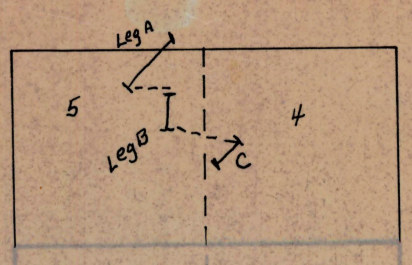
Amoco Production Company

Surface Log



Name: Sandy Lake Section

AREA OR QUAD: Port Moller, D-1 STATE: Alaska

LOCATION: Bear Lake Area Sec. 4,5 TWN 48S RNG 68W

MEASURED BY: L. Smiznov, B. Connelly, E. Amstrong, G. Brown. Date: 9,11 Aug 77

INTERVAL: Tachilni Fm, ~~Bear Lake Fm~~

REMARKS: Measured down section on ridges of south slope 2020 Mnt. Beginning at Leg A at the elevation 1850'. Upper-covered interval

LOCATION: 56°04' N 159°55' W

PLOTTED BY: L. Smiznov DATE: 15/8/77

PERIODS	EPOCHS	GROUP or FM.	MEMBER	Corrected x-beds paleo-current	CORES	SHOWS	DEPTH	LITHOLOGY	POROSITY	SAMPLES	DESCRIPTION
Leg A	Tachilni Fm	Pliocene				2164 F					Ss, brown, f-cg, scattered pebbles, 40% quartz, fossiliferous, bioturbated.
						2165 PP					Ss, white, f-g, arcosic, thin laminated
											Ss, brown, f-g, poorly sorted, a lot volcanic clasts.
						2148 F					Ss, fossiliferous as above, bioturbated.
											Ss, as above, 20-50'
											Ss, dark, vc-g, conglomeratic, poorly sorted volcanic with lenses of conglomerates with pelecypods
						2149 PP					Ss, dark-gray, m-fg, poorly sorted, mainly volcanic clasts, poorly cimented
											Conglomerate boulder size, volcanic, at the base a lot of pelecypods in living position.
						2150 PP					Ss, brown, f-g, sorted, arcosic with wood fragments, porous, bedded.
											Conglomerate as above
											Ss as above
						2151 L 2152 C					Ss, brown, v-cg, poorly sorted, volcanic
				S35W20 N70E 22 N75E 24 S80W22							Ss, as above - 125-160', x-bedded
						2153 Pf					Ss, brown, f-mg, sorted, quartz-volc; several fossiliferous horizons; claystone lenses and conglomerate interbeds; irregular x-beds.
						2154 PP 2155 F					
											Pure exposed interval, ss.
						2156 F					Ss as above, 300-330'
						2157 L					Interbedded: ss, light-gray, vf-g, moderately sorted, feldspathic; occasional conglomerates interlayers up to 2' thick and tuff up to 1'.
Leg B						2158 Pf					Ss and conglomerates as above with thin interlayers of claystones, sometimes flasier beds. At the base - conglomerate boulder size some fossil fragments, clear sedimentary contact with unit 4 - basal conglomerate for Tachilni Fm.
						2159 Pf					
						2160 F 2161 Pf 2163 Pf 2162 L					Angular disconformity represented by slumping zone with ss, yellowish, c-g, arcosic; coal and flasier beds. Contorted beds.
Leg C											Covered interval
			Miocene	S58E24 S5E 32 S33E37 S40E31 S61E36							Ss as above with conglomerates
						2169 Pf					Ss as above, x-beds; organic shales
				N78E24 N33E 27 N52E39							Conglomerate with x-beds and ss lenses
						2166 Pf 2167 PP 2168 L					Ss, gray, vf-g, subrounded, sorted, arcosic, porous, x-bedded; siltstones interlayers up to 3' thick.
				N56W32 N35W42 N24W35							Ss as above with coaly shales
											Covered interval, no further exposures.

Summary: Unit 1 is mainly medium bedded and x-bedded c-g ss, arcosic, bioturbated, fossiliferous. Local occurrence ss with marine fossils in living position, directly overlain by coarse conglomerate suggest that ss was deposited in a shallow marine environment with occasional storm outwashes (?) from nearby rivers or beach deposits (?)
Unit 2 is mainly f-g ss, arcosic with occasional thin interlayers of conglomerates and tuff.
Unit 3 is similar to unit 2 but contains thin interlayers of claystone and flasier beds, that means.....?
Coarsening up section for Tachilni Fm, maybe it means regressive sequence?
Unit 4 and 5 are arcosic ss, with organic shale and coal, probably deposited in lagoonal or tidal flat environments. X-bedded ss paleocurrents indicate transport to SE and NW (along shore), x-bedded conglomerate - to NE (perpendicular to the shore)