

# Haynesville & Smackover Sandstones

## Bossier Parish, Louisiana

### 13,500 acres



#### Suggested Deal Terms:

Consideration: \$400 per acre

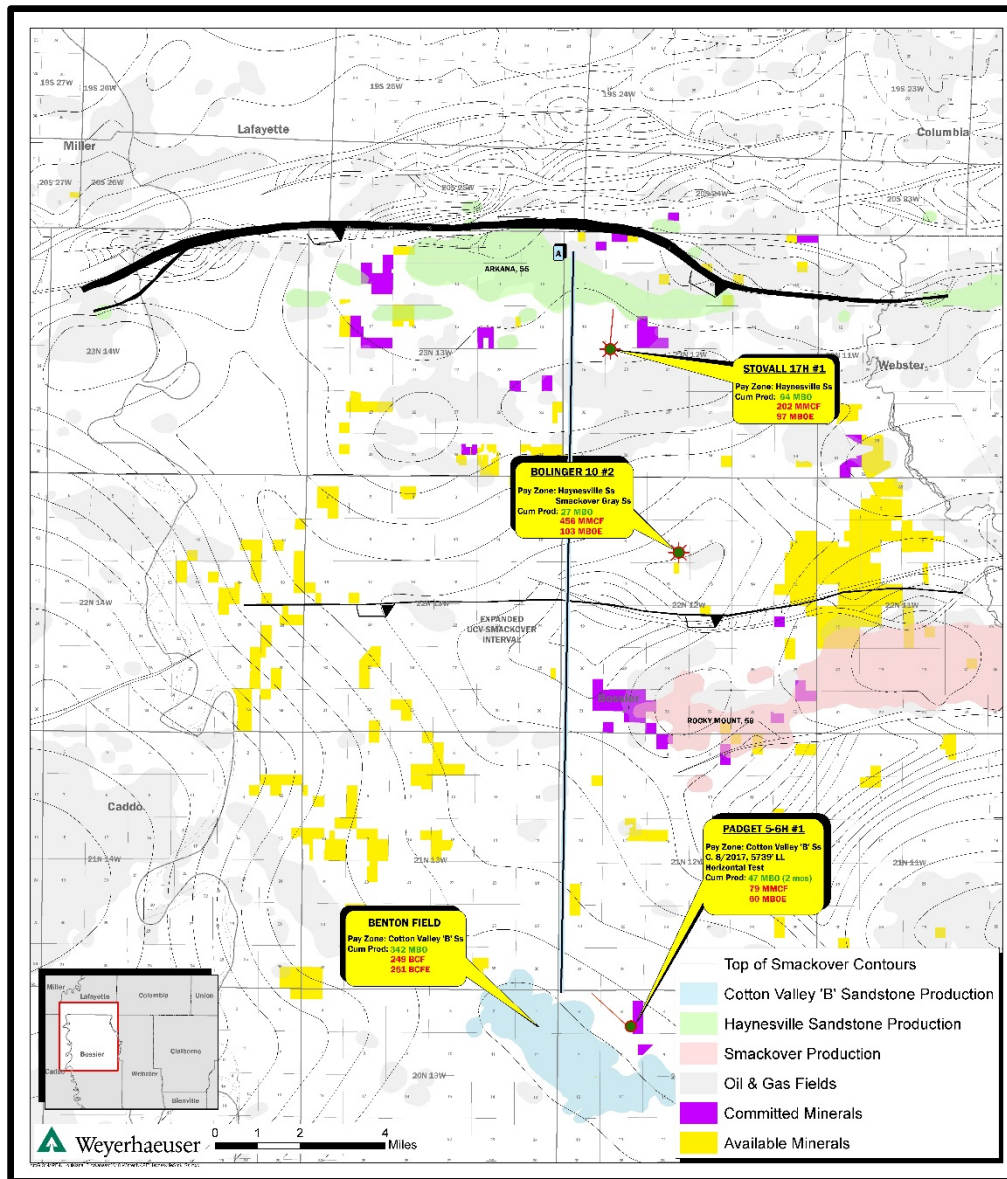
Royalty: 25%

Term: 3 years paid up

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**Contact: Pamela J. Reed, CPL**  
**Land Manager – Energy & Natural Resources**  
**(206) 539-4432**

[Pamela.Reed@Weyerhaeuser.com](mailto:Pamela.Reed@Weyerhaeuser.com)



# Executive Summary: UCV, Haynesville & Smackover Sandstones Bossier Parish, Louisiana

**Summary:** UCV, Haynesville and Smackover sandstones have produced oil and gas for decades along the Arkansas-Louisiana State Line Graben Trend. A 2014 horizontal Haynesville Sandstone completion in Arkana Field indicates that this drilling/completion technology can be utilized to achieve high IPs similar to those achieved in other N. Louisiana horizontal play trends (i.e., Upper Cotton Valley & Bossier Sandstone). Petrochem is currently drilling a 10,800' MD UCV (#1-5 Cook) horizontal test in Arkana Field.

**Primary Reservoir Target:** UCV, Haynesville & Smackover Gray sandstones.

**Secondary Reservoir Targets:** Lower Cotton Valley sandstones; shallow reservoir targets (Tokio, Annona, Pettit).

**Haynesville Sandstone:** Conventional oil and gas wells have produced from the widespread Haynesville Sandstone in the State Line Graben Trend at Arkana, Shongaloo N. – N. Red Rock and Haynesville fields. The CRYSTAL #1 Barnett produced 36,000 BO + 109 MMCFG from a vertical Haynesville Sandstone completion.

In 2014, SM Energy offset the #1 Barnett well with a horizontal test targeting the Haynesville Sandstone. The SM #17H-1 Stovall (C. 2014) tested 1.1 MMCFGPD + 561 BCPD from the Haynesville Sandstone below 10,300' MD. To date, the well has produced 64 MBO + 202 MMCFG. The #17H-1 Stovall completion indicates that horizontal drilling has the potential to enhance Haynesville Sandstone oil and gas recoveries significantly.

**Smackover Gray Sandstones:** The Smackover Gray Sandstone produces all along the State Line Graben Trend. These sandstones underlie the Haynesville sequence in Bossier Parish and provide an additional horizontal drilling target. At Rocky Mount Field, two Smackover Gray Sandstone wells have produced 45,727 BO + 663 MMCFG. These wells are located six miles and 600' down-dip from the crest of a large salt-cored Smackover structure centered in T23N-R13W.

**Upper Cotton Valley Sandstones:** The UCV sandstones produce oil and gas at Arkana and Plain Dealing fields. In 2017, Empresa completed the Padget 5-6H #1 in the UCV "B" sand; it produced 47 MBO and 79 MMCF in 2 months.

**Lower Cotton Valley (Bossier) Sandstones:** Seismic data shows a downthrown fault block containing an expanded Bossier interval in the south half of T22N, R12 & 13W. Prolific gas and condensate production in similar Bossier wedges exists in the N. La Salt Basin (i.e., Terryville/Hico-Knowles and Vernon fields)

**Shallow Targets:** The Tokio, Annona and Pettit formations are productive in the area.

**Weyerhaeuser Minerals:** Weyerhaeuser Company owns 2,540 net mineral acres across a broad structural high centered on T23N, R13W. Productive fields along the high include Arkana (Pettit, Haynesville Ss), Rocky Mount (Smackover Gray Sandstone), Plain Dealing (Pettit, UCV), Redland (Tokio, Pettit), Bolinger (Pettit), Carterville (Tokio) and N. Carterville (Pettit). Within the attached map area both shallow (14,331 acres) and deep (15,608 acres) mineral rights are available for lease.

