Amoco Production Company

Surface Log

Name Coal Bluff Section

AREA OR QUAD Port Moller (D-3) 1:63,360 **STATE** Alaska

LOCATION Herendeen Bay **Sec.** 32 **TWN** 50S **RNG** 74W

MEASURED BY Wm Connelly, Lee Smirnoff, Greg Brown **DATE** 12 Aug 77

INTERVAL Coal Valley mbr, Chignik Fm

REMARKS Section measured on beach. Begins at alluvium and ends at Staniukovich Fm. Measured down section from Coal Bluff southward.

LOCATION 55° 48' N 160° 45' W

PLOTTED BY Wm Connelly **DATE** 14 Aug 77

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

① Fluvial deposits, mainly fanglomerate, gray-grn, pebbles to cobbles, well rounded; in ss matrix, med gn, poorly sorted. Many ss lenses 2-4" thick. Congl. clasts mainly volc. with some granitic and metamorphic; locally abt pebbles and cobbles of pumaceous wht volc. rock, probably primary volc. debris.
ss contains < 20% qtz, mainly feldspar, and locally abt. wht pumaceous clasts and pyroxene.
Coaly seams < 1" thick common.
ss interlayers typically topped with coaly layer; possibly overbank deposits.
Unit ① is mainly braided stream deposits.

② Thick bedded dark gray ss, c gn, poor sort with scattered pebbles and granules. Composed mainly of volc. fragments with abt. pyroxene; many porous wht volc. clasts ~1/4" diameter, probably primary volc. debris. Planar and trough x-beds. Local coal beds < 1/2' thick.

③ Fanglomerate very similar to ①. More white pumaceous volc. clasts and tuffaceous matrix in ss.

④ Carbonaceous siltstn and sh, mainly gray brn but with some wht. tuffaceous beds. Many coal beds 1-2' thick 5 to 10' apart. Bentonite beds up to 3' thick.
Lagoonal environment probably.

⑤ Similar to ④ but with interbeds of wht-buff ss, becoming more abt down section. ss is c gn, mod sort, sub angular, mainly feldspar clasts, possibly tuffaceous matrix; occurs as 2-10' beds.
Probably mainly lagoonal but with more marine ss than ④.

Section ends at Staniukovich Fm (?).

Conclusion: Section is a regressive sequence. It begins in shallowest marine to lagoonal conditions, becomes more shaly and coaly and bentonitic up section; passes abruptly into fanglomerate (fluvial). There is good evidence for volcanic activity synchronous with Coal Valley sedimentation: 1) bentonite, 2) volcanogenic ss, 3) pumaceous clasts in congl. and ss.