2015 PROPPANT MARKET REPORT CONFIDENTIAL

2015 Report Summary

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Forward

The **2015 Proppant Market Report** is a detailed overview of the 2015 proppant industry in relation to prior years. Market intelligence has been gathered from a variety of industry resources which include historical PropTester, Inc. and KELRIK, LLC databases, key pressure pumping and operator personnel, logistics providers, proppant suppliers and other public and private resources.

Primary information is received directly from proppant manufacturers. Specifically, we solicit proppant produced and supplied to industry by individual proppant manufacturers each calendar year. Although this data is used to compile total proppant supply estimates, specific proppant supplier's sales are not disclosed. In cases where specific disclosures are not available, we have been able to cross reference

much of the individual North company disclosures, regulation company metrics. Due to inventories that have yet to

2015 Report Summary

are not limited to, public d pumping pressure presented may include tories from prior year.

Where feasible, we include an estimated annual proppant capacity for suppliers. A majority of these figures are voluntarily or publicly disclosed by the supplier. Unless noted otherwise, proppant capacities are annualized commencing January 2016. Capacities can and do vary year to year, and this fact must be taken into consideration when reviewing this information. Operating conditions, mid-year capacity expansions or plant closures, market diversification or substitution, logistical constraints and product demand mix impact functional capacity. This is particularly the case with natural sand producers, where product mix and deposit yield impact gradation availability and production efficiencies. Similarly, resin coat capacity is subject to available substrate supply, whether natural sand or synthetic.

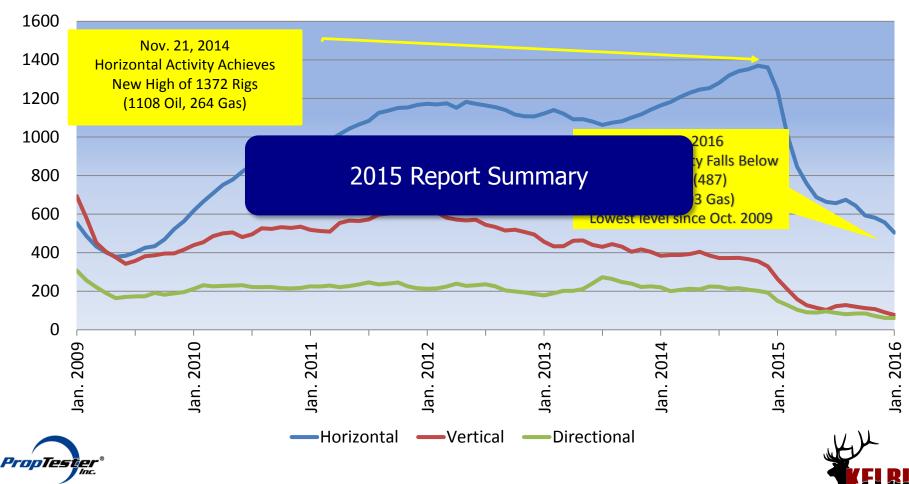




US Oil & Gas Drilling - Trajectory

US Trajectory Rig Count (Jan. 2009-Jan. 2016 Monthly Ave.)

(Source; Baker Hughes 2016, Converted to Monthly Ave.)



Key Factors Impacting Proppant Supply

Key Factors	Trend	2015 Outlook	
Proppant Type (Ceramic, Sand, Resin, Other)	1	See Commentary: Frac sand and sand substrate for resin coatin used, and consistently represents over 90 percent of the total prop continue to be investigated, sand, ceramic and resin coat are still p	opant market. Although alternative proppants
Proppant Quality	1	See Commentary: A significant increase in the use of "fit-for-purp expectations typically increase if supply is healthy. During tight su often must be employed. In very weak market conditions, howeve products continue to be developed, ranging from self-suspending	pply, lower quality sand and ceramic alternatives r, quality often takes a back seat to cost. New
Mine/Plant Yield (by Mesh Size)	ł	See Commentary: The increased use of small mesh sands command therefore cost, for many sand companies. In 2015, however, in volume affected all proppant segments. This trend negatively import when industry expects (and is receiving) price concessions.	nconsistent demand by proppant size, type and
Source Inventory (Location and Reserves)		See Commentary: Increased proppant consumption has reduced additional raw materials which may or may not be available adjace A majority of proppant raw material sources are already located fa	ent to the existing production operations.
Manufacturing Capacity		2015 Report Summary growth, will be challenging if material prices do not rebound. Spar shrink as producers idle or close uneconomical facilities.	e capacity will remain, but effective capacity will
Logistics Infrastructure (Truck, Rail, Barge, Transload)	ſ	See Commentary: Logistics constraints eased in 2015, not only d rail infrastructure. Super terminals and unit-trains are no longer th when industry demands more volume in a shorter time. Despite th whole new set of challenges, particularly involving loaded and unit	e exception, but increasingly the norm at a time e improvements, an industry slowdown poses a
Proppant Prices	₽	See Commentary: The proppant industry succumbed to pricing p generally expected during the second largest year in terms of total reminiscent of the mid 1980s crisis, when sand prices took nearly challenge in a large and diverse supplier base, but selling products this industry.	proppant supplied. Price deflation is now 15 years to recover. Pricing discipline may be a
Regulatory Constraints	ł	See Commentary: Regulatory challenges remain, ranging from d heightened regulatory restrictions at the county, state/provincial ar must now also deal with enhanced OSHA restrictions regarding per	nd federal levels. The pumping pressure industry

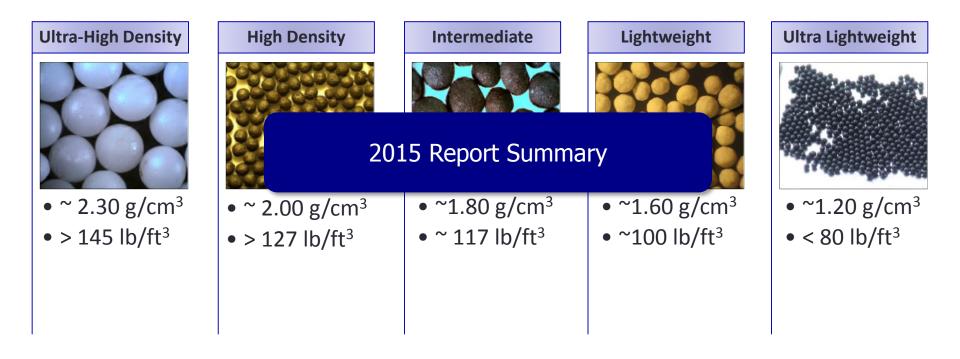




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Preference Bloomer, WI* *(pending) Wonewoc Wisconsin, Nebraska and Arizona. The former Woodbury, Minnesota p plant is now reportedly closed, and the former Hansen Lake (Canada) o divested by January 2015 last year. The company has indicated potent new production facility near Bloomer, WI, although no construction is k writing. The company also manufactures resin coated sand, as well as J dust suppression coating. and FloPRO PTT", a hydrophobic proppant to additive for self-suspending proppants. Badger Mining Corp. Taylor, WI Fairwater, WI Alma Center, WI* *Acquired from NFP Wonewoc CNR Capacity: 8:180 billion bls (4,090,000 tons) Grades: 12/20 thru 100 M Badger Mining Corp. Taylor, WI Fairwater, WI *Acquired from NFP Wonewoc CNR Capacity: 8:180 billion bls (4,090,000 tons) Grades: 12/20 thru 100 M Badger Mining Corp. Taylor, WI *Acquired from NFP Wonewoc CNR Capacity: 8:180 billion bls (4,090,000 tons) Grades: 12/20 thru 100 M Badger Materials, Inc. Corpus Christ Www.eaglematerials.com (Northern White Sand C.LLC) Corpus Christ Water All District State Corpus Christ Www.eaglematerials.com (Northern White Sand C.LLC) Corpus Christ Wonewoc Corpus Christ State for Construct an estimated true apacity of the New Auburn, WI facility, which it acquired from CRS 2014, to 2 Million thry. The company has yet to construct an estimated try dry processing plant near its existing Utica, II mine and wash plant. EOG Resources, Inc. Chippewa Falls, WI Rawhide, Hood Cty, TX Rawhide, Hood Cty, TX Rawhide, Hood Cty, TX Rawhide, Hood Cty, TX	Company	Plant Locations	Source Material	Direct Access	Estimated Realistic Frac Capacity and Noteworthy Events
Blair, WI Blair, WI Wonewoc CNR Preferred Sands produces frac sand currently from three facilities located by divested by January 2015 last year. The company has indicated potent new production facility near Bloomer, WI, although no construction is k writing. The company also manufactures resin coated sand, as well as I dust suppression coating, and FloPRO PTT*, a hydrophobic proppant tr additive for self-suspending proppants. Badger Mining Corp. Taylor, WI Wonewoc CNR Capacity: 8.130 billion lbs (4,090,000 tons) Workwork badgerminingcorp.com Taylor, WI Si. Peter WSOR CAR Wonewoc SI. Peter WSOR Capacity: 8.130 billion lbs (4,090,000 tons) Grades: 12/20 thru 100 M Badger Mining Corp. supplies Northern White sand from three operation work. eaglematerials. Inc. Wonewoc CNR Capacity: 6.130 billion lbs (4,090,000 tons) Workwork.eaglematerials. Inc. Corpus Christ Corpus Christ 2015 Report Summary in Proppants subsidiaries. Northern White Sand Co. LLCi Workwork eaglematerials.com Wonewoc Short line Capacity: 6.000 billion lbs (3,000,000 tons) Soft of Resources, Inc. Chippewa Falls, WI Non traditional Truck Truck Short line Capacity: 6.000 billion lbs (3,000,000 tons) Grades: 16/30 thru 200 Milion lbs (3,000,000 tons) Gra	Preferred Sands	Genoa, NB	Non traditional	UPRR	Capacity: 11.00 billion lbs (5,500,000 tons)
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determined.					a pending new plant in Cooke Country, Texas near Bulcher and St. Joe is to be
PropTester*					determined.
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Basic Ceramic/Synthetic Proppant Types







Rail Logistics Challenges (Weak Market)

