OF89-25 1of2

Province of British Columbia

Ministry of Energy, Mines and Petroleum Resources

MINERAL RESOURCES DIVISION
GEOLOGICAL SURVEY BRANCH

OPEN FILE MAP 1989-25 (SHEET 1 OF 2)

GEOLOGY OF THE TASEKO LAKES AREA

NTS 92O/3,4,5,6.

GRAEME MCLAREN AND JONATHAN ROUSE

SCALE 1:50 000

LEGEND

LAYERED ROCKS

QUATERNARY

Q	*UNCONSOLIDATED GLACIAL TILL AND ALLUVIUM*

UPPER CRETACEOUS

POWELL CREEK FORMATION

UKpcb	*BEDDED LAHARIC ANDESITIC BRECCIA AND EPICLASTIC SEDIMENTS.*
UKpc	*ANDESITIC BRECCIA, LAPILLI TUFF, CRYSTAL TUFF AND ASH TUFF; MINOR ANDESITIC TO BASALTIC FLOWS.*

SILVER QUICK FORMATION

UKsq	*PEBBLE TO COBBLE POLYMICT CONGLOMERATES, SANDSTONES AND ARGILLITE; MINOR ANDESITIC FLOWS.*

LOWER CRETACEOUS

TAYLOR CREEK GROUP

LKtcv	*RHYOLITIC TO BASALTIC TUFFS AND FLOWS; BLACK ARGILLITE, SILTSTONE AND SANDSTONE.*
LKtcs	*ARGILLITE, SILTSTONE, SANDSTONE; MINOR TUFFS.*

RELAY MOUNTAIN GROUP

LKrm	*BLACK ARGILLITE, SILTSTONE, SANDSTONE, MINOR ANDESITIC TUFFS AND FLOWS.*
LKv	*PURPLE ANDESITIC PYROCLASTICS AND BRECCIAS; MINOR FLOWS*

INTRUSIVE ROCKS

AGES UNCERTAIN

A	*HORNBLENDE DIORITE*
B	*COAST PLUTONIC COMPLEX: GRANODIORITE, QUARTZ DIORITE.*
C	*FELSITES: FELDSPAR AND BIOTITE FELDSPAR PORPHYRY*
D	*PLAGIOCLASE HORNBLENDE PORPHYRY*
E	*BEECE CREEK PLUTON: QUARTZ MONZONITE TO GRANODIORITE*
F	*QUARTZ EYE FELSITE DYKES AND STOCKS*

SYMBOLS

- Geological boundaries (defined, approximate, assumed)
- Unconformity (defined, assumed)
- Bedding (horizontal, inclined, vertical)
- Bedding with tops observed (inclined, vertical)
- Dyke
- Syncline axis
- Faults (defined, approximate)

SELECTED REFERENCES

Glover, J.K. and Schiarizza, P. (1987): Geology and Mineral Potential of the Warner Pass Map Sheet (92O/3); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1986, Paper 1987-1, pages 157-169.

Jeletzky, J.A. and Tipper, H.W. (1968): Upper Jurassic and Cretaceous Rocks of Taseko Lakes Map Area and their Bearing on the Geological History of Southwestern British Columbia; *Geological Survey of Canada*, Paper 67-54.

McLaren, G.P. (1986): Geology and Mineral Potential of the Chilko-Taseko Lakes Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1985, Paper 1986-1, pages 265-274.

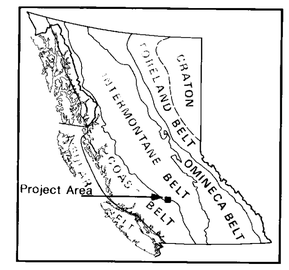
McLaren, G.P. and Rouse, J.N. (1989); Geology and Mineral Occurrences in the Vicinity of Taseko Lakes (92O/3,4,5,6); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Geological Fieldwork 1988, Paper 1989-1, pages 153-158.
(*this paper describes the fieldwork illustrated on this Open File map)

Tipper, H.W. (1978): Taseko Lakes Map Area (92O); *Geological Survey of Canada*, Open File 534.

THIS MAP INCLUDES INFORMATION FROM:

Glover, J.K. (1987): Geology of the Warner Pass Area (92O/3); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987/3.

McLaren, G.P. (1987): Geology and Lithogeochemistry of the Chilko-Taseko Lakes Area (92O/4,5; 92J/13; 92K/16; 92N/1); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987-12.



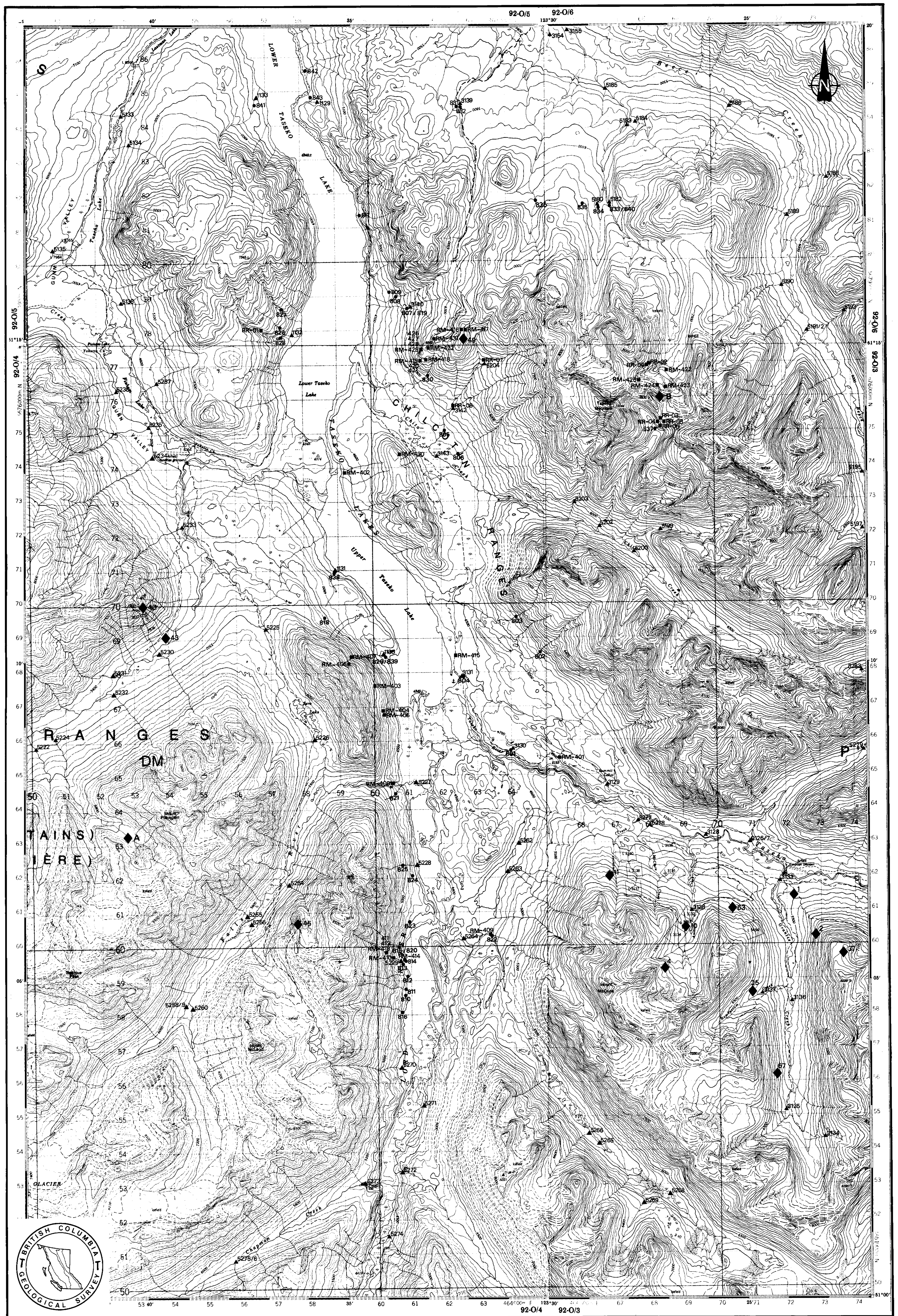
Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Miles

Metres 1000 0 1000 2000 3000 4000 Mètres

BRITISH COLUMBIA GEOLOGICAL SURVEY

OF 89-25 2002



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION
GEOLOGICAL SURVEY BRANCH

OPEN FILE MAP 1989-25 (SHEET 2 OF 2)

GEOCHEMISTRY OF THE TASEKO LAKES AREA

NTS 92O/3,4,5,6.

GRAEME MCLAREN AND JONATHAN ROUSE

SCALE 1:50 000

SYMBOLS

1988 Stream Sediment Sample Locations ●
1979 Regional Geochemical Survey (stream sediment location) △
1988 Lithogeochemical Sample Locations ■
Mineral Occurrences ◆

● 1988 Stream Sediment Data

SAMPLE NUMBER	Au PPB	Ag PPM	As PPM	Sb PPM	Bi PPM	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ni PPM	Co PPM	Mn PPM	Fe %	V PPM	Ba PPM	Hg PPB
801	3	0.1	6.4	0.6	0.3	1	19	7	61	20	11	308	3.02	75	55	50
802	1	0.1	6.6	0.6	0.4	1	24	9	72	25	11	518	3.52	96	39	20
803	3	0.2	5.4	0.9	0.4	1	21	6	49	15	8	372	2.21	71	37	40
804	2	0.2	8.1	0.8	0.2	1	17	11	60	21	12	1242	3.15	77	56	290
805	2	0.1	11.4	0.7	0.3	1	42	12	97	32	14	675	4.39	70	91	60
806	2	0.1	9.6	0.8	0.3	1	29	9	65	24	11	523	3.47	68	57	20
807	2	0.1	11.9	1	0.7	3	142	6	69	36	16	801	3.45	57	76	50
808	1	0.2	9.1	0.7	0.5	1	56	8	75	23	10	501	3.33	58	88	50
809	1	0.1	12.1	1	0.6	1	34	7	56	20	9	517	2.66	62	86	40
810	1	0.1	6.1	0.3	0.3	2	28	9	40	7	7	276	2.17	39	40	10
811	1	0.2	5.8	0.8	0.8	7	48	6	91	9	9	445	3.11	57	62	20
812	2	1.2	5.7	0.3	0.7	4	64	14	113	12	12	540	3.23	55	54	10
813	7	0.1	4.1	0.5	1.6	18	206	13	75	17	20	620	3.42	41	83	5
814	4	0.2	39.4	1.6	1	8	136	16	121	38	24	792	5.24	57	76	20
815	10	0.3	47.6	1.2	1.1	3	146	20	143	83	39	857	6.36	68	67	10
816	1	0.1	6.4	0.3	0.4	2	28	3	51	10	11	430	3.16	60	40	10
817	1	0.1	3	0.4	0.4	1	31	8	66	22	9	512	3.06	85	35	40
818	1	0.1	64.1	0.9	0.4	1	31	7	78	12	12	696	3.75	78	80	30
821	1	0.1	28.9	1.4	0.6	2	22	2	39	14	8	370	1.78	29	31	30
822	8	0.1	2.2	0.3	0.2	1	15	2	19	7	3	151	2.07	44	18	5
823	6	0.3	38.8	0.9	0.6	2	82	24	125	56	22	695	5.16	65	55	20
824	6	0.2	109.3	0.5	0.4	1	23	6	40	10	8	301	2.43	47	29	5
825	1	0.5	28	2.1	0.7	1	46	5	60	41	10	520	1.72	29	36	30
826	2	0.1	6.5	0.7	0.4	1	31	2	54	18	8	426	2.47	60	46	30
827	1	0.1	2.9	0.4	0.3	1	44	4	74	33	12	625	3.27	94	41	10
828	1	0.1	12	0.6	0.5	1	48	14	94	29	26	711	4.72	77	403	40
829	4	0.1	62.7	0.9	0.4	1	21	7	47	15	9	789	2.64	66	50	20
830	31	0.2	26	0.7	0.5	1	674	18	210	104	70	1158	2.95	50	95	60
831	2	0.1	2.7	0.5	0.3	1	31	8	58	16	11	967	2.81	76	78	30
832	5	0.1	7.2	0.5	0.4	1	47	10	78	24	11	623	3.3	56	85	20
833	3	0.1	17.9	0.8	0.3	1	35	10	77	14	9	376	3.02	75	41	5
834	3	0.2	16.2	0.5	0.4	1	65	20	141	40	20	1103	4.86	92	63	20
835	1	0.2	16.8	0.5	0.4	1	23	10	86	19	10	734	2.92	55	87	20
836	11	0.2	9	0.5	0.5	1	40	9	93	28	12	665	4.12	66	49	10
837	21	0.7	126.3	1.7	0.7	1	213	17	145	17	20	646	3.95	67	49	30
838	1	0.2	12.1	0.5	0.1	1	25	6	49	16	7	368	3.3	87	46	30
841	1	0.1	2.9	0.3	0.1	1	31	8	75	25	9	503	4.19	131	58	5
842	1	0.2	4.5	0.3	0.1	1	79	7	58	23	10	566	3.78	104	73	90
843	1	0.2	2.6	0.6	0.2	1	30	5	39	12	7	555	2.63	63	60	70

ANALYTICAL METHODS:

Ag, Mo, Cu, Pb, Zn, Ni, Co, Mn, Fe, V, Ba -

ICP analysis on a 0.5 gram sample; the acid leach used is partial for Mn, Fe and Ba.

Au: acid leach and atomic absorption analysis from a 10 gram sample.

Hg: flameless atomic absorption analysis.

As, Sb, Bi,: hydride generation ICP analysis.

■ 1988 Lithogeochemical Sample Data

SAMPLE	AU ppb	AG ppm	CU ppm	PB ppm	ZN ppm	CO ppm	NI ppm	MO ppm	HG ppb	AS ppm	SB ppm
RM-401	2	<.5	41	17	9	25	31	<7	240	61	2
RM-402	2	<.5	21	5	60	18	32	<7	162	15	<.5
RM-403	1	<.5	53	13	80	41	25	<7	<10	5	<.5
RM-404	129	22	26	.46%	120	21	3	<7	472	850	60
RM-405	1	<.5	2	10	8	13	2	<7	18	46	2
RM-406	1	<.5	73	9	88	26	15	<7	17	7	.5
RM-407	2	<.5	82	17	63	30	11	<7	40	10	.7
RM-408	18	<.5	11	50	98	28	2	<7	15	816	4
RM-409	2	<.5	5	26	98	21	23	<7	17	25	6
RM-410	2	<.5	90	9	69	22	19	<7	17	8	1
RM-411	2	<.5	40	7	25	42	12	<7	16	2	<.5
RM-412	26	<.5	42	9	36	47	6	<7	17	7	<.5
RM-413	13	2.0	21	52	12	39	5	100	20	4	<.5
RM-414	2	<.5	7	9	15	48	5	10	16	1	<.5
RM-415	2	<.5	38	9	43	25	25	<7	20	12	<.5
RM-416	22	<.5	520	7	26	27	21	<7	96	13	1
RM-417	17	.6	.24%	15	26	41	49	77	49	22	.9
RM-418	2	<.5	17	9	35	6	11	<7	147	4	<.5
RM-419	2	<.5	39	4	31	36	33	<7	157	28	3
RM-420	4	<.5	174	9	68	27	23	<7	30	<1	<.5
RM-421	11	<.5	50	10	190	28	34	<7	30	9	<.5
RM-422	7640	10	.12%	57	.64%	18	10	<7	47	4.15%	106
RM-423	23480	16	.14%	220	1.99%	19	14	<7	100	9.42%	203
RM-424	9	<.5	156	7	350	27	6	<7	20	93	3
RM-425	79	<.5	480	9	47	27	10	<7	<10	28	.8
RM-426	4	<.5	152	12	39	28	61	53	186	5	<.5
RM-427	6	<.5	297	5	18	18	15	27	186	14	<.5
RM-428	4	<.5	291	9	30	23	21	<7	32	15	<.5
RM-429	6	<.5	586	8	36	30	42	<7	200	3	1
RM-430	1	<.5	53	10	72	20	50	<7	80	6	<.5
RM-431	4	<.5	340	10	21	23	22	7	57	5	<.5
RM-432	5	<.5	210	10	16	25	<2	<7	52	7	<.5
RR-01	8	<.5	37	20	31	17	9	<7	190	24	.7
RR-02	5	<.5	74	15	56	25	34	<7	10	10	.5
RR-03	18	<.5	82	22	44	20	5	<7	<10	68	11
RR-04	9	<.5	45	28	42	16	4	<7	20	93	26
RR-05	170	.6	22	33	23	32	4	10	73	356	29
RR-06	9	<.5	410	22	48	28	4	50	12	60	10
RR-07	1	<.5	5	5	10	3	2	<7	10	3	<.5
RR-08	1	<.5	21	31	45	13	2	<7	193	8	.9
RR-09	1	<.5	115	10	56	22	8	<7	20	21	.5

▲ 1979 Regional Geochemical Survey Data

Sample	ZN ppm	CU ppm	PB ppm	NI ppm	CO ppm	AG ppm	AS ppm	MO ppm	W ppm	HG ppb
791129	28	19	2	9	6	0.1	1.0	1	1	120
791130	22	13	2	7	5	0.1	46.0	8	1	70
791131	24	25	1	10	6	0.1	2.5	1	1	80
791132	69	39	5	27	22	0.1	7.0	1	1	80
791133	36	19	1	13	7	0.1	0.5	1	1	70
793126	60	22	4	17	13	0.1	10.0	1	1	220
793127	62	22	5	17	13	0.1	11.0	1	1	210
793128	46	23	2	15	11	0.1	8.0	1	1	150
793129	30	9	1	11	8	0.1	2.0	1	1	90
793130	45	18	1	18	13	0.1	5.0	1	1	270
793131	43	15	2	16	11	0.1	5.0	1	1	250
793133	78	76	50	8	7	0.2	26.0	2	4	160
793134	68	1100	3	9	7	1.0	2.5	80	45	190
793135	91	19	85	8	9	1.0	65.0	1	1	130
793136	102	91	62	9	9	0.6	28.0	3	2	90
793137	80	89	44	10	9	1.2	47.0	4	9	100
793138	33	84	3	12	16	0.1	12.0	3	2	270
793139	64	43	3	21	12	0.1	5.0	1	1	210
793140	64	156	2	34	22	0.1	12.0	1	2	260
793142	82	44	3	29	16	0.1	10.0	1	1	360
793143	78	31	2	33	15	0.1	6.5	1	1	380
793154	64	28	1	24	11	0.1	5.5	1	1	150
793155	45	22	3	13	7	0.1	10.0	1	1	90
795133	44	20	2	15	4	0.1	6.0	1	1	70
795134	59	28	1	17	7	0.2	2.0	1	1	70
795135	66	32	1	17	10	0.1	1.0	1	1	60
795136	72	31	2	34	15	0.1	4.5	1	1	90
795180	100	49	3	29	18	0.1	8.0	2	1	80
795182	72	38	4	14	10	0.1	22.0	1	1	80
795183	90	49	5	29	16	0.1	14.0	2	1	60
795184	38	11	4	12	6	0.1	8.5	1	1	70
795185	74	36	3	28	14	0.1	10.0	1	1	80
795186	48	32	3	19	7	0.1	27.0	1	1	60
795188	40	20	4	9	5	0.1	15.0	1	1	60
795189	42	30	7	17	6	0.1	44.0	1	1	60
795190	32	15	4	8	4	0.1	6.0	1	5	70
795191	72	81	8	16	12	0.1	14.0	4	1	80
795192	77	86	8	16	13	0.2	15.0	4	1	60
795193	68	39	14	14	9	0.1	26.0	1	1	70
795195	51	32	11	4	4	0.1	10.0	1	1	60
795197	77	36	6	30	12	0.1	12.0	1	1	90
795199	86	53	7	34	15	0.1	18.0	1	1	80

Sample	ZN ppm	CU ppm	PB ppm	NI ppm	CO ppm	AG ppm	AS ppm	MO ppm	W ppm	HG ppb
795200	49	19	1	21	11	0.1	3.5	1	1	50
795202	66	124	7	22	13	0.2	60.0	1	4	110
795203	72	47	1	23	13	0.1	15.0	1	2	60
795204	56	28	2	24	11	0.1	3.5	1	1	70
795222	12	8	1	2	2	0.1	2.0	1	1	60
795224	12	13	1	4	3	0.1	4.0	1	1	40
795225	80	38	4	15	9	0.1	41.0	1	1	160
795226	72	34	6	44	16	0.1	10.0	1	1	60
795227	12	30	1	3	3	0.1	2.5	1	4	60
795228	58	23	3	37	6	0.1	3.0	1	1	90
795229	59	172	5	16	23	0.1	2.0	7	4	70
795230	54	30	3	29	13	0.1	12.0	1	1	130
795231	53	14	1	14	18	0.1	7.5	1	1	40
795232	62	38	5	38	14	0.1	13.0	1	1	80
795233	61	59	2	14	16	0.1	40.0	1	1	90
795234	59	45	1	15	16	0.1	12.0	1	1	710
795235	86	27	2	24	13	0.1	17.0	1	2	100
795237	98	76	3	18	8	0.1	10.0	1	1	210
795238	47	10	1	12	6	0.1	14.0	1	1	70
795254	94	65	13	32	18	0.1	18.0	1	1	60
795255	61	38	9	17	13	0.1	45.0	1	1	110
795256	24	9	1	2	3	0.1	0.5	1	1	40
795258	18	38	1	3	6	0.1	3.5	1	1	50
795259	18	43	1	3	5	0.1	3.0	1	2	40
795260	12	15	1	3	3	0.1	0.5	1	1	30
795262	87	42	2	33	27	0.1	8.0	4	1	150
795263	36	29	2	11	11	0.1	4.5	1	3	70
795264	18	12	1	6	3	0.1	1.0	1	1	40
795265	16	11	1	4	4	0.1	0.5	1	1	40
795266	46	39	5	17	10	0.1	1.0	1	1	40
795268	15	19	1	5	6	0.1	0.5	1	1	40
795269	20	9	1	5	4	0.1	0.5	1	1	40
795270	17	14	1	2	4	0.1	0.5	1	1	30
795271	112	82	7	14	10	0.4	3.0	7	2	40
795272	12	15	1	4	3	0.2	0.5	1	1	30
795273	16	19	1	3	5	0.1	1.0	1	1	20
795274	59	33	2	20	13	0.4	1.5	1	1	50
795275	9	21	1	3	4	0.1	0.5	1	2	40
795276	9	27	1	3	7	0.1	0.5	1	2	30
795277	24	65	4	15	9	0.1	13.0	2	1	40
795278	20	31	2	7	3	0.1	14.0	4	1	70
795279	59	16	4	15	9	0.1	7.5	1	1	70

Zn - Zinc by atomic absorbtion spectroscopy (PPM)
CU - Copper by atomic absorption spectroscopy (PPM)
PB - Lead by atomic absorption spectroscopy (PPM)
NI - Nickel by atomic absorption spectroscopy (PPM)
CO - Cobalt by atomic absorption spectroscopy (PPM)
AG - Silver by atomic absorption spectroscopy (PPM)
AS - Arsenic by flameless spectroscopy (PPM)
MO - Molybdenum by atomic absorption spectroscopy (PPM)
W - Tungsten by colorimetry using zinc dithiol (PPM)
HG - Mercury by flameless spectroscopy (PPB)

◆ MINERAL OCCURRENCES

MINFILE Number	Name(s)	Commodities
92O-1	Mohawk, Taseko	Cu, Mo, Au, Ag, Zn, Pb
92O-2	Motherlode	Cu, Au, Ag
92O-4	Spokane	Cu, Ag, Au
92O-10	Limonite,	Fe
92O-11	Chilcotin	Fe
92O-25	Rowbottom	Cu, Mo
92O-37	Top	Mo, Cu
92O-43	Charlie, Tchaikazan	Cu, Mo, Au, Ag
92O-45	Pellaire, Hi Do	Au, Ag, Cu
92O-49	Banner, Chita	Cu, Mo
92O-63	Teek (Spokane)	Cu
92O-67	Massena	Au, Ag
A*	Twin Creek	As, Cu, Au
B*	Taseko Mountain	Au, As, Pb, Zn

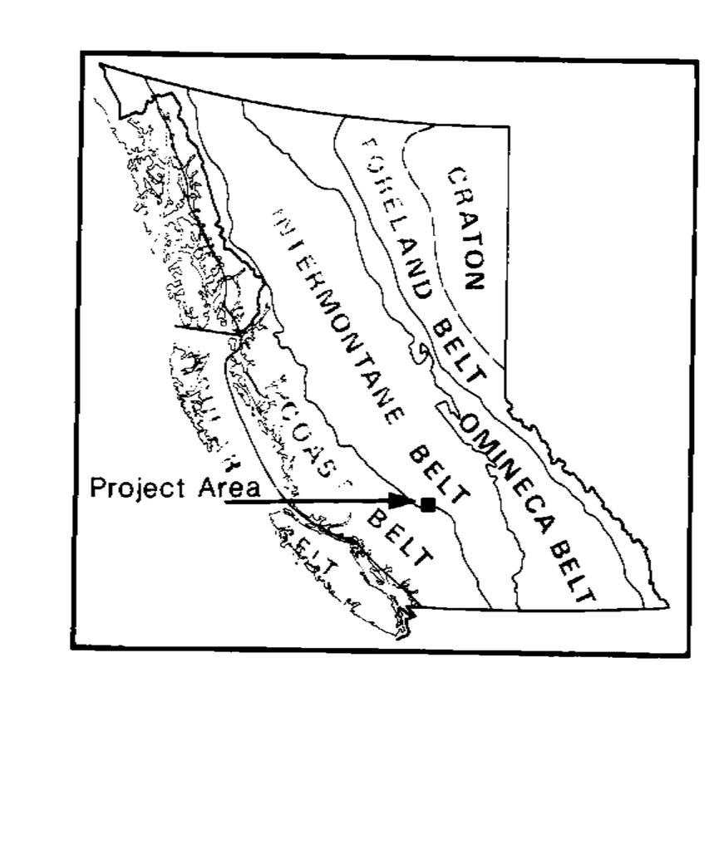
* no MINFILE number

FURTHER GEOCHEMICAL DATA:

British Columbia Ministry of Energy, Mines and Petroleum Resources, (1980): Regional Geochemical Survey, Taseko Lakes Map Area (92O), RGS-3-1979.

McLaren, G.P. (1986): Stream Sediment Geochemistry of the Chilko-Taseko Lakes Area, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1986-6. (this open file contains 15 maps plus notes displaying the results of a stream sediment survey conducted between Chilko and the Taseko Lakes. Data compiled in Open File 1989-25 completes this survey for map sheet 92O/4).

McLaren, G.P. (1987): Geochemistry West of Chilko Lake, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1987-14 (17 maps plus notes).



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