

The SPRING • 1976

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Line





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MARK II

**OIL FIELD PUMPING UNITS**



GEARS FOR INDUSTRY  
AND SHIP PROPULSION

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# MEMORY ON RAILS

by  
Dick  
Skron Dahl

**R**igh on a snow-covered pass between Colorado and New Mexico, a hardy group of history fans and railroad buffs gather once each year to enjoy a unique event.

Churning through the deep snow, the steam powered rotary snowplow of the Cumbres & Toltec Scenic (CATS) makes its annual memorial run for hundreds

of spectators.

This narrow gauge, three-part steam-driven rotary snow plow is probably the last of its kind operating in America today. Pushed by Engine #487, Rotary O-M #24 clears the track between Chama, New Mexico and Antonito, Colorado through 10,000-foot high Cumbres Pass, just as it did 90 years ago.

Consisting of water car, tender and boiler-plow car, the rotary snow plow was built in 1889 as a special order for this section of the then Denver and Rio Grande Western Railroad by the Cooke Locomotive and Machine Co. of Patterson, New Jersey.

This special coal-fired rotary

Continued on next page



Crowds gather for the historic trip as engineers build up steam in the coal-fired boilers of Rotary O-M #24 and steam engine #487

The snowplow chops and blows its way through deep drifts of snow on the tracks

The huge blades of the special Cumbres & Toltec Scenic snowplow, built in 1889, are capable of cutting through 10-foot drifts of snow



plow, with its huge, fan-like blades, is capable of cutting through 10-foot drifts of snow. When workmen ride the top of the fan guard, knocking the snow down with long shovels, the plow can travel through even deeper drifts of snow.



Today, the nostalgic cold weather run begins about sunup in the snowpacked yards of the Cumbres & Toltec Scenic. Engineers and other trainmen work to get up steam in the coal-fired boilers of Rotary O-M #24 and steam engine #487 to prepare for the special run in the chilly

morning air.

Passengers and spectators, loaded with cameras and sound recording equipment, congregate early to watch and record the preparations. Some have purchased tickets to ride in one of the three passenger cars on the special train, while others plan to use skis or snowshoes to leapfrog the route for special vantage points from which to photograph the scene from the past.

Rich in history, the CATS line dates back to 1880 when the Denver and Rio Grande Western Railroad decided to build an extension line from Antonito to Chama, a distance of 35 miles "as the crow flies."

Cumbres, the highest elevation railroad pass in the United States.

From the 1880's, passengers and freight moved over the line daily until January 31, 1951, when passenger service was suspended—a victim of modern highways and automobile popularity.

Freight hauling continued until 1968, when officials of the D&RGWR asked the Interstate Commerce Commission to approve a petition of abandonment.

When this was granted, groups of interested conservationists in New Mexico and Colorado joined forces in a drive to save the little



The evidence of the snowplow's work is apparent as the train chugs on over the cleared tracks

Photos by Author

It took some 64 miles of track to join the two cities, and crews worked more than a year to complete the narrow gauge job that crested at 10,015-foot Cumbres Pass between the two states. Many of the workers, who were paid less than \$4 a day, were Canadians.



When finished, the work was termed a mountain railroading marvel. Gorge-spanning trestles, tunnels, and spectacular cliffside construction with double and triple switchbacks all added to the excitement of a trip over the

railroad.

Results were slow in coming, but in 1970, the governments of the two states formed the Colorado-New Mexico Joint Railroad Authority and purchased the Chama-Antonito line for about \$550,000.

After necessary track and equipment repair, the first run of the newly named Cumbres & Toltec Scenic—now a tourist oriented train—chugged up the mountain on June 27, 1971.

Today, the little train runs each weekend from early spring to late fall, carrying passengers 64 miles back into history over the Cumbres.

# LUFKIN Installations

1. LUFKIN C320-256-120 Unit, Diamond Shamrock Corporation, Douglas, Wyoming



4. LUFKIN M1280-427-216 Unit, Texaco, Inc., Sumatra, Montana



5. LUFKIN M640-305-168 Unit, Amerada Hess Corporation, Fryburg, North Dakota

8. LUFKIN M456-365-120 Unit, Inexco Oil Company, Belfield, North Dakota





2. LUFKIN C456-305-144 Unit, Inexco Oil Company, Douglas, Wyoming

3. LUFKIN M456-305-120 Unit, Gary Operating Company, Belle Creek, Montana



6. LUFKIN M640-305-168 Unit, Cenex, Belfield, North Dakota

7. LUFKIN A912-305-168 Unit, Continental Oil Company, Dickenson, North Dakota



9. LUFKIN M912D-305-192 Unit, Amoco Production Company, Peoria Field, Byers, Colorado

10. LUFKIN C320-305-100 Unit, Anderson Oil Company, Douglas, Wyoming



# Titans of the Tide

By KATHY LOVE

**E**ver demanding servicing requirements for North Sea offshore operations has created a need for newer, larger, and more powerful surface support vessels.

The Mammoth Tide and her sister ships, built and owned by New Orleans-based Tidewater Marine Service, Inc., have met this need.

Principally designed for operations in the North Sea, the Mammoth Tide and her rugged sisters steadily perform servicing duties in the cold northern waters.

Built and launched from the shipyards of Hatlo Verksted A/S in Norway, the Mammoth Tide is among the largest and most powerful towing-supply boats ever launched.

With an overall length of 218 feet, a beam of 43 feet and depth of 19 feet, she is propelled by four engines developing a total of 10,340 IHP. These engines produce a top speed of more than 16 knots, and in trial runs, achieved a bollard pull of 251,000 pounds. This pulling power makes the Mammoth Tide one of the most powerful towing-supply boats on the seas.

The Mammoth Tide is a twin screw vessel powered by four Electro Motive Division diesel engines, Model 16-645E2, driving through two LUFKIN Model CSQ9610 twin pinion single reduction compound gear units.

The reduction gear slow speed shaft and housing was designed to accept the oil distribution box for the Liaaen controllible pitch propeller mechanism.

Each CSQ9610 pinion receives its power from the engine via a torque shaft and a Wichita pneumatically operated clutch.

The four engines—two per propeller shaft—allow for utilization of all engine power during towing, anchor handling and mooring operations. When normal rig and platform supply operations are underway, only two engines are used, resulting in substantial savings of fuel and lubricants.

A special "Towmaster" system includes controllible pitch propellers, each equipped with triple rudders. The system improves maneuverability

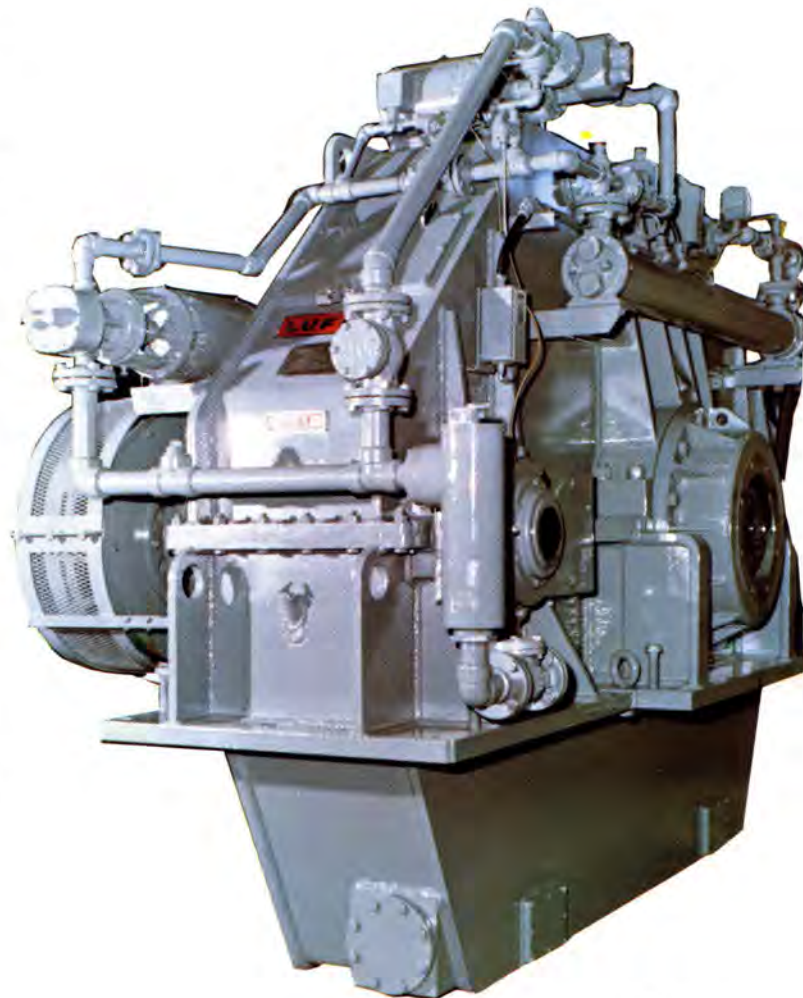
and produces a substantial increase in bollard pull.

Maneuvers are facilitated with 500 hp bow thrusters, providing six tons of thrust.

This ability to maneuver in different situations, and being able to pre-position, recover, connect, and install moorings in waves of more than 10 feet and wind velocities in excess of 30 knots, are just some of the talents of this very versatile vessel.

Success has marked the wake of the Mammoth Tide, and in that wake, still more vessels of this type will follow. LUFKIN has recently shipped four more CSQ9610 gears to equip two new Electro-Motive Division/Tidewater Marine boats of the Mammoth Tide type. These vessels will be built at Tacoma Shipbuilding in Tacoma, Washington.

LUFKIN is proud to have had a part in the construction of these "Titans of the Tide."



Built in Norway by Tidewater Marine Service, Inc., this new breed of towing-supply boats works in the hostile waters of the North Sea

Two LUFKIN CSQ9610 propulsion reduction gears were installed in the Mammoth Tide in the Norwegian shipyard where this unique vessel was built

# Snapshots



**JOHN STALDER**  
Continental Oil Co.  
Casper, Wyoming



**RAY EMMETT**  
Inexo Oil Co.  
Denver, Colorado



**JOE HURLBUT**  
Texaco Inc.  
Casper, Wyoming



**N. D. YOUST**  
Texaco Inc.  
Keene, North Dakota



**NORM ERDMAN**  
Beaver Mesa Exploration  
Denver, Colorado



**CURT MACINTYRE**  
Amoco Production Co.  
Casper, Wyoming



**FRANK HIESTAND**  
Cotton Petroleum Co.  
Denver, Colorado



**WALT ARBUCKLE**  
Kimbark Operating Co.  
Denver, Colorado



**STAN DUDLEY**  
Diamond Shamrock Corp.  
Casper, Wyoming



**GENE SPARKS**  
Diamond Shamrock Corp.  
Casper, Wyoming



**KENT KIRKPATRICK**  
Diamond Shamrock Corp.  
Casper, Wyoming



**DOUG LEWIS**  
Amoco Production Co.  
Casper, Wyoming



**BILL McNABB**  
Charter Explor. & Prod.  
Denver, Colorado



**J. V. MOSS**  
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Dickenson, North Dakota



**ROLAND HART**  
Prenalta Corp.  
Casper, Wyoming



**FRED SLAGLE**  
Terra Resources, Inc.  
Casper, Wyoming



**P. F. PATTERSON**  
Marathon Oil Co.  
Casper, Wyoming



**JACK E. VAUGHN**  
Minerals Management  
Casper, Wyoming



**ELDON RILEY**  
Diamond Shamrock Corp.  
Casper, Wyoming

# By Lufkin Camera men



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Texaco Inc.  
Keene, North Dakota



VERNON JOHNSON  
Genex  
Dickenson, North Dakota



PAUL GAYER  
Texaco Inc.  
Keene, North Dakota



RAY IHDE  
Continental Oil Co.  
Dickenson, North Dakota



ED MAIER  
Genex  
Dickenson, North Dakota



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Davis Oil Co.  
Denver, Colorado



CHUCK KORITNICK  
Atlantic Richfield  
Casper, Wyoming



DICK KING  
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Denver, Colorado



BILL ELLIOTT  
Diamond Shamrock Co.  
Casper, Wyoming



FRED HUNTINGTON  
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EDDIE GOLD  
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Texaco Inc.  
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JOE MILLER  
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Casper, Wyoming



DEAN SHULTZ  
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Casper, Wyoming



CARL BOND  
Minerals Management  
Casper, Wyoming



BILLY BALTHROP  
Amoco Production Co.  
Casper, Wyoming

# ...More Snapshots



**GRADY WRIGHT**  
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Denver, Colorado



**BILL WALTHER**  
Atlantic Richfield  
Denver, Colorado



**LEE DERRICK**  
Chevron Oil Co.  
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**JOHN SCHELL**  
Texaco Inc.  
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**GORDON EATON**  
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**CLARENCE BROWN**  
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**PAT EARLY**  
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