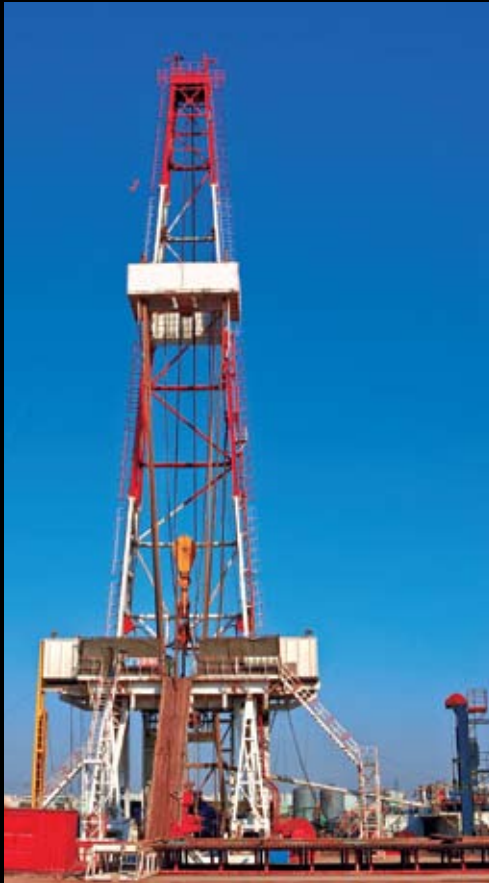


ONSHORE DRILLING

Etirex[®]
PRECISION HEAT & CONTROL

**Precision Heat and Control Systems
For Onshore Drilling and Production**





Etirex Heat for Your Oil and Natural Gas Drilling and Production

More than ten million years ago heat was the catalyst, together with intense pressure, that distilled carbon-rich organic material into crude oil and natural gas. Today heat plays a vital role in unlocking, extracting, and transporting oil and natural gas.

Etirex provides precision-engineered heat and control systems for more processes throughout the world than anyone, with the broadest product line and experience unmatched in the industry. We furnish full design and engineering for virtually any electric process heat and control operation. And we complete the package with customized services ranging from startup and training, to ongoing maintenance diagnostics, to emergency response—all based on complete knowledge of your components, parts, and systems.

Let us be your catalyst for putting heat exactly where you need it.



Gas transmission heater.



Separation tank heater.



Crude oil heater.

Enhanced Oil Recovery

Potable Water Piping

Heat tracing is used in cold weather climates to maintain the temperature of heated water pipelines and protect cold water pipelines from freezing.

On-Site Offices & Living Quarters

Blower, convection, and radiant heaters provide comfortable temperatures for work and living quarters.

Separation Tank Heating

Using immersion heaters, temperature stratification helps to separate mix fluids, such as water, mud, and chemicals.

Potable Water Tanks

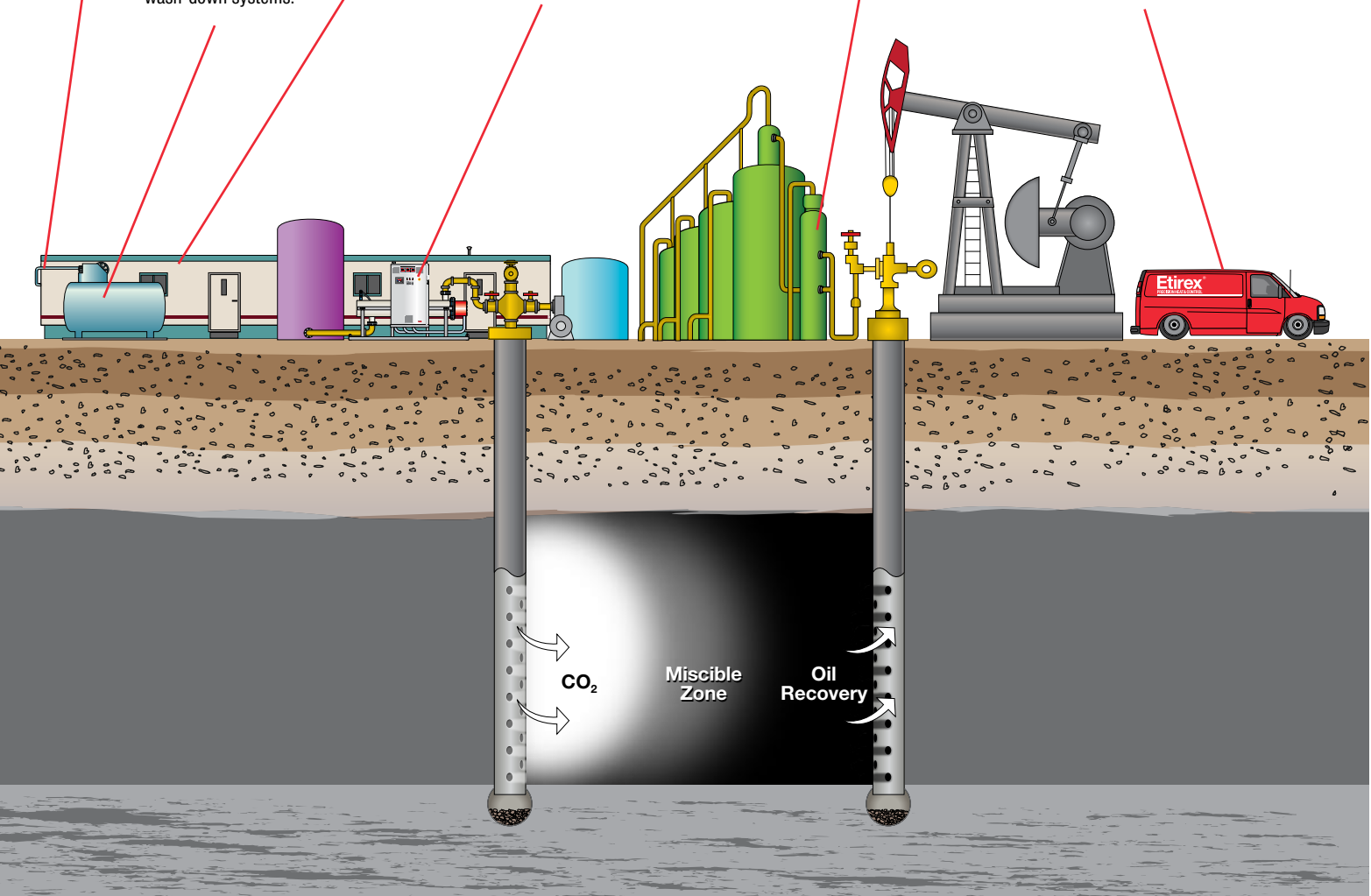
Electric heaters are used to heat potable water for on-site utilities such as drinking, shower, and wash-down systems.

Carbon Dioxide Treating

Circulation heaters pre-heat carbon dioxide gas prior to injection for efficient extraction operation.

Service and Maintenance

Regular service visits ensure optimal operating conditions and help predict needed replacements.



Immersion Heaters

Etirex immersion heaters apply heat directly at virtually 100 percent efficiency. Basic mounting options include threaded, flanged, and over-the-side designs. Various temperature control options permit very tight process temperature control. These direct-heating units feature carbon/INCOLOY*/stainless steel sheathed elements and thermowells, integral controls, and moisture- and explosion-resistant terminal enclosures.



Circulation Heaters

Our circulation heaters are designed to heat a flowing medium using in-line or side-arm piping configurations. A wide selection of kilowatt ratings, materials, vessel sizes, terminal enclosures, control features, and mounting methods are available. INCOLOY* sheathed elements, stainless steel vessels, and high-pressure ASME ratings enhance safety and the service life of turbines.



Auxiliary Electric Steam Boilers

Constructed of carbon or stainless steel with fiberglass insulation to ASME or PED code, Etirex steam boilers and steam generators are safe, versatile, and efficient energy management systems that provide low- or high-pressure hot water or steam. They are packaged units that are completely assembled and ready to install, needing only a water feed-source and electric power hook-up to operate from existing distribution voltages, making installation simple.



*Incoloy is the registered trademark of Huntington Alloys Corporation.

Hydraulic Fracturing

Tank Heating

Large-tank heaters with replaceable elements guard against fluids freezing in cold climates.

Frac Tank Manifolds

Circulation heaters warm fluids being pumped through cold manifolds to avoid freezing.

Knock-Out Tanks

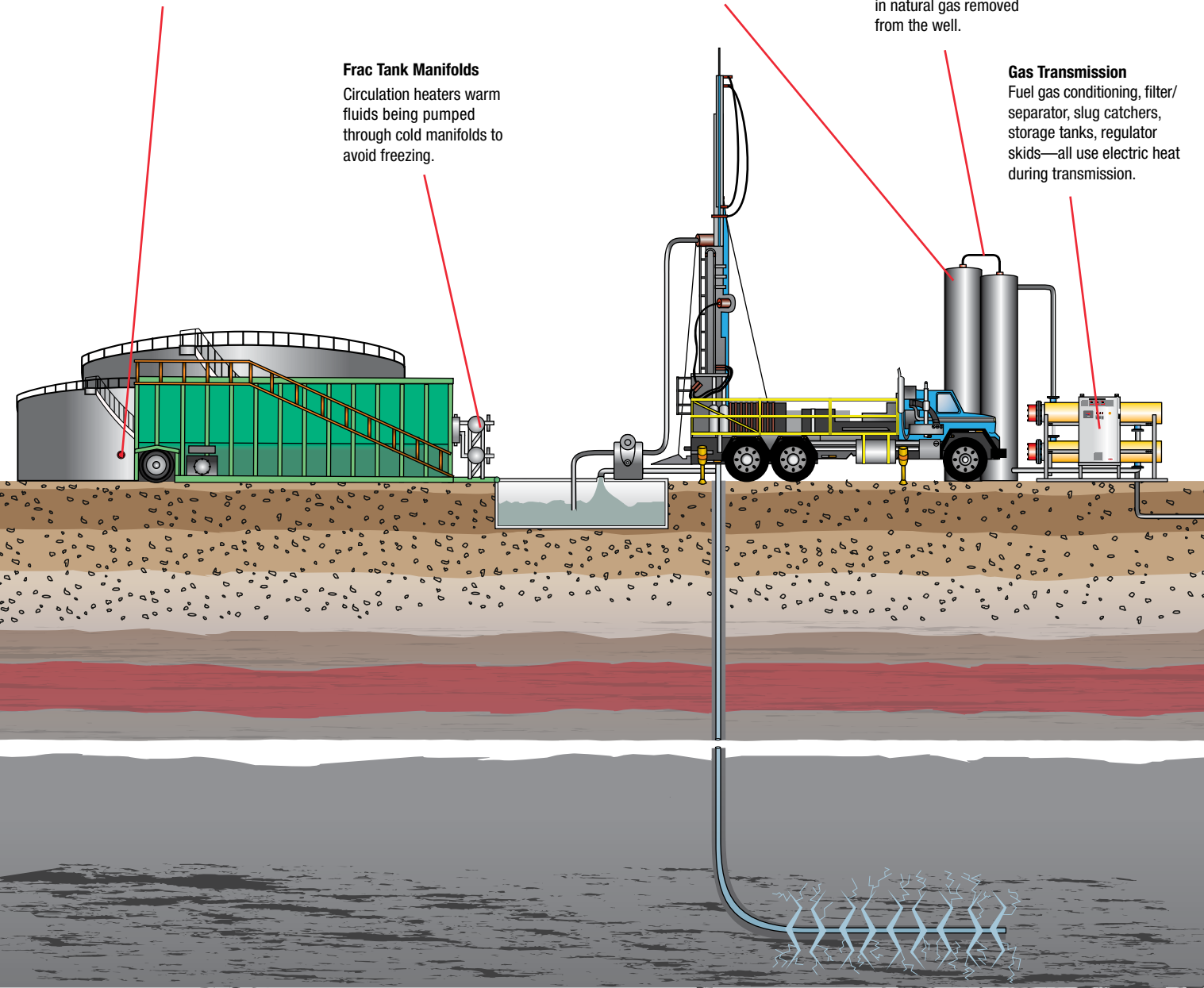
"Heater treaters" tanks use replaceable-element-design heaters to separate gas and liquid mixtures.

Condensation Tanks

Electric immersion heaters help maintain temperatures to prevent condensation from forming in natural gas removed from the well.

Gas Transmission

Fuel gas conditioning, filter/separator, slug catchers, storage tanks, regulator skids—all use electric heat during transmission.



Large-Tank Heating Systems

Etirex large-tank heaters employ metal-sheathed tubular or ceramic-insulated, open-coil pipe insert heating components for use in 2- and 3-inch (50- and 75-millimeter) nominal pipe sizes. This unique construction allows heating elements to be changed or field-serviced without draining the tank. Complete with Etirex controls, these large-tank heating systems can be operated to maintain materials at the proper temperature with little or no manual attention.



Comfort Heaters

Etirex general-purpose convection- and blower-type heaters are heavy-gauge steel units ideal for heating enclosed spaces such as service and maintenance facilities. Our heavy-duty forced-air heaters are designed for use in dirty, corrosive environments. For rugged use in potentially flammable or explosive conditions, Etirex hazardous-duty convection and forced-air blower heaters are the best choice. Our radiant heaters provide virtually instantaneous, dependable heat for tough-to-heat areas.



Heat Trace and Controls

Heat trace is used to counteract the heat loss from process equipment and piping through its insulation, to prevent solution precipitation and the increase of viscosity or solidification of product, and to provide freeze protection. Etirex offers a variety of heat trace cable; temperature control, monitoring, and management in one, modular package; and all of the necessary components needed to complete the installation.



Downhole Heating

Drilling Mud Piping Distribution

Self-regulating and constant-wattage heat trace cables are used for pipe temperature maintenance and freeze protection.

Drilling Mud Storage Tanks

Heaters are used to maintain or improve the viscosity or density of recirculating fluids for improved drilling efficiencies.

Waxy Crude Heaters

Circulation heaters warm the crude oil to improve viscosities for more efficient pumping and distribution.

Downhole Heating

Submersible electric heaters warm viscous oils for easy extraction from the well.

Steam-Assisted Gravity Drainage

Comfort Heating

Blower, convection, and radiant heaters provide comfortable temperatures inside operation buildings.

Steam Piping Network

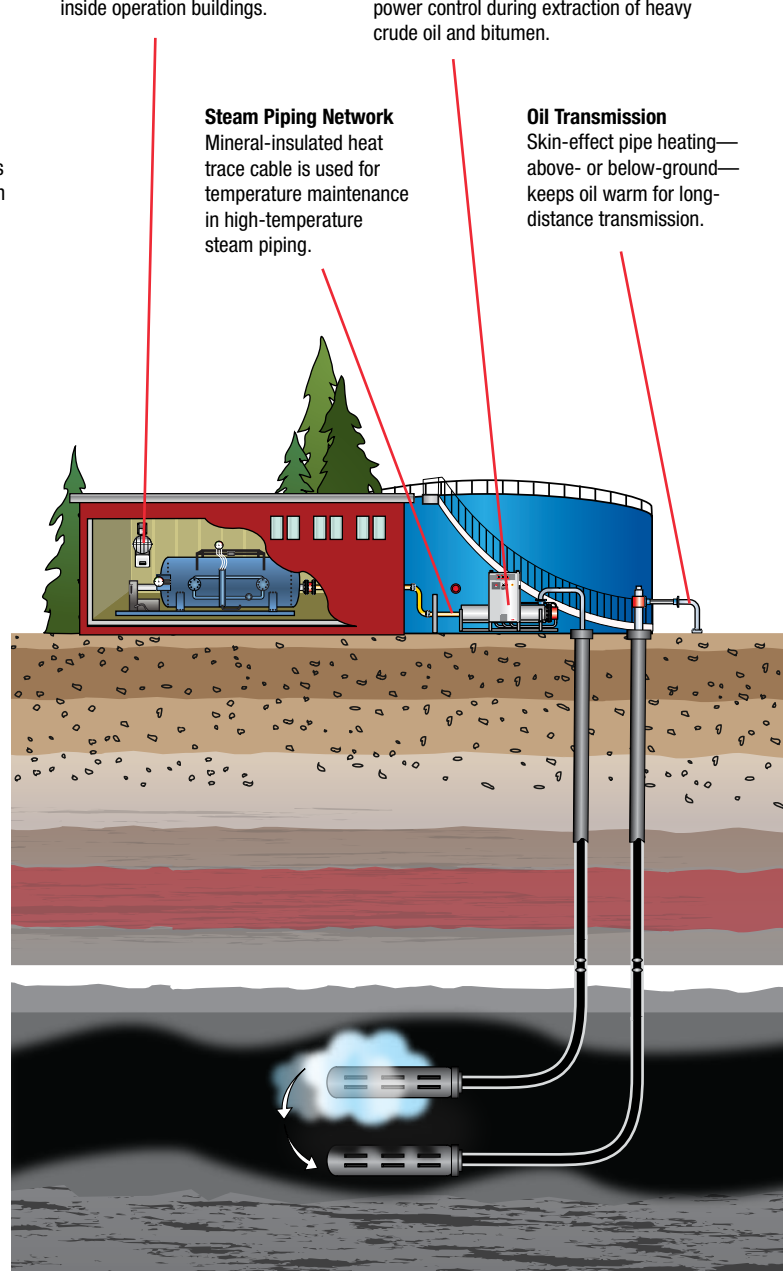
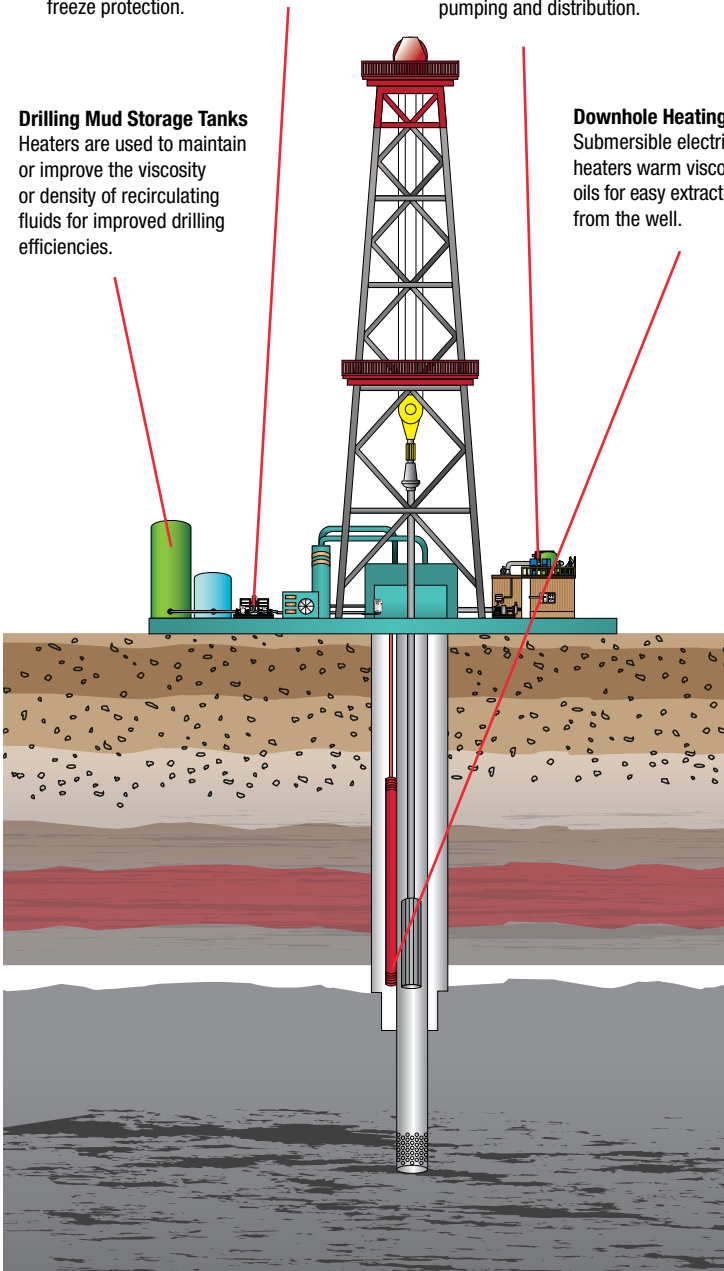
Mineral-insulated heat trace cable is used for temperature maintenance in high-temperature steam piping.

Steam-Assisted Gravity Drainage

Precision control of the steam quality used in horizontal wells can be accomplished with circulation heaters and SCR power control during extraction of heavy crude oil and bitumen.

Oil Transmission

Skin-effect pipe heating—above- or below-ground—keeps oil warm for long-distance transmission.



Control Systems

From basic, low-cost temperature and process controllers, to monitors and overtemperature controls, to more sophisticated control systems like the intelliPANEL® 3-phase SCR power control panel featuring unique color touch-screen technology, Etirex can design the right system for your operation's needs. We are the only heating element supplier offering a complete line of controls, control panels, and accessories.



Etirex Service

Etirex service contracts deliver efficient emergency response and preventive maintenance, helping to eliminate problems before they arise. Etirex field service personnel are experts at maximizing the performance of your process heat and control systems with a variety of on-site services including multi-point inspections, guaranteed emergency response times, site reports, and replacement parts availability.



Etirex Value-Added Products and Services Are Available Worldwide



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