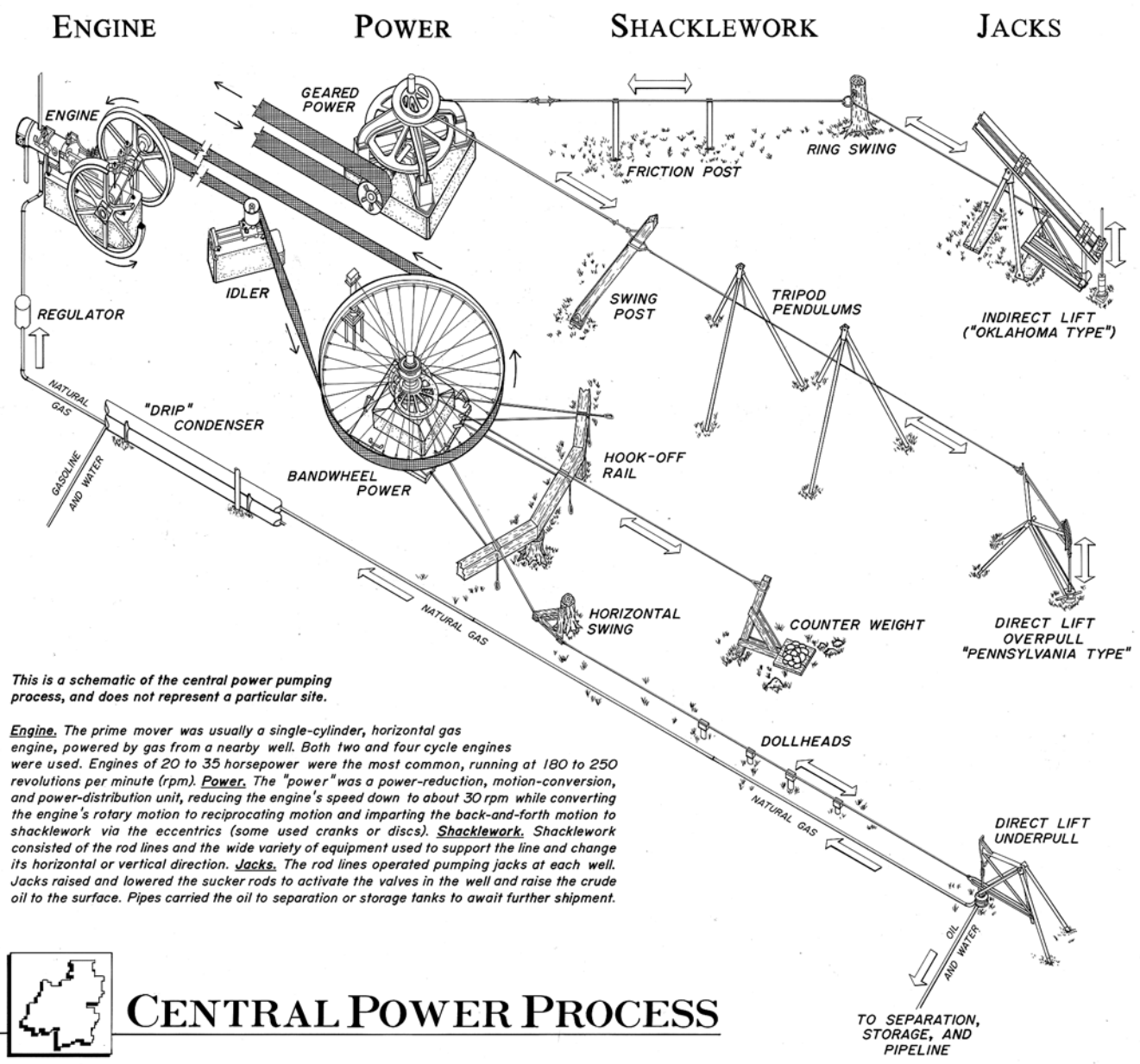


TWIN LINE



This is a schematic of the central power pumping process, and does not represent a particular site.

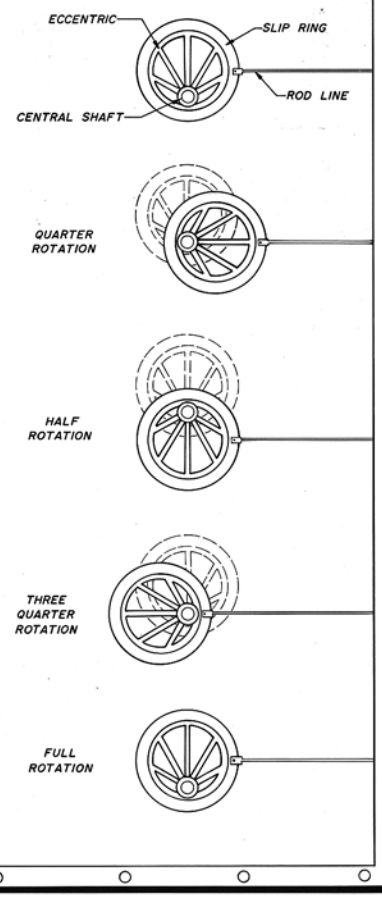
Engine. The prime mover was usually a single-cylinder, horizontal gas engine, powered by gas from a nearby well. Both two and four cycle engines were used. Engines of 20 to 35 horsepower were the most common, running at 180 to 250 revolutions per minute (rpm). **Power.** The "power" was a power-reduction, motion-conversion, and power-distribution unit, reducing the engine's speed down to about 30 rpm while converting the engine's rotary motion to reciprocating motion and imparting the back-and-forth motion to shacklework via the eccentrics (some used cranks or discs). **Shacklework.** Shacklework consisted of the rod lines and the wide variety of equipment used to support the line and change its horizontal or vertical direction. **Jacks.** The rod lines operated pumping jacks at each well. Jacks raised and lowered the sucker rods to activate the valves in the well and raise the crude oil to the surface. Pipes carried the oil to separation or storage tanks to await further shipment.



CENTRAL POWER PROCESS

ECCENTRIC MOTION

The eccentric is mounted slightly off-center to the power's central vertical shaft, and the rod lines are attached to the outer slip ring. As the eccentric rotates within the slip ring, the slip ring oscillates, imparting horizontal, reciprocating motion to the rod lines. The rod lines complete one full stroke for each rotation of the eccentric. Typically, an eccentric rotates 12-18 times per minute.



DEVELOPED BY: ERIC S. ELMER, KARA HURST, 1997
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SHEET
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TWIN LINE