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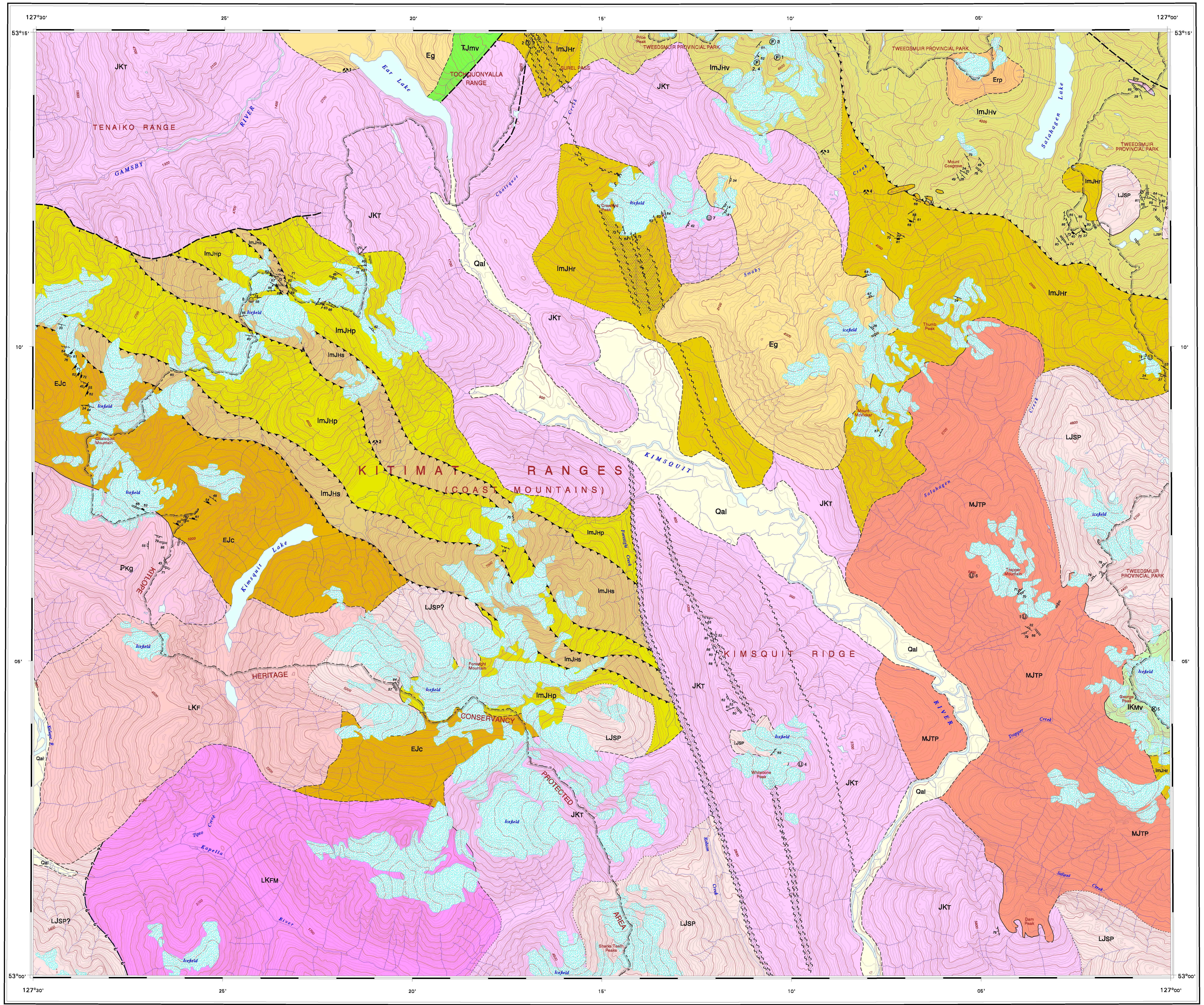
GEOLOGICAL SURVEY OF CANADA / COMMISSION GÉOLOGIQUE DU CANADA
Geoscience BC



LEGEND

STRATIFIED ROCKS

QUATERNARY

Qal — *Recent alluvium, till*

LOWER CRETACEOUS
?VALANGINIAN TO ?APTIAN
MONARCH ASSEMBLAGE (K/Ar ca. 124 Ma)

IKMv — *>50% volcanic rocks; amorphous olive green amygdaloidal basalt and basaltic andesite and associated breccia, tuff, and tuff breccia; locally intercalated with thinly bedded siltstone, black argillite to slate*

LOWER TO MIDDLE JURASSIC
SINEMURIAN TO BATHONIAN
HAZELTON GROUP (U/Pb ca. 171-191 Ma)

Sedimentary facies
ImJHs — *>50% sedimentary rocks; feldspathic sandstone and siltstone; black argillite, locally with thin cross-stratified calcareous sandstone to sandy limestone containing shallow water fauna; pebble to cobble conglomerate; lapilli tuff and welded ash-flow tuff; lesser basaltic andesite and basalt flows and breccias; rare intraformational conglomerate within sedimentary sequences; rare pillow basalt; complexly interfingered with* ImJHv

Volcanic facies
ImJHv — *>50% volcanic rocks; amorphous olive green amygdaloidal basalt and basaltic andesite and associated breccia, tuff, and tuff breccia; locally intercalated with thinly bedded siltstone, black argillite to slate; complexly interfingered with* ImJHs *includes layered mafic complex, of distinctly layered plagioclase and clinopyroxene rich layers, lesser pyroxene-olivine-magnetite cumulates, and abundant gabbro and aphanitic basalt*

Volcano-plutonic complex
ImJHp — *Characterized by 40-50% volcanic and volcaniclastic sedimentary rocks as large (0.5-10m) screens within hornblende/hornblende-biotite/biotite/rare pyroxene diorite to quartz diorite; locally foliated; distinct variations in texture (fine to coarse grained) and composition*

Rhyolitic facies
ImJHr — *Light purple to red, well stratified, thin to medium bedded, locally thick bedded to massive, rhyolitic tuff breccia, lapilli tuff, ash tuff and associated volcaniclastic conglomerate, sandstone, siltstone and lesser mudstone; includes rare pillow basalt*

TRIASSIC TO JURASSIC
Triassic-Jurassic metavolcanic rocks

TJmv — *Variably metamorphosed mafic to silicic volcanic and volcaniclastic rocks, including andesitic to basaltic flows, tuff-breccia, and tuff, with lesser argillite; unfoliated to slightly foliated, thick-bedded to massive, andesitic to rhyolitic lapilli tuff and tuff breccia to strongly foliated tuff, sandstone, and siltstone; metamorphic grade varies from lower greenschist to upper greenschist facies, dominated by chloritic schists (+/- epidote); characterized by readily identifiable primary volcanic textures overprinted by variable degrees of foliation*

INTRUSIVE ROCKS

PALEOGENE
EOCENE

Erp / Eg — *Light pink to light grey K-spar porphyritic/megacrystic to equigranular coarse grained pink hornblende biotite to biotite granite; intrusive contacts sharp; forms prominent outcrops with distinct exfoliation planes; yields abundant white rhyolite porphyry dykes*

Kitlope pluton (U-Pb ca. 61 Ma)
PKg — *Heterogeneous, fresh, medium- to coarse-grained biotite granite and granodiorite, locally with abundant large potassium feldspar megacrysts; unfoliated to good magmatic(?) foliation; commonly miarolitic in eastern area; commonly gneissic and migmatitic in west; PKgd = foliated diorite phase*

LATE CRETACEOUS TO PALEOCENE
FOUR MILE PLUTONIC SUITE (U/Pb ca. 62-73 Ma)

LKFM — *Muscovite-biotite granite; coarse-grained, equigranular; muscovite 0-8%; locally contains garnet, pink orthoclase megacrysts; aplite dykes with pegmatitic segregations bearing garnet and muscovite; unfoliated except possibly at margins; forms prominent cliffs characterized by 'onion-skin' exfoliation joints*

LATE CRETACEOUS
FOUGNER PLUTONIC SUITE (U/Pb ca. 68 Ma)

LKF — *±Pyroxene-hornblende-biotite quartz diorite to granodiorite; medium- to coarse-grained, equigranular to locally inequigranular with potassium feldspar megacrysts, homogeneous; distinct salt-and-pepper fresh appearance with conspicuous sphene*

LATE JURASSIC
STICK PASS PLUTONIC SUITE (U/Pb ca. 148-156 Ma)

LJSP — *Hornblende-biotite quartz monzodiorite to granite; medium- to coarse-grained, equigranular to inequigranular; distinctive mottled dark pink and light green appearance; abundant quartz, epidote veining*

MIDDLE JURASSIC
Trapper Peak pluton (U/Pb ca. 170 Ma)

MJTP — *Hornblende-granite to lesser biotite-hornblende granite, medium- to coarse-grained, equigranular to inequigranular, distinct light purple to medium pink K-spar oikocrysts enclose quartz, hornblende and plagioclase; plagioclase locally saussuritized to light green colour; pluton locally cut by small epidote veins and numerous hornblende- andesite, basalt, and rhyolite dykes*

EARLY(?) JURASSIC
Chatsquot layered mafic intrusion

EJc — *Compositionally-layered clinopyroxene gabbro, olivine gabbro, anorthosite and lesser magnetite-olivine websterite; compositional layers <1.0m thick and alternate between light-coloured anorthosite and darker gabbro and ultramafic layers; cut by numerous andesite porphyry and rhyolite dykes with associated intrusion breccias; locally mineralized with Cu-Ni-sulfides*

EARLY JURASSIC
TENAIKO PLUTONIC SUITE

JKT — *Compositionally and texturally heterogeneous assemblage of coarse-grained pyroxene-hornblende gabbro to medium- to coarse-grained hornblende diorite to quartz diorite; lesser hornblende granodiorite; locally contains abundant mafic and ultramafic xenoliths and metavolcanic screens ranging from a few centimetres to 10s of metres in length*

SYMBOLS

Geological contact (defined, approximate, assumed)
Facies boundary (approximate)
Fault, normal (defined, approximate, assumed)
Fault, normal, down dropped on side with balls (defined, approximate, assumed)
Fault, compressional, assumed (teeth on upthrust side)
Shear zone boundary
Shear zone (inclined) 35
Fold axis 45
Bedding (tops unknown inclined, tops known inclined, overturned) 45 35 45
Igneous layering 45
Flow contact 45
Foliation (inclined, vertical) 15
Joint (inclined, vertical) 45
Dyke (inclined, vertical) 45
Gossan
Landslide scarp
Kr-Ar age determination locality with ID number 6
U-Pb age determination locality with ID number 7
MINFILE occurrence with ID number 4
Park boundary

MINFILE*

MAP #	MINFILNO	NAME	COMMODITY	STATUS	DEP_CODE
1	093E 015	EARLAKE	AU, AG, CU	Showing	I05,I02
2	093E 010	KIM	CU, MO	Showing	L04
3	093E 117	POOR SAM (DICK)	CU	Showing	G06,L01
4	093E 118	POOR SAM (DISCOVERY)	ZN, CU, AU	Showing	G06,L01

* Data from British Columbia Geological Survey Branch MINFILE Mineral Inventory
COMMODITY abbreviations: AU = gold, AG = silver, CU = Copper, PB = Lead
DEP_CODE abbreviations: G06 = Noranda/Kuroko massive sulphide Cu-Pb-Zn; I02 = Intrusion-related Au pyrrhotite veins; I05 = Polymetallic veins Ag-Pb-Zn±Au; L01= Subvolcanic Cu-Ag-Au (As-Sb); L04 = PorphyryCu±Mo±Au;

GEOCHRONOLOGY

MAP #	FIELD #	LOCATION	AGE (Ma)	MINERAL	METHOD*	REFERENCE
1	85-WV-TRAP	Trapper Mtn	177.4 ± 0.7	Zircon	U/Pb	1
2	HFB-05-52	Ear Lake North	170.3 ± 1.0	Zircon	U/Pb	This report
3	68-JBM-04	Gable Mtn West	177.1 ± 1.3	Zircon	U/Pb	This report
4	85-WV-WHIT	Whitecone Peak	156 ± 1	Zircon	U/Pb	1
5	78-WV-217	George Peak	124 ± 8	Hornblende	K/Ar	2
6	71-JBM-04	Trapper Mtn	170.5 ± 0.7	Zircon	U/Pb	This report
7	90-JBM-04	Crawford Peak	155.4 ± 0.8	Zircon	U/Pb	This report
8	111-JBM-04	Chatsquot Mtn North	219.6 ± 1.3	Zircon	U/Pb	This report

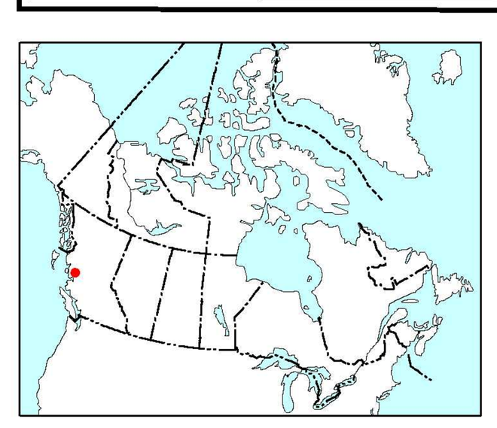
* All new Geochronology done at Pacific Centre for Isotopic and Geochemical Research, University of British Columbia; U/Pb analyses by R.M. Friedman

REFERENCES
[1] van der Heyden, P., 1989, U-Pb and K-Ar geochronometry of the Coast Plutonic Complex, 53°N to 54°N, British Columbia, and implications for the Insular-Intermontane superterrane boundary: University of British Columbia, Ph.D. thesis, 392 p.
[2] Stevens, R.D., Delabio, R.N., and Lachance, G.R., 1982, Age determinations and geological studies, K-Ar isotopic ages, Report 15; Geological Survey of Canada, Paper 81-2, 56 p. (Date 80-36)

PALEONTOLOGY*

MAP #	GSC #	FIELD #	COLLECTOR	DATE	FOSSILS	AGE	IDENTIFIER	REFERENCE**
1	96297	78-WV-247	G.J. Woodsworth	1978	Bivalves, indet.; Brachiopods, indet.	Triassic? Jurassic?	H.W. Tipper J.W. Haggart	This report
2	C-307252	HFB-04-Smaby fossils float	J.W. Haggart	2004	Bivalves, indet.	Jurassic?	J.W. Haggart	This report
3	C-307256	149-JBM-04	J.B. Mahoney	2004	Probable hildoceratid ammonite, cf. *Dumortieria* sp.; *Pleuromya* sp.; Bivalve fragments, indet.	Early Jurassic, possibly Toarcian	J.W. Haggart	JWH-2005-01
4	C-307257	HFB-04-Smaby fossils in situ	J.W. Haggart	2004	Bivalves, indet.; *Pleuromya* (?) sp.; Brachiopods, indet.	Jurassic?	J.W. Haggart	This report

* compiled by J.W. Haggart
** unpublished GSC Paleontological Report numbers


LOCATION MAP

Geology by J.B. Mahoney (2004), R.L. Hooper (2004), S.M. Gordee (2004), and J.W. Haggart (2004)

Geological compilation by J.B. Mahoney, R.L. Hooper, S.M. Gordee, and J.W. Haggart

Digital cartography by M. Ceh and N.L. Hastings

Contribution of Geological Survey of Canada's Bella Coola Targeted Geoscience Initiative, Cordilleran Energy and Minerals Project Number Y15 and British Columbia Rocks to Riches Program, Project Number 2005-032

GSC OPEN FILE 5386 (revised)
GEOSCIENCE BC MAP 2006-2 (revised)

GEOLOGY

FORESIGHT MOUNTAIN (93E/03)

BRITISH COLUMBIA

Scale 1:50 000/Échelle 1/50 000

kilometres 1 0 1 2 3 4 kilomètres

Universal Transverse Mercator Projection
North American Datum 1983

Projection transverse universelle de Mercator
Système de référence géodésique nord-américain, 1983

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Digital base map from data compiled by Geomatics Canada modified by Geological Survey of Canada

Mean magnetic declination 2007, 20° 16´E, decreasing 15.0´ annually. Readings vary from 20° 21´E in the northwest to 20° 11´E in the southeast corner of the map

Elevations in metres above mean sea level

Contour interval 100 feet

93 E/05	93 E/06	93 E/07
93 E/04	93 E/03 OF5386	93 E/02 OF5387
93 D/13	93 D/14	93 D/15

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

Pacific Centre for Isotopic and Geochemical Research PCIGR
University of Wisconsin Eau Claire Excellence

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5386
GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA
2007

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Les dossiers publics sont des produits qui n'ont pas été soumis au processus officiel de publication de la CGC.

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