The Goddard Youth Camp and Center

by Robert Allen,
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L to r, author Bob Allen shown with Goddard director Wayne Edgar and his son, Preston Edgar, at the Goddard Youth Center.

The Goddard Youth Camp is a camp where students, grades K through 12, spend from one day to one week learning about nature. They study the environment, water resources, plants, animals, rocks, and fossils. The camp is located approximately 7 miles south and 3 miles west of Sulphur, Murray County, Oklahoma, on the south shore of the Lake of the Arbuckles.

Mr. Wayne Edgar, along with his wife and sons, Preston and Clayton, manage the camp and teach the students. The camp museum has collections of Indian artifacts, fish and wildlife. The camp also has the "Arcocanthosaurus Atokensis," the only complete specimen of this dinosaur in the state of Oklahoma.

Geologically, this camp is in the Arbuckle Mountains and is built on the Silurian-Devonian Hunton limestone formation. The entire Paleozoic section, Springer through Arbuckle, outcrops within a few miles of this camp. Excellent fossil collecting localities are near camp. The Edgar family, along with Allen Graffham, an Ardmore geologist and paleontologist, have combed the entire area for fossils. Students have an area within the camp where they can find and identify fossils. This is an excellent introduction to surface geology.

In the spring of 2001, Wayne Edgar decided that ***since petroleum industry funding had built Camp Goddard, then the students and their teachers should learn something about oil and gas.*** He asked board member Allen Graffham for advise and my name was mentioned. Following a phone call from Edgar, I took him a copy of my article "Stratigraphy, Mountain Building and Complex Geological Structures of

the Ardmore Basin." This was published in December, 2000, in the "Shale Shaker," the journal of the Oklahoma City Geological Society.

Two weeks later, Edgar called me. The Oklahoma Energy Resources Board had funded a project for the Goddard Youth Center to demonstrate oil and gas in the subsurface. The question was "how is oil and gas trapped in the subsurface?" Wayne selected from my article the structural cross section that crosses from the SW/4 to the NE/4 of Davis on Highway 7 (the road is on the south line of Section 34). This cross section was selected because it demonstrates a multiplicity of possible structural traps in rocks that are close in proximity to the camp and to the students.

A large teaching cross section was proposed. Mr. and Mrs. Shane Womack, who are taxidermist and artist from Broken Bow, Oklahoma, were called and work on the cross section began. A session was held with the Edgars, Womacks and myself.

The cross section is carved on high density foam that is 18" thick. It covers a wall 35 feet long and 9.5 feet high (see figure above). It shows structural and stratigraphic oil and gas traps, an unconformity with onlap and both normal and reverse faults. The sand beds are actually made from Basal Oil Creek sand. The Hunton lime has trilobites, crinoids, brachiopods, and other fossils embedded within it. The Caney sale contains embedded concretions. The beds are colored and appear as they are seen on the ground surface.

With the aid of this cross section, people will be able to visualize what can be underneath their feet in the subsurface, and how difficult it is to drill a succesful oil or gas well. In conjunction with the cross section, students have microscopes to study rocks, minerals, fossils, and microfossils. These microscopes were donated by the School of Geology and Geophysics at the University of Oklahoma.

Perhaps an interest can be instilled in young students to pursue a future as an earth scientist. The Goddard Youth Center and Camp are definitely a step in the right direction.