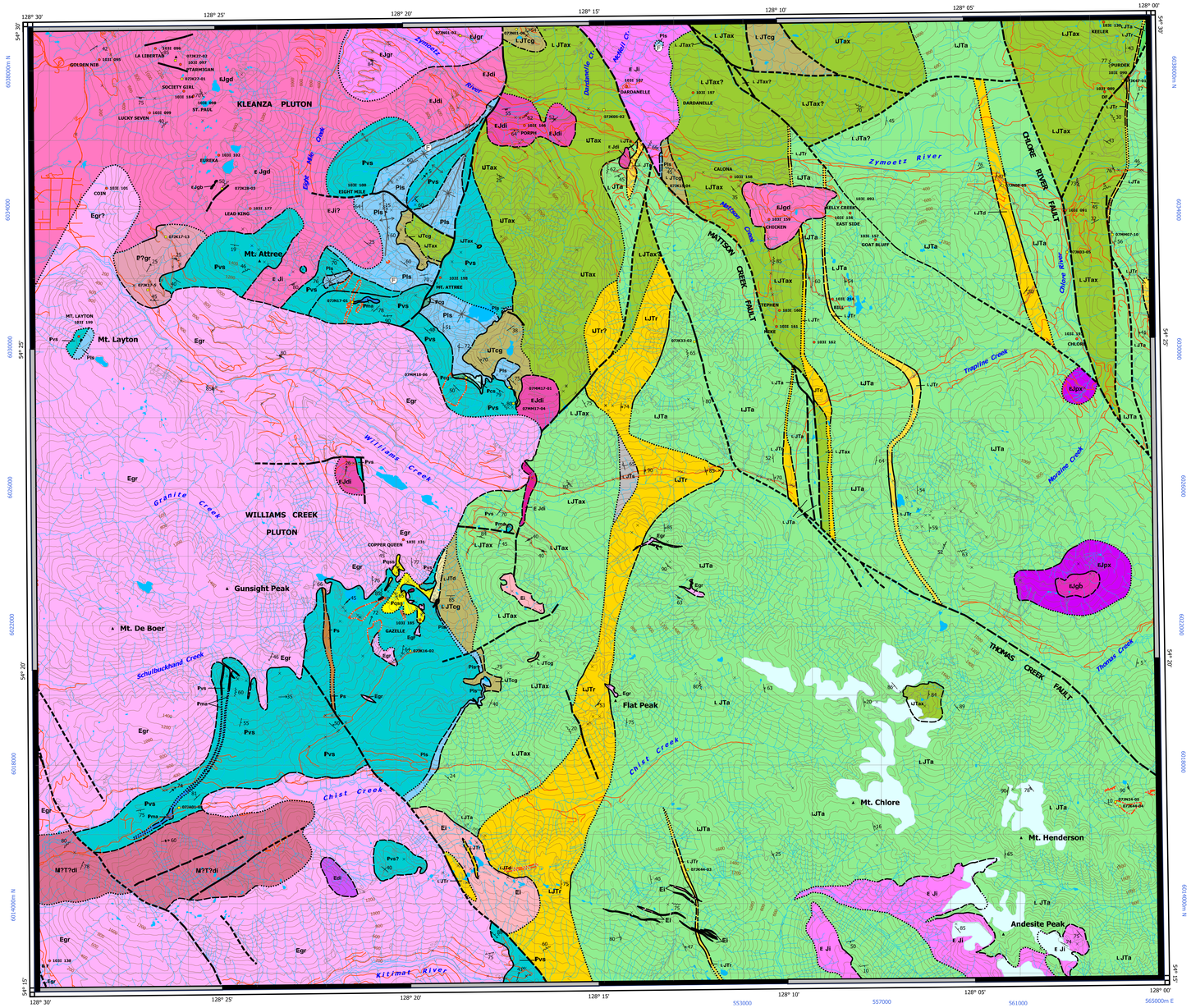

British Columbia Geological Survey

Open File 2008-3

Geology of Chist Creek Map Area (NTS 103I/08) British Columbia

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Digital Cartography by J. Nelson and M. McKeown

Field work carried out 2007
Printed January 2008

0 1 2 3 4 5
Kilometers

Legend

INTRUSIVE UNITS

Eocene

Williams Creek pluton; other unnamed bodies and dikes

- Ei — Equigranular to porphyritic granite and granodiorite. Contains euhedral titanite in most instances
- Egr — Mainly granite
- Egd — Mainly granodiorite
- Edi — Equigranular hornblende diorite, medium grained, fresh

Paleocene?

- Pgr — Foliated granite and granodiorite. Contains magmatic garnet in part
- M?T?di — Foliated diorite and granodiorite

Early Jurassic

Kleanza pluton ca. 200 Ma

- EJgd — Granodiorite, granite:equigranular, coarse to medium grained, homogeneous
- E gr — Hornblende-biotite granite
- EJdi — Diorite, microdiorite,gabbro: heterogeneous in texture and composition
- EJgb — Gabbro, minor pyroxenite, diorite.
- EJpx — Pyroxenite, locally layered.
- E Ji — Granodiorite, diorite, minor gabbro, granite.

STRATIFIED UNITS

Lower Jurassic

Telkwa Formation ca. 194-200 Ma

Flow-dominated division

- L JTa — Coherent, variably amygdaloidal andesite, basalt and dacite. Green, maroon and locally brick-red. Andesites are plagioclase-phyric, locally plagioclase-megacrystic. Amygdules large, irregular to small.

Lower and intraflow felsic marker units.

- L JTr / L JTd — Lower marker unit lies at base of flow-dominated division; upper lies both above and below andesite flows. Rhyolite and dacite distinguished by labels locally, but not separated. In part coherent, flow-banded; also volcaniclastic with variable clast sizes and degree of welding. Red, maroon, lavender, pink, cream. Small plagioclase phenocrysts common.
- L JTs — Epiclastic volcanic sandstone, siltstone; thin-bedded, green.

Volcaniclastic-dominated division

- L JTax — Plagioclase-phyric andesite lapilli tuff: coarse to fine-grained, monolithologic to texturally polymictic; less commonly, compositionally polymictic. Minor hornblende and rare clinopyroxene phenocrysts. Also plagioclase-phyric andesite flows and flow breccia; minor dacite, rhyolite, and volcanic sedimentary rocks. Green, maroon and bright burgundy.
- L JTcg — Polymictic conglomerate,volcanic-derived sandstone, siltstone and lapilli tuff. Contains both intraformational (plagioclase-phyric andesite and dacite) and extraformational (limestone, chert, felsite, clinopyroxene-phyric volcanic) clasts. Locally rhyolite-dominate. Grades into andesite breccia.
- L JTd — Grey aphanitic dacite, coherent to brecciated. Occurs locally at base of Telkwa Formation.

Permian and older

Zymoetz Group

Permian

Ambition Formation

- Pls — Limestone, marble, silty limestone, calcareous mudstone; minor green and pink lapilli tuff and volcanic sandstone. Some beds richly fossiliferous.

Pre-Permian

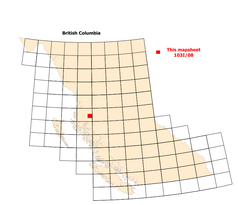
Mt. Attree Volcanics

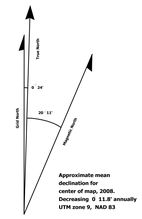
- Pcs — Banded and bedded calc-silicate, thin-bedded limestone and marble.
- Pcq — Conglomerate, calcrudite, sandstone, argillite, calc-silicate
- Pvs — Andesite and basalt breccia and flows; plagioclase- and augite phyric; Lesser volcanic sandstone, rhyolite and dacite tuff.
- Pqss — Quartz-sericite schist, pyritic, in part silicified. Mainly rhyolite lapilli tuff protolith.
- Pma — Marble, calc-silicate.
- Ps — Thin-bedded andesitic epiclastic sedimentary strata.

SYMBOLS

- Contact (Inferred, Approximate, Defined)
- Fault (Inferred, Approximate, Defined)
- Normal Fault (Inferred, Approximate, Defined)
- Thrust Fault (Inferred, Approximate, Defined)
- Unconformity (Inferred, Approximate, Defined)
- Limits of outcrop observed
- Bedding (tops unknown, tops known, tops known-overturned)
- Dike (inclined, vertical); vein
- Lineation (first phase, elongation, crenulation)
- Brittle Shear/ fault lineation
- Foliation (unspecified, first phase, first phase vertical); igneous flow banding
- Fold axis (anticline; syncline)
- Gossan outline
- Field Station
- Mineral Occurence, MINFILE
- Geochemical rock sample 2007
- Fossil Locality
- Contours at 100m intervals
- Road
- River
- Lake
- Glacier

The project was conducted in cooperation with the Resource Management Branch of the Kitselas First Nation.





Approximate mean declination for center of map, 2008. Decreasing 0 11.8' annually
UTM zone 9, NAD 83

2007 Geochemical and assay data

Station number	UTM East	UTM North	Location	MINFILE	Sample Type	Minerals noted	Description	Mo	Cu	Pb	Zn	Ag	As	Au	Cd	Sb
07JA01-03	536737	6016764	Chist Creek	none	2m cont chip	py	Phyllite with disem py	4.62	39.96	4.87	240.3	129	0.6	7.5	0.09	<0.02
07JA10-10	569870	6047786	Many Bear Creek (93L/12)	93L 323	grab	py	pyritic-silicified rhyolitre bx (adv. argillic alt.)	1.77	24.78	4.62	3.4	40	16.7	0.3	0.04	0.52
07JK03-05	562345	6032779	Clore R.	103I 091	2m disc chip	bo,cpy, po	Amygdaloidal andesite/dacite with min. in amygdales	0.43	3801	9.24	295.3	14200	3.1	0.5	0.15	0.09
07JK05-02	548992	6036878	Clore R.	none	5m disc chip	py, cpy	Vein hosted within Telkwa andesite lapilli tuff	3.71	105.5	3.1	40.9	873	8.4	79.9	0.11	0.34
07JK15-04	550803	6034687	Mattson Creek W.	none	grab	py	Highly silicified plag phyric andesite with up to 15% disem py.	1.27	29.65	8.36	64.7	69	5.7	0.6	0.08	0.35
07JK16-02	543404	6021282	Chist Creek spur	none	grab	py	L.Jur. sericite schist,up to 15% pyrite within quartz veins	63.46	3620	195.9	7496	4847	8.6	82.3	95.24	0.21
07JK17-5	535839	6031689	West Williams Creek	none	grab	py, mb?, sulfosalts?	quartz vein exposed over 1 X 4 metres minimum	18.21	3843	165.4	114.8	>100000	1	14098	3.12	0.3
07JK17-13	536358	6033218	West Williams Creek	none	grab	py	pyritic qtz-(sericite?) also diorite with blue opal beads - epithermal? Abundant sulfide alteration	2.03	79.98	14.99	3.1	394	2.1	8.2	<0.01	0.11
07JK27-01	536824	6037770	Mt. Thornhill	near Society Girl 1031184	grab	py,gn	Smokey qtz vein hosting dism. pyrite and minor galena	3.32	751.2	1.12%	55.8	45655	80.3	275.3	2.74	13.13
07JK27-02	536633	6038304	Mt. Thornhill	Ptarmigan 1031097	grab	py,cpy,mal	Qz vein w disem and blebby sulphides	1	2.15%	8.47	77.3	11126	2.4	53.2	1.74	0.21
07JK28-03	537977	6034609	Mt. Thornhill south	none	grab	py,	Shear w silica/pyritic alteration up to 30% disem pyrite some massive	2.2	60.61	2.68	42.3	156	11.2	5.9	0.04	0.04
07JK33-02	551598	6030194	ridge SW of Mattson Cr.	none	grab	mal, minor mt	Amygdaloidal plag phyric andesite w mt, jasper	0.19	9122	9.53	364.5	3056	0.4	474.5	1.3	0.31
07JK44-03	551409	6014982	Ridge NW of Hunter Creek	none	grab	py >cpy	Highly silicified volcanics w up to 15% fine disem py	0.75	32.04	7.03	48.5	155	2.9	3.4	0.03	0.11
07JK44-04	563863	6016810	Ridge NW of Hunter Creek	none	grab	py,	Intense gossan within andesite, pyritic + jarosite	4.37	103.3	6.15	23.9	57	34.2	0.6	0.09	0.3
07JK47-01	563945	6037713	Treasure Mountain	Purdex 103I 090	grab	cpy,po,mal,az	Dacite with fine disem sulphides	0.44	6.21%	537.7	161.6	35650	1.9	3	0.4	0.39
07JN01-03	548844	6039018	N. Zymoetz	none	grab	mt,cpy,gn	Skarn - lenses of calc-silicate metaseds. Mt rich zone with garnet, epidote, diopside	0.32	20.37	2.57	55.2	33	1.5	0.4	0.09	0.18
07JN01-06	546451	6039356	N. Zymoetz	none	grab	mal,cpy	Sulphide rich zone within Lower Telkwa, limestone dominated bx.	6.37	7.21%	15.68	97.9	5279	17.1	5.5	0.77	0.42
07JN08-05	560476	6034700	W. of Clore	none	grab	zeolite?	Rotten dacite bx silicified (possibly some pink zeolite?)	9.61	60.56	338.3	36	4624	182.8	60.5	0.49	3.48
07JN17-01	541737	6031336	Camp 2	none	grab	py	Gossan within Pz lapilli tuff, patchy, intense silicified-pyritic zone	0.34	41.74	10.71	72.9	517	8.5	2.3	0.67	0.77
07JN24-05	563735	6016931	Clore-Henderson-Andesite Peak	none	grab	py>>cpy	Gossanous diorite with up to 15% py intruding Telkwa rhyolite	1.86	100.3	9.74	15.4	102	10.1	0.8	0.03	0.41
07MM07-10	563650	6033284	E. Clore	none	2m cont chip	mal,cpy,bo	Hosted in porphyritic andesite (Telkwa), likely shear controlled, min over 15 ft	0.38	1.35%	4.43	298.3	15847	2.5	295.5	0.27	0.07
07MM17-01	546260	6028880	Summit E. of Mt. Attree	none	grab over 20m	mt,cpy,gl	Skarn - base of Pls over andesite flow, massive galena and trace grey sulfosalts	1.07	13.09%	248.7	1457	>100000	8.2	72.8	44.48	0.25
07MM17-04	546379	6028416	Summit E. of Mt. Attree	none	grab	cpy,mt,gn?	Magnetite skarn within Pz andesite, plag phyric flow	208.3	7.62%	36.6	367.6	70247	2.7	27.1	30.6	0.08
07MM18-06	545017	6029157	Summit E. of Mt. Attree	none	2m chip	py	silic-pyritic zone overlying highly foliated quartz-sericite schist	1.28	198.8	5.94	166.5	308	5.4	0.5	0.38	0.04

Gazelle area geochemistry (MINFILE 103I 185)

Station number	UTM East	UTM North	Description	Cu	Zn	Pb	Ag	Au	Ba	Mo
07MM13-13 01A	543083	6023645	grab sample: barite in highly silicified quartz-sericite schist	11.26	267.9	643	72787	362.4	>50000	22.77
07MM13-13 01B	543083	6023645	representative sample: barite in highly silicified quartz-sericite schist	37.78	7956	>10000.00	>100000	208.4	>50000	35.71
07MM13-13 01C	543083	6023645	highly silicified quartz-sericite schist with a lens of disseminated to massive galena (2 x 25 m zone)	212.8	4439	3107	18324	275.1	>50000	33.7
07MM12-01	542901	6022437	float sample: quartz-sericite schist with abundant pyrite	70.19	103.3	18.35	237	7.2	1063	0.35
07MM13-13 07	543083	6023645	magnetite skarn	25.02	70.6	46.78	1364	3.9	116	1.85
07MM14-01	542162	6022812	quartz vein within quartz-sericite schist near granodiorite. Mineralization is related to the intrusion.	46.45	312.2	406.7	3428	2988	852	95.44

All data in ppm unless % specified

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RECOMMENDED CITATION: Nelson, J.L.,Kyba, J., McKeown, M. and Angen, J., 2008, Geology of Chist Creek map area, NTS 103I/08, British Columbia; BC Ministry of Energy, Mines and Petroleum Resources Open File 2008-3 , 1:50,000 scale.