

Field Report from Quarry Excavation at the Hanson Ranch Field Station, Roxon, Wyoming.

Season of 1998

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The field season of 1998 was abbreviated as a result of a variety of circumstances that resulted in no class being offered during that summer. However, because of the importance of the site and its proper utilization to the Hansons and to the Hanson Ranch Research Station, Dr. Spencer and I felt the need to visit the ranch to reaffirm our commitment to continuing an educational program there. We spent several days at the ranch, visiting new potential sites with Mr. Hanson, and assessing the sites with respect to the possible need for salvage operations and the potential for development. We also examined the dig site from the previous season to assess its condition and the degree of protection afforded by our closing of the site. We confirmed that the barbed wire barrier was adequate to exclude cattle, and that the 6 mil continuous plastic that we had employed for covering the site was still intact. The flatness of the quarry floor had indeed prevented the accumulation of standing water, and the site looked like it would stand another season.

We examined outcrops in a number of locations on the ranch for sedimentary indicators of rapid deposition. We were able to locate sand volcanoes at several sites, and evidences for rapid evulsion of water at a number of other sites. All of these features were consistent with very rapid sedimentation, in which the entrapment of water in the sediment leads to forceful expulsion of water penecontemporaneously. We examined a series of outcrops for paleocurrent indicators and sedimentary indicators that were consistent with the rapid emplacement of sediment-choked water as suggested by the research from the previous season. We were able to find a series of cross-bedded sandstones that gave promise for further sedimentary study.

We spent some time at an outcrop near the northwest corner of the property just south of the county line. Here we found a very different distribution of biota than that we had seen at the dig site of the previous year. The deposit here consisted of fragmentary materials, including some "nests" of gar scales, and abundant turtle scutes. We also found a palm frond and sections that appeared to be made up almost entirely of plant macerates with occasional carbonized sticks and branches. This area appears to be a very good section to do sieving for small vertebrate remains and particularly for the mammal teeth known to come from the Lance Formation.