

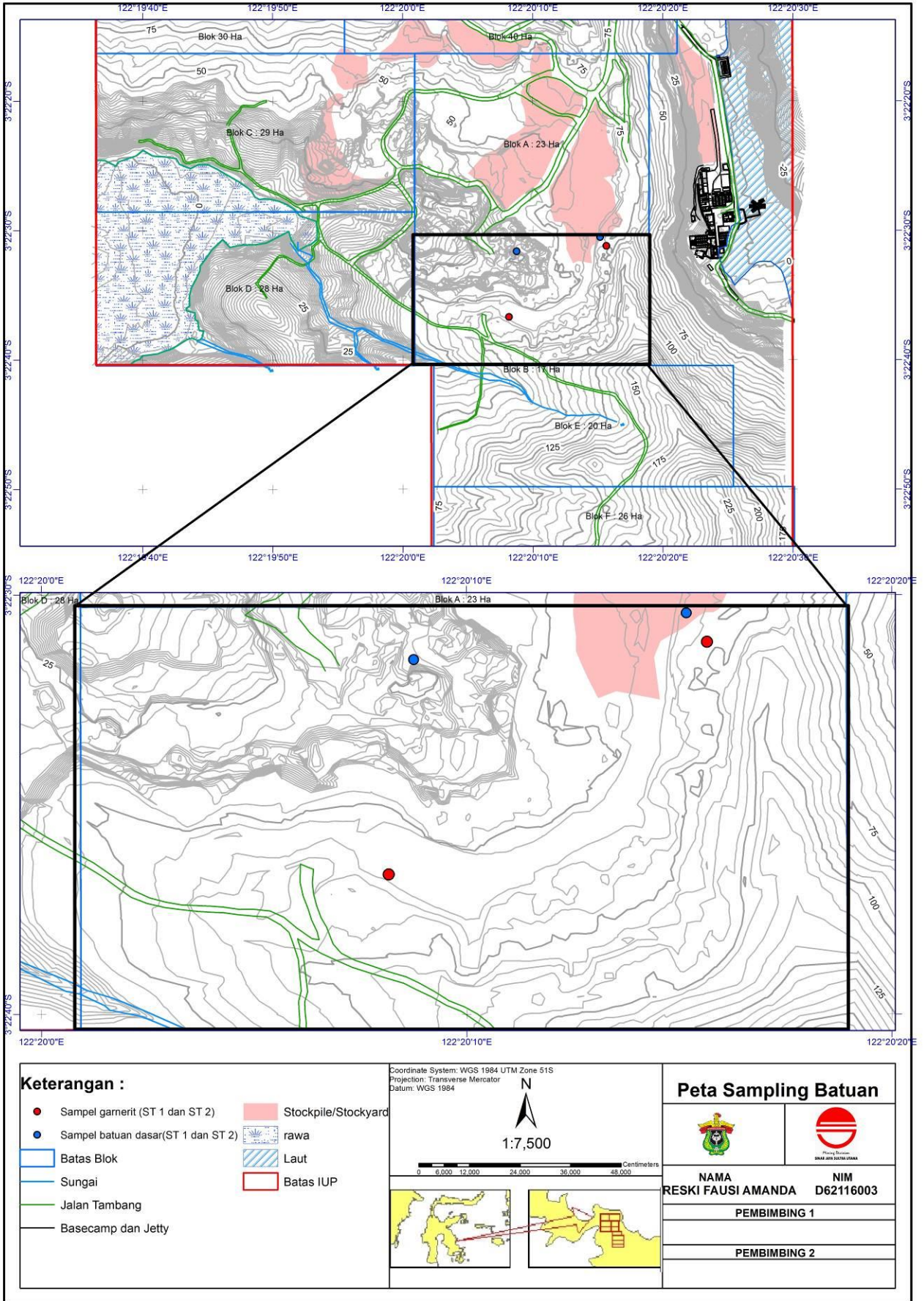
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LAMPIRAN

LAMPIRAN A
PETA LOKASI PENGAMBILAN SAMPEL



LAMPIRAN B
DATA TITIK BOR

hole_id	y	x	Ni	Fe	SiO2	MgO	Al2O3	CaO	Cr2O3	MnO	S/M	kedalaman	ketebalan bijih
TBC198B	9626900	425976.1	1.65	37.11	8.7	3.51	9.31	0.1	2.482	0.49	2.48	25	13
TBB421BR	9626903	426001.9	1.96	32.6	15.8	11	9.62	0.44	2.032	0.64	1.44	31	19
TBC199B	9626901	426024.3	1.88	30.09	14.8	10.9	7.1	0.11	1.806	0.45	1.36	26	18
TBA145	9626898	426045.8	1.54	40.7	5.64	2.32	10.4	0.22	2.389	0.62	2.44	19	7
TBC200B	9626901	426072.1	2.03	33.49	13	7.35	8.03	0.39	1.948	0.67	1.77	23	11
TBB422BR	9626900	426097.6	1.69	25.5	26.1	15.6	7.37	0.3	1.564	0.53	1.67	17	8
TBC201B	9626915	426126.4	1.58	23.86	27.6	17.8	5.88	0.52	1.452	0.44	1.55	14	7
TBA146	9626896	426142.5	1.9	21.81	26	11.8	5.83	0.75	1.247	0.45	2.21	10	4
TBC202B	9626901	426174.3	1.43	20.32	33.4	18.8	6.11	0.93	1.06	0.45	1.78	21	6
TBB423BR	9626900	426197.9	1.62	14.53	38.6	24.2	3.39	0.64	0.85	0.28	1.59	10	3
TBC203B	9626899	426223.7	1.5	40.69	7.91	4.4	7.6	0.1	2.21	0.8	1.8	9	1
TBA147	9626891	426240.6	2.17	18.06	30	16.6	3.66	0.29	0.798	0.4	1.8	9	4
TBC204B	9626899	426274.5	2.46	23.96	24.7	13.5	4.62	0.38	1.322	0.47	1.83	24	14
TBB424BR	9626900	426298.9	1.75	36.1	12.7	8.63	9.63	0.13	2.198	0.84	1.48	17	6

TBC124B	9626897	426323.9	1.86	22.37	28.5	16.8	7.25	0.54	1.333	0.57	1.69	14	7
TBA148BR	9626900	426347.9	1.84	25.8	24.9	17.5	6.14	0.15	1.533	0.67	1.43	22	16
TBC125B	9626898	426372.5	1.91	34.08	18.1	7.8	9.21	0.25	1.661	0.74	2.32	25	21
TBB425	9626896	426400.4	2.01	17.18	31.4	21.8	3.35	0.39	0.831	0.34	1.44	30	13
TBC126B	9626901	426424	1.54	44.3	4.92	2.86	10.2	0.07	2.65	1.19	1.72	17	7
TBA149	9626898	426450	1.98	22.93	27.3	11.4	4.22	0.4	1.986	0.46	2.39	16	6
TBC127B	9626899	426472.6	1.61	20.96	25.5	17.9	4.62	0.12	1.12	0.61	1.42	9	2
TBC36B	9626874	425977.3	1.76	32.97	12	8.39	7.94	0.37	2.081	0.46	1.44	13	7
TBC192B	9626876	425999.1	1.91	35.35	9.07	6.07	8.57	0.18	2.483	0.58	1.49	20	13
TBC37B	9626875	426025.5	1.63	36.99	7.11	5.23	9.71	0.09	2.252	0.61	1.36	21	5
TBC193B	9626875	426050.8	1.47	38.89	6.53	4.24	9.38	0.19	2.133	0.64	1.54	21	6
TBC38B	9626875	426079.1	1.59	38.53	6.66	3.84	8.87	0.23	2.31	0.53	1.73	19	5
TBC194B	9626875	426099.3	1.54	36.1	9.41	5.9	9.19	0.31	2.269	0.61	1.59	24	7
TBC39B	9626874	426128.5	1.65	34.2	12	7.86	7.94	0.24	2.003	0.7	1.52	14	12
TBC195B	9626874	426149.8	1.48	26.45	27	12	8.73	0.69	2.022	0.46	2.24	21	8

TBC40B	9626875	426179.5	2.09	20.63	30	12.7	4.35	1.12	1.102	0.4	2.36	20	12
TBC196B	9626879	426198.9	1.74	23.68	35.8	6.6	8.45	0.33	1.38	0.54	5.42	17	4
TBC09B	9626869	426219.1	1.64	34.13	16.5	1.72	9.8	0.08	2.239	0.53	9.6	29	19
TBC197B	9626876	426250.6	2.25	18.66	33	19.1	4.75	0.66	1.013	0.34	1.73	14	9
TBC10B	9626866	426276.4	1.83	21.55	28.5	14.6	4.75	0.58	1.32	0.41	1.96	8	2
TBC119B	9626875	426300	1.58	35.45	13.8	7.35	9.87	0.17	2.58	0.98	1.87	8	3
TBC41B	9626878	426329	1.8	36.78	12.5	7.27	7.07	0.16	2.341	0.74	1.72	17	10
TBC120B	9626878	426349.4	1.72	29.49	17.4	10.3	7.07	0.61	1.629	0.58	1.69	14	5
TBC42B	9626877	426372.6	1.55	20.79	32.1	26.8	6.68	0.21	1.238	0.43	1.2	17	9
TBC121B	9626880	426399.2	1.29	41.48	6.2	2.19	8.08	0.1	2.48	1.04	2.83	15	1
TBC43B	9626876	426423.8	1.31	47.88	3.13	0.84	12.1	0.01	3.33	1.1	3.73	14	0
TBC122B	9626877	426451	1.75	17.71	29.6	21.5	3.13	0.12	0.995	0.48	1.38	16	4
TBC44B	9626875	426473.7	1.8	15.33	37	22.2	1.89	0.1	0.743	0.33	1.67	10	3
TBC185B	9626849	425974.8	2.43	26.39	19	13.5	6.15	0.19	1.623	0.45	1.41	24	7
TBB396BR	9626849	426002.1	1.73	37.88	11.1	6.21	10.2	0.21	2.578	0.72	1.78	24	11

TBC186B	9626848	426028.2	1.22	45.05	2.94	1.17	12.7	0.02	2.892	0.75	2.51	17	1
TBB397	9626852	426052.4	1.6	35.14	7.17	5.11	8.74	0.23	2.59	0.55	1.4	17	4
TBC187B	9626850	426073.5	1.44	41.61	4.88	2.83	8.72	0.06	2.124	0.74	1.73	19	5
TBB398	9626850	426101.6	1.65	36.02	8.66	3.8	8.15	0.23	1.92	0.75	2.28	21.5	7
TBC188B	9626844	426127	1.52	38.45	8.4	6.38	7.65	0.14	1.924	0.7	1.32	21	3
TBB399	9626849	426148.5	1.93	29.55	16.2	10.3	5.36	0.18	1.901	0.58	1.58	25	16
TBC189B	9626849	426178	2.41	18.67	33.3	14	5.37	0.41	1.143	0.39	2.38	13	7
TBB400	9626851	426196	2.05	27.13	20.6	9.09	6.68	0.67	1.489	0.43	2.27	17	11
TBC190B	9626851	426228.4	2.37	30.01	23.7	8.25	8.34	0.28	1.852	0.52	2.88	29	9
TBB401BR	9626852	426241.4	1.66	32.78	21.8	5.89	9.63	0.2	1.823	0.63	3.7	25	9
TBC191B	9626852	426279.3	1.73	23.08	31.3	10.3	8.62	0.98	1.51	0.5	3.03	11	2
TBB402	9626857	426299.3	1.94	22.07	25.1	11.6	3.62	0.84	1.068	0.24	2.16	9	4
TBC115B	9626851	426325	1.83	23.86	22.7	12.9	6.15	0.74	1.529	0.45	1.75	25.5	8
TBB403	9626852	426347.6	2.01	20.91	25	16.6	4.53	0.7	1.21	0.44	1.51	12	6
TBC116B	9626847	426375.2	2.6	18.29	27.4	19.9	4.51	0.22	1.016	0.4	1.38	22	12

TBB404	9626850	426399.5	1.73	19.55	26.8	20.7	4.04	0.27	1.144	0.42	1.29	25	7
TBC117B	9626851	426425.4	1.58	25.1	22.5	18.4	7.48	0.05	1.301	0.53	1.23	21	3
TBB405	9626849	426449	1.28	48.5	1.69	0.61	6.55	0.01	1.96	1.3	2.77	14	19
TBC118B	9626850	426474	2.51	16.85	33.5	22.2	3.36	0.12	0.881	0.39	1.51	22	12
TBC31B	9626824	425975.6	2.18	31.33	14.3	10.3	6.94	0.1	1.776	0.5	1.38	25	4
TBC179B	9626824	425999.2	1.58	40.87	5.23	2.63	9.58	0.03	2.303	0.66	1.99	26	5
TBC32B	9626827	426025.8	1.44	41.64	4.61	2.7	9.1	0.15	2.5	0.76	1.71	24	5
TBC180B	9626825	426046.1	1.63	36.68	9.12	5.68	8.45	0.39	2.442	0.68	1.61	25	10
TBC33B	9626824	426073.6	2.26	24.67	23.7	16	4.66	0.2	1.152	0.5	1.48	27	5
TBC181B	9626824	426099.4	1.68	32.11	15.6	9.21	7.67	0.17	1.591	0.7	1.7	27	8
TBC34B	9626826	426125.2	2.54	16.76	29.5	21.5	3.12	0.25	0.768	0.3	1.37	22	6
TBC182B	9626824	426147.4	1.53	37.18	12.5	4.37	13.7	0.06	2.53	0.77	2.85	19	14
TBC35B	9626829	426172.7	1.85	30.18	18.5	6.71	6.66	0.6	1.92	0.3	2.76	7	7
TBC183B	9626824	426193.8	1.72	33.02	18.8	6.78	11	0.4	2.163	0.75	2.77	17	12
TBC07B	9626827	426220.7	1.92	29.06	19.8	8.15	7.28	0.44	1.567	0.4	2.43	16	18

TBC184B	9626822	426252.3	2.82	27.98	22.7	7.03	7.04	0.3	1.728	0.48	3.23	28	9
TBC08B	9626824	426274.3	2.45	23.14	28.7	8.33	5.34	0.34	1.638	0.38	3.44	29	20
TBC110B	9626818	426297.1	1.81	29.74	20.4	6.61	7.84	0.55	2.408	0.48	3.09	20	15
TBC46B	9626823	426323.7	2.63	18.12	26.9	13.7	3.51	0.46	0.933	0.34	1.96	25	1
TBC111B	9626822	426348.2	1.91	21.98	29.1	16.3	8.07	0.23	1.217	0.51	1.78	25	2
TBC47B	9626827	426374.7	2.2	17.97	28.7	17.8	4.62	0.21	0.92	0.4	1.61	25	9
TBC112B	9626824	426400.6	2.3	14.45	32.3	22.4	3.07	0.2	0.629	0.29	1.44	21	11
TBC48B	9626828	426423.3	2.07	15.79	30.8	19.7	3.53	0.24	0.761	0.34	1.56	22	18
TBC113B	9626824	426448.9	2.42	15.83	32.1	23.4	3.47	0.06	0.742	0.33	1.37	29	14
TBC49B	9626827	426472.1	2.35	21.91	28.4	15.3	4.71	0.14	1.039	0.49	1.85	19	10
TBC172B	9626800	425974.8	2.02	29.86	15.2	10.4	6.38	0.33	2.037	0.46	1.46	22	6
TBB372BR	9626805	426000.1	1.5	40.56	9.15	6.85	8.44	0.13	2.351	0.85	1.34	23	4
TBC173BR	9626801	426024	1.37	46.9	5.32	1.04	8.73	0.03	2.967	1.09	5.09	26	6
TBA130	9626801	426047.4	1.95	28.09	18.2	10.5	5.01	0.18	1.47	0.52	1.74	22	3
TBC174B	9626800	426078	1.64	31.5	15.7	9.49	6.26	0.28	1.796	0.29	1.65	22	3

TBB373	9626800	426100.7	2.35	18.85	28	19.3	3.31	0.92	0.743	0.47	1.45	16	11
TBC175B	9626799	426125.3	1.9	27.78	19.5	9.83	7.9	0.13	1.66	0.47	1.98	25	12
TBA131BR	9626797	426149.9	1.72	27.07	24.2	11.8	9.12	0.21	1.575	0.54	2.05	27	3
TBC176B	9626800	426171.2	1.5	38.22	7.03	2.65	11.2	0.1	2.343	0.66	2.65	13	5
TBB374	9626795	426208.1	1.62	21.26	26.6	15.6	5.45	0.09	0.938	0.46	1.7	10	15
TBC177B	9626805	426230.6	1.71	26.1	29.3	7.68	9.58	0.14	1.85	0.49	3.81	19	18
TBA132	9626794	426266.7	2.42	19.29	30.1	13.1	4.57	0.44	1.223	0.3	2.3	22	19
TBC178BR	9626795	426274.6	2.14	23.09	30.7	12.9	6.12	0.67	1.618	0.3	2.37	23	6
TBB375	9626799	426299.7	2.08	15.76	32.5	17.5	3.42	0.66	0.727	0.29	1.85	28	8
TBC106B	9626800	426323.8	1.59	36.79	13.7	3.31	9.39	0.29	2.707	0.49	4.13	26	7
TBA133	9626797	426350.3	1.66	25.92	22	11.6	5.26	0.19	1.531	0.35	1.9	26	10
TBC107B	9626800	426374.1	2.15	17.36	35.4	16.8	5.81	0.57	1.263	0.42	2.11	20	10
TBB376	9626806	426402.2	2.66	17.54	32.8	14.8	4.11	0.4	0.858	0.4	2.22	24	4
TBC108B	9626799	426426	1.87	18.29	32.5	13.9	4.58	0.81	1.098	0.33	2.33	24	6
TBA134	9626794	426447.8	1.5	29.7	18.2	9.78	6.29	0.63	1.527	0.54	1.86	18	13

TBC109B	9626799	426474.7	1.85	16.09	32.7	18	3.41	1.16	0.751	0.29	1.81	19	0
TBC26B	9626772	425974.7	1.08	29.2	16.5	10.7	5.69	0.52	1.65	0.56	1.54	12	1
TBC166B	9626775	425999.2	1.46	31.96	16	9.88	5.44	0.07	1.905	0.76	1.62	15	3
TBC27B	9626776	426023.3	1.34	43.43	3.81	1.96	8.98	0.03	2.498	0.86	1.95	16	9
TBC167B	9626775	426050.9	1.86	33.61	13.8	7.77	7.33	0.09	2.189	0.69	1.78	25	17
TBC28B	9626776	426075.4	2.67	23.73	21.2	14.3	6.63	0.12	1.544	0.4	1.48	27	9
TBC168B	9626775	426098.3	1.86	19.15	28.7	19.1	4.92	0.06	0.96	0.43	1.5	22	11
TBC29B	9626774	426121.8	1.62	31.52	14.8	9.9	8.17	0.11	1.809	0.47	1.5	24	9
TBC169B	9626772	426149.8	1.84	18.16	31.5	21	5.51	0.38	1.058	0.31	1.5	22	9
TBC30B	9626778	426173.4	2.35	28.94	16.9	10.3	7.39	0.28	1.708	0.42	1.64	19	17
TBC170B	9626777	426194.7	2.48	20.69	31	15.8	6.34	0.65	1.325	0.35	1.97	23	17
TBC05B	9626768	426225.5	1.84	30.41	18.9	5.27	7.68	0.39	2.01	0.4	3.59	10	16
TBC171B	9626776	426255.6	1.83	26.53	25.2	6.62	5.94	0.42	1.534	0.29	3.81	21	8
TBC06B	9626776	426279.3	1.94	23.4	27.9	9.58	5.34	0.6	1.504	0.4	2.91	13	7
TBC101B	9626773	426300.6	2.51	21.44	30.7	9.47	5.16	0.53	1.366	0.33	3.24	22	16

TBC51B	9626773	426325.9	2.22	23.83	24.4	6.03	5.01	0.3	1.517	0.27	4.05	8	8
TBC102B	9626776	426349.8	2.53	23.37	27.7	9.48	5.37	0.5	1.54	0.35	2.92	26	18
TBC52B	9626777	426374.9	2.08	15.35	30.3	15.9	2.98	0.75	0.76	0.31	1.9	23	3
TBC103B	9626774	426400.6	1.8	21.93	30.4	13.9	7.68	1.21	1.787	0.37	2.19	22	9
TBC53B	9626774	426426.8	1.7	25.11	26	12.4	6.59	0.35	1.33	0.5	2.1	14	3
TBC104B	9626773	426450.9	2.62	14.17	37.4	19.4	3.37	0.07	0.827	0.31	1.92	17	14
TBC54B	9626775	426475.2	1.87	19.59	31.9	17	4.5	0.6	1.038	0.39	1.88	18	5
TBC159B	9626748	425974.3	1.82	26.61	20.1	13.4	5.66	0.51	1.541	0.46	1.49	18	6

LAMPIRAN C
HASIL REPORT ANALISIS XRD

Match! Phase Analysis Report

Sample: ST1B-RESKI (5-70)

Sample Data

File name ST1B-RESKI.ORG
File path C:/Users/ASUS/Downloads/data xrd mentah/ST1B-RESKI
Data collected Aug 31, 2020 12:46:15
Data range 5.000° - 70.000°
Original data range 5.000° - 70.000°
Number of points 3251
Step size 0.020
Rietveld refinement converged No
Alpha2 subtracted No
Background subtr. No
Data smoothed Yes
Radiation X-rays
Wavelength 1.540600 Å

Matched Phases

Index Amount (%) Name Formula sum

A 41.6 Antigorite H58 Mg45 0138 Si32
B 32.4 Lizardite-2H1 H4 Mg3 09 Si2
C 20.8 Talc H2 Mg3 012 Si4
D 5.2 Quartz O2 Si

2.5 Unidentified peak area

A: Antigorite (41.6 %)

Formula sum H58 Mg45 0138 Si32
Entry number 96-900-4000
Figure-of-Merit (FoM) 0.764751
Total number of peaks 328
Peaks in range 328
Peaks matched 21
Intensity scale factor 0.15
Space group C 1 2/m 1
Crystal system monoclinic
Unit cell a= 81.6640 Å b= 9.2550 Å c= 7.2610 Å β = 91.409 °
I/Ic 0.82
Calc. density 2.578 g/cm³
Reference Capitani G. C., Mellini M., "The crystal structure of a second antigorite polysome (m = 16), by single-crystal synchrotron diffraction", American Mineralogist **91**, 394-399 (2006)

B: Lizardite-2H1 (32.4 %)

Formula sum H4 Mg3 09 Si2
Entry number 96-900-4514
Figure-of-Merit (FoM) 0.624742
Total number of peaks 86
Peaks in range 37
Peaks matched 7
Intensity scale factor 0.21
Space group P 63 c m
Crystal system hexagonal
Unit cell a= 5.3450 Å c= 14.6620 Å
I/Ic 1.53
Calc. density 2.537 g/cm³
Reference Guggenheim S., Zhan W., "Effect of temperature on the structures of lizardite-1T and lizardite-2H1 Sample: T = 475 C", The Canadian Mineralogist **36**, 1587-1594 (1998)

C: Talc (20.8 %)

Formula sum H2 Mg3 O12 Si4
 Entry number 96-900-8041
 Figure-of-Merit (FoM) 0.537478
 Total number of peaks 298
 Peaks in range 187
 Peaks matched 15
 Intensity scale factor 0.11
 Space group C 1 2/c 1
 Crystal system monoclinic
 Unit cell a= 5.2600 Å b= 9.1000 Å c= 18.8100 Å $\beta = 100.000^\circ$
 I/Ic 1.23
 Calc. density 2.841 g/cm³
 Reference Gruner J. W., "The crystal structures of talc and pyrophyllite Locality: Harford County, Maryland, USA",
 Zeitschrift fur Kristallographie **88**, 412-419 (1934)

D: Quartz (5.2 %)

Formula sum O2 Si
 Entry number 96-901-2603
 Figure-of-Merit (FoM) 0.543676
 Total number of peaks 32
 Peaks in range 15
 Peaks matched 3
 Intensity scale factor 0.07
 Space group P 31 2 1
 Crystal system trigonal (hexagonal axes)
 Unit cell a= 4.7050 Å c= 5.2500 Å
 I/Ic 3.11
 Calc. density 2.974 g/cm³
 Reference Hazen R. M., Finger L. W., Hemley R. J., Mao H. K., "High-pressure crystal chemistry and amorphization of
 alpha-quartz Locality: synthetic Sample: P = 5.1 GPa", Solid State Communications **72**, 507-511 (1989)

Candidates

Name Formula Entry No. FoM

Bi5 O7 I Bi5 I O7 96-810-4134 0.8000
 Cd I6 Tl4 96-451-0235 0.7993
 calcium chlorite Ca Cl2 O4 96-220-7380 0.7987
 Cd I6 Tl4 96-451-0236 0.7965
 Mg O7 Si2 Sr2 96-431-7124 0.7932
 Cd I6 Tl4 96-451-0234 0.7910
 Ag F2 96-150-9322 0.7901
 Si Se2 Se2 Si 96-210-7126 0.7768
 Bismutocolumbite Bi Nb0.79 O4 Ta0.21 96-900-9420 0.7744
 Tl4 (Cd I6) Cd I6 Tl4 96-153-9643 0.7736
 Plumboselite O5 Pb3 Se 96-901-5252 0.7675
 Cs3 (Au O2) (Cs Au)4 Au5 Cs7 O2 96-151-0554 0.7617
 Srilankite O2 Ti0.5 Zr0.5 96-901-0851 0.7614
 (Rb.2 Tl3.8) (Cd I6) Cd I6 Rb0.2 Tl3.8 96-153-9644 0.7602
 Sr Ge2 Ge2 Sr 96-722-1213 0.7591
 Ca Ho0.05 La1.6 Mo4 O16 Yb0.3596-722-0856 0.7579
 Zirconium titanium oxide (0.5/0.5/2) - HT (Srilankite) O2 Ti0.5 Zr0.5 96-100-8791 0.7560
 Ca Ho0.05 La1.55 Mo4 O16 Yb0.496-722-0853 0.7559
 (Sb0.52 Bi0.48) (Nb0.71 Ta0.29) O4 Bi0.48 Nb0.71 O4 Sb0.52 Ta0.29 96-810-3764 0.7548
 Eu2 Mg O7 Si2 96-431-7122 0.7537
 O5 Pb3 Se 96-400-1078 0.7530
 Zr (Ti O4) O4 Ti Zr 96-153-8359 0.7524
 Ca Ho0.05 La1.45 Mo4 O16 Yb0.596-722-0854 0.7524
 Ag Bi Se2 96-901-1023 0.7520

Rubidium copper iron bis(phosphate) Cu Fe O8 P2 Rb 96-223-8315 0.7515
Ca Ho0.05 La1.5 Mo4 O16 Yb0.4596-722-0852 0.7477
Ce2 Fe O2 Se2 96-710-5871 0.7469
Srilankite O2 Ti0.548 Zr0.452 96-901-0852 0.7464
Ca1.033 Ga3 La0.967 O7 96-432-9294 0.7444
Bismutotantalite Bi0.98 Nb0.11 O4 Sb0.02 Ta0.89 96-900-4612 0.7429
Potassium K 96-901-1982 0.7412
Sb S Br Br S Sb 96-153-5784 0.7336
Eu2 Mg O7 Si2 96-704-7316 0.7334
Bi5 O7 Br Bi5 Br O7 96-201-6341 0.7324
Bi (Nb O4) Bi Nb O4 96-153-2719 0.7311
ZrO2 ortho I phase O2 Zr 96-154-5066 0.7309
Er Ta O4 Er O4 Ta 96-153-0906 0.7298
Sb (Nb O4) Nb O4 Sb 96-153-0607 0.7294
Bi (Ta O4) Bi O4 Ta 96-153-2722 0.7286
Sassolite B H3 O3 96-901-4011 0.7284
Ga5.5 La3 Nb0.5 O14 96-210-3542 0.7270
Ca1.023 Ga3 Nd0.977 O7 96-410-6837 0.7270
Leightonite Ca Cu0.68 H4 K O9 S2 96-900-2726 0.7264
Bi0.333 O8 Pb2.5 V2 96-431-5782 0.7256
Mo4 O21.84 Sr11 96-230-0579 0.7247
Lanthanum palladium oxide (2/1/4) La2 O4 Pd 96-100-0484 0.7246
N O2 Sm Zr 96-430-3944 0.7232
Cs V Br3 Br3 Cs V 96-153-0068 0.7230
SiO2 (stishovite at 6.09 GPa) O2 Si 96-154-5152 0.7229
N Nd O2 Zr 96-430-3941 0.7222
Sn Se Se Sn 96-153-8897 0.7202
O4 Sn W 96-900-7596 0.7184

and 739 others...

Search-Match

Settings

Reference database used COD-Inorg REV214414 2019.03.29
Automatic zeropoint adaptation Yes
Minimum figure-of-merit (FoM) 0.60
2theta window for peak corr. 0.30 deg.
Minimum rel. int. for peak corr. 1
Parameter/influence 2theta 0.50
Parameter/influence intensities 0.50
Parameter multiple/single phase(s) 0.50

Criteria for entries added by user

Reference:

Entry number: 96-900-0849;96-900-1092;96-900-1093;96-900-1639;96-900-1640;96-900-1779;96-900-1883;96-900-4509;96-900-4510;96-900-4511;96-900-4512;96-900-4513;96-900-4514;96-900-4994;96-900-4995;96-900-7425;96-901-4665;96-901-5164;96-901-5487;96-901-5581;96-901-6051;96-901-6148;96-900-3104;96-900-4000;96-900-4515;96-901-4626;96-901-5975;96-901-6234;96-101-1153;96-300-0049;96-900-8041;96-900-8298;96-900-8732;96-901-4436;96-101-1098;96-101-1160;96-101-1173;96-101-1177;96-101-1201;96-110-0020;96-500-0036;96-900-0776;96-900-0777;96-900-0778;96-900-0779;96-900-0780;96-900-0781;96-900-5018;96-900-5019;96-900-5020;96-900-5021;96-900-5022;96-900-5023;96-900-5024;96-900-5025;96-900-5026;96-900-5027;96-900-5028;96-900-5029;96-900-5030;96-900-5031;96-900-5032;96-900-5033;96-900-

5034;96-900-7379;96-900-8093;96-900-8094;96-900-9667;96-901-0145;96-901-0146;96-901-0147;96-901-1494;96-901-1495;96-901-1496;96-901-1497;96-901-2601;96-901-2602;96-901-2603;96-901-2604;96-901-2605;96-901-2606;96-901-3322;96-901-5023

Peak List

No. 2theta [°] d [Å] I/I0 FWHM Matched

1	12.20	7.2489	370.14	0.4603	A, B
2	24.44	3.6392	381.47	0.4061	A, B, C
3	28.26	3.1554	500.09	0.4112	A
4	30.48	2.9304	597.97	0.1590	A
5	31.06	2.8770	1000.00	0.1976	A, B, C
6	35.50	2.5267	574.14	0.2400	A, B
7	36.48	2.4610	446.68	0.4000	A, B, C
8	43.22	2.0916	179.36	0.2262	C
9	52.20	1.7509	185.19	0.1973	B, C, D
10	60.84	1.5213	273.38	0.2400	C
11	62.66	1.4814	289.15	0.3535	C, D
12	66.88	1.3978	160.06	0.2342	B, C
13	69.38	1.3535	57.44	0.0724	C

Integrated Profile Areas

Based on calculated profile

Profile area Counts Amount

Overall diffraction profile 3172083 100.00%

Background radiation 3045202 96.00%

Diffraction peaks 126881 4.00%

Peak area belonging to selected phases 46795 1.48%

Peak area of phase A (Antigorite) 16005 0.50%

Peak area of phase B (Lizardite-2H1) 17822 0.56%

Peak area of phase C (Talc) 10889 0.34%

Peak area of phase D (Quartz) 2078 0.07%

Unidentified peak area 80086 2.52%

Peak Residuals

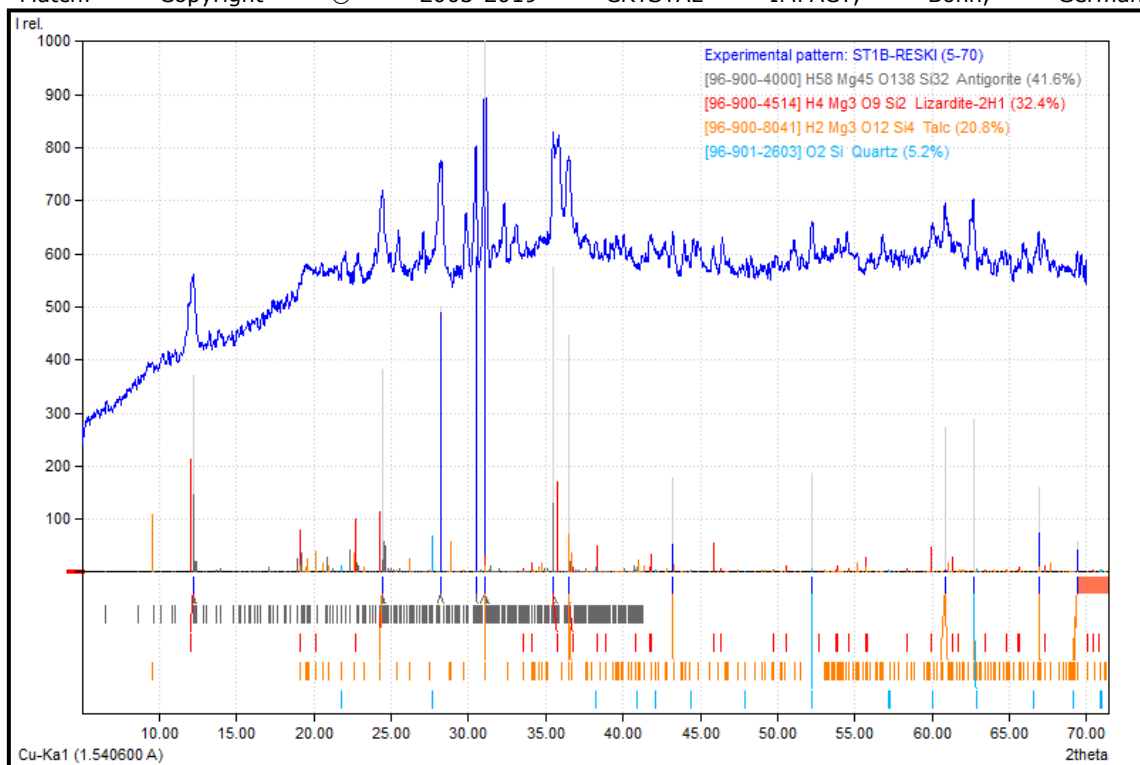
Peak data Counts Amount

Overall peak intensity 1230 100.00%

Peak intensity belonging to selected phases 954 77.53%

Unidentified peak intensity 276 22.47%

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Match! Phase Analysis Report

Sample: ST2-RESKI (5-70)

Sample Data

File name ST2-RESKI.ORG
File path C:/Users/ASUS/Downloads/data xrd mentah/ST2-RESKI
Data collected Aug 31, 2020 12:46:16
Data range 5.000° - 70.000°
Original data range 5.000° - 70.000°
Number of points 3251
Step size 0.020
Rietveld refinement converged No
Alpha2 subtracted No
Background subtr. No
Data smoothed Yes
Radiation X-rays
Wavelength 1.540600 Å

Matched Phases

Index Amount (%) Name Formula sum

A 79.4 Antigorite-T Mg₄₈ O₁₄₇ Si₃₄
B 14.2 Lizardite-2H1 H₄ Mg₃ O₉ Si₂
C 5.4 Quartz O₂ Si
D 1.0 Trimagnesium dihydroxide phyllo-tetrasilicate Talc 2MH₂ Mg₃ O₁₂ Si₄

2.6 Unidentified peak area

A: Antigorite-T (79.4 %)

Formula sum Mg₄₈ O₁₄₇ Si₃₄
Entry number 96-901-6234
Figure-of-Merit (FoM) 0.704626
Total number of peaks 498
Peaks in range 498
Peaks matched 20
Intensity scale factor 0.56
Space group P 1
Crystal system triclinic (anorthic)
Unit cell a= 43.5000 Å b= 9.2300 Å c= 7.2700 Å $\alpha = 90.000^\circ$ $\beta = 92.000^\circ$ $\gamma = 84.750^\circ$
I/Ic 0.97

Calc. density 2.557 g/cm³

Reference Dodony I., Posfai M., Buseck P. R., "Revised structure models for antigorite: An HRTEM study Note: n = 17",

American Mineralogist **87**, 1443-1457 (2002)

B: Lizardite-2H1 (14.2 %)

Formula sum H₄ Mg₃ O₉ Si₂
Entry number 96-900-4514
Figure-of-Merit (FoM) 0.643426
Total number of peaks 86
Peaks in range 37
Peaks matched 7
Intensity scale factor 0.16
Space group P 63 c m
Crystal system hexagonal
Unit cell a= 5.3450 Å c= 14.6620 Å
I/Ic 1.53

Calc. density 2.537 g/cm³

Reference Guggenheim S., Zhan W., "Effect of temperature on the structures of lizardite-1T and lizardite-2H1 Sample: T =

475 C", The Canadian Mineralogist **36**, 1587-1594 (1998)

C: Quartz (5.4 %)

Formula sum O2 Si
 Entry number 96-901-2606
 Figure-of-Merit (FoM) 0.700314
 Total number of peaks 29
 Peaks in range 14
 Peaks matched 3
 Intensity scale factor 0.10
 Space group P 31 2 1
 Crystal system trigonal (hexagonal axes)
 Unit cell a= 4.5350 Å c= 5.1700 Å
 I/Ic 2.70
 Calc. density 3.251 g/cm³
 Reference Hazen R. M., Finger L. W., Hemley R. J., Mao H. K., "High-pressure crystal chemistry and amorphization of alpha-quartz Locality: synthetic Sample: P = 12.5 GPa", Solid State Communications **72**, 507-511 (1989)

D: Trimagnesium dihydroxide phyllo-tetrasilicate Talc 2M (1.0 %)

Formula sum H2 Mg3 O12 Si4
 Entry number 96-101-1153
 Figure-of-Merit (FoM) 0.256122
 Total number of peaks 297
 Peaks in range 182
 Peaks matched 14
 Intensity scale factor 0.01
 Space group C 1 2/c 1
 Crystal system monoclinic
 Unit cell a= 5.2600 Å b= 9.1000 Å c= 18.8100 Å β = 100.080 °
 I/Ic 1.32
 Calc. density 2.834 g/cm³
 Reference Gruner J W, "The crystal structures of talc and pyrophyllite.", Zeitschrift fuer Kristallographie, Kristallgeometrie, Kristallphysik, Kristallchemie (-144, 1977) **88**, 412-419 (1934)

Candidates

Name Formula Entry No. FoM

Se O F2 F2 O Se 96-403-1234 0.7844
 H0.9 Na0.22 O2.45 Ru 96-431-0643 0.7527
 D4 O7 P V 96-151-7988 0.7452
 Cs0.069 W O3 Cs0.137778 O4 W1.11111 96-152-4790 0.7437
 Nepouite H4 Mg0.24 Ni2.76 O9 Si2 96-154-8975 0.7363
 K2 Mo9 S11 96-432-2281 0.7341
 scandium dirubidium pentadecamolybdenum nonadecasulfide Mo15 Rb2 S19 Sc0.43 96-201-8477 0.7307
 bismut ammonium oxalate hydrate C4 Bi N O11.7 96-431-0397 0.7295
 Volborthite Cu3 H6 O11 V2 96-901-4305 0.7245
 Volborthite Cu3 H6 O11 V2 96-901-6229 0.7228
 H14 K0.778 Mn1.216 O25.94 S2 U496-901-0644 0.7223
 Volborthite Cu3 H6 O11 V2 96-901-5722 0.7215
 (V O) (P O4) (H2 O)2 H4 O7 P V 96-153-0879 0.7181
 K2 Mo9 S11 96-432-2278 0.7178
 Cu2 K1.8 Mo9 S11 96-432-2280 0.7133
 C17.5 H0 Fe N10 O0.5 96-705-2298 0.7127
 Iron Fluoride F3 Fe 96-210-0654 0.7102
 Na2 O13 Si5 Ti 96-711-0494 0.7096
 indium silver telluride Ag0.8 In2.4 Te4 96-152-0110 0.7028
 C4 B C12 F4 N2 S4 96-411-6446 0.7015
 Ba9 F10 In4 S10 96-721-4226 0.7015
 Volborthite Cu3 H6 O11 V2 96-901-5495 0.7012
 H20 Mo6 N4 O24 Te 96-432-1864 0.7004

Tm₂ S₃ S₃ Tm₂ 96-153-7164 0.6967
 Ca Mg₂ Bi₂ Bi₂ Ca Mg₂ 96-722-1204 0.6942
 Spangolite Al Cl Cu₆ H₁₅ O₁₉ S 96-900-1548 0.6940
 Cs₂ReF₆ Cs₂ F₆ Re 96-224-2483 0.6917
 Volborthite Cu₃ H₆ O₁₁ V₂ 96-900-9757 0.6905
 meta-schoepite H₁₆ O₂₀ U₄ 96-210-2097 0.6879
 Metaschoepite H₃₄ O₄₀ U₈ 96-901-1299 0.6879
 Ca Mn Si 96-153-9706 0.6875
 Volborthite Cu₃ H₆ O₁₁ V₂ 96-900-9756 0.6865
 C₃₀ H₄₆ N₄ S₂ 96-402-9135 0.6864
 Tricopper divanadate dihydroxide dihydrate (Volborthite) Cu₃ H₆ O₁₁ V₂ 96-100-0138 0.6862
 Na₈ (Al₄ Be Si₇ O₂₄) Br₂ Al₄ Be Br₂ Na₈ O₂₄ Si₇ 96-703-5748 0.6845
 Metaschoepite H₃₄ Na_{1.16} O_{37.9} U₈ 96-901-0198 0.6845
 Copper divanadate dihydroxide dihydrate (Volborthite) Cu₃ H₆ O₁₁ V₂ 96-100-0139 0.6843
 Volborthite Cu₃ H₆ O₁₁ V₂ 96-201-8527 0.6841
 As Na Nb₄ O₁₃ 96-403-0922 0.6839
 Metaschoepite H₃₄ Na_{0.47} O_{37.082} U₈ 96-901-0199 0.6827
 Potassium silver tetraniohium nonaoxide arsenate Ag_{0.2} As K_{0.8} Nb₄ O₁₃ 96-221-8403 0.6824
 Zippeite H₂₇ Na₅ O₅₂ S₄ U₈ 96-900-4756 0.6824
 Na (H₃ O) (Mo₃ O₁₀) H₃ Mo₃ Na O₁₁ 96-152-6957 0.6821
 H₃ O₉ P₃ Sc₂ 96-810-0496 0.6813
 K Nb₄ As O₁₃ As K Nb₄ O₁₃ 96-153-0043 0.6799
 Gobbinsite Al_{2.8} Ca_{0.47} H₁₂ Na₂ O₂₂ Si_{5.2} 96-900-9491 0.6796
 Bementite Mn_{6.683} O₂₃ Si₆ 96-900-1585 0.6782
 Antigorite-T Mg₄₈ O₁₄₇ Si₃₄ 96-901-6234 0.6768
 C₈ H₄ Fe N₆ Pd S₄ 96-433-0734 0.6762
 Li₃ Eu₂ (B O₃)₃ B₃ Eu₂ Li₃ O₉ 96-151-0909 0.6751
 (U O₂) ((Mo O₄) (H₂ O)) (H₂ O)_{1.45} H_{4.9} Mo O_{8.45} U 96-152-1823 0.6739
 Metaschoepite H₃₂ Na_{1.22} O_{39.09} U₈ 96-901-0197 0.6721

and 251 others...

Search-Match

Settings

Reference database used COD-Inorg REV214414 2019.03.29
 Automatic zeropoint adaptation Yes
 Minimum figure-of-merit (FoM) 0.60
 2theta window for peak corr. 0.30 deg.
 Minimum rel. int. for peak corr. 1
 Parameter/influence 2theta 0.50
 Parameter/influence intensities 0.50
 Parameter multiple/single phase(s) 0.50

Criteria for entries added by user

Reference:

Entry number: 96-900-0849;96-900-1092;96-900-1093;96-900-1639;96-900-1640;96-900-1779;96-900-1883;96-900-4509;96-900-4510;96-900-4511;96-900-4512;96-900-4513;96-900-4514;96-900-4994;96-900-4995;96-900-7425;96-901-4665;96-901-5164;96-901-5487;96-901-5581;96-901-6051;96-901-6148;96-900-3104;96-900-4000;96-900-4515;96-901-4626;96-901-5975;96-901-6234;96-101-1153;96-300-0049;96-900-8041;96-900-8298;96-900-8732;96-901-4436;96-101-1098;96-101-1160;96-101-1173;96-101-1177;96-101-1201;96-110-0020;96-500-0036;96-900-0776;96-900-0777;96-900-0778;96-900-0779;96-900-0780;96-900-0781;96-900-5018;96-900-5019;96-900-5020;96-900-5021;96-900-5022;96-900-5023;96-900-5024;96-900-5025;96-900-5026;96-900-5027;96-900-5028;96-900-5029;96-900-5030;96-900-5031;96-900-5032;96-900-5033;96-900-

5034;96-900-7379;96-900-8093;96-900-8094;96-900-9667;96-901-0145;96-901-0146;96-901-0147;96-901-1494;96-901-1495;96-901-1496;96-901-1497;96-901-2601;96-901-2602;96-901-2603;96-901-2604;96-901-2605;96-901-2606;96-901-3322;96-901-5023

Peak List

No. 2theta [°] d [Å] I/I0 FWHM Matched

No.	2theta [°]	d [Å]	I/I0	FWHM	Matched
1	12.20	7.2489	1000.00	0.4373	A, B
2	24.56	3.6217	825.89	0.5613	A, B, D
3	28.62	3.1165	213.05	0.2495	A, C, D
4	35.48	2.5281	200.24	0.6400	A, B
5	41.80	2.1593	41.83	0.4483	B, C
6	45.04	2.0112	58.16	0.3440	D
7	59.14	1.5609	67.44	0.3200	C, D
8	60.16	1.5369	98.20	0.6400	B, D
9	64.84	1.4368	40.39	1.0371	B, D
10	68.70	1.3652	31.02	0.5460	D

Integrated Profile Areas

Based on calculated profile

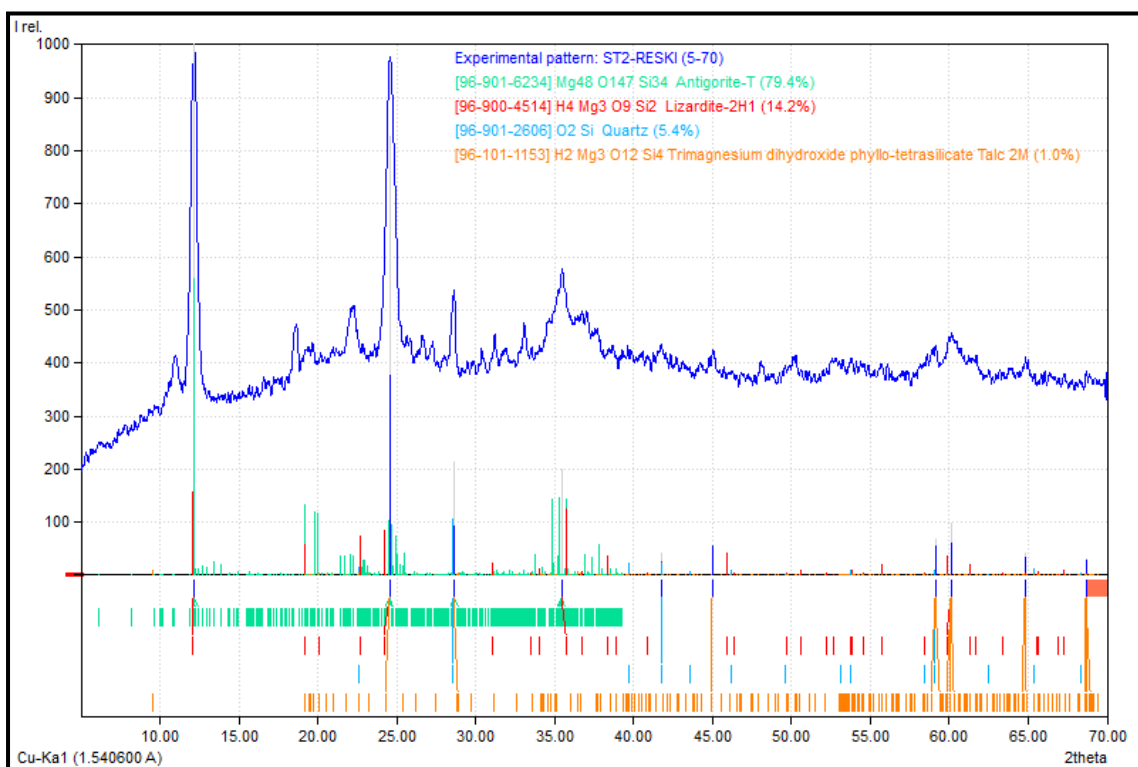
Profile area Counts Amount

Overall diffraction profile 2920412 100.00%
 Background radiation 2728366 93.42%
 Diffraction peaks 192045 6.58%
 Peak area belonging to selected phases 114976 3.94%
 Peak area of phase A (Antigorite-T) 81706 2.80%
 Peak area of phase B (Lizardite-2H1) 24372 0.83%
 Peak area of phase C (Quartz) 6977 0.24%
 Peak area of phase D (Trimagnesium dihydroxide phyllo-tetrasilicate Talc 2M) 1921 0.07%
 Unidentified peak area 77070 2.64%

Peak Residuals

Peak data Counts Amount

Overall peak intensity 2565 100.00%
 Peak intensity belonging to selected phases 1974 76.97%
 Unidentified peak intensity 591 23.03%

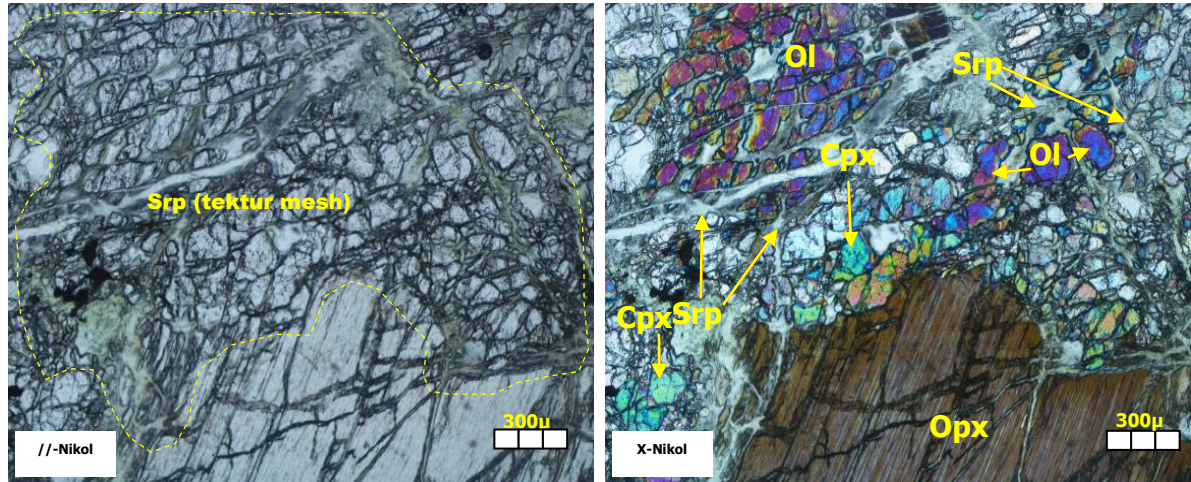


LAMPIRAN D
DESKRIPSI MINERAL

No Sampel : 01 Nama Batuan : **Harsburgit**

Tipe Batuan : Batuan Beku

Klasifikasi : IUGS (2011)
Foto



Mikroskopis :
Sayatan batuan beku ini abu-abu kehitaman pada nikol sejajar, orange kebiruan pada nikol silang. adapun mineral penyusunnya olivin, piroksin, dan serpentin.

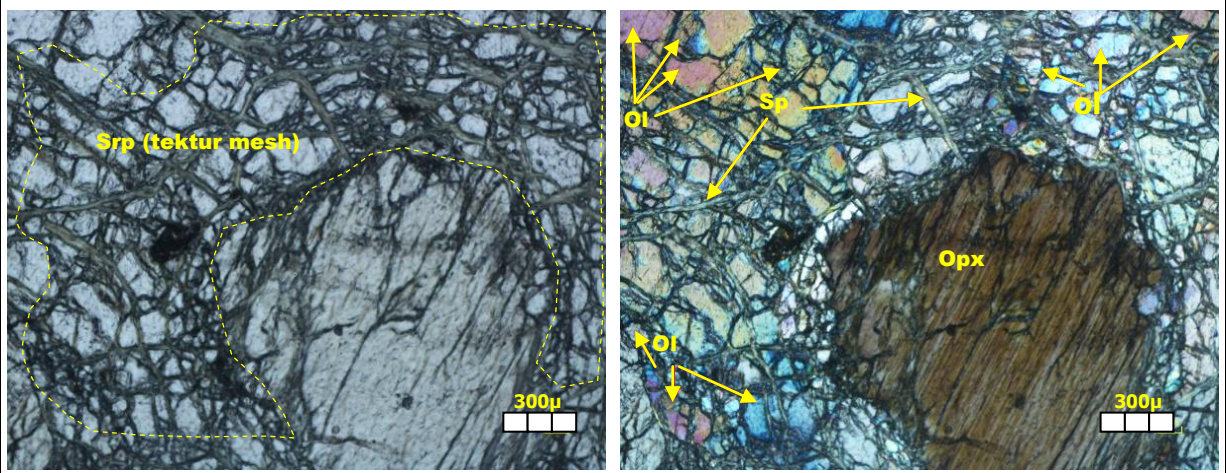
Deskripsi Mineralogi

Komposisi Mineral	Jumlah (%)	Keterangan Optik Mineral
Olivin	64	Pada nikol sejajar berwarna abu-abu terang dan nikol silang berwarna orange-ungu, bentuk subhedral-anhedral, belahan tidak ada, pecahan tidak rata, pleokroisme dwikroik dengan sudut gelapan 25°.
Ortopiroksen	21	Pada nikol sejajar abu-abu gelap dan nikol silang berwarna krem-kekuningan, bentuk kristal ortorombik, sudut gelapan 5°-17°, belahan dua arah, pecahan tidak rata, pleokroisme dwikroik
Serpentin	10	Pada nikol sejajar abu-abu kehitaman dan pada nikol silang berwarna putih-abu-abu, bentuk anhedral dan berbentuk vein
Klinopiroksen	5	Pada nikol sejajar berwarna abu-abu dan pada nikol silang berwarna hijau kebiruan, bentuk anhedral, pecahan tidak rata, sudut gelapan 0°

No Sampel : 02 Nama Batuan : **Harsburgit**

Tipe Batuan : Batuan Beku

Klasifikasi : IUGS (2011)
Foto



Mikroskopis :
Sayatan batuan beku ini abu-abu kehitaman pada nikol sejajar, orange kebiruan pada nikol silang. adapun mineral penyusunnya olivin, piroksin, dan serpentin.

Deskripsi Mineralogi

Komposisi Mineral	Jumlah (%)	Keterangan Optik Mineral
Olivin	69	Pada nikol sejajar berwarna abu-abu terang dan nikol silang berwarna orange-ungu, bentuk subhedral-anhedral, belahan tidak ada, pecahan tidak rata, pleokroisme dwikroik dengan sudut gelap 25°.
Ortopiroksen	21	Pada nikol sejajar abu-abu gelap dan nikol silang berwarna krem-kekuningan, bentuk kristal ortorombik, sudut gelap 5°-17° , belahan dua arah, pecahan tidak rata, pleokroisme dwikroik
Serpentin	10	Pada nikol sejajar abu-abu kehitaman dan pada nikol silang berwarna putih-abu-abu, bentuk anhedral dan berbentuk vein

