Evercore ISI

Energy | Oilfield Services, Equipment & Drilling

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Private Company Energy Technology Showcase Takeaways

Energy technology at the forefront of our private company showcase. We hosted the first of a series of forums in partnership with SCF Ventures, in which we hosted a group of portfolio companies for a series of technology discussions and presentations. This first event was focused on three high-tech energy companies, which included Kinetic Pressure Control, Deep Imaging, and Petro.ai (formerly Ruths.ai). Kinetic Pressure Control is a venture attempting to solve well control problems in high end wells. Deep Imaging is focused on finding a solution for the parent/child well interference issues. Lastly, Petro.ai delivers data science tools to optimize asset development in the age of large data. For those not familiar, SCF Ventures is the early stage product and technology arm of SCF Partners, a leading private equity/ venture capital firm in the energy services and equipment sector. We believe in today's environment that understanding the leading edge of technology advancement in the space is critical for energy investing.

Well attended event with clients, corporates, and other private investors sharing views on technology adoption. It was clear that the audience views technology as the key to driving additional efficiencies and productivity gains in shale development. The industry is in the middle of retooling for lower for longer and operators and contractors must make changes to their businesses to enhance returns. Technology and innovation will be the main drivers for this change. The other key themes we picked up on was product differentiation matters more in a lower for longer world, innovation will come from product focused companies, and most independent service companies are not setup to deal with early stage products. We expect to see more alliances formed to help with R&D development. It also is important to have tools that can retrofit and interact with existing technologies and platforms.

Company 1 – Kinetic Pressure Control

Background:

Kinetic Pressure Control is a leading well control technology company that designs and manufactures innovative wellhead and pressure control equipment and services. Its main product is called the Kinetic Blowout Stopper (K-BOS). This is an electrically initiated, pyro-mechanical gate valve which performs the critical function of shearing and sealing during completions and intervention well control operations. The K-BOS harnesses the power of kinetic energy to enable an operator to shear and seal everything above the bit in the well. This unique design greatly limits the potential threat posed by blowouts and improves reliability.

Management:

Co-Founder, CEO: Founder of Kinetic Pressure Control, he has served as Chairman and President for more than 3 years. Prior to his role at Kinetic, he assumed the role of officer in the Royal Australian Electrical and Mechanical Corps for 5 years. Mr. Gallagher is a seasoned engineer that has implemented and patented technologies that underpin well completion.

Steven Augstmann, CTO: He is a co-founder and previously held several positions at Lloyds Register Energy, formally known as ModuSpec. During his tenure, Mr. Augtsmann's responsibilities included detailed design of drilling vessels and systems, project management and BOP recertification.

Our Key Takes:

Kinetic Pressure Control is focused on reimagining the well control market and in turn protect and strengthen the oilfield social license to operate by stopping the threat of blowouts. The case for change was pretty clear as historically they were always blindspots in the prevention of a blowout with unshearable pipe, or an unsealable well, or having to keep critical personnel on site. Incentives were also misaligned by leaving critical decision making process to rig hand on the well to decide the best course of action to respond to a spike in well pressure. Its aShear System is packaging known technology that is familiar to operators but can shear anything above the bit in the wellbore no matter the pressure. Imagine the implications for an operator when it comes to drilling offshore in a delicate ecosystem like the Artic with the confidence in knowing that blowouts will not occur with this system.

The company described its technology as a blowout stopper rather than preventer and considers it to be almost like an airbag for the oil and gas industry. In the event of a deadman autoshear situation, aShear activates to secure the well by instantly shearing whatever is across the stack. The PLC controller is electronically initiated and monitors and reacts to well conditions. The value to an E&P company is compelling – operational savings of 3-7 rig days, protects social license by stopping blowouts from occurring and reduces well control backup redundancies. The company has a riser and riserless base offering. Its go to market commercialization strategy is to partner with key oilfield service companies to help introduce the product to the market. Subsea they are partnering with RIG while onshore their key partner is NESR. The company views the key target market for its technology to be the subsea market and high H2S wells in Middle East land drilling.

Company 2 – Deep Imaging Technologies, Inc.

Background:

Deep Imaging is focused on characterizing frac propagation and improving frac performance by directly measuring the frac fluid in the formation and providing a real time view of fluid movement. The company creates a subsurface electromagnetic field which detects a measurable change caused by the frac fluid as it moves in the formation. This eliminates the guesswork by providing operators with direct measurements of how far and where the fluid migrated during the frac. The entire surface-based arrays are located away from the well pad. The company can identify frac hits, bad cement, plug failures, open zippers and other challenges in real time. This will enable operators to optimize their frac design on a real time basis.

Management:

David Moore, CEO: He joined the company as the President and CEO in 2018. Mr. Moore was previously the president and CEO at a manufacturing firm, holding this position for more than 4 years. He also served at General Electric for 10 years, assuming roles at GE Power and GE Oil & Gas divisions.

Josh Ulla, Chief Development Officer: Mr. Ulla was the Borehole Geophysics Expert at Exxon Mobil for more than 5 years. During his tenure at Exxon Mobil, he held positions at the geophysics geophysical operations and formation evaluation divisions overseeing seismic projects.

Our Key Takes:

Deep Imaging Technologies understands the challenges operators are facing with unconventional development with parent / child issues, frac hits, well interference, and low ultimate recovery rates of the resource in the ground. The company also wants to push the industry away from running science pads where an operator experiments with a modified completion design before applying it across its acreage. Instead, providing companies with real time fluid tracking will allow them to adjust their completion design as conditions change during the frac job. It is clear that frac fluid is not going into rock formation like the operators had thought or modeled. Using electromagnetic fields, the company can track fluids and tell an operator to put a diverter in to stop the fluid channel from moving too far from the formation. They can tell the operator if a frac plug failed or if there is clear interference between the parent and child well.

The company can help an operator mitigate frac hits, improve well and stage spacing decisions, identify isolation issues and plug failures, improve well integrity, confirm fracture geometry, and helps with completion design trials and flowback tests. Since the receivers are placed out in the field and then rods are driven into the ground, the HSE risk is low for an operator as none of the Deep Imaging equipment is on the well pad. The equipment is in the field creating the electromagnetic field over the

well itself. The management team described the adoption process as anywhere from immediate to two years during which time a larger operator will interview key company personnel and evaluate the technology, do a run trial, and then analyze the results. The benefits for the operator are meaningful when you think about the savings that can be generated by changing stage lengths, avoiding frac hits, identifying cement issues.

Company 3 – Petro.ai (formerly Ruths.ai)

Background:

Petro.ai combines data analytics with a deep understanding of the oil and gas business to provide an integrated analytics platform for oil and gas. The platform spans the entire well lifecycle from exploration and drilling to completions and production. The main product, Petro.ai, is easy to set up with pre-made workflows to apply powerful machine learning algorithms right out of the box. The product is used to build and share digital plans, seamlessly measure key variables throughout well construction, track performance in real time, capture incremental learnings from each pad and well to drive well productivity improvements, and drive innovation across an organization. Petro.ai has seen that existing platforms require too much custom development to deliver a valuable data science use case to expert G&G users.

Management:

Troy Ruths, CEO: Founder of Petro.ai, he has served as the CEO since August 2013. Mr. Ruths received his B.S.E. from the Washington University in St. Louis and he also holds a PhD in computer science from Rice University.

Richard Gaut, CFO: He joined the company as Board Observer in 2018 and was later appointed CFO in March 2019. Mr. Gaut also currently serves on the board of several private energy companies. Mr. Gaut earned an MBA in Energy Finance from Rice University.

Our Key Takes:

The only software company at our technology showcase, Petro.ai's focus is on aggregating disparate data sets together and providing a modern petroleum analytics solution. The need for a solution is clear as the company highlighted recovery rates in shale today which range from 5-12% compared to much higher recovery rates in conventional development. Their software can help raise recovery factors by improving the understanding of the reservoir, capturing learnings from each well, and improving development plans. Combining that with driving capital efficiency improvements as their data shows that many operators are over-capitalizing reservoir development. These factors can range from using too large of a frac job, optimizing stage spacing, and improving stacked zone pay targets. Machine learning is ideal for unconventional development as it is a complex problem with many factors that influence the outcome and is done on a large scale with hundreds of millions of inputs and results that can be classified in a repeatable way.

Petro.ai can be used to mitigate frac hits by using predictive modeling and data science with oil and gas science and measurements. It can also be used to optimize the drilling and completion program targeting a stacked pay zone. The platform allows for new workflows to be built between teams to improve collaboration between data science teams and operating teams. It can also be delivered onto an operator's network, in cases where large operators might want to protect their well level data. Petro.ai clearly differentiates its offering by having over 350 verified workflows, a large user community and active blog where uses can share best practices and steer future development, and supercharge internal teams as operators became leaner with their own back office headcount. They also have workflows that focus on drilling automation analysis that help to high grade drillers, crews, procedures, and bring together standard real-time feeds that are out there. Petro.ai uses multiple data sources built from operator data, industry level data, consultancies, and field data for what they described to be a public/ private data blending. They demonstrated the power of the software describing its automated decline curve analysis where their product can build it out in minutes what would take a team of engineers to build in two weeks.

3

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Current Ratings Definition

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Outperform- the total forecasted return is expected to be greater than the expected total return of the analyst's coverage universe
In Line- the total forecasted return is expected to be in line with the expected total return of the analyst's universe
Underperform- the total forecasted return is expected to be less than the expected total return of the analyst's universe
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Prior to March 2, 2017, Evercore ISI's recommendations were based on a stock's total forecasted return over the next 12 months:

Buy- the total forecasted return is expected to be greater than 10%
Hold- the total forecasted return is expected to be greater than or equal to 0% and less than or equal to 10%

Sell -the total forecasted return is expected to be less than 0%

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ISI Group and ISI UK:

Prior to October 10, 2014, the ratings system of ISI Group and ISI UK which was based on a 12-month risk adjusted total return:

Strong Buy- Return > 20%
Buy- Return 10% to 20%
Neutral - Return 0% to 10%
Cautious- Return -10% to 0%
Sell- Return< -10%

For disclosure purposes, ISI Group and ISI UK ratings were viewed as follows: Strong Buy and Buy equate to Buy, Neutral equates to Hold, and Cautious and Sell equate to Sell.

Evercore Group:

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Overweight- the stock is expected to outperform the average total return of the analyst's coverage universe over the next 12 months.
Equal-Weight- the stock is expected to perform in line with the average total return of the analyst's coverage universe over the next 12 months.
Underweight -the stock is expected to underperform the average total return of the analyst's coverage universe over the next 12 months.
Suspended- the company rating, target price and earnings estimates have been temporarily suspended.

For disclosure purposes, Evercore Group's prior "Overweight," "Equal-Weight" and "Underweight" ratings were viewed as "Buy," "Hold" and "Sell," respectively.

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Short- the stock is a negative holding in the model portfolio; the total forecasted return is expected to be less than 0%.
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Coverage Suspended- the rating and target price have been removed pursuant to Evercore ISI policy when Evercore is acting in an advisory capacity in a merger or strategic transaction involving this company, and in certain other circumstances; a stock in the model portfolio is removed.
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Coverage Universe			Investment Banking Services I Past 12 Months		
Ratings	Count	Pct.	Ratings	Count	Pct.
Buy	420	52	Buy	91	22
Hold	321	40	Hold	36	11
Sell	38	5	Sell	3	8
Coverage Suspended	13	2	Coverage Suspended	6	46
Rating Suspended	9	1	Rating Suspended	4	44

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Price Charts

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