

The New Chisholm Trail

OKLAHOMA COOP AND TWO MARKETING GROUPS BUILD A RAIL TERMINAL



Farmers Grain Co.

Pond Creek, OK • 580-532-4273

Founded: 1917

Storage capacity: 8.5 million bushels at 13 locations

Annual volume: 13.7 million bushels

Annual revenues: \$138 million

Number of members: 2,200

Number of employees: 90

Crops handled: Hard red winter wheat, corn, soybeans, sorghum

Services: Grain handling and merchandising, feed, agronomy, energy, retail farm supplies, brokerage, insurance, financial services

Key personnel at Medford:

- Scott Bonine, general manager
- Montie Walton, project manager
- Jesse McCants, operations manager
- Meredith Harden, scale operator/ grain grader

Supplier List

Aeration fans..... Tiernan Aeration
Bearing sensors..... CMC Industrial Electronics
Bin sweeps... Prairie Land Millwright
Bucket elevators..... Schlagel Inc.
Bulk weigh scale C&A Scales
Bulk weigh scale controls... Cultura Technologies LLC
Catwalks .. Frisbie Construction Co.
Concrete tanks..... McPherson Concrete Storage Systems, Inc.
Contractor/millwright..... Frisbie Construction Co.
Control system..... Kasa Controls & Automation
Conveyors Schlagel Inc.
Distributor..... Schlagel Inc.
Electrical contractor..... Shawver Electric
Elevator buckets Tapco Inc.
Fall protection Fall Protection Systems Corp.
Grain temp system ... Rolfes@Boone
Level indicators..... BinMaster Level Controls



The new Chisholm Trail Terminal outside of Medford, OK, operated by Farmers Grain Co., features 1.5 million bushels of upright storage and 60,000 bph of receiving and loadout capacity. Aerial photo courtesy of McPherson Concrete Storage Systems.

Historians and Wild West buffs know about the old Chisholm Trail in the 20 years after the Civil War. That was a route along which cattle ranchers drove huge herds from their ranches in Texas up through Oklahoma to the rail heads in Kansas for shipment to the big cities in the east.

A new 6.5-million-bushel rail loading terminal in Medford, OK (580-395-3323), named for the Chisholm Trail that passed nearby, handles grain instead of livestock and is as likely to send it south to the Gulf of Mexico as anywhere else.

“This is the first rail loader in this area on the Union Pacific (UP),” says Montie Walton, project manager for Farmers Grain Co.,

managing partner in the project with 60% ownership of the Chisholm Trail Terminal. Walton joined the cooperative two years ago after working 38 years for W.B. Johnston Grain Co. (now part of CGB Enterprises, Inc.) in Enid, OK.

“All of the other rail terminals in the Enid area are on the BNSF (Burlington Northern



Project Manager Montie Walton

Magnets Bunting Magnetics Co.
Manlift..... BarnesCo
Motion sensors CMC Industrial Electronics
Sampler..... Gamet Mfg. Inc.
Tower support system Frisbie Construction Co.
Truck probe Gamet Mfg. Inc.
Truck scales..... UniBridge Scales Service



An incoming grain truck is weighed on one of two 75-foot UniBridge pitless scales. Ground level photos by Ed Zdrojewski.

Santa Fe),” he continues. “We’re in the middle of a major wheat-producing area, and this was an opportunity to access new markets available along the UP.”

Ownership of the other 40% of the terminal is split between two cooperative merchandising organizations – Equity Marketing Alliance, Enid, and CoMark Grain Marketing LLC, Cheney, KS.

Currently, the Chisholm Trail Terminal is handling strictly hard red winter wheat, though plans are in the works to add sorghum and, maybe, soybeans. The terminal loaded its first 110-car UP shuttle on its 10,000-foot loop track on Oct. 18, 2016.

Fourteen Months of Construction

Work on the \$20 million project broke ground in June 2015. “It went pretty quickly, because we only had about half a dozen days when it was impossible to work, mainly due to wind,” Walton says.

The venture hired Frisbie Construction Co. Inc., Gypsum, KS (785-536-4288), as contractor and McPherson Concrete Storage Systems, Inc., McPherson, KS (800-999-8151), as tank builder.

“McPherson Concrete has built numerous tanks for Farmers Grain in the past,” Walton notes. “Frisbie has a good reputation and a long business history in this part of the country.”

Other players on the project included Kasa Controls & Automation, Salina, KS (800-755-5272), which supplied the automated control systems, and Shawver & Son Inc., Oklahoma City, OK (405-

525-9451), which served as electrical contractor. Engineering Consultants PA, Hutchinson, KS (620-665-6394), performed engineering work.

Grain Storage

Chisholm Trail Terminal includes 1.6 million bushels of McPherson upright jumpform concrete storage. These include a pair of 500,000-bushel tanks, four 125,000-bushel tanks, and three 30,000-bushel blending tanks.

The two big tanks are 72 feet in diameter and 140 feet tall. The tanks have flat concrete floors, Prairie Land Millwright Bin Gator zero-entry sweeps, 12-cable Rolfes@Boone grain temperature monitoring systems, and BinMaster rotary level indicators. Four sets of 60-hp Tiernan centrifugal tandem fans provide 1/7 cfm per bushel of aeration.

The four 125,000-bushel tanks stand 36 feet in diameter and 140 feet tall. They are equipped similarly to the larger tanks, with nine cables on the Rolfes@Boone grain temperature monitoring system and two sets of 30-hp Tiernan tandem fans per tank, again supplying 1/7 cfm per bushel of aeration.

The three 30,000-bushel blending tanks are 24 feet in diameter by 92 feet tall, with above-ground conical hoppers. They also are aerated but do not have grain temperature monitoring.

In addition to the upright storage, the Chisholm Trail Terminal also has four 1-million-bushel LeMar temporary storage bunkers. These are oval-shaped at 100 feet wide by 500 feet long and have four-foot perforated steel sidewalls,



Grain handling equipment includes a pair of 30,000-bph Schlegel receiving legs, a 60,000-bph Schlegel loadout leg, and a 60,000-bph C&A bulk weigh loadout scale.

packed lime floors, and nine 10-hp axial fans to hold tarps in place. Walton says these have been full since the 2016 wheat harvest.

The facility also has another 1 million bushels stored in grain storage bags.

Grain Handling

Incoming grain trucks first stop at a Gamet JaHam truck probe station for sampling then proceed to a pair of 75-foot pitless UniBridge inbound/outbound scales automated by the manufacturer’s proprietary software.

Drivers then are routed to one of two enclosed 1,700-bushel mechanical receiving pits. One of the two pits is set up to receive from railcars, as well.

The pits feed a pair of Schlegel 30,000-bph legs equipped with two rows of Tapco 18x8 heavy-duty buckets mounted on a 39-inch Goodyear belt.

The legs deposit grain into two four-duct Schlegel flatback Syncroset electric distributors. These, in turn, deposit grain onto a series of Schlegel 30,000-bph drag conveyors running out to storage.



Four LeMar 1-million-bushel temporary storage bunkers have been full since the 2016 wheat harvest.

The storage tanks empty onto above-ground 60,000-bph Schlagel enclosed belt conveyors. The belts carry grain to two 30,000-bph Schlagel legs featuring two rows of Tapco 18x8 heavy-duty buckets mounted on a 39-inch Good-year belt.

The shipping leg and one of the two receiving legs deposit grain at 60,000 bph directly into a C&A bulk weigh loadout scale that is under the control of a Cultura oneWeigh[®] automation system and equipped with a Gamet diverter-type sampler. Walton says the company plans to install a cleaner above the bulkweigher some time over the winter of 2016-17.

The bulkweigher spout loads railcars inside the same enclosure as the receiving pits. Workers atop railcars are protected by a trolley unit from Fall Protection Systems running the length of about three cars.

The UP supplies locomotive power for moving shuttle trains around the 10,000-foot loop track, which was constructed with 132-lb. rail.

The terminal has no grain dryers, but they could be added in the future. "Most of our wheat comes in at 14% moisture or less," says Walton.

Ed Zdrojewski, editor