Terminal for Southwest Oklahoma

GAVILON GRAIN OPENS ITS NEWEST CONCRETE ELEVATOR WITH LOOP TRACK

Since acquiring the Peavey grain business from ConAgra in 2008, Gavilon Grain, LLC has been expanding its grain handling and merchandising business at a breakneck pace, both through acquisitions and construction of new facilities. The company’s acquisition of the DeBruce Companies last year, for example, made Gavilon the third largest grain handler in the United States, after ADM and Cargill.

On the construction side of the equation, Gavilon has built brand new elevators in New Rockford, ND and Moore, MT and is expanding its Valley City, ND facility. Two new concrete rail terminals are under construction in southwest Nebraska and north central Montana.

And the newest greenfield elevator to open for business is in Headrick, OK (877-648-1733), about five miles east of Altus, OK, in the southwest corner of the state. Gavilon loaded its first shuttle train on the Burlington Northern Santa Fe (BNSF) in mid-January 2011.

“We are very pleased to be expanding our grain facility network in southwest Oklahoma,” says Mark Sethre, a 25-year veteran of the Peavey system, who most recently managed a grain elevator in Terre Haute, IN. “The Altus location complements our existing grain elevators in the surrounding region, including the Port of Catoosa in Oklahoma, and Saginaw and Wichita Falls in north Texas.”

The Facility

Gavilon Grain constructed a 5.2-million-
bushel facility, including 1.2 million bushels in upright concrete storage, a pair of 2-million-bushel temporary storage piles, and a 7,875-foot loop track with the capacity to service 110-car BNSF shuttle trains. The cost is confidential.

The company hired Vigen Construction, Inc., Grand Forks, ND (218-773-1159), as general contractor and millwright on the project. Creek Electric Inc., Wichita, KS (316-943-5888), served as electrical contractor and supplied the control systems. U.S. TrackWorks LLC, Wayland, MI (616-877-4284) constructed the loop track from standard 112-lb. rail and wood crossties.

Construction broke ground in November 2009, and the facility was ready to start receiving grain 12 months later.

**Grain Storage**

The main elevator includes two 500,000-bushel and two 120,000-bushel slipform concrete tanks plus one interstice tank.

The two big tanks stand 76 feet in diameter and 140 feet tall. They have flat concrete floors and 16-inch GSI sweep augers but no grain temperature cables, since the facility is designed for rapid turnaround of grain. A set of four 50-hp AIRLANCO centrifugal fans supply the recommended 1/5 cfm per bushel worth of aeration for small grains through in-floor ducting.

The two smaller tanks stand 36 feet...
Two of four main tanks at the elevator are outfitted with KanalSystem floors designed both for aeration and air-assisted unloading. These tanks are outfitted with sloped KanalSystem floors with a side sump. A single 50-hp AIRLANCO centrifugal fan per tank provides air for both aeration and unloading.

Outside, the two Union Iron Works Temp-Stor ground piles measure 1,200 by 120 feet on packed earth. They each have 4-foot-high perforated steel sidewalls and 13 AIRLANCO axial fans rated at 5 hp each.

The ground piles are fed from the main elevator by a 20,000-bph McCord open belt conveyor running between the two piles. The belt includes a track-mounted tripper arm that moves the length of the piles scooping up grain from the belt and depositing it inside the ovals.

**Grain Handling Systems**

Grain operations are handled from a single-story brick office building on the south side of U.S. Highway 62. Adjacent to this building, inbound and outbound trucks utilize an 80-x-11-foot METTLER TOLEDO Model VTC221 concrete deck pitless scale, where samples are taken with an Intersystems truck probe. Weights are recorded by a oneWeigh scale management system from AGRIS.

Trucks proceed to one of two 900-bushel receiving pits that are enclosed in a metal-sided structure. The two mechanical pits feed a 20,000-bph or a 40,000-bph Intersystems leg. The pit serving the higher-capacity leg is designed to receive grain from trucks or railcars. The larger of the two legs is equipped with two rows of Tapco 20x8 CC-XD Xtreme Duty elevator buckets mounted on a 42-inch belt, while the 20,000-bph leg has a single row of Tapco 20x8 CC-XD Xtreme Duty buckets on a 42-inch belt.

At the top of the elevator, both legs are equipped with two-way valves that send grain to corresponding-capacity Intersystems drag conveyors that run out to storage or to the bulk weigh loadout system.

The upright storage tanks empty onto a 60,000-bph Hi Roller Hi-Life enclosed belt conveyor in a below-ground tunnel. The two ground piles are emptied by payloaders that dump grain into a hopper to be conveyed via the McCord belt back to the elevator, where in turn, it is deposited onto the Hi Roller belt.

The reclaim conveyor carries grain back to the legs, which in turn, convey it into a 60,000-bph Meier Engineering bulk weigh loadout scale under the control of oneWeigh™ software from AGRIS. Workers atop railcars during loadout are protected by a Tri-Tech cable-type fall protection unit running approximately 10 hopper car lengths.

According to Sethre, he and his staff have been able to load 110-car shuttle trains in 10 hours or less – BNSF gives shippers 15 hours before charging demurrage.

*Ed Zdrojewski, editor*