

Bedrock geology of the Andrea Creek area
part of NTS 1041/01

by Paul Schiarizza

Scale 1:25 000

Legend

- Eocene**
- Edi** Diorite
- Middle - Late Jurassic**
- Bowler Lake Group**
 - JBL** Chert-pebble conglomerate; chert-quartz sandstone, slate
- Queens Terrane**
- Late Triassic - Early Jurassic**
- TJgd** Granodiorite, tonalite, quartz diorite, diorite
- Whitehorse Trough**
- Early - Middle Jurassic**
- JI** Inklin Formation: slate, siltstone, sandstone, locally includes calcareous sandstone, conglomerate, limestone
- Late Triassic**
- uTS** Sinwa Formation: limestone, marble; locally includes calcareous conglomerate
- Middle - Late Triassic(?)**
- Tcg** Conglomerate unit; schistose metaconglomerate containing felsic volcanic and plutonic clasts that were probably derived from the underlying Kutcho assemblage; locally includes sandstone, phyllite, limestone
- Triassic(?)**
- Tgb** Metagabbro; locally grading to biotite-chlorite-actinolite-epidote-plagioclase semischist
- Cache Creek Terrane**
- Late Permian - Middle Triassic**
- Kutcho assemblage**
 - Intrusive rocks**
 - PTKt** Tonalite; locally grading to chlorite-sericite-plagioclase-quartz semischist
 - PTKd** Metadiorite, chlorite-actinolite-epidote-plagioclase semischist
- Northern division**
- PTK4** Phyllite, siltstone, sandstone; commonly includes dikes and sills of metagabbro
 - PTK3** Chlorite-sericite-plagioclase-quartz schist derived by large relict quartz grains; locally includes coarse breccia containing fragments of the same material; derived from felsic volcanic, volcanicslastic and intrusive(?) rocks
 - PTK2** Quartz-sericite schist, variably pyritic, commonly with small quartz grains and/or flattened felsic lithic fragments; quartz-plagioclase-phyric metarhyolite, grading to sericite-quartz schist
 - PTK1** Sericite-chlorite schist containing feldspar and quartz grains and, locally, felsic lithic fragments; locally includes siltstone and phyllite; derived mainly from felsic volcanoclastic rocks
- Central division**
- PTK** Quartz-plagioclase-phyric metarhyolite, locally grading to sericite-quartz schist and fragmental schist
- Southern division**
- PTKs3** Epidote-chlorite schist derived from mafic volcanic rocks; locally includes metadiorite, metarhyolite and quartz-sericite schist
 - PTKs2** Quartz-feldspar-phyric metarhyolite; chlorite-sericite-quartz schist with quartz, feldspar and felsic lithic fragments; siltstone, phyllite, quartzose sandstone; epidote-chlorite schist derived from mafic volcanic or volcanoclastic rocks
 - PTKs1** Chlorite-sericite schist with quartz, feldspar and felsic lithic fragments (derived mainly from epiclastic rocks); phyllite, siltstone, sandstone
- Late Paleozoic - Early Mesozoic**
- Cache Creek complex**
 - PMCCb** Metabasalt, grading to actinolite-epidote-chlorite schist; locally includes serpentinite, chert, limestone, metagabbro
 - PMCCs** Serpentinite; common lenses of silicified metabasalt and chert
 - PMCCu** Harzburgite, dunite, serpentinite; locally includes listwanite-altered rock and lenses of slaty siltstone and chlorite schist
 - PMCCul** Listwanite-altered ultramafic rock

- Geological contact (defined, approximate, inferred)
 Fault (defined, approximate, inferred)
 Thrust fault, teeth on upthrust side (inferred)
 Axial trace of fold, inferred (anticline, syncline)
 Limit of mapping
 Bedding, inclined (tops known, tops unknown)
 Schistosity or slaty cleavage, inclined
 Lineation, plunging (stretch or bedding/cleavage intersection, crenulation)
 Mesoscopic fold axis, plunging (symmetromorphic, postmetamorphic)
 Field station, 2010 mapping program
 Sample dated by U/Pb on zircons, with preliminary age (R. Friedman, UBC)
 Assay sample (Table 1)
 Mineral showing (Table 2)
 Kutcho Creek deposit, massive sulphide lens (projected vertically to surface)
 Topographic contour (20 m, 100 m intervals)
 Rough road
 Gravel airstrip
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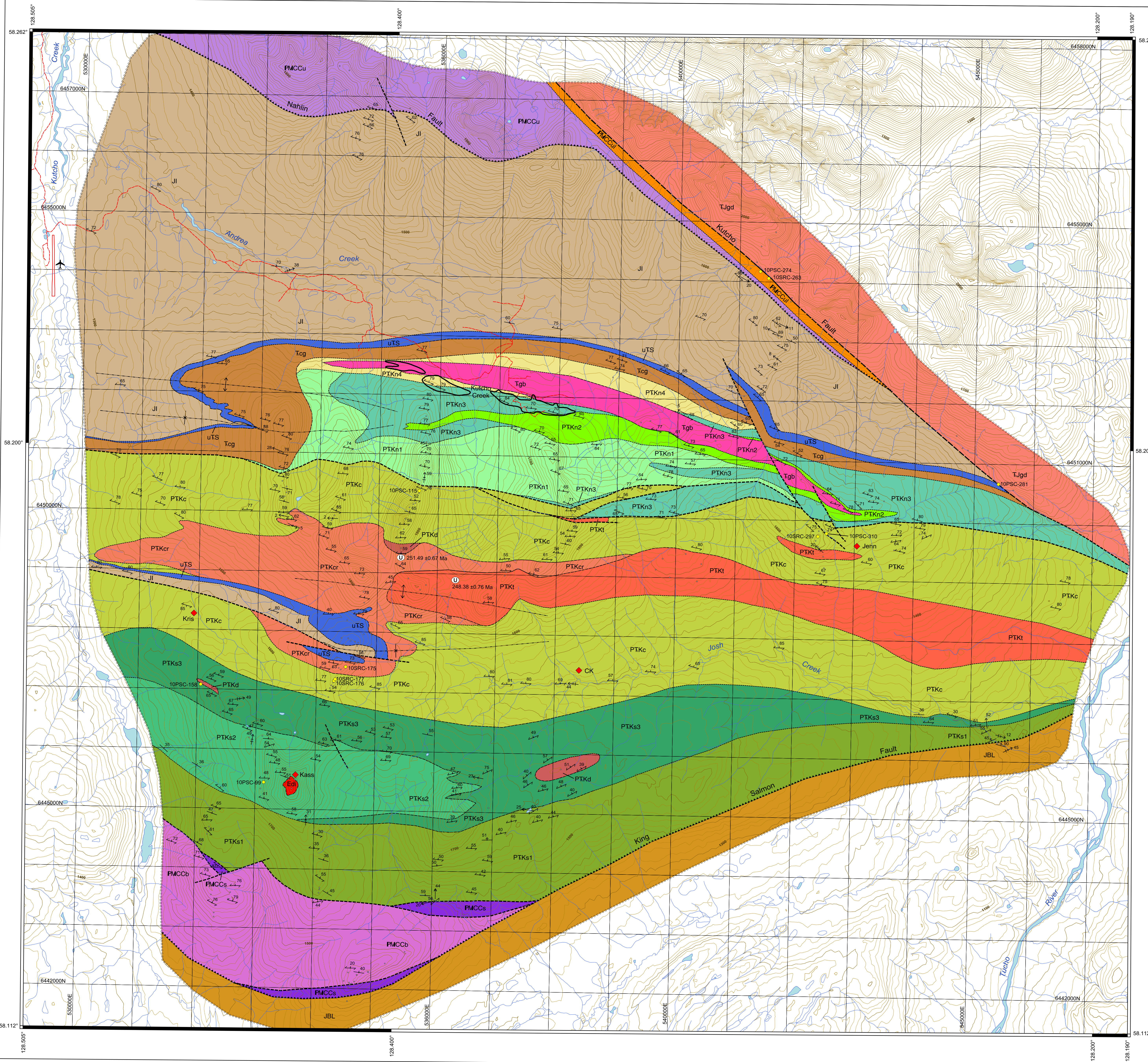


Table 1: Assay data; samples collected during 2010 field season and analysed at Acme Laboratories, Vancouver, using ICP-MS after aqua regia digestion

Sample	Eastings	Northings	Rock Type	Element																	
				Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Au	Sb	Bi	Cr	Ba	B	W	Hg
	Units			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
	Detection Limit			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		
10PSC-99	533140	644548	pyritic, silicified sericite-chlorite schist	0.4	95.1	6.8	42	<0.1	32.8	26.1	523	5.27	619	1	3.4	1.1	76	5	3	<0.1	<0.01
10PSC-115	536076	645037	pyritic quartz-chlorite-sericite schist	0.3	54.5	2.7	1991	<0.1	56.6	18.6	2487	5.85	3.3	<0.5	<0.1	174	21	<1	<0.1	0.03	
10PSC-158	532055	644706	pyritic sericite-quartz-altered lens	17.2	93.8	9.1	199	0.4	36.8	10	529	11.79	10.2	<0.5	0.3	<0.1	100	27	<1	<0.1	<0.01
10PSC-274	541344	645167	listwanite	<0.1	5.9	4.6	6	<0.1	572.7	49.2	704	2.21	1.3	1.3	0.3	<0.1	218	3	3	<0.1	<0.01
10PSC-281	545403	645061	listwanite	0.1	5.7	2	6	<0.1	2134.8	87.2	383	3.06	16.7	1.8	1	<0.1	195	66	2	<0.1	0.11
10PSC-310	542526	644974	pyritic siliceous lens in metarhyolite	3.5	9	3.2	10	0.1	4.1	1.2	105	3.95	5.8	1.8	0.2	0.2	<1	18	<1	<0.1	<0.01
10PSC-175	534485	644748	pyritic silicified metarhyolite	0.5	2.9	7.1	9	<0.1	3.4	0.8	50	1.09	1.6	2.3	0.4	<0.1	3	17	<1	<0.1	<0.01
10PSC-176	534393	644769	pyritic sericite-quartz schist	1.3	16.1	1.7	87	<0.1	1.3	6.5	838	4.7	0.9	2.1	0.1	0.1	3	2	<1	<0.1	<0.01
10PSC-177	534313	644798	pyritic sericite-quartz schist	<0.1	19.3	1.3	57	<0.1	1.5	3.7	212	1.99	0.6	2	<0.1	<0.1	4	21	<1	<0.1	<0.01
10PSC-263	541484	645404	listwanite	<0.1	6.3	1.7	6	<0.1	1560.7	60.3	700	3.69	1.3	<0.5	0.3	<0.1	350	5	<1	<0.1	<0.01
10PSC-297	542383	644972	epidote-chlorite schist with pyrrhotite-pyrite	6.4	84.3	1.4	159	0.4	42.2	26.9	1778	15.71	6.1	3.7	<0.1	1.4	87	48	<1	<0.1	<0.01

Table 2: Mineral occurrences

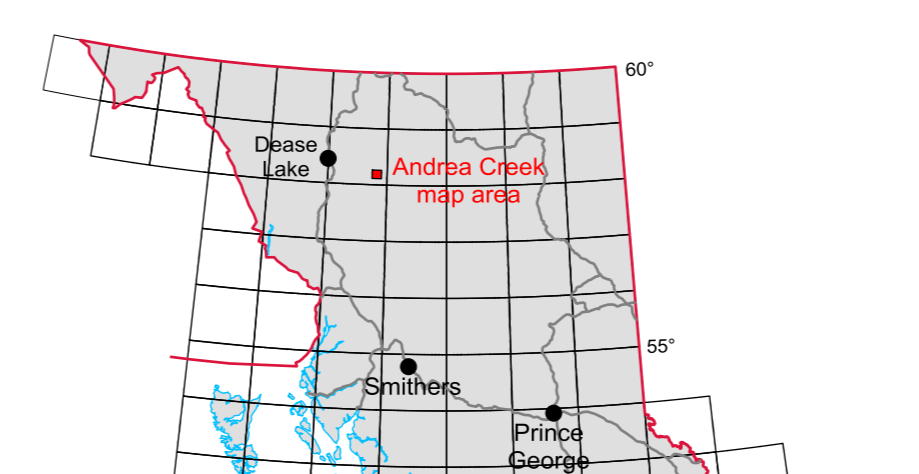
Name	MINFILE No.	Eastings	Northings	Description	Reference
CK	1041 075	538406	644715	pyrite, with traces of chalcophyllite and sphalerite, in sericite-quartz schist	Assessment Reports 6630, 20636
Jenn		543041	6449581	traces of chalcophyllite and sphalerite in pyritic sericite-quartz schist, intersected in drill hole	Assessment Reports 5138, 5641, 11323
Kass	1041 095	532652	6445582	lenses of laminated to brecciated pyrrhotite, with traces of chalcophyllite and sphalerite	Assessment Report 11314
Kris		531922	6448270	pyritic quartz-sericite schist with minor chalcophyllite; intersected in drill hole	Assessment Reports 20636, 31029
Kutcho Creek	1041 060	537594	6451842	massive sulphide lenses; pyrite, sphalerite, chalcophyllite, bornite	Bridge et al. (1986); Barrett et al. (1996)

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 Barrett, T. J., Thompson, J. F. H. and Sherlock, R. L. (1996). Stratigraphic, lithochemical and tectonic setting of the Kutcho Creek massive sulphide deposit, northern British Columbia: Exploration and Mining Geology, Volume 5, pages 309-338.
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Topographic base produced from TRIM data supplied by LandData B.C.
 Universal Transverse Mercator Projection, Zone 9, North American Datum 1983 (Canada)

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Geological interpretation base mainly on 2010 fieldwork. Additional sources of information shown below

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