



PROPOSAL: Water Exploration and Production (Water E&P)

Primary Water: earth-generated water also referred to as juvenile, magmatic, plutonic, paleo, ancient, trapped, conic, mineral, thermal...in all cases it is *new water* added to the atmospheric cycle. It has now been proven using deep-earth seismics that hydrogen and oxygen combine in the transition zone of the mantle at a depth of c. 400 miles, where our silicate bedrock is formed, and makes its way to the surface via the centrifugal forces of our planet, emerging both at the bottom of our oceans in massive quantities and at the highest mountain elevations.

Water E&P: seeks to deploy the proven methodology of all other oil/gas and mineral extraction ventures in the area of pinpoint well location and precision borehole drilling to produce potable water at near surface depths in all formations regardless of climate or precipitation.

Exploration: involves a multi-disciplinary approach using aspects of geochemistry, petrology, mineralogy, crystallography, physical chemistry and structural geology. Advanced geophysical data collection and analytics can and should be utilized, focusing on the passive data collection of magnetics, radiometrics, gravity and advanced seismics, as well as satellite imagery and data such as DEM, SAR and the full range of Landsat capabilities.

Production: employs standard water well drilling rigs and equipment but in unique ways – in search not of aquifer basins but renewable non-aquifer sources. Like “mining for water” we drill small boreholes into primary water formations and contact points, almost always seeking primary bedrock (hence “rock drillers”) while sealing off vadose and surficial contamination to produce primary water, almost always rising under pressure yielding shallow static levels and thus simple submersible (or even non-electrical mechanical) pumps, and without the need for filtration. Preference is to drill at higher elevations to allow for gravity flow to area of use.

Deployment: is rapid as a result of a short E&P cycle of pre-deployment mapping and data analysis of the designated project area (parcel, polygon, district, region), remote fracture trace mapping, and minimal personnel (usually two expats); drillers and rigs can be pre-qualified and thus contracted locally before decision is made to own rigs and crews; multiple sites can be located and drilling commenced during a 2-week engagement; PW project manager will stay on once project is launched and expectations are met to continue rollout and training.

Training: a formal program can be developed to create relatively self-sufficient teams in multiple geographies; involving a combination of alternating classroom and fieldwork. Primary Water E&P is an applied science and can only reach the 90/95% success rates experienced by the many practitioners through practical application and some trial and error.

Business Model: E&P costs can be minimized if principals partner in downstream revenue sharing, either from off-take sale and/or distribution and retail scenarios.