

THE OREMASTER SUBTERRANEAN SUPER X 600
Super Sensitive Radiation Detector

Manufactured by

White's Electronics, Inc.

1011 Pleasant Valley Road
Sweet Home, Oregon 97386

Area code 503 367-2138



THE OREMASTER

SUBTERRANEAN SUPER X600

Super Sensitive Radiation Detector

We now introduce the New Oremaster Subterranean Super X600, automatic mineral, water and anomaly detector, which may be used on foot, mobile and airborne. This is a very unusual and Super Sensitive instrument, which is so designed to automatically react to changes in formation, faults, and indicate anomalies for prospecting, geological study, and exploration. This should be of special interest to the Petroleum Geologist to aid him in his field work.

Subnormal, as well as abnormal occurrences are automatically indicated on separate meters!

Three meters are incorporated. A Monitor or background meter on which is constantly registered the varying background; a Negative or subnormal meter, which registers subnormal deposits and anomalies, and a Positive or abnormal meter for registering abnormal deposits.

The Positive and Negative registering meters may be adjusted, so that no reading is registered on either meter, until a subnormal or abnormal deposit or occurrence is detected. They may also be adjusted to indicate very slight changes in mineralization and structure changes for geological study or exploration. These adjustments are simple and quick, and may be made on the spot by the operator. The metering sensitivity of both, or either the Positive or Negative meters, may be quickly set to as low or as high a degree of sensitivity as the operator desires to use. This is another feature to be appreciated, not only by the prospector, but also the geologist and mining engineer.

In mineral prospecting and exploration, a high grade ore body containing gold, copper, nickel, chrome, silver, lead, tungsten, etc., containing very weak radio-active isotopes are registered on the abnormal (positive) meter of the instrument.

High grade, heavy gravity ore bodies, containing no radio-active isotopes, such as iron, lead, nickel, chrome, etc., are registered on the subnormal (negative) meter of the instrument. Underground lakes, rivers, large caves, etc., are also registered on the Negative meter. When

detecting the presence of an underground lake, the deeper the body of water, the higher is the reading, and the shallower the water, the lower is the reading on the Negative, subnormal meter.

Over normal ground, no reading is had on the Positive or Negative meters. Just as soon as a positive area (mineralized) is entered, the super sensitive Positive meter reads. As soon as a subnormal area is entered, the Negative meter reads. The more positive the area, the higher the reading is on the Positive meter. The more subnormal the area, the higher the reading is on the Negative meter. These readings are automatically made and regulated by the formations the instrument is used on and over.

We received a high 3 scale negative reading over a 72% specular, Hemetite (iron) deposit on the Negative meter of the instrument, that contained no radio-active isotope. As we moved from the center of the deposit, toward the edge, the closer we got to the edge, the lower the negative reading we received. Just as we stepped off the vein, the Negative meter dropped to zero (no reading). A dip needle and a compass were both tried over this deposit, with no results, as this deposit contained no magnetic ore. As we approached another iron deposit, that contained radio-active isotopes, the Positive meter went off scale. Over the deposit, approximately 6 meter scales were registered on the Positive meter! On a subnormal reading ore body, the highest reading, is when the instrument is over the highest grade of ore or quantity.

We have a large piece of native copper, right from the mine at Bisbee, Arizona. The instrument will give a full scale meter reading on the Positive meter from the natural occurring, lightly radio-active isotope in the ore! We also have chalcopryite, bornite and other natural ore samples that are not detectable with the metal detector, due to their cubic crystalline composition, but are detectable on the Positive meter of this instrument. We have silver ore, not detectable with the metal locator, but detectable with the Subterranean X600 on the Positive meter of the instrument. (A sample of this Idaho silver ore goes with each instrument, which it will detect.)

While the instrument may be used for sub-surface prospecting, it may also be used for surface prospecting, checking out-croppings, etc., while it detects 360 degrees, it is also directional. On surface prospecting the highest reading one receives, when a high reading is received from the Positive ore body, is when the instrument is pointed in the direction of the deposit, or when over the deposit.

By following in the direction from which you receive the highest reading on the Positive meter, and using the Range Control, it will bring you to the ore body that you received the high reading from.

The batteries used are 6-#720 Eveready 1 1/2 volt, 2-#467 Eveready 67 1/2 volt, and 2-#412 Eveready 22 1/2 volt.

This instrument comes complete with instructions; a natural silver ore (not native silver) sample, which it will detect; fresh heavy duty batteries; carrying strap, and ready to operate.

This firm has been noted for years for its Super Sensitive instruments. The new Subterranean line is by far the most sensitive instrument we have ever produced for field use.

It now appears that interest is again being resumed in Uranium and Thorium minerals. The Subterranean may also be used for prospecting for these mineral deposits, and due to its exceptional high sensitivity, deposits of these minerals may be detected with the instrument that are so far beneath the surface, that they were beyond the detectable range of regular prospecting radiation detectors! Ground that was prospected before, should be gone over with this instrument, as well as old mine tunnels that can be checked for veins, which may have been missed, or may lay behind the walls of the tunnel. They may be there, but invisible to the naked eye.

SPECIFICATIONS:

Length: 12 inches in width, 7 1/2 inches in height, and weighs 10 3/4 lbs.

Full Two Year Warranty.

PRICE: #1295.00

Terms, if desired: \$295.00 down and your choice of the following:
12 months at \$91.75 per month; 15 months at \$75.07 per month;
18 months at \$63.94 per month; 24 months at \$50.05 per month;
30 months at \$41.70 per month, or 36 months at \$36.14 per month.

Discount for cash 5%.

NOTE: We reserve the right to change specifications, whenever they may add to the versatility of the instrument, without notification.

WHITE'S ELECTRONICS, INC.

Manufacturers of Super Sensitive Space Age
Electronic Instruments

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Sweet Home, Oregon 97386

Phone: 503-367-2138

DETECTION OF POSITIVE ORE BODIES

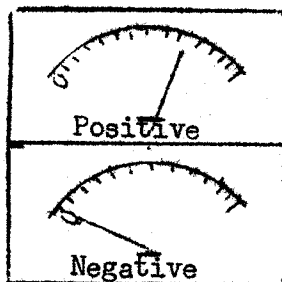
The Highest Positive readings are secured when the instrument is directly over the center of the Ore Body or the highest concentration of mineral.

The lower readings are obtained along or near the edge of the deposit and the Normal background readings for the area are again secured away from the deposit.

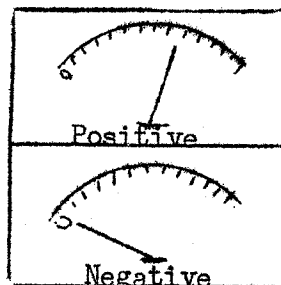
HIGH Reading on Meter
on edge of ore body.

HIGH Reading on Meter
on edge of ore body.

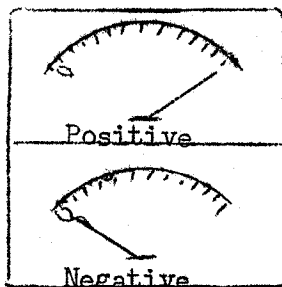
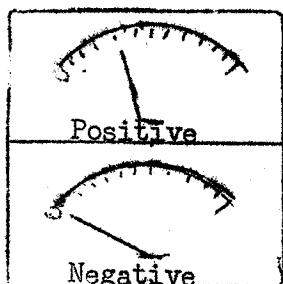
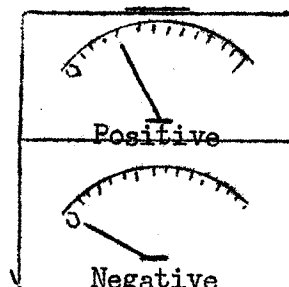
NORMAL Red meter
reading away from
ore body.



HIGHEST Reading
on Red Positive
meter over Positive
ore body.



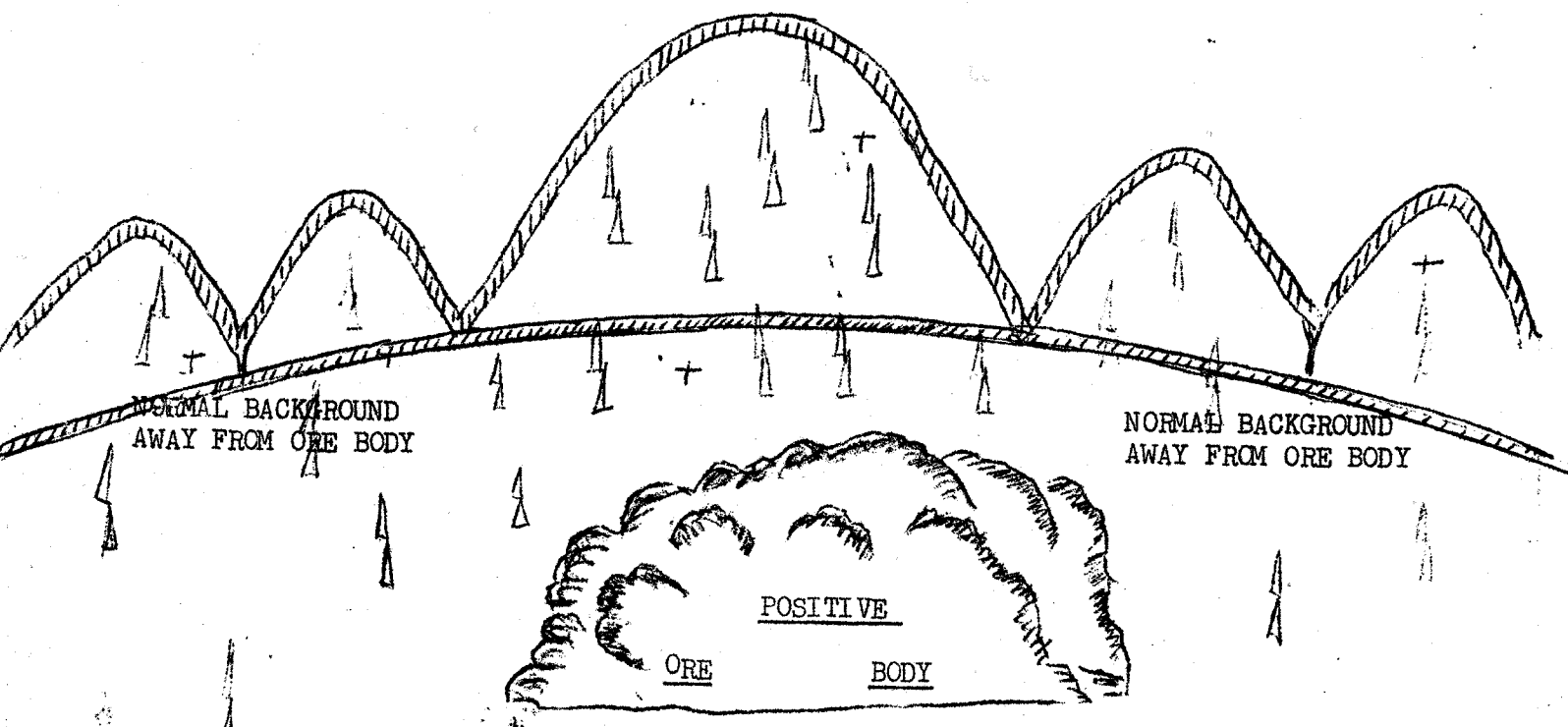
NORMAL Red Meter
reading away from
ore body.



NORMAL Negative
meter reading away
from ore body..ZERO

Reading on Black
meter over POSITIVE
ore body. ZERO

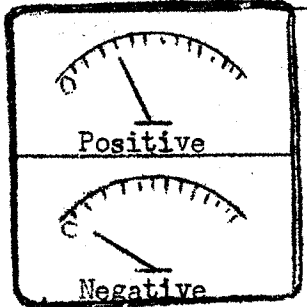
NORMAL Negative
meter reading away
from ore body..ZERO



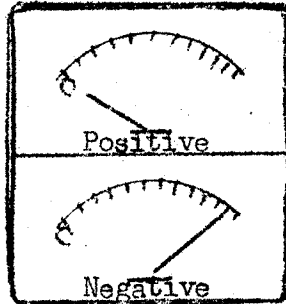
A POSITIVE ORE BODY, which is an ore deposit containing radio-active Isotopes, and having a higher radio-active content than the surrounding soil and formation adds to the normal radio-activity of the area resulting in a Positive, or above normal reading, over this type of deposit.

DETECTION OF NEGATIVE ORE BODIES

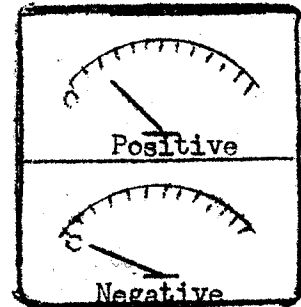
NORMAL Red meter reading away from Negative Ore Body.



NO reading on POSITIVE meter over Negative Ore Body.



NORMAL Red meter reading away from Negative Ore Body.



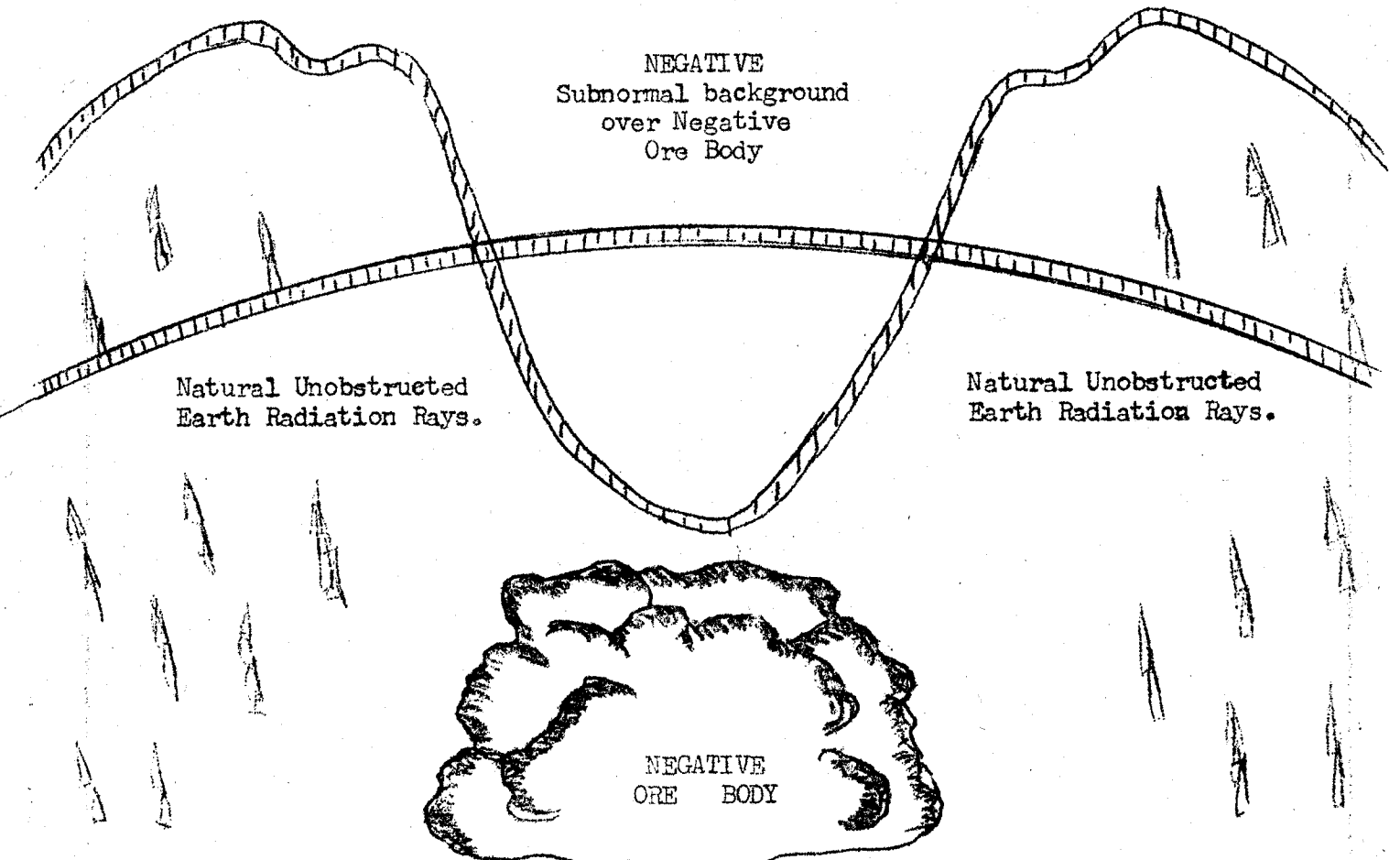
NORMAL Negative meter reading away from negative Ore Body.

Reading on Black Negative meter over Ore Body.

NORMAL Negative meter reading away from negative Ore Body.

Normal background away from Negative Ore Body.

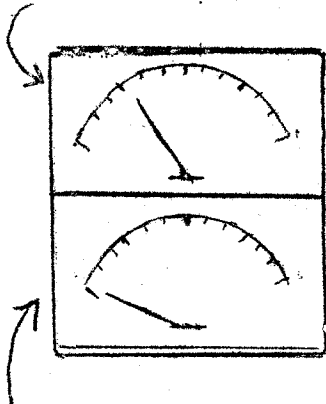
Normal background away from Negative Ore Body.



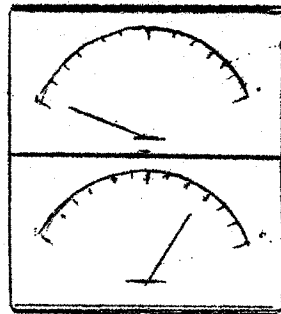
Natural Earth rays blocked by negative sub-normal ore body, which causes a drop in the POSITIVE reading over the deposit and results in a negative, (below normal) reading on the black faced negative meter.

NEGATIVE READINGS OVER WATER (SUBNORMAL)

Note Normal Positive
reading away from pool.
(Normal Background)

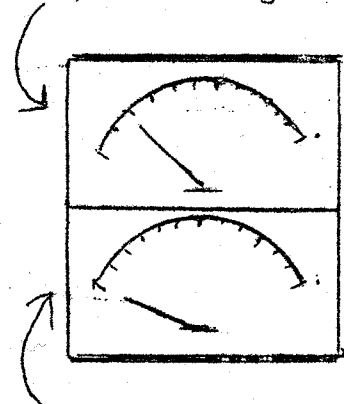


Zero, Negative reading
on black faced, sub-
normal reading meter.

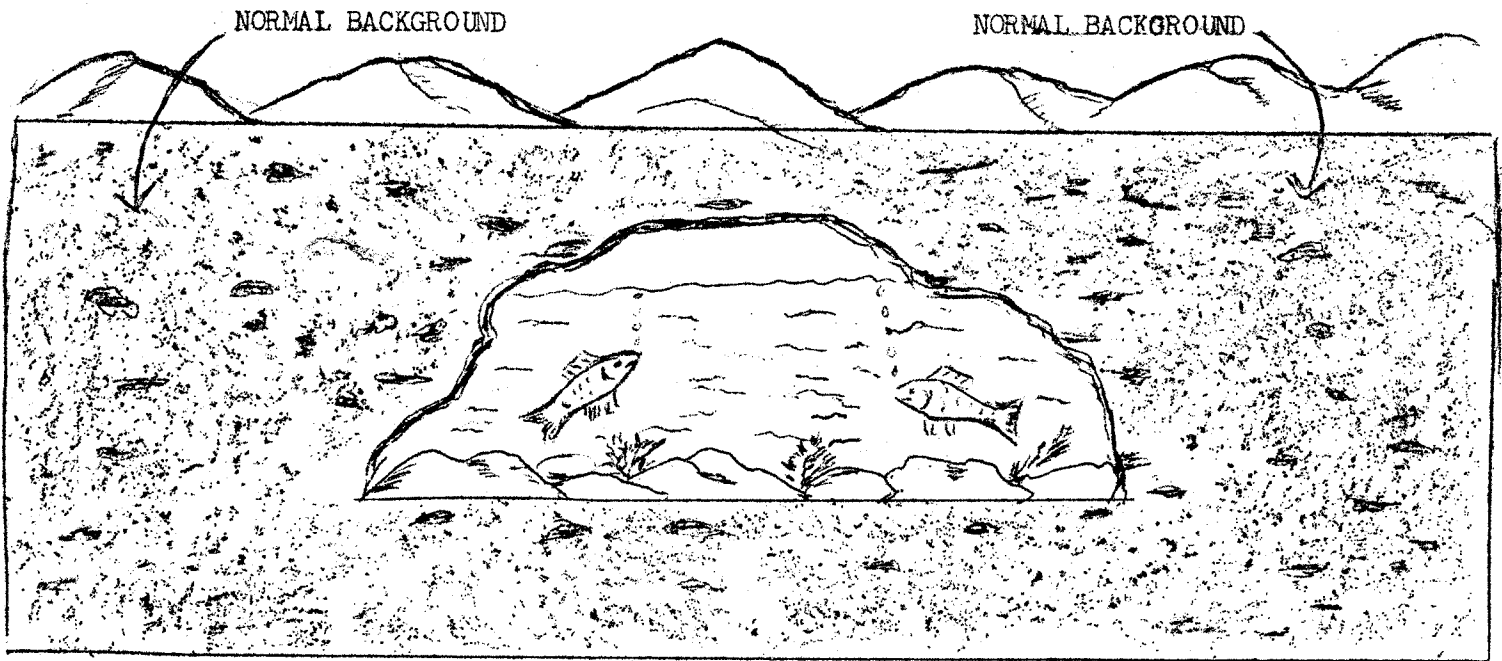


High reading on the
sub-normal black-faced
meter, over pool.

Note Normal Positive
reading away from pool.
(Normal Background)



Zero, Negative reading
on black faced sub-
normal reading meter.



SUBTERRANEAN WATER BODY

Note: Background reading drops over large, deep pools, resulting in a reading on the black-faced negative meter, while over the pool. (Large Subterranean caverns may also give a negative reading on the instrument).

RADIO ACTIVITY AND MINERAL DEPOSITS 11

There is evidence indicating that the radio-activity of igneous bodies are non-uniformly distributed. Small stock and batholiths are higher in radio-activity than are the large ones.

Also, it appears that the radio-active elements tend to concentrate into the topmost parts of the batholiths during their formation because radio-activity, as measured into erroded body today, is highest near the rims and decreased towards the center.

Furthermore, mineralized areas around igneous bodies are rather loosley connected with the highly radio active parts of the intrusives. Stocks and batholiths of igneous or metamorphic origin possess broad zones of higher than normal radio-activity in the vicinity or related ore bodies controlled by major structural features.

Some ore bearing solutions are rich in radio-active elements that are able to diffuse through the surrounding rock for considerable distances, consequently, they are not only building up the high level of radio-activity in the mineralized zones, but also produce in the country rock a notable activity that decreases away from the ore body.

Eecause the activity of some non-radio-active ores are higher than the activity of the country rock, it is sometimes possible to locate ore bodies by systematically studying the radio-activity at the surface.

Other mineralized areas may be found from their association with rocks of abnormal activity. Similar surveys may also be made to detect the presence of formation contacts, faults, sheer zones and other structural features to map outcrops of veins, dikes and igneous bodies that differ in activity from the rocks surrounding them and of deeply weathered rocks.

Veins and other deposits mined for their content of radio-active elements may be detected by means of geiger counters and the scintillation counters by their high activity, if the country rock has been only slightly permeable to direct radio-active elements constituting the ore,

There are over 100 different radio-active minerals that have been clas-sified and many other radio-active minerals of uncertain value are also known to exist, but have not been adequately studied.

RADIO ACTIVITY AND MINERAL DEPOSITS . . .

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Mineral deposits that contain strong gamma radiation may be detected from much greater distance normally than deposits that have weaker radiation.

Gamma radiation consists of true rays which are like those of X-Rays and light and so are not electrically charged, but they are a million times shorter in wave length than visible light.

They readily pass through at least 3 inches of lead. In South America prospectors have been equipping themselves with airborne scintillation counters to prospect for diamonds to locate the Kimberlite pipes, the funnel shaped bodies of bluish rock ranging up to over 2000 feet in diameter in which diamonds are found.

Of volcanic origin, Kimberlite rock belongs to the basalt family and so has a subnormal radio-activity blackout, therefore this should be a likely place to look for a diamond bearing formation.

Measurements of radio-activity by means of scintillation counters and super sensitive geiger counters may also provide a means of oil exploration. Oilfields are generally low in radio activity and are commonly surrounded by a zone or halo. Having an activity that is slightly higher than normal, this may vary in different areas.

The difference in activity is believed caused by the upward movement of Chloride, rich oil field waters, which because of the reducing action of the minute amounts of dissolved hydrocarbons they contain, are sulphate free and consequently are capable of dissolving radium from the surrounding strata, such as Uraniferous shales not far from the surface.

The radium bearing waters move upward at varying speeds. When encountering oil or gas accumulations, they deposit most of the radio-active constituents near the edges of an oil field, as the result of oxidation of the sulphides and sulphates, by descending atmospheric water.

In areas that give a high reading, yet nothing can be quickly detected that is giving off this reading and it is thought that the reading may be originating at depth from a radio-active ore body, it is a good policy to check the foliage, the trees, moss on the trees, and the leaves on the trees.

If you have had a campfire, check the ashes for a high reading. If

there are cattle, deer, elk, sheep, antelope or any grass or foliage eating animals in the area and any of their droppings that are encountered should be checked for a high reading.

The deposit could be either Uranium or Thorium, or both, as the animal concentrates the foliage in their stomach, these droppings can be surprisingly radio-active in an area containing these deposits.

We have seen radiation so high that these droppings from stock could be detected driving by them in a jeep with an OREMASTER Super Scintillation Instrument.

This was evidently caused by the large Thorium deposit near where the cattle had been feeding.

All areas that give a high abnormal reading should be carefully checked for the possible presence of mineral deposits.

Areas that give an unusually below normal readings should be carefully investigated for the possibility of oil or possibly a subnormal mineral deposit, underground lake, river or cavern.

A Subnormal Ore Body is an ore body containing heavy gravity metal in a mineral deposit that does not contain any Radio Activity or has less radiation than the surrounding country rock.

We have examined both high grade abnormal reading ore bodies and high grade subnormal reading deposits. In our experience we find that properly designed Super Sensitive Radiation detector is an exceptionally valuable and desirable instrument to use in mobile as well as foot prospecting, to locate mineralized veins and ore bodies, to prospect, An Underground deep water lake or river, will usually give a subnormal reading on a Super Sensitive Radiation Detector when passing over them.

Many shallow surface streams, give abnormal readings due to the placer mineral deposits that they contain.

WHITES ELECTRONICS, Inc.

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