

GLOBAL TECHNOLOGY COMPANY

delivering on
fracing –
and beyond

From fracing to world leading fertilisers, Texas-based CARBO is a technology operation with a problem-solving reputation. “The CARBO way of doing business is to do it right the first time,” said President and CEO Don Conkle. Colin Chinery reports.



With a high-profile reputation in hydraulic fracturing of natural gas and oil wells, global technology company CARBO Ceramics delivers industry-wide casting and mineral grinding solutions, as well as products and services for the oil and gas sector.

“We produce the highest quality product and are known to be the best in the industry,” said President and CEO Don Conkle. “We are a technology company with the reputation of being a problem solver. The CARBO way of doing business is to do it right the first time.”

Houston-based CARBO was founded 43 years ago, manufacturing ceramic proppant for the oil and gas industry – designed to keep an induced hydraulic fracture open, during or following a fracturing treatment.

The company quickly expanded into industrial as well as other applications. Today these include software, consulting services, spill prevention and containment, and geotechnical monitoring, with a client base reaching across from oil and gas to mining, foundry and agriculture.

But since 2015, low and volatile oil prices have shaken the entire oil and gas industry, and from corporate strategies to innovation, companies have been exploring new ways to adjust to the new normal.

Outside the box

For CARBO, with operations in Alabama, Wisconsin, Texas and Georgia, it meant “finding ways of looking outside the box,” said Mr Conkle.

“The oil and gas business has been pretty tough over the last six to seven years. Due to this, we stepped back, retooled our plants and diversified our business.”

For the Houston company, the unprecedented collapse in its traditional sector was so extreme that in March 2020,

CARBO Ceramics filed a Chapter 11 bankruptcy case.

“The extreme market adjustment resulted in an extreme excess of rail cars used to transport products around North America. Unfortunately, the leases on them were a large financial burden which ultimately resulted in the filing,” recalled Mr Conkle.

But within three months, a debt-for-equity exchange deal with the Wilks Brothers investment group, the debt holders, saw Bankruptcy Court approval of a restructuring plan, with Mr Conkle, previously Vice President Marketing and Sales, appointed as CEO.

“Over the last five years, we have discovered many unique manufacturing and technology opportunities that supplement the oilfield business allowing the creation of other divisions. The creativeness of our people has driven the transformation of CARBO. Although the last five years has been very tough, our employees have been resilient and I am thankful for them.”

It’s a process that has accelerated in the 12 months since. ▾

post-bankruptcy exit, with the restructured company decreasing the cost structure, reevaluating its business, exiting from some segments and increasing focus on those identified for expansion.

Fact-finding mission

“In the last year we have established the long-term strategy for the company,” Mr Conkle remarked. “Moving forward, oilfield will remain as a significant part of our company focus – obviously since this was our foundation – and a continuing focus on the industrial ceramics will continue as an area for further growth.

“Along with oilfield, industrial ceramics is a market segment where we have a different technical differentiation. We also like the agricultural business because there are synergies with our oilfield technology and manufacturing expertise. I know this may sound odd, but as a company we are very good at making round products.

“For example, we are good at grinding up minerals and ores, taking the ground-up particles and forming round pellets from a few microns up to 6mm, applying coatings, and if necessary, inserting chemical into a pellet.”

The CARBO multi-purpose portfolio is extensive and diverse. CARBOGRIND for example, is a high-performance ceramic media improving grinding efficiency while lowering

operational costs METAKAO, a premium metakaolin additive enhancing concrete and cement-based product performance; while ASSETGUARD products and technologies protect equipment, worksite and the environment.

In the oil and gas segment, KRYPTOSPHERE ultra-conductive ceramic proppant technology is engineered to maximise and sustain hydrocarbon flow rates for the life of the well. A unique proppant developed by CARBO, now with four types, the KRYPTO-SPHERE line began with the high-density HD that has seen notable success in offshore applications.

KRYPTOSPHERE HD is the highest strength proppant in the world – in one case, pumping in the Gulf of Mexico at 35,000 ft depths below the water surface. While KRYPTOSPHERE LD is being utilised in various countries around the world to help clients optimise production rates and longer-term recovery of their reservoirs.

KRYPTOSPHERE XT from a strength perspective, sits between the two, and KRYPTOAIR high-performance, ultra-low density ceramic proppant, is utilised for gravel packs, solving unique problems across the world.

Nobody as good

“We are highly successful with our traditional CARBOLITE line. It is the industry workhorse, as there’s nobody else in the industry producing a product as good,” declared Mr Conkle.

“And we couple this with SCALEGUARD, a porous ceramic proppant engineered with an innovative controlled release technology and infused with scale-inhibiting chemicals. Used in North America Europe, the Middle East, Asia, Latin America, and the Gulf of Mexico, it’s a product that has been very successful for us over the years.”

The unique characteristics of NANOMITE C ceramic micro-proppant reduces completion time, screen-out risks and overall completion costs while improving the production contribution from all clusters and the reservoir matrix.

“We are amazed and encouraged at the success our clients have achieved,” said Mr Conkle, who added that CARBO is also known for service excellence.

“In every single business we work in, the timing and delivery of our products to our clients is paramount,” underlined the CEO. “One delay could cost hundreds of thousands of dollars a day for our clients.

“We have developed a three-to-five-year plan, established our vision, and are marching forward with that vision. We have already had some really good successes, even amidst Covid, a period in which we continued to work, never leaving our offices or plants, and continued serving our clients.”

New frontiers of technology

CARBO is at the forefront of developing technologies that enable production of oil and natural gas from reserves previously economically unviable. And this is linked with a strong commitment to environmental stewardship.

“Our mining contractors use low-impact practices and reclamation efforts to reduce the impact of our mining activities on the



environment,” he explained. “Soil and other materials are placed in exhausted mines to re-establish its contours, with trees and other native vegetation planted to minimise erosion and enhance the natural appearance.”

Since 2008, the United States has become the world’s leading producer of oil and gas, largely due to advances in hydraulic fracturing. But fracing can be politically sensitive. President Biden has ordered a moratorium on new oil and gas leases on federal land, while California’s governor plans to ban hydraulic fracturing by 2024.

Mr Conkle stresses the logic of necessity, and the need for greater clarity and public understanding.

“There’s an energy transition that’s taking place across the world, including solar, wind and geothermal, but we are going to need natural gas for the next 20 or 30 years or beyond. And to produce natural gas you have to frac the wells. It’s an education process, and of course we all need to be good stewards of the world in which we live while advancing society.”

In the meantime, CARBO pursues its goal of portfolio diversification, with four primary legs (oilfield, industrial, environmental and agriculture), with technology as a core component of each business.

“We believe it will give us independence of action. None of the four are dependent on each other. If the oilfield segment declines, we increase focus in industrial or agricultural. And that’s where we want to have the flexibility moving forward.

“The oilfield sector is very cyclic. I have been in the business for 35 years and seen multiple cycles, and the cycles will continue to come and get closer together.”

Strength to strength

Mr Conkle is confident that CARBO is going to remain strong in the oilfield segment where the company will continue to invest in technology.

“We are also going to grow stronger in the industrial space – this means foundry, grinding, filtration and where we have technology that we can bring value to the market.”

He added: “We want to be stronger in the agricultural business, developing a broad range of nutrient-rich innovative products to deliver the most effective fertiliser technology as we also help to protect the environment we live in.”

If this has been a roller coaster time for the pedigree company, the sudden crash has seen a fast rebound towards diversification and enhanced profitability. And for Don Conkle, whatever the adjustments, the absolutes remain.

“For me, CARBO is focused on service, quality and innovation. This is what we are known for and want to continue to be known for.” ■

