Putting The U.S. Shale Revolution in Perspective For An Audience From China

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Putting the Top U.S. Unconventional Basins in Perspective

Permian Basin now produces more oil than Venezuela and almost as much as Kuwait.

And the Appalachian region produces more natgas per day than Iran.

Source: EIA, Encyclopedia Britannica
The most capable U.S. rigs working in the Permian Basin could sit atop Zhongnanhai and drill a well that terminated under the CCTV Central Tower 4 km away.
Tremendous Logistical and Capital Intensity of Unconventional Oil & Gas Development

What do you need to drill 8 wells with 10,000 ft laterals in the Bone Spring or Wolfcamp intervals in the Permian Basin?

### Inputs

<table>
<thead>
<tr>
<th>Input</th>
<th>Units</th>
<th>Per well</th>
<th>8 Well Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money</td>
<td>$$</td>
<td>$10 million</td>
<td>$80 million</td>
</tr>
<tr>
<td>OCTG (steel)</td>
<td>tonnes</td>
<td>400</td>
<td>3,200</td>
</tr>
<tr>
<td>Sand</td>
<td>tonnes</td>
<td>9,075</td>
<td>72,600</td>
</tr>
<tr>
<td>Water</td>
<td>M^3</td>
<td>79,800</td>
<td>638,000</td>
</tr>
</tbody>
</table>

- **726 railcars of sand**
- **X 3.6** Sand equal to nearly 4 times the tonnage carried by China’s largest coal trains.
- **X 15** As much steel as a Type 054 Jiangkai-II frigate.
- **X 1** 15 times the water used in a large gas well completion in Sichuan.

Source: Sinodefence.com

Source: Downhole Service Company, CNPC Chuanqing Drilling Engineering Co., Ltd

Source: C&C Transload, Odessa, TX

https://www.youtube.com/watch?v=egLSUINMz8
China is a focal point because in the last decade, its incremental demand growth roughly equals the current oil consumption of Japan and Malaysia combined.
North American Energy Abundance Changing the U.S.-China Energy Relationship

Exports of crude oil and refined products from the U.S. to China, ‘000 bpd

Source: EIA
多多谢谢！