Recovery
P = Poor
VP = very poor
F = Fair
● - pollen
● - none
B = Barren

Amoco Production Company

Surface Log

Name: AMERICAN BAY
Area or Quad: Port Moller C-1 State: Alaska
Location: West shore of American Bay 5,8,17,20 T 52S R 70W
Measured by: BROWN-SMIRNOV, Scott Date: 16-17 JULY 77
Interval: Stepovak, Oligocene - Eocene ?
Remarks: Beach section, measured down section, along the western shore of American Bay, from the wave cut terrace exposed at low tide to the crest of the anticline.
Location: 160°8' W 55°42' N
Plotted by: Brown Smirnov Date: 18 JULY 77

Trend of Paleocurrent

Trend of "X-beds" N25E — SO N61E 50SE — flaser bedding — x-beds — ripples — flaser bedding

SS, green-gray, f-med, M sorting, med-granular interbeds (ex. poor sorted) 40% feld, 50% lithic, 10% qtz, granules are volcanic/lithic. granules are sparse, med gr's most common

thin-med bedded sets of trough x-beds.

Medium scale trough x-beds composed of thin bedded trough x-bedsets. shallow marine sands

Strong single trend of paleocurrent

ss as above with coalified wood

scattered oysters with spongeborings, clams, gastropods

Ripple bedded ss, mud laminae in the trough x-beds

425-AP6004F

ss, gray, fine, ang, M. sorted, thinly laminated. the gr. size is fining downward, mactra, ostrea (oyster), coaly wood, bioturbated, near shore interface, occ. large storm clasts, rare wood than fossils, concretions - calcareous ≈ 5" dia

6-5 — SO 48 N58E 48SE — 535-AP5179PF shale, gray, slightly silty

burrows

ss, gray, fine, s-ang, m sorted, massive, burrows, occasional granular interbeds 1" thick (from storms)

865-AP5180PP 10.0% 0.05MD concretions as above

905-AP6005F Fossils, Acila, pectin?, wood

Trend of "X-beds" N35W — flaser bedding ripple laminations — 5 — 945-AP5181PF, 950-AP5182PP 3.5% <0.05MD

ss, gray, crse, sang-ang., p. sorted, flaser bedding (near shore shelf) interbedded, thin beds of crse + med sand, ripple laminated ≈ 20' thick

N60E 41SE — 980-AP5183PP 7.0% 1.04MD

ss, tan, crse - med, s-ang, mod sorted, 15% qtz, 40% feld, 45% lithic,

Trend of X-beds N — thick bedded sets of thin bedded wedge planar x-beds - (wave bar)

Float from this interval contains mactra clams

covered interval probably shale

4 — 1095-AP5184PF siltstone, gray, badly weathered, poorly exposed, poor samples, thin laminations

occasional thin interbeds of fine ss.

1190-AP5184PF (crossed out)

5-6 — SO 45 N61E 45SE — 1325-AP5185PF, AP5186SR

ss. gray, med-crse, ang, p. sorted, green clasts, thinly laminated

sh, gray, lots of iron, conc. - calcareous - sub spherical,

F-Gas - Early Peak Gas - .7%

ss. gray, fine, plant frags, conc. as above.

5-6 — bioturbation — 1410-AP6006F, 1425-AP5187PF

shale, gray, silty, ferruginous stains, sparse fossils - articulated, upright position

sparse fossils

burrows — bioturbated — 1640-AP6007

ss, gray, fine, ang, m. sorted, homogeneous, massive; Fossils - mactra clams, oysters, scaphopod, burrows, slightly bioturbated, coaly wood frags, random calc. concretions ≈ 8" dia.

ss, as above with some thin beds of crse ss

Trend of "X-beds" N15E — Fault — SO 36 N60E 36SE

Fault, direction & displacement undetermined

ss, gray, crse-med, ang, p. sorted, crse at top grading downward to fine, thin granular interbeds at the top

flaser bedding — clay laminations in ss

burrows — 2270-AP5188PP 6.5% <0.05MD

ss, gray-green, fine-med, ang, p sorted, few small burrows nodules, mactra, oyster frags, chondrites burrows, coaly wood

FAULT — small fault direction unknown

ss, gray, crse, p. sorted, volcanic grains

Trend of "X-beds" 20SE — SO 40 N66E 40SE wedged planar x-beds

wedge planar x-beds, main trend S60E however minor trends to the NW

ss, gray, crse-granular, volcanic clasts, some iron conc.

Rip ups — FLASER BEDDING

ss, gray, fine, ang, m-p sorted, flaser bedding (inter beds of clay in ss) occ. thin laminated mudstone & f. ss. some mudstone rip up clasts 1-2", volcanic - andesite clasts

Trend of "X-beds" S40E — ripples festoon x-beds

thin laminations of ss & mudstone, ss as above

6 — 3220-AP5189PF B

ss, gray, fine as above & siltstone, highly fe-stained, green volcanic clasts

occasional crse ss interbeds

wedge planar x-beds

ss, gray-green, crse - vcrse, ang, v.p. sorted, lithic & volcanic clasts

flaser bedding ripups burrows

ss, pink, m-crse, ang, v.p. sorted, flaser bedding, ferruginous, mudstone laminations (flaser bedding)

wedge planar x-beds

Large fault, appears to be about 3' of displacement

Trend of "X-beds" SE — ripups burrows N68E 36SE — burrows wedge planar x-beds

ss, as above with clay pebble fragments ≈ 3" dia - ripups burrows

4030-AP5190PP 5.3% <0.05MD

7 — 4080-AP5191PF

siltstone, gray,

ss, gray, med, ang, m. sorted, poor porosity, burrowed, chondrites crse ss - granules at top. grading down ward to siltstone

ripples

conglomerate, green, cobble - pebble, poor porosity, tuffaceous, polymictic, coarsening upwards

ss, gray-green, f-med, ang, p sorted, volcanic grains

tuffaceous conglomerate as above

ss as above

COVERED INTERVAL

ss, tan, crse-med, ang, p. sorted, massive

siltstone, light tan, pyrite mineralization

4765-AP5192PP 3.8% <0.05MD ss, gray, f., ang, p. sorted

Andesite flow or sill

flaser bedding ripups

ss, gray, f, ang, m. sorted, poor porosity, flaser bedding, ripup clasts

7-6 — 4855-AP5193PF shale, dk. gray, silty

N60E 39SE — burrows

ss, dk-gray, m-crse, ang., p. sorted, poor porosity, volcanic frags.

siltstone, dk.-gray, thinly bedded, Fossils - mactra, Acila, burrows, concretions ≈ 2" dia

7-6 — 5090-AP5194PF

Lava flows

5140-AP6008F

siltstone, as above

Andesite dike

7 — 5275-AP5195PF, AP5196SR F-Gas - Peak Gas - .9%

siltstone, as above, scattered clams & gastropods concretions ≈ 6" dia

7 — 5505-AP5197PF shale, dk.-gray, thinly bedded

siltstone, dk. gray, thin interbeds of med ss. near the bottom, random plant frags.

7 — 5840-AP5198PF, AP5199SR F-Gas - advanced? - .7%

N70E 39SE

siltstone as above

6100 Mudstone, thin laminated

Covered interval

Lahar, green, volcanic and sedimentary rocks' clasts up to 2"

Trend of x-beds N65W N80W

6820 AP6009PP 4.9% 0.95MD

Ss, green-gray, vc-g, poorly sorted, lithic and volcanic clasts. Cross-bedding sets up to 3' thick. The most coarse ss at the top.

Interbedded: ss, dark, f-g and siltstones

7000 Ss, gray, vc-g, poorly sorted, lithic and feldspathic clasts. Vertical andesite? dike.

7 — 7120 AP6010 Pf, 6011 SR F-Gas - Advanced? - .7%

Thin interbedded: ss, dark, f-g; siltstones; occasional volcanic ss up to 1' thick with increasing thickness down section.

7 — 7780 AP6012 Pf

8000

7 — 8130 AP6013 Pf, 6014 SR F-Gas - Advanced - .8%

Claystone.

Interbedded: ss, gray, m-f-g, graded, lithic and feldspathic clasts, massive with decreasing thickness of interbeds down section; ss, dark-gray, f-g, massive; siltstones. There are plant fragments? and clams?

7 — AP6015 Pf

Covered interval

Strike of ripples N55W

Ss, gray, m-f-g, moderately sorted, mainly feldspathic, massive with scattered pebbles and oysters.

Interbedded: siltstones with ripple marks; ss, gray, m-g, moderately sorted, as above but without oysters, graded - coarse ss at the top; conglomeratic ss at the base with clasts up to 10" of different sedimentary rocks. Vertical dikes of basic rock and tectonical breccia, one interbed of basic porphyritic extrusive.

Basic porphyritic intrusive

Ss, gray, c-f-g - graded, mainly lithic fragments Thickness of the rythm up to 3'.

9000 Intrusive as above with vertical dike of basic rock.

Interbedded: ss, gray c-g, poorly sorted, lithic and feldspathic clasts, massive; ss, graded as above; siltstones. Cut by tectonical breccia.

Conglomerates with boulder size clasts of different rocks, matrix - v.c-g ss.

Last part of the section exactly at the crest of anticline.

Summary:

7120-9130 Lower-most interval (8750-9130) is complex, containing congl. and ss and graded beds. It followed by a transgressive sequence of siltstones with progressively fewer volcanic ss up section

6100-7120 and down Regressive - transgressive cycle. Coarsening up sequence: vcg ss, volcanic - lahar - probably siltstone (covered interval) - mudstone

4650-6100 Siltstones, comparatively stable, probably deep marine environment.

1500-4650 Regressive - transgressive cycle: vcg ss - coarsening up section conglomerates - ss and siltstones - shale. Paleocurrents are bimodal NE-SW (parallel to shore?) and unimodal SE (perpendicular to shore down paleoslope?)

0-1500 Regressive sequence: Shale and siltstone - ss. NE paleo stable shallow marine terrigenous