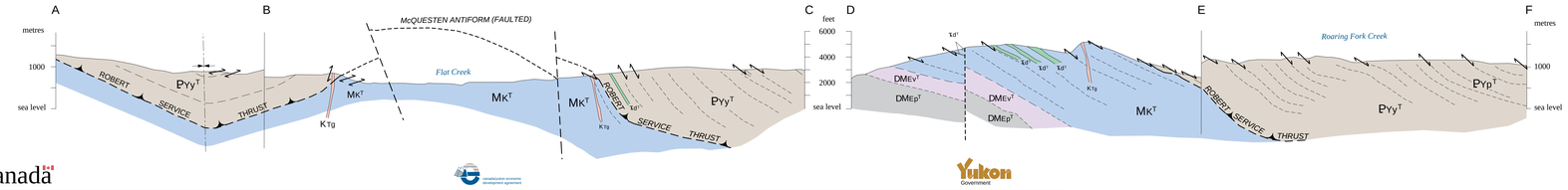
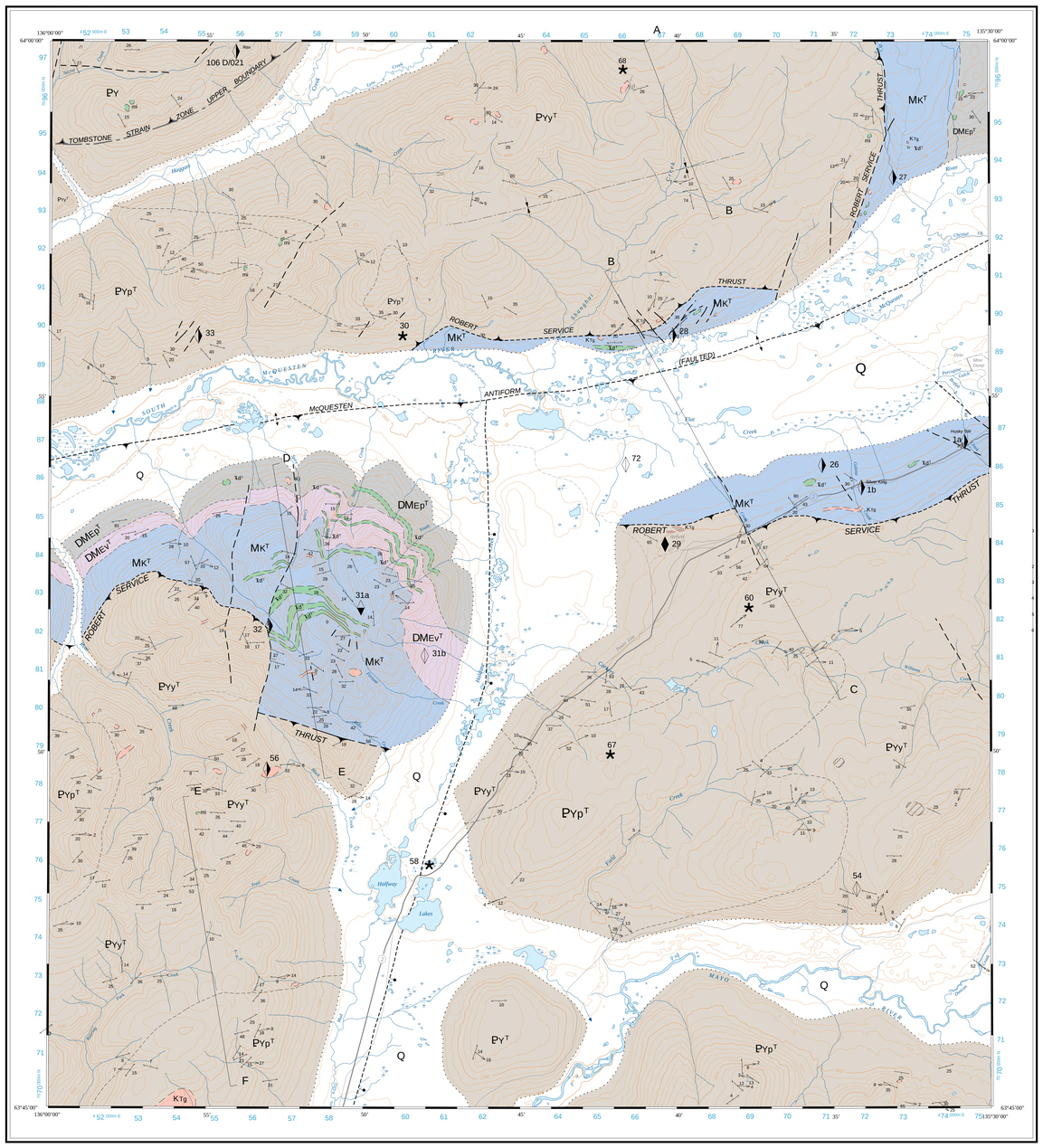


Canada



LEGEND

QUATERNARY

Q — Undifferentiated, unconsolidated gravels, sands and clays

EARLY LATE CRETACEOUS (?)

TOMBSTONE INTRUSIONS

KTg — KTg: buff to grey dykes, sills and small plugs of aplite and granite; locally quartz-, feldspar and/or biotite phyric, minor arsenopyrite. KTl: rare fine- to coarse-grained light grey biotite lamprophyre dykes, locally feldspathic.

UPPER PROTEROZOIC

HYLAND GROUP[1]

PY — Yusezyu Formation[1] : 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.

TOMBSTONE STRAIN ZONE UPPER BOUNDARY

PYy^T — Yusezyu Formation[1] : prominently foliated and lineated muscovite chlorite phyllite, quartzofeldspathic and micaceous psammite, gritty psammite and rare calc-silicate rock and marble **PYy^T** : mainly phyllite; **PYp^T** : mainly psammite. Diagonal ruling indicates areas of carbonate rock

ROBERT SERVICE THRUST

TRIASSIC

1d' — Foliation-concordant podiform to lenticular bodies of fine- to medium-grained green amphibole-chlorite-plagioclase meta-diorite or meta-gabbro[6]

MISSISSIPPIAN

KENO HILL QUARTZITE

MK^T — Keno Hill quartzite[1] : finely to coarsely foliated and lineated, light to dark grey, locally mottled vitreous quartzite, subordinate dark grey carbonaceous phyllite, and rare green-grey phyllite (felsic metavolcanic, possible infolds of DMEv^T) and calcareous quartzite

DEVONO-MISSISSIPPIAN

EARN GROUP

DMEv^T — Foliated greenish-white to green-grey quartz-sericite-chlorite phyllite locally with mm-scale quartz augen, inferred to be felsic metavolcanic, minor grey carbonaceous phyllite[6]

DMEp^T — Grey carbonaceous phyllite, siliceous carbonaceous meta-sandstone, rare calcareous meta-greywacke

K-Ar age determinations from quartz-biotite porphyritic granite sills (KTg): 1.6 km southwest of the peak of Mt. Haldane: 82 ± 5 Ma (GSC 65-49, Wanless et al, 1967); Fortune Creek. 600m northeast of Mt. Haldane: 89 ± 2.6 Ma (GSC 80-74; Stevens et al, 1981). U-Pb age determinations on nearby intrusions range from 91-94 Ma (J.K. Mortensen and M.L. Bevier, University of British Columbia).

Hyland Group and Yusezyu Formation are defined by Gordey and Anderson (1993) based on work in Nahanni map area (105 I).

Yusezyu Formation is intruded by pre-kinematic intermediate to mafic sills and dykes of unknown age that are generally too small to portray at the scale of mapping (m).

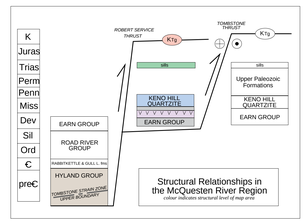
U-Pb zircon and baddeleyite age determination on similar diorite sills in Tombstone Mountains of 232 ± 1.5/1.2 Ma (Mortensen and Thompson, 1990).

Mississippian age based on Visean-Namurian conodonts obtained from Keno Hill quartzite in Tombstone Mountains (Mortensen and Thompson, 1990; Orchard, 1991).

Relatively imprecise Devonian and Mississippian U-Pb age determinations have been obtained from this unit in northeastern Mayo map area by M.L. Bevier and Jim Mortensen, University of British Columbia. This unit may correlate with unit hosting the MARG VMS deposit in Nash Creek map area (Minfile 106 D/009).

MINERAL OCCURRENCES
Yukon Minfile

Veins:		
105 M/1a	Husky SW	Ag, Pb, Zn
105 M/1b	Silver King	Ag, Pb, Zn
105 M/26	Gerlitzki	Ag, Pb, Zn
105 M/27	Titan	Ag, Pb
105 M/28	Shanghai	Ag, Pb, Zn
105 M/29	Wayne	Ag, Pb, Zn, Au, W
105 M/31a	Strebchuck	Sn, Ag,Pb,W
105 M/31b	Joumbira	Pb, Ag, Sn, W
105 M/32	Mount Haldane	Ag, Pb, Zn
105 M/33	Laysier	Ag, Pb
105 M/54	Chance	Sb
105 M/56	Sundown	Ag, Pb
105 M/72	Beley	Zn
106 D/21	Rex	Ag, Pb, Zn, Sb
Skarns/replacement:		
105 M/29	Wayne	Au, W
Work targets:		
105 M/30	Argent	unknown
105 M/58	Halfway	unknown
105 M/60	Newry (Aurex)	unknown
105 M/67	Corkery	unknown
105 M/68	Weasel	unknown



SYMBOLS

Geological contact (defined, approximate, assumed and/or covered)

Fault- displacement unknown (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

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

Line of cross-section — A A'

Apparent dip of measured bedding, foliation (in cross-section)

Foliation form lines in cross-section

RECOMMENDED CITATION

HUNT, J.A., MURPHY, D.C., ROOTS, C.F. and POOLE, W.H., 1996. Geological map of Mt. Haldane area, Yukon (105 M/13). Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Map 1996-4, 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 van Randen, Yukon Geology Program.

Any revisions or additional geological information known to the user would be welcomed by the Yukon Geology Program.

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. 867-667-3264 Fax 867-667-3267.

Store the map in a dark area to prevent colours from fading.

Map last revised August 1997.

Topographic base produced by SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES.
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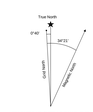
ONE THOUSAND METRE
Universal Transverse Mercator Grid
ZONE 8

MOUNT HALDANE
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 1985
Transverse Mercator Projection



Use diagram only to obtain numerical values
APPROXIMATE MEAN DECLINATION 1973
FOR CENTRE OF MAP
Annual change decreasing 6.3'

116 A/1	106 D/4	106 D/3
105 P/16 Murphy & Héon Geoscience Map 1996-3	105 M/13 THIS MAP	105 M/14 Murphy & Roots Geoscience Map 1996-5
105 P/9	105 M/12	105 M/11

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

Geoscience Map 1996-4

Geological map of Mount Haldane area, Yukon (105 M/13)

by

J.A. Hunt and D.C. Murphy
Canada/Yukon Mineral Development Agreement
Geoscience Office

C.F. Roots and W.H. Poole
Geological Survey of Canada