

## DESCRIPTION OF SOUTHWEST MICROWAVE TEST SITE

Southwest Microwave, Inc. purchased 31.7 acres of vacant flat desert land in Pinal County, Arizona for the purpose of engineering and compliance testing of Microtrack and other intrusion detection products. The precise location is given in Fig 1

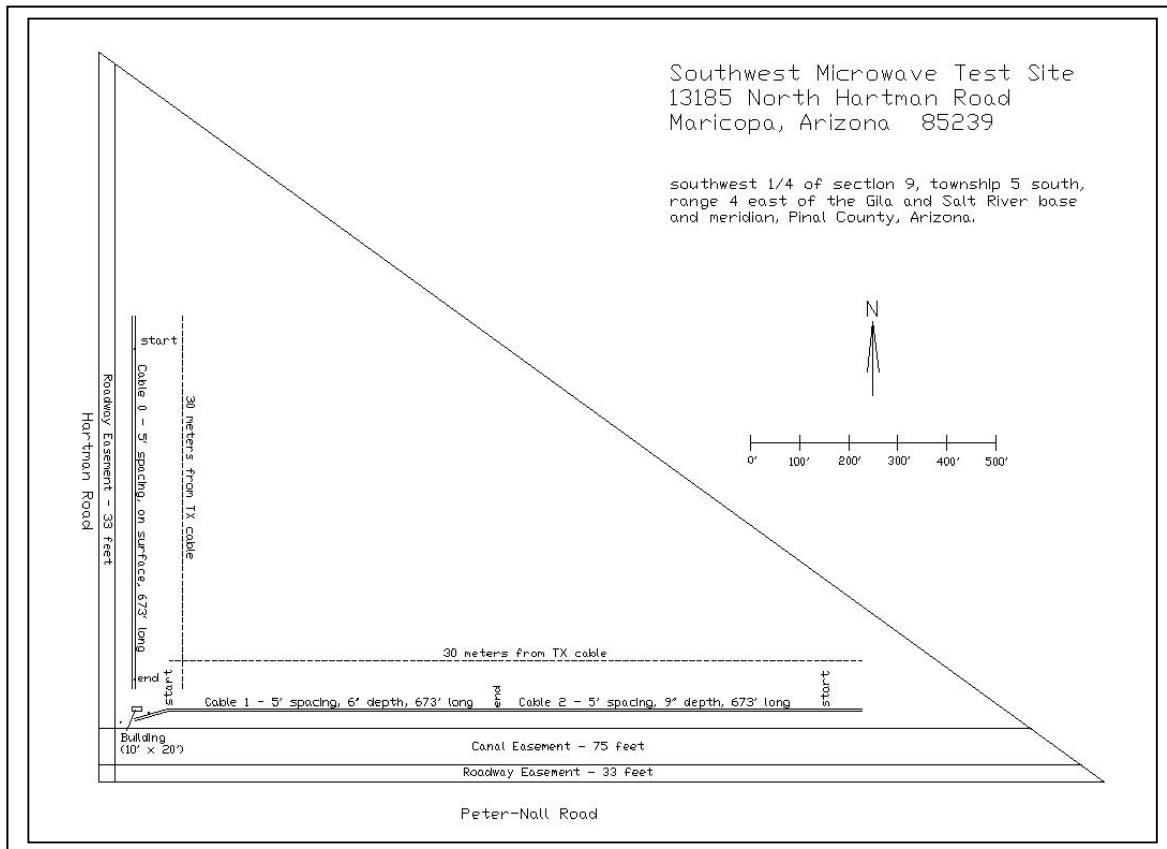


Fig 1

The site is level desert area with scattered low growing brush as shown in Fig 2. A 10 x 20 foot trailer for storing test equipment and providing a source of AC power is located in the southwest corner of the property. The only other buildings are a farmhouse and water tank over 500 meters west of Hartman Road. The soil is sandy and dry. Measured conductivity is .3 to .5 mS/meter when soaked with water and below .01mS/ meter when dry. Two pairs of leaky cables are buried in the locations as shown in Fig 1. The photo in Fig 3 is taken near the end of buried cable number 1. The tall trees and the water tank beyond Hartman Road are visible in the top of the picture.



**Fig 2**



**Fig 3**

## **Description of the Test Structures**

The equipment measures the field strength of the emissions from the leaky cable. A PVC frame holds the calibrated loop antenna at constant height above the ground and can be easily moved. The spectrum analyzer has the DC power option and is mounted along with a 12 volt battery on a moveable cart. This equipment is used to map the field near the ground level and is shown in the photo titled “Field Measurement Mobile Test Equipment”. Measurements at heights up to 4 meters used the equipment shown in the photo titled “Field Height Measurement Fixture”. This is also constructed from PVC tubing to minimize distortion of the emitted fields. The loop antenna can be raised, lowered and rotated for different polarizations as required