

# **Impact of Percentage Depletion Allowance on Marginal Wells and the Small Businesses that Make up the American Upstream Independent Oil & Gas Industry**

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## **Introduction**

According to information provided by EIA, DOE, EPA, IHS, and the Tax Foundation, there are 918,068 oil and gas wells in the U.S. Most U.S. oil and gas production comes from wells producing between 100 boepd and 3,200 boepd.

Marginal wells (those producing 15 boepd or less) account for 77.9% of total U.S. wells and 7% of total U.S. production. Nationally, small independent producer's employees paid \$30.7 billion in income taxes, sales tax, and excise tax last year. The entire direct/indirect/induced economics for small producers show they generated \$131 billion in federal and state taxes last year, a figure that is projected to grow to \$189 billion this year. Every \$1 million in capital expenditure (capex) for independents result in \$1.1 million of total taxes generated along with the creation of 39 total jobs. Every \$1 million of capex for independents results in \$2.4 million of direct and \$5.1 million of overall contribution to GDP. Every \$1 million generated by marginal well production generates \$2 million in economic activity elsewhere in the economy.

Studies show that the impact of losing marginal well production would cost the U.S. economy \$184.5 billion, 178,000 jobs, and \$115 billion in earned labor income per year. The livelihood of the small business sector of the oil and gas industry and nearly 10 million royalty owners nationwide is based on marginal well production.

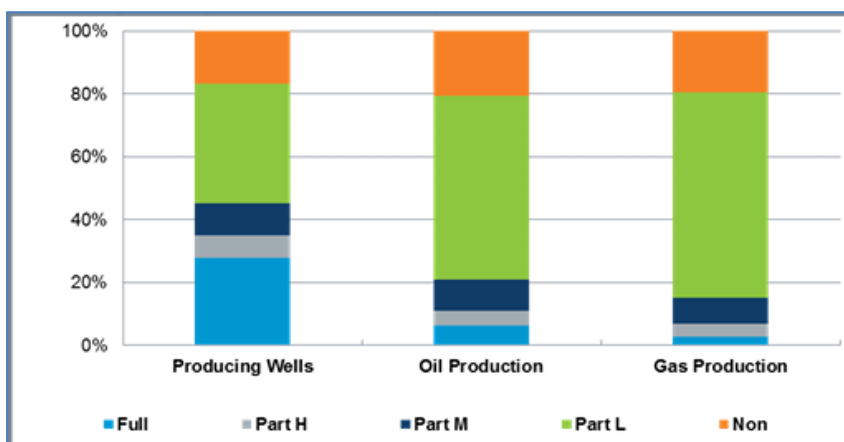
There are over 13,000 operators that had production in the U.S. last year, and of these well over 10,000 produce less than 1,000 boepd from marginal wells (wells producing < 15 boepd) and qualify for 1% - 15% depletion rate.

## Calculating Impact of Depletion

I calculated the depletion percentage that each operator could claim by multiplying 15% times a ratio of 1000 boepd divided by the average daily production of barrels of oil and boe of gas. Based on this derived percentage, an operator was assigned to one of five groups as follows:

- Full – All operators producing less than 1000 boepd who qualified for the full 15% depletion rate (based on definition at 26 U.S. Code § 613). There were over 13,000 operators that had production last year, and of these just over 10,000 were included in this group.
- Part-High – Independent producers with depletion rates between 5% and 15%
- Part-Medium – Independent producers with depletion rates between 1% and 5%
- Part-Low – Independent producers with depletion rates less than 1%. Please note that many of the large independents with high production volumes were included in this group
- Non – Integrated major oil companies that did not qualify for percentage depletion.

The Figure below is a comparison of operating wells and production by Operator Class. A key observation was the relatively high amount of oil and gas production contributed by producers that could claim little or no depletion allowance. On the other hand, 27% of all wells were operated by producers that could claim the full 15% depletion, 7.7% of all wells were operated by producers that could claim 5% - 15% depletion, and 9.6% of all wells were operated by producers that could claim 1% - 5% depletion. This indicates 44.3% of all wells were operated by producers that could claim 1%-15% depletion.



Since production from producing wells within each group declines over time, revenue, royalty, and production taxes also decrease commensurately; however, lease operating or fixed cost stays constant. This eventually results in negative profit as wells surpass their economic limits. Since we know that in the real world, wells are not all abandoned at once within a common group, I established a well abandonment rate based on a sliding scale which compared profitability with fixed cost. Abandonment of some wells would begin to occur once profit reached 50% of fixed costs, and then well counts would continue to decrease as profits deteriorated over time. Once profit reached a negative 100% of the fixed costs, then all wells within the group would be abandoned.

### **Calculating Net Profit With and Without Depletion**

The loss of profit due to the removal of percentage depletion increases the abandonment rate for currently producing wells and lowers the expectation of future drilling due to less available capital.

Additional revenue derived from income tax savings due to percentage depletion leads to higher profitability; however, without percentage depletion, the lack of this revenue diminished profitability.

Consequently, by using the same scale comparison of profitability to fixed cost, abandonment rates were increased and production was decreased in the non-depletion case.

Capital expenditures are sunk costs for forecasting production from currently producing wells. By focusing solely on the relationship between profit and operating expense, any future drilling and associated production would require capital expenditure to drill and complete the new wells necessary to sustain or increase production. Thus, another severe consequence of diminished cash flow or decreased profit due the lack of revenue from percentage depletion was severe constraint of capital that could be applied to future drilling.

### **Impact on Drilling of New Wells**

Without percentage depletion, fewer wells would be drilled in the future resulting in less production. Economic analyses looked at the profit obtained without depletion and subtracting from the profit obtained with depletion. This difference was then applied as a reduction to capital expenditure for the subsequent year. Since fewer wells would be drilled in this subsequent year, even less cash flow would be available for drilling in future years. This year-over-year reduction in available capital, ultimately compounds or results in a “snowball effect” resulting in

significantly fewer wells being drilled in the non-depletion case in the future. In general, operator groups with higher depletion rates, such as the “Full” depletion operator group, would make much deeper reductions in drilling than operator groups with smaller depletion percentages.

Elimination of depletion will have the most onerous effect on new wells as capital will be severely reduced for new capital spending. This will result in an estimated decrease of 7,000 fewer wells being drilled each year which represents an approximately 23.5% reduction in drilling. This reduction in drilling will hit the “Full” operator class the hardest as they will absorb nearly two-thirds of the loss; however, all of the operator classes that can claim some depletion allowance will experience some loss in capital and ability to maintain current drilling rates. Experience has shown that when reductions in drilling occur, it often takes a few years before production begins to be severely impacted. This “masking” of production loss will eventually catch up resulting in long-term supply shortages.

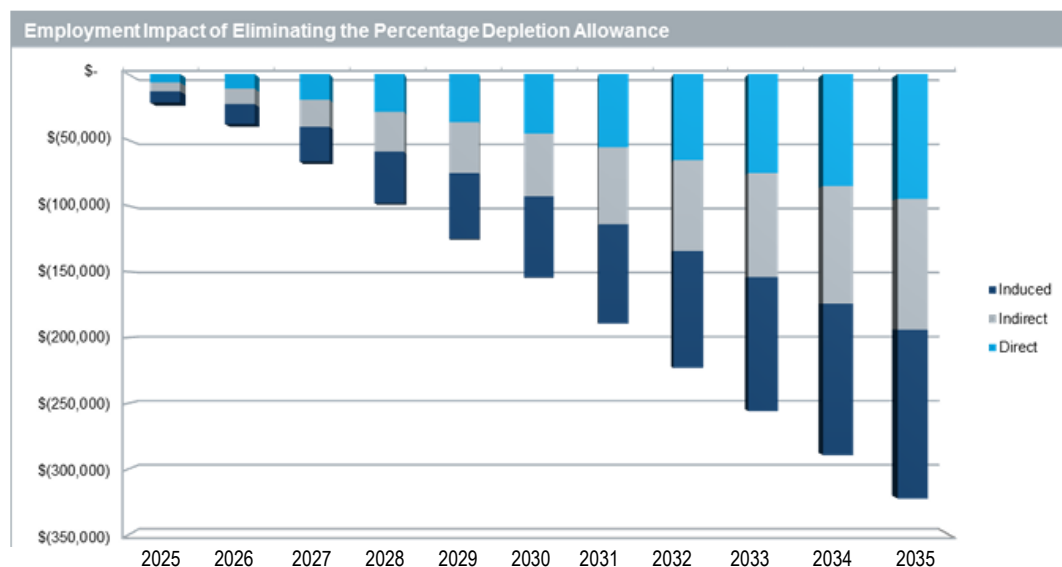
## **Impact on Producing Wells**

We expect a slight trend reversal in decline of producing wells with gradual increases over the forecast period. Long-lived wells producing from tight oil and shale gas plays have a slower abandonment rate than do conventional wells. Even so, without percentage depletion it is estimated that there would be approximately 42,000 fewer producing wells, which represents a 4.2% decrease in producing wells. For the “Full” operator class, there would be a much larger overall reduction in profit; hence, this group would contribute over 68% of the change in well reductions. We have already noted that this group operates a higher percentage of wells compared to the related production percentage, which implies that these wells are lower performing, and more economically marginal. Hence, we would also expect that reduced revenue due to depletion removal would accelerate the abandonment rate. Most of the substantial activity in the tight oil and shale gas plays such as the Bakken, Eagle Ford, Marcellus Shale, and other plays is dominated by operator groups Part M and Part L, which claim relatively smaller amounts of depletion. Elimination of depletion will have less effect on this group, which implies that eliminating percentage depletion would have less impact within the large unconventional plays.

Larger operators, who can claim a smaller percentage of depletion, tend to have better performing wells overall. Consequently while reductions in the number of producing wells and new wells from the elimination of percentage depletion may be relatively small for these operators, compared with decreases for the “full” operator class, similar reductions in production would occur for each of the operator groups. These findings would suggest that all operators, regardless of the amount of claimed depletion have a stake in continuing to be able to claim the depletion allowance.

## National Level Impacts

The impact of the change in tax policy that eliminates the percentage depletion allowance for oil and gas producers are costly for the U.S. economy and the costs grow larger over time as investment in new wells that would otherwise have been drilled under the current policy are not made. This lowers the productive capacity, not only of the oil and gas industry, but the U.S. economy as a whole. Over a decade there are an average 178,206 jobs that would be forgone each year.



The employment impacts are symptoms of the larger problem driven by the decreased economic activity in the oil and gas industry. The changed incentives for producing and drilling new wells, ripples through the economy, lowering gross value-added (contributions to GDP) along the way. By the end of a decade the yearly accumulated losses to the economy amount to \$184.5 billion.

## Impact on States

While the costs of eliminating percentage depletion to the U.S. economy are large, they are not equally borne by all the states. Twenty-eight (28) oil and gas producing states would be the hardest hit, bearing on average 94% of the cost in terms of gross value-added; yet many other states do bear some of the cost. The table below shows the 10 most impacted producing states. Texas, by far, bears the largest share of the cost.

Top 10 producing states: Impact of percentage depletion on gross value-added (millions of 2024 \$)

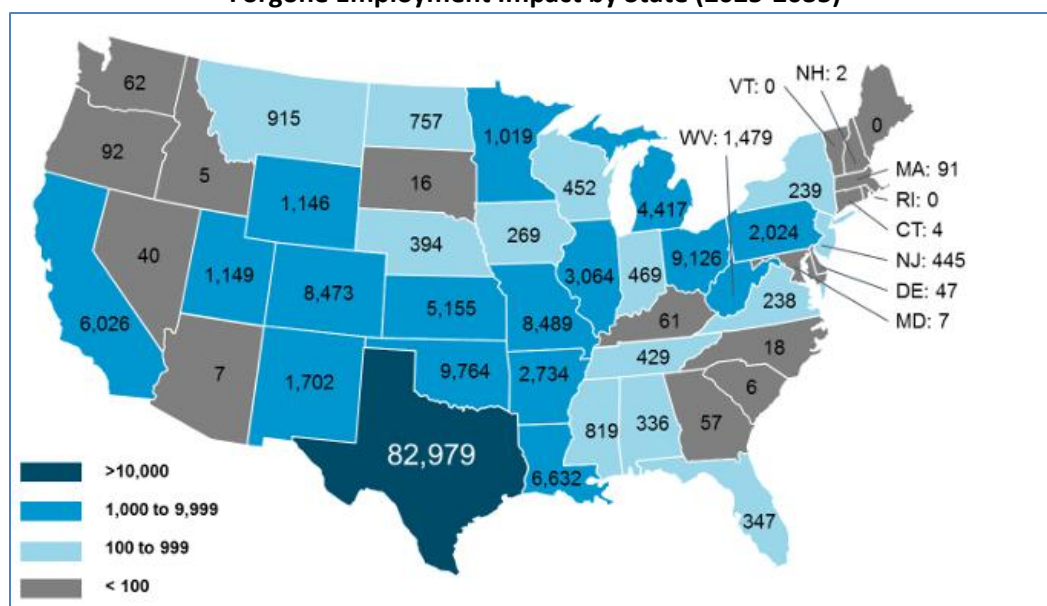
|                                       | 2025           | 2026           | 2027           | 2028            | 2029            | 2030            | 2031            | 2032            | 2033            | 2034            | 2035            |
|---------------------------------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| California                            | (137)          | (162)          | (261)          | (371)           | (500)           | (639)           | (788)           | (942)           | (1,100)         | (1,263)         | (1,431)         |
| Colorado                              | (85)           | (171)          | (282)          | (413)           | (573)           | (765)           | (979)           | (1,211)         | (1,455)         | (1,711)         | (1,976)         |
| Florida                               | (19)           | (9)            | (14)           | (20)            | (27)            | (34)            | (42)            | (50)            | (58)            | (65)            | (73)            |
| Illinois                              | (35)           | (85)           | (166)          | (253)           | (300)           | (348)           | (425)           | (495)           | (563)           | (638)           | (708)           |
| Michigan                              | (37)           | (104)          | (204)          | (308)           | (358)           | (416)           | (507)           | (586)           | (661)           | (744)           | (827)           |
| New York                              | (8)            | (17)           | (18)           | (30)            | (29)            | (30)            | (34)            | (36)            | (40)            | (45)            | (48)            |
| Ohio                                  | (20)           | (182)          | (619)          | (1,061)         | (975)           | (875)           | (1,026)         | (1,067)         | (1,065)         | (1,117)         | (1,164)         |
| Pennsylvania                          | (18)           | (47)           | (100)          | (158)           | (173)           | (192)           | (236)           | (274)           | (312)           | (359)           | (410)           |
| Texas                                 | (1,336)        | (2,166)        | (3,574)        | (5,152)         | (6,940)         | (8,866)         | (10,886)        | (12,852)        | (14,739)        | (16,565)        | (18,313)        |
| Virginia                              | (2)            | (6)            | (14)           | (24)            | (25)            | (26)            | (32)            | (37)            | (43)            | (50)            | (57)            |
| <b>Top ten producing states total</b> | <b>(1,697)</b> | <b>(2,949)</b> | <b>(5,253)</b> | <b>(7,790)</b>  | <b>(9,899)</b>  | <b>(12,191)</b> | <b>(14,955)</b> | <b>(17,551)</b> | <b>(20,037)</b> | <b>(22,557)</b> | <b>(25,008)</b> |
| <b>All producing states total</b>     | <b>(2,092)</b> | <b>(3,673)</b> | <b>(6,428)</b> | <b>(9,466)</b>  | <b>(12,120)</b> | <b>(15,010)</b> | <b>(18,434)</b> | <b>(21,723)</b> | <b>(24,941)</b> | <b>(28,230)</b> | <b>(31,450)</b> |
| <b>US total</b>                       | <b>(2,189)</b> | <b>(3,911)</b> | <b>(6,864)</b> | <b>(10,117)</b> | <b>(12,920)</b> | <b>(15,970)</b> | <b>(19,605)</b> | <b>(23,089)</b> | <b>(26,495)</b> | <b>(29,982)</b> | <b>(33,395)</b> |
| Producing states % of US total        | -96.0%         | -94.0%         | -94.0%         | -94.0%          | -94.0%          | -94.0%          | -94.0%          | -94.0%          | -94.0%          | -94.0%          | -94.0%          |

NOTES: Numbers may not sum due to rounding.

Source: IHS Economics

While the producing states bear the brunt of the economic costs, the non-producing states are still impacted. The gross value-added in Missouri, for example, is nearly \$1.5 billion lower in 2035 than they otherwise would be. This lost economic value is greater than many of the producing states and shows how small changes in incentives for individual producers in one industry can have far reaching impacts and quickly compound in a highly interdependent economy. The top 10 non-producing states together have a cumulative impact over the decade of \$11 billion in forgone gross value-added. The forgone employment picture by state shows a similar story. Employment losses are greatest in the producing states, but as the map below shows, many other states will forego some employment that would have been supported under the current policy.

**Forgone Employment Impact by State (2025-2035)**



## Impact on Royalty Owners

Royalty owners are mainly those who have provided the land for drilling and have gotten a share of the revenue from the production of the wells in return. The federal and many state governments are royalty owners. Private royalty owners, according to the National Association of Royalty Owners are “teachers, farmers, ranchers, homemakers, accountants, firemen, plumbers, retirees, dentists, small business owners, factory workers, engineers, pet groomers, widows, roofers, lawyers, policemen, florists, carpenters, bricklayers” who have often view the royalties as a part of their families’ legacy. Average royalty earnings for an individual are \$500 a month with many earning less than this.

Private royalty owners can also claim the percentage depletion deduction. Eliminating the percentage depletion allowance affects royalty owners in two ways. First it lowers the incentive and so providing land or the investment dollars for new wells that are seen as riskier will likely be forgone. Second, well production would be lower or go offline, thus diminishing the amount of production revenue and hence lowers the royalty owners’ earnings.

The economic impact on the owners of royalty shares in producing wells is significant. Over a decade, royalty owners are estimated to earn \$34.3 million less (in total).

## Conclusion

Eliminating the percentage depletion allowance would impose a large cost on the U.S. economy. Because the elimination of the percentage depletion allowance raises the effective tax rate on the owners and operators of oil and gas producing wells, the ability of independent oil and gas producers to operate and maintain their wells profitably and to take on the risk of investing in new wells is diminished. Thus some wells would get capped while other wells never get drilled. Over time this reduces the productive capacity in the oil and gas industry, which would have far reaching impacts for all sectors of the U.S. economy. The economic costs are borne by all major industries, and ripple through to many non oil and gas producing states as well as the producing states. This impacts revenue to the federal government and rather than raising revenue for the federal government, the costs would outweigh the benefits. Overall, the policy change will reduce tax revenue to the Federal Government by \$2.5 billion over the next decade and it will reduce federal royalty revenue by \$1.1 billion over the decade.

Respectfully submitted,



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