ExploTec

Summary

ExploTec Group, with the support of advanced digital control, creates an intelligent structure with technological content that can lead to a massive improvement in the quality of life of citizens and an increase in environmental protection while reducing costs. The ExploTec Group uses state-of-the-art technology with hardware and software to develop and release the earth's resources in an environmentally friendly way. This is done through the use of innovative exploration methods and the integration of existing systems so that start-ups, companies and people alike can participate in this new technological revolution. Our knowledge and years of research make this possible, as the tests and pilot projects have shown.

In addition, we use similar other business areas in our portfolio that have been used for many years, for example in the areas of health and air purification systems with mold control.
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Vision

Create a new listing that is accessible to everyone, everywhere, so that every place on the planet can develop healthily.

We give businesses, city managers and operators the support they need to manage their cities more efficiently through innovative technologies. We are committed to the values of openness, cooperation, transparency and consensus-building. We work in the public interest to create a better future for all.

Technology is on the rise around the world, and municipalities, municipalities, municipalities and businesses are eager to reap its many benefits. Our mission is to provide and efficiently use the necessary tools to protect the planet and improve care. We are committed to the values of openness, cooperation, transparency and consensus-building. We work in the public interest to create a better future for all.

The future of technology is bright, and we are committed to it.

Vision

Isotope exploration deals with the exploration of water, oil and mineral resources in Africa, Sub-Saharan Africa and other areas through the application of new geophysical exploration technologies and the pursuit of the primary water concept.

Mission

Use these technologies to create prosperity and economic development in Africa and other regions by:

- Mobilising water resources for human consumption and agricultural production by expanding land use for cereals and livestock and improving yields per hectare through irrigation.

- Acquisition of exploration rights and mining rights.

Technologies

Radiometric measurement of large areas for potential underground water deposits, kimberlite pipes, probable oil deposits, and possibly metals. Determination of drilling points by radiometric and passive seismic surveying.

Unique value proposition

Many arid regions of the world urgently need more water resources. Due to severe droughts, the water resources of some countries (South Africa, Namibia, Australia, California, South America, etc.) are quickly depleted. Economic development is slowing down.

Problem

The Blue Planet

Looking at Earth from space, it becomes clear why it is called the "Blue Planet." About 70 % of the earth's surface is covered with water. But 97.5 % of the huge water mass is in the oceans. They contain salt and are useless for most living things.

Of the remaining 2.5% freshwater, more than two-thirds is bound in the glacier masses and in the permafrost. Only 0.8% of all water on earth is freely usable for humans, most of it in the form of groundwater. The rest is spread over rivers and lakes.

But even this small amount should actually be enough for all people on earth – despite the steady population growth, because the freely available water remains in principle constant. This has to do with the water cycle, a constant system of evaporation and condensation.

Dwindling groundwater

There are many examples of excessive water waste. Some are due to thoughtlessness, others to pure greed for profit or lack of sufficient water resources. Many countries around the world are attacking their groundwater reserves of the future.

In addition to the major Asian nations of India, China and Pakistan, this is also the case in the southwest of the USA. In this low-precipitation region, intensive agriculture is practiced despite a lack of water, which requires enormous amounts of groundwater, especially in years with little rainfall.

In the fast-growing Mexico City, there are already great difficulties in supplying all households with sufficient drinking water. Since wells have dried up in many places, entire districts have to be supplied with rationed water from tankers in summer.

Yemen has a home-grown problem. In this traditionally very water-scarce country, a large part of the precious water is used for the cultivation of catheter harvesting. This ubiquitous everyday drug paralyzes not only Yemeni society, but also its agriculture.

Reckless waste of water

But it is not only groundwater that is being overused; Also, the water of rivers and lakes is sometimes tapped too much. The best example of this is the Aral Sea in Central Asia. Once the fourth largest lake on earth, today it is only a shadow of its former self.

Since the 1930s, large quantities of water have been extracted from its two tributaries to irrigate huge cotton fields in Uzbekistan and Kazakhstan. As a result, the lake has shrunk dramatically and its formerly weak salinity has greatly increased. In addition, it has been contaminated by decades of pesticide discharges. According to experts, at best, a small part of the Aral Sea can be saved.

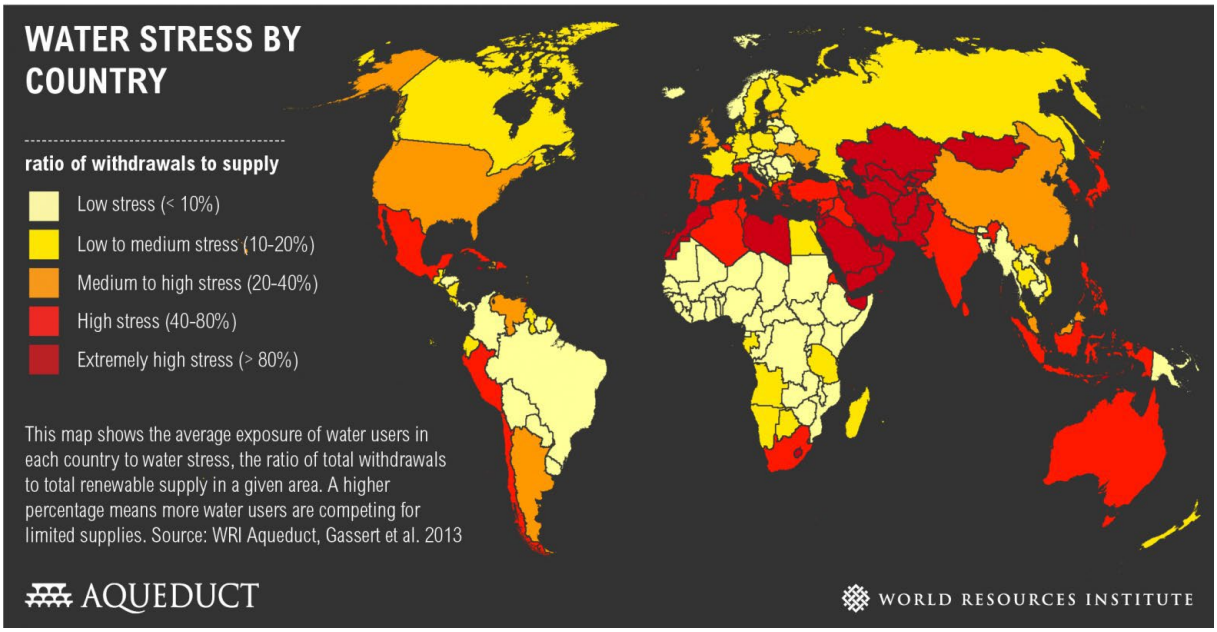
In addition to agriculture and drinking water supply, tourism also plays a role in water waste. The entire Mediterranean is actually too dry to supply the masses of travelers with enough water – especially for golf courses that can be played all year round.

In particularly dry summers, for example, Mallorca is additionally supplied with water from tankers from the mainland. Even the supposedly water-rich Alpine region is not immune to waste. Above all, the snow cannons, which are used for ski tourism, place an excessive strain on the water reserves of the Alps.

There are problems in many regions of the world due to permanent drought and a lack of economic and political problems, for example in Africa, Asia, the Gulf region or the USA.

In addition, there are problems with pollutant emissions and health.

In order to avoid major conflicts over this coveted resource in the future, new strategies for water supply must be developed.



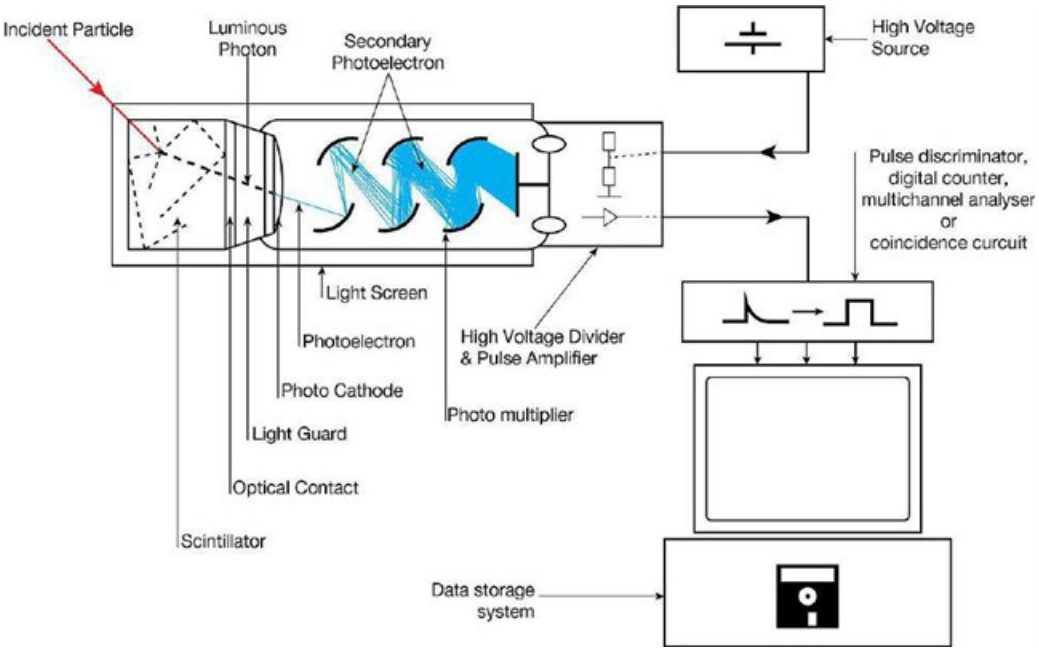
This map shows the average exposure of water users in each country to baseline water stress, i.e. the ratio of total abstraction to total renewable supply in a given area. A higher percentage means that more water users compete for limited water supplies.

Our analysis shows that 37 countries are currently facing "extremely high" water stress, meaning that more than 80% of the water available to agricultural, domestic and industrial users is abstracted each year.

Solution

What is isotope exploration?

A centilation counter is an instrument for detecting and measuring ionizing radiation



On the other hand, the use of background radiation for surveys is not very well known. This is our unique selling point.

Background radiation is key

Naturally occurring background radiation, which is always present on Earth, characterizes underground variations by the amount and type of radiation emitted. This so-called background radiation is subject to local fluctuations and is influenced by many factors.

The background radiation shows subnormal activity as it penetrates water and oil.

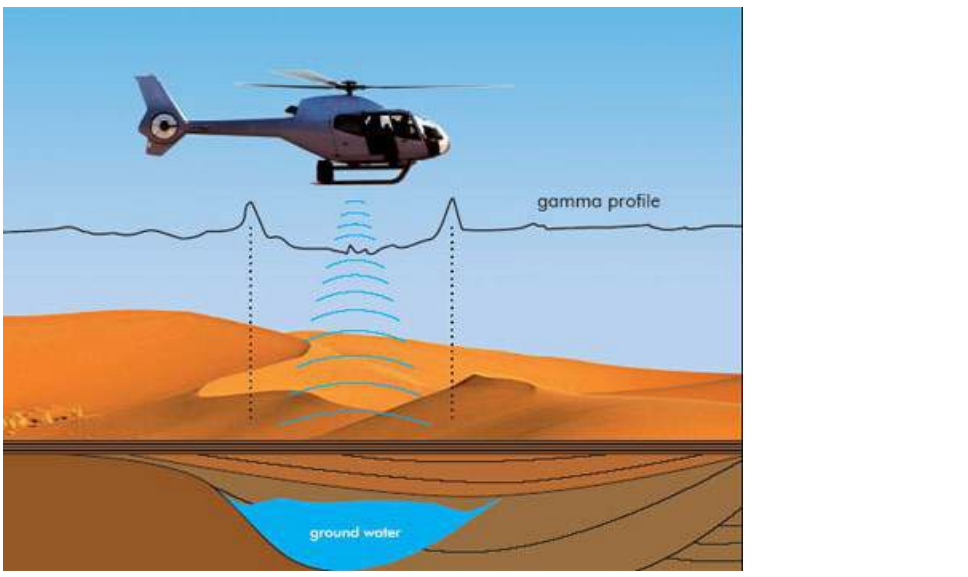
Based on this pattern, water and oil deposits can be identified, their boundaries mapped and read .

Identification of water resources

Classical gamma ray analysis

The background radiation shows below-average activity when passing through water and oil. This pattern can be used to identify water and oil resources, map their boundaries, and determine the best locations for exploratory drilling. Depending on the size of the area to be measured, the survey can be carried out on foot, by handcart, off-road vehicle, drone or helicopter. (Results are limited for small aircraft due to high speed). 11

Dr. Edgar Gummerum has found underground water deposits with his method in more than 100 cases, with a success rate of > 90%.



Radon trace analysis

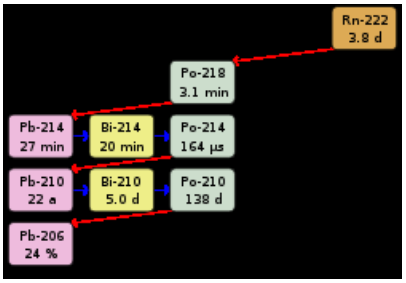
Based on the hypothesis that higher radon emissions occur selectively in certain regions such as active faults, we can derive underground fractures from high surface radon concentrations, faults and fissures if the hotspots are lineament-oriented.
The following properties of radon offer advantages for the identification of cracks, faults and cracks, i.e. as evidence for the fracture trace analyses and lineament studies carried out prior to the on-site analysis:

- Due to its gaseous nature, it can easily penetrate through a crack network during crustal migration.

- Since it is an inert gas that does not undergo chemical reactions with surrounding materials, it is not trapped during movement.

- It is easy to detect due to its radioactivity and favorable half-life of 3.8 days.

It is possible to indirectly detect the presence of radon by measuring the gamma-specific energy level of its intermediate decay product 214 Bi (detected within the radioactive series222Margin218→Butt 214 Pb→214Bi), which has a half-life of 20 minutes. →12



11Infographic Source: gamma-exploration.com Marketing Materials

12Tameshige Tsukuda,: radon gas monitoring by ground-based gamma-ray measurements to detect changes in crustal activity;

Earthquake Research Institute, University of Tokyo, 2008

"The solution to global water scarcity lies right beneath our feet, but only if we are willing to reorient ourselves, from searching for rainfall and tracking watersheds to the water table and unconsolidated aquifers to look for the original water source within the mantle and crust when it comes to faults, Cracks and fracture zones rises to the surface. "

Mark Burr USA in collaboration with Isotope Exploration

Some of many proofs in the world:

General

- Oases in deserts (key question: Where does the water come from if it does not rain to replenish the depleted groundwater).

- Springs on high mountains (key question: where does the water come from if gravity only makes it flow downwards).

- Most hot springs in the world (high temperature due to water from deep springs).

- Penetration of water into mine shafts (water rises well above the groundwater level, even in zones without known aquifers and little rainfall).

Namely

- Ain Figeh Well, Damascus, Syria: Average yield 132,000 gpm (8.3 m3/sec) since Roman times

- Mt. Whitney, California: continuous flow of water from a spring 13,000 feet above sea level

- Mines in Finland and Sweden near the coast without salinity (Nordenskiöld, 1885)

- Black smokers under the Atlantic Ocean: vents with supercritical water first discovered in nature (2006)

- New York City (1956): New water source at a depth of 3 meters: 12 million liters per day. Temperature and cleanliness indicate that this water source was not connected to any known body of water.

Challenges in adopting the new paradigm

Public science has ignored the concept and evidence for the existence of primary water (deep groundwater) and has not considered it a new source of water production.

There is a simple reason for this: the entire water business today benefits from the existing paradigm of scarce water sources: water treatment, transport, distribution, conservation, purification, recycling. The public scientific consensus is that there is no water on earth (primary water) and that all groundwater is part of the water cycle and that groundwater use corresponds to surface water supply. Water supply (i.e. the amount of water in rivers). This scientific consensus is false and must be challenged by evidence.

A possible scenario to consider

Even if new sources of water are found through successful drilling for primary water, governments and public scientists can promote policy that groundwater is a sacred cow and should be left where it should be left.

Overview

Isotope exploration with ExploTec introduces advanced Western technologies to emerging and frontier markets. We are a global company with an international team operating in Africa and Asia. Our technologies are capable of transforming business ecosystems, societies and nations.

Isotope exploration is a geophysical exploration method that has been developed in Germany and the USA for 75 years and has now reached a new level of excellence.

The Company should develop sources in Sub-Saharan Africa and elsewhere by employing new geophysical exploration technologies and leveraging its privileged access to key African markets through our trusted partners in various African countries and elsewhere in the world.

Technologies

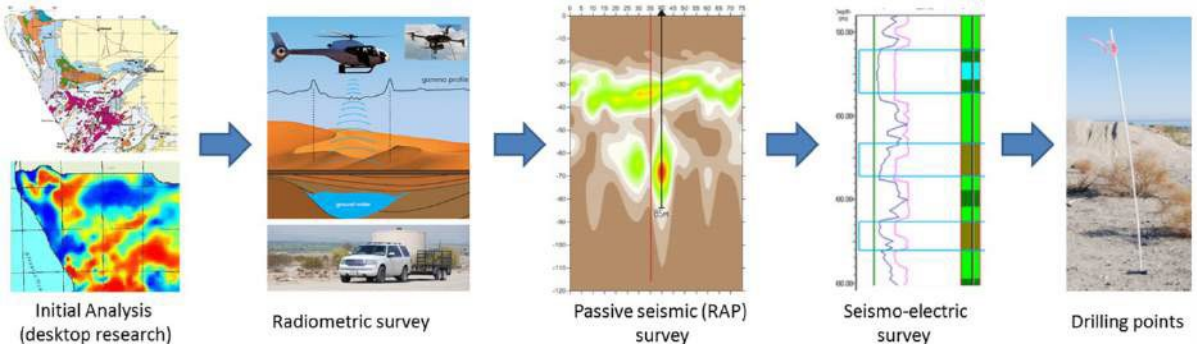
Our key technology is the use of scintillation counters to measure gamma rays from the Earth, which provide valuable information about underground elements and structures. We detect underground resources such as bodies of water, oil projects, kimberlite pipes and possibly gold and other metals using both background radiation and specific isotope spectroscopy.
Analysis.

Originally developed by Dr. Armin Bickel, scintillation detectors were developed in the United States about 50 years ago and successfully used to discover oil deposits in Texas and California. and in the 1970s to discover gold and copper deposits in French Guiana. Mobile scintillation meters based on this technology have since been further developed, for example by the German engineer Edgar Gummerum. This remote geophysical sensing technology makes it possible to locate underground water and oil deposits and to identify certain radioactive isotopes of chemical elements by measuring gamma rays.1

We also use complementary technologies from partners and third parties.

The workflows at a glance:

Although Africa is known as a resource-rich continent, it is the least explored continent in the world, with the exception of Antarctica. Many areas are still new territory in terms of exploration.



1 Dr. Armin Bickel was a member of Wernher von Braun's NASA team, the father of the Apollo program that put man on the moon. After his retirement, Dr. Bickel manufactured portable scintillation counters with very high accuracy. Both von Braun and Dr. Bickel emigrated from Germany to Germany. America after World War II.

Technologies

Our business is the exploration of water and mineral resources using both airborne and surface geophysical methods.

The geographic focus is on Africa, the world's least explored continent, which offers excellent business and investment opportunities. However, we are not limited to Africa, as Southern California, Australia, India, China and the Middle East also offer excellent opportunities for water extraction.

Our services are based on the application of innovative geophysical technologies developed by inventors and scientists from Germany and the United States, with complementary technologies from several countries. These technologies or scientific approaches are described in this chapter.

Our own intellectual property is isotope exploration, while the complementary geophysical methods are owned by third parties who work with us, either on a general level or on a project basis. The concept of primary water is well known, but few people understand the enormous impact it has.

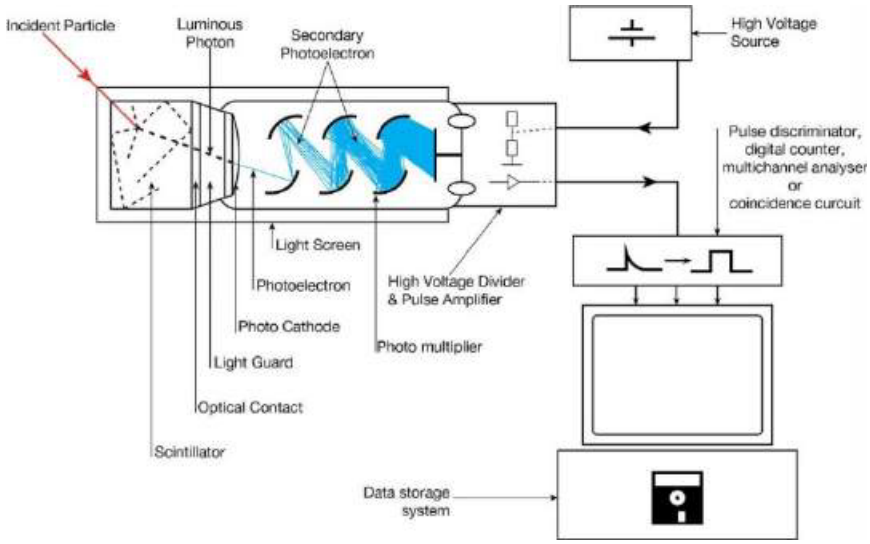
In order to achieve the best results for our customers, it makes a lot of sense to use a variety of geophysical methods. The intelligent combination of complementary scientific approaches and research methods not only allows us to maximize the effectiveness and efficiency of our work. Rather, it also allows us to open up new areas of challenging exploration.

Radiometric measurement

How Scintillation Counters Work

The term isotope exploration refers to the use of gamma radiation to study the subsurface. By determining the natural terrestrial gamma radiation and the attenuation that occurs, potential underground resources of water, petroleum, minerals and precious metals can be identified with minimal effort. The radiation is analyzed on a sliding scale with sensitive scintillation counters with specially dotted quartz sensors. Depending on the scope of investigation, gamma spectra or individual frequencies (isotopes) are analyzed.

Scintillation counters are used to measure radioactivity in various disciplines from medicine to nuclear physics, depending on the sensitivity of the detector. Our scintillation counters are very sensitive and consist of a special quartz sensor (usually NaI = sodium iodide) and a photomultiplier connected to a computer.



Gamma rays are received by these quartz sensors, converted into flashes of light and amplified by a photomultiplier as electrical impulses. The data is expressed in counts per second (ips) or total gamma. The strength of the light pulses is proportional to the energy level of the gamma rays.

Therefore, there are characteristic gamma energy levels due to the presence of certain isotopes of chemical elements. Scintillation counters have been widely used for geophysical surveys for several decades.

Historical background

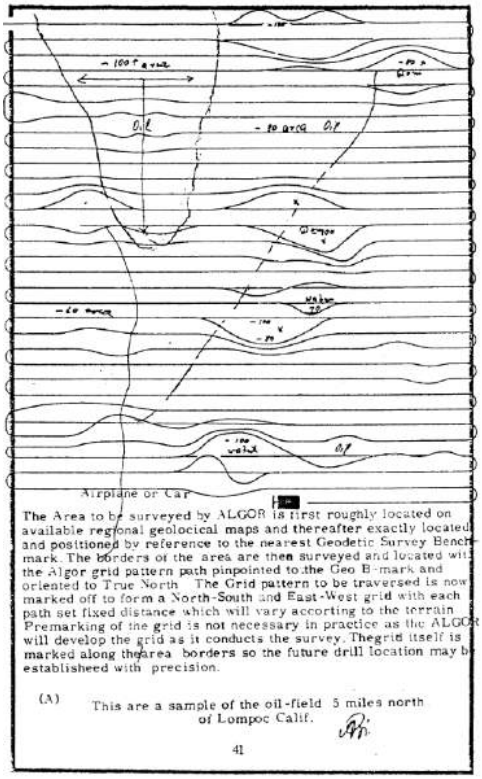
The isotope exploration methodology is based on the research and development of Dr. Armin Bickel, who has very successfully discovered water, oil and mineral resources.

Prof. Dr.-Ing. Armin J. Bickel, born in Germany, began his career as an astrophysicist at the Peenmünde Research Center, where he was involved in the development of the V2 rocket during World War II. In the 1950s he emigrated to Canada. Later, until his retirement, he worked on rocket development projects and conducted research on space technology at NASA. Dr. Bickel was part of a team led by his former boss Wernher von Braun that built the famous Saturn V rocket and sent humans to the moon.

After his retirement in the 1970s, Dr. Bickel founded his own company - Isotope Geology & Mining Exploration Inc. An expert in natural nuclear reactions, he used his extensive professional experience to develop specialized scintillation counters that he applied in the search for water, oil, diamonds and minerals by focusing on specific patterns of background radiation. Naturally occurring background radiation, which is always present on Earth, identifies underground variations by the extent and type of radiation emitted. It is subject to local fluctuations and is influenced by many factors.

Dr. Bickel found that background radiation from Earth's interior shows below-average activity when it passes through water and oil. This pattern makes it possible to identify water and oil reserves, map their boundaries and determine the best locations for exploratory drilling. He sold the devices he manufactured in small quantities and used them himself with great success in several countries.

The following pictures document Dr. Armin Bickel's use of the ALGOR scintillation counter he designed and built. They show how he studied oil, gold and nickel deposits in California.2



Airplane or Car

The Area to be surveyed by ALGOR is first roughly located on available regional geolocical maps and thereafter exactly located and positioned by reference to the nearest Geodetic Survey Bench mark. The borders of the area are then surveyed and located with the Algor grid pattern path pinpointed to the Geo B-mark and oriented to True North. The Grid pattern to be traversed is now marked off to form a North-South and East-West grid with each path set fixed distance which will vary according to the terrain. Premarking of the grid is not necessary in practice as the ALGOR will develop the grid as it conducts the survey. The grid itself is marked along the area borders so the future drill location may be established with precision.

(A) This are a sample of the oil-field 5 miles north of Lompoc Calif.

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EXAMPLE.

ISOTOPE LOC. # 36

SUBTERRANEAN ISOTOPE SENSOR "ALGOR"

Area Siskiyou County Calif. 17 miles West of Gazelle

Map location Twp. 42 N. -R7W Section 2 T. 28 (patend claims

Elevation 8550 feet Engineer A.J. Jones Date 8.7.75 Time 10 am.

Instrument setting & reading Minerals XX Water X Oil none

Location	Sensi dial 1	Zero dial 2	Backgr. count 3	Meter neg. 4	Meter pos. 5	Neutral set. 1	2	3	Remarks
Neutral	6	476	26-35	0	0-10	6	476	26-35	Gold and Nickel
R7W # 1	6	465	34-42	0	15-40	"	"	"	bearing quarts
R7W # 3	6	465	55-65	0	100+to 80	"	"	"	outcroppings and bluffs
R7W # 8	6	385	58-74	0	100+to 80	"	"	"	
R7W # 9	6	385	48-65	0	70	"	"	"	
R7W # 10	6	385	45-60	0	56	"	"	"	
R6W neutral	5	565	26-35	0-10	0	5	565	26-35	
R6W # 2	5	565	20-32	40	0	"	"	"	
R6W # 3	5	565	18-27	100++to 75	0	"	"	"	Water appr.
R6W # 4	5	610	20-25	60	0				10 feet width
R6W # 5	5	590	20-32	40	0				

Example: The neutral setting on location R7W is "476" on zero adjust dial ("N" & "P" = 0 R7W # 1 indicated start of a mineralized zone. At R7W # 3 meter "P" saturates more than "100+" adjust "P" meter to 75-80. Slowly move forward if "P" meter saturates to 100+ again adjust back to 75-80. If "P" meter remains steady without increasing no further adjustment is necessary. To calculate the vein width measure distance from R7W # 3 to R7W # 8

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Dr. Bickel was a basic scientist and had a broad knowledge, most of which is no longer available today. Still, he let Edgar Gummerum in on the "secrets" of scintillation meter technology when they met in person at his California home in the 1990s.

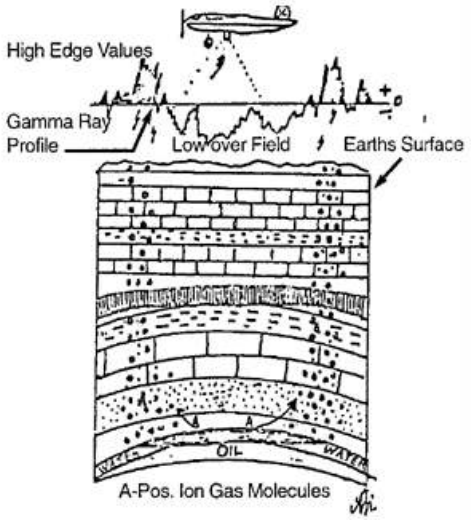
In the 1970s, there were neither computer systems nor the Global Positioning System (GPS). The scintillation counters used today by Isotope Exploration use software that contains both measurement data and

Records GPS coordinates in real time as you walk, drive or fly through an area.

Scintillation counters for isotope exploration

The scintillation counters we use provide quantitative and qualitative results that enable a wide range of geophysical analyses, such as:

- Identification of the exact location of aquifers and aquifers and potential primary water sources.
- Deposition of minerals and precious metals
- Search for oil deposits
- Finding kimberlite tubes, which are the main source of diamonds
- Anomalies such as faults, fractures, tectonic faults



Original graphics by Dr. Armin Bickel

Sources of radioactivity

Natural radioactivity comes from the following three sources:

Radiation from above:

- Cosmic rays from the Sun and space0.3 mSv per year 4

Radiation from below:

- Earth radiation0.5 mSv per year.
- Potassium40 (highly concentrated in potassium fertilizers)0,2 mSv per year.
- Radon1.3 mSv per year
- Other sources (e.g. cesium-137; Consequences of the Chernobyl disaster) 0.1 mSv per year.

In order to obtain accurate results, it is important to separate the earth's radiation from other sources of radioactivity. Isotope exploration can take several measures to meet this requirement.

3in Central Europe
4mSv = Millisievert

The theory of water produced

by the earth The water or primary water produced by the earth (also known as juvenile, paleotic, plutonic, magmates, connates, primordial water, etc.) is present worldwide and regardless of climate. However, the chances of gaining access to primary water depend on geology and petrology. This water source is not dependent on the atmospheric water cycle, which is fed by solar energy, but is part of the primary water cycle, which is fed by earth energy. On the other hand, the atmospheric water cycle, which includes precipitation, runoff, reservoirs, aquifers, infiltration, leaching, evaporation, and transpiration, is the knowledge base and domain of most geologists and hydrologists. The entire value chain in the water business today is based on the paradigm that the atmospheric water cycle is the only water resource.

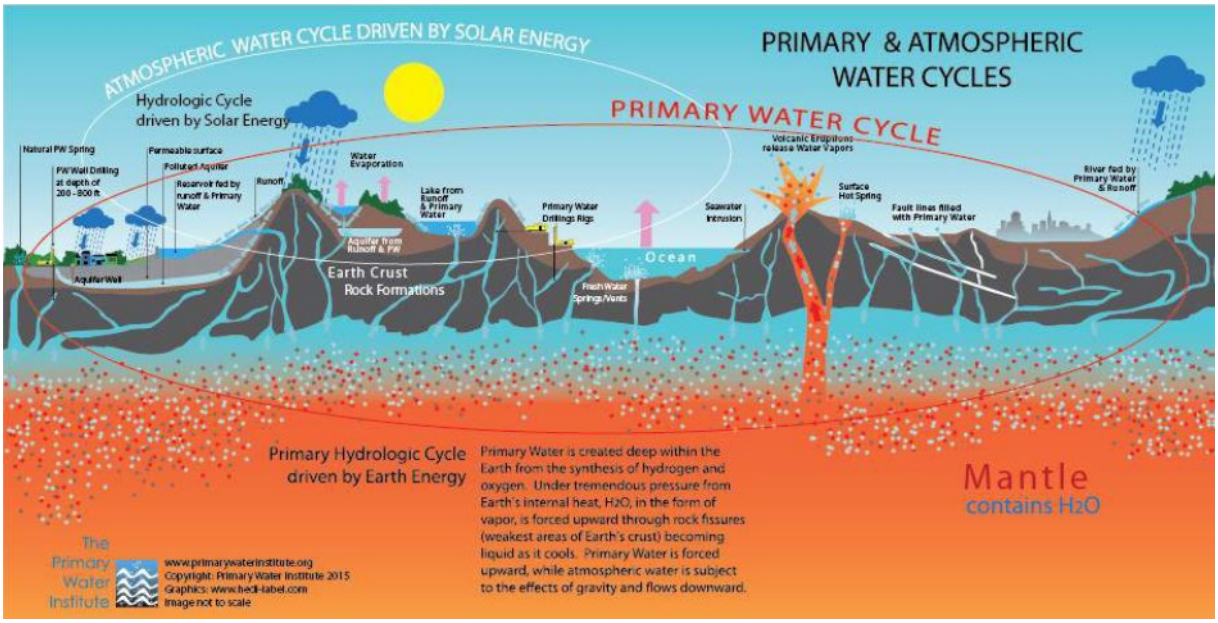
The theory of water extracted from the earth was mainly developed by another German scientist, Stephan Riess, who coined the term "primary water". He discovered many hundreds of wells in the United States and around the world in the second half of the 20th century by locating drilling sites and drilling holes in rock layers. This was - and still is - in stark contrast to the conventional wisdom of most geologists and hydrologists who search for groundwater sources in unsorted material (gravel, sand, soil or sediment).

Seismic depth measurements have now shown that hydrogen and oxygen combine in the mantle transition zone at a depth of about 400 miles, where our silicate-bearing bedrock forms, and come to the surface via the centrifugal forces of our planet and appear in large quantities both at the bottom of our oceans and in the highest mountain regions.

Although many scientists still consider primary water to be a mere hypothesis, there is plenty of evidence in the world:5

- Oases in deserts (Key question: Where does the water come from if it doesn't rain to replenish the dwindling groundwater?)
- Springs on high mountains (key question: Where does the water come from if gravity only makes it flow downwards?)
- Most hot springs in the world, including hundreds of them in arid areas of the western U.S. (high temperature due to water from deep springs)
- Water entering mining shafts (water via ferrata far above the groundwater level, even in areas without known aquifers with little rainfall)

Courtesy of The Primary Water Institute, USA
5The theory, practice and much evidence are detailed in the excellent book New Water. For "A Thirsty World" by Michael H. Salzman,
Murray Geb. Inc., Culver City, Kalifornien 1960



Where the primary water comes from:

- The Earth's mantle contains large amounts of H2O. Primary water comes from several sources:

- Magmatic and volcanic water produced by the synthesis of hydrogen and oxygen under enormous pressure from the Earth's internal heat

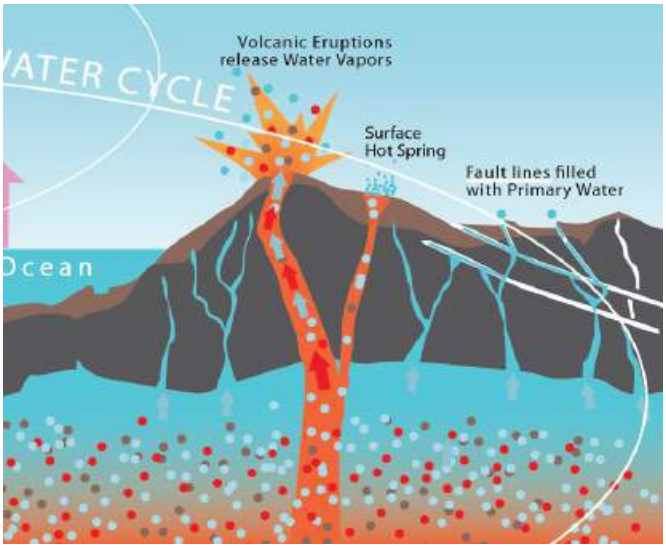
- Metamorphic water released by the transformation of one rock into another under very high pressure .

- Oceanic water formed by the subduction of tectonic plates into the Earth's mantle.

- H2O in the form of steam is pushed through the weakest parts of the earth's crust, splitting the rock and becoming liquid as it cools.

- Supercritical water also transports heavy metals, which become sources of primary ore deposits (mostly in veins).

- Primary water is pushed upwards. Atmospheric secondary water flows downwards due to gravity.



Some concrete examples of ground-coupled water sources:

- Ain Figeh Well, Damascus, Syria: Average yield 132,000 gpm (8,340 l/min) since Roman times.

- New York City (1956): New water source at a depth of 3 meters: 12 million liters per day. Temperature and cleanliness indicate that this water source was not connected to a surrounding body of water.

- The Day River rises in western Oregon and consistently carries more water than precipitation would allow in the entire region.

- Mining shafts:
  - Mines in Finland and Sweden near the coast without salinity (Nordenskiöld, 1885)
  - Eureka Mine, Nevada: 40 million liters per day and Tombstone Mine, Arizona

- Black smokers under the Atlantic: Supercritical water sources discovered for the first time in nature (German expedition, 2006)

- Computer simulation of reactions in the Earth's mantle between liquid hydrogen and quartz 7

Access to primary water sources:

- Primary water rises from the mantle and injects itself — the Earth has faults and fractures, so surface and primary water mix in aquifers, in some lakes, and in some places in the ocean .

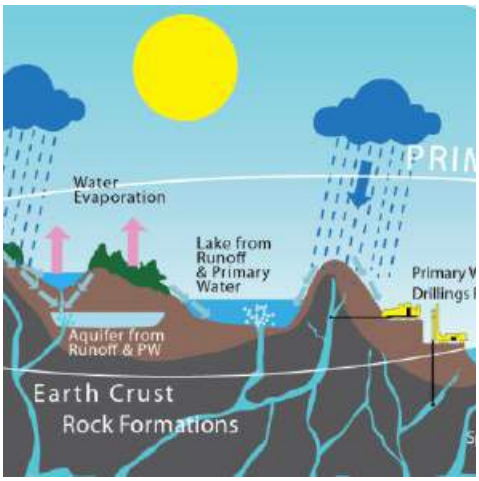
- In some places, the primary water seeps out constantly and continuously.

- In other places, the cracks in the groundwater do not reach the surface.

- In other places, the cracks in the groundwater do not reach the surface.

- Oil rigs can reach water that pushes to the surface by moving horizontally or drilling vertically into the primary water column, depending on equipment and logistics.

Part of our job is to locate and develop primary water columns with high yields.



6As of it. 4 m3/sec minimum discharge throughout the year, indicating that it comes from primary water; additional outflow to
Precipitation received from nearby mountains
7Klo Tse, University of Saskatchewan in Canada, 2017; Found in:https://www.newscientist.com/article/2119475-planet-earthmakesits-own-water-from-new-deep-in-mantle/

Complementary technologies In addition to our own radiometric surveying method, we use other geophysical methods that can create added value for our customers. Some of these are operated by us with commercially available equipment and software products, while other methods are introduced by other members of our working group.

These technologies include:

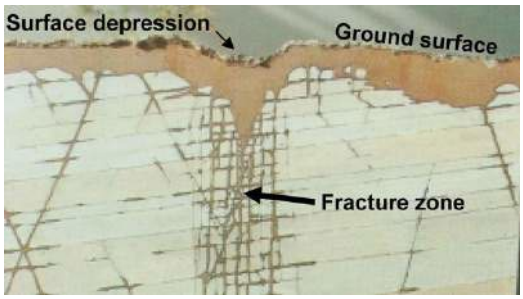
- Fracture trace analysis / lineament studies
- Passive seismic surveying (Resonance Acoustic Profiling)
- Seismo-electric surveying

Fracture trace analysis and lineament investigations

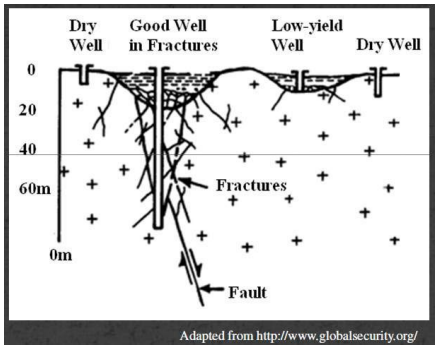
Fracture trace analyses and lineament investigations are used when large areas are to be examined for groundwater resources. This method helps us narrow down the size of the area to be measured, pre-select target areas with a high probability of finding water, and prioritize targets. Since this analysis is performed by evaluating existing geological and geophysical maps (desktop research), it can be done well in advance of each site visit, saving time and money. 8.

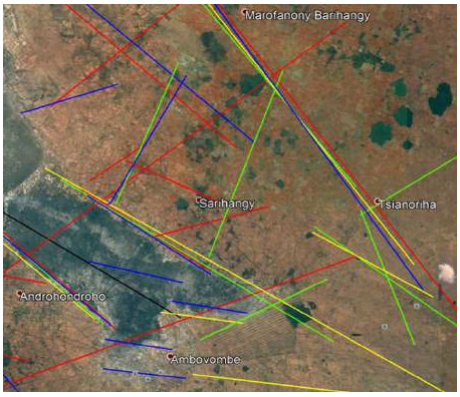
The basis for detecting broken trace water wells is quite simple. There are zones of structural weakness in the Earth's crust that contain zones of fracture concentration in the bedrock below. These fractures are actually cracks in the rock that are in zones of 5 to 50 feet wide, 100 to 200 feet deep, and several thousand feet to more than a mile long. Each fracture zone can contain one or up to 200 individual fractures or crevices, and there can be five or ten fractures or fracture zones in a 100-hectare area. 9

Mapping water resources using advanced geophysical analysis will reveal more lineaments – and carry the signature of a high probability of primary water.



8.Grafikquelle: Quelle: "A Digital Processing & Data Compilation Approach for Using Remotely Sensed Imagery to Identify Geological Lineaments in Hard-Rock Terrains: An Application For Groundwater Exploration In Nicaragua (2008)"
9sources: Primary Water Technologies, USA; Extension PennState (USA) http://extension.psu.edu/Natural Resources/Water/Drinking Water/Wells/Water-Well-Site-by-Fracture Trace Mapping



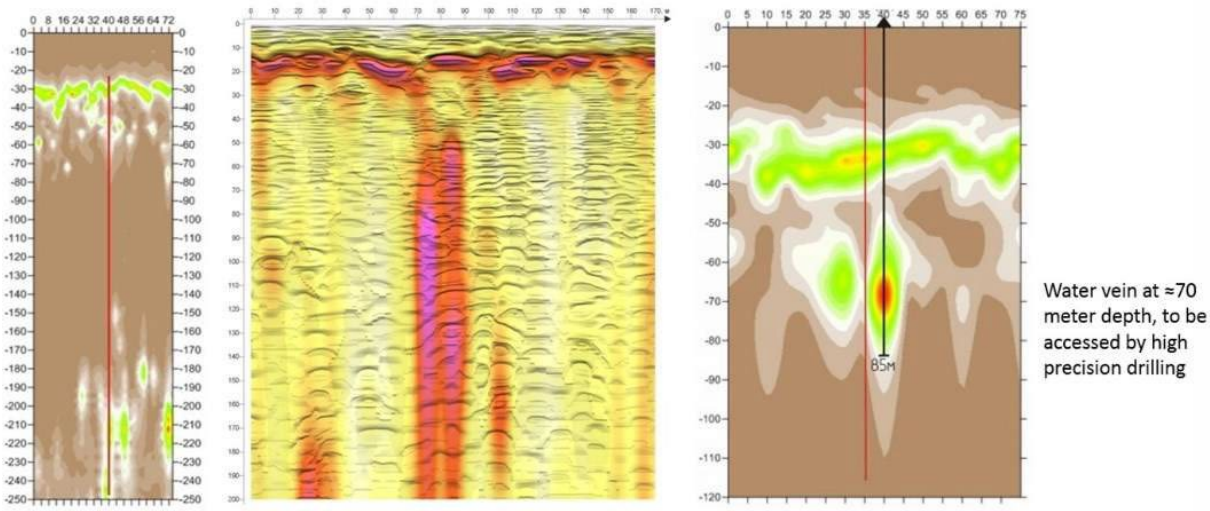


Lineament studies previously conducted in Madagascar
The field studies of the pilot project have actually started

Acoustic resonance profiling

RAP is a passive seismic technique based on the detection of background noise. It can reach low frequencies at depths of more than 2000 meters and allows profiling of geographical formations based on density/porosity. Our focus is on shallow targets for "Rift Water" and determining the depth of reservoirs.

1. Set a contour line
2. Perform measurements
3. Plead for the data
4. Join a meeting and present the results



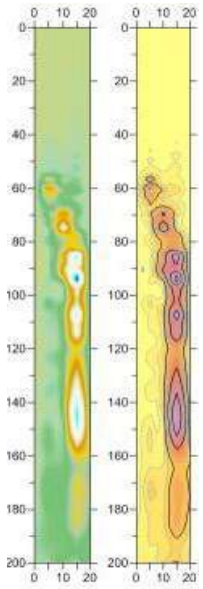
Water vein at ≈70 meter depth, to be accessed by high precision drilling

X-axis represents survey line, Y-axis the depth; both in meters

In November 2017, a pilot project was carried out in Madagascar, which showed with remarkable results how radiometric surveying and passive seismic methods work together perfectly to enable rapid data collection and processing in the field.

The first drill point was completed in August 2018. We estimated that at the drill point delineated by our survey, we would encounter a deeply fractured aquifer at a depth of about 85 meters (see purple areas in the image on the right).

The estimate could not have been more accurate: we came across 85.5 meters of water!



Seismoelectric surveying

Seismoelectric surveying is similar to seismic reflection surveying (seismic) but is a much simpler technique.

<u>Signals show:</u>

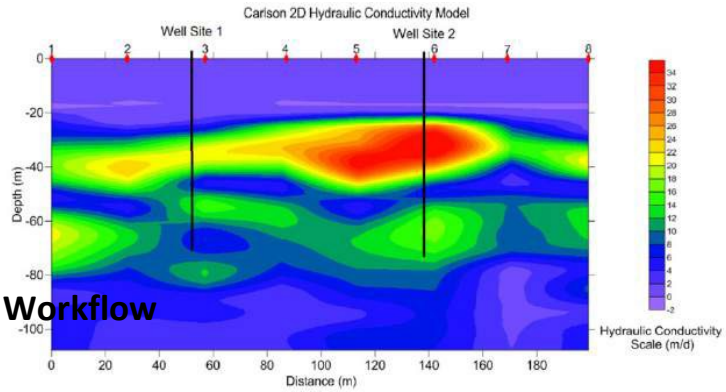
- Distinction between fresh water (strong signal) and salt water (weak or no signal).
- thickness of a body of water (or hydrocarbon-containing layers)
- Water flow (expected capacity)
- Distinction between flat and inclined layers

This technology is an ideal approach for the last mile before deciding whether and where to drill:

- Does depth, thickness and capacity justify commercial exploration and production?
- What kind of use would the water quality allow? (drinking water, water for Cattle breeding, irrigation).

We have not yet made a final decision on which product we will source.

In fact, technological developments are changing in our favor,
Important here are also the key data of the region, which facilitates the selection of the technology to be used.



Workflow

General sequence of steps

1. Review of existing geophysical maps, geological maps and satellite images and collect historical data

A. Analysis of geological structures, in particular: analysis of fracture traces and lineament investigations

b. Analysis of historical data (drilling, existing and abandoned mines, oil spills)

c. Software-based analysis of events and trends

2. Pre-selection of areas to be investigated, depending on the client's requirements and budget

3. Site inspection and radiometric surveying with data processing and analysis after each step , with the results of each step determining the scope and scope of the following step:

a. Rough grid, by plane or helicopter.

b.Center grille, by helicopter, drone or 4x4

c. Fine grid, by drone or 4x4 or on foot, e.g. drilling point determination on foot

4. Determination of the underlying geological structures and the depth of the target resource by complementary methods, i.e. passive seismic and electrical resistance methods

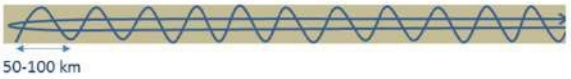
5. Final evaluation, preparation of maps, detailed discussion of results, recommendation for further action in the final report to the customer

Airborne survey of large areas

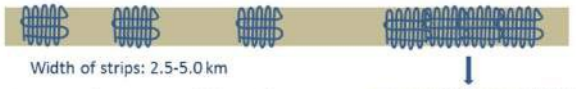
If large areas are to be scanned, the following workflow is suggested:

Project phases:

1. Preparation
   - Purchase of equipment; completion of Gamma Exploration's R&D program re mounting on drones (3 months)
   - Analysis of publicly available geophysical data; creation and interpretation of own maps; lineament studies
2. Initial radiometric survey of very large areas (country size) via airplane or ex-military fixed wing drone



3. Comprehensive scan of the most promising areas



4. Intermediate scan of large key areas with helicopter or fixed wing drone

Width of strips: 1-2 km

Project phases:

5. Detailed scan of hotspots / anomalies with radiometric survey

   Width of strips: 50 - 100 m

   Potential areas where thermal pipes might occur must also be surveyed with a dense grid due to small diameters of such pipes
6. Spectrographic analysis of radon decay isotopes and metals (where applicable)
7. Measuring of underground structures and determination of depths with passive seismic

   Grid of measuring points: 5 - 20 m
8. Estimate of size of water body, water flow (yield) and water quality (salinity) with a complementary technology
9. Synopsis: Interpretation of findings; recommendations for drilling points
10. Drilling for water (if required)

Fixed wing drone with VTOL ability (Vertical takeoff and landing)

- High speed
- long range

Multicopter

- Low speed
- short range

Key advantages of using drones:

- Cost and time effectiveness: Large areas can be scanned in a short period of time
- High precision: Tracks can be predetermined von the computer
- Highly automatted survey
- Only option in difficult terrain (i.e. rain forests, uneven mountaineous terrain)

Main advantages of using drones

Performing our radiometric surveying with drones offers clear advantages that lead to a competitive advantage:

- Cost and time efficiency: Large areas can be scanned in a short time.
- High precision: tracks can be specified on the computer
- Highly automated surveying
- The data is transmitted wirelessly and in real time to the base station, where the operator can view the results on his notebook.
- In difficult terrain (e.g. rainforest, uneven terrain), surveying with a drone is the only viable option.
- Separation of data collection and analysis: While the operator on site focuses on drone flights and the storage and forwarding of the data series, the expert can sit in his office in another country and guide the operator the next day for the next steps. When data collection, processing, and analysis occur in different time zones, efficiency is even greater.

For legal reasons, the best way to run our systems on drones is to work with an existing drone operator in the target country. Therefore, our systems are mounted on drones licensed by the drone operators of the respective country.

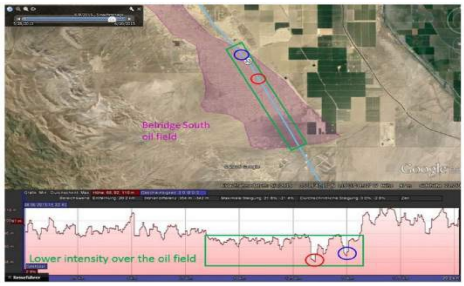
China is the leading manufacturer of drones. The speed of innovation is enormous. Three years ago, the flight time of a commercial copter drone with a payload of 2 kg was about 20 minutes before the battery needed to be replaced. Today, there are fixed-wing drones with VTOL capabilities that allow for much longer flight times. Hybrid drones (fuel and electricity) can fly for more than 1 hour. [10]

[10] VTOL = vertical take-off and landing

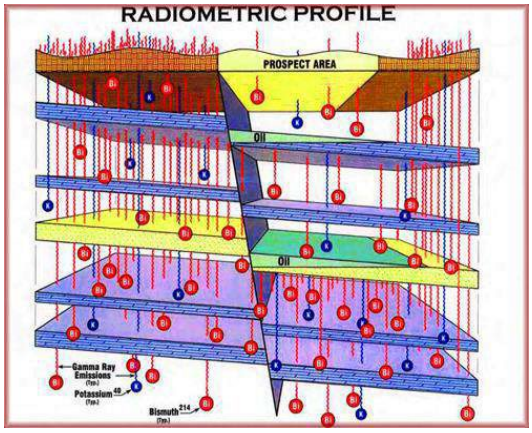
Detection of petroleum deposits

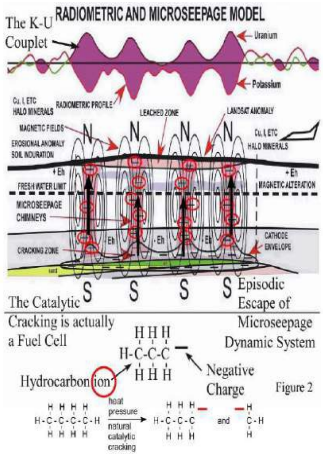
In Dr. Bickel's experience, background radiation analysis can also be used to detect liquid hydrocarbons. In 2015, we conducted a rough radiometric survey over Belridge South, the fifth largest oil field in the U.S. in Southern California, by crossing it in a car on a public road. The task was to find out if lower readings could be seen over the oilfield, as Bickel's experience suggests.

The results were astounding: a significant reduction in intensity was observed over the oil field, as Dr. Bickel had expected. In addition, the changes in signal intensity coincide exactly with the boundaries of the oil field:
Why is that? The gamma radiation is partially blocked by underground oil layers (see right image below).



The radiometry and microseepage model (see left image) goes one step further.
Dr. Robert Olson discovered that certain patterns of potassium and uranium signal intensity can be monitored over oil reservoirs. We plan to adjust our scintillation counters to measure total, U-number, K-number and Th-number simultaneously. 13

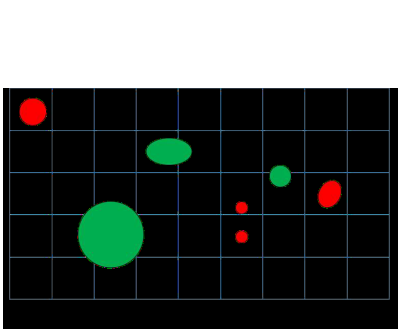


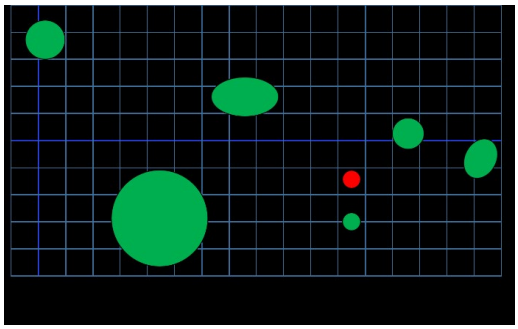


Areas with high hydrocarbon potential are further studied using the seismoelectric survey method, which allows us to measure the thickness of a hydrocarbon-bearing layer and identify multiple layers of water and oil. This is a good approach for the last mile before setting up drill points.

Detection of kimberlite tubes

Kimberlite is the most important diamond-bearing material on earth, and kimberlite tubes are the most common primary source of diamonds. They typically have a round or oval, sometimes irregular shape on the surface and a relatively small diameter (from 1-2 kilometers to dozens of meters). They have specific radiometric anomalies that can be detected using our examination methods, even if they are buried under layers of sand, gravel or sediment.



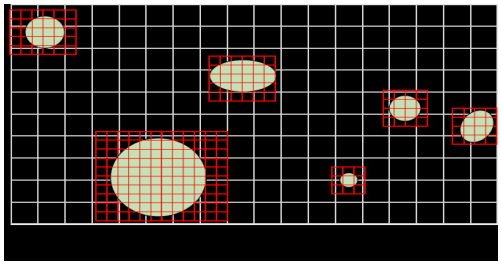


When searching for kimberlite tubes, it depends on the width of the grid whether all or only a few kimberlite tubes are visible. In a rough grid (see picture on the left) there are only pipes with large diameters, and those that are randomly crossed by one of the grid lines (shown in green). Therefore, a maximum width of 100 meters is recommended (see picture on the right).

After the anomalies are discovered, detailed scans must be performed to verify that the anomalies have the typical characteristics of a kimberlite tube and to show their limitations:

In order to get an indication of whether a kimberlite tube contains diamonds or not (which is not the case in 90% of cases), other methods that are not part of our portfolio must be used. Radiation testing methods do not help because diamonds emit or block radiation.

Detection of gold and other metals



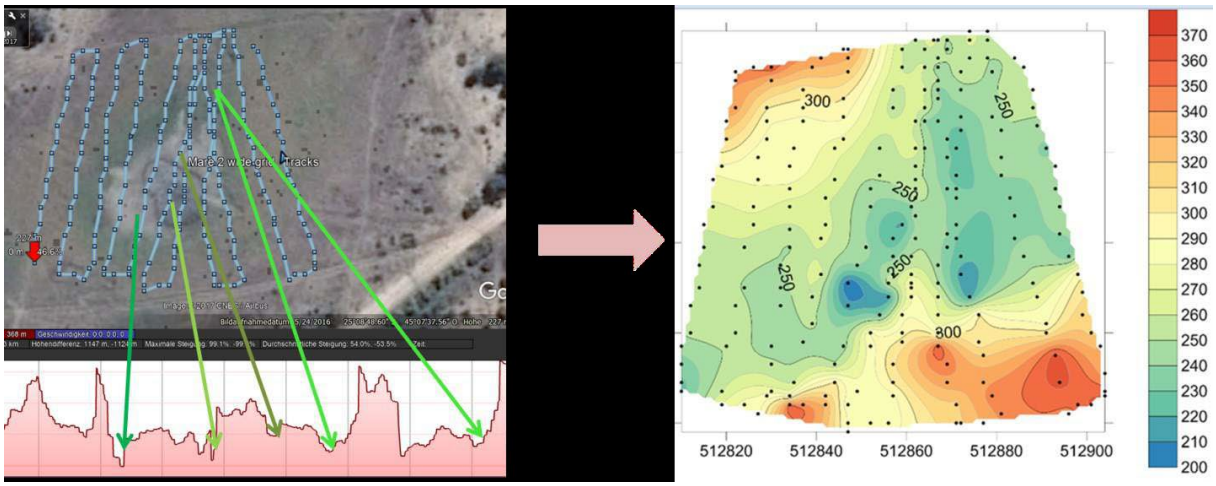
Dr. Bickel has succeeded in detecting gold and other metals with his method. This contradicts conventional wisdom, as naturally occurring gold is not radioactive.

We fully understand the reasons for his method as well as the technical details. We are confident that we will be able to calibrate our scintillation counters accordingly after purchasing high-performance scintillators.

Due to the highly confidential nature of this information, we do not disclose details in this business plan.

Visualization tools for rapid deployment

We use Google Earth™ in combination with a proprietary add-on that displays intensity data as a signal line (left image). We also use Surfer software for visualizing geospatial data in 2D (right image) and Voxler software™™ for 3D. Our proprietary radiometric data can typically be processed and displayed on our notebook screen within ten minutes, allowing us to respond almost instantly to the results and decide how, for example, to investigate a particular anomaly in more detail or apply complementary technologies to study the geological structure and determine depth. Quantity and quality of water.

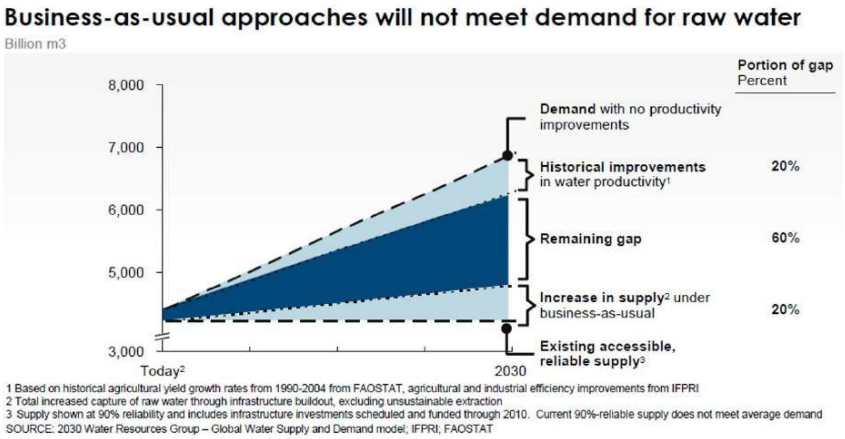


The market

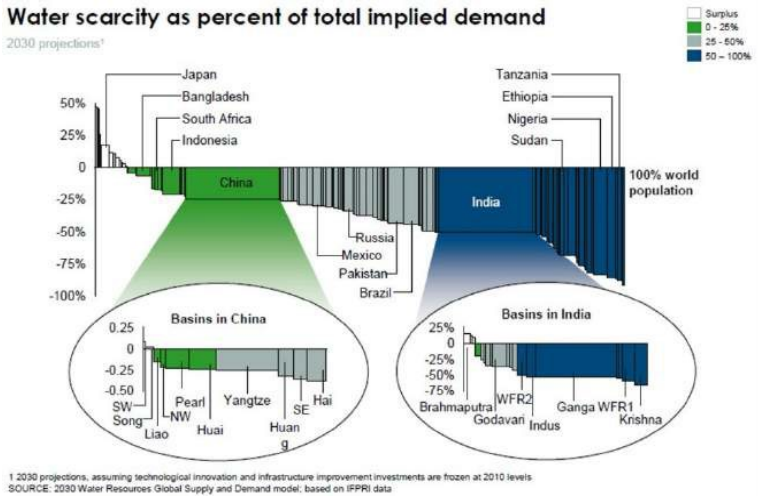
Isotope exploration operates in a favorable and promising market environment as we provide innovative solutions to some of the world's biggest problems.

Water

Water is probably the most pressing problem worldwide. The scarcity of water supply in many regions and people who do not have access to clean drinking water are the biggest challenges. Sinking groundwater levels and deteriorating water quality are other major problems.
The following slides from the McKinsey Water 2030 study highlight some aspects of the problem.

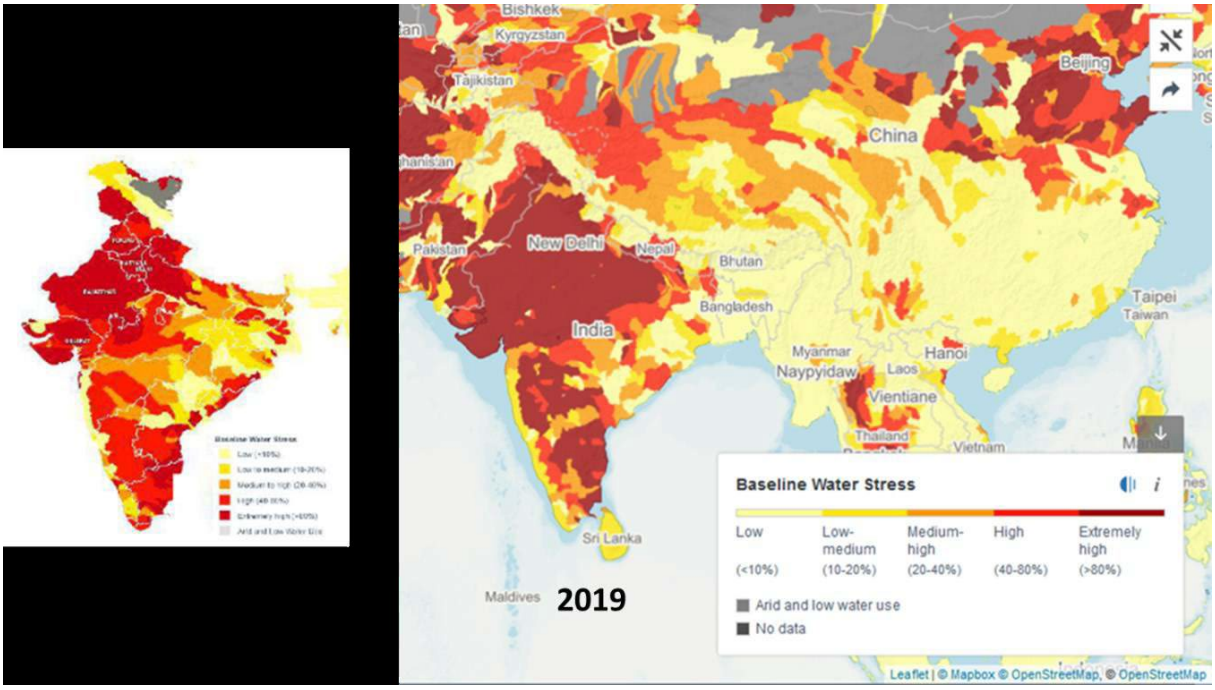


Africa is by far the continent with the least developed infrastructure and represents the greatest need. This puts us in an attractive growth market with excellent long-term prospects.



The generative water approach offers a completely new solution for dry countries such as South Africa, Botswana, Namibia, Kenya and others. However, the largest markets are India and China, followed by Nigeria, Ethiopia and Tanzania.

India has a huge water resource. Most parts of the country are under high water stress. That is, they consume almost all the water available to them.



Other countries and regions with high water stress are:

- Middle East, especially Israel, Lebanon, Jordan, Turkey, Iran, Afghanistan, Pakistan.
- Central Asia
- Different parts of Australia
- Southwestern United States
- Mexico
- Southern Europe: Spain, Portugal, Italy, Greece, Bulgaria - Mexico

Competition

Contract drilling companies might behave like competitors if they see our approach as a threat to their core business, as it reduces the number of [bad] wells drilled for a particular water well program.

On the other hand, working with a local or international contract drilling company would increase their competitive advantage, as the joint venture would allow them to virtually guarantee the success of their customers. We applied this approach in our pilot project in Madagascar in December 2017. Our joint venture, consisting of Primary Water Technologies, local drilling company Bushproof and Transformative Technologies, received a takeover offer initiated and financed by the United Nations (UNICEF). In this case, the drilling contractor was the leader of the consortium.

Whether drilling companies from other countries are approached by us to discuss a possible partnership agreement depends on the local market situation. Most likely, the decision will be made on a case-by-case basis. In our E&P (exploration and production) business model, forming a project-based partnership with a drilling contractor is a key element of the approach.

The largest drilling companies in the world operating in Africa are:

- Major Drilling Group International (MDI; market capitalization 915 million Canadian dollars),
- Foraco (FAR; Market capitalization $220 million).

In the pre-Covid period, Foraco generated $164 million in revenue, 11% of which was in the water supply sector (38% base metals, 31% gold). Africa accounted for 28% of sales. A rough estimate would suggest that an annual turnover of $4-6 million is due to water drilling in Africa. (2020 data)

Primärwasser

Very few companies adopt the primary water approach, mainly from the US and Australia. One of them is Primary Water Technologies (PWT) from the USA, the GP in the Madagascar project.

Gold

As major currencies (including the US dollar and euro) continue to be inflated by money-printing central banks and bond markets lose their safe-haven status, the following investment argument may become more important: owning a gold mine is one of the best hedging strategies against a collapse of the global financial system. Gold is the ultimate currency that has maintained its purchasing power for 5,000 years. Even if the possession of gold bars became illegal again in some countries (as was the case in the US from 1934 to 1971), the ownership of shares in foreign companies would not be affected.

We believe that the bull market in gold and silver has not yet entered the bubble phase as very few institutional investors are already invested. We expect gold and silver prices to rise much higher than they do today, providing excellent exit opportunities as the market enters the mania phase.

It is time to secure attractive mining rights in undeveloped regions, develop these assets by defining resources and reserves in the coming years, and finally divest some of them at the peak of the resource cycle still to come.

Alternatively, we could choose to develop and hold our own gold mining assets for the long term in order to have our own "bank" with a real currency that is expected to outlast all fiat currencies.

In the gold mining industry, depletion of reserves is a global problem. New discoveries are lagging behind production:

From 1990 to 1999, the industry found an average of 1.4 ounces of gold reserves and resources for every ounce produced.
From 2000 to 2009, only 0.7 ounces of gold reserves and resources were found for each ounce produced.
For the years 2010 to 2016, the industry estimates that at best 0.3 ounces of gold could be found for each ounce produced.
- The Majors need new deposits of scale and capital efficiency. 14

14Grafikquelle: Seabridge Company Presentation 2017

Unique selling points and customer benefits.

Exploring the water

In water explorationOur methods complement or compete with traditional methods (hydrogeology, satellite and aerial photography, established geophysical surveying methods, dowsing).
Our main advantages are our high success rate, our ability to scan large areas quickly and cost-effectively, and our drone operating model.
The higher success rate leads to huge cost savings by eliminating missed holes.

Example: Plausibility check of 350 wells, Republic of Mali

- A few years ago, the German engineering company Gauff drilled 350 wells in a grid, of which 40% were successful and 60% unsuccessful.
- With our survey methods, most of the unsuccessful drilling could have been explained and thus avoided.
- ➔ 1.0 - 1.5 million euros could have been saved (average drilling depth: 66 m; Cost$_n$ per meter drilled: 150 €) if our methods for determining the borehole locations have been poorly used. (simple example)

One of our business models is to share cost savings with our customers. However, it does not make sense to set up a general pricing model because there are too many parameters that affect competitiveness, such as:

- Water engineers and drilling companies in South Africa charge lower prices than in other sub-Saharan countries.
- The lower the groundwater level, the more expensive drilling becomes and the more important a low failure rate is.
- The more proof of concept we can present, the more convinced potential customers will be.
- Exploration & Production is the business model with the greatest potential. However, it is only advisable in countries with a good rule of law, where the contracting parties usually keep their promises and treaties.

Therefore, some general assumptions are made in this business plan that distinguish between cash-based projects and projects with an equity kicker. For more information, see the Budget section.

The customer benefit can be summarized as follows:

Municipalities, municipal utilities:

- More water resources
- Better coverage of existing and future needs
- Reducing the risk of bottlenecks

Agricultural land seeking water and institutional investors in agricultural land, real estate and water rights:
- Revaluation of land ownership if there is evidence of an increase in asset prices in the water
- Increase in the area under cultivation Increase in total yields
- Conversion of rainland into irrigated land Increase in yield per hectare
- Replacing expensive alternatives (construction of dams and pipelines, purchase of water) with own wells
- Better deals on land purchases after reviewing water resources

Building land banks and real estate portfolios based on proprietary knowledge of where the water is Revaluing land when there is evidence of water is a profitable business in Southern California, where we piloted with a local real estate developer. California suffered badly from a severe drought that lasted six years before heavy rains began. However, the water shortage is not over, and it will take many years for the depleted aquifers to recover. Water scarcity and availability therefore remain a problem, and water prices are expected to remain high.

Special project "California" (example)

In order to take advantage of this situation and offer added value to local farmers, the search for primary water becomes very interesting. One of our projects is to survey selected areas in Southern California by traveling about 30,000 kilometers on public roads and scanning the area for water and oil. Where we find promising anomalies or hotspots, we approach landowners or developers of commercial real estate and enter into agreements with equity kickers, i.e. we collect 10-20% of the price increase of the property as a fee for successful water search.

For this project, the potential revenues are significantly higher than the total costs of the entire project (including capital costs), and the duration with

appropriate personnel and technical equipment is significantly shortened accordingly.

During our pilot in the Salton Sea region, we have already identified a number of areas with promising business potential that deserve further exploration.

The same business model can be applied in other countries such as Australia.

A prerequisite for launching such projects is the lifting of travel restrictions for people who are not vaccinated against Covid-19. Current travel regulations do not allow entry into the United States.

Research on kimberlite tubes

This business can be started immediately if the exploration is to be done by helicopter or off-road vehicle. If an area is to be explored by drone, our system must be mounted on a drone model available from a licensed drone operator, which will take some time.

One of our partners has a long track record in finding kimberlite pipes. For example, he discovered some diamond-bearing pipes in the Arkhangelsk region of Russia.

Exploration of petroleum deposits

The prospection and exploration of mineral resources is very expensive and often time-consuming. They are by far the most important cost factor of exploration companies. Since most pure-play exploration companies have no revenue, the obvious bottleneck in their business model is funding. As they are generally not bank-financed, the provision of cash is provided through equity financing, which leads to dilution of the initiators' shares through subsequent financing rounds before the IPO and further capital increases after the IPO. Good drilling results, which would increase the resource and reserve base, would immediately lead to higher share prices and allow for capital increases on better terms.

Since time and cost savings are very important for exploration companies, our services should be used. By finding anomalies or hotspots using our isotope exploration method, we can narrow down the best locations for test drilling. In turn, the exploration company can achieve a higher success rate by selecting the best locations from the outset while reducing costs by avoiding drilling errors. This becomes even more important when the availability of oil rigs is a limiting factor.

Of course, each project is treated and negated differently. For business planning, we have made some rough estimates and basic assumptions. For more information, see the Budget section.

The customer benefit can be summarized as follows:

Oilexploration Companys:

- Delimitation of target areas for 3D seismic analyses (onshore and possibly offshore).
- Fast results enable compliance with strict exploration permit conditions
- Quick results support capitalization rounds (shorter time, better price, higher probability)
- Lower cost exploration programs become mandatory in a low oil price environment
- Complementary to other methods

Governments, regulators:

- Better basis for negotiating conditions for new oil blocks, as the provision of more data would allow higher prices
- Expansion of knowledge

Due to low oil prices, we do not see the oil industry primarily as our customers in the foreseeable future. Both large corporations and exploration companies have radically cut their exploration budgets.

However, if the recent rise in oil prices continues and the average price level rises significantly, the situation will change and offer us additional upside potential.

California Special Project:

As mentioned earlier, we plan to scan select areas in Southern California that travel about 18,000 miles on public roads. If we find evidence of oil deposits in areas where there are no known oil deposits, we should be able to exploit them.

Exploration of gold and metals

This business requires significant R&D activities and the procurement of specific technical equipment.

T he business potential liesmainly from industry. .

IP-Status

The technologies used have the following IP status:

-Scintillation Counter:
These devices are state-of-the-art. There are no known patents. Since we are users of these technical devices and not manufacturers, our intellectual property consists of knowing how the scintillation counters and the various operating parameters can be used for specific tasks in the exploration business.

We believe that our intellectual property can be better protected by a restrictive transfer of know-how to selected persons than by presenting the most important basics of a patent application.
In the field of passive seismic, however, our partner plans to renew existing patents.

Organization
In terms of structural organization, TT prefers a combination of network and hierarchical structure. The resulting network structure should be particularly resistant and robust against external influences. Its strengths are:

- High security in normal times (business as usual).
- Operational hierarchical structures can develop spontaneously from the nodes
- Quick response to market opportunities
- Short reaction time in crisis situations

Together with ExploTec , the processing and documentation takes place in the company's own decentralized data center via blockchain and security is guaranteed.
The corresponding IT structures are coordinated with ExploTec as well as the distribution.

Mauritius maintains close cultural, business and bilateral relations with many other African countries. Mauritius has emerged in recent decades as an attractive, safe and competitive location for cross-border investment and is recognised as a gateway for investment and trade with Africa.

Mauritius and Dubai play a crucial role in the development of Africa and the Gulf region. Inclusion in the OECD list reflects an impeccable track record as an offshore hub and low-control platform. Mauritius and Dubai are also not on the recently published blacklist of EU tax havens.

We think that the current world financial system is very vulnerable to shocks. Within the forecast horizon of this business plan, a

There could be a global meltdown, followed by a major depression in the developed world, which would bring massive changes.

SWOT-Analyse

Strengthening

- Proven ability to win tenders. The United Nations (via UNICEF Madagascar and the UNICEF USA Bridge Fund) selected the primary water concept and awarded a bidding consortium with isotope exploration as the main subcontractor. The pilot project in Madagascar was successful because it found a water resource in deep rock and in sufficient quantities in a very dry area where no normal geologist or hydrologist would have suspected water.

- Very experienced team of German and international experts.
- Competitive advantage through low exploration costs per square kilometer and quick interpretation of initial results.
- Flexible corporate structure in Mauritius and UAE with excellent legal, financial and tax frameworks.
- Strong network in many target countries worldwide, especially in Africa.
- Excellent "storyline" with lots of valuable content that can be used for social media marketing.
- The business case is associated with a basic human need that has nothing to do with economic or financial cycles. Even in a global economic crisis, the business case remains viable.

Weak spots

- Missing company history. Although Edgar has encountered water more than 100 times using the isotope exploration method , with an estimated success rate of more than 90%, few projects are documented.
- Lack of capital.
- Some R&D in the search for mineral resources still needs to be developed and some theoretical assumptions have to be verified or falsified. However, the business plan is not based on a business potential that depends on the successful implementation of these measures.
Many oil majors have drastically scaled back their exploration programs, partly because of low oil prices ahead of 2020 and partly because of the global trend toward decarbonization. On the other hand, recent developments in Ukraine and Russia have led to high oil prices and a severe energy crisis, which could lead to further exploration programs in the future.

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Occasions

Strong impact on the sustainability of global food production through access to new primary water sources, leading to an expansion of irrigated agricultural land.

Primary water is chemically different from hydrological precipitation sources. There are a number of chemical signatures that can be used to identify primary water. When primary water is mixed with meteor water, it can be difficult to distinguish.

Ultimately, governments around the world need access to primary water to sustain water production for a thirsty population.

Important to note here:

All information on efficiency, possible costs and revenues as well as technical development are certainly partly outdated in our favour.
There are no regional restrictions as well as other restrictions.

Earth and its natural resources are unimaginably large, but access should be possible for all, even if capital takes its toll.
We also ask here fast and absolutely secure and anonymous data processing and hosting with absolutely new blockchain technology.

A huge business potential for isotope exploration!

Thank you for your attention!

ExploTec Group:

Dubai, Mauritius

For investors and partners:

contact@lmsa-horizon.com

info@lmsa-horizon.com

http://explotec.eu

Phone, Skype, WhatsApp: +491779693580

Your contact person:

Andreas Gorski

CEO/Founder