7th Annual Private Company Energy Conference Recap



SIMMONS & COMPANY

INTERNATIONAL. -

Energy Specialists of Piper Jaffray

CONFERENCE PANEL PARTICIPANTS

CAPITAL EQUIPMENT

Curtis Samford

President & CEO AFGlobal Corporation

Randy Vanberg

Vice President Global Heat Transfer

Chad Joost

Senior Vice President, Sales & Marketing Stewart & Stevenson

COMPLETION SERVICES

Warren Zemlak

President & CEO Allied Energy Services

Ann Fox

President & CEO Nine Energy Service

Chris Wright

Chairman & CEO Liberty Oilfield Services

E&P PERSPECTIVES FROM SUPPLY CHAIN MANAGEMENT

Mark Hood

Supply Chain Director Apache Corporation

Callum Streeter

COO

EdgeMarc Energy Holdings, LLC

Xuan Yong

CEO

RigUp

LAND DRILLING AND WELL SERVICES

Scott Milliren

Chairman & Founder Ranger Energy Services

Jon Cole

Chairman & CEO Sidewinder Drilling

Kenneth Shore

Vice President & CFO TEC Well Service

PROPPANT AND LOGISTICS

Cody Wickersheim

President

Badger Mining Corporation

Jonathan Green

CEO

CIG Logistics

Steve Broker

Executive Vice President & COO Rangeland Energy

Bill Zartler

CEO

Solaris Oilfield Infrastructure

December 4, 2016

CONCLUSION

Our Private Company Energy Conference concluded on December 1, 2016, and in its usual fashion, the conclave featured a number of revealing industry anecdotes, many of which are summarized below. This year the conference featured nearly 60 attending energy enterprises, representing exposure to virtually all U.S. L-48 business segments. Moreover, the conference consisted of the following five industry panels: (i) Land Drilling and Well Service; (ii) Capital Equipment; (iii) Proppant and Logistics; (iv) Completion Services, and (v) Perspectives from E&P Supply Chain Management.

Primary Takeaways:

Key observations from this year's conference as well as from recent company updates, include: (1) Anecdotes surrounding efforts to raise frac pricing by ~20+% were reaffirmed. One frac participant noted the delivery of ~30%+ price increases to some customers. This is consistent with commentary we received from an E&P company early last week who shared the results of a recent RFP. Specifically, this E&P issued an RFP for an additional frac fleet and received bids that were 20-40% higher than its current pricing. We first learned of efforts by industry participants to materially raise rates roughly three weeks ago and the anecdotes are growing. (2) Q4 frac sand volumes will be strong as one sand provider sees volumes up 25-30% while another, who is nearly sold out, claims its volumes could be up more than 30% q/q. A third mine sees higher demand but is sold out, thus its increase will be less robust. Meanwhile, a fourth (and large) sand player's volume is tracking up 40% in Q4 assuming the December order book holds. (3) Q4 seasonality appears to be a non-issue. Thus Q4 guidance issued by many OFS names is likely too conservative – we will address this in our Q4 updates in the coming weeks.

Implications for Stocks:

We do not believe the magnitude of the frac industry's current pricing endeavors or the limited seasonal impact this year are fully appreciated by the market. In addition, the continuation of very strong activity momentum, improving visibility, building confidence for sustainably accommodating oil prices, and growing concerns about sufficiently available frac capacity collectively coalesce into improving pricing leverage, likely better than expected results in 1H'17 and a near-term catalyst for stocks. Thus we continue to recommend SLCA, FMSA, PTEN, and PES as momentum should yield further strong performance. In time, however, prospects for increased supply of equipment and frac sand will likely eventually lead to growing skepticism and perhaps a return to more normalized valuation levels.

Too many industry contacts at this year's conference continue to share the same fear -an industry that is not capable of exercising capital discipline. Importantly, a

John Daniel

Sr. Research Analyst,
Piper Jaffray & Co.
713 546-7215
john.m.daniel@simmonspjc.com

Bill Herbert

Sr. Research Analyst,
Piper Jaffray & Co.
713 546-7203
william.a.herbert@simmonspjc.com

John Watson

Research Analyst,
Piper Jaffray & Co.
713 546-7256
john.h.watson@simmonspjc.com

Related Companies:	Share Price:
BHI	65.30
CFW.TO	3.52
FET	22.05
FMSA	8.95
HAL	54.17
HP	79.45
NBR	17.05
PDS	5.59
PES	5.70
PTEN	28.09
RES	21.32
SLB	85.01
SLCA	52.43
SND	13.46
SPN	15.03
TUSK	16.36
WFT	5.11

INDUSTRY RISKS

Cannibalized equipment, costs of rebuilds, and the oversupply of frac fleets. The oversupply of frac sand and the potential for declining service intensity.

sharp uptick in pricing/utilization, irrational exuberance on the part of Wall Street as manifested in lofty valuations and the rise of new/returning oil service franchise will likely ultimately lead to overcapacity rearing its ugly head once again. Thus the notion that SMID-cap OFS names are good long-term buys remains a challenging proposition to defend. That said, the mood is improving, as are returns. Package this with higher oil prices and the result should be higher near-term stock prices for OFS stocks.

Q4 Seasonality:

Fears of any holiday slowdown were put to ease as several frac companies and two coiled tubing franchises report little-to-no slowdown during the Thanksgiving holiday week and most report a full schedule for the month of December. Well service contacts noted a more extended holiday impact, but well service hours for the quarter are generally expected to be flat q/q.

Pressure Pumping Pricing:

Confirmation of material price increases and anecdotes of higher pricing reported over the past few weeks are now becoming more broad-based. Efforts are underway by several players to raise prices with multiple comments of 20%+ price requests. One of our panelists shared that pricing bottomed in Q2, but has improved steadily since then with rates today higher than two weeks ago. This company will deploy additional crews next



Ann Fox, President & CEO - Nine Energy Service



Warren Zemlak, President & CEO - Allied Energy Services

year. A frac company with operations in Canada noted that its Canadian prices increased 15% in October with additional increases in the 5-10% range likely in January. It too will increase working equipment next year and is booking jobs through March. Meanwhile, an E&P team recently shared the results of a recent RFP (within the last ten days) in which quotes came in 20-40% higher from current pricing. Pre-OPEC, the success of these increase requests was questionable. Post-OPEC, these increases likely stick.

Pressure Pumping Newbuilds/Asset Transfers:

Newbuild activity remains in a nascent stage, but this will change. One builder reported the sale of two new fleets to a start-up and the sale of three fleets to existing players. We are tracking a private frac player that is building 42,500 HP, another private player who is building 30,000 HP and, as a reminder, TUSK previously announced the purchase of 75,000HP. Two other existing players have added incremental assets to upgrade existing fleets with one adding ~30,000 HP and another adding ~15,000 HP. An emerging player is purportedly expected to add six fleets, but we are still trying to confirm this field comment, although we believe it is real. Equipment reactivations are also underway as SPN, CFW.T, and FTS International all reported on their respective Q3 calls recent increases in marketed fleets. Discrete asset sales/equipment transfers are also developing. One private frac company recently acquired one fleet from another player who exited the frac market and WFT purportedly recently sold some of



Curtis Samford, President & CEO - AFGlobal Corporation

its frac equipment with one fleet reportedly purchased by a Chinese-backed Rockies-focused frac enterprise. With the capital markets continuing to be wide-open, we suspect more M&A activity will unfold in 2017.

BHI Frac Fleet:

The new BJS frac fleet will be comprised of 1.9M HP. 1.7M of which is BHI legacy. The key attraction to CSL was the scale and standardization of the BHI fleet - CSL professes that the fleet is one of the most standardized in the industry. Current mythology is that coming out of this downturn, the BHI frac fleet was effectively a carcass. CSL professes that, in fact, the condition of the fleet was considerably better than they expected as very low utilization coupled with diligent R&M preserved the fleet's capability. Of the 1.7M in BHI frac HP, only 200-300K HP is expected to be obsolete. CSL believes that 25% of the fleet could be reactivated in 3 months and 75% in 9-12 months. Should these professions prove to be accurate and should the new BJS franchise guickly deploy idle capacity, rapidly develop the requisite HR, accounting and internal control systems as well as bring back quality employees that may have otherwise departed from BHI, then this purchase would likely prove to be one of the besttimed in the history of the oilfield. This task will, however, be a complicated one for the BJS team. Moreover, while the BJS team contends a more robust and capable fleet, industry protagonists who have looked at this business and/or possess a better-than-average knowledge of the BHI frac business contend that of the 1.7M HP, only 500K

HP is competitive with new generation HP. Of the 500K HP, apparently 125K HP is winterized and in Canada – thus only 375K HP is in the U.S. The remaining 1.2M HP is essentially viewed as spare parts, comprised of obsolete or uncompetitive equipment from a cost-to-operate standpoint. Time will tell who is right with respect to the actual quality of the frac equipment. In addition, the BHI NAM onshore/cementing business is speculated to have generated ~\$100-160M of negative cash flow in 2016, although the cementing business is widely acknowledged as a hidden gem. One of our industry panelists who is a leading cementing player offered up an optimistic view of completion-related pricing, a potential nice tailwind for the new BJS entity.

Frac Sand Volumes and Pricing:

Q4 volumes are expected to be up 25-30% per one sand player while another sees volumes up 30+%. Sand mines located on the CN should see better relative volumes given access to Canada. Sand prices are also moving higher with one mine prophesying the potential for FOB mine prices in Q1 to spike from low \$20/ton to potentially \$30/ton given an expectation for 40/70 shortages. This mine opined that the \$30/ton could be short-term as mines will kick up production coming out of the winter months, but a sharp uptick in spot sales is believed to be probable. Two other mines agree pricing will move up sharply from current levels, but were hesitant to call for spot \$30/ton – a mid-\$20/ton price felt more reasonable. That said, one player



Cody Wickersheim, President - Badger Mining Corporation



Xuan Yong, CEO - RigUp

shared a recent story where a competing sand mine asked it to market sand for them. The mine proposed to sell the sand to the other mine for \$28/ton, but after a bit of haggling, the actual purchase price appears to be in the low \$20's – still a slight increase from recent spot sales in the region. Discussions for sand contracts ranging between 3-7 years are being discussed.

New Frac Sand Coming?:

Several industry contacts report efforts are underway to develop new mines in Texas and Oklahoma. One E&P contact verified this as potential new sand players are pitching/seeking interest in support for sand upon development of the purported new mines. That said, there are questions regarding the quality and size of the potential reserves. We are still seeking clarity on who and where these potential players may be, but greater regional sand production is a longer-term risk for certain logistically disadvantaged players up north. Stay tuned as we dig into identifying emerging regional sand providers.

Proppant Logistics:

One panelist—Solaris Oilfield Services, a last mile provider of proppant logistics—reported tremendous growth prospects for its solution, noting a potential doubling of its operation over the next year. Another sand mine panelist acknowledged that it is in development of its own system while an attending company who also owns/ operates its own last mile solution also sees tremendous growth prospects. What is clear from listening to our

attendees as well as what we hear from SLCA and HLCP who similarly offer a last mile solution is a real need to improve the efficiency associated with well site sand delivery. And while growth prospects seem bright, what is also abundantly clear is the prospects for significantly increased competition for last mile solutions which leads us to believe that returns for such products will diminish over time. With regards to transload infrastructure, one transload operator claimed reports of construction costs equal between \$15-40M to build a transload. It takes 12 months to build a silo plant versus 6-8 months for smaller plants. In addition, there was also confirmation that there are 6 unit train capable facilities in the Permian. One of our panelists believes that significant transload expansion will not be necessary, contrary to consensus expectations as they believe current infrastructure can handle projected sand demand. However, it is worth pointing out that all of our panelists continue to build/expand transload facilities.

Land Drilling:

In the Permian, the constraint for land drilling will likely be people not equipment. Peak day rates were \$27,500/day in comparison to trough rates earlier this year of \$12,500/day. Right now, day rates are in the upper \$14,000 to low \$15,000 range for high-end rigs. Public companies receiving \$17,000/day day rates are often providing a third mud pump. Dayrates are not expected to breach \$20,000/day by YE'17 but our panelist did believe rates will improve by \$2,000-3,000/day over the course of



Chris Wright, Chairman & CEO - Liberty Oilfield Services

2017. For meaningfully higher pricing, consolidation is necessary. Also, high-end drilling rigs are all pretty similar while crews determine performance and allow for differentiation. Our drilling panelist expects to move from 10 working rigs today to between 14 and 16 in Q1. We learned from a second driller who shared that leading edge day rates for Tier 1 rigs are in the \$15,000-\$17,000 range.

Coiled Tubing:

One CT contact sees Q4 revenue up ~25% sequentially due to improved utilization and a modest recovery in pricing. A second CT player also reports higher activity, noting no slowdown during Thanksgiving and little-to-no slowdown anticipated at Christmas. This player will likely test pricing soon.

Well Service:

Perhaps the most unenthusiastic commentary emanated from the well service contacts. While workover activity has improved thus far in Q4, the work is largely not profitable in the Permian Basin. Well service rates are at their lowest levels since 2002 as competition remains heated due to the re-emergence of companies from Chapter 11. These companies are purportedly stealing crews by paying higher wages, yet these companies often are the lowest priced players in the market. Hourly rates in the Permian are characterized as sub-\$185/hour in some cases while peak pricing for drillouts of \$18,500/



Jon Cole, Chairman & CEO - Sidewinder Drilling



Mark Hood, Supply Chain Director - Apache Corporation

day are now priced closer to \$13,000/day. Both of our panelists recently participated in M&A transactions, and additional M&A will likely be needed to address the significant overcapacity in this business segment.

Capital Equipment:

Work on frac equipment has picked up substantially over the past few months. One panelist cited that 70-80% of work is new builds (including working on cold stacked equipment and preparing that equipment for work) while 20-30% is refurb. 50-75% of work is for existing customers, depending on the company. One panelist believes 25% of frac equipment will not work again; 50% needs major overhaul; and 25% needs a shave and haircut. Some capital equipment players now require 40-50% down-payments to work on frac fleets, much higher than a few years ago. Supply chain is viewed as a bigger constraint than labor for capital equipment players. Specifically, the ability to find smaller ticket items concerns some players (i.e. fuel pumps, valves, etc.). At this point, there isn't much concern about major components such as pumps, engines, transmissions or radiators. None of the panelists are currently building equipment on spec nor are they receiving inquiries from E&P's (in contrast to inquiries from a handful early in 2016).

E&P Panel Observations:

One of the panelists is moving from 2 frac crews in 2016 to 4 crews next year while it likely adds ~4-6 rigs. A

second panelist will likely employ just one rig in 2017 – it is presently not drilling today. One rig in the Utica should drill about 18 wells. According to one provider, service pricing has increased by 11% over the past 75 days. Another panelist tested 3,200 lbs per lateral foot, but they have settled at 2,000 lbs per lateral foot. They could drop to 1,600 lbs per lateral foot depending on sand prices. Both operators on the panel are primarily using finer grades, although one is also using ceramic in the Utica, and one of the two self-sources their sand.

Wireline:

A small wireline operator shared recent results which further validate the unfolding industry recovery. Revenues are expected to total \$6.3M in Q4 vs. \$4.9M in Q3 (+29% q/q). December revs are expected to be \$2.5M, up sharply over November while the January outlook is bright. Select pricing improvement is beginning but is not yet broadbased. Wages/salaries in the field have increased about 10-12% recently. This company is trying to poach crews and has had some of its own crews poached. These crews left to go to a wireline start-up (again more evidence of industry bad behavior - new capacity emerging in an already oversupplied market). During the downturn and still today, add-on's which used to be billed separately are still being included in overall price (which is effectively a price cut), but these add-on's likely come back early next year. The company is running ~15 crews now with an expectation to ramp to ~20 crews in Q1.



Kenneth Shore, Vice President & CFO - TEC Well Service



Randy Vanberg, Vice President - Global Heat Transfer

Ratings, Price Targets and Risks:

We rate SLCA OW with a \$49 price target based on 10x EV/'18E EBITDA (assuming \$366M of 2018E EBITDA, \$243M of net debt, and 70M shares). Risks include the oversupply of frac sand and the potential for declining service intensity. SLCA is a likely consolidator, thus potential equity-financed deals are a possibility.

We rate FMSA OW with a \$10 price target based on 9.5x EV/'18E EBITDA (assuming EBITDA = \$296M, cash = \$490M, debt = \$1.14B and shares = 221M). Risks include the oversupply of frac sand, the potential for declining service intensity, balance sheet leverage and overhang from FMSA's PE sponsor.

We rate PTEN OW with a \$22 price target based on 7.0x EV/'18E EBITDA (2018E EBITDA of \$539M, shares outstanding of 146.3M and net debt of \$561.4M). Risks include contract expirations for its land rig fleet, oversupply of NAM pressure pumping market, potential asset writedowns, and negative earnings.

We rate PES OW with a \$4.25 price target based on 7.0x EV/2018E (2018E EBITDA: \$96M, debt: \$399.5M, cash: \$9.7M, sh/out: 64.9M). Risks include contract expirations for its land rig fleet, high debt levels, potential asset writedowns, low barrier to entry business units, and negative earnings. Inability to divest assets and raise cash a potential risk.

IMAGES FROM THE PRIVATE COMPANY ENERGY CONFERENCE

























DISCLOSURES

Distribution of Ratings/IB Services Piper Jaffray					
			IB Serv./Past 12 Mos.		
Rating	Count	Percent	Count	Percent	
BUY [OW]	413	54.77	94	22.76	
HOLD [N]	310	41.11	22	7.10	
SELL [UW]	31	4.11	2	6.45	

Note: Distribution of Ratings/IB Services shows the number of companies currently covered by fundamental equity research in each rating category from which Piper Jaffray and its affiliates received compensation for investment banking services within the past 12 months. FINRA rules require disclosure of which ratings most closely correspond with "buy," "hold," and "sell" recommendations. Piper Jaffray ratings are not the equivalent of buy, hold or sell, but instead represent recommended relative weightings. Nevertheless, Overweight corresponds most closely with buy, Neutral with hold and Underweight with sell. See Stock Rating definitions below.

Analyst Certification — John Daniel, Sr. Research Analyst — Bill Herbert, Sr. Research Analyst

The views expressed in this report accurately reflect my personal views about the subject company and the subject security. In addition, no part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this report.

Piper Jaffray research analysts receive compensation that is based, in part, on overall firm revenues, which include investment banking revenues.

Time of dissemination: 4 December 2016 20:07EST.

Research Disclosures

Piper Jaffray was making a market in the securities of Fairmount Santrol at the time this research report was published. Piper Jaffray will buy and sell Fairmount Santrol securities on a principal basis.

Within the past 3 years Piper Jaffray participated in a public offering of, or acted as a dealer manager for, Fairmount Santrol securities.

Piper Jaffray was making a market in the securities of Pioneer Energy Services at the time this research report was published. Piper Jaffray will buy and sell Pioneer Energy Services securities on a principal basis.

Piper Jaffray was making a market in the securities of Patterson-UTI Energy, Inc. at the time this research report was published. Piper Jaffray will buy and sell Patterson-UTI Energy, Inc. securities on a principal basis.

Piper Jaffray has received compensation for investment banking services from or has had a client relationship with Patterson-UTI Energy, Inc. within the

Piper Jaffray was making a market in the securities of U.S. Silica Holdings, Inc. at the time this research report was published. Piper Jaffray will buy and sell U.S. Silica Holdings, Inc. securities on a principal basis.

Piper Jaffray expects to receive or intends to seek compensation for investment banking services from U.S. Silica Holdings, Inc. in the next 3 months.

Piper Jaffray has received compensation for investment banking services from or has had a client relationship with U.S. Silica Holdings, Inc. within the past 12 months.

DISCLOSURES (CONTINUED)

Affiliate disclosures: Piper Jaffray is the trade name and registered trademark under which the corporate and investment banking products and services of Piper Jaffray Companies and its subsidiaries Piper Jaffray & Co. and Piper Jaffray Ltd. are marketed. Simmons & Company International is a division of Piper Jaffray & Co. This report has been prepared by Piper Jaffray & Co. and/or its affiliate Piper Jaffray Ltd. Piper Jaffray & Co. is regulated by FINRA, NYSE and the United States Securities and Exchange Commission, and its headquarters are located at 800 Nicollet Mall, Minneapolis, MN 55402. Piper Jaffray Ltd. is authorized and regulated by the Financial Conduct Authority, and is located at 88 Wood Street, 13th Floor, London EC2V 7RS. Disclosures in this section and in the Other Important Information section referencing Piper Jaffray include all affiliated entities unless otherwise specified.

Rating Definitions

Stock Ratings: Piper Jaffray ratings are indicators of expected total return (price appreciation plus dividend) within the next 12 months. At times analysts may specify a different investment horizon or may include additional investment time horizons for specific stocks. Stock performance is measured relative to the group of stocks covered by each analyst. Lists of the stocks covered by each are available at www.piperjaffray.com/researchdisclosures. Stock ratings and/or stock coverage may be suspended from time to time in the event that there is no active analyst opinion or analyst coverage, but the opinion or coverage is expected to resume. Research reports and ratings should not be relied upon as individual investment advice. As always, an investor's decision to buy or sell a security must depend on individual circumstances, including existing holdings, time horizons and risk tolerance. Piper Jaffray sales and trading personnel may provide written or oral commentary, trade ideas, or other information about a particular stock to clients or internal trading desks reflecting different opinions than those expressed by the research analyst. In addition, Piper Jaffray offers technical and event-driven research products that are based on different methodologies, may contradict the opinions contained in fundamental research reports, and could impact the price of the subject security. Recommendations based on technical or event-driven analysis are intended for the professional trader, while fundamental opinions are typically suited for the longer-term institutional investor.

- . Overweight (OW): Anticipated to outperform relative to the median of the group of stocks covered by the analyst.
- . Neutral (N): Anticipated to perform in line relative to the median of the group of stocks covered by the analyst.
- . Underweight (UW): Anticipated to underperform relative to the median of the group of stocks covered by the analyst.

Other Important Information

The material regarding the subject company is based on data obtained from sources we deem to be reliable; it is not guaranteed as to accuracy and does not purport to be complete. This report is solely for informational purposes and is not intended to be used as the primary basis of investment decisions. Piper Jaffray has not assessed the suitability of the subject company for any person. Because of individual client requirements, it is not, and it should not be construed as, advice designed to meet the particular investment needs of any investor. This report is not an offer or the solicitation of an offer to sell or buy any security. Unless otherwise noted, the price of a security mentioned in this report is the market closing price as of the end of the prior business day. Piper Jaffray does not maintain a predetermined schedule for publication of research and will not necessarily update this report. Piper Jaffray policy generally prohibits research analysts from sending draft research reports to subject companies; however, it should be presumed that the fundamental equity analyst(s) who authored this report has had discussions with the subject company to ensure factual accuracy prior to publication, and has had assistance from the company in conducting diligence, including visits to company sites and meetings with company management and other representatives.

Notice to customers: This material is not directed to, or intended for distribution to or use by, any person or entity if Piper Jaffray is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to such person or entity. Customers in any of the jurisdictions where Piper Jaffray and its affiliates do business who wish to effect a transaction in the securities discussed in this report should contact their local Piper Jaffray representative, or as otherwise noted below. Canada: This research report is distributed in Canada by CIBC World Markets Inc. Investors in Canada wishing to effect a transaction in the securities discussed in this report should contact their CIBC sales representative. This research report has not been prepared in accordance with the disclosure requirements of Dealer Member Rule 3400 – Research Restrictions and Disclosure Requirements of the Investment Industry Regulatory Organization of Canada. For further disclosure related to CIBC conflicts of interest please visit https://researchcentral.cibcwm.com. Europe: This material is for the use of intended recipients only and only for distribution to professional and institutional investors, i.e. persons who are authorised persons or exempted persons within the meaning of the Financial Services and Markets Act 2000 of the United Kingdom, or persons who have been categorised by Piper Jaffray Ltd. as professional clients under the rules of the Financial Conduct Authority. United States: This report is distributed in the United States by Piper Jaffray & Co., member SIPC, FINRA and NYSE, Inc., which accepts responsibility for its contents. The securities described in this report may not have been registered under the U.S. Securities Act of 1933 and, in such case, may not be offered or sold in the United States or to U.S. persons unless they have been so registered, or an exemption from the registration requirements is available.

This report is produced for the use of Piper Jaffray customers and may not be reproduced, re-distributed or passed to any other person or published in whole or in part for any purpose without the prior consent of Piper Jaffray & Co. Additional information is available upon request.

Copyright 2016 Piper Jaffray. All rights reserved.