

Tracing the roots of a Calgary tracer technology success

By Mario Toneguzzi on October 31, 2019 · No Comment

Todd Dyer of Isotopes Canada talks about being a solution-provider through innovation for the energy industry

Todd Dyer is president and CEO of Isotopes Canada.



Todd Dyer

What is Isotopes Canada and what does it do?

Dyer: We're a Canadian-owned, privately-held tracer technology company based in Calgary. All our staff, office and lab are in the city and all our laboratory work is done right here in Calgary.

The services we provide include tracer program design, injection programs,

sample program design and sample analysis. Our tracer technology, simply put, is a process where we attach our tracer formulations to a product our customers are using or are encountering in their production or extraction process.

By attaching our tracer formulation to their known product, we can determine where and when this product is present and if there are any anomalies. This allows our customers to better understand the landscape and what they may need to address or overcome when recovering hydrocarbons and managing their fluid or gas.

The result is increased knowledge for the customer to optimize production while decreasing operating costs and maximizing profitability.

How did this idea come together for this business and when?

Dyer: Well, back in the early 1980s four individuals from Calgary identified an application in the hydrocarbon sector for our formulations utilizing tritium. These four individuals had a wealth of experience in the science and energy sector and were able to identify gaps in the tracing industry at that time and a solution using our tritium-based formulations. The business has been operating since 1981.

Originally, we were licensed by the Atomic Energy Board (AEB), which eventually became the Canadian Nuclear Safety Commission (CNSC), who we work with today. My partner and I are the owners of the company and share in our vision for Isotopes Canada to continue to focus on niche/specialty tracing formulations that provide quantitative results for better information and data for our customers.

We have recently signed a non-disclosure agreement with a nano-technology company to potentially develop and expand our current suite of formulations through nanoscience. Exciting times are ahead for us as we continue to increase the number of formulations that we can offer our customers.

Our business is almost 40 years old and we have witnessed many changes over the years in the energy sector. As the industry needs to become more efficient with more focus on enhanced oil recovery (EOR), we can be a part of the solution for many of our customers as there are many applications where we can provide value. As we like to say at Isotopes Canada, we are: "Tracing the Future, One Sample at a Time."

What sets you apart in your industry?

Dyer: That's a great question that we get asked all the time. Although there are other tracer technology companies that offer tracing formulations, to our knowledge we are the only ones in Canada with a licence to use tritium. What sets tritium apart from other isotopes, salts or dyes is the accuracy in which we can

detect and trace our product compared to others. This results in more accurate quantitative data compared to the qualitative data provided by other organizations. Another advantage is that everything we do we manage for our customers with little to no interruption to their facility or operation.

We do get asked about the safety of our formulations and if there are any special regulatory requirements necessary. Our product is very safe. There are no special requirements necessary related to vehicles, chemical suits or storage once the product is administered by our staff, our formulations remain very safe and stable. Other benefits are that our formulations are not impaired or affected by temperature, pressure or porosity. This is very important because most alternative formulations cannot make this claim.

Another differentiator is the half-life of our product, which is 12.3 years. Where other products have a very quick decay rate, often hours or days, our products can still be detected years out. The advantage to our customers is that if they have slow communication or require longer term testing, our product is a great and reliable solution that they can rely on without having to complete another application.

Lastly, the fact that we are local and well experienced, having conducted hundreds of projects over the years, our in-house knowledge and expertise is excellent.

Being a smaller local organization, we can customize our services to meet our customers' requirements – we don't use a cookie-cutter, one-size-fits-all approach for a project. This has proven to be very successful and valuable to them.

Our response times are quick and nimble when needed. Recently we completed a project for a customer in a week from initial meeting to application, which provided them the information required to make an informed decision without delaying their project and adding additional costs.

We can process the samples in our lab in five to seven business days. This is much quicker than the industry average, which often can be weeks.

At Isotopes Canada, we're not interested in providing our customers with generic tracing products that provide qualitative results. We're committed to being a solution-provider through innovation focusing on specialty and niche tracing formulations that provide quantitative results that our customers can count on.

What projects have you been involved in since you opened and where do you do business?

Dyer: Since the company started in 1981, we have completed over 500 projects primarily in Canada but also across North America, South America, in the Middle East and Europe. These projects include offshore work on the East Coast, conventional drilling around the world and waterflood projects in South and North America.

A large portion of our business has been completed here in Western Canada. Over the years, we've worked with most of the large energy companies around the world along with a substantial majority of small to medium-sized energy companies.

We recently completed a project in Turkey and continue to pursue other international opportunities. We are looking at opportunities in South America and the U.S. while our foundational business here in Western Canada continues to grow.

Considering the state of the economy and the oil patch, how has business been for you?

Dyer: For a business of almost 40 years, we have encountered many economic cycles through the 1980s, '90s, and early 2000s, which all represented periods where the industry struggled. However, in my career, I have never encountered as challenging a landscape as the one we are currently experiencing.

Whether it's global headwinds due to trade conflicts, extremist activists or government policies, there's a real need for better education of the energy industry in Canada. We should be proud of the secure energy we are producing ethically and with very high-quality standards. The industry is also very focused on improving their sustainability and specifically the greenhouse gas impact primarily through development of very exciting technologies.

Most credible energy forecasts suggest that the demand for energy will continue to grow over the next 20 to 30 years, driven in large part by the increase in the world's population.

We need to change the narrative of the energy sector by promoting the great work being done here, the value we bring to Canadians and lead the way globally by becoming an industry champion in the energy sector.

Isotopes' tracer formulations are a perfect fit for energy companies focused to improve their efficiency and sustainability, decrease costs and optimize profitability. We can provide accurate quantitative data that our customers can use to drive value for their organizations.

Interviewed by Mario Toneguzzi, a Troy Media business reporter based in Calgary.

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