Mineral Prospecting by Proton Resonance
Problem
How to identify certain elements underground?
Implication

To Identify areas thought to contain hydrocarbons are initially subjected.

When a prospect has been identified and evaluated and passes the oil company's selection criteria.

An exploration well is drilled in an attempt to conclusively determine the presence or absence of oil or gas.
How identify a prospect?
It is possible a sensor react to the existence of an element, regardless of the medium that separates them?
A little reflection will show that the law of the equality of the inertial and gravitational mass is equivalent to the assertion that the acceleration imparted to a body by a gravitational field is independent of the nature of the body.

- Albert Einstein,
Atoms and Molecules fluctuate and influence each other by field acceleration.
Resonance is the tendency of a system to oscillate at maximum amplitude at certain frequencies, known as the system's resonance frequencies (or resonant frequencies). At these frequencies, even small periodic driving forces can produce large amplitude vibrations, because the system stores vibrational energy.
Simon Shnoll

• Studied the fine structure of the dispersion of results on biochemical processes analysing histograms. Discovered similarities in histograms shapes;
• The effect of space-time fluctuations, which, in their turn, are caused by the movement of the measured object in an anisotropic gravitational field;
• Measurements of processes of different nature;
• Any kind of measurement presents the same variation histograms;
• Energy independent (occurs in high energy as low energy processes);
• Dependent on geographic position and localtime;
• Use of collimators shown the influence of cosmic bodies in the histograms shape.
Implications

The sensors are affected as a result of providing a spectrum which is the information of the absorbed energy as a function of wavelength (or frequency) in the form of a graph.
Principles

Proton Resonance

• More than 95% of all matter are composed of Nucleon (protons, neutrons). Proton is the most stable known particle in universe.

• Proton have a basic resonance frequency, and all processes of nature tend to be in resonance with this frequency.
Principles

Continued Fractions

The equation

\[ \ln\left(\frac{f}{f_p}\right) = n_0 + \frac{1}{n_1 + \frac{1}{n_2 + \frac{1}{n_3 + \frac{1}{n_4 + \ldots}}}} \]

describes the behavior of n-resonant-body and exposes the fractal nature of the system.

Dr. Müller 1981

A. Ya. Khinchin 1949
Principles

**Fractal Dimension**

Explain the fractal nature and dimension of resonance process and, as a consequence of all processes in nature.
Principles

Element Spectra

Chemical elements and its isotopes nucleous are resonant systems of protons and neutrons, so they have a resonance spectra according to its nuclear composition.

\[ m \cdot c^2 = \hbar \cdot \omega \]
Process

- Data Collection
- Preprocessing - Calculation of histograms
- Location of spectral lines in continued fractions computed in P3
- Calculation of the relative concentration of the element.
- Statistical distribution of isotope concentration per layer
- Export SEG-Y
Implications of Principles

Knowing the resonance frequencies of the desired elements, looking up their standards in response sensors.
Signals are captured and stored
Process – Data Collection

Signals are captured by Helicopter
Processo

Preprocessing - Calculation of histograms
Calculation of the Relative Concentration
Calculation of Stochastic Resonance
Result of Proton Resonance

Traditional Tecnology  x  New Tecnology
Result Of Proton Resonance

Traditional Tecnology X New Tecnology
Conclusion

Operation time reduction, higher profit, lower risk, and sustainability in 360 degrees
Thank You for attention

Cláudio Salgado
e-mail: claudio.salgado@crbstech.com
Fone: 48 – 9981-5473

CRBS TECH : Our mission is to develop sustainable technologies to our planet