ENCL 17-d

COMPOSITE
Surface Log

Name UPPER CHITINA VALLEY
AREA OR QUAD McCARTHY **STATE** ALASKA
LOCATION ______ **Sec.** ___ **TWN** 2-8S **RNG** 12-18E, CRM
MEASURED BY composited by Doug Powell **DATE** 12-9-75
INTERVAL Pennsylvanian to Quaternary Rocks.
REMARKS Composite of Surface Sections by Amoco, 1974, and published by U.S.G.S in the McCarthy Area of the Southern Wrangell Mountains of the Upper Chitina Valley Region

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

PLOTTED BY JDP **DATE** 12-9-75

△ SOURCE ROCK SAMPLE
P(O,G,W) Generating Capability: Non, Poor, Fair, Good (Hydrocarbon type: Oil, Gas, wet Gas).
81.7* Carbonization scale % (Elemental analysis)
*= Lower carbon due to weathering or incomplete purification of sample.
5 Carbonization scale (visual)

Surficial Deposits - Glacio-Alluvial

McCARTHY C-5, C-6 QUADRANGLES: MACKEVETT, 1970, USGS GQ-899; MACKEVETT, 1971, USGS BULL 1323; MACKEVETT, 1972, USGS GQ-979

Subaerial lava flows; chiefly andesite and basaltic andesite, subordinate pyroclastic rocks, vitrophyre and continental sedimentary rocks.

Conglomerate Lentil

Andesitic dikes and sills

Basaltic dikes and sills

Felsic hypabyssal rocks.

Intermediate granitic - chiefly granodiorite rocks.

Continental Sedimentary rocks; Conglomerates, pebble to boulder, sandstone, siltstone, shale, carbonaceous shales and lignites. Intercalated flows of Wrangell Lavas.

Sandstone, medium to coarse grained grades into granule to pebble conglomerates; fine grained sandstones and rarely siltstones, mostly light to medium greys, weathers light brown.

MacCOLL RIDGE SECTION SECTIONS 6-7, T8S, R17E, CRM; McCARTHY A-4 QUADRANGLE.

Shale, dark grey - black, blocky with scattered to abundant calcareous concretions, silty in part rare interbeds of thin bedded siltstone and sandstone.

COPPER CREEK SECTION SECTION 20, 28-29, T6S, R17E, CRM, McCARTHY B-4 QUADRANGLE

Igneous intrusives - dikes and sills, up to 50' thick.

MOONSHINE CREEK FORMATION IS 3500' thick in the McCarthy C-4 Quadrangle and is composed of siltstone, sandstone with lesser amounts of conglomerate and shale. It is apparently a facies of the Chititu Formation and is of albian and Cenomanian age.

SCHULZE FORMATION of albian and Cenomanian ages overlies the Kennicott Formation in certain areas. Composed of siliceous shales, siltstones and sandstones. Facies with Moonshine Creek and Chititu Formations. about 200' thick.

Conglomerate, dark grey-brown, pebble to boulder, shale, grey, silty, non calcareous, sandstone, grey, fine-grained, calcareous, poor porosity and permeability

Shale, black, silty with limy concretions; locally basal pebble conglomerate, grey, sandstone matrix.

BEAR CREEK SECTION SECTIONS 14, 15, 22, T.4S, R12E, CRM; McCARTHY C-6 QUADRANGLE

Shale, dark grey, in part silty to siltstone, few thin sandstones and calcareous concretions.

Conglomerate Lentil, dark grey, pebble - cobble grades to sandstone.

LUBBE CREEK SECTION SECTIONS 29, 30, 32, T.3S, R15E, AND SECTIONS 5, 6, 8, 9, T.4S, R 15E, CRM McCARTHY C-5 QUADRANGLE.

Shale and siltstone, dark grey - black some thinly interbedded siltstone, sandstone and shale.

Conglomerate, pebble to cobble, grades to sandstone, lenses of shale and sandstone

Shale, dark grey - black, hard, calcareous, in part silty to thin siltstone beds.

Shale, black, hard, calcareous silty and sandy in lower part with some siltstone beds.

Shale and siltstone, black, weathers reddish-brown, hard. Siliceous limestones, and limy siltstones in part shaly, chert

Interbedded siliceous, calcareous shales, siltstones and limestones

McCARTHY C-5 QUADRANGLE: MacKEVETT, 1970, USGS GQ-899 AND MacKEVETT, 1971, USGS BULL 1323.

"Impure organic calcareous chert (layered), with subordinate spiculite, shale and limestone"

"Carbonaceous shales, impure chert and limestone and subordinate crystalline limestone."

"Limestone, dark greenish grey, thin bedded with chert nodules and lenses"

"Limestone, medium grey, medium to thick bedded with chert nodules"

"Crystalline carbonates best developed in lower part, light to medium grey."

"Dolomites in lower 300'± section in southwest part of Quadrangle" - area of Copper Mines (host rock for Kennicott copper mine deposits

McCARTHY B-4 QUADRANGLE: MacKEVETT AND SMITH, 1972, USGS GQ-943 AND MacKEVETT, 1970, USGS BULL 1333.

Altered Basaltic Lavas, greenish grey, dark grey or olive grey, between 2' and 30' thick, commonly amygdaloidal and porphyritic; largely or entirely of continental origin (flood basalts).

Basal Conglomerate up to 200' thick, grey, predominantly olive grey, pebble and granule size, subrounded clasts with source from Skolai Group, uncommon gabbro and from "Daonella beds", matrix of poorly sorted sandstone.

Siltstone and shale, uncommon limestone and chert nodules.

McCARTHY C-4 QUADRANGLE: MacKEVETT, 1970, USGS GQ-844, AND McCARTHY B-4 QUADRANGLE: MacKEVETT AND SMITH, USGS GQ-943; AND MacKEVETT, 1970, USGS BULL 1333.

Limestone Lentil at top, coarse bioclastic, 1'-10' thick light grey, with variegated yellow and red stained weathered surfaces.

Sandstone, siltstone, shale, limestone, conglomerate and bedded chert, generally thin bedded.

Gabbro intrusives.

"Greywacke, breccia, tuff breccia and volcanic lutite, slightly metamorphosed" Beds up to 100' thick.

"Predominantly massive basalt and basaltic andesite flows; subordinate pillow breccia and coarse volcaniclastic sedimentary rocks; slightly metamorphosed." Flows between 10'-100' thick.

Base NOT Exposed

▨ Quaternary - Tertiary volcanic Flows

▨ Triassic volcanic Flows

▨ Pennsylvanian or Permo-Pennsylvanian volcanic Flows