APPENDIX 1: ROSENF (BEFORE YUGANSKNEFTGAS ACQUISITION) AMONG ITS PEERS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>YUKOS</td>
<td>13.7</td>
<td>85.7</td>
<td>80.7</td>
<td>10.3</td>
<td>35.3%</td>
<td>5</td>
<td>3.4</td>
<td>1100</td>
<td>1,390.09</td>
</tr>
<tr>
<td>LUKOIL</td>
<td>15.3</td>
<td>84.1</td>
<td>78.8</td>
<td>31.8</td>
<td>37.8%</td>
<td>5</td>
<td>1400</td>
<td>2.59</td>
<td>1,073.40</td>
</tr>
<tr>
<td>TNK-BP</td>
<td>9.6</td>
<td>70.2</td>
<td>61.5</td>
<td>29.1</td>
<td>41.2%</td>
<td>8</td>
<td>2100</td>
<td>2.49</td>
<td>399.22</td>
</tr>
<tr>
<td>Surgut</td>
<td>6.6</td>
<td>59.6</td>
<td>54</td>
<td>20.8</td>
<td>24.8%</td>
<td>14.2</td>
<td>200</td>
<td>2.96</td>
<td>2,775.50</td>
</tr>
<tr>
<td>Sibur</td>
<td>4.6</td>
<td>34</td>
<td>31</td>
<td>10.1</td>
<td>29.7%</td>
<td>1.9</td>
<td>1000</td>
<td>1.75</td>
<td>697.88</td>
</tr>
<tr>
<td>Transneft</td>
<td>6</td>
<td>23</td>
<td>24</td>
<td>11.5</td>
<td>46.0%</td>
<td>0.7</td>
<td>400</td>
<td>4.17</td>
<td>602.52</td>
</tr>
<tr>
<td>Slavneft</td>
<td>1.6</td>
<td>22</td>
<td>18</td>
<td>8.1</td>
<td>36.8%</td>
<td>0.9</td>
<td>600</td>
<td>2.22</td>
<td>251.8</td>
</tr>
<tr>
<td>Rosneft</td>
<td>2.9</td>
<td>31.6</td>
<td>19.5</td>
<td>7.4</td>
<td>34.2%</td>
<td>9.3</td>
<td>600</td>
<td>3.02</td>
<td>483.22</td>
</tr>
<tr>
<td>Bureneft</td>
<td>Na</td>
<td>12</td>
<td>12</td>
<td>3.8</td>
<td>31.6%</td>
<td>-</td>
<td>Na</td>
<td>Na</td>
<td>Na</td>
</tr>
</tbody>
</table>

* ** billion barrels
** million tons
*** billion cubic meters
## S per barrel
## $ per kilometer

Poussenkova, Appendix 1.
Comment: Rick Heede:
The history of Rosneft is inseparably linked with that of the Russian oil industry. The Company’s core enterprises were established in the Soviet era, when large-scale exploration and development of new oil & gas fields began. In the 1990s, many Russian fuel and energy companies, together with other related state-owned enterprises, were consolidated into vertically integrated companies on the model of the world’s largest oil & gas corporations. These new companies were then sold, either fully or in part, to private investors. Management of those oil & gas assets which remained in state ownership became the responsibility of the state enterprise Rosneft.

Russian Government Decree Nr. 971 of September 29, 1995 established a new entity, Open Joint-Stock Company Rosneft Oil Company, which was the legal successor of the previously existing state enterprise. In 1998, Russia’s economic crisis presented significant financial and operational challenges for Rosneft, including a production decline due to a severely depleted resource base, low capacity utilization at refineries, and a fall in retail sales. Highly depreciated equipment and outdated technology also put obstacles in the way of Company development.

Source: Rosnef Annual report 2010.

Comment: Rick Heede:
Rosneft Annual Report 2008, page 22: “The Company is primarily engaged in exploration and production of hydrocarbons, production of petroleum products and petrochemicals, and marketing of outputs. Rosneft has been included in the Russian Government’s List of Strategic Enterprises and Organizations. The state holds 75.16% in the Company (through OJSC ROSNEFTEGAZ), while approximately 15% of shares are in free-float.”

Comment: Rick Heede:
Company website / history: “In the 1990s, many Russian fuel and energy companies, along with other related state-owned enterprises, were consolidated into vertically integrated companies based on the model of the world’s largest corporations. These newly established companies were subsequently fully or partially sold to private investors. Oil and gas assets still owned by the state were managed by the state enterprise Rosneft. Russian Government Decree No. 971 of September 29, 1995 established Rosneft as it is today (Open Joint-Stock Company ‘Rosneft Oil Company’). The Company took control of assets previously managed by the state enterprise of the same name.”

Comment: Rick Heede:
Total net worldwide crude oil plus natural gas liquids produced by each company or state-owned enterprise. Where data is available, we list gross production (before royalty production is netted out). More often, however, oil companies report production net of royalty production. Crude production includes natural gas liquids (NGL) unless noted.

Comment: Rick Heede:
Natural gas is typically reported as dry gas; natural gas liquids are reported under crude oil.
Carbon dioxide is normally removed from the gas flow at the production site (see “Vented Carbon Dioxide”).

“SCM/d” = standard cubic meters per day, “cf/d” = cubic feet per day.
Net production typically excludes a number of diverted gas streams. Quantities and fractions vary; ExxonMobil’s exclusions are probably typical of the industry: “Net production available for sale quantities are the volumes withdrawn from... natural gas reserves, excluding royalties and volumes due to others when produced, and excluding gas purchased from others, gas consumed in producing operations, field processing plant losses, volumes used for gas lift, gas injections and cycling operations, quantities flared, and volume shrinkage due to the removal of condensate or natural gas liquids production.” ExxonMobil Corporation (2004) 2003 Financial and Operating Review, www.exxonmobil.com, p. 55.

Comment: Rick Heede:

Comment: Rick Heede:

Comment: Rick Heede:
Since the gas/oil production ratio over the period 1998 to 2010 declined from 1,933 cf/bbl in 1998 to 514 cf/bbl in 2010, and the weighted average works out to 874 cf per bbl, we average the annual ratios over 13 years 1998-2010, or 1,394 cf per bbl. This is still conservative relative to the ratio in 1998.

Comment: Rick Heede:

Comment: Rick Heede:

Comment: Rick Heede:
Energy Intelligence, Top 100 data fro Rosneft 2000-2001. 544 million cv per day in 2000 (198.6 Bcf, and 593 million cf in 2001 (216.4 Bcf).

Comment: Rick Heede:
Energy Intelligence, Top 100 data fro Rosneft 2000-2001. 544 million cv per day in 2000 (198.6 Bcf, and 593 million cf in 2001 (216.4 Bcf).

Comment: Rick Heede:
We cite Rosneft production data from annual reports. Poussenkova cites slightly different data, e.g., 21.6 Mt (158.3 million bbl) in 2004 and 74.4 Mt (545.4 million bbl) in 2005.
Comment: Rick Heede:
AR 2010 pdf pg 54; 2008-2010; 2008 agrees with OGJ100.

Comment: Rick Heede:
AR 2010 pdf pg 54; 2008-2010; 2008 agrees with OGJ100.

Comment: Rick Heede:
AR 2010 pg 62 (pdf pg 57); consistent with 2008 value from OGJ100; not consistent with 2009 OGJ100 value of 554.4

Comment: Rick Heede: