

AMERADA PETROLEUM CORPORATION
P. O. BOX 2040
TULSA, OKLAHOMA

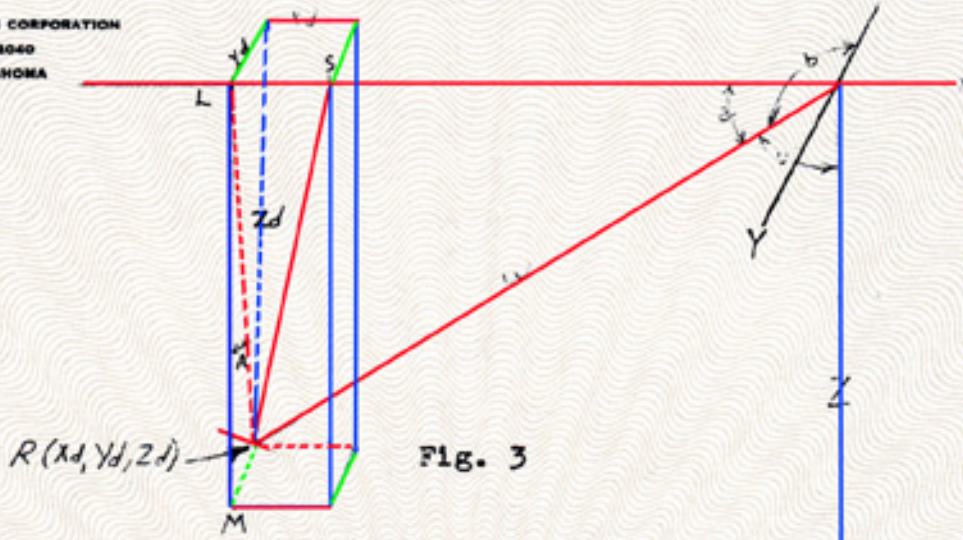


Fig. 3

The color code used in Fig. 3 is as follows:

Red lines indicate the plane of reflection and all measurements parallel to this plane and the X axis.

Blue lines indicate the vertical plane and all measurements parallel to this plane and the Z axis.

Green lines indicate the plane in which the line of the "T" and the reflection point fall and all measurements parallel to this plane.

Also from Fig. 3 the angles involved are angle A, the angle which the plane of reflection makes with the vertical, and angles a, b, & c, which are the direction angles which the line w makes with the X, Y, & Z axes respectively.

In this instance G is the intersection of these axes and is the origin of coordinates. The direction angles serve to locate the direction of the line w in space.

In the initial determination of dip in only one plane, we assumed that the plane of reflection was vertical and that there was no dip in a direction at right angles to this plane. Angle A then serves to displace to one side or other of the vertical, depending upon the direction of dip.

Since $\sin A$ and $\cos A$ are necessary values in the determination of true dip, we must derive these values in terms of measurable quantities.