Amoco Production Company

Surface Log

Name ASPEN CREEK SECTION

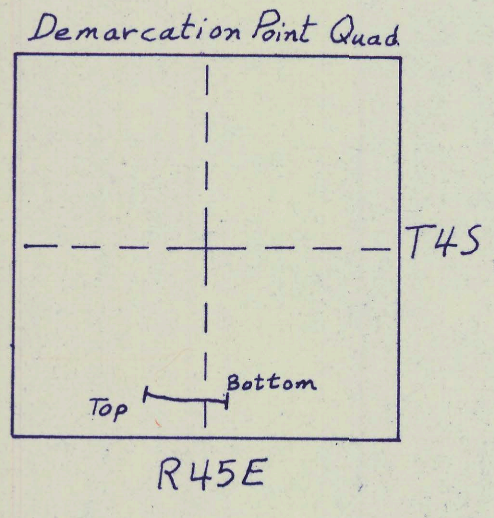
COUNTY SE BROOKS RANGE **STATE** ALASKA

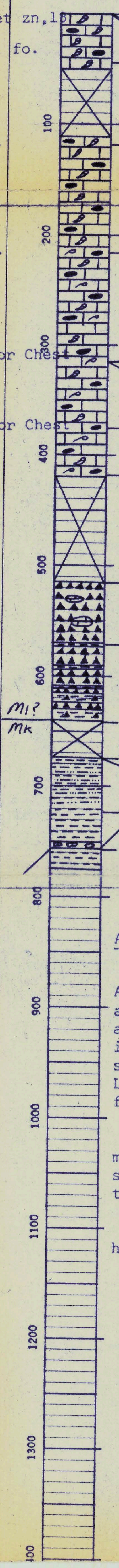
LOCATION ____ °N ____ °W **Sec.** S½ **TWN** 4S **RNG** 45E

MEASURED BY Fehlmann, Hankinson, Self **DATE** 6/26/71

INTERVAL Lisburne Kayak

REMARKS Section is acrss contact only. Neither formation's section is complete. Demarcation Point Quad.





Mamet zn, 18 / Mer. fo. — FCH709L; FCH710-11L; FCH712 — Ls, dk gy-blk, finely xln, sooty, strong fetid odor, yields acid cut, w/ abdnt colonial & rugose corals, crinoids, occ. dk cht nods at top, becomes 50% cht at base of unit.

Covered, rubble indicates Ls & cht, AA.

Mer. — FCH713L — Ls, dk gy-blk, fetid odor, cinoidal packstn w/minor dk cht lenses & nods. The entire unit alternates w/crinoidal packstn & dk xln Ls, AA. Cht % varies from 0-50%.

Mer. — FCH714L — Ls, AA, w/brachs

Mer. or Chest — FCH715L; FCH716 — Ls, AA, except crinoidal packstns exhibit minor vuggy porosity.

Mer. or Chest — FCH717 (float) — Ls, crinoidal packstn & finely xln AA, both cht and Ls are finely laminated. The cht appears to have replaced the limestone.

FCH718L — Covered - ~~Rubble~~ indicates Ls, AA.

FCH719L; FCH720L — Cht, black, thin to medium bedded rare irregular limestone nodules and lenses. (@5%), downward increase in abundance of thin shaley stringers. Unit grades downward into silicious dark grey-black, brown wxing shale. Chert appears to have replaced the limestone and some of the shale.

FCH721L — Covered - Shale?

FCH722Sr; FCH723L (float); FCH724Sr — Silst & sh, blk platy & fissile, hard (slaty), w/Ironstone conc. grades downward into shale. The hard nature of the shale and siltstone probably is due to silification.

FCH725LP — Tectonic breccia w/clasts of sh. & silst, AA. Fault zone

Shale, AA.

<u>Aspen Creek 1971</u> (Lisburne Kayak)

Amoco measured a 775' section across the Lisburne Kayak (Mississippian) contact at Aspen Creek. The section is incomplete for both formations. The lower 135' of the section are assigned to the Kayak Formation and consist of dark shale and siltstone. The upper 640' are assigned to the Lisburne Formation and consist of two units. The basal, black chert unit is 125' thick and grades both down into the Kayak and up through scattered, irregular limestone nodules into the crinoidal, coral-rich upper limestone unit. The true thickness of the Lisburne is unknown, but its upper contact with the Echooka (Permian) was measured and sampled four miles to the south at Joe Creek.

The Kayak shales and siltstones were deposited in quiet near-shore or protected marine shelf waters while the Lisburne represents carbonate deposition on an open marine shelf. The cherts at the base of the Lisburne have replaced the carbonates and silicified the siltstones and shales of the upper Kayak.

Based on data from megafossils and forams, the upper 375' of the section (Lisburne) have been dated as Meramec. No age data is available for the lower half of the section.