

Table 1

Sieve Analysis of Submitted Proppant Samples
Submitted By: Mississippi Sand, LLC
ISO 13503-2/API RP19C, Section 6, "Sieve Analysis"

Sample I.D. US Standard Sieve No.	Frac Sand Sample Labeled: 30/50		Frac Sand Sample Labeled: 40/70	
	Weight %		Weight %	
	Retained	Cumulative	Retained	Cumulative
6	0.0	0.0	0.0	0.0
8	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0
16	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0
20	0.0	0.0	0.0	0.0
25	0.3	0.3	0.0	0.0
30	3.9	4.2	0.0	0.0
35	24.0	28.3	0.0	0.0
40	45.2	73.5	1.4	1.4
45	23.7	97.2	16.9	18.4
50	2.2	99.4	29.7	48.1
60	0.3	99.7	29.5	77.5
70	0.1	99.8	17.5	95.0
80	0.0	99.8	3.9	98.9
100	0.0	99.8	0.9	99.8
120	0.0	99.8	0.0	99.8
140	0.0	99.8	0.0	99.8
170	0.0	99.8	0.0	99.8
200	0.0	99.8	0.0	99.8
230	0.0	99.8	0.0	99.8
pan	0.2	100.0	0.2	99.9
total	100.0		99.9	
in-size	95.2	= as 30/50	93.6	= as 40/70
ISO Mean Dia. (mm)	0.470		0.301	
Median Dia. (mm)	0.462		0.293	

July 2010

Table 2

Sieve Analysis of Submitted Proppant Sample
Submitted By: Mississippi Sand, LLC
ISO 13503-2/API RP19C, Section 6, "Sieve Analysis"

Sample I.D.	Frac Sand Sample Labeled: 100 Mesh	
	Weight %	
US Standard Sieve No.	Retained	Cumulative
6	0.0	0.0
8	0.0	0.0
10	0.0	0.0
12	0.0	0.0
14	0.0	0.0
16	0.0	0.0
18	0.0	0.0
20	0.0	0.0
25	0.0	0.0
30	0.0	0.0
35	0.0	0.0
40	0.3	0.3
45	3.6	4.0
50	7.2	11.2
60	8.0	19.2
70	23.3	42.5
80	28.5	71.0
100	18.0	89.0
120	6.5	95.5
140	3.0	98.5
170	0.8	99.3
200	0.3	99.5
230	0.0	99.5
pan	0.4	100.0
total	100.0	
in-size	94.5	= as 45/140
in-size	87.3	= as 50/140
in-size	56.0	= as 70/140
ISO Mean Dia. (mm)	0.214	
Median Dia. (mm)	0.204	

July 2010

Table 3

Frac Sand Sample Labeled: 30/50
Submitted By: Mississippi Sand, LLC
Arrived 6/17/2010

**Measurement of Properties of Proppants
Used In Hydraulic Fracturing and Gravel-Packing Operations**

ISO 13503-2, Section 7, "Proppant Sphericity and Roundness"

* mean of a 20 count

Sphericity =	0.8
Roundness =	0.7
Clusters =	None Observed in Field of Count

Recommended Sphericity and Roundness for proppants = 0.6 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

Recommended Sphericity and Roundness for high strength proppants = 0.7 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

ISO 13503-2, Section 8, "Acid Solubility"

* mean of 3 analysis

Acid Sol. Percent =	2.0	%
----------------------------	------------	----------

Recommended Maximum Acid Solubility for proppants 6/12 thru 30/50 = 2.0%

Tested as per ISO 13503-2/API RP19C, 100ml of 12:3 HCl:HF* with 5 grams of sand or proppant at 150°F for 30 minutes, *Other acids may be specified, depending on desired application

ISO 13503-2, Section 11, "Proppant Crush-Resistance Test"

<u>Stresses Tested (psi)</u>	<u>% Fines -30+50 crush prep</u>
4000	1.1
8000	8.1
9000	10.3
K-Value =	8K

Suggested maximum fines for 30/50 Frac Sand per API RP-56 = 10% @ 4000psi

The highest stress level which proppant generates no more than 10% crushed material, rounded down to the nearest 1000psi = K-Value

July 2010

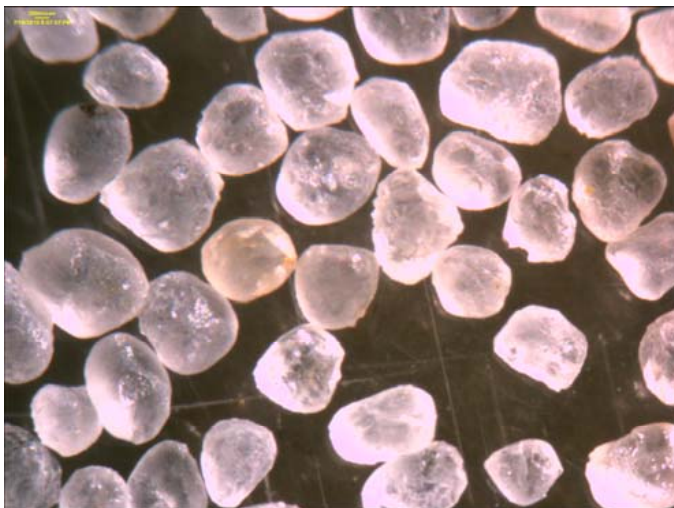


Table 4

Frac Sand Sample Labeled: 40/70
 Submitted By: Mississippi Sand, LLC
 Arrived 6/17/2010

**Measurement of Properties of Proppants
 Used In Hydraulic Fracturing and Gravel-Packing Operations**

ISO 13503-2/API RP19C, Section 7, "Proppant Sphericity and Roundness"

* mean of a 20 count

Sphericity = 0.7
Roundness = 0.7
Clusters = None Observed in Field of Count

Recommended Sphericity and Roundness for proppants = 0.6 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

Recommended Sphericity and Roundness for high strength proppants = 0.7 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

ISO 13503-2/API RP19C, Section 8, "Acid Solubility"

* mean of 3 analysis

Acid Sol. Percent = 1.4 %

Recommended Maximum Acid Solubility for proppants 40/70 to 70/140 = 3.0%

Tested as per ISO 13503-2/API RP19C, 100ml of 12:3 HCl:HF* with 5 grams of sand or proppant at 150°F for 30 minutes, *Other acids may be specified, depending on desired application

ISO 13503-2/API RP19C, Section 11, "Proppant Crush-Resistance Test"

<u>Stresses Tested (psi)</u>	<u>% Fines -40+70 crush prep</u>
5000	2.4
9000	6.8
10000	10.6
K-Value =	<u>9K</u>

Suggested maximum fines for 40/70 Frac Sand per API RP-56 = 8% @ 5000psi

The highest stress level which proppant generates no more than 10% crushed material, rounded down to the nearest 1000psi = K-Value

July 2010

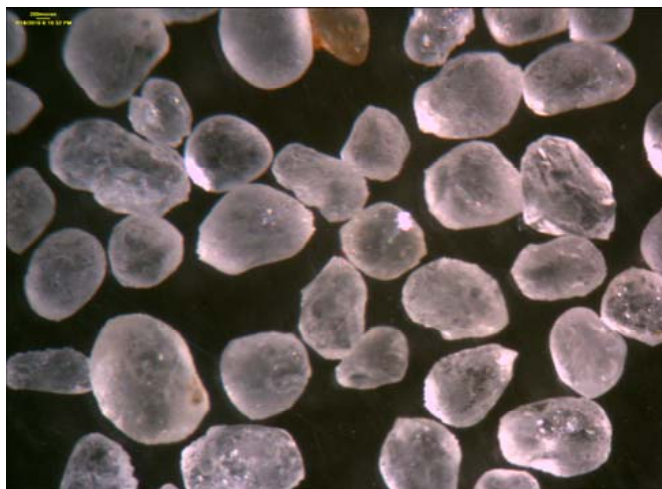


Table 5

Frac Sand Sample Labeled: 100 Mesh
 Submitted By: Mississippi Sand, LLC
 Arrived 6/17/2010

**Measurement of Properties of Proppants
 Used In Hydraulic Fracturing and Gravel-Packing Operations**

ISO 13503-2/API RP19C, Section 7, "Proppant Sphericity and Roundness"

* mean of a 20 count

<u>Sphericity =</u>	<u>0.7</u>
<u>Roundness =</u>	<u>0.6</u>
<u>Clusters =</u>	<u>None Observed in Field of Count</u>

Recommended Sphericity and Roundness for proppants = 0.6 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

Recommended Sphericity and Roundness for high strength proppants = 0.7 or greater (ISO/DIS 13503-2/Amd.1/API RP19C)

ISO 13503-2/API RP19C, Section 8, "Acid Solubility"

* mean of 3 analysis

Acid Sol. Percent = 1.2 %

Recommended Maximum Acid Solubility for proppants 40/70 to 70/140 = 3.0%

Tested as per ISO 13503-2/API RP19C, 100ml of 12:3 HCl:HF* with 5 grams of sand or proppant at 150°F for 30 minutes, *Other acids may be specified, depending on desired application

ISO 13503-2/API RP19C, Section 11, "Proppant Crush-Resistance Test"

<u>Stresses Tested (psi)</u>	<u>% Fines -45+140 crush prep</u>
5000	0.9
13000	9.0
14000	10.0
15000	12.7
K-Value =	<u>13K</u>

Suggested maximum fines for 70/140 Frac Sand per API RP-56 = 6% @ 5000psi

The highest stress level which proppant generates no more than 10% crushed material, rounded down to the nearest 1000psi = K-Value

July 2010

