Drumming Out the Old
at ConocoPhillips' Billings Plant

The 20-year old drums in the coker unit at the ConocoPhillips Billings, Montana, refinery were old and tired. They needed replacing. AltairStrickland was selected as the ideal mechanical contractor to complete the $48 million drum replacement project. But the project was not without controversy even though the new drums would be more efficient, more environmentally friendly and safer than the old cylindrical drums.

The new 350,000-pound drums were fabricated in Japan and were shipped to the U.S. for delivery to the plant. It was that 700-mile road journey from the Port of Lewiston to Billings that had a few folks upset. You see, land transport required a complicated permitting system and a slow schedule. After assembly, each steel drum would measure 100 feet long and 24 feet in diameter. Each truck could carry only half of a drum (even with an unusual number of axles so the load could be distributed evenly). It also required the refinery owner, ConocoPhillips, to temporarily move 800 power lines. Because the trucks had stay off major highways and could travel no faster than 35 mph and only at night, the back-roads route through Idaho and Montana upset some rural residents who feared that emergency vehicles could be delayed should they be needed.

But the transport was achieved smoothly without incident, and there was no reported inconvenience. In fact, the transport and the project itself became more of a photo event than anything. Many took photos of the huge drums being transported, and when the drums were lifted at the plant, the events garnered a paparazzi of locals including some who had worked at the plant when the original coker drums had been installed!

AltairStrickland worked with ConocoPhillips' plant personnel to preplan the project. A 680,000-pound derrick had to be lifted before the two new drums could be installed. A team of lift experts, including Jim Robinson of AltairStrickland, ultimately chose a PTC 35 crane with a boom length of 450 feet and a 120-meter radius capable of lifting at least 700,000 pounds. The crane was owned and operated by Mammoet.

The first lift to carefully remove the unit's derrick began at 6 a.m. and was completed by 9 a.m. Most lifts begin at or before dawn because of the wind factor. The first lift was completed without incident, as were subsequent lifts to remove the old drums, place the new drums and reset the derrick.

By the time the project was successfully completed, AltairStrickland had logged 25,000 man-hours over a 30-day time period with zero first aids and zero recordables. Glenn Carpenter, AltairStrickland's Area Operations Manager on the project, said "the success of this project was attributed to a total TEAM EFFORT with a special thanks to AltairStrickland employees, Jim Robinson, Darrel Lausch, Brian Nelson, Ed Wiley, Eddy Rosales, Terry Boer, Donnie DuPont, and Roxanne Wiley, along with the ConocoPhillips project team of Brady Hobza and Randy Pipal." ■

Transportation of the drums required transporting in half sections

Excerpts from a note Julian Stoll, Plant Manager for ConocoPhillips Billings, sent after the first lift was made for the coker replacement project:

"(My) commendations on an exceptional first lift today (that included) flawless planning, preparation, and execution. Very well done to all involved, and THANKS."

Mr. Stoll continued, "Completing critical work safely is essential to our success. Today, and throughout the planning leading up to today, the teamwork and professionalism demonstrated by all parties has been impressive. Let's keep our guard up, and avoid complacency on future lifts, but let's take a moment to celebrate and recognize a difficult job very well executed earlier today."