Drilling Productivity Report
For key tight oil and shale gas regions

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Anadarko Region

Drilling Productivity Report

April 2020

drilling data through March
projected production through May

Anadarko Region
New-well oil production per rig
barrels/day

Rig count
rigs

Anadarko Region
New-well gas production per rig
thousand cubic feet/day

Rig count
rigs

Anadarko Region
Legacy oil production change
thousand barrels/day

Anadarko Region
Legacy gas production change
million cubic feet/day

Anadarko Region
Indicated change in oil production (May vs. Apr)
thousand barrels/day

Anadarko Region
Oil production
thousand barrels/day

Anadarko Region
Natural gas production
million cubic feet/day

Oil +14
barrels/day
month over month

Gas +80
thousand cubic feet/day
month over month

4,074
May
thousand barrels/day

3,994
April
thousand barrels/day

May
689
2015
barrels/day

April
675
2014
barrels/day

Oil production
thousand barrels/day

Gas production
million cubic feet/day

Oil -21
thousand barrels/day
month over month

Gas -216
million cubic feet/day
month over month

+163
April
7,047
MMcf/d

-379
May
6,831
MMcf/d

-216

+28
-49
-21

+80

3,534
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800

2011
2012
2013
2014
2015
2016
2017
2018
2019
2020

Oil production
thousand barrels/day

Gas production
million cubic feet/day

April 2020

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Appalachia Region

Drilling Productivity Report

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drilling data through March
projected production through May

Oil +3 barrels/day
March over month

136 May
133 April
barrels/day

Monthly additions
from one average rig

May 14,874
April 14,583
thousand cubic feet/day

Gas +291 thousand cubic feet/day
Month over month

Appalachia Region
New-well oil production per rig
barrels/day

Rig count
rigs


New-well oil production per rig

Appalachia Region
Legacy oil production change
thousand barrels/day


Appalachia Region
Indicated change in oil production (May vs. Apr)
thousand barrels/day

April
May
Mmbbl/d
Mmbbl/d

Production from new wells
Legacy production change
Net change

Indicated change in natural gas production (May vs. Apr)
million cubic feet/day

April
May
MMcf/d
MMcf/d

Production from new wells
Legacy production change
Net change

Natural gas production
million cubic feet/day

Oil production
thousand barrels/day


Oil -2 thousand barrels/day
Month over month

Gas -326 million cubic feet/day
Month over month
Eagle Ford Region
Drilling Productivity Report

Oil
+24 barrels/day
month over month

1,255 May
1,231 April

Monthly additions from one average rig

Gas
+84 thousand cubic feet/day
month over month

4,278 May
4,194 April

Eagle Ford Region
New-well oil production per rig
barrels/day

Eagle Ford Region
Rig count
rigs

Eagle Ford Region
New-well gas production per rig
thousand cubic feet/day

Eagle Ford Region
Rig count
rigs

Eagle Ford Region
Legacy oil production change
thousand barrels/day

Eagle Ford Region
Legacy gas production change
million cubic feet/day

Eagle Ford Region
Indicated change in oil production (May vs. Apr)
thousand barrels/day

Eagle Ford Region
Indicated change in natural gas production (May vs. Apr)
million cubic feet/day

Eagle Ford Region
Oil production
thousand barrels/day

Eagle Ford Region
Natural gas production
million cubic feet/day
Haynesville Region
Drilling Productivity Report

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Haynesville Region
New-well oil production per rig
barrels/day

New-well oil production per rig
barrels/day

Rig count
rigs

Rig count
rigs

Haynesville Region
Legacy oil production change
thousand barrels/day

Haynesville Region
Legacy gas production change
million cubic feet/day

Haynesville Region
Indicated change in oil production (May vs. Apr)
thousand barrels/day

Haynesville Region
Indicated change in natural gas production (May vs. Apr)
million cubic feet/day

Haynesville Region
Oil production
thousand barrels/day

Haynesville Region
Natural gas production
million cubic feet/day

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9,977
9,782
+195

Oil
+1

Gas
+195

May
April

May
April

May
April

May
April

May
April

May
April

May
April

drilling data through March
projected production through May

thousand cubic feet/day
month over month

thousand barrel/month
month over month

thousand barrels/day
month over month
The Drilling Productivity Report uses recent data on the total number of drilling rigs in operation along with estimates of drilling productivity and estimated changes in production from existing oil and natural gas wells to provide estimated changes in oil\(^1\) and natural gas\(^2\) production for seven key regions. EIA's approach does not distinguish between oil-directed rigs and gas-directed rigs because once a well is completed it may produce both oil and gas; more than half of the wells do that.

**Monthly additions from one average rig**
Monthly additions from one average rig represent EIA's estimate of an average rig's\(^3\) contribution to production of oil and natural gas from new wells.\(^4\) The estimation of new-well production per rig uses several months of recent historical data on total production from new wells for each field divided by the region's monthly rig count, lagged by two months.\(^5\) Current- and next-month values are listed on the top header. The month-over-month change is listed alongside, with +/- signs and color-coded arrows to highlight the growth or decline in oil (brown) or natural gas (blue).

**New-well oil/gas production per rig**
Charts present historical estimated monthly additions from one average rig coupled with the number of total drilling rigs as reported by Baker Hughes.

**Legacy oil and natural gas production change**
Charts present EIA's estimates of total oil and gas production changes from all the wells other than the new wells. The trend is dominated by the well depletion rates, but other circumstances can influence the direction of the change. For example, well freeze-offs or hurricanes can cause production to significantly decline in any given month, resulting in a production increase the next month when production simply returns to normal levels.

**Projected change in monthly oil/gas production**
Charts present the combined effects of new-well production and changes to legacy production. Total new-well production is offset by the anticipated change in legacy production to derive the net change in production. The estimated change in production does not reflect external circumstances that can affect the actual rates, such as infrastructure constraints, bad weather, or shut-ins based on environmental or economic issues.

**Oil/gas production**
Charts present all oil and natural gas production from both new and legacy wells since 2007. This production is based on all wells reported to the state oil and gas agencies. Where state data are not immediately available, EIA estimates the production based on estimated changes in new-well oil/gas production and the corresponding legacy change.

**Footnotes:**
1. Oil production represents both crude and condensate production from all formations in the region. Production is not limited to tight formations. The regions are defined by all selected counties, which include areas outside of tight oil formations.
2. Gas production represents gross (before processing) gas production from all formations in the region. Production is not limited to shale formations. The regions are defined by all selected counties, which include areas outside of shale formations.
3. The monthly average rig count used in this report is calculated from weekly data on total oil and gas rigs reported by Baker Hughes.
4. A new well is defined as one that began producing for the first time in the previous month. Each well belongs to the new-well category for only one month. Reworked and recompleted wells are excluded from the calculation.
5. Rig count data lag production data because EIA has observed that the best predictor of the number of new wells beginning production in a given month is the count of rigs in operation two months earlier.
The data used in the preparation of this report come from the following sources. EIA is solely responsible for the analysis, calculations, and conclusions.

**Drilling Info** (http://www.drillinginfo.com) Source of production, permit, and spud data for counties associated with this report. Source of real-time rig location to estimate new wells spudded and completed throughout the United States.

**Baker Hughes** (http://www.bakerhughes.com) Source of rig and well counts by county, state, and basin.

**North Dakota Oil and Gas Division** (https://www.dmr.nd.gov/oilgas) Source of well production, permit, and completion data in the counties associated with this report in North Dakota.

**Railroad Commission of Texas** (http://www.rrc.state.tx.us) Source of well production, permit, and completion data in the counties associated with this report in Texas.

**Pennsylvania Department of Environmental Protection** (https://www.paoilandgasreporting.state.pa.us/publicreports/Modules/Welcome/Welcome.aspx) Source of well production, permit, and completion data in the counties associated with this report in Pennsylvania.

**West Virginia Department of Environmental Protection** (http://www.dep.wv.gov/oil-and-gas/Pages/default.aspx) Source of well production, permit, and completion data in the counties associated with this report in West Virginia.

**Colorado Oil and Gas Conservation Commission** (http://cogcc.state.co.us) Source of well production, permit, and completion data in the counties associated with this report in Colorado.

**Wyoming Oil and Conservation Commission** (http://wogcc.state.wy.us) Source of well production, permit, and completion data in the counties associated with this report in Wyoming.

**Louisiana Department of Natural Resources** (http://dnr.louisiana.gov) Source of well production, permit, and completion data in the counties associated with this report in Louisiana.

**Ohio Department of Natural Resources** (http://oilandgas.ohiodnr.gov) Source of well production, permit, and completion data in the counties associated with this report in Ohio.

**Oklahoma Corporation Commission** (http://www.occeweb.com/og/oghome.htm) Source of well production, permit, and completion data in the counties associated with this report in Oklahoma.