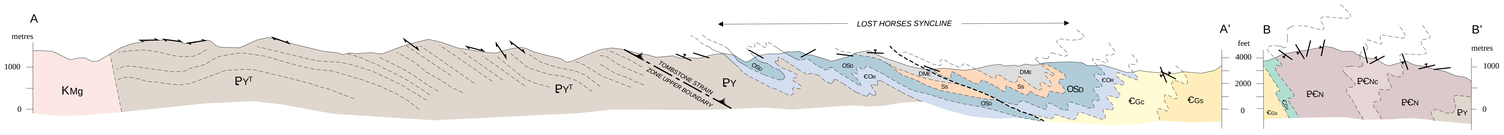
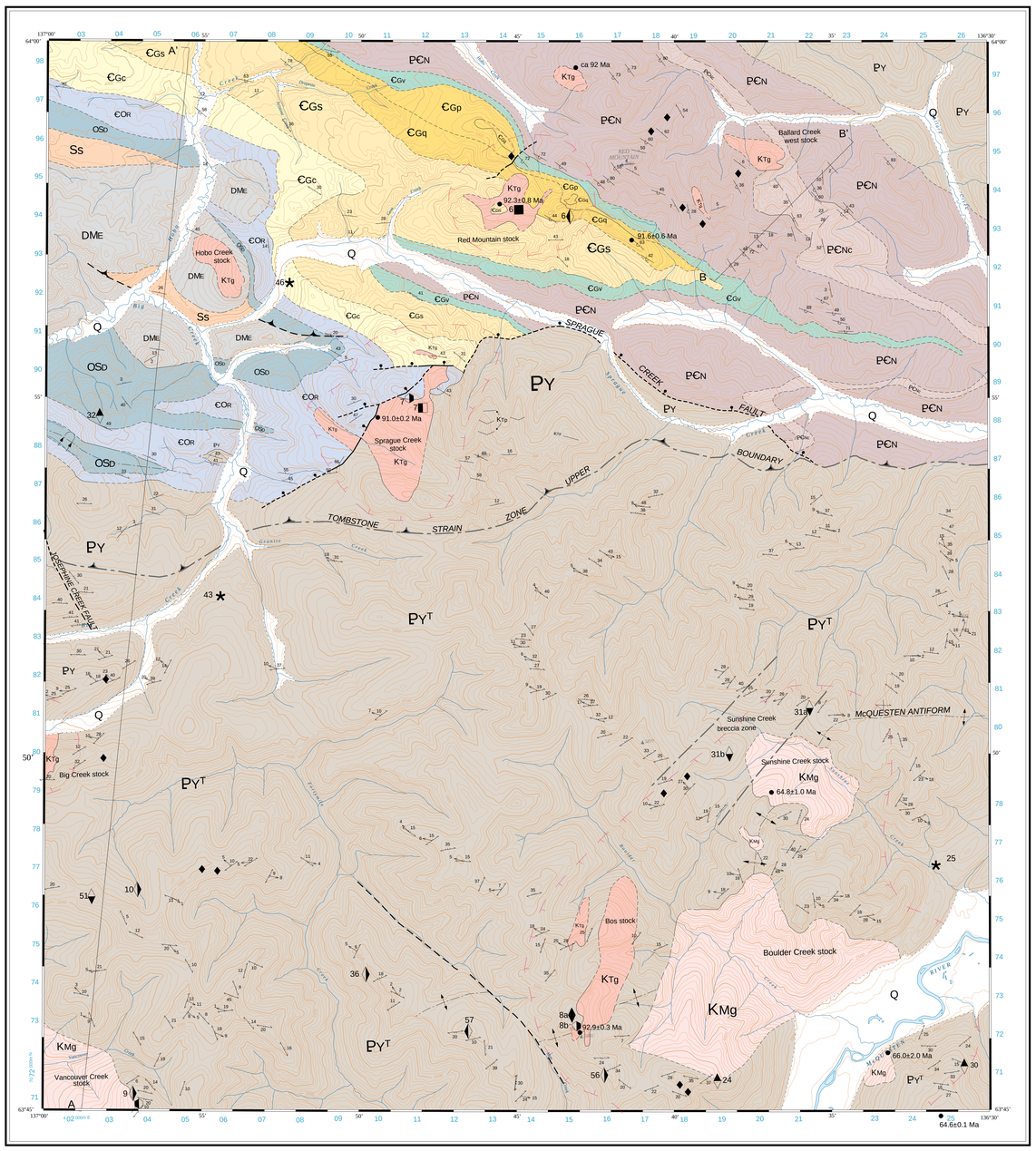


Canada



LEGEND

QUATERNARY

Q — Alluvium, colluvium and glacial deposits

LATE CRETACEOUS

McQUESTEN INTRUSIONS[1]

KMg — Medium- to coarse-grained, locally porphyritic (locally potassium feldspar megacrystic) biotite-muscovite granite and quartz monzonite

EARLY LATE CRETACEOUS

TOMBSTONE INTRUSIONS[2]

KTg — Medium- to coarse grained, locally porphyritic biotite ± hornblende, clino-pyroxene granite, quartz monzonite and granodiorite

DEVONIAN-MISSISSIPPIAN

EARN GROUP

DME — Grey to black shale/phyllite, siltstone, sandstone, and chert-pebble conglomerate

unconformity

ORDOVICIAN-SILURIAN

ROAD RIVER GROUP

SS — Steel Formation[3] : beige-orange, massive to well laminated, locally ripple cross-laminated, locally dolomitic siltstone and mudstone; common feeding traces and mottling due to bioturbation

OSD — Duo Lake Formation[3] : grey to black shale and thin-bedded chert

UPPER CAMBRIAN-ORDOVICIAN

€OR — Rabbitkettle Formation[3] : laterally persistent calcareous phyllite, thin- to medium-bedded marble/dolomitic marble, and rare limestone-pebble conglomerate; cherty calcisilicate rock near intrusions.

unconformity

CAMBRIAN

€GC — Gull Lake Formation[3] :Tan- to brown-weathering thinly-bedded calcareous siltstone, sandstone, shale and limestone

€GS — Gull Lake Formation[3] : Greenish-grey phyllite with mm-scale siltstone laminae, uncommon sandstone and pebbly sandstone, and greenish-grey chert

€Gq — Gull Lake Formation[3] : Light to dark grey, locally pebbly quartzite (siliceous meta-sandstone) and dark grey phyllite (€gp)

€Gv — Gull Lake Formation[3] : Dark green massive to fragmental mafic meta-volcanic and volcaniclastic rocks

UPPER PROTEROZOIC-LOWER CAMBRIAN

HYLAND GROUP[3,4]

PЄN — Narchilla Formation[3] : maroon and green phyllite with cm-scale green-grey siltstone laminations, grey to green meta-sandstone and pebbly meta-sandstone (grit), and sandy limestone

PЄNc — Sandy limestone and limestone-breccia-rich member

PY — Yusezyu Formation[3,4] : foliated tan to grey meta-sandstone, muscovite-chlorite phyllite, blue-grey quartz and chalky white feldspar pebbly meta-sandstone (grit) pebble meta-conglomerate and uncommon sandy marble (€cc). Purplish/ maroonish siliceous pelitic hornfels and calcsilicate hornfels near intrusions

TOMBSTONE STRAIN ZONE UPPER BOUNDARY

PYT — Yusezyu Formation[3,4] (in Tombstone Strain Zone): prominently foliated and lineated muscovite-chlorite phyllite, quartzofeldspathic and micaceous psammite, gritty psammite, rare calc-silicate rock and marble (€cc)

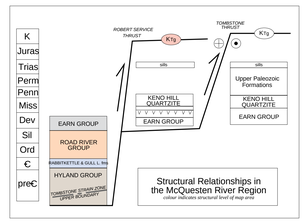
1 64-67 Ma U-Pb zircon and/or monazite age determinations by Jim Mortensen, University of British Columbia
2 91-94 Ma U-Pb zircon and/or titanite age determinations by Jim Mortensen, University of British Columbia
3 Formation names are those defined or used by Gordey and Anderson (1993) for Nahanni map area (105 I)
4 Yusezyu and Narchilla formations are intruded by intermediate to mafic sills and dykes of unknown age that are too small to portray at the scale of mapping

SYMBOLS

Geological contact (defined, approximate, assumed and/or covered)
Fault (defined, approximate, assumed and/or covered)
Thrust fault- teeth on hanging wall (defined, approximate, assumed and/or covered.)
Normal fault- circle on downthrown side (defined, approximate, assumed and/or covered.)
Fold axial surface trace (upright anticline, syncline, overturned syncline, anticline)
Limit of outcrop
Limit of hornfels
Bedding (known upright, overturned, unknown)
Foliation (one tick indicates earliest phase of deformation, two or more indicates subsequent phase(s) of deformation) and mineral or clast elongation lineation
Breccia, breccia zone
U-Pb age determination sample location and age — 69.3±0.7 Ma
Line of cross-section — A A'
Apparent dip of bedding; bedding, top indicated; foliation in cross-section
Foliation form lines in cross-section
Summer roads

MINERAL OCCURRENCES
Yukon Minfile

Intrusion-hosted:		
115P 006	HOBO (RED MOUNTAIN)	Au
115P 007	SPRAGUE (MAHTIN)	Au, Ag, Cu, Sb, Sn
Skarn:		
115P 007	SPRAGUE (MAHTIN)	Au, Ag, Cu, Sb, Sn
115P 008a	EAST RIDGE (TEE)	Sn, Au, Zn, Cu, Ag
115P 008b	EAST RIDGE (SNARK)	Au, W, Sn, Cu, Zn, Ag
115P 009	LUGDUSH	Sn
115P 030	OLIVER	Sn, Ag, Zn
Vein, breccia:		
115P 006	HOBO (RED MOUNTAIN)	Au, Ag, Cu
115P 008a	EAST RIDGE (TEE)	Au, Ag, Pb, Zn, Sn
115P 009	LUGDUSH	Ag, Pb
115P 010	RIDGE (STERLING)	Ag, Pb, Zn, Sn
115P 025	BOULDER	Cu
115P 030	OLIVER	Sn, Ag
115P 031a	BIX (SUNSHINE CR. E.)	Sn, Ag
115P 031b	BIX (SUNSHINE CR. W.)	Sn, Ag
115P 032	MOZI	Mo, Zn, Ag, Cu
115P 036	BANDER	Ag, Zn
115P 051	JABBERWOCK	Sn, Ag, Au
115P 056	ORE (MAY CREEK)	Ag, Pb, Zn, Cu
115P 057	QUEST	Ag, Pb, Zn, Au
Work targets:		
115P 025	TOTH	unknown
115P 043	CORTIN	unknown
115P 046	WEIZ	unknown



RECOMMENDED CITATION

MURPHY, D.C. and HEON, D., 1996. Geological map of Sprague Creek map area, western Selwyn Basin, Yukon (115 P/15). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Geoscience Map 1996-2, scale 1:50 000.

This map accompanies MURPHY, D.C. 1996. Geology of the McQuesten River region northern McQuesten and Mayo map areas, Yukon (115 P/14,15,16 and 105 M/13,14). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Bulletin 6.

Digital cartography and drafting by Will vanRanden, Canada/Yukon Geoscience Office.

Any revisions or additional geological information known to the user would be welcomed by the Canada/Yukon Geoscience Office.

Copies of this map, the accompanying report and Yukon Minfile may be purchased from Geoscience Information and Sales, Exploration and Geological Services Division, Indian and Northern Affairs Canada, Room 102-300 Main St. Whitehorse, Yukon Y1A 2B5 Ph. 403-667-3204 Fax 403-667-3198.

Last revisions made June 11, 1996.

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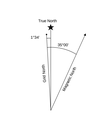
ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

SPRAGUE CREEK
YUKON TERRITORY
SCALE 1:50 000

Miles 1 0 1 2 3 Miles
Metres 1000 0 1000 2000 3000 4000 Metres

CONTOUR INTERVAL 100 FEET
Elevations in Feet above Mean Sea Level
North American Datum 1983
Transverse Mercator Projection



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1981
FOR CENTRE OF MAP
Annual change decreasing 4.0'

116 A/3	116 A/2	116 A/1
115 P/14 Murphy, et al. Geoscience Map 1996-1	115 P/15 THIS MAP	115 P/16 Murphy & Heon Geoscience Map 1996-3
115 P/11	115 P/10	115 P/9

Indian and Northern Affairs Canada
Exploration and Geological Services Division
Yukon Region

Geoscience Map 1996-2

Geological map of Sprague Creek area western Selwyn Basin, Yukon NTS 115P/15

by

Donald C. Murphy and Daniele Heon
Canada/Yukon Mineral Development Agreement
Geoscience Office