

Table 20.--Chemical analyses of the metasedimentary rocks of the Plainfield-Danielson area.

(Analyst, Dorothy F. Powers)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sample	S7-40	S7-45	S8-171	S8-159	S8-172	S7-68	S8-90	S7-106	S7-128	S7-138	S8-185	S7-77	S7-121	S8-168	S8-181
SiO ₂	56.10	68.87	65.16	67.69	71.08	71.32	72.43	64.05	62.42	74.74	73.52	65.03	65.28	65.56	64.84
Al ₂ O ₃	21.79	14.21	15.48	14.22	12.35	13.61	13.49	17.71	19.21	12.65	13.32	12.62	12.81	11.85	14.48
Fe ₂ O ₃	5.11	2.27	1.31	2.82	1.93	.71	.70	1.70	2.27	.59	.79	.65	.79	.56	.77
FeO	4.05	3.89	5.20	2.93	3.96	4.34	3.07	3.69	4.88	3.80	3.70	4.41	4.93	4.26	5.04
MgO	2.08	2.25	2.63	2.55	1.83	1.79	1.46	2.46	1.91	1.36	1.17	3.70	3.68	3.18	4.19
CaO	.71	1.63	1.78	2.14	1.51	.69	1.27	.45	.21	.33	.61	8.16	7.83	7.06	2.76
Na ₂ O	1.41	1.98	2.92	3.01	2.26	1.34	2.38	.92	.81	.60	1.31	1.75	1.87	2.24	2.22
K ₂ O	3.55	2.72	2.72	2.49	2.46	3.28	2.85	4.10	3.44	2.72	2.40	1.51	.52	1.15	2.99
H ₂ O-	.30	.08	.07	.06	.11	.08	.09	.11	.16	.13	.03	.04	.06	.04	.12
H ₂ O+	2.15	.84	1.22	.91	.96	1.22	1.18	3.00	2.78	1.69	1.67	.61	.68	.83	1.34
TiO ₂	1.18	.91	.89	.81	1.05	.80	.57	.90	1.11	.81	.89	.84	.90	.85	.81
P ₂ O ₅	.03	.04	.07	.04	.09	.07	.18	.08	.09	.08	.08	.19	.17	.16	.14
MnO	.12	.08	.20	.08	.08	.13	.07	.05	.07	.03	.06	.09	.12	.10	.12
CO ₂	.01	.01	.06	.01	.01	.02	.02	.02	.02	.01	.01	.01	.06	1.97	.05
TOTAL	99.59	99.78	99.71	99.76	99.68	99.40	99.76	99.24	99.38	99.54	99.56	99.61	99.70	99.81	99.87
Mesonorm															
Q	28	40	31	33	42	45	40	35	37	54	49	25	29	33	31
C	10		3		0.8	3	0.8	5	9	5	5			2	4
Or		8										9	0.7		2
Ab	11	17	25	26	20	12	21	7	7	5	11	16	17	20	19
An	3	8	7	10	7	3	5	1	0.5	1	2	12	16	10	9
Bi	12	13	17	11	11	13	10	12	12	10	9		3	11	24
Mu	17		6	10	10	15	14	20	15	13	11				
Ho												30	27	13	
Di												1			
Wo												1			
Cc			0.1											5	0.1
Ap	0.1	0.1	0.1	0.1	0.3	0.1	0.4	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3
Mt	5	2	1	3	2	0.7	0.7	2	2	0.6	0.8	0.7	0.8	0.6	0.8
Il	1	1	1	1	1	1	0.8	1	1	1	1				
Ti															
H ₂ O	12	5	7	5	6	7	7	16	16	10	10	2	2	2	2
An	21	31	23	27	25	20	19	18	7	17	18	43	49	33	33
An + Ab															

1-2: Tatnic Hill Formation, lower member; sillimanite gneiss; for location, mode and sample description see table 7.

3-5: Tatnic Hill Formation, lower member; muscovite-biotite gneiss; for location, mode and sample description see table 7.

6-7: Tatnic Hill Formation, Yantic Member; muscovite-biotite gneiss; for location mode and sample description see table 9.

8-11: Scotland Schist; biotite-muscovite schist; for location, mode and sample description see table 12.

12-13: Tatnic Hill Formation, Fly Pond Member; calc-silicate gneiss; for location, mode and description see table 8.

14-15: Hebron Formation; calc-silicate schist; for location, mode and description see table 10.

Semiquantitative spectrographic analysis

(Analyst, Nancy M. Conklin, 1959)

B	0	0	0	0	0	0	0	.007	.003	.007	.0015	0	0	0	0
Ba	.03	.07	.03	.03	.03	.07	.03	.07	.07	.03	.03	.03	.03	.03	.03
Be	.00015	0	0	0	0	0	.00015	.00015	.0003	0	.00015	.00015	.00015	.00015	.00015
Co	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0007	.0007	.0007	.0007	.0007	.0007	.0015	.0007
Cr	.007	.007	.015	.015	.007	.007	.003	.015	.007	.007	.007	.015	.015	.015	.007
Cu	.00015	.00015	.0003	d	.0007	.0007	.003	.0015	.0015	.0007	.0003	.00015	.0007	.0003	.003
Ga	.0015	.0007	.0015	.0007	.0007	.0015	.0007	.0015	.0015	.0007	.0003	.0007	.0007	.0003	.0007
La	.007	.007	.003	.003	.015	.003	0	0	.003	.003	0	0	.003	.003	0
Mo	0	0	0	0	0	0	0	0	0	<.001	0	0	0	0	0
Nb	.0015	d	.0015	d	d	d	d	.0015	.0015	.0015	.0015	.0015	d	d	0
Nd	.015	.015	0	0	.015	0	0	0	0	0	0	0	0	0	0
Ni	.003	.003	.003	.003	.003	.003	.0015	.0007	.0015	.0007	.0007	.003	.003	.003	.0015
Pb	.0015	.0015	.0015	d	.0015	.0015	d	.0015	.0015	.0015	d	.0015	.0015	.0015	.0015
Sc	.0015	.0015	.003	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015	.0015
Sn	.0015	0	.0015	0	0	0	.0015	0	0	0	0	0	0	0	0
Sr	.015	.03	.03	.03	.015	.015	.015	.015	.015	.015	.03	.03	.03	.07	.015
V	.015	.015	.015	.015	.015	.007	.007	.015	.015	.007	.003	.015	.015	.015	.007
Y	.003	.003	.003	.0015	.007	.003	.0015	.0015	.003	.003	.0015	.0015	.0015	.0015	.0015
Yb	.0003	.0003	.0003	.00015	.0003	.0003	.00015	.0003	.0003	.0003	.0003	.0003	.0003	.0003	.00015
Zr	.03	.015	.015	.015	.03	.03	.015	.03	.03	.03	.03	.03	.015	.03	.007

Figures are reported to the nearest number in the series 7, 3, 1.5, 0.7, 0.3, 0.15, etc., in percent. These numbers represent midpoints of group data on a geometric scale. "d" indicates barely detected, and concentration uncertain. Comparisons of this type of semiquantitative results with data obtained by quantitative methods, either chemical or spectrographic, show that the assigned group includes the quantitative value about 60 percent of the time.

Elements looked for but not found: Ag, As, Au, Bi, Cd, Ce, Dy, Er, Eu, Gd, Ge, Hf, Hg, Ho, In, Ir, Li, Lu, Os, Pd, Pr, Pt, Re, Rh, Ru, Sb, Sm, Ta, Tb, Te, Th, Tl, Tm, U, W, Zn.