



MEMORANDUM

CLASSIFICATION

TO
A

Ken Dawson
Chris Dodds

676073
114P/13

YOUR FILE No.
Votre dossier

OUR FILE No.
Notre dossier

FROM
De

Mike Orchard

DATE

9 Nov. '85.

FOLD

SUBJECT
Sujet

"Windy Craggy" area

Attached is a preliminary compilation of all the relevant carodant data. I've sent a copy to Dan MacIntyre & asked him to 'fill-in' detail lacking from most of the localities. Please do the same & return to me so I can finalize this particular file.

85 OFFICER ASSIST LETTER DEC

STA. NO. OR SEC. NO.

SAMPLE INTERVAL

3178 LETTER SAMPLE NO.

FROM: TOP BASE MEASURE: FEET METERS

GLACIER CK

LOCATION NAME

LOCATION TYPE

SAMPLE TYPE

- 1 ISOLATED OUTCROP
2 SURFACE SECTION
3 SUBSURFACE SECTION
4 TALUS
5 OTHER

- 1 LITHOLOGIC
2 MACROFOSSIL
3 MICROFOSSIL
4 COAL
5 PALYNOLOGY
6 INORGANIC GEOCHEMISTRY
7 ORGANIC GEOCHEMISTRY
8 RADIOMETRIC DATING
9 OTHER

FORMATION NAME "Glacier Creek Volcanic Sequence"

CODE

MEMBER NAME

UTM NTS TP - RGE. 114 P/08 W CODE

LATITUDE 59 23 50 LONGITUDE 136 23

G.S.C. NUMBER C 043178

NOTEBOOK SERIAL NUMBER

PROBABLE AGE Norian (?)

118526

Top of ridge above barite beds
1.5m of shaly brown limestone
About 100m above barite zone.

Report on microfossils from the "Windy Craggy" and adjacent areas
of the Tatshenshini River map area (114P)

GSC Loc. No.: C-102643 NTS: 114P, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2739

GEOGRAPHIC LOCATION: Lat, Long: 59°40'; 137°46'
 UTM:
 Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
 Formation:
 Member:
 Description: 10 m carbonate unit S of Tatshenshini
Glacier. Blue-grey limestone.

Lithology (Weight): Carbonate (4.540 kg)

FOSSILS:

Conodont taxa:
 coniform element

CAI: @6

AGE: probably Ordovician

Remarks: A single proximal fragment of a bi-carinate coniform element.
Resembles the species in other Ordovician samples in the St. Elias Mts.

Date: 28/05/85

from

GSC Loc. No.: C-103037 NTS: 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2744

GEOGRAPHIC LOCATION: Lat, Long: 59°44'; 137°45'
 UTM:
 Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
 Formation:
 Member:
 Description: 1.5 m dark grey limestone (-220 m)

Lithology (Weight): Carbonate (2.020 kg)

FOSSILS:

Conodont taxa:
 ramiform fragment (1)

CAI:

AGE: Ordovician - Triassic

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103038

NTS: 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2747

GEOGRAPHIC LOCATION: Lat, Long: 59°44'; 137°45'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Upper black limestone below dacite flow
(-370 m).

Lithology (Weight): Argillite (1.570 kg)

FOSSILS:

Conodont taxa:
Epigondolella abneptis (Huckriede) (4)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103040

NTS: 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2752

GEOGRAPHIC LOCATION: Lat, Long: 59°44'; 137°45'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: 25 m limestone (-460 m).

Lithology (Weight): Argillite (5.040 kg)

FOSSILS:

Conodont taxa:
Epigondolella abneptis (Huckriede) (11)
ramiform elements (2)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103043 **NTS:** 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2760

GEOGRAPHIC LOCATION: **Lat, Long:** 59°44'; 137°45'
 UTM:
 Description: Windy Craggy

STRATIGRAPHIC CONTEXT: **Group:**
 Formation:
 Member:
 Description: Black limestone, 4 m (-620 m).

Lithology (Weight): Argillite (3.900 kg)

FOSSILS: Ichthyoliths, sponge spicule

Conodont taxa:
 Metapolygnathus? sp. (1)

CAI: 6

AGE: Late Triassic

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103044 **NTS:** 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2764

GEOGRAPHIC LOCATION: **Lat, Long:** 59°44'; 137°45'
 UTM:
 Description: Windy Craggy

STRATIGRAPHIC CONTEXT: **Group:**
 Formation:
 Member:
 Description: Marble in c.s. hfls (-900 m), adj. by
sills.

Lithology (Weight): Carbonate (3.300 kg)

FOSSILS:

Conodont taxa:

- Epigondolella primitia** (3)
- Metapolygnathus nodosus** (8)

CAI: 6-7

AGE: Late Triassic; late Carnian - early Norian

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103049

NTS: 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2778

GEOGRAPHIC LOCATION:

Lat, Long: 59°44'; 137°45'

UTM:

Description: Windy Craggy

STRATIGRAPHIC CONTEXT:

Group:

Formation:

Member:

Description: top 5 m; N 1/2 of 30 m limestone immediately S of basalt, ore (+480 m).

Lithology (Weight): Argillite (1.910 kg)

FOSSILS:

Conodont taxa:

- Epigondolella primitia** Mosher (6)
- E. cf. abneptis** (Huckriede) (8)
- Neogondolella navicula** (Huckriede) (2)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks: Rerunning of this sample produced a slightly different faunule from that originally recovered - composite sample?; both are Early Norian.

Date: 28/05/85

GSC Loc. No.: C-102648

NTS: 114P12, Tatshenshini River

Collector, Field No.: Dawson, 1983; 83-2798

GEOGRAPHIC LOCATION:

Lat, Long: 59°44'; 137°45'

UTM:

Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: 12 m wkly recrystallized limestone
between 2 flaws, (80 m below ore).

Lithology (Weight): Carbonate (4.685 kg)

FOSSILS:

Conodont taxa:
Epigondolella abneptis (43)
Neogondolella sp. (2)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 28/05/85

GSC Loc. No.: C-103045 **NTS:** 114P12, Tatshenshini River

Collector, Field No.: Dodds, 1983; 83-CAD-2-1

GEOGRAPHIC LOCATION: **Lat, Long:** 59°39'; 137°46'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (1.118 kg)

FOSSILS:

Conodont taxa:
Epigondolella sp. (3)

CAI: 5

AGE: Late Triassic; probably Early - Middle Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-103046 NTS: 114P12, Tatshenshini River

Collector, Field No.: Dodds, 1983; 83-CAD-3-1

GEOGRAPHIC LOCATION: Lat, Long: 59°39'30"; 137°46'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (1.374 kg)

FOSSILS:

Conodont taxa:
Epigondolella abneptis subsp. B Orchard (23)

CAI: 5

AGE: Late Triassic; Early Norian;

Remarks: Many of these elements resemble the more primitive, ^{E.}abneptis A, suggesting the faunule dates from about the middle of the Early Norian.

Date: 29/05/85

GSC Loc. No.: C-103048 NTS: 114P13, Tatshenshini River

Collector, Field No.: Dodds, 1983; 83-CAD-7-1

GEOGRAPHIC LOCATION: Lat, Long: 59°46'; 137°44'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (1.544 kg)

FOSSILS:

Conodont taxa:
Epigondolella sp. (1)

CAI: 5

AGE: Late Triassic; probably Early - Middle Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-103887

NTS: 114P12, Tatshenshini River

Collector, Field No.: Dodds, 1983; 83-CAD-21-1

GEOGRAPHIC LOCATION: Lat, Long: 59°44'; 137°48'
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (1.252 kg)

FOSSILS:

Conodont taxa:

Epigondolella sp. (3)
ramiform element (1)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-103257

NTS: 114P/12, Tatshenshini River

Collector, Field No.: MacIntyre, 1983; 83-MJO/WD-31

GEOGRAPHIC LOCATION: Lat, Long: 59°45'27"; 137°48'46"
UTM: Zone 8; E349450; N6626700
Description: NE of Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation: Unit 5b MacIntyre 1983.
Member:
Description:

Lithology (Weight): Carbonate ()

FOSSILS:

Conodont taxa:

Epigondolella abneptis (200)
Neogondolella navicula (10)
ramiform elements

CAI: 5-7

AGE: Late Triassic; Early Norian;

Remarks: A very rich faunule (numbers are approximate) containing diverse morphotypes of *Epigondolella*. Note the range of CAI also.

Date: 29/05/85

GSC Loc. No.: C-101387 NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28536

GEOGRAPHIC LOCATION: Lat, Long:
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Falconbridge #28536, DDH 5b, 106-107
ft.

Lithology (Weight): Grey, limy siltstone sl. nodular. (0.800 kg)

FOSSILS:

Conodont taxa:
Epigondolella sp. (2)
ramiform element (1)

CAI:

AGE: Late Triassic; Norian

Remarks: Both epigondolellids are bidenticulate, a typical Late Norian morphology. However, since they are early growth stages, they may equally represent older species. Sample processed as a chert.

Date: 29/05/85

GSC Loc. No.: C-101380 NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28529

GEOGRAPHIC LOCATION: Lat, Long:
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Falconbridge #28529, DDH 5b, 387-388
ft.

Lithology (Weight): Grey, limy siltstone. (0.880 kg)

FOSSILS:

Conodont taxa:
Epigondolella sp. (1)
ramiform element (1)

CAI:

AGE: Late Triassic; Norian

Remarks: A very small, early growth stage.

Date: 29/05/85

GSC Loc. No.: C-101394 NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28543

GEOGRAPHIC LOCATION: Lat, Long:
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Falconbridge #28543, DDH 9, 56-57 ft.

Lithology (Weight): Black, limy argillite. (0.704 kg)

FOSSILS: Foraminifera, sponge spicules.

Conodont taxa:

- Epigondolella sp. (2)
- Neogondolella sp. (1)
- ramiform elements (3)

CAI:

AGE: Late Triassic; Norian

Remarks: All elements are early growth stages, species ^{are} ~~is~~ therefore uncertain

Date: 29/05/85

GSC Loc. No.: C-101395 NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28544

GEOGRAPHIC LOCATION: Lat, Long:
UTM:
Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Falconbridge #28544, DDH 9, 75-80 ft.

Lithology (Weight): Grey, limy siltstone. (1.008 kg)

FOSSILS:

Conodont taxa:

Epigondolella cf. E. abneptis (2)
ramiform elements (2)

CAI:

AGE: Late Triassic; probably Early Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-101396

NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28545

GEOGRAPHIC LOCATION:

Lat, Long:

UTM:

Description: Windy Craggy

STRATIGRAPHIC CONTEXT:

Group:

Formation:

Member:

Description: Falconbridge #28545, DDH 9, 34-135 ft.

Lithology (Weight): Black, limy siltstone. (1.285 kg)

FOSSILS: Sponge spicules

Conodont taxa:

Epigondolella abneptis (Huckriede) (13)

Neogondolella sp. (1)

ramiform elements

CAI: 5

AGE: Late Triassic; Early Norian

Remarks: Most specimens are early growth stages, and mimic younger species. Ramiforms are common as fragments.

Date: 29/05/85

GSC Loc. No.: C-101400

NTS:

Collector, Field No.: Orchard, 1982; 82-MJO-28549

GEOGRAPHIC LOCATION:

Lat, Long:

UTM:

Description: Windy Craggy

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Falconbridge #28549, DDH 11, 444-445
ft.

Lithology (Weight): Nodular, grey limy argillite. (1.844 kg)

FOSSILS: Ammonoids, shell fragments, foraminiferids, bryozoans.

Conodont taxa:
Epigondolella cf. E. abneptis (4)
ramiform elements (4)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-102867 NTS: 114P, Tatshenshini River

Collector, Field No.: D. MacIntyre, 1982; 82-WD-9-30

GEOGRAPHIC LOCATION: Lat, Long: 59°43'22"; 137°42'43"
UTM:
Description: Drill hole 9, Windy Craggy.

STRATIGRAPHIC CONTEXT: Group: Kaskawulsh Group (Campbell & Dodds 1979)
Formation:
Member:
Description: From hanging wall of Windy Craggy deposit. Strat. position uncertain due to fault offsets which displace hanging wall.

Lithology (Weight): Carbonate ()

FOSSILS:

Conodont taxa:
ramiform element

CAI: 5

AGE: Ordovician - Triassic

Remarks: A single bar fragment of a kind that is more common in the *Late* Paleozoic and Early Triassic.

Date: 29/05/85

GSC Loc. No.: C-118289 NTS: 114P/12E, Tatshenshini River

Collector, Field No.: Dodds, 1984; 84-DG-45170

GEOGRAPHIC LOCATION: Lat, Long:
UTM: Zone 8; E34555; N662425
Description: Windy Craggy deposit, approx. 6540 ft.
elevation.

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (0.741 kg)

FOSSILS:

Conodont taxa:
Epigondolella primitia Mosher (32)
Neogondolella sp. (2)

CAI: 5

AGE: Late Triassic; Early Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-103262 NTS:

Collector, Field No.: MacIntyre, 1984; 84-MJO-WD-10

GEOGRAPHIC LOCATION: Lat, Long: 49°43'07"; 137°47'28"
UTM: E343000; N6622500
Description: Windy Craggy area.

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description: Unnamed limy siltstone

Lithology (Weight): Limy siltstone ()

FOSSILS:

Conodont taxa:
Epigondolella cf. E. abneptis (Huckriede) (1)

CAI: 5.5

AGE: Late Triassic; Early Norian

Remarks:

Date: 29/05/85

GSC Loc. No.: C-118290 NTS: 114P/12E, Tatshenshini River

Collector, Field No.: Dodds, 1984; 84-DG-45174

GEOGRAPHIC LOCATION: Lat, Long: 59°43'50"; 137°44'00"
UTM: Zone 8; E34637; N662375
Description: Windy Craggy, deposit approx. 5400 ft.
elevation.

STRATIGRAPHIC CONTEXT: Group:
Formation:
Member:
Description:

Lithology (Weight): Carbonate (1.640 kg)

FOSSILS:

Conodont taxa:
ramiform elements (2)

CAI:

AGE:

Remarks:

Date:

GSC Loc. No.: C-102868 NTS: 114P, Tatshenshini River

Collector, Field No.: MacIntyre, 1982; 82-WD-005C

GEOGRAPHIC LOCATION: Lat, Long: 59°43'22"; 137°42'43"
UTM:
Description: Surface sample, Windy Craggy deposit.

STRATIGRAPHIC CONTEXT: Group: Kaskawulsh Group (Campbell & Dodds)
Formation:
Member:
Description: From hanging wall of Windy Craggy
deposit - 30-50 m? above top of ore zone limestone interbedded with
calcareous siltstone and dacitic tuff.

Lithology (Weight): Carbonate ()

FOSSILS:

Conodont taxa:
Epigondolella cf. E. primitia Mosher (4)
Polygnathus sp.

CAI: 5.5

