generations and weaves hard fact with adventure, romance and melodrama.

From post-World War I Paris where the peace talks created the modern world to jazz age New York City, roaring 20s Chicago and oil boom Oklahoma, **Jacques LeFash Livingstone** discovers oil's secrets, runs from anything to do with oil, marries, has a son and finds himself an oil baron despite his best efforts.

In pre-World War II Washington, D.C., **Victoria Wade Bridger, Lady North**, accepts a diplomat's request to help American oil men explore in Saudi Arabia and, as a result, gets herself and her dearest friend caught up in espionage and the darkest moments of World War II.

After slogging with the American infantry across World War II Europe, **Monty Livingstone** gives up his dream of being a spy for his country and goes to work for Big Oil until, in early 1950s Iran, he is unexpectedly recruited into the Cold War. Suddenly, everything from his adolescence in the Oklahoma oil fields to a lost love in Berlin to his training by an MI-6 operative matters if he is to finish his CIA assignment.

Just like in his first volume (**OIL IN THEIR BLOOD, The Story of Our Addition**, Trabish's lean, muscular prose and relentless storytelling drills into every incident for a better understanding of metaphysical and stark cold truths about love, family and the dark commodity that drives our world.

TECHNICAL ASPECTS OF THE DESIGN AND OPERATION OF THE REID TWO-CYCLE GAS ENGINE TYPE A, SISTERVILLE

William Wingo
13923 State Hwy 8, Titusville, PA 16354
willwingo@catsandmacks.com

This paper will discuss the operational cycle, function of component parts, design and personal observations on the evolution of the design of the Joseph Reid Gas engine.
The Joseph Reid two cycle gas engine is unique in both design and method of operation. Joseph Reid began the manufacture of gas engines in 1894, with the first engine being shipped from the Oil City factory on December 1st.

The 2 cycle design of the engine provides a power stroke with every revolution of the crankshaft, which is not unique to the Reid engines. What is unique to this engine is the utilization of a supply or charging cylinder and piston on either the left or right hand side of the main cylinder.

Another design feature of the Type A engine include a valveless, ported exhaust system and a fuel intake that minimizes wear

Site of one of the original dug wells, 1858;now on the property of Fairbank Oil Company. [W. R.. Brice]

and provides an extremely uniform mixture of gas and air to the combustion chamber.

The cycle of operation is based on a crankshaft with two throws, separated by ninety degrees of rotation that allow the charging cylinder to perform two functions in the operation of the engine: providing a fresh charge of mixed gas and air and then scavenging the main cylinder of the products of combustion.

A proportional feed valve supplies fuel and air from independent sources to the charging cylinder for mixing and delivery to the main combustion chamber. The rate of supply is controlled by a hand valve in conjunction with the flyball governor, which, in turn controls the speed of the engine based on the load that the engine is carrying.

References:

Author unlisted/ unknown: *REID TWO CYCLE GAS ENGINES AND PUMPING POWERS, Bulletin No. 29, October, 1924*, publisher unlisted.

Author unlisted/ unknown: *LIST OF PARTS OF THE REID TWO-CYLCE GAS ENGINES*, Oil City PA., Joseph Reid Gas Engine Co., Oil City, PA, publisher unlisted.