



**WESTPORT**

TECHNOLOGY CENTER INTERNATIONAL

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**Drilling Technologies**

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**GCMS Testing  
Of A Synthetic Base Oil  
Treated with 20 lb/bbl PipeRubber  
For NER Corp.**

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**Introduction**

At the request of Robert Wood (President, NER Corporation), the Westport Technology Center International Drilling Fluids Laboratory mixed 20 lb/bbl PipeRubber in a commercially-available synthetic base oil (IO C<sub>16</sub> – C<sub>18</sub>). After hot-rolling for 16 hours at 150°F, the sample was filtered, then tested by GCMS. A sample of the base synthetic was also hot-rolled and tested by GCMS.

**Conclusions**

An GCMS analysis (composition breakdown on organic portion of sample only) indicates that there is no significant difference between the samples. The NER PipeRubber is not causing any interference to the base synthetic GCMS profile.

**Sample Identification**

01-252 – lab-standard, commercially-available synthetic base oil, (IO C<sub>16</sub> – C<sub>18</sub>).  
01-390 – PipeRubber, received from NER Corp. 10-19-01.

**Test Results****Table #1 – GCMS Test Results of IO Synthetic samples**

<u>Compound</u>	<u>Carbon Number</u>	<u>Base IO volume %</u>	<u>Base IO with 20 lb/bbl PipeRubber, vol %</u>
1-Tetradecene, (E)- and its isomers	C <sub>14</sub>	35.62%	34.90%
1-Hexadecene, (Z)- and its isomers	C <sub>16</sub>	34.15%	33.75%
1-Heptadecene, (Z)- and its isomers	C <sub>17</sub>	1.25%	1.33%
1-Octadecene, (E)- and its isomers	C <sub>18</sub>	21.40%	22.45%
3-Eicosene, (E)	C <sub>20</sub>	3.29%	3.41%
Normal hydrocarbons	C <sub>11</sub> -C <sub>21</sub>	4.29%	4.16%