What is claimed is:

1. A system, comprising:

a downhole PVT (pressure/volume/temperature) measurement assembly in a downhole environment, comprising:

a PVT chamber;

a PVT piston located within the PVT chamber, wherein the PVT piston is in fluid communication with formation fluid and movable in a direction relative to the PVT chamber to vary a volume of sample formation fluid in the PVT chamber;

a magnetic field sensor assembly including a plurality of magnetic field sensors in spaced relation to one another;

a magnet, wherein one of the magnet and the magnetic field sensor assembly is coupled to the PVT piston, and wherein the other of the magnet and the magnetic field sensor assembly is coupled to the PVT chamber; and

a controller in communication with the downhole PVT measurement assembly, wherein the controller is configured to determine a relative position of the magnet with respect to the magnetic field sensor assembly and to determine the volume of the sample formation fluid within the PVT chamber based on the relative position and based on a compressibility of the sample formation fluid created by an ambient pressure of the downhole environment and a thermal expansion of the sample formation fluid created by an ambient temperature of the downhole environment.

2. The system of claim 1, wherein the magnet is located on the PVT piston and the magnetic field sensor assembly is located outside the PVT chamber, the plurality of magnetic field sensors located to sense the location of the PVT piston within the PVT chamber to ascertain the volume of the sample formation fluid within the PVT chamber.

3. The system of claim 2, wherein the magnetic field sensor assembly includes an array of GMR (giant magnetoresistance) sensors.

4. The system of claim 3, wherein the GMR sensors are located on a circuit board adjacent the PVT chamber.

5. The system of claim 2, wherein the system includes a downhole tool including a formation

tester tool having a draw down piston assembly within the formation tester tool, and wherein the PVT measurement assembly is in communication with the draw down piston to receive the formation sample fluid from the draw down piston.

6. The system of claim 1, wherein the controller comprises a surface controller located at a surface of the earth and in wireline communication with the downhole PVT measurement assembly.

7. The system of claim 1, wherein the PVT piston comprises part of a draw down probe assembly.

8. The system of claim 1, wherein the PVT piston includes a seal pad.

9. The system of claim 1, wherein the system comprises a logging while drilling (LWD) system.

10. The system of claim 1, wherein the system comprises a wireline system.

11. A measurement system comprising:

a PVT (pressure/volume/temperature) measurement assembly comprising:

a PVT chamber;

a PVT piston in fluid communication with formation fluid, the PVT piston located within the PVT chamber and movable within the PVT chamber to vary a volume between the PVT piston and an end wall of the PVT chamber, the PVT piston including a magnet having a location; and

a plurality of magnetic field sensors coupled along the PVT chamber to sense the location of the magnet within the PVT chamber when the PVT measurement assembly is in a downhole well; and

a surface controller located at a surface of the earth and in wireline communication with the PVT measurement assembly, the surface controller configured to determine the volume based on the location of the magnet within the PVT chamber and based on a compressibility of the sample formation fluid created by an ambient pressure of the downhole environment and a thermal expansion of the sample formation fluid created by an ambient temperature of the downhole environment.

12. The measurement system of claim 11, wherein the PVT measurement assembly is located within a downhole tool.

13. The measurement system of claim 12, wherein the PVT chamber is configured to receive a sample fluid from a downhole source.

14. The measurement system of claim 11, wherein the plurality of magnetic field sensors includes a GMR sensor.

15. The measurement system of claim 14, wherein the plurality of magnetic field sensors includes an array of GMR sensors located on a circuit board mounted adjacent the PVT chamber.

16. A downhole assembly comprising:

a formation tester tool;

a draw down piston assembly within the formation tester tool;

a PVT (Pressure/Volume/Temperature) measurement assembly in communication with the draw down piston to receive a sample fluid from the draw down piston, the PVT measurement assembly including, a PVT chamber to hold a portion of the sample fluid when it is retrieved from a formation surrounding a well, a PVT piston located within the PVT chamber and movable within the PVT chamber to vary a volume between the PVT piston and an end wall of the PVT chamber, the PVT piston in fluid communication with the sample fluid, the PVT piston including a magnet, and a magnetic field sensor assembly, the magnetic field sensor assembly having a plurality of magnetic field sensors located to sense a location of the magnet within the PVT chamber; and a controller in communication with the PVT measurement assembly, the controller to ascertain the volume of the sample fluid within the PVT chamber while the tool is downhole based on a compressibility of the sample formation fluid created by an ambient pressure downhole and a thermal expansion of the sample formation fluid created by an ambient temperature downhole.

17. The downhole assembly of claim 16, wherein the plurality of magnetic field sensors includes a GMR sensor.

18. The downhole assembly of claim 17, wherein the plurality of magnetic field sensors are located on a circuit board mounted adjacent the PVT chamber.

19. A method comprising:

moving at least one magnet and at least one magnetic field sensor relative to each other in a downhole environment, wherein one of the magnet and the magnetic field sensor is coupled to a PVT

(Pressure/Volume/Temperature) piston in fluid communication with a formation fluid and the other of the magnet and the magnetic field sensor is coupled to a PVT chamber;

determining, at a controller, a location or a change of location of the magnet relative to the magnetic field sensor while the tool is in the downhole environment; and

determining a volume of a sample of formation fluid between the PVT piston and the PVT chamber based on the location or the change of location and based on a compressibility of the sample formation fluid created by an ambient pressure of the downhole environment and a thermal expansion of the sample formation fluid created by an ambient temperature of the downhole environment.

20. The method of claim 19, wherein the PVT piston and the PVT chamber comprise a PVT measurement assembly and the magnetic field sensor is located to determine the location of the magnet as the PVT piston moves.

21. The method of claim 19, wherein the controller comprises a surface controller located at a surface of the earth.