61.394	1.5089	4	8	10.7	16	1.0	0.036
25:	62.433	1.4863	62.449	1.4859	4	24	32.0	491	32.1	0.368
26:	62.615	1.4824	62.609	1.4825	4	22	29.3	249	16.3	0.204
27:	64.013	1.4533	64.046	1.4527	4	38	50.7	524	34.2	0.248
28:	64.109	1.4514	64.102	1.4516	4	31	41.3	445	29.1	0.258
29:	69.509	1.3513	69.509	1.3513	3	5	6.7	14	0.9	0.050

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Fri Jan 21 1994 @1:19pm

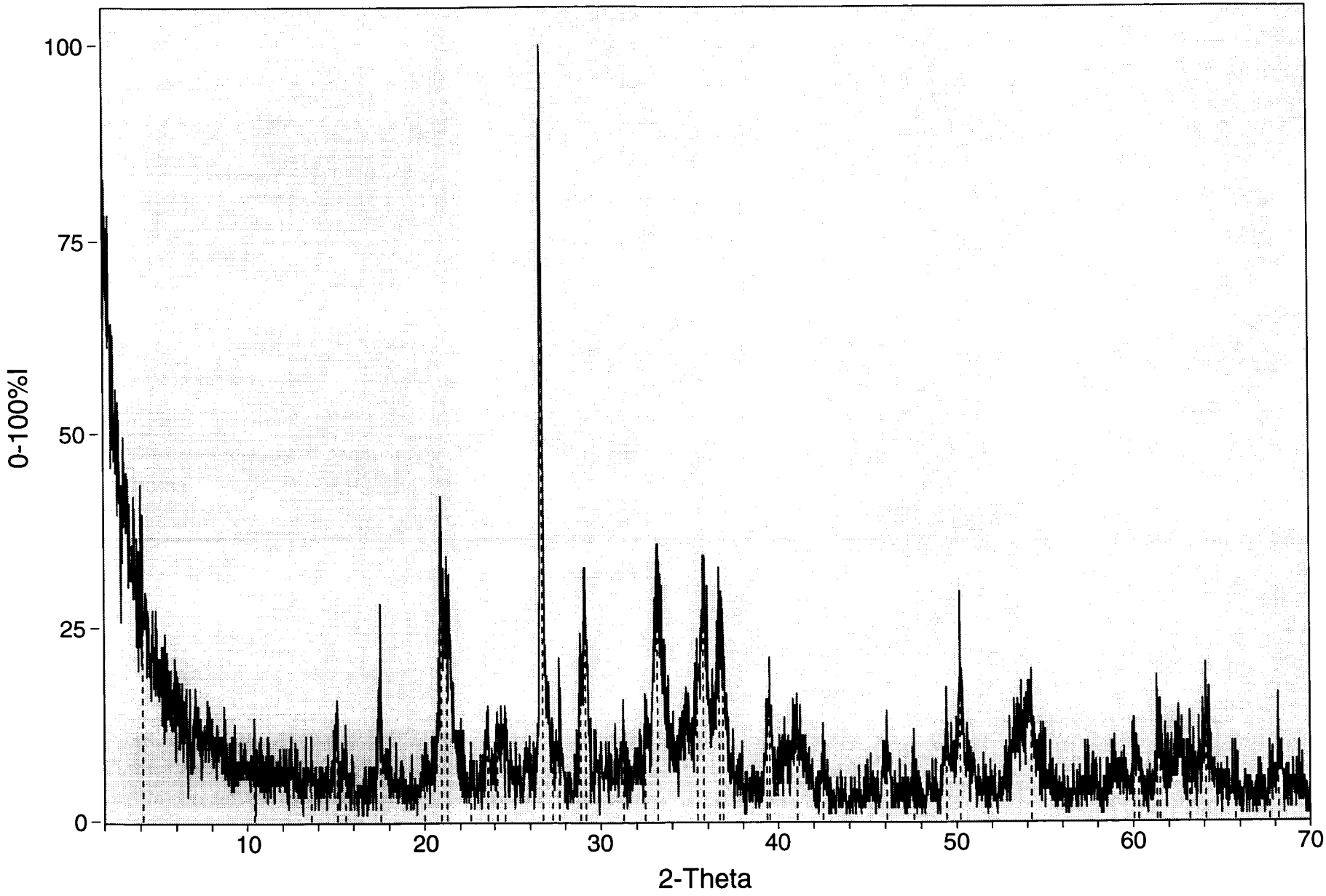
NOPI2961.MDI> 1/20/94 - NOPI-296-XRD1

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Macaulayite - Fe24Si4O43(OH)2		42- 596	1.0	0.00	69		A ()	36.34	8.73	5.04	798	2	4.[illegible]
2>( ) Lanarkite, syn - Pb2OSO4	+	37- 516	1.1	0.00	50		I2/m (12)	12.43	5.70	7.08	250	4	6.999
3>( ) Gismondine - CaAl2Si2O8!4H2O	+	20- 452	1.2	0.00	57		P21/c (14)	10.02	10.61	9.84	1046	4	2.224
4>( ) Zoisite, syn - Ca2Al3(SiO4)(Si2O	+	13- 562	1.3	0.06	34		Pbnm (62)	10.06	16.15	5.58	907	4	3.150
5>( ) Thomsonite - NaCa2Al5Si5O20!6H2O	+	35- 498	1.4	0.00	21		Pnnb (52)	13.09	13.26	13.05	2266	4	2.364
6>( ) Quartz, syn - SiO2	+	33-1161	1.4	0.00	50	3.6	P3221 (154)	4.91	4.91	5.41	113	3	2.649
7>( ) Cesanite - Ca2Na3(SO4)3(OH)	+	35- 506	1.5	0.06	26		P63/m (176)	9.44	9.44	6.90	533	2	2.831
8>( ) Gerdtremmelite - (Zn,Fe)(Al,Fe)2		38- 373	1.5	-.06	20		P*,-1 (2)	5.17	13.04	4.93	318	2	
9>( ) Caryopilite-1\ITM\RG - Mn3Si2O5(	+	38- 422	1.5	0.00	43		A2/m (12)	7.52	9.86	5.69	204	2	3.002
10>( ) Spurrite - Ca5(SiO4)2CO3	+	13- 496	1.6	0.00	59		P21/c (14)	14.15	6.70	10.49	976	4	3.026
11>( ) Lanarkite, syn - Pb2(SO4)O	+	33-1486	1.6	0.00	50		I2/m (12)	12.42	5.70	7.07	249	4	7.019
12>( ) Fayalite, syn - Fe2SiO4	+	34- 178	1.7	-.12	49		Pmnb (62)	6.09	10.48	4.82	308	4	4.398
13>( ) Prosperite - HCaZn2(AsO4)2(OH)	+	33- 599	1.7	0.00	26		C*/c (15)	19.24	7.72	9.76	702	8	4.414
14>( ) Gyrolite - Ca4(Si6O15)(OH)2!3H2O	+	42-1452	1.7	0.00	33		P-1 (2)	9.74	22.40	9.74	1824	4	2.392
15>( ) Tuhualite - (Na,K)2Fe4Si12O30!H2		10- 440	1.7	-.06	20		Cmca (64)	14.31	17.28	10.11	1250	4	2.890
16>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	1.7	0.00	57		P-62c (190)	8.56	8.56	10.76	683	2	2.546
17>( ) Tarasovite [NR] - NaKAl8(Si,Al)1		26- 970	1.8	0.00	82			43.85	8.88	5.13	1997	2	2.360
18>( ) Illite-\IT2M#1\RG - (K,H3O)Al2Si	+	26- 911	1.8	0.00	57		A2/a (15)	20.16	9.00	5.19	469	4	2.790
19>( ) Panunzite - (K,Na)AlSiO4	+	31-1081	1.8	0.00	27		P63 (173)	20.51	20.51	8.55	3117	32	2.590
20>( ) Neltnerite - CaMn6SiO12		35- 666	1.8	0.06	26		I41/acd (142)	9.46	9.46	18.85	844	8	4.640
21>( ) Hematite, syn - Fe2O3	+	33- 664	1.8	0.00	59	2.4	R-3c (167)	5.04	5.04	13.75	101	6	5.270
22>( ) Pirssonite - Na2Ca(CO3)2!2H2O	+	22- 476	1.9	-.06	51		Fdd2 (43)	11.32	20.06	6.00	341	8	2.361
23>( ) Hydrobasaluminite - Al4SO4(OH)10		8- 76	1.9	-.12	20		P ()	14.91	9.99	13.64	1879	4	3.615
24>( ) Epidote - Ca2Al2Fe(SiO4)(Si2O7)(	+	17- 514	1.9	0.00	24		P21/m (11)	10.20	5.63	8.90	462	2	3.500
25>( ) Vuagnatite - CaAlSiO4(OH)	+	29- 289	1.9	0.00	52		P212121 (19)	7.05	8.54	5.68	342	4	3.417
26>( ) Andradite, syn - Ca3Fe2(SiO4)3	+	10- 288	2.0	0.00	48	1.3	Ia3d (230)	12.06	12.06	12.06	877	8	3.850
27>( ) Amicite - K2Na2Al4Si4O16!5H2O	+	33-1273	2.0	0.00	26		I2 (5)	10.23	10.42	9.88	526	2	2.060
28>( ) Goldichite - KFe(SO4)2!4H2O	+	11- 428	2.0	0.00	28		P21/c (14)	10.44	10.52	9.13	982	4	2.428
29>( ) Marokite - CaMn2O4		16- 709	2.0	0.00	44		P*ab (57)	9.64	10.00	3.15	304	4	4.671
30>( ) Arsenopyrite - FeAsS	+	42-1320	2.0	-.12	21		P21/a (14)	5.77	5.67	5.74	174	4	6.209
31>( ) Greenalite-\IT1M\RG - Fe3Si2O5(O		39- 348	2.0	0.00	20		P ()	7.44	9.70	5.60	391	2	3.154
32>( ) Greenalite-\IT1T\RG - Fe3Si2O5(O		39- 337	2.0	0.00	20		P ()	7.21	9.70	5.60	392	2	3.153
33>( ) Paulingite - K3Ca(Si16Al5)O42!22	+	39-1378	2.1	0.06	21		Im3m (229)	35.11	35.11	35.11	>9999	32	2.221
34>( ) Trikalsilite, syn - (K,Na)AlSiO4	+	12- 197	2.1	0.00	21		P63 (173)	15.35	15.35	8.54	1742	18	2.[illegible]
35>( ) Tosudite - Na0.3Al6(Si,Al)8O20(O		22- 956	2.1	-.12	54		P ()	5.12	5.12	29.78	677	1	2.[illegible]
36>( ) Plumbojarosite - PbFe6(SO4)4(OH)	+	39-1353	2.1	0.00	27		R-3m (166)	7.31	7.31	33.69	520	3	3.613
37>( ) Alacranite - AsS		42- 537	2.1	0.00	27		C2/c (15)	9.89	9.73	9.13	430	16	3.305
38>( ) Marcasite - FeS2	+	37- 475	2.1	0.06	34		Pnnm (58)	4.44	5.42	3.39	82	2	4.882
39>( ) Arsenuranospathite - HAl(UO2)4(A		31- 586	2.1	0.00	27		P42/n (86)	7.16	7.16	30.37	1557	1	2.543
40>( ) Tacharanite - Ca12Al2Si18O51!18H		29- 287	2.2	-.06	20		I ()	26.09	3.65	17.07	793	1	2.282

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

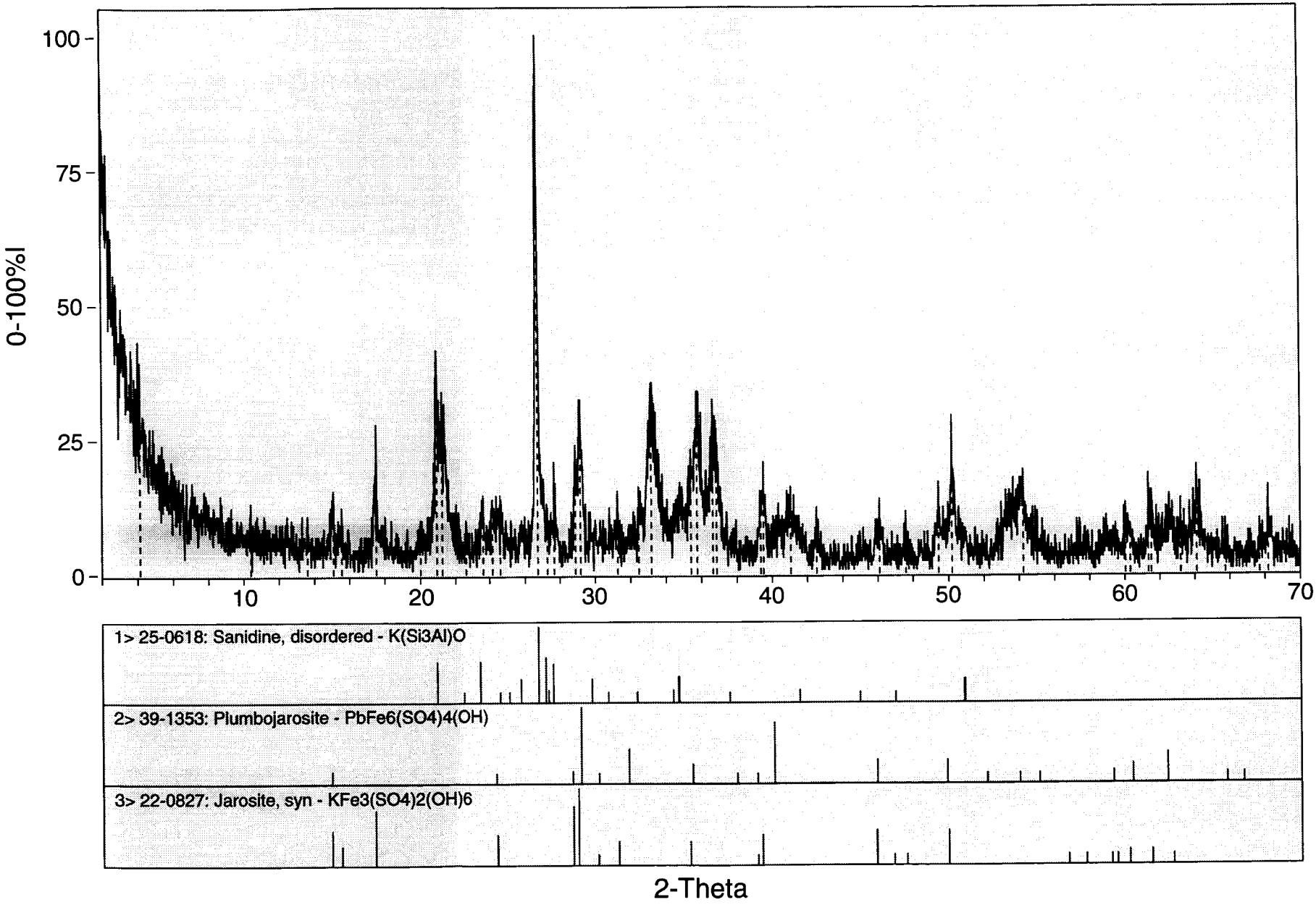
ID: 1/20/94 - NOPI-298-XRD1

File: NOPI2981.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/20/94 - NOPI-298-XRD1

File: NOPI2981.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Fri Jan 21 1994 @1:26pm

File: NOPI2981.MDI> 1/20/94 - NOPI-298-XRD1

Scan Parameters:	Search Parameters:
Radiation = CU_1.540598	Filter length(pts) = 25
Scan Range = 2 - 70	Noise level(sigmas) = 2.0
Step Size = .02	Intensity cutoff(%) = .5-100
Count Time = 1 sec.	2-Theta Zero (degs) = 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	4.140	21.3258	4.140	21.3258	30	21	16.8	31	1.9	0.027
2:	10.400	8.4991	10.400	8.4991	6	11	8.8	15	0.9	0.025
3:	13.620	6.4962	13.620	6.4962	5	9	7.2	15	0.9	0.030
4:	15.078	5.8711	15.056	5.8798	4	16	12.8	131	8.2	0.147
5:	15.558	5.6911	15.539	5.6981	3	13	10.4	88	5.5	0.122
6:	17.518	5.0585	17.504	5.0625	3	33	26.4	347	21.6	0.189
7:	20.020	4.4316	20.020	4.4316	5	8	6.4	14	0.9	0.031
8:	20.941	4.2387	20.983	4.2303	3	51	40.8	1604	100.0	0.566
9:	21.240	4.1798	21.213	4.1850	4	40	32.0	1400	87.3	0.630
10:	22.642	3.9239	22.642	3.9239	4	9	7.2	17	1.1	0.034
11:	23.638	3.7609	23.623	3.7633	4	15	12.0	151	9.4	0.181
12:	24.159	3.6809	24.170	3.6792	3	15	12.0	101	6.3	0.121
13:	24.600	3.6159	24.577	3.6193	4	15	12.0	189	11.8	0.227
14:	26.738	3.3314	26.724	3.3331	4	125	100.0	1473	91.8	0.212
15:	27.290	3.2653	27.287	3.2656	5	11	8.8	63	3.9	0.103
16:	27.681	3.2201	27.679	3.2203	4	23	18.4	204	12.7	0.160
17:	28.877	3.0893	28.883	3.0887	4	27	21.6	193	12.0	0.129
18:	29.160	3.0600	29.129	3.0632	5	37	29.6	584	36.4	0.284
19:	31.259	2.8592	31.249	2.8600	5	15	12.0	76	4.7	0.091
20:	32.485	2.7540	32.499	2.7528	6	15	12.0	85	5.3	0.102
21:	33.180	2.6979	33.195	2.6967	8	38	30.4	1088	67.8	0.515
22:	35.420	2.5322	35.473	2.5285	9	21	16.8	366	22.8	0.314
23:	35.760	2.5089	35.763	2.5087	7	37	29.6	1050	65.5	0.511
24:	36.660	2.4493	36.692	2.4473	7	35	28.0	1149	71.6	0.591
25:	36.862	2.4364	36.861	2.4365	6	29	23.2	432	26.9	0.268
26:	39.359	2.2874	39.403	2.2850	6	12	9.6	204	12.7	0.306
27:	39.519	2.2785	39.499	2.2796	5	22	17.6	202	12.6	0.165
28:	41.060	2.1965	41.051	2.1969	3	18	14.4	634	39.5	0.634
29:	42.539	2.1235	42.544	2.1232	2	14	11.2	106	6.6	0.136
30:	46.101	1.9674	46.079	1.9682	2	16	12.8	190	11.8	0.214
31:	47.608	1.9085	47.608	1.9085	4	11	8.8	20	1.2	0.033
32:	49.440	1.8420	49.453	1.8416	2	20	16.0	285	17.8	0.256
33:	50.201	1.8158	50.209	1.8156	3	35	28.0	809	50.4	0.416
34:	54.238	1.6898	54.207	1.6907	3	22	17.6	1128	70.3	0.923
35:	60.041	1.5396	60.077	1.5388	2	15	12.0	274	17.1	0.329
36:	60.302	1.5336	60.282	1.5341	3	9	7.2	105	6.5	0.210
37:	61.343	1.5101	61.364	1.5096	5	19	15.2	112	7.0	0.106
38:	61.519	1.5061	61.519	1.5061	5	15	12.0	49	3.1	0.059
39:	63.199	1.4701	63.199	1.4701	6	12	9.6	19	1.2	0.028
40:	64.100	1.4516	64.109	1.4514	5	21	16.8	296	18.5	0.254
41:	65.741	1.4193	65.744	1.4192	3	10	8.0	51	3.2	0.092
42:	67.702	1.3828	67.706	1.3828	3	10	8.0	30	1.9	0.054
43:	68.201	1.3740	68.221	1.3736	2	19	15.2	290	18.1	0.275

#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Fri Jan 21 1994 @1:30pm

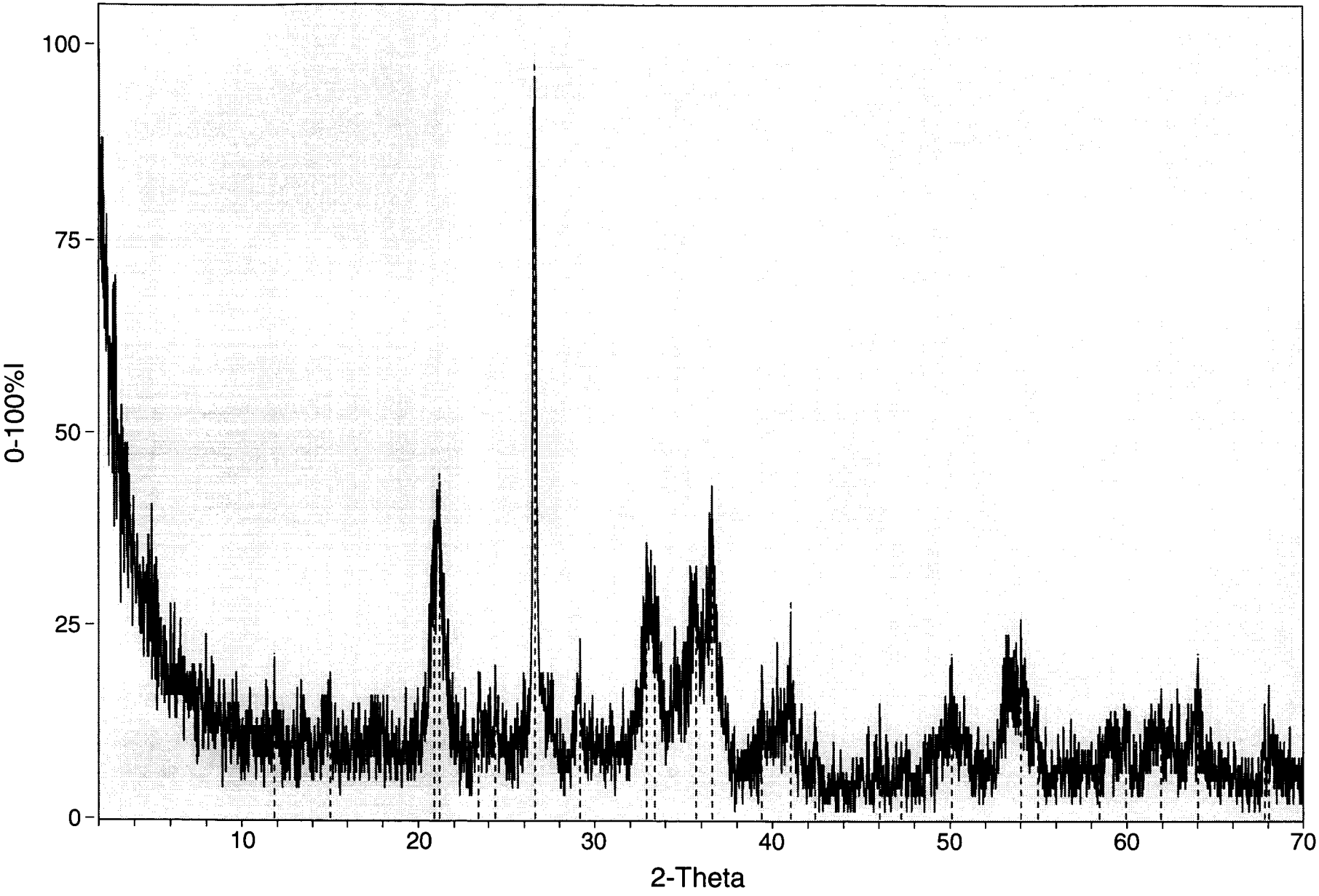
NOPI2981.MDI> 1/20/94 - NOPI-298-XRD1

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Lanarkite, syn - Pb2OSO4	+	37- 516	0.8	0.00	60		I2/m (12)	12.43	5.70	7.08	250	4	6.[illegible]
2>( ) Lanarkite, syn - Pb2(SO4)O	+	33-1486	1.0	0.00	60		I2/m (12)	12.42	5.70	7.07	249	4	7.019
3>( ) Sanidine, disordered - K(Si3Al)O	+	25- 618	1.1	0.00	85		I2/m (12)	8.45	13.03	7.18	362	4	2.556
4>( ) Gismondine - CaAl2Si2O8!4H2O	+	20- 452	1.3	0.00	71		P21/c (14)	10.02	10.61	9.84	1046	4	2.224
5>( ) Orthoclase - KAlSi3O8	+	31- 966	1.3	-.12	66		I2/m (12)	8.43	12.98	7.20	360	4	2.571
6>( ) Okenite - CaSi2O5!2H2O	+	33- 305	1.4	0.00	26		P*,-1 (2)	9.70	21.97	7.29	1415	9	2.241
7>( ) Plumbojarosite - PbFe6(SO4)4(OH)	+	39-1353	1.4	0.00	31		R-3m (166)	7.31	7.31	33.69	520	3	3.613
8>( ) Allactite - Mn7(AsO4)2(OH)8		17- 748	1.4	0.00	30		P21/n (14)	10.12	12.12	5.51	672	2	3.944
9>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	1.4	0.00	71		P-62c (190)	8.56	8.56	10.76	683	2	2.546
10>( ) Alacranite - AsS		42- 537	1.4	0.00	32		C2/c (15)	9.89	9.73	9.13	430	16	3.305
11>( ) Macaulayite - Fe24Si4O43(OH)2		42- 596	1.4	0.00	57		A ()	36.34	8.73	5.04	798	2	4.523
12>( ) Moganite [NR] - SiO2		38- 360	1.4	0.00	85		I ()	8.53	10.76	4.93	226	12	2.645
13>( ) Epidote - Ca2Al2Fe(SiO4)(Si2O7)(	+	17- 514	1.5	0.00	23		P21/m (11)	10.20	5.63	8.90	462	2	3.500
14>( ) Gismondine - CaAl2Si2O8!4H2O	+	39-1373	1.5	0.12	33		P21/c (14)	10.02	10.64	9.84	1047	4	2.221
15>( ) Akaganeite-\ITM\RG, syn - FeO(OH		34-1266	1.5	0.00	92		I4/m (87)	10.53	10.53	3.03	168	8	3.510
16>( ) Suolunite - Ca2Si2O5(OH)2!H2O	+	26- 307	1.5	-.06	22		Fdd2 (43)	11.13	19.82	6.00	331	8	2.693
17>( ) Tridymite-\IT2OH\RG, syn - SiO2		14- 260	1.6	0.12	33		P ()	9.92	9.92	81.50	6946	160	2.298
18>( ) Spurrite - Ca5(SiO4)2CO3	+	13- 496	1.6	0.00	32		P21/c (14)	14.15	6.70	10.49	976	4	3.026
19>( ) Beudantite - PbFe3[(As,S)O4]2(OH	+	19- 689	1.6	0.12	25		R-3m (166)	7.32	7.32	17.02	263	3	4.489
20>( ) Panunzite - (K,Na)AlSiO4	+	31-1081	1.6	0.00	20		P63 (173)	20.51	20.51	8.55	3117	32	2.590
21>( ) Illite-\IT2M#1\RG - (K,H3O)Al2Si	+	26- 911	1.6	0.00	71		A2/a (15)	20.16	9.00	5.19	469	4	2.790
22>( ) Laihunite-\IT1M\RG - Fe1.6SiO4		30- 664	1.6	0.00	20		P21/a (14)	10.19	4.80	5.80	284	4	4.244
23>( ) Prosperite - HCaZn2(AsO4)2(OH)	+	33- 599	1.7	0.12	21		C*/c (15)	19.24	7.72	9.76	702	8	4.414
24>( ) Lawsonite, syn - CaAl2Si2O7(OH)2	+	13- 567	1.7	0.12	23		Bbmm (63)	8.79	13.12	5.84	336	4	3.102
25>( ) Rankinite - Ca3Si2O7	+	22- 539	1.7	0.06	23		P21/n (14)	9.54	8.91	7.85	643	4	2.979
26>( ) Ojuelaite - ZnFe2(AsO4)2(OH)2!4H	+	35- 516	1.7	0.00	26		P21/c (14)	10.25	9.66	5.57	550	2	3.388
27>( ) Pirssonite - Na2Ca(CO3)2!2H2O	+	22- 476	1.8	0.00	32		Fdd2 (43)	11.32	20.06	6.00	341	8	2.361
28>( ) Natrosilite, syn - Na2Si2O5	+	24-1123	1.8	-.12	22		P21/a (14)	12.33	4.85	8.13	471	4	2.568
29>( ) Zoisite, syn - Ca2Al3(SiO4)(Si2O	+	13- 562	1.8	0.00	29		Pbnm (62)	10.06	16.15	5.58	907	4	3.150
30>( ) Orientite - Ca2Mn3Si3O10(OH)4	+	18- 941	1.8	0.00	26		Bbmm (63)	9.05	19.16	6.13	531	4	3.484
31>( ) Goldichite - KFe(SO4)2!4H2O	+	11- 428	1.8	0.00	22		P21/c (14)	10.44	10.52	9.13	982	4	2.428
32>( ) Jarosite, syn - KFe3(SO4)2(OH)6	+	22- 827	1.8	0.12	25		R-3m (166)	7.29	7.29	17.16	263	3	3.159
33>( ) Lithosite - K6Al4Si8O25!2H2O		37- 457	1.8	0.00	22			15.20	10.23	8.44	1312	2	2.540
34>( ) Paulingite - K3Ca(Si16Al5)O42!22	+	39-1378	1.8	0.12	22		Im3m (229)	35.11	35.11	35.11	>9999	32	2.[illegible]
35>( ) Tarasovite [NR] - NaKAl8(Si,Al)1		26- 970	1.8	0.06	76			43.85	8.88	5.13	1997	2	2.[illegible]
36>( ) Gyrolite - Ca4(Si6O15)(OH)2!3H2O	+	42-1452	1.8	0.00	27		P-1 (2)	9.74	22.40	9.74	1824	4	2.392
37>( ) Trabzonite - Ca4Si3O10!2H2O	+	40- 513	1.8	0.00	31		P21/* (11)	6.92	20.64	6.89	975	4	3.001
38>( ) Ilvaite - CaFe3(SiO4)2OH	+	25- 149	1.9	0.00	20		P21/a (14)	13.01	8.81	5.85	671	4	4.048
39>( ) Thomsonite - NaCa2Al5Si5O20!6H2O	+	35- 498	1.9	-.06	23		Pnnb (52)	13.09	13.26	13.05	2266	4	2.364
40>( ) Evenkite - C24H50		28-2004	1.9	0.00	26		P21/c (14)	33.80	4.98	7.59	1277	2	0.881

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

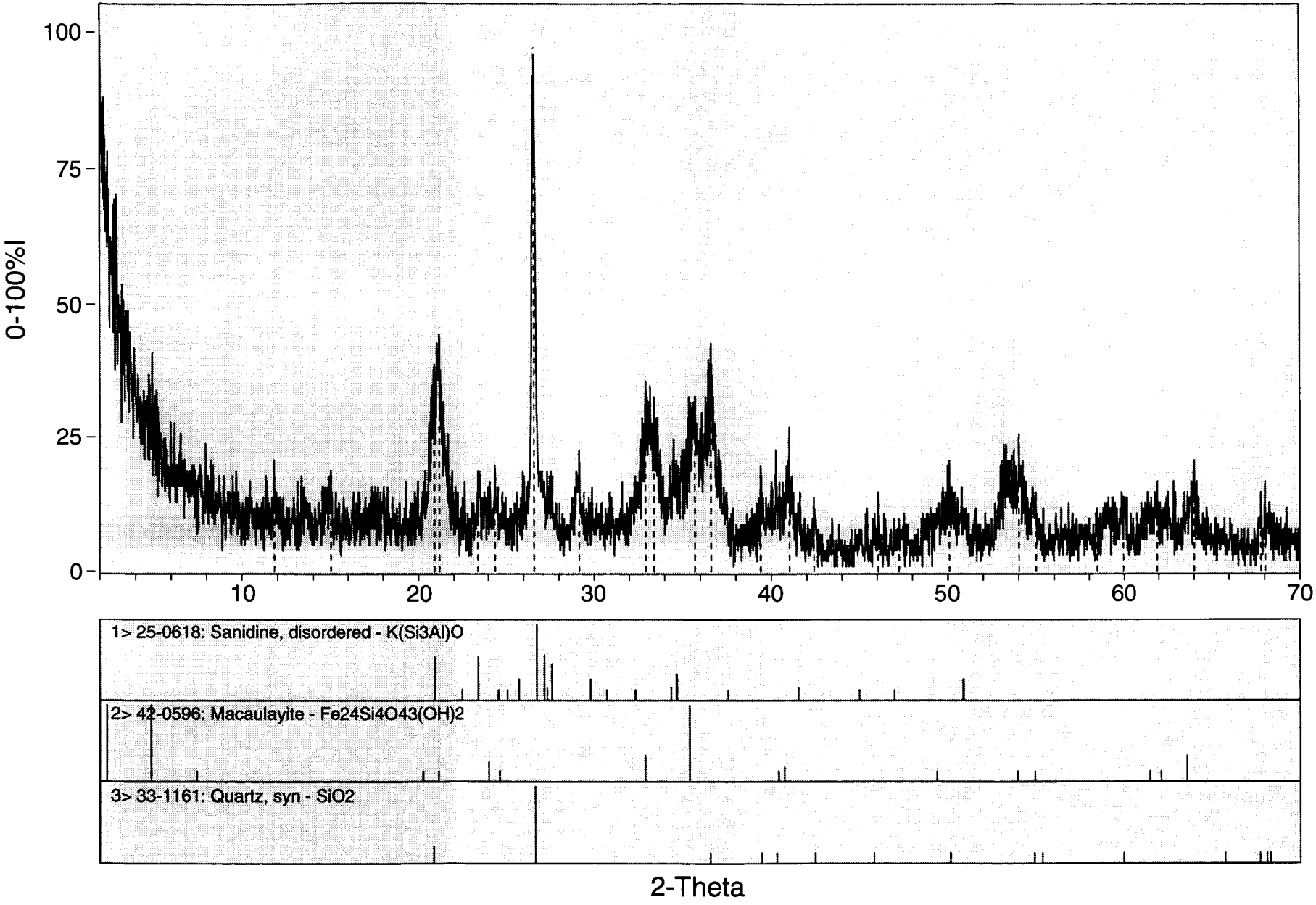
ID: 1/20/94 - NOPI-299-XRD1

File: NOPI2991.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/20/94 - NOPI-299-XRD1

File: NOPI2991.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Fri Jan 21 1994 @1:34pm

File: NOPI2991.MDI> 1/20/94 - NOPI-299-XRD1

Scan Parameters:	Search Parameters:
Radiation = CU_1.540598	Filter length(pts) = 25
Scan Range = 2 - 70	Noise level(sigmas) = 2.0
Step Size = .02	Intensity cutoff(%) = .5-100
Count Time = 1 sec.	2-Theta Zero (degs) = 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	11.818	7.4824	11.828	7.4760	7	15	16.1	51	2.8	0.061
2:	15.019	5.8939	15.005	5.8995	5	15	16.1	94	5.2	0.113
3:	20.897	4.2475	20.927	4.2416	5	34	36.6	1456	80.9	0.771
4:	21.176	4.1922	21.158	4.1958	5	41	44.1	1592	88.5	0.699
5:	23.439	3.7923	23.454	3.7899	5	15	16.1	172	9.6	0.206
6:	24.379	3.6482	24.387	3.6470	6	14	15.1	116	6.4	0.149
7:	26.616	3.3465	26.602	3.3482	6	93	100.0	1489	82.8	0.288
8:	29.155	3.0605	29.134	3.0627	6	18	19.4	168	9.3	0.168
9:	32.939	2.7170	32.975	2.7142	8	29	31.2	994	55.3	0.617
10:	33.399	2.6807	33.399	2.6807	9	24	25.8	118	6.6	0.088
11:	35.717	2.5119	35.700	2.5130	8	26	28.0	1799	100.0	1.245
12:	36.597	2.4534	36.594	2.4536	8	36	38.7	1294	71.9	0.647
13:	39.399	2.2852	39.406	2.2848	7	13	14.0	70	3.9	0.097
14:	41.017	2.1987	41.004	2.1993	5	24	25.8	508	28.2	0.381
15:	42.399	2.1301	42.403	2.1300	4	10	10.8	49	2.7	0.088
16:	46.038	1.9699	46.026	1.9704	2	13	14.0	88	4.9	0.122
17:	47.240	1.9225	47.245	1.9223	3	7	7.5	52	2.9	0.134
18:	50.098	1.8193	50.102	1.8192	3	19	20.4	701	39.0	0.664
19:	54.019	1.6962	54.013	1.6964	4	22	23.7	1069	59.4	0.875
20:	54.976	1.6689	54.976	1.6689	7	9	9.7	14	0.8	0.028
21:	58.459	1.5775	58.459	1.5775	4	8	8.6	13	0.7	0.029
22:	59.958	1.5416	59.955	1.5417	4	11	11.8	142	7.9	0.232
23:	61.915	1.4975	61.912	1.4975	5	12	12.9	46	2.6	0.069
24:	64.020	1.4532	64.013	1.4534	5	17	18.3	230	12.8	0.244
25:	67.803	1.3810	67.787	1.3813	3	12	12.9	62	3.4	0.093
26:	68.039	1.3768	68.043	1.3767	3	15	16.1	222	12.3	0.266

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Fri Jan 21 1994 @1:37pm

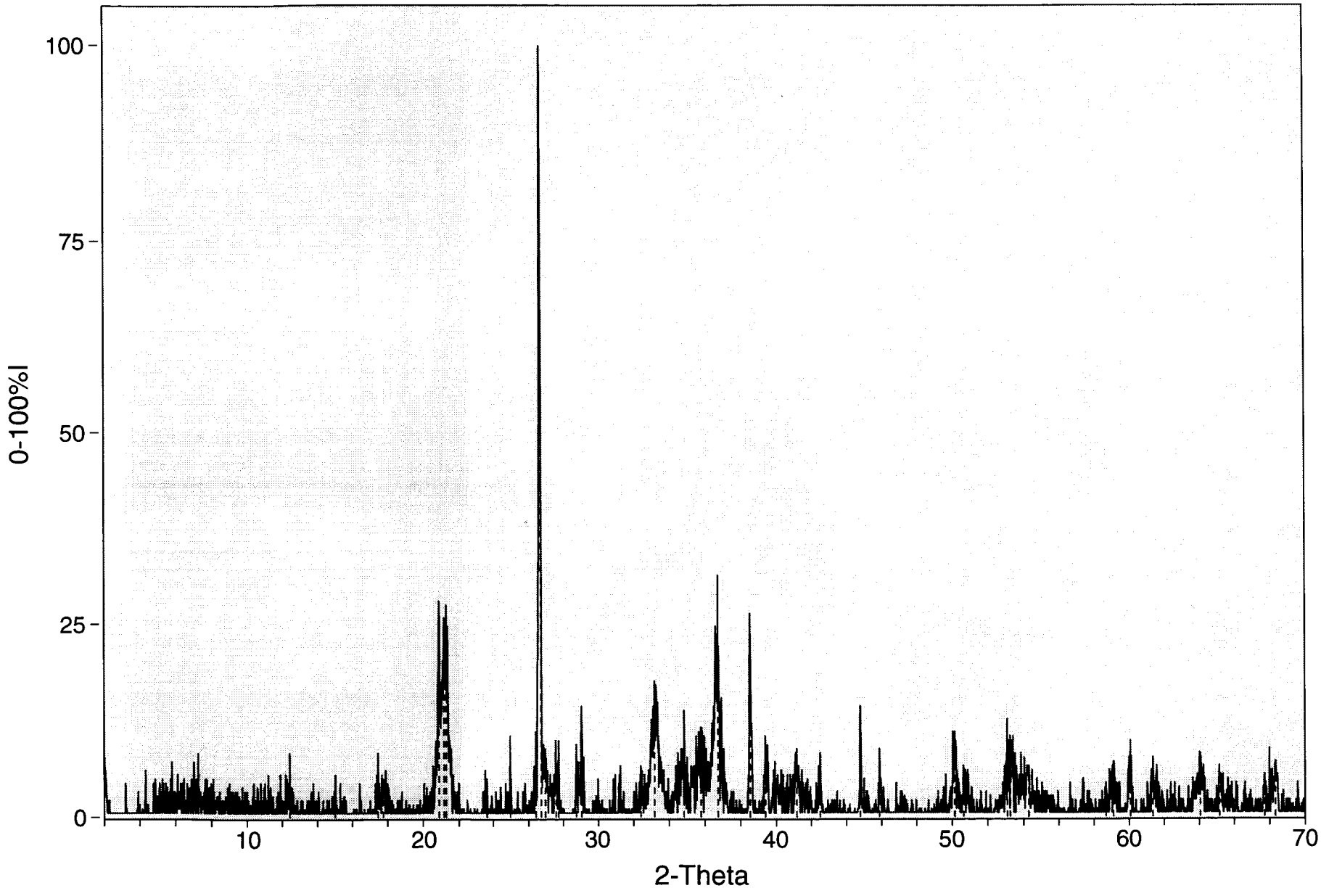
NOPI2991.MDI> 1/20/94 - NOPI-299-XRD1

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Gismondine - CaAl2Si2O8!4H2O	+	20- 452	0.8	0.00	77		P21/c (14)	10.02	10.61	9.84	1046	4	2.[illegible]
2>( ) Gyrolite - Ca4(Si6O15)(OH)2!3H2O	+	42-1452	0.9	0.00	32		P-1 (2)	9.74	22.40	9.74	1824	4	2.392
3>( ) Lanarkite, syn - Pb2OSO4	+	37- 516	0.9	0.00	82		I2/m (12)	12.43	5.70	7.08	250	4	6.999
4>( ) Lanarkite, syn - Pb2(SO4)O	+	33-1486	0.9	0.00	82		I2/m (12)	12.42	5.70	7.07	249	4	7.019
5>( ) Sainfeldite - Ca5H2(AsO4)!4H2O		16- 615	1.1	0.12	80		C2/c (15)	18.64	9.81	10.12	918	8	2.990
6>( ) Sanidine, disordered - K(Si3Al)O	+	25- 618	1.1	0.00	36		I2/m (12)	8.45	13.03	7.18	362	4	2.556
7>( ) Rankinite - Ca3Si2O7	+	22- 539	1.1	0.00	32		P21/n (14)	9.54	8.91	7.85	643	4	2.979
8>( ) Macaulayite - Fe24Si4O43(OH)2		42- 596	1.2	0.00	67		A ()	36.34	8.73	5.04	798	2	4.523
9>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	1.2	0.00	77		P-62c (190)	8.56	8.56	10.76	683	2	2.546
10>( ) Okenite - CaSi2O5!2H2O	+	33- 305	1.2	0.00	30		P*,-1 (2)	9.70	21.97	7.29	1415	9	2.241
11>( ) Prosperite - HCaZn2(AsO4)2(OH)	+	33- 599	1.2	0.06	30		C*/c (15)	19.24	7.72	9.76	702	8	4.414
12>( ) Quartz, syn - SiO2	+	33-1161	1.2	0.00	82	3.6	P3221 (154)	4.91	4.91	5.41	113	3	2.649
13>( ) Gismondine - CaAl2Si2O8!4H2O	+	39-1373	1.2	0.00	31		P21/c (14)	10.02	10.64	9.84	1047	4	2.221
14>( ) Copiapite - Fe14O3(SO4)18!63H2O	+	35- 583	1.3	0.00	30		P-1 (2)	7.38	18.76	7.34	979	1	6.266
15>( ) Illite-\IT2M#1\RG - (K,H3O)Al2Si	+	26- 911	1.3	0.00	77		A2/a (15)	20.16	9.00	5.19	469	4	2.790
16>( ) Goslarite, syn - ZnSO4!7H2O	+	9- 395	1.4	0.00	39		P212121 (19)	11.78	12.05	6.82	968	4	1.972
17>( ) Zoisite, syn - Ca2Al3(SiO4)(Si2O	+	13- 562	1.4	0.00	28		Pbnm (62)	10.06	16.15	5.58	907	4	3.150
18>( ) Orientite - Ca2Mn3Si3O10(OH)4	+	18- 941	1.4	0.00	28		Bbmm (63)	9.05	19.16	6.13	531	4	3.484
19>( ) Ojuelaite - ZnFe2(AsO4)2(OH)2!4H	+	35- 516	1.6	0.00	37		P21/c (14)	10.25	9.66	5.57	550	2	3.388
20>( ) Microcline, ordered - KAlSi3O8	+	19- 926	1.6	0.00	34		P-1 (2)	7.62	7.92	7.22	361	2	2.561
21>( ) Alamosite - PbSiO3		29- 782	1.6	0.00	77		Pn (7)	12.25	7.06	11.24	893	12	6.319
22>( ) Birunite [NR] - Ca15(CO3)5.5(SiO		15- 75	1.6	0.00	21								2.360
23>( ) Ilvaite - CaFe3(SiO4)2OH	+	25- 149	1.6	0.00	26		P21/a (14)	13.01	8.81	5.85	671	4	4.048
24>( ) Sidwillite - MoO3!2H2O	+	39- 363	1.7	-.06	36		P21/n (14)	10.62	13.82	10.48	1538	16	3.109
25>( ) Lawsonite, syn - CaAl2Si2O7(OH)2	+	13- 567	1.7	0.00	25		Bbmm (63)	8.79	13.12	5.84	336	4	3.102
26>( ) Pirssonite - Na2Ca(CO3)2!2H2O	+	22- 476	1.7	0.00	23		Fdd2 (43)	11.32	20.06	6.00	341	8	2.361
27>( ) Cebollite - Ca5Al2(OH)4Si3O12		16- 695	1.7	0.00	24								2.960
28>( ) Shortite - Na2Ca2(CO3)3	+	21-1348	1.7	0.00	21		C2mm (38)	7.12	11.03	4.96	195	2	2.610
29>( ) Ussingite - Na2AlSi3O8OH		14- 426	1.7	0.00	24		P1 (1)	7.26	8.72	7.15	396	2	2.536
30>( ) Epidote - Ca2Al2Fe(SiO4)(Si2O7)(	+	17- 514	1.7	0.00	27		P21/m (11)	10.20	5.63	8.90	462	2	3.500
31>( ) Vuagnatite - CaAlSiO4(OH)	+	29- 289	1.7	0.00	27		P212121 (19)	7.05	8.54	5.68	342	4	3.417
32>( ) Spurrite - Ca5(SiO4)2CO3	+	13- 496	1.8	0.00	29		P21/c (14)	14.15	6.70	10.49	976	4	3.026
33>( ) Cesanite - Ca2Na3(SO4)3(OH)	+	35- 506	1.8	0.00	23		P63/m (176)	9.44	9.44	6.90	533	2	2.831
34>( ) Perlialite - K9NaCaAl12Si24O72!1		38- 395	1.8	0.06	21		P6/mmm (191)	18.49	18.49	7.51	2224	1	2.[illegible]
35>( ) Groutite - MnO(OH)		12- 733	1.8	0.00	39		Pbnm (62)	4.57	10.69	2.85	139	4	4.[illegible]
36>( ) Laihunite-\IT1M\RG - Fe1.6SiO4		30- 664	1.8	0.00	27		P21/a (14)	10.19	4.80	5.80	284	4	4.244
37>( ) Moluranite, heated - U4Mo7O32!20		29-1371	1.8	0.00	31								4.000
38>( ) Larnite, syn - Ca2SiO4	+	29- 371	1.8	0.00	23	0.6	P21/n (14)	9.28	6.76	5.48	343	4	3.338
39>( ) Marokite - CaMn2O4		16- 709	1.8	0.00	28		P*ab (57)	9.64	10.00	3.15	304	4	4.671
40>( ) Moganite [NR] - SiO2		38- 360	1.8	-.06	69		I ()	8.53	10.76	4.93	226	12	2.645

* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

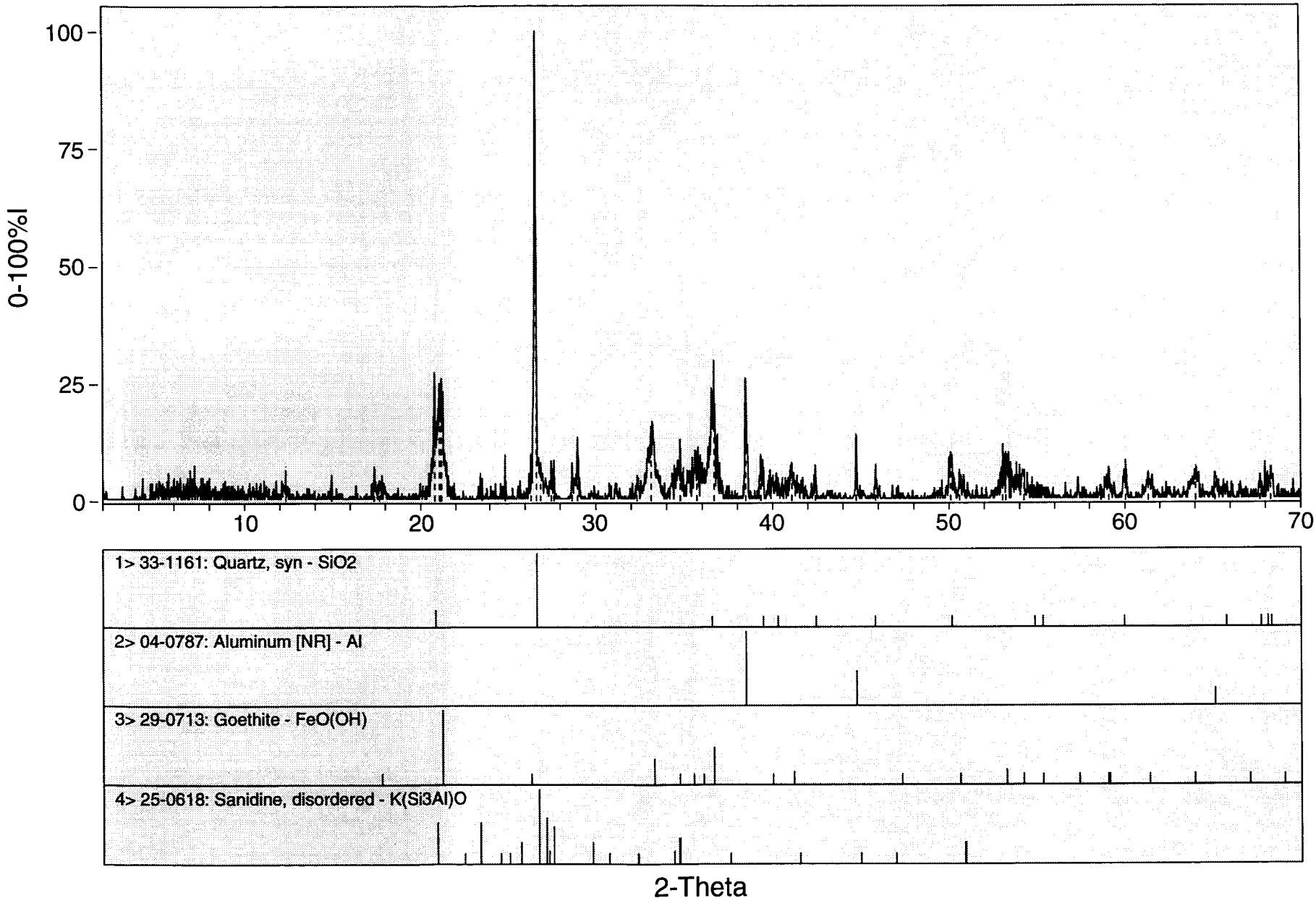
ID: 1/17/94 - NOPI-301-XRD2

File: NOPI3012.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



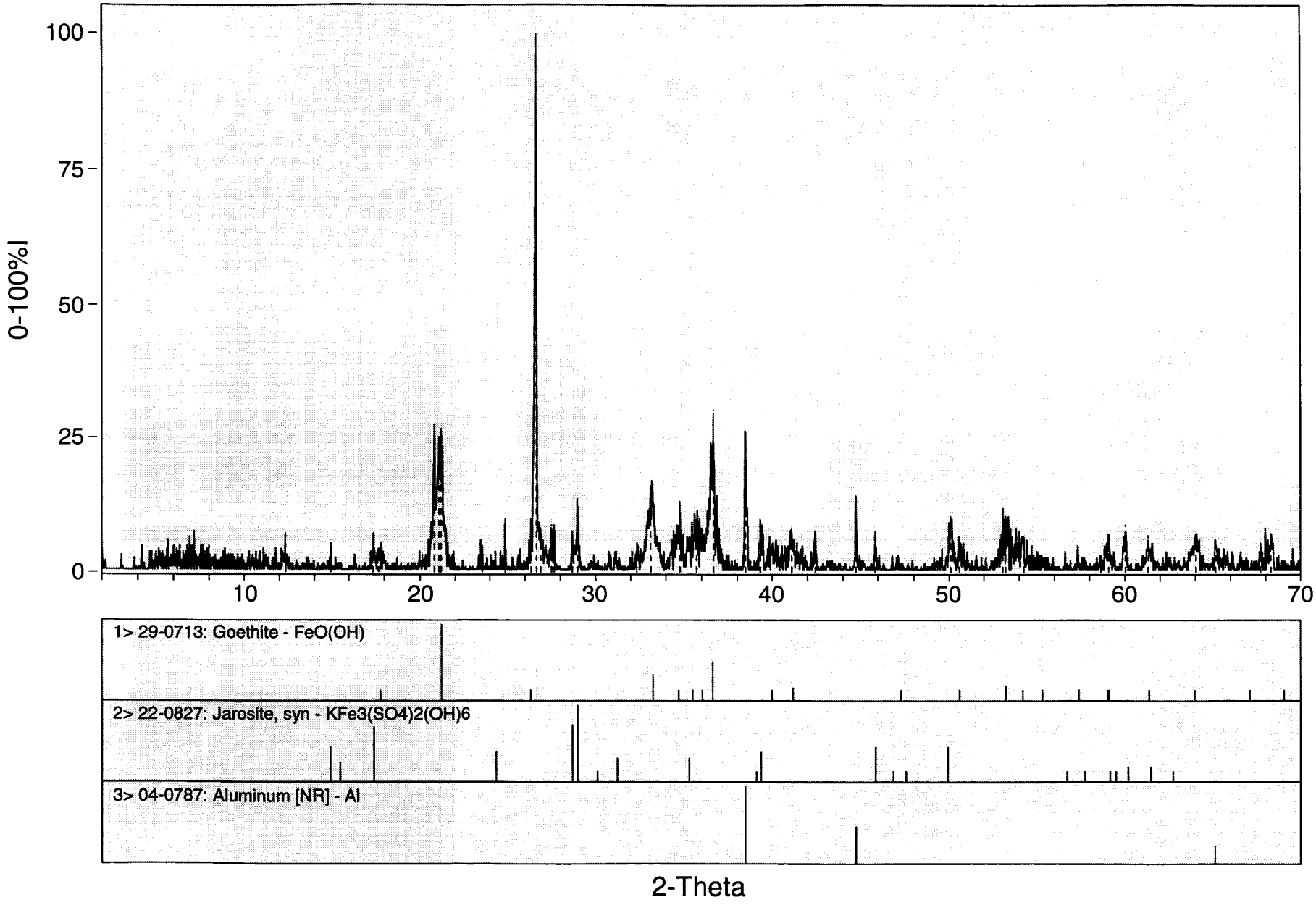
ID: 1/17/94 - NOPI-301-XRD2

File: NOPI3012.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



ID: 1/17/94 - NOPI-301-XRD2

File: NOPI3012.MDI Scan: 2-70/.02/1/#3401, Anode:CU Zero=0.0



Jade: Peak Listing Mon Jan 17 1994 @3:04pm

File: NOPI3012.MDI> 1/17/94 - NOPI-301-XRD2

Scan Parameters:		Search Parameters:	
Radiation	= CU_1.540598	Filter length(pts)	= 25
Scan Range	= 2 - 70	Noise level(sigmas)	= 2.0
Step Size	= .02	Intensity cutoff(%)	= .5-100
Count Time	= 1 sec.	2-Theta Zero (degs)	= 0

	Peak-Position		Centroid-Position		Peak & Area are without Bkgrd					
#	2Theta	d	2Theta	d	Bkgrd	Peak	I%	Area	I%	FWHM*
1:	12.346	7.1635	12.346	7.1635	5	10	5.6	10	0.6	0.020
2:	14.927	5.9301	14.923	5.9319	1	9	5.0	30	1.8	0.060
3:	17.372	5.1007	17.376	5.0994	1	14	7.8	75	4.5	0.096
4:	17.671	5.0151	17.671	5.0150	2	7	3.9	21	1.3	0.054
5:	20.818	4.2635	20.883	4.2503	1	50	27.8	1078	64.3	0.388
6:	21.080	4.2110	21.079	4.2113	4	43	23.9	652	38.9	0.273
7:	21.196	4.1883	21.157	4.1958	1	49	27.2	1151	68.7	0.423
8:	23.577	3.7704	23.577	3.7704	2	7	3.9	12	0.7	0.031
9:	24.861	3.5785	24.857	3.5792	1	18	10.0	52	3.1	0.052
10:	26.345	3.3802	26.345	3.3802	5	15	8.3	26	1.6	0.031
11:	26.642	3.3432	26.614	3.3467	2	180	100.0	1258	75.1	0.126
12:	26.885	3.3136	26.877	3.3145	5	11	6.1	40	2.4	0.065
13:	27.489	3.2421	27.506	3.2402	1	17	9.4	109	6.5	0.115
14:	27.639	3.2249	27.639	3.2249	4	14	7.8	37	2.2	0.048
15:	28.668	3.1114	28.668	3.1114	5	12	6.7	19	1.1	0.028
16:	28.967	3.0799	28.960	3.0807	1	25	13.9	173	10.3	0.125
17:	32.353	2.7649	32.364	2.7640	1	11	6.1	55	3.3	0.090
18:	33.115	2.7030	33.131	2.7017	1	31	17.2	704	42.0	0.409
19:	34.772	2.5779	34.753	2.5792	4	21	11.7	129	7.7	0.111
20:	35.714	2.5120	35.717	2.5118	1	20	11.1	1676	100.0	1.508
21:	36.675	2.4484	36.640	2.4506	2	55	30.6	856	51.1	0.280
22:	38.481	2.3375	38.490	2.3370	1	47	26.1	331	19.7	0.127
23:	39.325	2.2893	39.347	2.2880	1	18	10.0	126	7.5	0.126
24:	41.104	2.1942	41.106	2.1941	1	15	8.3	349	20.8	0.419
25:	42.444	2.1280	42.431	2.1286	1	14	7.8	71	4.2	0.091
26:	44.729	2.0244	44.743	2.0238	1	25	13.9	122	7.3	0.088
27:	45.831	1.9783	45.844	1.9778	1	15	8.3	68	4.1	0.082
28:	50.096	1.8194	50.110	1.8190	1	19	10.6	217	12.9	0.206
29:	50.586	1.8029	50.586	1.8029	3	7	3.9	17	1.0	0.044
30:	53.059	1.7246	53.109	1.7231	1	22	12.2	335	20.0	0.274
31:	53.221	1.7197	53.207	1.7201	1	18	10.0	431	25.7	0.431
32:	54.255	1.6893	54.216	1.6905	1	11	6.1	441	26.3	0.722
33:	58.643	1.5730	58.643	1.5730	1	7	3.9	14	0.8	0.036
34:	59.086	1.5622	59.063	1.5628	1	12	6.7	149	8.9	0.223
35:	60.046	1.5395	60.029	1.5399	1	17	9.4	110	6.6	0.116
36:	61.329	1.5104	61.360	1.5097	1	13	7.2	139	8.3	0.192
37:	64.034	1.4529	64.026	1.4531	1	14	7.8	194	11.6	0.249
38:	65.138	1.4310	65.158	1.4305	1	11	6.1	75	4.5	0.123
39:	67.700	1.3829	67.705	1.3828	1	9	5.0	50	3.0	0.100
40:	68.300	1.3722	68.287	1.3724	1	12	6.7	128	7.6	0.192

* Intensity values are based on counts per second.

Jade: Hit List from Search/Match — Mon Jan 17 1994 @3:06pm

NOPI3012.MDI> 1/17/94 - NOPI-301-XRD2

40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Quartz, syn - SiO2	+	33-1161	0.5	0.00	83	3.6	P3221 (154)	4.91	4.91	5.41	113	3	2.649
2>( ) Gismondine - CaAl2Si2O8!4H2O	+	20- 452	1.6	0.00	66		P21/c (14)	10.02	10.61	9.84	1046	4	2.224
3>( ) Aluminum [NR] - Al	+	4- 787	1.7	0.00	22	3.6	Fm3m (225)	4.05	4.05	4.05	17	4	2.699
4>( ) Microcline, ordered - KAlSi3O8	+	19- 926	2.7	0.12	21		P-1 (2)	7.62	7.92	7.22	361	2	2.561
5>( ) Goethite - FeO(OH)	+	29- 713	3.0	0.00	20		Pbnm (62)	4.61	9.96	3.02	139	4	4.258
6>( ) Sidorenkite - Na3Mn(PO4)(CO3)	+	33-1266	3.0	0.06	51		P21/* (11)	8.98	6.73	5.15	311	2	2.977
7>( ) Berlinite, syn - AlPO4	+	10- 423	3.4	0.12	40		P31,212 (151)	4.94	4.94	10.97	232	3	2.618
8>( ) Sanidine, disordered - K(Si3Al)O	+	25- 618	3.5	-.06	45		I2/m (12)	8.45	13.03	7.18	362	4	2.556
9>( ) Epsomite, syn - MgSO4!7H2O	+	36- 419	3.5	0.12	20		P212121 (19)	11.87	11.98	6.85	974	4	1.681
10>( ) Heterosite - (Fe,Mn)PO4	+	34- 134	3.9	-.06	23		Pmnb (62)	5.82	9.82	4.79	274	4	3.400
11>( ) Unnamed mineral, syn [NR] - Fe3(	+	37- 481	4.2	0.00	66		P21/n (14)	9.10	10.05	8.02	672	4	3.710
12>( ) Foggite - CaAl(PO4)(OH)2!H2O		29- 282	4.4	0.12	20		A2122 (20)	9.27	21.32	5.19	513	8	2.772
13>( ) Lanarkite, syn - Pb2OSO4	+	37- 516	4.4	0.00	83		I2/m (12)	12.43	5.70	7.08	250	4	6.999
14>( ) Groutite - MnO(OH)	+	24- 713	4.6	-.06	22		Pbnm (62)	4.56	10.70	2.87	140	4	4.171
15>( ) Ramsdellite - MnO2	+	42-1316	4.6	0.12	20	3.0	Pbnm (62)	4.70	9.53	2.86	128	4	4.501
16>( ) Pyrochroite, syn - Mn(OH)2		18- 787	4.7	-.06	22		P-3m1 (164)	3.32	3.32	4.74	45	1	3.274
17>( ) Groutite - MnO(OH)		12- 733	5.0	0.12	21		Pbnm (62)	4.57	10.69	2.85	139	4	4.195
18>( ) Celestine, barian - (Sr,Ba)SO4	+	41-1387	5.1	0.12	66		Pbnm (62)	6.96	8.51	5.41	320	4	4.223
19>( ) Illite-\IT2M#1\RG - (K,H3O)Al2Si	+	26- 911	5.1	-.12	40		A2/a (15)	20.16	9.00	5.19	469	4	2.790
20>( ) Vertumnite - Ca4Al4Si4O6(OH)24!3		29- 291	5.3	-.12	23		P21/* (11)	5.77	25.12	5.74	723	1	2.158
21>( ) Moganite [NR] - SiO2		38- 360	5.4	-.06	45		I ()	8.53	10.76	4.93	226	12	2.645
22>( ) Lanarkite, syn - Pb2(SO4)O	+	33-1486	5.5	-.06	66		I2/m (12)	12.42	5.70	7.07	249	4	7.019
23>( ) Forsterite, syn - Mg2SiO4	+	34- 189	5.6	0.00	22		Pmnb (62)	5.98	10.20	4.76	290	4	3.222
24>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	5.6	-.12	40		P-62c (190)	8.56	8.56	10.76	683	2	2.546
25>( ) Kinoshitalite-\IT1M\RG - BaMg3Al	+	29- 180	5.9	0.12	40		A2/m (12)	10.26	9.25	5.34	250	2	3.421
26>( ) Orthoclase, barian - (K,Ba)(Si,A		19- 3	5.9	-.06	45		I2/m (12)	8.50	13.06	7.20	365	4	
27>( ) Celestine, barian, syn - Ba0.25S	+	39-1467	5.9	0.00	23		Pbnm (62)	6.94	8.48	5.39	317	4	4.107
28>( ) Tamarugite - NaAl(SO4)2!6H2O	+	19-1186	6.1	0.06	23		P21/m (11)	7.35	25.23	6.10	1126	4	2.065
29>( ) Khademite - Al(SO4)(OH)!5H2O	+	26-1011	6.2	-.06	20		Pcab (61)	11.18	13.06	10.89	1589	8	1.924
30>( ) Widenmannite - Pb2UO2(CO3)3		27- 281	6.3	0.06	22		Pn** (59)	8.99	9.36	4.95	417	2	6.893
31>( ) Augelite - Al2(PO4)(OH)3	+	34- 151	6.3	0.00	90		I2/m (12)	12.15	8.01	5.08	247	4	2.687
32>( ) Sidwillite - MoO3!2H2O	+	39- 363	6.5	-.12	45		P21/n (14)	10.62	13.82	10.48	1538	16	3.109
33>( ) Anandite-\IT2M#1\RG - BaFe3(Si,F		19- 78	6.6	-.12	23		A2/a (15)	19.96	9.49	5.47	516	4	3.940
[illegible]( ) Hoegbomite-\IT18R\RG - (Fe,Mg)1.		16- 167	6.9	-.12	20		R-3m (166)	5.74	5.74	83.36	792	18	3.930
[illegible]( ) Coalingite - Mg10Fe2CO3(OH)24!2H		26-1217	6.9	0.06	22		R-3m (166)	3.12	3.12	37.40	105	1	2.262
36>( ) Buchwaldite - NaCa(PO4)		29-1194	7.0	0.06	10		P21nm (31)	6.74	9.26	5.17	322	4	3.257
37>( ) Purpurite - (Mn,Fe)PO4		17- 202	7.1	-.12	23		Pmnb (62)	5.83	9.70	4.77	270	4	3.200
38>( ) Caminite - Mg3(SO4)2(OH)2	+	39- 359	7.2	-.06	51		I41/amd (141)	5.25	5.25	12.99	179	2	2.775
39>( ) Celsian, syn - BaAl2Si2O8	+	38-1450	7.2	0.12	66		I2/m (12)	8.59	13.05	7.20	368	4	3.390
40>( ) Sapphirine-\IT2M\RG - (Mg4Al4)(A		19- 750	7.4	-.06	22	3.5	P21/c (14)	9.94	14.43	9.79	1317	4	3.476

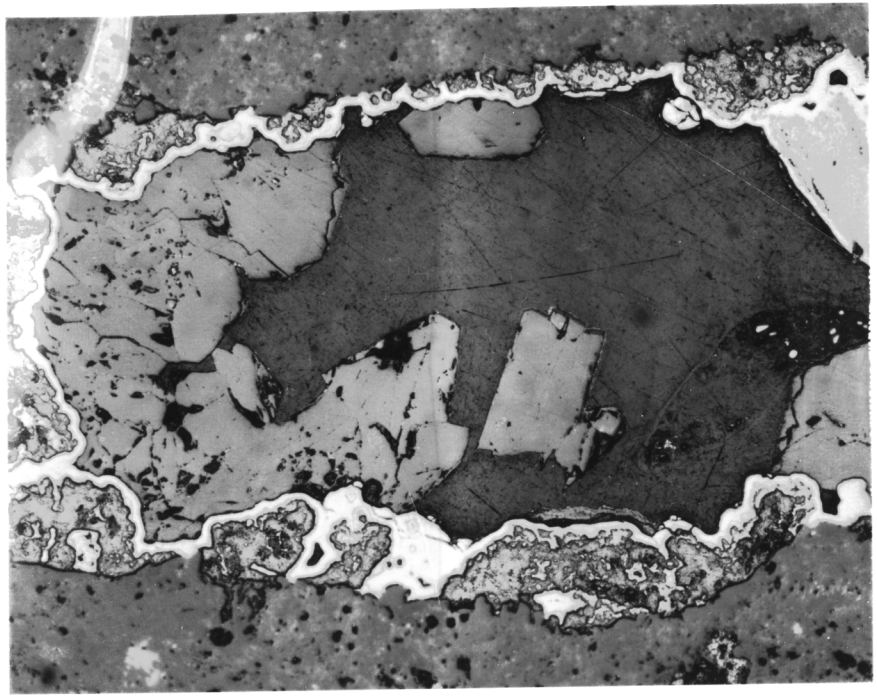
* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

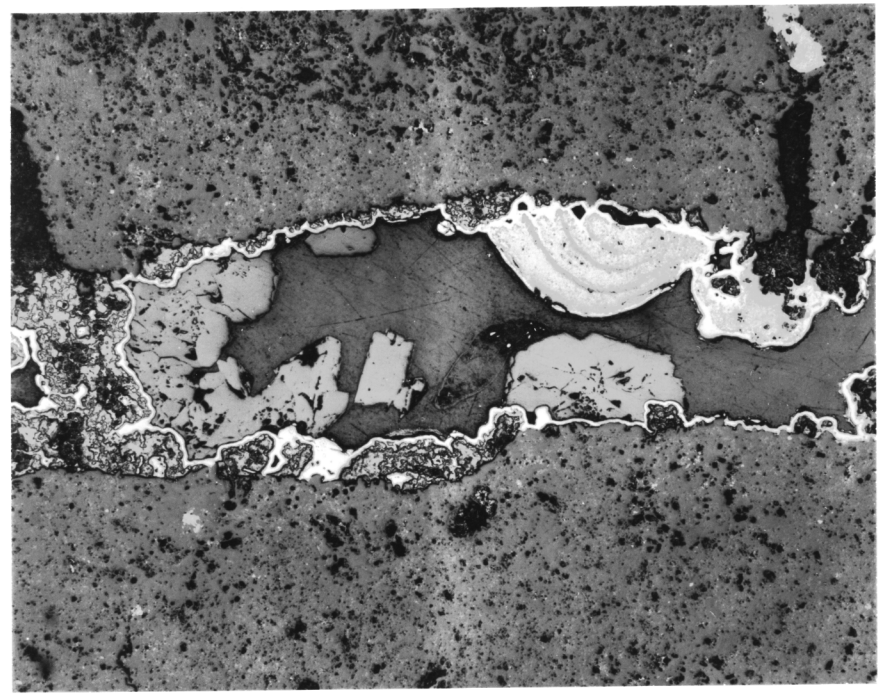
Jade: Hit List from Search/Match — Mon Jan 17 1994 @3:09pm

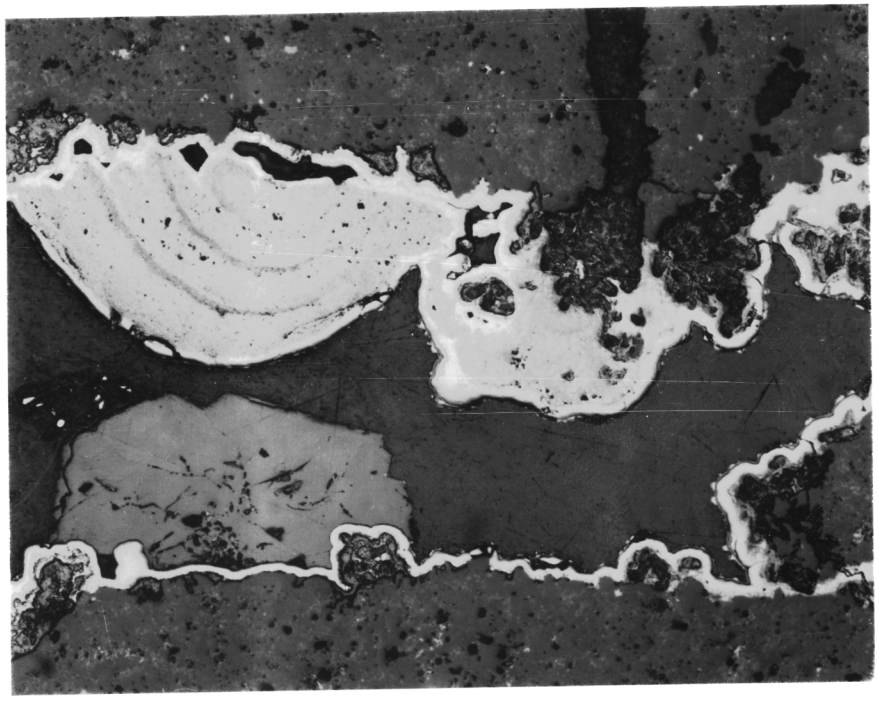
NOPI3012.MDI> 1/17/94 - NOPI-301-XRD2

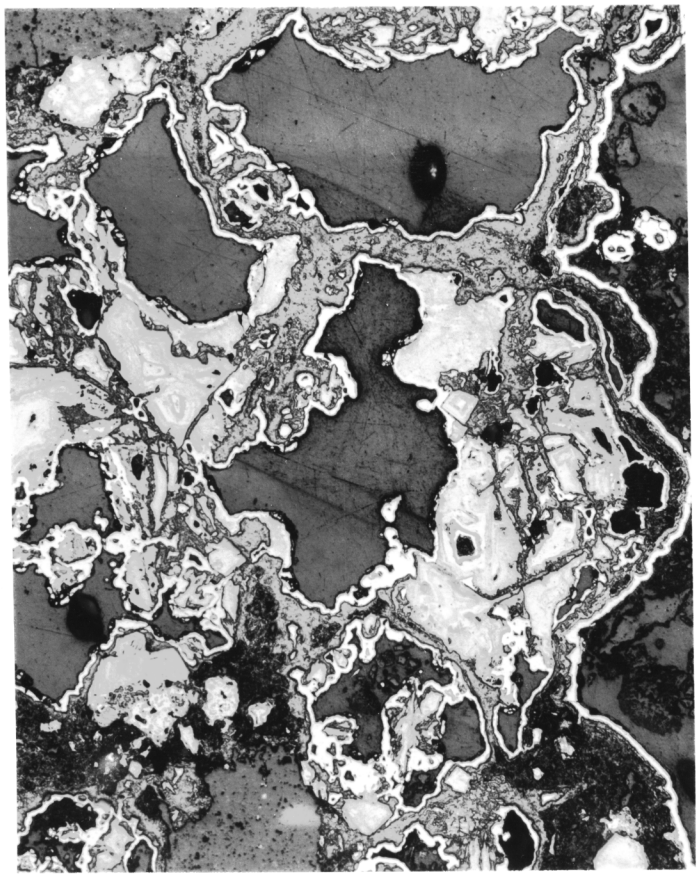
40 Hits Sorted on Figure-Of-Merit	QM*	PDF-#	FOM	OFF	I%	RIR	Space-Group	a	b	c	Vol*	Z	Dx*
1>( ) Richterite, potassian - KNaCaMg5	+	25- 675	1.1	0.00	11		C2/m (12)	10.05	17.99	5.27	461	2	3.008
2>( ) Nepheline, potassian, syn - (K,N	+	12- 198	1.2	-.06	10		P63 (173)	10.24	10.24	8.51	772	8	2.560
3>( ) Goethite - FeO(OH)	+	29- 713	1.2	0.06	16		Pbnm (62)	4.61	9.96	3.02	139	4	4.258
4>( ) Krinovite - NaMg2CrSi3O10	+	20-1123	1.2	-.06	6		P-1 (2)	9.65	10.22	8.80	715	4	3.418
5>( ) Jarosite, syn - KFe3(SO4)2(OH)6	+	22- 827	1.3	0.00	10		R-3m (166)	7.29	7.29	17.16	263	3	3.159
6>( ) Amicite - K2Na2Al4Si4O16!5H2O	+	33-1273	1.3	0.06	9		I2 (5)	10.23	10.42	9.88	526	2	2.060
7>( ) Epsomite, syn - MgSO4!7H2O	+	36- 419	1.4	0.00	20		P212121 (19)	11.87	11.98	6.85	974	4	1.681
8>( ) Tamarugite - NaAl(SO4)2!6H2O	+	19-1186	1.4	0.00	18		P21/m (11)	7.35	25.23	6.10	1126	4	2.065
9>( ) Vertumnite - Ca4Al4Si4O6(OH)24!3		29- 291	1.4	0.06	19		P21/* (11)	5.77	25.12	5.74	723	1	2.158
10>( ) Gismondine - CaAl2Si2O8!4H2O	+	39-1373	1.5	0.00	19		P21/c (14)	10.02	10.64	9.84	1047	4	2.221
11>( ) Aluminum [NR] - Al	+	4- 787	1.5	0.06	19	3.6	Fm3m (225)	4.05	4.05	4.05	17	4	2.699
12>( ) Zoisite, syn - Ca2Al3(SiO4)(Si2O	+	13- 562	1.5	0.06	10		Pbnm (62)	10.06	16.15	5.58	907	4	3.150
13>( ) Spurrite - Ca5(SiO4)2CO3	+	13- 496	1.5	0.06	14		P21/c (14)	14.15	6.70	10.49	976	4	3.026
14>( ) Ramsdellite - MnO2	+	42-1316	1.6	-.06	16	3.0	Pbnm (62)	4.70	9.53	2.86	128	4	4.501
15>( ) Celadonite-\IT1M\RG - K(Mg,Fe,Al	+	17- 521	1.6	0.00	7		A2/m (12)	10.13	9.06	5.23	236	2	2.950
16>( ) Gaylussite - Na2Ca(CO3)2!5H2O	+	21- 343	1.6	-.12	6	0.4	I*/a (15)	11.58	7.78	11.21	494	4	1.993
17>( ) Purpurite - (Mn,Fe)PO4		17- 202	1.6	0.06	15		Pmnb (62)	5.83	9.70	4.77	270	4	3.200
18>( ) Douglasite - K2FeCl4!2H2O		41-1358	1.6	0.00	9			11.80	16.27	8.23	1526		2.160
19>( ) Potassium alum, syn - KAl(SO4)2!	+	7- 17	1.6	0.12	15		Pa3 (205)	12.16	12.16	12.16	1797	4	1.754
20>( ) Ferropyrosmalite - (Mn,Fe)8Si6O1	+	12- 268	1.6	0.00	12		P-3m1 (164)	13.36	13.36	7.16	1107	2	3.060
21>( ) Despujolsite - Ca3Mn(SO4)2(OH)6!		20- 226	1.6	0.06	8		P-62c (190)	8.56	8.56	10.76	683	2	2.546
22>( ) Natrophilite - NaMnPO4	+	25- 846	1.6	0.00	6		Pmnb (62)	6.31	10.52	4.99	331	4	3.467
23>( ) Qingheiite - Na3Mn3Mg2Al2(PO4)6	+	41- 588	1.6	0.00	12	4.0	P21/a (14)	10.90	12.41	6.42	860	2	3.499
24>( ) Vuagnatite - CaAlSiO4(OH)	+	29- 289	1.6	0.12	8		P212121 (19)	7.05	8.54	5.68	342	4	3.417
25>( ) Balangeroite-\IT2M\RG - (Mg,Fe,M		35- 567	1.7	0.00	10		P*** (47)	13.58	13.85	9.65	1815	1	2.980
26>( ) Richterite, syn - Na2CaMg5Si8O22		25- 808	1.7	0.00	10		C ()	9.91	17.98	5.27	455	2	2.988
27>( ) Tarapacaite, syn - K2CrO4	+	15- 365	1.7	0.00	11		Pnam (62)	7.66	10.39	5.92	471	4	2.737
28>( ) Holtedahlite - Mg2PO4(OH)	+	33- 879	1.7	0.00	10		P3*1 (164)	11.19	11.19	4.97	539	6	2.967
29>( ) Olympite - Na3PO4	+	33-1272	1.7	-.06	7		Pn*a (62)	10.15	14.82	10.14	1526	16	2.854
30>( ) Northupite - Na3Mg(CO3)2Cl		19-1213	1.8	0.00	7		Fd3 (203)	13.98	13.98	13.98	683	16	2.419
31>( ) Landesite - Mn3Fe(PO4)2(OH)3!3H2		16- 603	1.8	-.12	6		Pmna (53)	9.43	10.17	8.47	812	4	4.217
32>( ) Tridymite-\IT2OH\RG, syn - SiO2		14- 260	1.8	-.06	9		P ()	9.92	9.92	81.50	6946	160	2.298
33>( ) Glaucophane, syn - Na2Mg3Al2Si8O	+	15- 58	1.8	0.00	10		C2/m (12)	9.71	17.92	5.27	447	2	2.908
[illegible]( ) Alleghanyite, magnesian - Mg2Mn3	+	39-1348	1.8	0.12	10	0.8	P21/a (14)	10.57	4.82	8.08	390	2	3.678
[illegible]( ) Autunite - Ca(UO2)2(PO4)2!10H2O	+	41-1353	1.8	-.06	4		I4/mmm (139)	7.01	7.01	20.74	509	2	3.098
36>( ) Trikalsilite, syn - (K,Na)AlSiO4	+	12- 197	1.8	0.00	10		P63 (173)	15.35	15.35	8.54	1742	18	2.631
37>( ) Huttonite, syn - ThSiO4	+	34- 188	1.8	-.06	10		P21/n (14)	6.78	6.97	6.50	296	4	7.267
38>( ) Koashvite - Na6(Ca,Mn)(Ti,Fe)Si6	+	27- 669	1.8	0.00	6		P*cb (55)	10.19	20.95	7.36	1571	4	2.980
39>( ) Marsturite - Mn3CaNaHSi5O15	+	31- 585	1.8	0.12	10		P*,-1 (2)	7.70	11.73	6.78	584	2	3.468
40>( ) Ferrowyllieite - Na2Fe2Al(PO4)3	+	39- 409	1.9	0.00	9		P21/a (14)	10.88	12.29	6.32	839	4	3.719

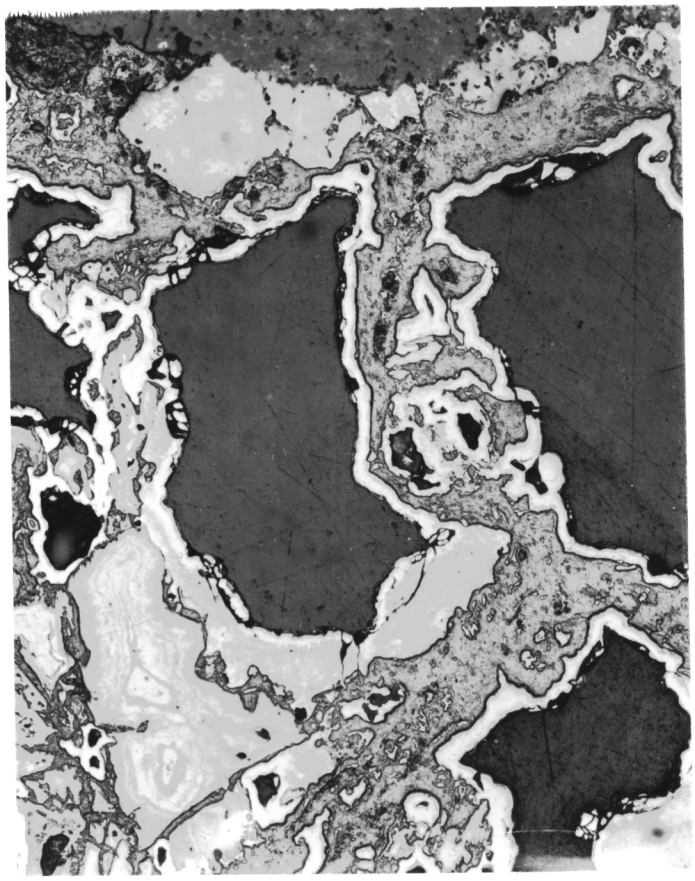
* QM - ? for Doubtful Quality or Non-ambient patterns; + for Indexed patterns with Space-Group, Unit Cell & Density.
* vol - reduced-cell volume; dx - measured density if calculated is not available.

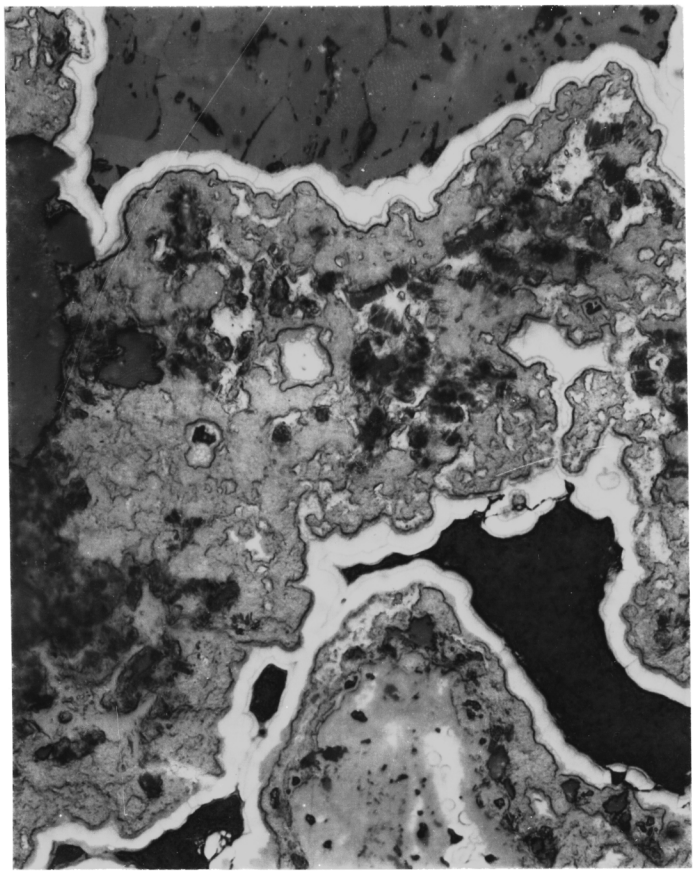












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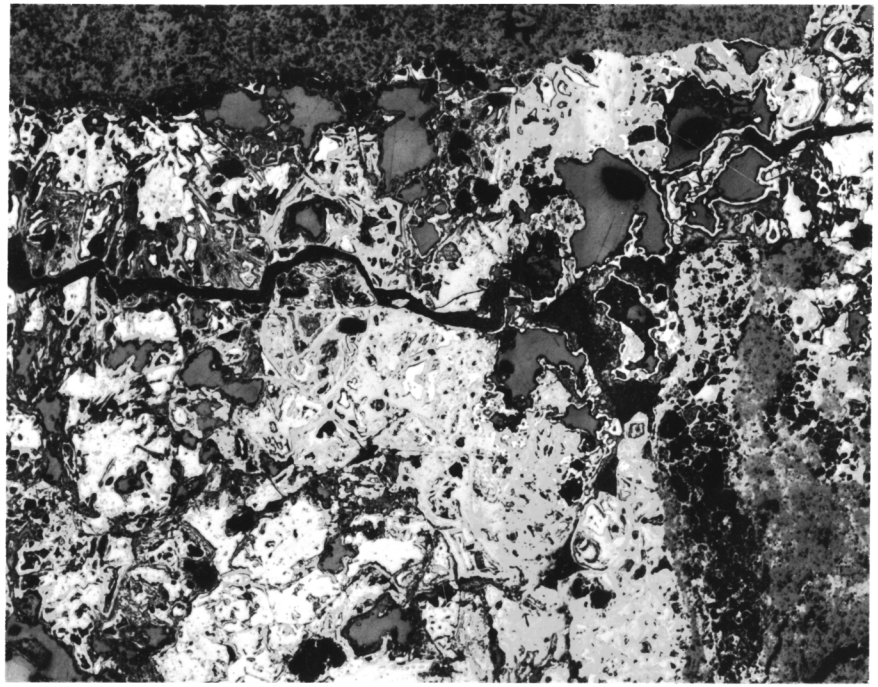

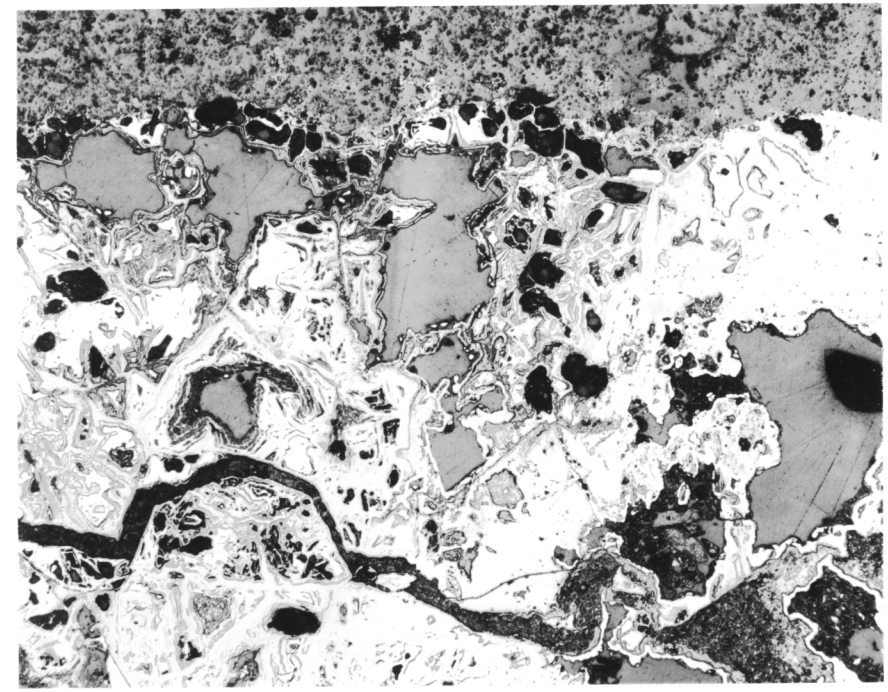

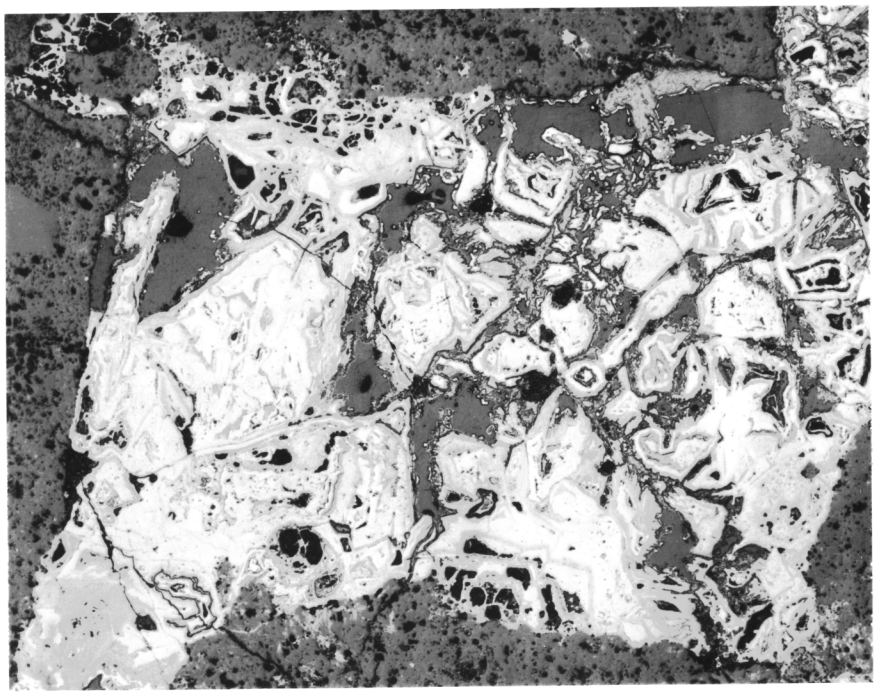

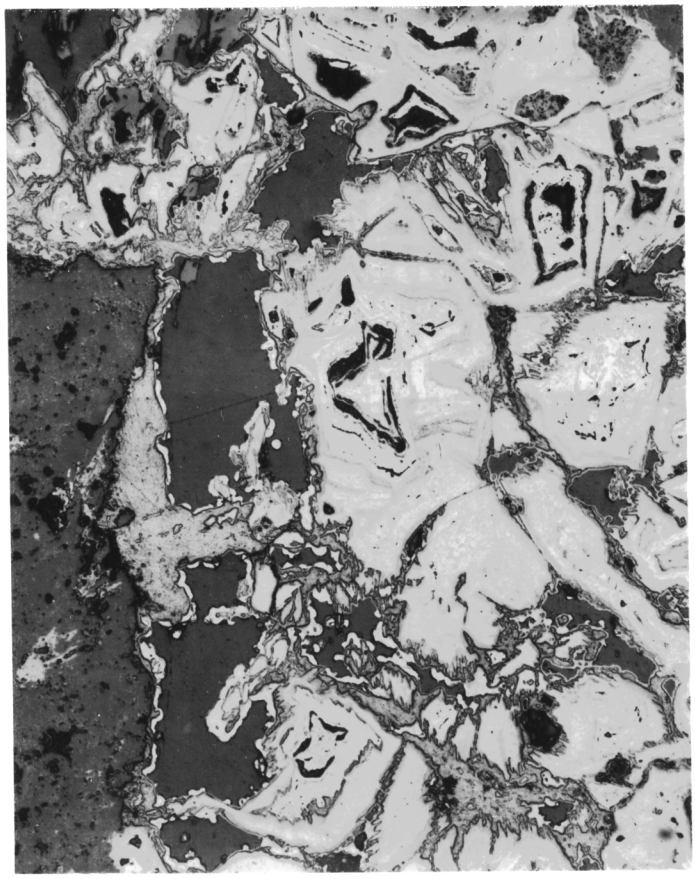

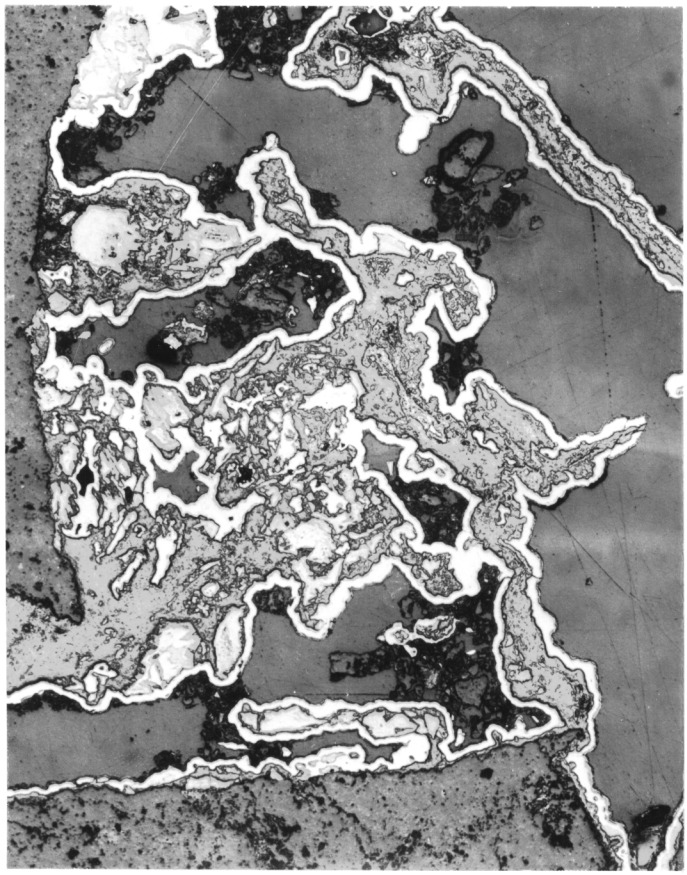

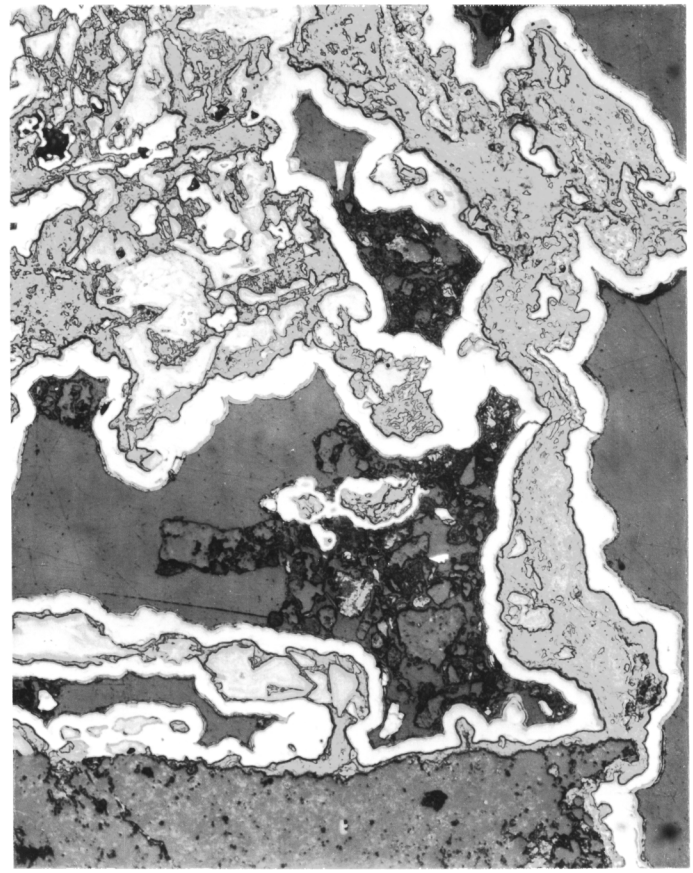

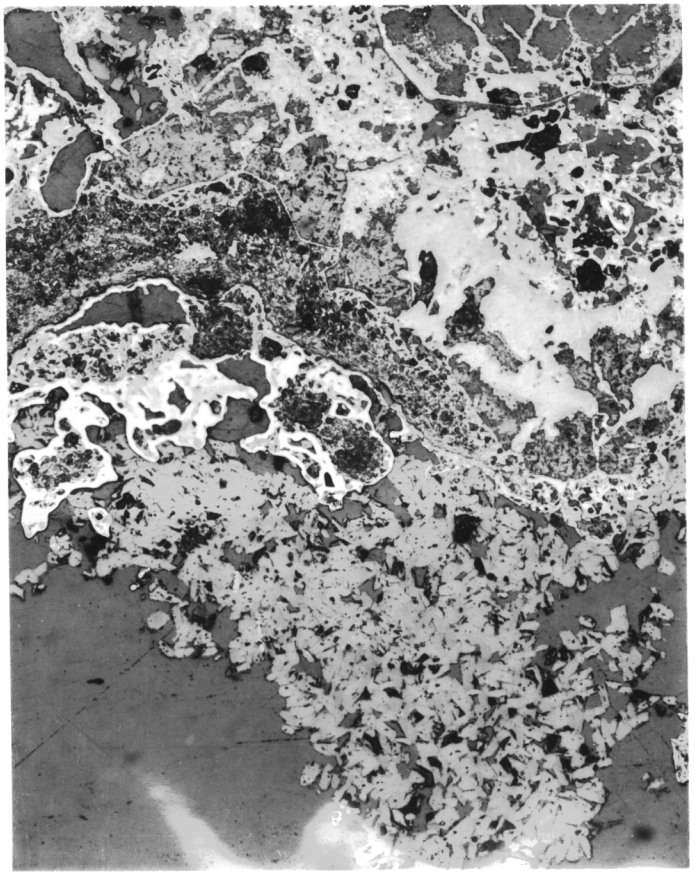

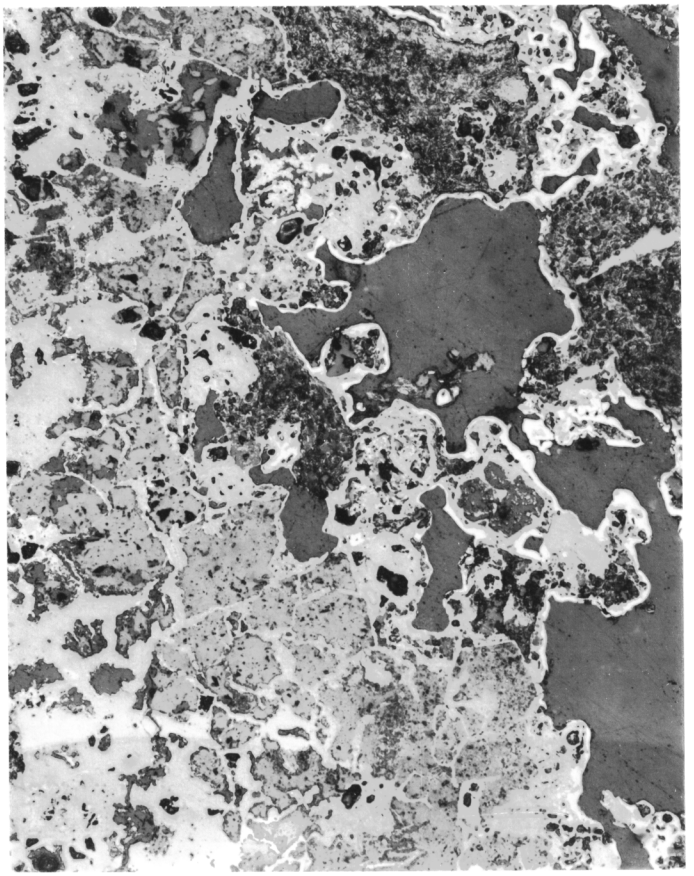

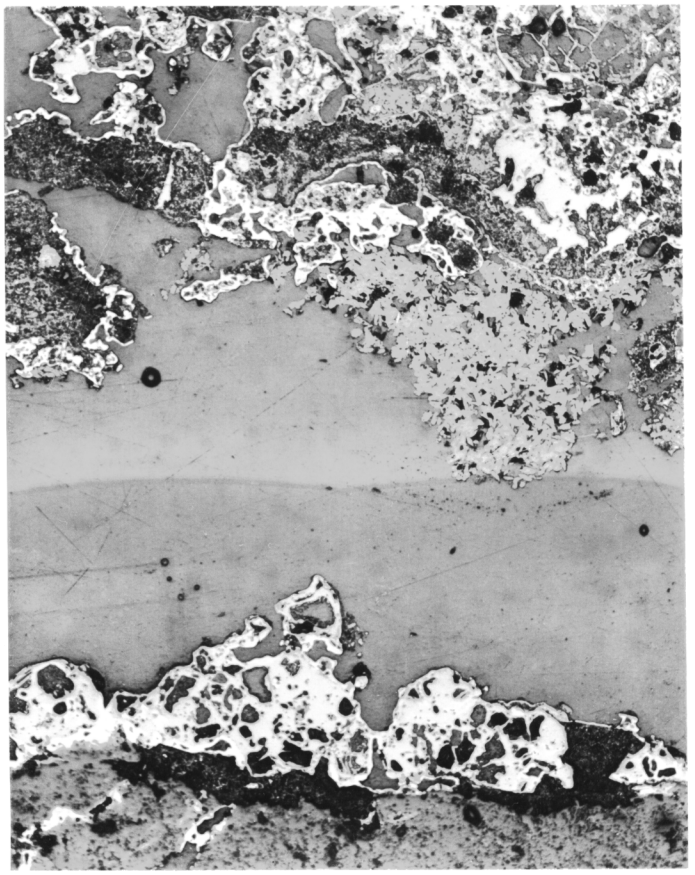

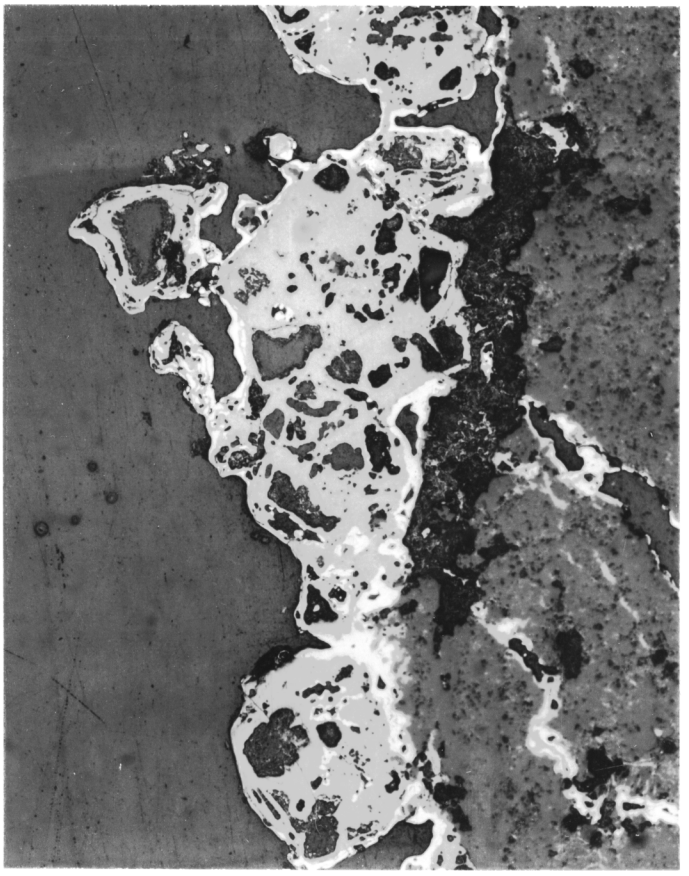

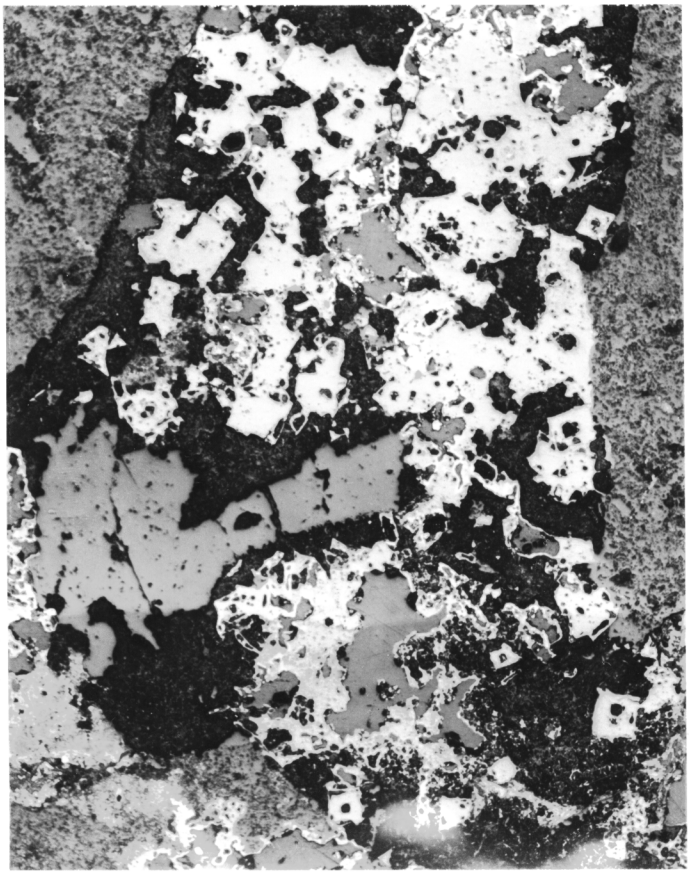

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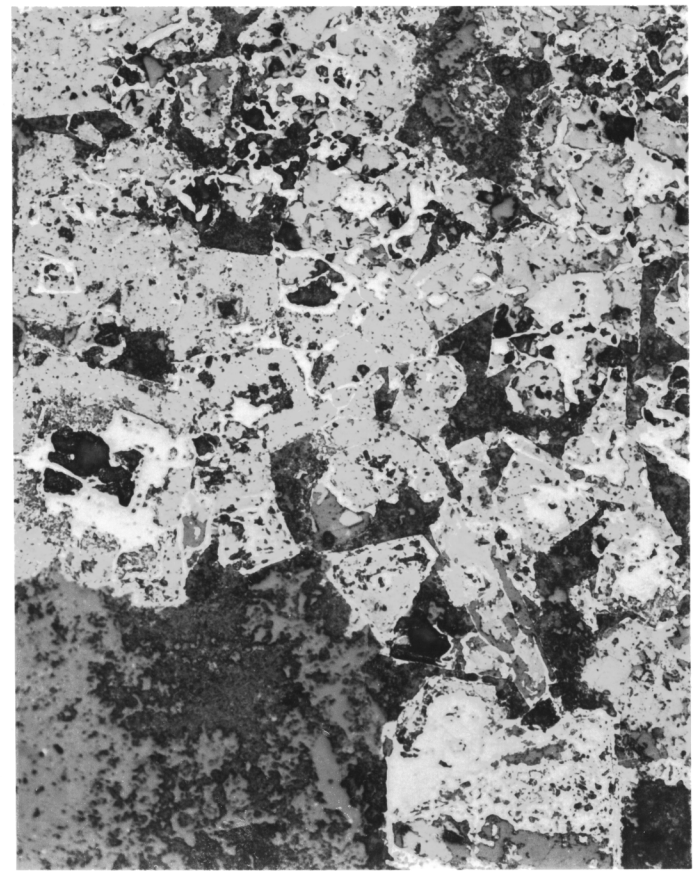

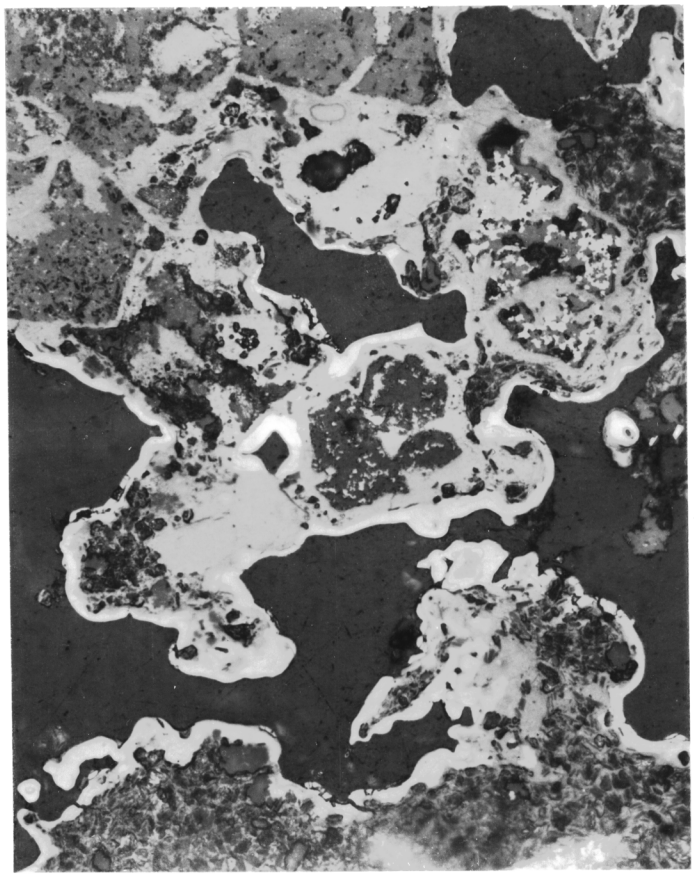

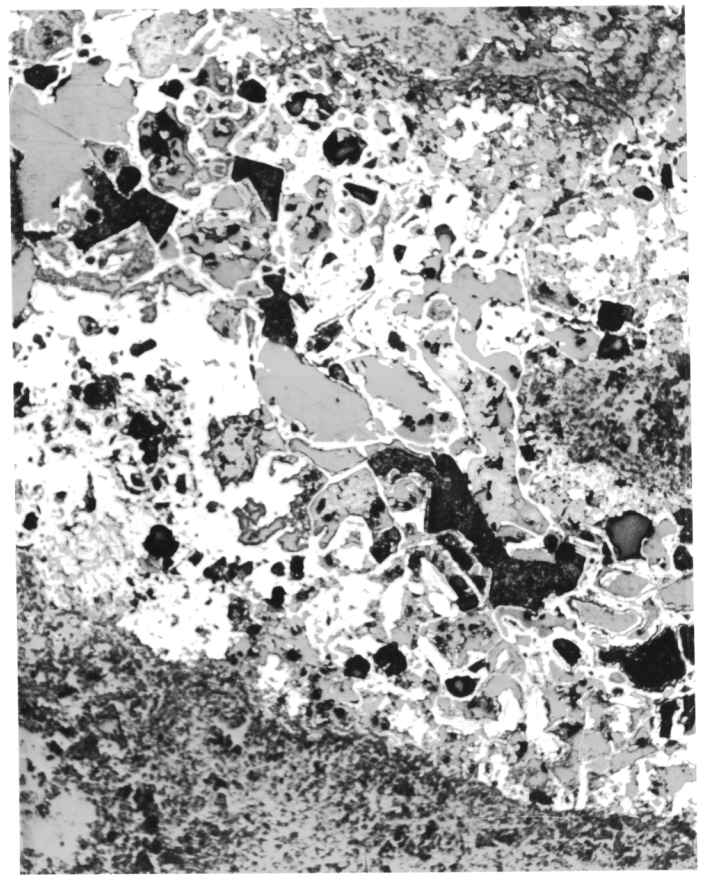

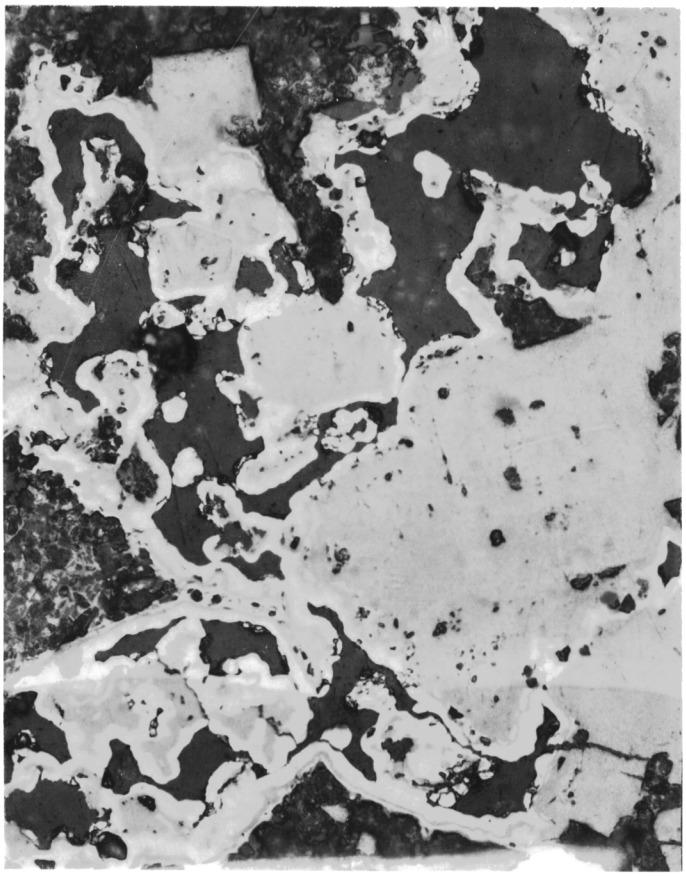

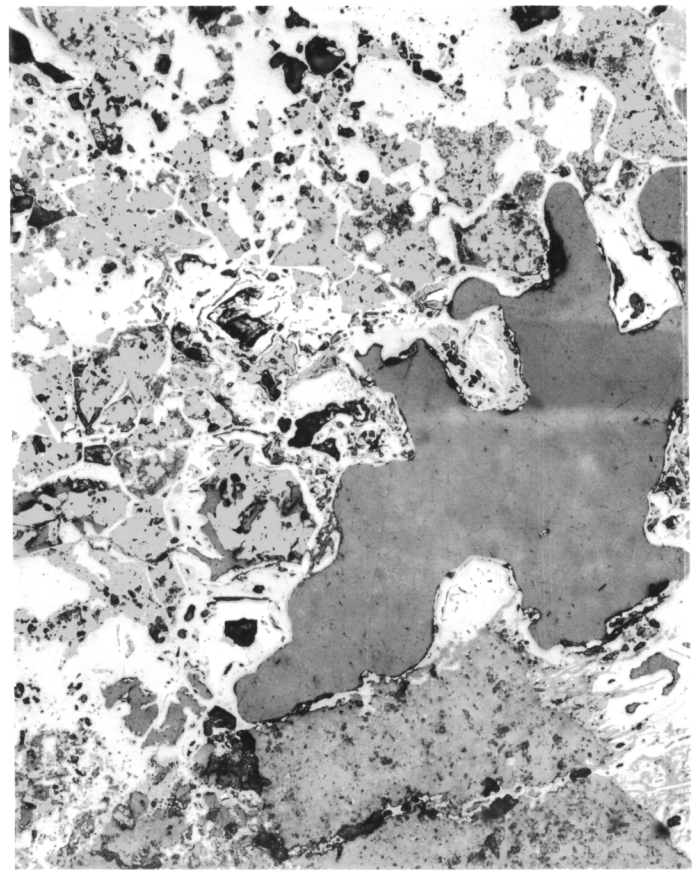

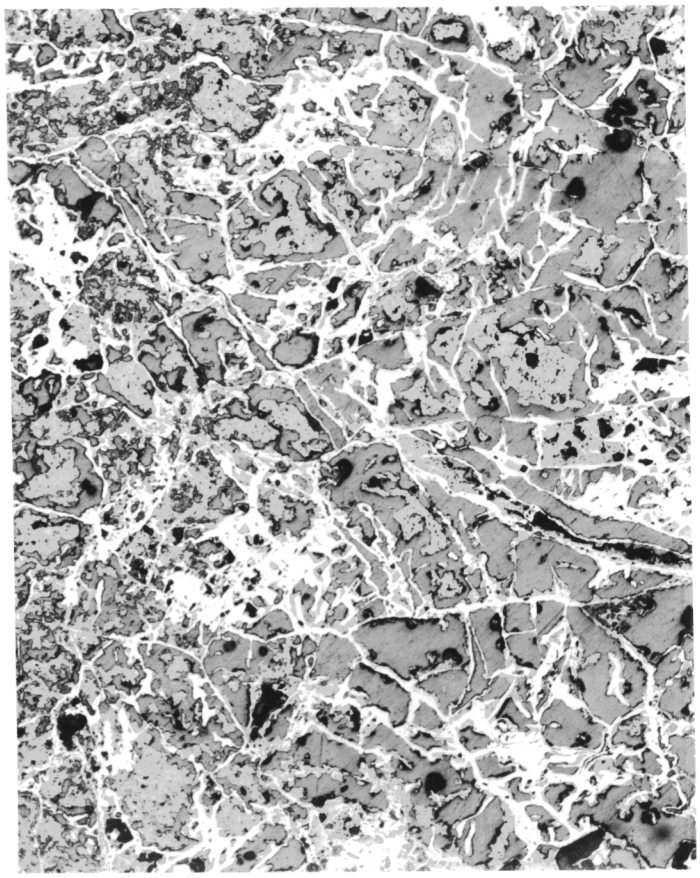

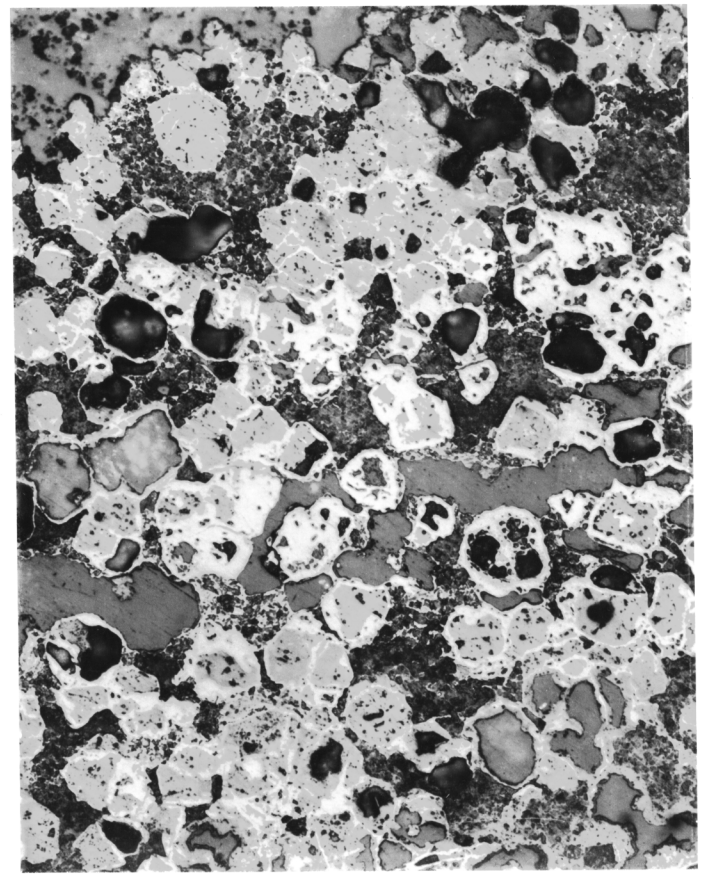
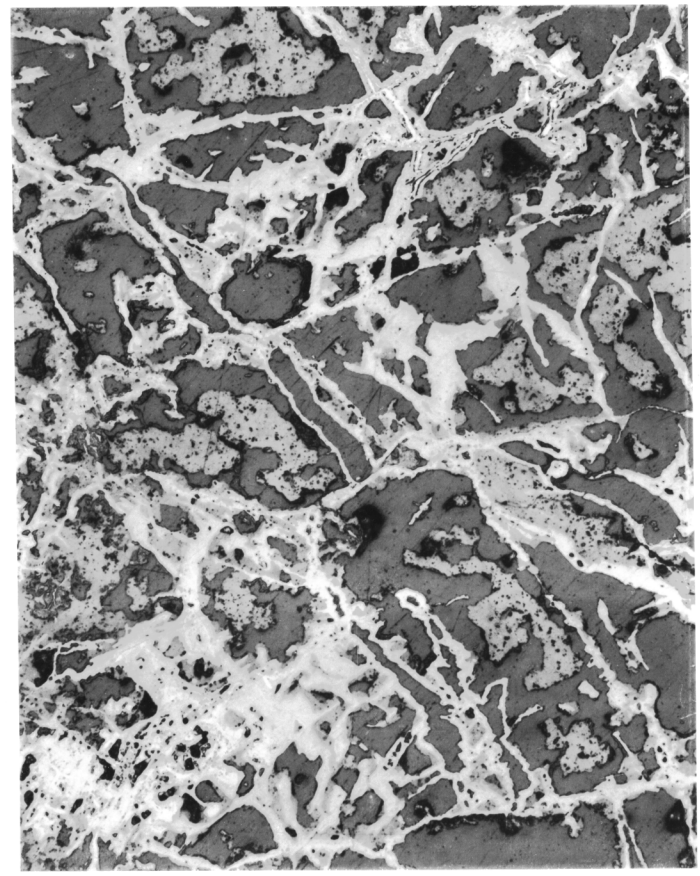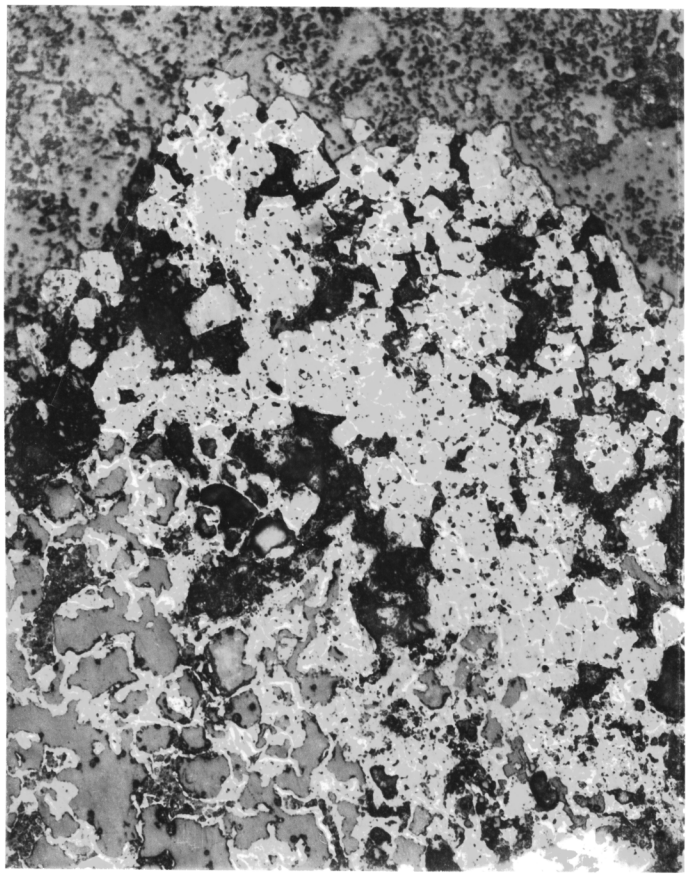
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