Amoco Production Company

Surface Log

Name: Milky Ridge Section
ADR or WELL: Port Moller Alaska
LOCATION: East of Bear Lake 32,21,17 (TS2S,R1E) 4.85 miles 69W
MEASURED BY: L. Swinney, R. Armstrong, P. Brown August 77
INTERVAL: Tachilni, Bear Lake Fm.
REMARKS: Measured along the SW slope of the 3510 Mtn (Log A), NE slope of the 4136 Mtn (Log B), SE slope of the 1000 Mtn (Log C), cliffs between 3245 and 4136 Mtn observed from helicopter (Log D). Top of the section at the top of 3510 Mtn bottom of the section - contact with Bear Lake Fm (Milky River section)
LOCATION: 58°/ 160°2'
PLOTTED BY: L. Swinney DATE: 8/5/77

FORMATION (PHASES)	SAMPLE NO.	DEPTH	LITHOLOGY	POROSITY	SAMPLES	DESCRIPTION
Pliocene Tachilni Fm	1					Basalt lava flow
						Conglomerate, boulder-cobble size, mainly volcanic scoria, interbedded with layers of ss. Coarse, very poorly sorted, angular, mainly volcanic and Ophic clasts
	2					Claystone - shale, yellowish; conglomerate interbedded as above
		3181 ft				
		3182 ft				
						Interbedded andesite and porphyritic andesite flows; agglomerates, dark-gray, andesite - basalt clasts, up to 3'; occasional lenses of ss up to 1' thick as above. Based contacts of lava flows.
						Conglomerate, pebble size, volcanic and Ophic clasts, matrix - ss as above. Occasional shale lenses.
	3					Conglomerate as above, but boulder size
						ss as above
						Andesite porphyry with lenses up to 3' tuff and conglomerate with carbonaceous wooly debris
						ss as above with coaly lenses up to 1' thick
						Agglomerate and conglomerates as above.
						Tuff, gray, massive
	4					
		3404				
		3409 ft				
		3416 ft				Interbedded ss, gray, f-m, extremely poorly sorted, angular clasts - quartz, quartzite, feldspath, s - dotted with big fragments; conglomerates, dark-gray, clasts up to 3'; thin claystones interlayers, up to 1' thick.
	5	3424 ft				
		3427 ft				
		3428 ft				
		3429 ft				
		3430 ft				
Pliocene Tachilni Fm	6	3434 ft				Breccia, brown-yellow, boulder size
						Thin interbedding: ss, gray, f-m, siltstones, white claystones; one foot of thin of bottom conglomerates, conglomerate at the base.
	7	3442 ft				Thin interbedding, ss, yellowish, f-m, moderately sorted; siltstones, claystones, thin conglomerate interbedded, up to 2' thick.
	8	3453 ft				Thin interbedding, ss, gray-white, f-m, poorly sorted, arkosic (with feldspar), s-dotted siltstones; occasional conglomerates as above (with fossils)
	9	3467 ft				Different ss as in the units 7,8; conglomerates as above at the base
	10	3476 ft				Base exposed: ss, gray, c-g, volcanic, fossiliferous / thin laminated siltstones.
	11	3478 ft				Tuff breccia, volcanic clasts up to 1'
		3479 ft				
		3480 ft				Siltstones, gray, thinly bedded; ss as above, s-bedded, gray claystones
		3481 ft				
	12	3483 ft, 3483 ft				
		3485 ft				
		3486 ft				
	13	3486 L				ss, gray - brown, f-g, v poorly sorted, Ophic and quartz clasts, irregular bedding, conglomerate lenses up to 8' thick; 2-8' thick ss used debris.
	14					Covered interval
						Agglomerate, composed of volcanic debris
						Covered interval
		3489 ft				184.4 L.L. avg 80
		3493 ft				Tuff breccia, andesite clasts up to 20 cm, matrix with fragments of basalt, quartz and feldspath; irregular thick contacts
		3495 ft				Conglomerate, ss, brown, extremely poorly sorted cut by andesite dike
		3499				
						Covered interval
		3506 ft				Organic shale
						Tuff breccia as above
						Conglomerates (this part of section - Log D observed from helicopter, because exposed on cliffs)
						Breccia, irregular bedding
Pliocene Tachilni Fm						
						Conglomerates
						Breccia, irregular bedding
						Slump interval, mainly ss. See Milky River section for continuation.
Miocene Bear Lake Fm						

Summary: There are three principal intervals of Tachilni: lower (Log A) dominated by conglomerates and agglomerates, mostly volcanic activity. Middle, regressive cycle from marine to subaerial with the lower and thinnest to ss, conglomerates, because basalt also there (?) predominant with minimal percentage. Upper, subaerial from above; sediments contained much siltstones of volcanic ash. Upper, mainly interest from Log D which shows all the general regards of marine (?) setting. Tremendous change of facies in both directions - many dozens of lava flows and remaining thinner of ss.