STRATIGRAPHIC INDEX of HAND SPECIMENS

[Table 5 – Stratigraphic table of specimens]

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Section underlined,- as 24
Number of Specimen in section given last, as #1, 2

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Pegmatites,- (47-29) 6 #4,35. (48-29) 31 #25. (48-30) 33 #1
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" Feldspar-poor (48-30) 28 #2,3,10. 30 #6.

" " + Molybdenite (48-29) 28 #12,13. 31 #15.

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33 #2. 34 #1f.
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Sibley,- (47-29) 6 #44. (48-30) 20 #5,6,7,8,16.
(48-31) 22 #3,4.

Michigamme Slate,- (48-30) 34 #3b.

" Staurolite Schist (47-31) 1 #4. (48-30) 33 #2.

" Mica Schist (47-31) 1 #1. (48-30) 30 #1. (48-31) 25 #1a.

" Graywacke (47-31) 1 #1. (48-30) 28 #10,11. 30 #2,3.
34 #1d,3a.

" " (Concretions) (48-30) 28 #4. (48-31) 25 #1b,1c.

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" Tuff on Bijiki (47-29) 4 #6. 5 #9. (48-29) 32 #27

" Ash (fine tuff) (47-29) 4 #2. 5 #12,22,23,30. (48-29) 29 #14,15,16.
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(48-30) 19 #1,2,3,4,5.

" Ash on Bijiki (47-29) 4 #1. 5 #25. (48-29) 30 #3,4. 32 #21,22.
(48-31) 23 #5.

" Coarse dike (48-29) 31 #26. (48-30) 22 #5. (48-31) 22 #8,10.
23 #8,9. (49-30) 10 #1.

" " " + Garnet,etc.(48-29) 32 #11.

" Fine grained (47-29) 5 #6,14. 6 #3,19. (48-29) 28 #5,6. 31 #6,7.
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(48-31) 23 #6,7. 24 #3,4,5,11.

Basic dikes, Clarksburg or older,- (48-30) 1 #8. 13 #6. 24 #2,4,13.
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Bijiki Iron formation,-
Ore (48-29) 29 #1,2,3,4,11. 30 #5,6,7,19,21.
(48-30) 25 #12.

Oxidized (47-31) 12 #1e. (48-29) 30 #17,18. 31 #29.

Iron carbonate (47-31) 12 #1h. (47-29) 5 #10,11,13,15,18,24,26,29.

Magnetite & quartz (48-30) 25 #1,2.

Grüneritic (47-29) 4 #3,5. (47-31) 12 #2a,3
(48-29) 30 #23,24. 31 #27,28. 32 #4,23,24,25,28,30.
(48-30) 25 #3,3a,4,4a,4b,5,6,7,8,9,10,11,13,14.
(48-30) 26 #1,3. 30 #5. (48-31) 25 #2. 26 #1.

"Limonite" from "grüneritе" (47-31) 12 #1a,1b,1c,1d,2b,4a,4b. (48-31) 26 #1.

from Greenalite (48-29) 30 #10,14. 32 #12. (48-30) 30 #6.
(48-31) 22 #16.

Graphitic Slate (48-29) 29 #10,13. 30 #11,12,13,15,16.
(48-30) 26 #2,3. (48-31) 26 #2,3,4.

Goodrich Graywacke,- (48-29) 30 #2. 32 #15,16. (48-31) 23 #2.

Quartzite (48-29) 30 #1,8,9. 32#29.

Conglomerate (48-29) 31 #13. (48-31) 23 #1.

Negaunee Grüneritic (47-29) 5 #7,8.
(48-31) 22 #1. 24 #6,7,8. 36 #1

Magnetite,qtz. (48-29) 31 #11. (48-31) 22 #2,6. 24 #9,10. 36 #2.

Slate & graywacke (48-29) 31 #18,23a,23b. (48-30) 20 #2.

Hemlock (48-31) 22 #15.

Iron formation (47-29) 4 #4.

Ajibik Slate, graywacke quartzite (4829) 20 #3. 31 #3,9. (48-30) 20 #4.
(48-30) 22 #6,7. 23 #14a. (48-31) 23 #10.

Ditto (granitized) (47-29) 5 #5,27,28. 6 #2,5,6,20,21,25,26,42,43.
(48-29) 31 #4,9a. (48-30) 22 #3.

Conglomerate (48-29) 21 #8,9. 32 #18.

Champion Pegmatites,- (47-29) 6 #38,39,40 (48-29) 6 #2

Pegmatites, probably mostly of Champion Age
(48-29) 20 #1. 21 #1 (48-30) 1 #7,13,15,16.
(48-30) 2 #7. 12 #3,8. 13 #4,7,9,15,19,20.
(48-30) 13 #21,25,27,28,29. 20 #12. 21 #4,8.
(48-30) 23 #1,6,10,12. 24 #11,12. (49-30) 27 #5.
(49-30) 28 #3,6,9. 35 #1,3. 36 #3.

Quartz veins, probably mostly Champion age.
(48-30) 12 #8. 20 #14. 23 #9.

Mesnard,- (48-29) 28 #8.
(48-30) 1 #11. 13 #3,5. 23 #11.

Mesnard or Kitchi granitized quartzite (48-30) 1 #2,3,4. 2 #1,6,8,10. 13 #23. 20 #9.
(48-30) 22 #2. 24 #5.

Kitchi graywacke (48-29) 21 #2,3,4. (49-30) 35 #2.

Quartz monzonitic gneiss (granitized graywacke)to graywacke & slate
(47-29) 6 #28, 36. (48-29) 6 #1,5,6. 20 #2.
(48-29) 21 #5,10. 28 #1,2. (48-30) 1 #1,9,10,18,19.
(48-30) 2 #2,3,9. 12 #1,2,4,6,6a,7,9.
(48-30) 13 #8,10,12,13,14,16,17,18,22,30. 20 #19.
(48-30) 21 #5. 22 #1. 24 #1,3,6,7,9,10,12,16,17,18,19.
(49-30) 26 #6. 27 #1,2,3,4,6. 28 #4,8,9. 35 #4.

Conglomerate (48-29) 21 #7. (48-30) 1 #17. 20 #11,18.

Laurentian? Granite (48-30) 1 #12. 20 #15.

Keewatin? (48-29) 21 #6. (48-30) 1 #5,6,14. (48-30) 28 #7.
(49-30) 35 #1,2.

DESCRIPTIONS OF TRIMMED SPECIMENS:

LAKE MICHIGAMME AREA:

W. A. Seaman 1946.

	R 30 W.	Range 29 W	
Twp		20	21
48 N	25	30 29	28
		31 32	33
Twp 47 N		5	4

W. A. Seaman Section 4 47-29

47-29 Section 4

#1. 130 paces N, 60 E of West 1/4 post. July 22, 1946

Amphibole (Cummingtonite?) partly radiated or in rosettes.	30%	0.1 x 2mm
Amphibole (Dark blackish green) parallel fibers.	5%	2 x 2mm
Biotite	10-20%	to ½mm
Biotite ± Chlorite	20%	to 0.1mm
Quartz ± other light colored granular material	20%	to 0.1mm
Pyrite	Trace	0.2mm
Unrecognized	10%±	mostly under 0.1mm

Strike about N 60° E, dip steep NW. Has finer grained, lighter colored beds, one about 10mm thick showing in specimen.

Probably base, or near base of Clarksburg or top of Bijiki Iron formation plus fine basic ash. Within a f ew paces of high magnetics seemingly in the foot. Graywacke or perhaps a cherty iron carbonate plus Clarksburg ash.

#2. 470 paces south, 10 E of NW corner but about 40 paces south of the "forty" line as this section is apparently short north and south. July 25, 1946

Dark beds.

Amphibole fibrous, dark greenish black (Actinolite?), in pseudohexagonal thin aggregates about 2 to 3mm in diameter and resembling chloritoid. Edges (or rims) of flat aggregates not quite parallel to centers.	over?	50%
Biotite	10%	0.1-0.2mm
Pyrite	Trace	
Dark material, including edges of amphibole aggregates, biotite, ± chlorite	20-30%	

Light colored bands.

Dark amphibole (like in dark beds)	10%	1±mm
Biotite	10-20%	to 0.2mm
Quartz ± other light colored granular material white, grayish, etc.	50%	under 0.1mm
Unrecognized	25±%	

Strike, - East and west to N 70 E. Dip steep northward (overturned?). Close (above?) magnetic belt. Graywacke plus basic volcanic ash (Clarksburg)

#3. 870 paces South, 260 east of West 1/4 post. September 18, 1946.

W. A. Seaman Section 4 47-29

Grunerite, colorless to yellow, rather interlaced.	50%	to 0.1 x 1mm
Magnetite	Trace	
Quartz	5%	0.1mm
Unrecognized (Grunerite, quartz?)	45%	to 0.1mm

Strike N 60 W, etc. (crumpled), Dip SW (crumpled)
Grunerite phase of Bijiki iron formation

#4. 1720 paces South, 200 East of NW corner. September 18, 1946

Amphibole, colorless to yellow, (Grunerite?) Some flat aggregates to 10mm diameter.	60%	to 1 x 3mm
Quartz (perhaps vein quartz, parallel to beds)	5%	" 2mm
Quartz (granular) in beds and disseminated, perhaps recrystallized chert	5%	" 1mm
Magnetite	5%+(?)	0.1mm
Carbonate veins, 0.2mm thick across bedding.		
Fine, mostly dark, unrecognized	10%	to 0.1mm
Light, unrecognized (perhaps grunerite)	15%	

Perhaps grunueritic phase of pre-Negaunee (pre-Hemlock) Iron formation. About 5 feet thick, lying between coarse biotite schist beds (that may be "Siamo" slate ± Ash (Hemlock?). All cut by narrow, irregular pegmatite and quartz veins.
Strike,- N. 80° E. Dip,- 75° S SE (overturned?)

#5. 120 paces N, 330 East of West 1/4 post. September 19, 1946

Grunerite	20%	to 0.05 x 0.5mm
Magnetite	to 10%	under 0.1mm
Quartz, much of it in flattened aggregates to 2mm diameter.	Over 5%	0.1mm
Grunerite, quartz, etc.	50%	under 0.05 x 0.5mm

Strike East and west to north and south. (Crumpled). Generally curving to northward to the east. Dip north (to west), 40° to 70°.

Grunueritic phase of Bijiki iron formation.

#6. 120 paces North, 20 East of West 1/4 post. September 20, 1946

Irregular fragments of rhomb carbonate (Ankerite?) some partly dissolved out	5-10%	to 12mm
Irregular fragments of gray, fine grained somewhat porous, soft material	10%	" "
Irregular fragments of brown to black basaltic appearing material, quite porous	5%	" 5mm
Irregular cavities by volume	20%	" 8mm
Quartz grains or fragments	2%	" 2mm
Amphibole (dark, fibrous, greenish-black)	40- 50%	to 1 x 3mm
Pyrite and chalcopyrite	Traces	
Biotite	5%	to 0.5mm
Unrecognized, mostly dark	10%	to 0.5mm

Strike about East & West (?), Dip northward(?).
Clarksburg Tuff.

W. A. Seaman Section 5 47-29

#5. 360 paces south, 5 East of North 1/4 post. August 9, 1946

Feldspar, calcic or Albite	30-40%	to 5 x 8mm
Feldspar (probably including end views & sections parallel to b), undetermined	10%	" " "
Quartz, disseminated & in small aggregates	30%	to 1mm
Biotite ± other dark minerals	5-10%	under ½mm
Sericite (much of it yellowish)	5-10%	" 2mm
Feldspar, sericite, quartz	10-20%	under 1mm

Strike,-a little west of north. Dip,-80°± eastward(?).

Granitized sediment--probably Ajibik quartzite. Exposed in an interrupted north and south striking ridge. Exposed width is a little over 20 paces.

#6. 540 paces South, 5 East of North 1/4 post. July 9, 1946

Chlorite ± Biotite	25%	mostly under ½mm
Amphibole (dark greenish black)	10%	to ½ x 1mm
Feldspar, quartz, etc.	20%	under 0.1mm
Unrecognized, dark grayish to greenish black, and probably including ends of amphiboles and edges of chlorite and biotite plates.	50%+	under 0.1mm

Strike,- N. 75° E. Dip 80° eastward. Probably a sheared basic dike, about 3 feet wide, in granitized Ajibik.

#7. 110 paces South, 100 East of North 1/4 post. July 16, 1946

Grunerite, interlaced (not radiated)	60-70%	0.1 x 1mm
Magnetite, in 1-2mm beds	5-10%	under 0.1mm
Magnetite, disseminated	25%	to ½ or 1mm
Pink garnets (mostly confined to a few narrow beds)	2- 5%	½mm

Strike,-North 80° west, dip, -70° northward. Sheared, with an appreciable amount of the Grunerite orientated parallel to the shearing, (or about vertical) at 20° to the bedding. (Bedding dips 85° north in places)

Grunerite phase of the Negaunee iron formation, a few paces in the foot (south) of a very strong magnetic b elt.

#8. 325 paces south, 475 east of north 1/4 post. July 9, 1946

Grunerite	70-60%	to 0.2 x 1mm
Magnetite	20% or more?	to ½mm
Reddish pink garnets	5-10%	½mm

Strike,-about NW (folded and somewhat crumpled). Dip,-75° NE. Much of the Grunerite about evenly divided in orientation from parallel to the bedding to parallel to the cleavage, which is about 15° steeper.

Grunerite phase of the Negaunee iron formation, a few paces below (SW of) a very strong magnetic belt.

#9. 410 paces south, 715 east of north 1/4 post July 16, 1946

Fragments of recrystallized iron carbonate (Ankerite?), to more than 30mm. Partly dissolved out.	? %	1mm (across individual Cl)
Areas or fragments of fine grained grayish material in which are many 1/3mm plates of chlorite or biotite.	20%	
Calcic Feldspar, a few fragments to 2x6mm		
Clinochlore (?), a few plates to 3mm.		
Rhombohedral carbonate matrix (?)	5-10%	to 1mm
Grayish, soft, perf+ Cl (probably more rhombohedral carbonate)	40±%	under 0.5mm
Quartz, or other hard material	?%	under 0.1mm
Irregular cavities, by volume	5%	to 5mm
Chalcopyrite and pyrite	Traces	

Strike NW. dip steep NE.

Clarksburg tuff in top of Bijiki iron formation. (Or Bijiki plus ash and fragments of Clarksburg). Near weak magnetic belt.

#10. 7 or 8 paces east and 3 or 4 south of the #9 specimen, but apparently about 5 paces stratigraphically NE of #9 and probably below #9 as the formations here seem to be overturned. July 16, 1946

Rhombohedral carbonate (Ankerite?)	50-70%	mostly under 1mm
Clinochlore or biotite	10%	to 1/3 or 1mm
Quartz	5%	to 1mm
Fine grained gray material, unrecognized	20%	under 1/3mm
Fine grained dark material	5%	" 1/3mm

A layer of iron rust in which small scales of chlorite(?) are visible, coats the weathered surface to a depth of several millimeters. The iron carbonated seems to compose the bulk of the specimen as a fine groundmass or matrix and also occurs in irregular spots and streaks (fragments or broken beds?)

Strike,-about NW. Dip steep NE (overturned?). On, or very close to a weak magnetic belt trending northwestward.

Cherty iron carbonate (recrystallized) phase of the Bijiki iron formation, with probably a little fine Clarksburg ash mingled with the top of the iron formation.

#11. 370 paces South, 710 east of North 1/4 post. July 16, 1946

Ankerite (or other ferruginous rhomb carbonate)	50-85%	to 1/3mm
Chlorite or biotite, a few small areas a few millimeters across	1-2%	0.1mm
Amphibole (actinolite?) one or more areas 3mm across.		1/3 x 1mm
Chlorite or biotite (or both), disseminated	5-10%	0.1mm

Iron rust coating several mm thick in which are many 0.1mm scales of chlorite(?).

Strike,-NW. Dip,-Steep NE (Overturned?). On or near a weak magnetic belt trending about NW. Area between #10 and #11 is probably a syncline with both limbs about parallel and dipping NE. A finer grained iron carbonate phase of the Bijiki iron formation.

#12. 100 paces North, 130 West of East 1/4 post. July 8, 1946
(This 1/4 post is too far north).

Amphibole, greenish black, to (more abundant in some layers)	10-20%	to 1 x 2mm
Biotite	5%	to 1/3mm
Unrecognized dark minerals	10-20%	under 1/3mm
Rhombohedral carbonate, disseminated (exclusive of 1-2mm veins)	10%	under 1/3mm
Unrecognized light colored minerals including some (perhaps considerable) quartz	25%	to 0.1mm
Grayish to dark greenish, unrecognized	20-40%	under 0.1mm

Prominently bedded in field, faintly in specimen. This is the matrix or country rock of the veins like specimen #1.
Strike, E NE, steep northward dip. Crumpled some in places. Strike is northwesterly about 40 paces to the west and north.
Graywacke plus Clarksburg ash overlying Bijiki iron formation. 50 paces or so above (north of) magnetic belt of medium intensity.

#13. 435 paces south, 285 west of NE corner. September 3, 1946

Chlorite or biotite	10%	0.1mm
Chlorite	1%	1/3 to 1mm
Rhombohedral iron bearing carbonate	60-70%	0.1mm
Quartz	10%(?)	0.1mm
Unrecognized fine grayish to greenish black	10-20%	to 0.1mm

Exposed surface has a crust, several mm thick, of iron rust with chlorite.
Strike-,NW. Dip varies from 80° SW to 70° NE. Crumpled in places. From an area of moderately high readings between two northwest trending magnetic belts of which the northern one is weak but the southern one quite strong. Probably an anticline.
Cherty iron carbonate (plus a little fine Clarksburg ash?) phase of the Bijiki iron formation. Probably quite close to the top.

#14. 440 paces South, 290 West of NE corner. September 3, 1946

Amphibole, greenish black and somewhat fibrous	60%	1x2mm (a few larger).
Feldspar (altered partly to sericite (?) and quartz	20%	under 1mm
Biotite (& chlorite?)	5%	to 1mm
Unrecognized	15%	0.1mm±

Strike,-NW ? Dip NE? (Steep?)

Uralitic Diabase? Probably a Clarksburg dike.

#15. 450 paces South, 710 east of N 1/4 post (290 W of NE cor). Sept. 3, 1946

Rhombohedral iron carbonate (ankerite?)	50-80%	0.1mm
Chlorite or biotite (or both)	25-15%	0.1mm
Quartz	over 5%	0.1mm

Coating of iron rust, with abundant chlorite scales, forms a crust several mm thick on the weathered surfaces.

Cherty iron carbonate (finely recrystallized) phase of Bijiki. (Near top?)

#16. 300 paces south, 480 east of North 1/4 post. September 3, 1946

Irregular fragments of fine grained dark rock
" " " " soft, light colored rock
" of rock made of granular quartz (Recrystallized chert or quartzite?)
Irregular carbonate (Ankerite?) rock
Irregular fragments of dark rock that is mostly dark amphibole.
Matrix that is mostly dark greenish black amphibole (1 x 2mm) with considerable biotite and chlorite in scales to 1/3mm.

Clarksburg Tuff.

Strike,-??, Dip,-??. From what is probably a boulder of more than 50 tons. About 20 paces north of Grunneritic phase of the Negaunee iron formation--that by ledge, magnetics and character is almost undoubtedly near the base of the iron formation.

#17. 490 paces south, 260 West of NE corner. September 4, 1946

Fragments (?) of feldspar (sericitized?)-quartz	1%	to 3mm
Fragments of Rhomb carbonate (Ankerite?)	2%	to 3mm
Matrix (?) of greenish black (almost black) amphibole	50%	to 1x4mm
Biotite	5%	to 1/3mm
Unidentified dark material (probably mostly ends of amphiboles and edges of biotite ± chlorite	20%	
Feldspar, quartz and other (?) light colored minerals	20%	to 1mm

Strike North 45° W. Dip nearly vertical, varying from steep SW to 70° NE.
A 10 to 20mm bed or band runs through the specimen. This band is reddish brownand shows an abundance of biotite scales to 1/3mm with no general parallelism of orientation. A few small amphibole crystals and a considerable amount of very fine grayish material much of which shows minute cleavage flashes.

Adjacent country rock is carbonate phase of Bijiki iron formation striking about parallel. Clarksburg (?) graywacke or ash at, or near the top of the Bijiki iron formation. Structure --may be crest of an anticline.

#18. 715 paces South, 275 West of NE. corner September 13, 1946

Light colored beds (to 10mm)		
Granular quartz (Recrystallized chert?)	to 50%	0.1mm
Biotite (or other reddish brown mica)	10%	0.1mm
Grunerite, varying proportions up to	30+%	to 1/3mm long.
Pale reddish garnets, varying " "	10%	to 1/3mm
Unrecognized, most likely quartz & grunerite	0 to 50%	

Dark beds (to 15mm) Dark and light about equal proportions. Predominantly biotite (or other nearly black mica) to 1mm, with subordinate fine quartz and other light colored minerals under 1/3mm and a few reddish garnets about 1/3mm.

Strike NW, Dip steep NE. Top or near top of Bijiki, with Clarksburg.

#19. 690 paces South, 285 west of NE. corner September 14, 1946

Biotite (perhaps including some chlorite)	50%	0.0 to 0.5mm
Quartz	10%	0.1mm
Other light colored material	30%	to 0.1mm
Pale reddish garnets	5%?	0.2mm

Cleavage (due to parallel arrangement of much of the biotite) at 10° to the faint bedding.

Strike,- in general northwesterly. Dip, near vertical. N.

Mica schist, probably from graywacke at or near the base of the Clarksburg. Within a few paces of the top of the Bijiki iron formation, and specimen #18. Plan 8 inches-

#20. Taken 5 paces west of #19 and apperently about 10 feet stratigraphically below, but formation is so contorted here that the stratigraphic relations were not clear. The specimen appears to be almost identical in character with #19 and is most likely from the same bed. This specimen #20 is almost immediately above the strong magnetic belt running northwesterly. Rocks of the magnetic belt do not outcrop in the immediate vicinity, this specimen being taken from the extreme SW edge of the outcrop closest to the belt to the SW. Strike here about 70° W of N. Dip about vertical. Crumpled. September 14, '46

#21. 480 paces South, 220 West of NE corner. September 14, 1946

Pinkish garnets, from 10% to 60% in different beds	Average about 30-50%	1mm
Chlorite or biotite	30%	0.2mm
Iron hydrate, disseminated 1mm spots	2%	
Unrecognized, perhaps including some quartz, but probably mostly more fine garnet, chlorite, etc.	30%	0.1mm

Strike,-N 70° W. Dip,-about vertical. (Strike varies from N 60 W to N 80 W.).
Occurs as narrow belt a few inches thick only a few inches above nearly pure grunerite phase of Bijiki iron formation.

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#22. 450 paces South, 195 west of NE corner. September 16, 1946

Angular, irregular fragments of
Hard, light gray, granular material (Rexled chert?) to 20mm long
Recrystallized rhombohedral carbonate (Ankerite?) to 3-4mm
" Rhomb carbonate plus amph, chlorite, etc. to 5mm
Dark blackish green fragments mostly of amphibole to 4x8mm
Amphibole, chlorite± biotite plus carbonate to 10mm
Matrix (?) of ½mm biotite, greenish black amphibole to 1x3mm, and chlorite (?) 0.1mm with subordinate amount of light colored material.

Strike,-NW. Dip, nearly vertical. Clarksburg Tuff, fine fragmental phase, interbedded with coarser tuff.

#23. 5 paces south and 40 west of #22. (i.e. about 450+ South and 230 West of NE corner. 9-16-46

Irregular angular fragments of the following material,--(Most, if not all to 15mm long)
Fine grained, granular, mostly hard, white to gray perhaps mostly recrystallized chert from the iron formation, grain under 0.1mm. 5-10%
Recrystallized rhombohedral carbonate (Ankerite?), to 1mm across cleavage surfaces. to 5%
Blackish (greenish-black) aggregates or fragments mostly amphibole with some biotite± chlorite. Amphibole about 1x3mm, biotite, etc. 0.5mm. 20%
Mostly biotite± chlorite, 0.3mm 5-10%
Rhomb, carbonate plus chlorite, etc. scales or crystals 5%
Matrix (?) of fine micaceous material, carbonate, quartz, amphibole, etc.

Strike,-northwesterly. Almost vertical.
Clarksburg Tuff. Near axis of anticline?

#26. 655 paces South. 130 West of NE corner. September 17, 1946

Rhombohedral carbonate (Ankerite?)	40-50%	1mm
Biotite	5%	0.1mm
Chlorite or Biotite	15%	to 0.1mm
Magnetite octs	1?	under 0.1mm
Quartz or other light colored hard mineral	1 to 5?	under 0.2mm
Unrecognized, mostly light colored and perhaps mostly more ankerite	40%	under 0.2mm

Rock is mottled with areas to 5-6mm diameter made up of a higher % of chlorite, etc. Rock is covered on weathered surfaces with a coating of iron hydrate several millimeters thick.

Strike,- N 60° E. Dip NW.
Recrystallized carbonate phase of Bijiki iron formation. (Probably near the top).

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#24. 770 paces South, 40 paces West of NE corner. September 17, 1946

Ankerite (or other rhomb carbonate)	30-50%	1mm
Chlorite (5-10% to 0.5mm)	30%	0.2mm
Biotite (0.1mm), Amphibole (1mm long)	Traces	
Quartz	5-10%	to 0.2mm
Pyrite	Trace	
Greenish fragments or areas to 4mm made up of 1mm chlorite	10%	
Grayish material (may be more quartz, carbonate,etc.)	10-25%	under 0.2mm

A rough, porous crust several millimeters thick in which are abundant minute (0.1mm) scales of chlorite and a few ½mm scales of biotite, occurs on weathered surfaces.

Strike, NE. Dip NW. Top of Bijiki iron formation with, probably appreciable amount of Clarksburg fine ash.

#25. 740 paces South, 80 paces west of NE corner September 17, 1946

Chlorite	30-40%	to 0.1mm
Biotite, apparently at least	5%	to 0.03mm
Chlorite, biotite, etc.	10-20%	under 0.1mm
Dark greenish black amphibole	1%	under 1½mm long.
Rhombohedral carbonate (Ankerite?)	20-30%	to 1mm
Quartz	5%	to 1mm
Light Colored minerals (Quartz, carbonate?, etc.)	10-30%	under 1mm

A thick, rough, brownish crust (several mm thick) of iron hydrate on the weathered surfaces. This crust shows abundant 0.2-0.3mm flakes of yellow-brown biotite and much fine chlorite.

Strike,-N 60° E, Dip,-northwestward.
Graywacke(?)

#27. 620 paces South, 215 west of East 1/4 post. September 18, 1946

Feldspar, predominently alkalic. Some striated, but most of the striated very finely so and probably albitic. The larger feldspars nearly all alkalic and many of them pseudo-porphyritic.	50%	to 4x4x8mm (mostly less than 3mm long)
Quartz, a few aggregates of 1mm grains totalling 5 to 6mm across.	30%	to 1-2mm
Biotite, often in aggregates 3-4mm across.	5%	to 0.3mm
Sericite	1-5%	under 0.05mm
Quartz, end views of feldspar, sericite, etc.	15-20%	

Strike about E & W (varies from N 70 W to N 60 E). Dip, steep northward.
Granitized quartzite, probably Ajibik.

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#28. 625 paces South, 215 West of East 1/4 post. September 18, 1946

Very much like #27 except few (if any) pseudo-phenocrysts of feldspar and feldspar mostly under 4mm and very little of it visibly striated. Quartz 1mm and less. Both #28 and #27 are cut by quartz veins, mostly about parallel to the bedding. #28 is more obviously granular in appearance than #27.

Granitized Ajibik (?) Quartzite. Dip steeply northward.

#29. 420 paces South, 40 paces West of NE corner. September 21, 1946

Ankerite (or other iron bearing rhombohedral carbonate)	60%	0.1mm
Ankerite (or siderite) (in streaks, beds or veins)	10%	1.0mm
Chlorite or biotite	10%	under 0.1mm
Unrecognized, mostly light colored and including appreciable quartz or other hard material	30	under 0.2mm

An iron hydrate coating several millimeters thick, in which are very abundant micaceous scales less than 0.1mm in diameter, covers the weathered surfaces.

Carbonate phase of the Bijiki iron formation.
Strike about E & W. Dip 70° to 90° northward.

#30. 570 paces South, 135 West of NE corner. September 26, 1946

Coarser, dark beds, 10 to 30mm thick

Amphibole, dark greenish black	60%	to 3 x 6mm
Chlorite (or biotite)	20%	under 0.1mm
Ankerite (or other iron bearing rhombohedral carbonate)	5%	to 1mm
Pyrite	Trace	
Unrecognized (mostly dark)	15%	

Lighter colored bed, 25mm thick. Finer grained.

Dark greenish black amphibole	5-20%	to 2mm long.
Pale amphibole	5±%	to 1mm long.
Quartz (Considerable?)	5-15%	to 0.1mm
Chlorite (or biotite)	10-20%	under 0.1mm
Unrecognized	50±%	mostly under 0.1mm

Strike,-northeasterly, but curves (concave to the NW.)
Dip,-rather flat to North and Northwest.

Clarksburg, in hanging (several paces) of Bijiki iron formation.

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#1. 300 paces North, 20 West of SE corner July 20, 1946

Alkalic feldspar (some of it albite) (Albite and microcline?, intergrown)	50%	to 1cm with a few much larger.
Albite or low calcic feldspar	10%	to 4 x 3 x 8mm
Feldspar, probably mostly alkalic	25%	mostly smaller or end views.
Quartz, almost "graphic" in places	20%	to 15mm long aggregates.
Micaceous material, a little of it muscovite but mostly dark. In aggregates to 15mm diam.	5%	1mm

Strikes about NW and cutting material of Specimen #2.
Pegmatite, irregular. From 6 inches to 2 feet wide.

#2. 310 paces North, 10 paces West of SE corner July 20, 1946

Feldspar, largely alkalic but considerable calcic feldspar present. Feldspar (especially the alkalic) appears to be partly altering to (or from) sericite.	40%	to 3 x 4mm (Mostly under 2mm)
Quartz, rather evenly sized and arranged grains fairly evenly distributed.	40%	½ to 1mm
Biotite	5%	½ to 1mm
Chlorite or biotite	10%	to ½mm
Unrecognized, mostly feldspar and (or) quartz	5%	

Strike,-NW. Dip NE. (Folded some).
Granitized graywacke(?), probably Kitchi.

#3. 180 paces North, 20 West of SE corner. July 20, 1946

Quartz grains	60%	⅛mm
Feldspar (Disseminated). alkalic	5-10%	⅛mm
Feldspar, mostly alkalic, in 1 to 2mm seams or veinlets	10%	to 1½mm
Sericite	5%	
Biotite or chlorite	5%	0.1mm
Unidentified (more feldspar, sericite, quartz, etc.)	10-15%	

Strike,-E & W to N 75° W. Dip steep southward.
Quartzite. Perhaps Ajibik or less likely Mesnard.