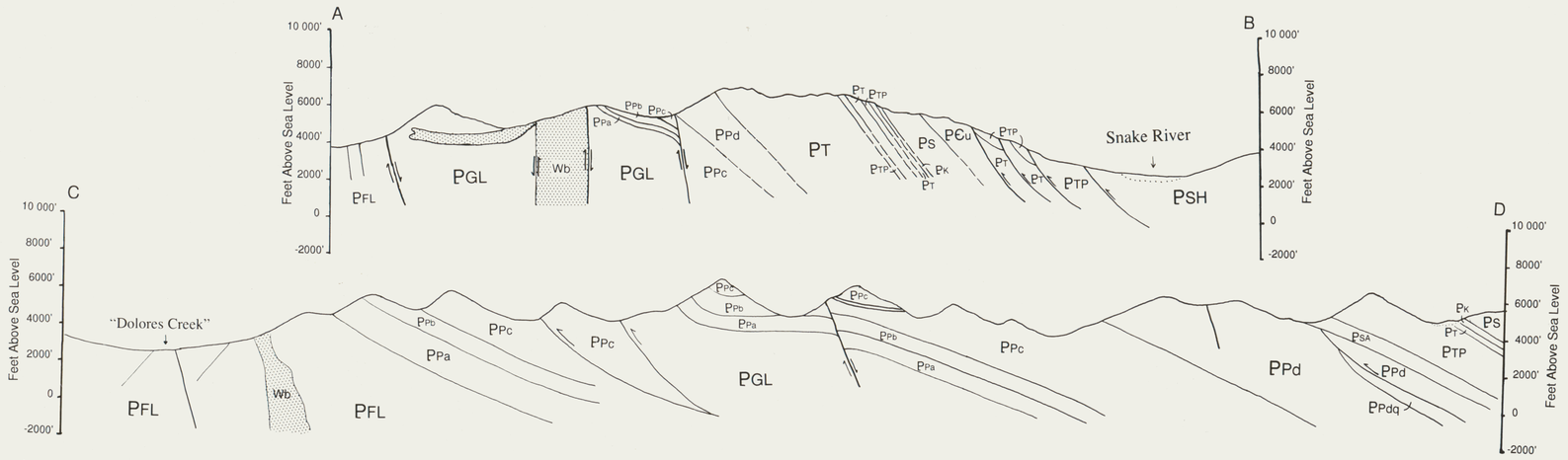
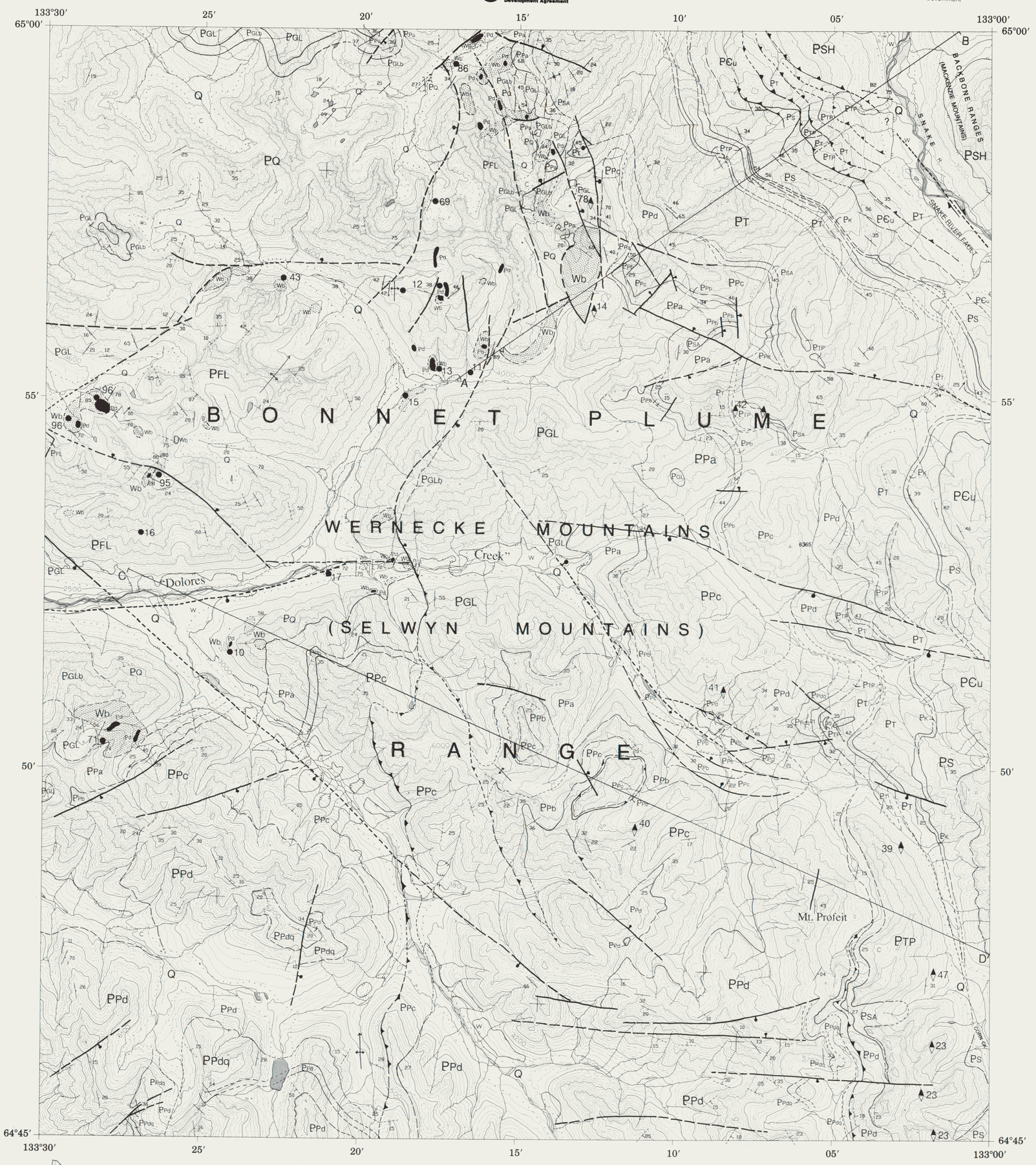


Canada

Canada/Yukon Economic Development Agreement

Yukon Government



CONTOUR INTERVAL 100 FEET

© CANADA COPYRIGHTS RESERVED 1973

YUKON TERRITORY

Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Milles

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

CONVERSION SCALE FOR ELEVATIONS
ÉCHELLE DE CONVERSION DES ÉLÉVATIONS

Metres 30 20 10 0 50 100 150 200 250 300 Mètres

Feet 100 50 0 100 200 300 400 500 600 700 800 900 1000 Pieds

NORTH AMERICAN DATUM 1927
TRANSVERSE MERCATOR PROJECTION

TOPOGRAPHIC MAP PRODUCED BY SURVEYS AND MAPPING BRANCH, DEPARTMENT OF ENERGY, MINES AND RESOURCES, OTTAWA, 1970.

106 F/4	106 F/3	106 F/2
106 C/13	106 C/14	106 C/15
106 C/12	106 C/11	106 C/10

LEGEND

STRATIFIED ROCKS

Quaternary

Q — *Alluvium, colluvium, and glacial deposits*

Upper Proterozoic to Lower Paleozoic

PЄu — *Rusty to grey weathering quartz arenite; pinkish orange and grey weathering white carbonate; pebble conglomerate; siltstone and shale*

Upper Proterozoic
Windermere Supergroup

PS — ***Sheepbed Formation:*** *recessive, black weathering shale and siltstone; minor grey weathering limestone near top of unit*

PK — ***Keele Formation:*** *thin bedded to massive, light orange to brown weathering micritic dolostone. Minor brown weathering diamictite locally forming base of unit may belong to* ***Ice Brook Formation***

PT — ***Twitya Formation:*** *thin bedded, brown weathering siltstone interbedded with sandstone, granule to pebble conglomerate ("grit"), and light grey weathering dolostone*

PTP — ***Profeit dolostone*** *(facies of Twitya Formation): massive to thick bedded, light grey weathering dolostone commonly containing vugs, stromatolites, oncolites, oolites and micritic intraclasts; commonly fetid; minor siltstone, sandstone and grit*

PSH — ***Shezal Formation:*** *massive, green weathering diamictite containing rounded to subrounded pebbles and cobbles of carbonate, sandstone and (?)greenstone*

PSA — ***Sayunei Formation:*** *thick bedded to massive, orange to brown weathering sandstone, and conglomerate containing rounded to subrounded pebble to boulder sized clasts of carbonate, siltstone and quartz arenite*

Middle to Upper Proterozoic
Pinguicula Group

PPd — ***Unit D:*** *medium to very thick bedded buff, orange, brown and grey weathering dolostone, interbedded with black, grey and maroon weathering shale, micaceous siltstone, nodular limestone, and light grey weathering quartz arenite. Stromatolites are locally abundant in basal and upper parts of succession*

PPdq — ***Corn Creek quartz arenite*** *(facies of Unit D): thick to very thick bedded, light grey weathering quartz arenite, minor siltstone and carbonate; abundant in upper parts of Unit D; formerly termed "Corn Creek quartzite"*

PPc — ***Unit C:*** *thin to very thick bedded and massive, grey weathering dolostone and limestone; abundant "zebra" texture and pods of coarse grained sparry dolomite; minor intraclast conglomerate and interbeds of black shale*

PPb — ***Unit B:*** *medium bedded, orange weathering dolostone; minor grey weathering limestone and maroon weathering siltstone. Local crossbedding and intraclast conglomerate*

PPa — ***Unit A:*** *thin bedded, laminated, maroon, green and black weathering siltstone and shale; minor basal sandstone and conglomerate*

Middle Proterozoic
Wernecke Supergroup

PGL — ***Gillespie Lake Group:*** *orange, brown and grey weathering dolostone and silty dolostone, locally stromatolitic, locally hosting chert nodules and sparry karst infillings; minor siltstone and shale, and light grey weathering quartzose sandstone*

PGLb — ***Basal Gillespie Lake Group:*** *cross laminated, orange weathering silty to sandy dolostone interbedded with black weathering shale and grey to white weathering, quartzose, fine grained sandstone*

PQ — ***Quartet Group:*** *black weathering shale, finely laminated dark grey weathering siltstone, and planar to cross laminated light grey weathering siltstone and very fine grained sandstone. In upper part of succession, siltstone and fine grained sandstone interbedded with subordinate orange weathering dolostone grades upward into basal Gillespie Lake Group*

PFL — ***Fairchild Lake Group:*** *thinly bedded, laminated to cross-laminated, black to greenish-grey weathering siltstone and limy siltstone; minor black to grey weathering slate and kinked slate; minor brown weathering dolostone*

INTRUSIVE ROCKS

Middle Proterozoic
Wernecke breccia

Wb — *Mottled red, green and grey weathering hematitic and dolomitic breccia, and related metasomatized and veined country rock. Breccia contains variably metasomatized clasts of Wernecke Supergroup, and minor diorite. Breccia and metasomatites are locally enriched in copper, cobalt, uranium, gold and silver*

Igneous dykes and stocks

Pd — *Fine to medium grained, greenish grey weathering diorite with local pegmatitic segregations; pinkish grey weathering, fine to medium grained quartz albite syenite*

SYMBOLS

stratigraphic or intrusive contact — known, approximate, assumed

normal fault (pegs on hanging wall) — known, approximate, assumed

thrust fault (teeth on hanging wall) — known, approximate, assumed

strike-slip fault

bedding — inclined, overturned, vertical, horizontal, facing unknown; estimate from airphoto or distant sighting

cleavage — inclined

fold — syncline; anticline

line of cross section — A B

REFERENCES

BELL, R.T., 1986. Geological map of northeastern Wernecke Mountains, Yukon Territory. Geological Survey of Canada, Open File 1207.

BLUSSON, S.L., 1974. Geology of Nadaleen River, Lansing, Niddery Lake, Bonnet Plume Lake and Mount Eduni map areas, Yukon Territory; Geological Survey of Canada, Open File 205, scale 1:250 000.

DEAN, P.M., 1974. Report on geological and geochemical field work; I.N.A.C. Assessment Report # 061207.

DELANEY, G.D., 1981. The mid-Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory. In: Proterozoic Basins of Canada, F.H.A. Campbell, (ed.). Geological Survey of Canada Paper 81-10, p. 1-23.

EISBACHER, G.H., 1981. Sedimentary tectonics and glacial record in the Windermere Supergroup, Mackenzie Mountains, northwestern Canada. Geological Survey of Canada, Paper 80-27 p. 1-40.

INAC, 1993. Yukon MINFILE, 1993. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada.

LAZNICKA, P. AND EDWARDS, R.J., 1979. Dolores Creek, Yukon--a disseminated copper mineralization in sodic metasomatites. Economic Geology, Vol. 74, p. 1352-1370.

NORRIS, D.K., 1975. Snake River. Geological Survey of Canada, Map 1529A.

STAMMERS, M.A., 1977. Geologic report on the Ram 1-48 mineral claims; I.N.A.C. Assessment Report # 090284.

THORKELSON, D.J. and WALLACE, C.A., 1994a. Geological setting of mineral occurrences in Fairchild Lake map area (106C/13), Wernecke Mountains, Yukon. In: Yukon Exploration and Geology, 1993. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, p. 79-92.

THORKELSON, D.J. and WALLACE, C.A., 1994b. Geological map of Fairchild Lake map area, (106C/13), Wernecke Mountains, Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada Open File 1994-6 (G).

YEAGER, D. and IKONA, C., 1979. Geological and geochemical report on the Elk 1-90 mineral claims; I.N.A.C. Assessment Report # 090424.

YEAGER, D. and IKONA, C., 1980. Geophysical report on the Ram 1-48 mineral claims; I.N.A.C. Assessement Report # 090589.

Acknowledgments

The authors thank Grant Abbott for constructive comments, and Will van Randen for technical support.

Interpretation of this map is provided in the following report:

THORKELSON, D.J. and WALLACE, C.A., 1995. Geology and mineral occurrences of the "Dolores Creek" map area (106C/14), Wernecke Mountains, northeastern Yukon. In: Yukon Exploration and Geology, 1994. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada.

Recommended citation:

THORKELSON, D.J. and WALLACE, C.A., 1995. Geological map of "Dolores Creek" map area (106C/14), Wernecke Mountains, northeastern Yukon. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1995-6(G).

Mineral Occurrences, listed in Yukon Minfile

● Wernecke breccia
Cu and/or U (+/- Co, Au, Mo, Ba, Ag)
- 10 KEY MOUNTAIN
- 11 MAMMOTH
- 12 CIRQUE
- 13 PORPHYRY
- 15 AIRSTRIP
- 16 MUELLER
- 17 DOBBY
- 43 DOWSER
- 69 PTERD
- 71 PIKA
- 86 ANOKI
- 95 JULIE
- 96 BELL

Vein
Zn-Pb (+/- Ag, Cu, Au)
- 14 TETRAHEDRITE CREEK
- 23 COB
- 39 PROFEIT
- 40 POO
- 41 CARNE
- 42 DAN
- 47 COAST
- 78 BLUSSON

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

Open File 1995-6(G)

GEOLOGICAL MAP OF "DOLORES CREEK" MAP AREA (106C/14), WERNECKE MOUNTAINS, NORTHEASTERN YUKON
1:50 000 scale

Derek J. Thorkelson and Carol A. Wallace
Canada/Yukon Geoscience Office

Copies of this map may be purchased from: Exploration and Geological Services Division, Indian and Northern Affairs Canada, 300-345 Main St., Whitehorse, Yukon Y1A 2B5