

Section PR136 was a symmetrical cross section with a central bar in the middle of the channel when it was established in 1975. Both banks are on Moorcroft-level terraces. It was resurveyed annually during the 4 consecutive years 1977-1980, resurveyed in 1982, resurveyed annually during the 15 consecutive years 1984-1998, and, after a 13-year hiatus, was surveyed in 2012.

The flood of May 1978 caused no erosion of the approximately 3.5-m high banks or of the central bar, and thus had little effect on the shape and size of the channel cross section. The secondary channel along the right bank was deepened by about 50 cm during 1979. The greatest change came between 1980 and 1982 when the elevation of the central bar was raised 20-30 cm, and again by about 10 cm during the spring runoff in 1987. Photos taken in 1987 (see photo section) show the central bar vegetated so that it could be designated as an island.

This island was essentially new flood plain that was augmented again in 1993 along both edges as levees 10-20 cm in height and then raised an additional 20-40 cm across the entire island during 1995 (Moody and others, 1999). During the entire time from 1978 to 1995 there was essentially no erosion of either bank. Between 1995 and 2012, the left bank was eroded about 3.5 m near the top of the bank, a possible bench-like feature (Page and Nanson, 1982) was deposited at the base of the left bank of the island, and the secondary channel along the right bank of the cross section degraded by about 1.0 m.

Moody, J.A., Pizzuto, J.E., and Meade, R.H., 1999, Ontogeny of a flood plain: *Geological Society of America Bulletin*, v. 111, p. 291-303.

Page, K., and Nanson, G., 1982, Concave-bank benches and associated floodplain formation: *Earth Surface Processes and Landforms*, v. 7, 529-543.





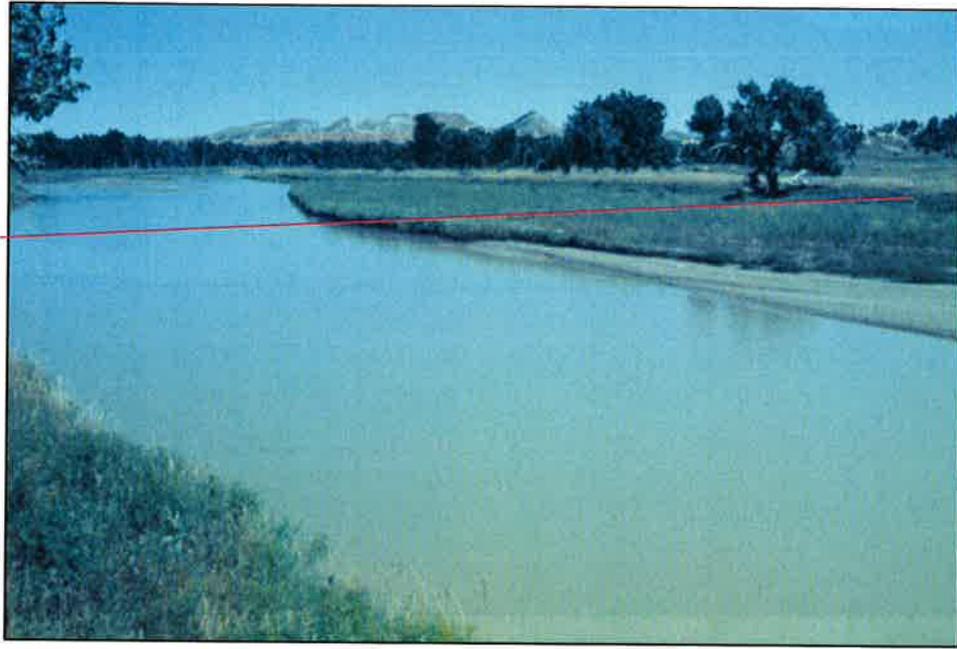
PR136. **Top.** 22 July 1977. View upriver. E. Meade (~1.6 m tall) in red circle is standing on the section. **Bottom.** 16 August 1979. View is downriver from bedrock knoll, about half a kilometer upriver of section. Red line is approximate line of section.



PR136. **Top.** 26 September 1987. View downriver from knoll. **Bottom.** 21 September 1988. Zoom lens view downriver from knoll. Red lines indicate the approximate line of section.



PR136. **Top.** 3 September 1994. Sediment deposits that surrounded ice blocks about 500 m downstream from PR136 on the left bank. View is upriver. **Bottom.** 11 March 1995. View upriver with ice on upriver end of emerging island. Survey rod in orange cover is on the section. Knoll (under white arrow) from which other pictures were taken is in the upper right.



PR136. **Top.** 27 August 1993. View downriver with red line indicating the approximate line of section.