

US OCTG market



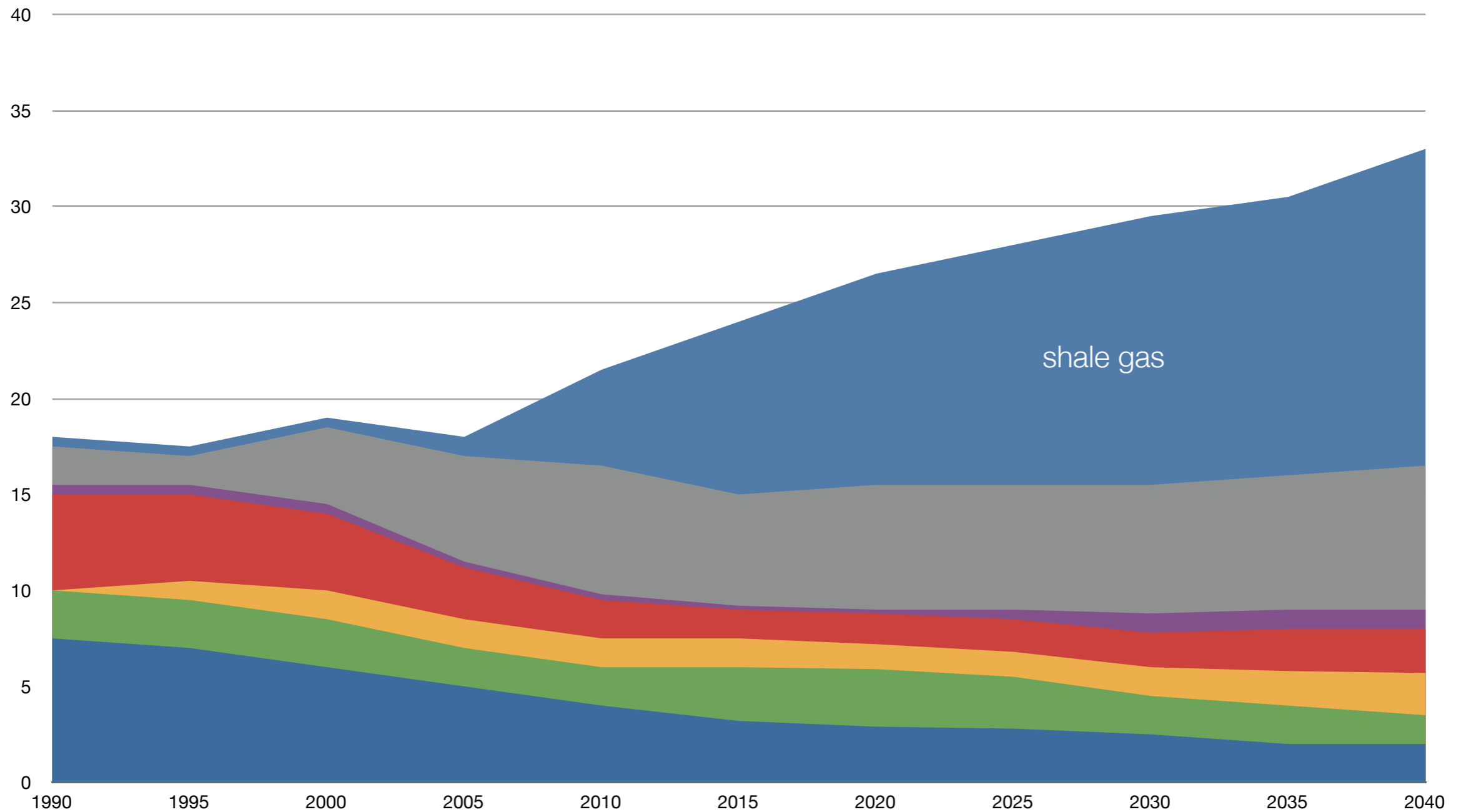
alita

Current increasing demand and lagging supply mean high prices for both oil and gas, making exploitation of North American unconventional gas plays suddenly far more lucrative for producers. One of the most important such plays to emerge has been **U.S. shale gas**. U.S. shale gas reserves were largely ignored but but **hydraulic fracturing** technology and **horizontal drilling** have successfully brought in the gas at commercial rates

The U.S. Energy Information Administration's Annual Energy Outlook 2013 projects U.S. natural **gas production to increase** from 23.0 trillion cubic feet in 2011 to **33.1 trillion cubic feet in 2040**, a 44% increase. Almost all of this increase is due to projected growth in shale gas production, which grows from 7.8 trillion cubic feet in 2011 to **16.7 trillion cubic feet in 2040**.

Horizontal drilling is expected to make up about **60% of all drilling** in the U.S.

U.S. dry natural gas production

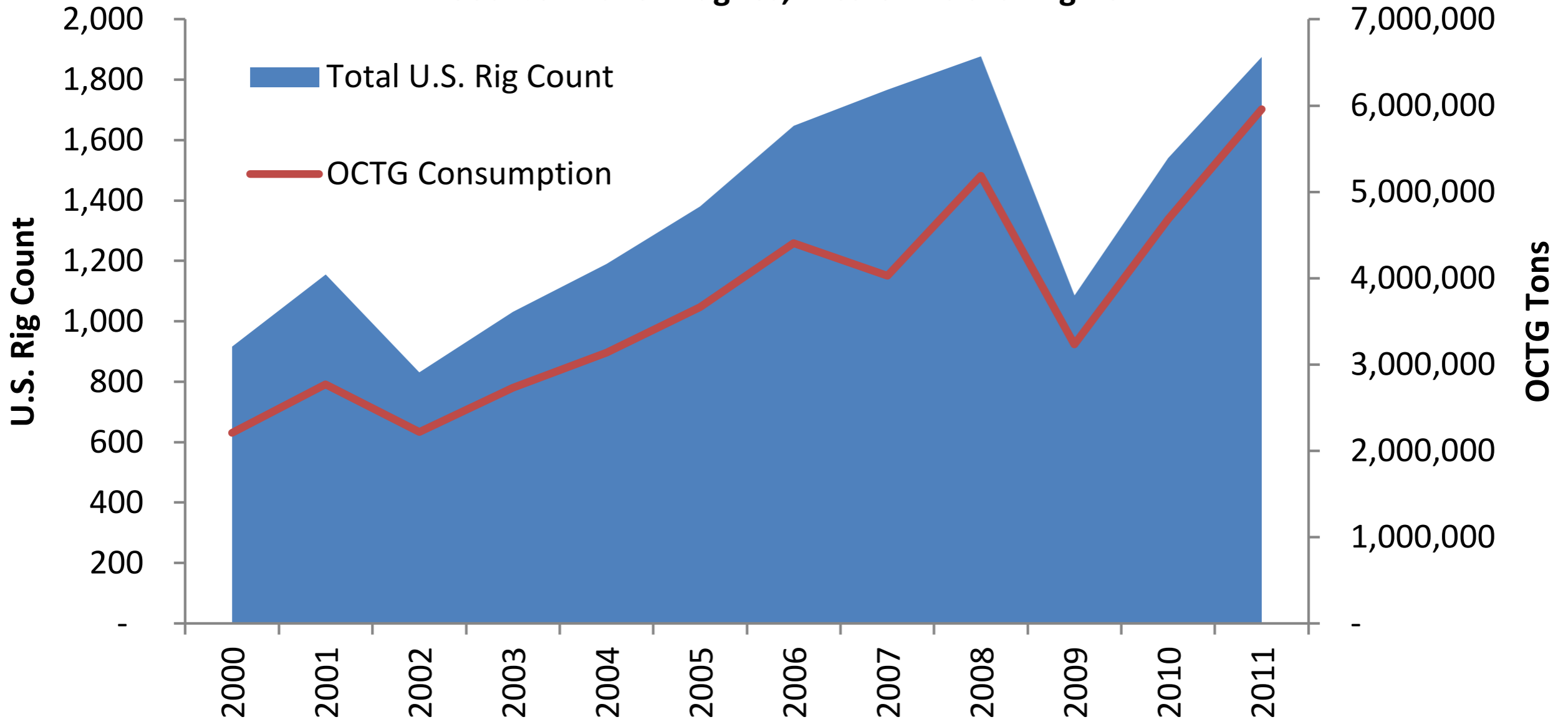


- Non-associated onshore
- Associated with oil
- Coalbed methane
- Non-associated offshore
- Alaska
- Tight gas
- Shale gas

The oil and gas industry is typically divided into upstream, midstream and downstream segments. OCTG pipes (Oil Country Tubular Goods) and connections are used in the **upstream** segment (downhole in oil and gas wells). Although OCTG is a steel product its **consumption** is highly **correlated to drilling** for oil and natural gas.

Rig Activity vs OCTG Consumption

Source: Baker Hughes, Preston Publishing Co

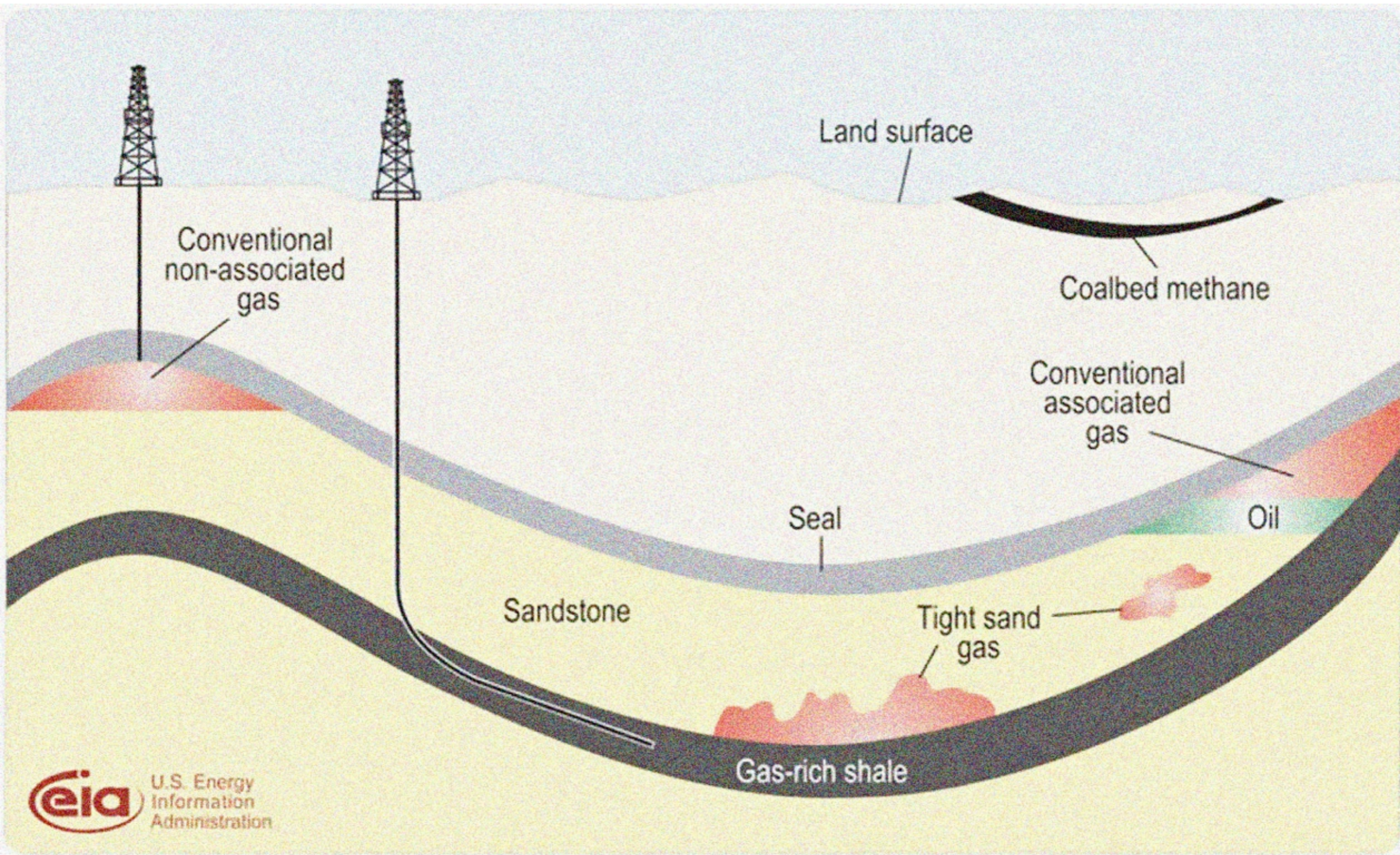


horizontal drilling



Horizontal drilling is process of drilling a well from the surface to a subsurface which is used for drilling non-vertical wells which cannot be reached with vertical drilling. When directional drilling is combined with **hydraulic fracturing** it can become fantastic producers of oil or natural gas.

schematic geology of shale gas



There are two demand trends that have emerged as a result of increased shale drilling activity.

The first is continued **growth** of the amount of **alloy tubular products used** in each well. The OCTG that is used for hydraulic fracturing technology and horizontal drilling require a high level of performance which has moved the industry **towards special high alloy N80/L80 and P110.**

The second trend is that of **overall consumption of tubular products per well.** The increased depth and lateral recovery systems have contributed to significantly higher rates of tubular consumption per well.

Horizontal drilling has significantly **increased demand for 4 1/2", 5 1/2" and 7"** outside diameter products. This has had the effect of **reducing existing effective domestic capacity** as producers have added these items to their order book at the expense of 9 5/8" and other, larger sizes. The shift combined with the shift in sizes has resulted in **high capacity utilization** numbers for domestic mills in the last few years.

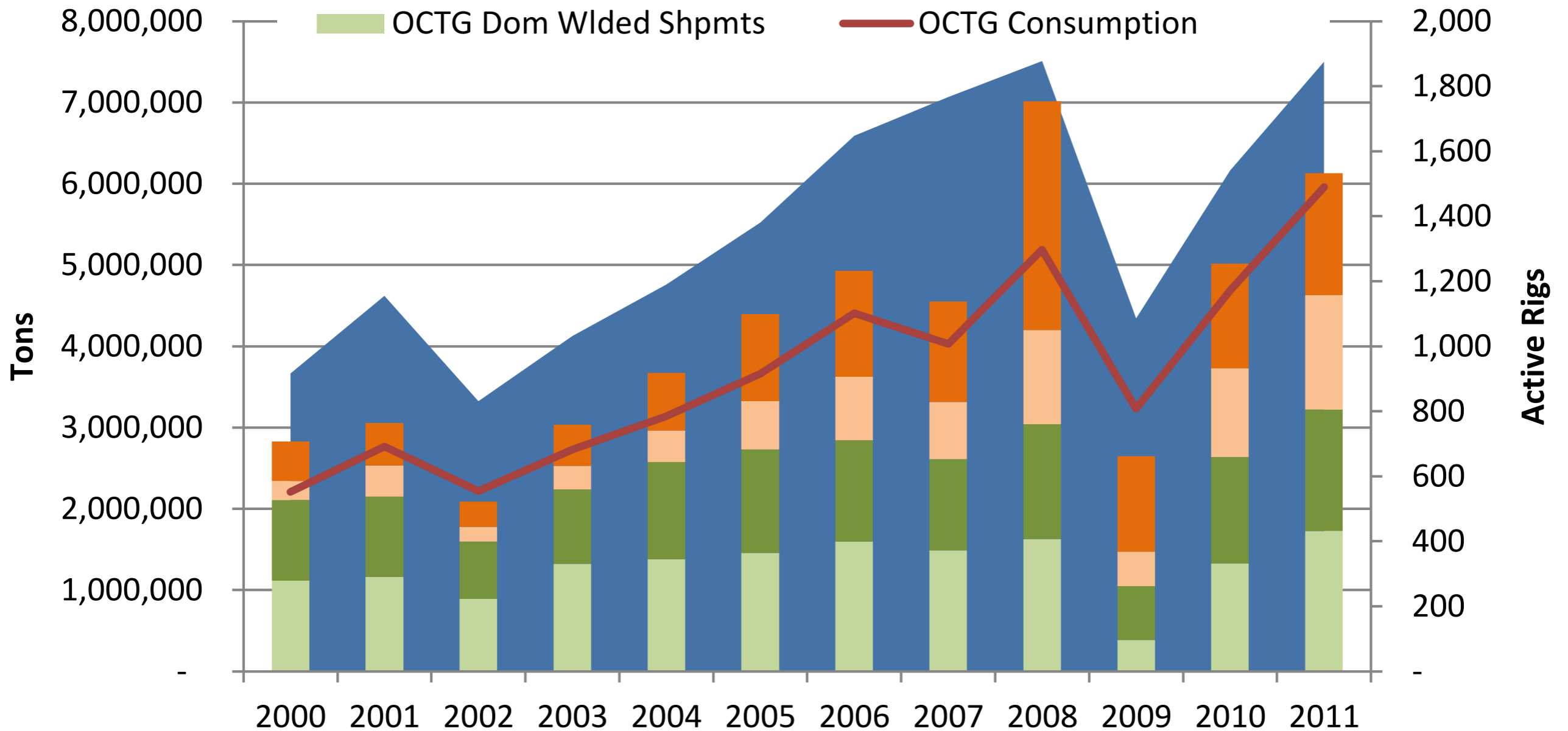
octg demand 2 7/8-8 5/8

Region	Current Period	Alloy %	Forecast					
			2014	Alloy %	2016	Alloy %	2021	Alloy %
West	91,000	40%	123,000	42%	268,000	45%	337,000	50%
Rockies	389,000	55%	580,000	56%	575,000	58%	670,000	60%
Mid-Continent	824,000	65%	958,000	67%	1,017,000	69%	1,057,000	71%
ArkLaTex	1,935,000	60%	2,289,000	64%	2,238,000	68%	2,390,000	72%
Northeast	204,000	65%	257,000	67%	627,000	69%	658,000	70%
Southeast	64,000	42%	76,000	42%	69,000	42%	76,000	42%
Total	3,507,000		4,283,000		4,794,000		5,188,000	

Rig Count, OCTG Cons, OCTG Shipments

Source: Baker Hughes, U.S. DOC, Preston Publishing Co

- Total Rig Count
- OCTG Imp Smls Shpmts
- OCTG Imp Wlded Shpmts
- OCTG Dom Smls Shpmts
- OCTG Dom Wlded Shpmts
- OCTG Consumption



In 2011 US buyers **imported** about **51% of all OCTG** consumed due to the lack of sufficient domestic supply while domestic producers were able to demand higher prices for their production. As per June 2013 published figures domestic produced OCTG sold N80 18% for N80, 11% for L80 and, 11% for grade P110 above import price figures.

more imports = anti dumping suits

Alita USA plans to invest up to USD 120 million to construct a 150,000 mt fully-integrated manufacturing facilities in US, to produce steel OCTG pipes (Oil Country Tubular Goods). The production facility will be equipped with state-of-the-art **heat treatment, process and testing lines** to produce the special high alloy grade N80, L80 and P110 grades OCTG pipes.

The facility is expected to be in production in 2015.

New OCTG Investments

Company	Capacity	Timing	Location
Welded Tube of CN (W)	150,000	Late 2013	Lackawanna, NY
Prolamsa (W)	330,000	2014	Houston, TX
Benteler (S)	350,000	2015	Caddo Parish, LA
Borusan (W)	150,000	2014	Houston, TX
USA Investments (W)	150,000	2015	McCleary, WA
TPCO (S)	550,000	2014	Houston, TX
OMK (W)	150,000	2013	Houston, TX
Tenaris (S)	650,000	2016	Houston, TX
	2,480,000		

74% of all OCTG consumption **2 7/8 - 8 5/8**

55% of all **current consumption** alloy grade

60% by 2016

SMLS alloy **marginally** preferred than ERW alloy

no price difference between alloy ERW & SMLS

Seamless: **USD 1 B** for 400,000 = \$2500 / mt

ERW: USD 120 million for 150,000 = **\$800 / mt**

production cost **ERW** < SMLS

raw material cost **HRC** vs high grade blooms

SMLS or ERW?

SMLS will set the price and **ERW will benefit**