ENCL 17-c

COMPOSITE
Surface Log

Name SOUTHWEST WRANGELL MOUNTAINS
AREA OR QUAD GULKANA AND McCARTHY **STATE** ALASKA
LOCATION ______ **Sec.** ____ **TWN**3N-4S **RNG**4E-10E, CRM
MEASURED BY Composited by Doug Powell **DATE** 12-23-75
INTERVAL Quaternary to Pennsylvanian
REMARKS Composite of Surface Sections by Amoco, 1974 and published data by the USGS.

LOCATION ______ **N** ______ **W**

PLOTTED BY JDP **DATE** 1-6-76

Location of sample which has been radiometrically age-dated.

SOURCE ROCK Sample
F(o) = Generating Capab.Lity: Non, Poor, Fair, Good / (Hydro carbon type Oil, Gas, WET Gas)
89.9 = Carbonization scale in % (Elemental)
5 = Carbonization scale (Visual)

PERIODS	EPOCHS	GROUP or FM.	MEMBER	AGES (Stages)	FOSSILS	CORES	SHOWS	DEPTH	LITHOLOGY	POROSITY	SAMPLES	DESCRIPTION	LOCALITY

QUATERNARY — TERTIARY: PLIOCENE — MIOCENE?: WRANGELL LAVA; FREDERIKA FM.?

600'± Surficial Deposits: Glacio-Alluvial

NOTE: In vicinity of Mount Sanford, Mount Wrangell and Mount Blackburn the cone development of Wrangell Lavas probably exceed 10000'. — Mount Drum Area Mendenhall, 1905 USGS PP 41, pp 55-56

"Sucession of Lavas with Little or no fragmental material" (4000-5000')
Mainly Andesite and basalt Lavas
Slight western and Northern Dip

8400'

"Series of Variegated Tuffs" (1000-2000')
Probably pyroclastics intercalated with Lava Flows.

"Massive Flows" (300-400')

"Basal Series of Variegated Tuffs" (1000'
Probably includes Conglomerates, Sandstones, Siltstones, shales and coaly beds intercalated with Wrangell Lavas as noted in short section at Chokosna River section.

UNCONFORMITY

CRETACEOUS — LOWER CRETACEOUS: KENNICOTT FORMATION; ALBIAN (LATE, EARLY); NELCHINA FORMATION: NEOCOMIAN, HAUTERIVIAN (LOWER, LOWER)

Fossils: Puzosia Alaskana; Aucellina
Samples: F(G) 74.4* 4; F(O) 89.9 5; G(W) 80.1* 5-6

650'± Siltstone, Limestone concretions, marine Fossils.
Shale and Siltstones, Carbonaceous, with animal Trails.
19.4% ϕ 38.5 Mds — Shale, silty-Siltstone, thin sandstone (good porosity) bed of granite wash, onlaps on Granodiorite Intrusive
Shale, Silty-Siltstone, Siliceous (?)
Shale, dark grey-black, hard

Localities: Snider Peak Section Sec 1 & 2, T3N, R4E CRM and Grantz, etal, 1966, USGS, PP 550-C, Gulkana A-6 Quadrangle. Chokosna River section, Sec 34, T.3S, R10E and Sec 3, T.4S, R10E, CRM. and Grantz, etal, 1966, McCarthy C-7 Quadrangle.

1500'± Numerous bedded Limestone concretions and Calcareous siltstone zone. Probabl Aucellina zone of Grantz, 1966

CONTACTS NOT SEEN 250' Poorly exposed, possible sandstone at base.

UNCONFORMITY

300'± Sandstone, grey, Fine grained, Calcareous, Fossiliferous, Oil Odor on fresh breaks. — Grantz, etal 1966

130' Limestone (calcarenite), Lt. grey-white, oil odor on fresh breaks. On granodiorite intrusive at MacDougall Creek. — Kuskulana Pass and MacDougall Creek Areas.

KAR: 141±5 MY-hornblende — 300'± Sandstone, finegrained, minor quartz, Inoceramus Prisms, Calcareous cement. Pebble-Cobble Conglomerate at base.

UNCONFORMITY

JURASSIC — UPPER JURASSIC: KOTSINA CONGLOMERATE

KAR: 142±5 MY Hornblende from Micro-diorite dike.
2000-2500'±
KAR: 157±6 MY Biotite from granodiorite clast.

"Conglomerate, dark to olive grey, pebble-cobble with boulders in some beds, thick bedded, well rounded with shaly to Lithic or Feldspathic Matrix, contains interbeds and Lenses (tens of feet thick) of sandstone and shale, dark grey, hard with carbonaceous material and plant scraps. Conglomerate Clasts Locally derived, mainly dark rocks of altered volcanic rocks and Triassic Limestones, chert, and argillite with some Light colored and some mafic plutonic rocks, sandstone and quartz. size of clasts appear to decrease toward the southeast."
"Intruded by porphyritic hornblende microdiorite dike"
"The conglomerate mountains are rugged with precipitous cliffs and a rugged skyline." "many of the ridges are practically impassable."
*When this unit exceeds 3500'± the upper member of the McCarthy Fm. (dominantly or entirely Lower Jurassic age) is represented as well as the lower member of the McCarthy Fm. (dominantly or entirely upper Triassic age).

Localities: Grantz, etal, 1966. Sheep Mountain area, from head of Strelna Creek to North side of Kotsina River. Moffit and Mertie, 1923, USGS Bull 745

UNCONFORMITY

JUR-UP.TR — L. JUR-UP. TR: McCARTHY FM. (UPPER & LOWER); UPPER TRIASSIC: NIZINA LS; CHITISTONE LS; KARNIAN-? NORIAN TO SINE

* 300-5000' Shale, black, with varying amounts of thin bedded Limestone and argillite, best developed at base of section. Originally the Kuskulana FM. (includes Nizina Ls and McCarthy FM. Appears to be facies relationship where the Limestones are changing to shales. Unit is 300-5000' thick, thins westward by Truncation on Sheep MTN (T.2-3S, R.7-8E, CRM.) to about 300'.

75'-700'± Limestone, bluish grey, weathers Light grey, basal part massive becoming thinner bedded toward top, with shale partings and interbedded shale Locally Facies to almost totally shale.

Localities: Moffit and Mertie, 1923, USGS Bull 745, Kotsina-Kuskulana District; and Moffit 1938, USGS Bull 894, Geology of the Chitina Valley and adjacent Area.

TRIASSIC — UPPER MIDDLE AND (OR) LOWER UPPER TRIASSIC: NIKOLAI GREENSTONE

6500-7000'± Basaltic Lava flows, dark green, weathers Locally to reddish or reddish brown, coarse Texture, Amygdaloidal.

Southwest Wrangells

Lavas are less vesicular and finer grained.
Pillow structures reported in lower 75'.

UNCONFORMITY

?PERMIAN — LOWER PERMIAN: HASEK CK. FM.
PENNSYLVANIAN — SKOLAI GROUP (STRELNA FORMATION NOW OBSOLETE); STATION CREEK FORMATION: VOLCANICLASTIC MEMBER; VOLCANIC FLOW MEMBER

Chert, thin bedded
Metamorphosed Sedimentary rocks.
Banded Slate or argillite with sandy beds.
Limestone beds and fine grained basalt
Waterlain and subaerial Tuff.
Finegrain basalt
Shaly, Argillaceous beds
Siliceous bed
Fine grained basalt
Silicified Limestone
Gabbro with some Tuffaceous Beds.
7000-8000'± Chert
Gabbro
Lava flows, basaltic some volcaniclastics
Base not exposed.

Localities: Strelna Creek and Nugget Creek and other areas in the Southwest Wrangell Mountains

VVV Quaternary-Tertiary volcanic Flows
VVV Triassic volcanic flows
VVV Pennsylvanian or Permo-Penn. volcanic flows.

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