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In situ magnetic susceptibility measurements in the Southern Nicola Project area, southern British Columbia (NTS 092H/01W, 02E, 07E, 08W)

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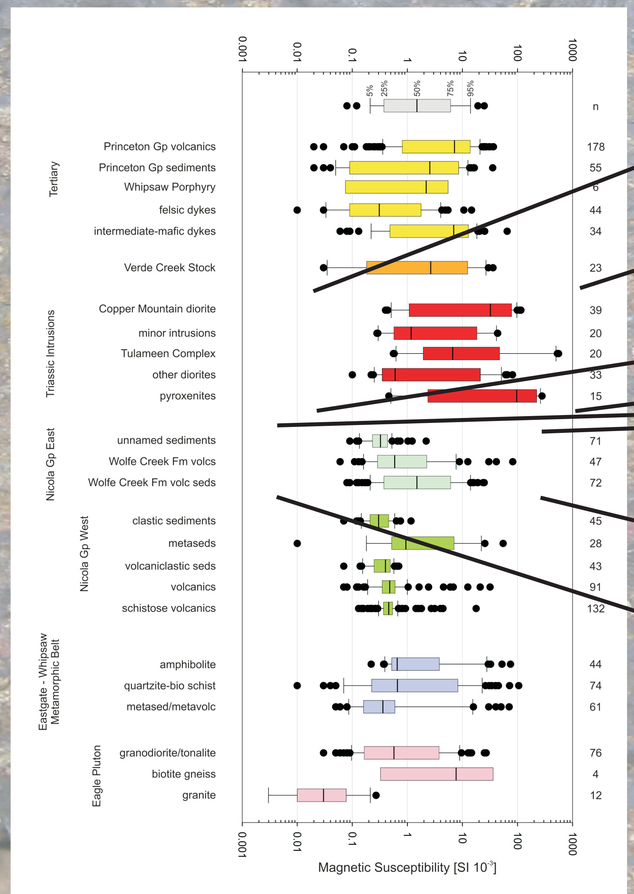
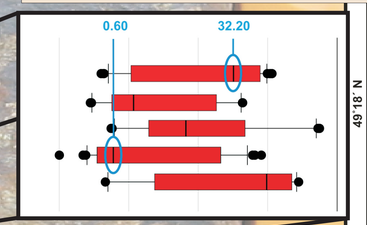
In situ measurements of magnetic susceptibility were made on a routine basis during the 2008 and 2009 field seasons in the Southern Nicola Project area. The area is located on the eastern boundary of Manning Park, about 15 km southwest of the town of Princeton. The geology of the area is described in Massey et al. (2009a, 2009b) and Massey and Oliver (2010a, 2010b).

The measurements were made using a Exploranium KT-9 kappameter. Ten individual readings were taken, scattered over the outcrop at each locale, and the average recorded. Data for each station is tabulated in the accompanying MS Excel file and summarized by stratigraphic unit in Table 1 and Figure 1.

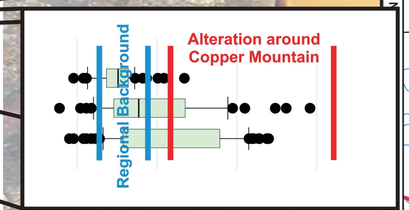
Map unit	Maximum	Percentiles 95%	75%	50%	25%	5%	Minimum	Number of readings
EPv	37.70	25.85	13.85	7.20	0.87	0.24	0.00	178
EPs	35.40	14.72	8.48	2.54	0.10	0.04	0.02	55
EPw	6.26	6.01	5.00	2.20	0.09	0.07	0.06	6
EPif	64.70	20.29	12.90	5.69	0.50	0.10	0.06	44
EPi/m	64.70	22.18	12.90	5.96	0.49	0.09	0.06	34
KVqm	35.80	29.02	11.75	2.90	0.20	0.03	0.03	23
mJEgd	26.90	12.88	3.68	0.57	0.18	0.07	0.03	76
KEg	0.27	0.17	0.07	0.03	0.01	0.01	0.00	12
TrCd	115.00	99.81	70.60	32.20	1.97	0.44	0.40	39
Tri	43.50	43.22	14.83	1.18	0.57	0.29	0.28	20
TrTu	551.00	539.60	37.85	6.68	1.99	0.57	0.55	20
Trd	80.60	63.58	21.00	0.60	0.37	0.23	0.10	33
Tru	279.00	261.50	195.50	97.40	12.89	0.51	0.46	15
TrNs (East)	2.30	1.12	0.49	0.35	0.25	0.13	0.09	71
TrNwc	81.90	24.82	2.43	0.55	0.28	0.12	0.06	47
TrNwd	24.80	17.22	5.88	1.50	0.39	0.14	0.08	72
TrNs (West)	1.17	0.62	0.46	0.30	0.21	0.13	0.07	45
TrNs'	55.20	24.31	6.48	0.94	0.60	0.08	0.00	28
TrNvs	0.70	0.63	0.48	0.40	0.26	0.14	0.07	43
TrNv	32.00	5.25	0.59	0.48	0.35	0.15	0.07	91
TrNv'	17.70	1.51	0.54	0.46	0.37	0.22	0.13	132
TrMa	74.50	31.95	3.68	0.66	0.54	0.38	0.22	44
TrMq	105.00	36.07	8.17	0.66	0.23	0.03	0.01	74
TrMsv	70.40	40.30	0.58	0.36	0.16	0.06	0.05	61
Kfq	21.80	20.12	16.10	0.29	0.17	0.11	0.07	9

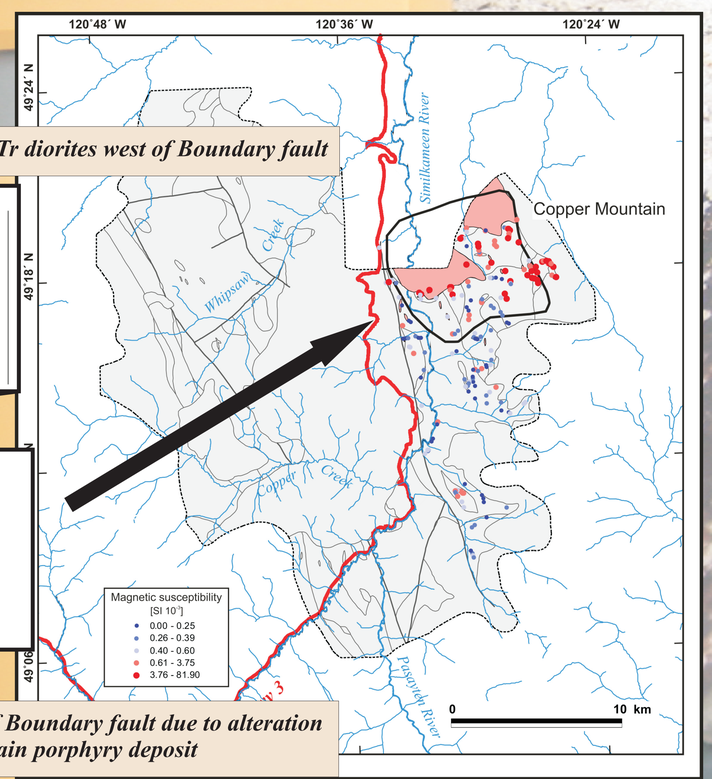
Table 1. Summary statistics of magnetic susceptibility measurements (10^{-3} SI units). Data grouped by stratigraphic units as in Figure 1 and in Massey et al. (2009b).





Copper Mountain diorites >> Tr diorites west of Boundary fault





High values in TrN east of Boundary fault due to alteration around the Copper Mountain porphyry deposit

Figure 1. Ranges of magnetic susceptibility measurements for lithologies in the map area. Data are grouped by stratigraphic units as in Massey et al. (2009b) and Massey and Oliver (2010b).

References

Massey, N.W.D. , Vineham, J.M.S. and Oliver, S.L. (2009a): Southern Nicola Project: Whipsaw Creek-Eastgate-Wolfe Creek area, southern British Columbia, (NTS 92H/01W, 02E, 07E, 08W); in Geological Fieldwork 2008, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 2009-1, pages 189 - 204.

Massey, N.W.D. , Vineham, J.M.S. and Oliver, S.L. (2009b): Geology and mineral deposits of the Whipsaw Creek-Eastgate-Wolfe Creek area, British Columbia, (parts of NTS 92H/01W; 92H/02E; 92H/07E; 92H/08W); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 2009-8: 1:30 000-scale.

Massey, N.W.D. and Oliver, S.L. (2010a): Southern Nicola Project: Granite Creek area, (parts of 92H/07 and 92H/10):*B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 2010-1, pages XX-XX.

Massey, N.W.D. and Oliver, S.L. (2010b): Geology and mineral deposits of the Granite Creek area, British Columbia, (parts of NTS 92H/07 and 92H/10); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 2010-X: 1:XX0 000-scale.