F I S C A L I M P A C T R E P O R T

SPONSOR Soules **ORIGINAL DATE** 02/25/13 **LAST UPDATED** **HB**

SHORT TITLE Ban Horizontal Oil and Gas Fracturing **SB** 547

ANALYST Weber

REVENUE (dollars in thousands)

Estimated Revenue from State Land Office			Recurring or Nonrecurring	Fund Affected
FY13	FY14	FY15		
	($40,500.0)	($40,500.0)	Recurring	Land Maintenance
	($48,300.0) to ($96,600.0)	($48,700.0 to $97,400.0)	Recurring	Land Grant Permanent Fund

(Parenthesis ( ) Indicate Revenue Decreases)

REVENUE (dollars in thousands)

Estimated Revenue from Oil and Gas Division @ EMNRD			Recurring or Nonrecurring	Fund Affected
FY13	FY14	FY15		
	($64,000.0)	($128,000.0)	Recurring	Severance Tax/General Fund
	($67,200.0)	($67,200.0)	Recurring	Gross Receipts Tax/General Fund
	($30,000.0)	($60,000.0)	Recurring	Land Grant Permanent Fund

SOURCES OF INFORMATION
LFC Files

Responses Received From
Attorney General Office (AGO)
Energy, Minerals and natural Resources Department (EMNRD)
State Land Office (SLO)
Department of Health (DOH)

SUMMARY

Synopsis of Bill

Senate Bill 547 proposes a new section of the Oil and Gas Act prohibiting a combination of

horizontal drilling and multistage hydraulic fracturing for the purpose of extracting oil and natural gas.

Section 70-2-33 NMSA 1978, DEFINITIONS is changed to include:

A. horizontal drilling" means the method of drilling used to increase the exposure of a well to an oil or natural gas source rock formation that typically exists as a near-horizontal layer of bedrock. After drilling vertically to just above a targeted source rock, the direction of drilling is transitioned approximately ninety degrees to horizontal so that the resulting borehole enters the source rock and continues through it horizontally. Typically, the resulting horizontal, or lateral, section of the well is hydraulically fractured in multiple stages;
B. hydraulic fracturing" means the process of injecting fluid, usually a mixture of water, sand and chemicals, into an oil- or natural-gas-bearing rock formation adjacent to the borehole of an oil or natural gas well for the purpose of either creating new fractures or expanding existing fractures to stimulate the flow into the well of oil or natural gas that would otherwise remain in the rock formation;

FISCAL IMPLICATIONS

The SLO reports the assumptions used for the fiscal impact are as follows:

1. A roughly 75% reduction in bonus monies paid to the state from gas and oil lease bonus sales. In FY 2014, the State Land Office projects collections at $54 Million or a loss of $40.5 Million.
2. A conservative 10% reduction in royalties paid on current production, based on projected oil and gas royalties for FY 2014 of $483 Million represents a loss of $48.3 Million for the year. A 20% reduction would double the loss at $96.6 Million.
3. A conservative 10% reduction in royalties paid on current production, based on projected oil and gas royalties for FY 2015 of $487 Million represents a loss of $48.7 Million for the year. A 20% reduction would double the loss at $97.4 Million.
4. An increase of the loss in revenues going forward at 10% per annum in recognition that new production will be curtailed in direct relationship to the lack of new wells being drilled.

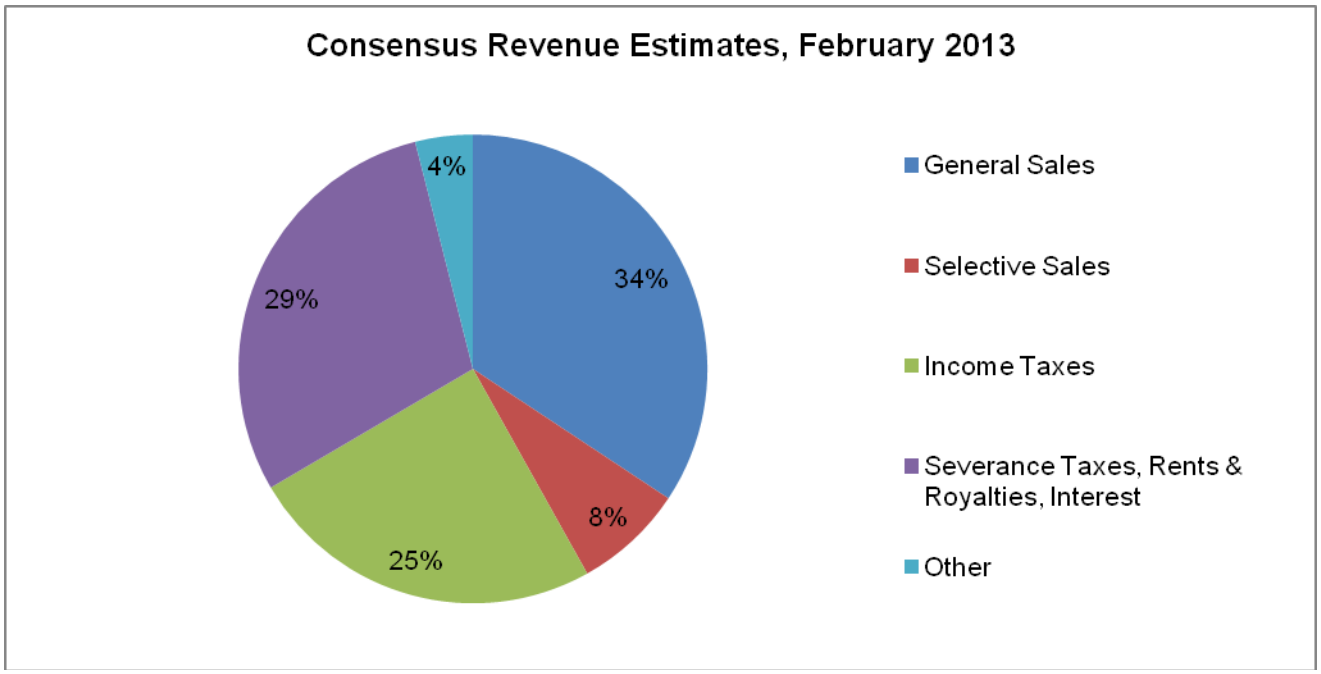
EMNRD notes the following as the assumptions used for the revenue reductions above in the table headed Oil and Gas:

The estimates in the revenue table above are based on the following assumptions: (1) each year, new oil production is reduced by 8 million barrels; (2) extraction taxes, including the severance tax, have a total rate of about 8%; (3) a reduction in drilling activity by 350 horizontal wells per year, with an average per well cost of $4 million per well, 80% of which would involve goods or services subject to gross receipts tax at an average rate of 6%; (4) 30% of lost production would come from State trust lands, and would be subject to an average royalty of 12.5%.

The two agencies estimates vary for the Land Grant Permanent Fund but since it is not possible to know the exact effect this bill would have on the industry both are shown and would be in “range”.

LFC warns that these revenue reductions are representative of what to expect but compared to the official consensus revenue projection will be high. The revenue changes from the agencies are a result of the stated assumptions and cannot be tied back to the consensus projection.

The following table from the LFC illustrates the importance of oil and gas revenues.



About 29 percent of general fund revenues are received directly from oil and gas revenues. These direct revenues are from oil and gas school tax, oil conservation tax, natural gas processors tax, federal mineral leasing and state land office rents and royalties.

Other revenues indirectly from oil and natural gas come from LGPF and STPF interest and from gross receipts tax, personal income tax and corporate income tax.

Assuming SLO's conservative loss ratio of 10 percent this would mean a direct loss to the general fund of $171 million.

SIGNIFICANT ISSUES

Oil and gas revenues are approximately 94% of the revenues of the State Land Office. Virtually all of the new well activity in the state, both in the Permian Basin and in the San Juan Basin is derived from horizontal wells in combination with hydraulic fracturing – precisely what would be banned under this bill. The bill would eliminate the oil and gas industry's interest in new exploration by limiting the potential use of the technology resulting in a reduction of millions of dollars to the Maintenance Fund in bonus monies for new leases. The other prime source of new leasing (and associated bonus monies) has been oil and gas leased lands within or near to potash reserves which heretofore had been off limits to oil and gas drilling, but which are now subject to horizontal drilling. Vertical wells create obstacles to potash mining, whereas drilling islands allow less waste in potash reserves and permit simultaneous oil and gas development through horizontal drilling.

EMNRD reports that oil production in New Mexico has been declining steadily since 1970, reaching a low of 59,196,170 barrels in 2007. Since that time the trend has reversed. Reported 2012 production was 77,352,666 barrels, with December reports still incomplete. This is the highest level since 1985. Much of this increase is undoubtedly due to the increasing use of horizontal wells and fracture treatment. The trend will most likely reverse sharply if SB 547 is enacted. Fracking has doubtless also increased New Mexico gas production from what it would otherwise have been, though gas production has continued to decline.

EMNRD continues that in the five-year period from 2008 through 2012, New Mexico oil production increased at a rate of approximately six million barrels per year. If 38% of new wells are horizontal wells (as estimated below), which on the average are *at least* twice as productive as vertical wells on a well-for-well basis, then it would seem conservative to attribute at least two-thirds of that increase to horizontal drilling. Actually, that would be too conservative. The six million barrels per year figure represents the net increase in production. Undoubtedly, New Mexico production from existing wells has been declining due to depletion and abandonment. Accordingly, it would seem reasonable to assume that the net increase is no more than one-half of actual new production. On that basis, the annual rate of increase of oil production resulting from horizontal wells could reasonably be estimated at eight million barrels per year (2/3rds of six million barrels, times two).

To obtain an estimate of the percentage of drilling activity in New Mexico represented by horizontal drilling, we looked at weekly compilations of well completion reports for 12 randomly selected weeks in the past 12 months, one week for each month. These compilations included completion reports for 320 wells, of which 123 (or 38.4375%) were completed as horizontal wells. A total of 1,070 wells were completed in New Mexico in 2012. Horizontal wells generally cost from three to five million dollars to drill and complete. Assuming that one-third of the wells drilled in New Mexico in 2012 had not been drilled, and those were horizontal wells, this would have reduced the amount spent on oil development in New Mexico in 2012 by an estimated $1.4 billion dollars.

OTHER SUBSTANTIVE ISSUES

The bill does not limit the application of the fracking ban to wells developing State and privately owned minerals. However, its application on federal and tribal lands may be preempted. Congress, by enacting the various mineral leasing laws, has indicated an intention that federal lands suited to oil and gas development be used for this purpose. While state environmental laws that limit uses of federal land are not categorically precluded, *California Coastal Com'n v. Granite Rock Co.*, 480 U.S. 572 (1987), neither are such state laws necessarily permitted. In view of the dramatic effect this bill would have in limiting oil and gas development, it seems likely that federal courts would hold that it could not be applied on federal lands, and even more likely that it could not be applied on tribal lands. Since around 60% of drilling activity in New Mexico occurs on federal lands, a holding that the bill was preempted on federal and tribal lands would significantly reduce any positive effects that might be thought to result from the bill's enactment.

MW/blm