



OPEN FILE 6150
GEOLOGY

TASEKO LAKES
BRITISH COLUMBIA

Cartography by C.J. Wagner,
Geological Survey of Canada, Pacific Division

Any revisions or additional geological information known to the user
should be welcomed by the Geological Survey of Canada

Scale 1:250 000 Échelle 1:250 000

Universal Transverse Mercator Projection
Projections Transversales Universelles de Mercator
Système de coordonnées géographiques universelles de Mercator

Geological compilation by P. Schanz, J.J. Mahony, and C.J. Hickson

Review by G.J. Woodworth

Authors: J.B. Mahony, C.J. Hickson, J.W. Haggart, P. Schanz,
P.B. Reed, R.L. Enkin, P. van der Heyden, and S. Izard

Geology by P. Schanz, C.J. Hickson, P.B. Reed,
J.J. Mahony, P. van der Heyden, and S. Izard

Geological compilation by P. Schanz, J.J. Mahony, and C.J. Hickson

Geographic information system by J.J. Mahony and P. van der Heyden
with additional contributions by R.M. Friedman

Map ID: 6150
Scale: 1:250,000
UTM Easting: 5073
UTM Northing: 642

Mean magnetic declination 2013: 17°43' E, decreasing 13.0' annually.
Readings vary from 17°22' to the SE corner to 18°03' at the NW corner of the map.

Table 1. Geochronology data collected within Taseko Lakes map area (NTS 92-0)

Argon-Argon (Ar-Ar) Method												
Map ID	Sample ID	UTM Easting	UTM Northing	Age (Ma)	Error ² (Ma)	Material Dated	Map Unit	Geologic Occurrence	Rock Type	Geologist	Reference	Lab
1	CS3-1090A4	511100	274420	0.8	0.6	whole rock	MPVc	Chilchew Group	alkaline augite basalt	P.B. Reed	unpublished	GSC
2	CS3-1090A4	505400	273780	1.2	0.1	whole rock	MPVc	Chilchew Group, Chiam formation	alkaline basalt	P.B. Reed	unpublished	GSC
3	CS3-1091	513900	273020	1.3	0.2	whole rock	MPVc	Chilchew Group	medicinal-grade basalt flow	P.B. Reed	unpublished	GSC
4	CS3-1093C	516100	273280	1.9	0.4	whole rock	MPVc	Chilchew Group	medium-gray olivine basalt	P.B. Reed	unpublished	GSC
5	CS3-1090A1	509500	273900	1.7	0.1	whole rock	MPVc	Chilchew Group	alkaline augite basalt	P.B. Reed	unpublished	GSC
6	CS3-1090A1	519200	274120	1.0	0.2	whole rock	MPVc	Chilchew Group	medium-gray olivine augite basalt	P.B. Reed	unpublished	GSC
7	TL-87-12	523278	285549	27.3	0.2	sericite	Evd	Liard Mountain volcanic complex	silicified and sericitized volcanics	D.A. Archibald	unpublished	Quanaa
8	TL-87-16	491241	265702	34.7	1.9	hornblende	EV	Liard Mts.	hornblende porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
9	TL-87-16	494197	262318	41.8	2.8	K-feldspar	EV	Liard Mts.	hornblende-plagioclase-biotite quartz porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
10	TL-87-7	486584	268239	43.5	0.3	biotite	Egd	Lorne Lake stock	quartz monzonite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
11	TL-87-20	473901	267769	43.9	0.6	biotite	Evd	Lorne Lake pluton	granodiorite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
12	TL-87-4	509200	267524	47.4	0.5	biotite	EV	Red Mountain volcanic complex	hornblende-plagioclase-biotite quartz porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
13	HB-91-03-26	544200	270400	48.2	0.5	whole rock	Ev	Eocene volcanic-Empire Valley	hyalite	C.J. Hickson	unpublished	GSC
14	HB-91-03-06	527500	270200	49.5	0.5	whole rock	Ev	Eocene volcanic-Empire Valley	basalt(?) all	C.J. Hickson	unpublished	GSC
15	HB-91-03-28	544200	270500	49.5	0.5	whole rock	Ev	Eocene volcanic-Empire Valley	andesite	C.J. Hickson	unpublished	GSC
16	HB-90-36-10	515700	270550	52.8	0.5	whole rock	Ev	Eocene volcanic-Empire Valley	andesite	C.J. Hickson	unpublished	GSC
17	TL-87-8	502200	267234	53.5	0.8	biotite	EV	Liard Mt. volcanic complex	hornblende-plagioclase-biotite quartz porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
18	TL-87-17	478415	266184	55.4	0.3	whole rock	uKPM	Power Creek Formation	andesite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
19	TL-87-17	478415	266184	55.0	1.9	plagioclase (interst.)	uKPM	Power Creek Formation	andesite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
21	DR-91-04-01	534200	266500	61.7	0.6	whole rock	uKPM	Eocene volcanic-Empire Valley	hornblende-plagioclase-biotite quartz porphyry	C.J. Hickson	unpublished	GSC
22	VH-126-6	484500	272000	64.5	0.7	biotite	KT17	Pitz Peak complex	mylonitic muscovite-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
23	TL-87-24	493200	266390	66.7	2.1	hornblende	uKPM	Power Creek Formation	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
24	HB-90-40-03	518500	267900	66.2	0.6	whole rock	uKPM	Dash-Crum succession (Power Creek Formation)	hyalite(?)	C.J. Hickson	unpublished	GSC
25	TL-87-17	502900	266190	67.1	0.9	biotite	KT20	Sibersong pluton	granodiorite	D.A. Archibald	Schanz et al. (1997)	Quanaa
26	TL-87-14	509212	266112	67.6	0.6	plagioclase	KT7	North Valley porphyry	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
27	HB-91-10-01	521600	270180	68.5	0.7	whole rock	uKPM	dike cutting Power Creek Formation	andesite	C.J. Hickson	unpublished	GSC
28	JM-515	435000	269200	69.9	3.2	hornblende	uKPM	dike cutting Power Creek Formation	diortite	J.A. Mason	Mason (1999)	Princeton
29	TL-87-10	430000	268200	69.3	0.3	biotite	uKPM	Power Creek Formation	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
30	TL-87-4	481304	265423	71.8	0.6	biotite	uKPM	Dickson-McClure batholith (Coast Plutonic Complex)	granodiorite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
31	DR-91-03-03	478415	266184	73.7	0.5	alkalite	uKPM	Taylor-Windfall complex	alkalite in mineralized zone	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
32	TL-87-11a	433874	266204	75.6	0.9	hornblende	uKPM	Shulaps Shalows Ultramafic Complex	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
33	TL-87-11b	533342	265405	76.5	9.8	hornblende	uKPM	dike within Shulaps Ultramafic Complex	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
34	TL-87-17	478415	266184	77.6	1.5	plagioclase	uKPM	Power Creek Formation	andesite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
35	JM-516	435000	269200	78.1	0.8	biotite	uKPM	dike cutting Power Creek Formation	diortite	J.A. Mason	Mason (1999)	Princeton
36	JM-512	434800	268575	79.0	4.1	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
37	JM-408	469700	271650	79.9	7.4	hornblende	uKPM	diortite in corona flow of Silverglade complex(?)	andesite	J.A. Mason	Mason (1999)	Princeton
38	JM-204	445700	269180	81.7	1.0	hornblende	uKPM	dike cutting Power Creek Formation	diortite	J.A. Mason	Mason (1999)	Princeton
39	TL-87-4	481304	265423	82.1	2.0	hornblende	uKPM	Dickson-McClure batholith (Coast Plutonic Complex)	granodiorite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
40	TL-87-6	478415	266184	86.3	0.3	muscovite	uKPM	Power Creek Formation	andesite	P. van der Heyden	P. van der Heyden (2005)	Princeton
41	JM-303	442100	267820	88.2	3.4	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
42	HB-91-01	435000	269200	89.0	0.9	illite	MS	illite from fault cutting Taseko Range formation	illite from fault zone	P. van der Heyden	P. van der Heyden (2005)	Princeton
43	JM-262	434500	269270	89.2	2.4	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
44	JM-262	434500	269270	89.2	2.4	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
45	HB-91-16-01	523100	270200	90.2	0.9	whole rock	mKb	Spanish Bridge Group	whole rock	P. van der Heyden	Hurt and Rodick (1994)	GSC
46	VH-126-7	407700	269000	90.7	1.9	biotite	Jgd	Mt. Wales intrusion	hornblende-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
47	JM-217	444500	269100	91.5	2.5	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
48	HP-92-26-2	476100	266820	91.8	1.7	hornblende	uKPM	dike	chloropyroxene-hornblende porphyry	D.A. Archibald	Schanz et al. (1997)	Quanaa
49	HB-90-36-09	509500	267900	92.0	0.5	whole rock	uKPM	Power Creek Formation	andesite	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
50	JM-263	434575	269270	92.7	10.2	hornblende	uKPM	Power Creek Formation	andesite	J.A. Mason	Mason (1999)	Princeton
51	JM-369	442200	267870	96.4	3.6	hornblende	uKPM	Basica Creek succession	andesite	J.A. Mason	Mason (1999)	Princeton
52	VH-126-11a	437100	270050	98.9	1.2	biotite	uKPM	Power Creek Formation	hornblende-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
53	HB-91-09-04b	539800	270700	101.0	1.1	whole rock	mKb	Spanish Bridge Group	basalt	C.J. Hickson	unpublished	GSC
54	TL-87-17-4	502912	266120	104.5	16.6	hornblende	KT7	North Valley porphyry	hornblende-plagioclase porphyry	D.A. Archibald	Archibald et al. (1990); Schanz et al. (1997)	Quanaa
55	VH-126-11b	437100	270050	104.8	1.2	biotite	uKPM	Power Creek Formation	hornblende-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
56	VH-126-9	507700	266800	111.5	1.1	hornblende	Jgd	Mt. Wales tonalite	hornblende-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
57	VH-126-11	502900	266900	122.0	4.0	hornblende	uKPM	Pitz Peak diorite	hornblende diorite	P. van der Heyden	Hurt and Rodick (1994)	GSC
58	CS3-109-10a	527500	270200	129.0	1.5	hornblende	uKPM	Power Creek Formation	hornblende diorite	P. van der Heyden	Hurt and Rodick (1994)	GSC
59	TL-88-23	525900	265470	200.0	10.7	hornblende	Pan	Shulaps ultramafic (hooker in Shulaps serpentine instillation)	amphibolite	D.A. Archibald	Archibald et al. (1991); Schanz et al. (1997)	Quanaa

Uranium-Lead (U-Pb) Method												
Map ID	Sample ID	UTM Easting	UTM Northing	Age (Ma)	Error ² (Ma)	Material Dated	Map Unit	Geologic Occurrence	Rock Type	Geologist	Reference	Lab
161	MONS-2	507200	272150	82.2	1.0	zircon	Ev	Mt. Wales pluton	granodiorite	R.M. Friedman	Friedman and Armstrong (1989)	UBC
162	92SC-4	444500	269200	21.0	13.1	zircon	Ev	Franklin River pluton	chloropyroxene-hornblende porphyry	P. van der Heyden	unpublished	GSC
163	VH-126-6	484500	272000	82.3	0.6	zircon	KT17	mylonitic phase of biotite tonalite	biotite tonalite	P. van der Heyden	unpublished	GSC
164	37JM98	523200	266902	82.2	0.2	zircon	uKPM	Power Creek Formation	legillite luff	J.J. Mahony	Mahony et al. (1999)	GSC
165	92RS-28	427100	270217	89.0	3.0	zircon	Ev	Power Creek Formation	zircon (epitaxial)	P. Schanz	Schanz et al. (2003)	GSC
166	PRCQ-28-4	476700	266438	93.4	0.1	zircon	Kot	Gravel Mts. stock, possible Power Creek subvolcanic	zircon	P. Schanz	unpublished	UBC
169	98SGC-1	468290	266480	101.5	0.2	zircon	KTP	Gravel Cabin pluton	hornblende diorite	S. Izard	unpublished	UBC
170	98SGC-1	464510	266400	102.0	2.0	zircon	KTP	Mount Phipps pluton	volcanic plug	S. Izard	unpublished	UBC
171	98SGC-2	458200	266210	102.8	2.5	zircon	KTP	Mt. Wales intrusion	zircon	S. Izard	unpublished	UBC
172	98SGC-2	457510	266450	103.8	0.5	zircon	KTP	Mount McCord batholith	granodiorite	S. Izard	unpublished	UBC
173	98JBM97	540337	270700	104.1	0.3	zircon	mKb	Spanish Bridge Group	hyalite	J.J. Mahony	Mahony et al. (2003)	UBC
174	HB-90-33-01	522500	274410	104.5	0.5	zircon	uKPM	Alton Area gneiss	hornblende monzonite	C.J. Hickson	unpublished	GSC
175	HB-90-36-09	519100	267830	105.9	0.5	zircon	mKb	Alban volcanic rocks, unconfomable to pluton	granodiorite and feldspar-chrycite mylonite flow	C.J. Hickson	unpublished	GSC
176	HB-91-07-05	520500	266600	109.0	5.0	zircon	uKPM	Little Basin pluton, granodiorite phase	biotite granodiorite	C.J. Hickson	unpublished	GSC
177	VH-126	506700	270030	110.8	1.2	zircon	uKPM	Mt. Wales intrusion	hornblende-biotite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
178	VH-877	507700	266800	111.6	0.5	zircon	Jgd	Mt. Wales tonalite	weakly foliated biotite-hornblende tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
179	VH-29-1	509900	266900	116.7	1.0	zircon	Jgd	Pitz Peak diorite	radiolarite to orange-gladite	P. van der Heyden	Hurt and Rodick (1994)	GSC
180	VH-419	502511	266465	118.0	1.0	zircon	uKPM	Pitz Peak hornblende quartz diorite	hornblende quartz diorite	P. van der Heyden	Hurt and Rodick (1994)	GSC
181	Pitz Peak	501987	270387	146.5	2.0	zircon	Jgd	Pitz Peak tonalite	tonalite	R.M. Friedman	Friedman and Armstrong (1989)	UBC
182	13A-9W6	524900	266800	146.7	0.8	zircon	uKPM	boudier in conglomerate	diortite	J.J. Mahony	Mahony et al. (1999)	GSC
183	VH-87	507700	266900	147.0	0.5	zircon	uKPM	basalt	basalt	P. van der Heyden	Hurt and Rodick (1994)	GSC
184	VH-24	503700	266900	147.5	0.5	zircon	uKPM	Mt. Wales tonalite, Pitz Peak complex	radiolarite to orange-gladite tonalite	P. van der Heyden	Hurt and Rodick (1994)	GSC
185	VH-80	510000	266950	151.1	1.0	zircon	MWV	post-hornblende diorite within Pitz Peak complex	radiolarite	P. van der Heyden	unpublished	GSC
186	VH-41	506600	266975	164.9	1.0	zircon	MWV	metabasites of Pitz Peak complex	garnetiferous biotite, foliated luff, breccia	P. van der Heyden	unpublished	GSC
187	CS2-12R	538790	273680	241.5	0.5	zircon	MWV	Farsell pluton	quartz diorite	P.B. Reed	unpublished	GSC
188	98SGC-3	454200	266370	251.0	16.0	zircon	uKPM	diortite	diortite	S. Izard	unpublished	GSC
189	CS2-22R	527500	270600	264.9	1.2	zircon	uKPM	Winglases Assemblage	biotite-hornblende quartz monzonite	P.B. Reed	unpublished	GSC
190	FAR-1	52010	274447	268.0	5.0	zircon	uKPM	Winglases Assemblage	biotite-hornblende quartz monzonite	R.M. Friedman	Friedman and van der Heyden (1992)	UBC
191	CSW-12R	520900	273200	269.0	2.0	zircon	uKPM					