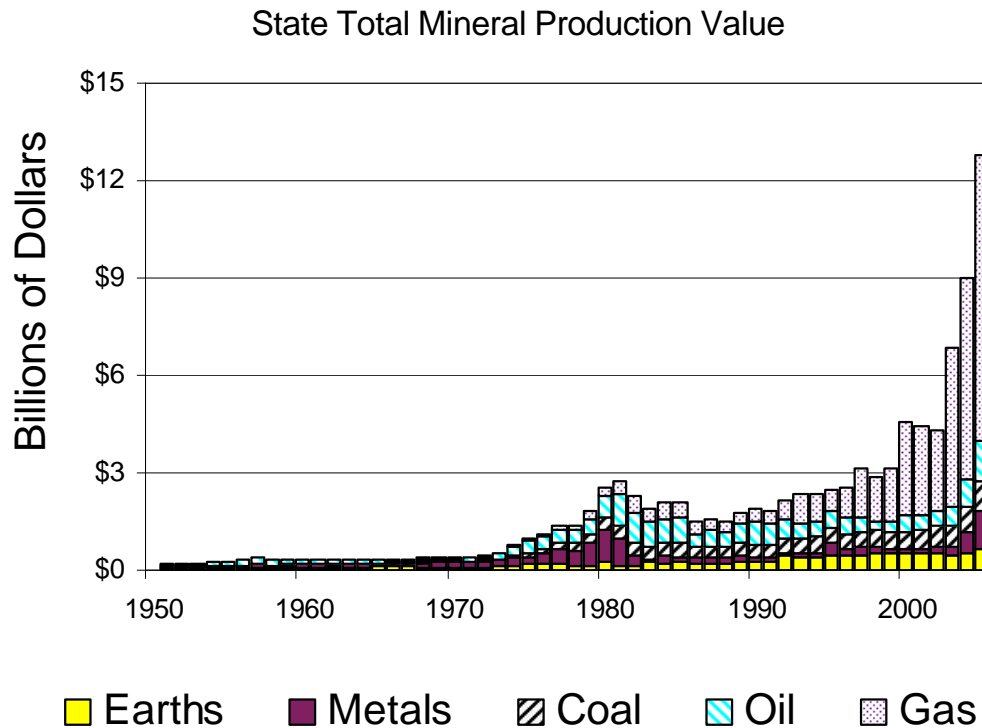


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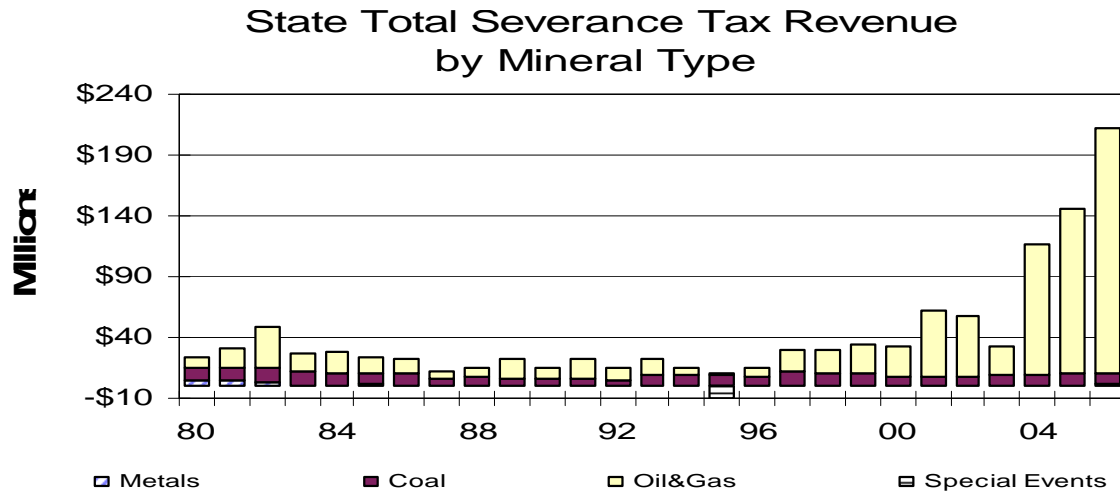
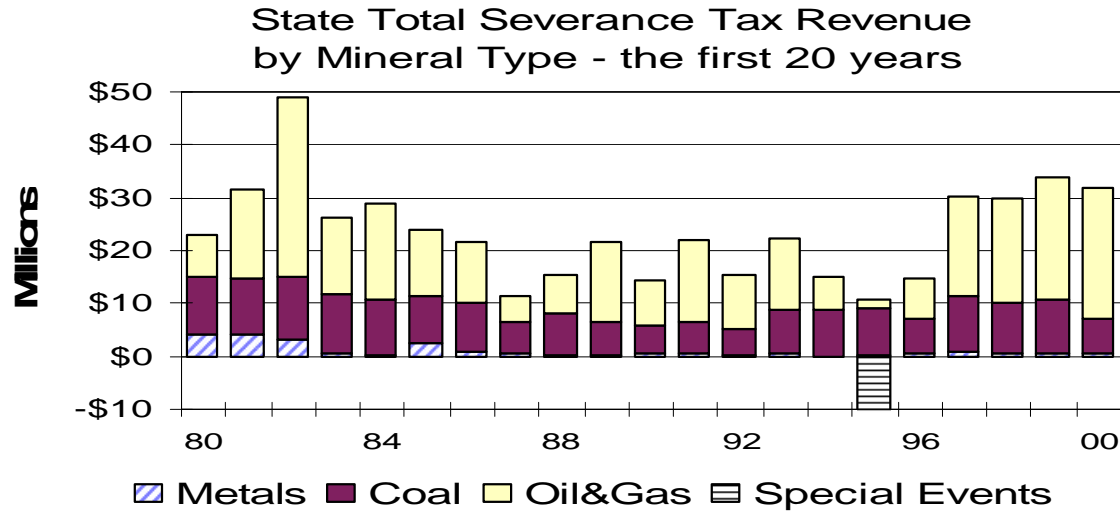
## **Forecasting Colorado State Severance Tax**

A sequential slide show describing how the severance tax in Colorado does not directly follow trends in the value of mineral production due to a large credit for property tax.

**Total mineral production in Colorado has gone through dramatic expansion and contraction cycles over the last decades. The majority of production value has been in oil and gas production**

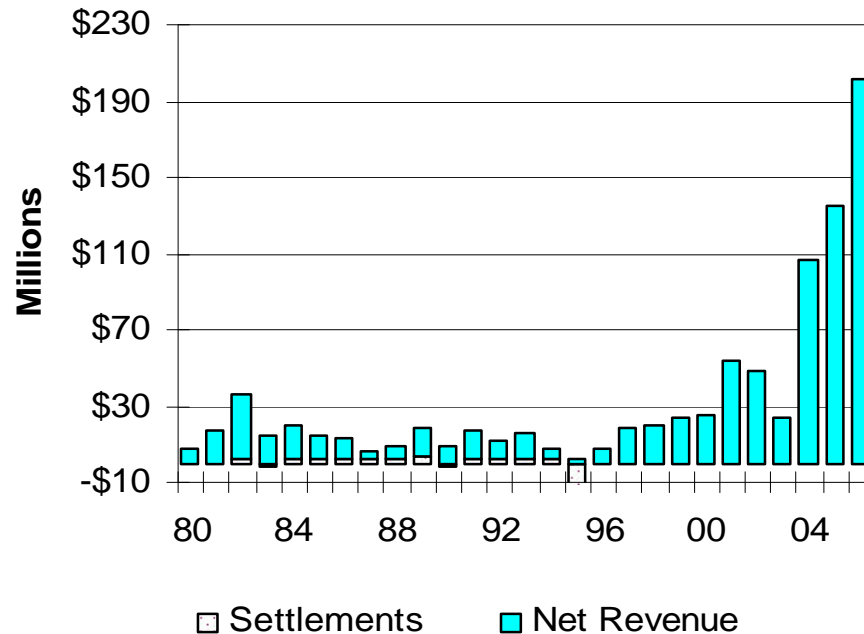


**Total severance tax revenue to the state has swung widely, making forecasting state severance revenue very difficult.**



The big severance revenue source has been oil and gas production. On a year-to-year basis, oil and gas severance tax revenues have oscillated widely in cycles that are not cleanly related to changes in total state mineral production value. In addition, refunds in 1995 betray an exposure to "one-time" events.

Severance Tax Revenue From Oil & Gas



**State Oil and Gas Severance Tax Revenue =**

**Production Quantity**

**- minus Small Well Exemptions Quantity**

**- minus government owned production**

**•time oil or gas Price**

**- minus Transportation Processing and Manufacturing costs**

**\* times Tax Rate**

**-minus Property Tax Credit**

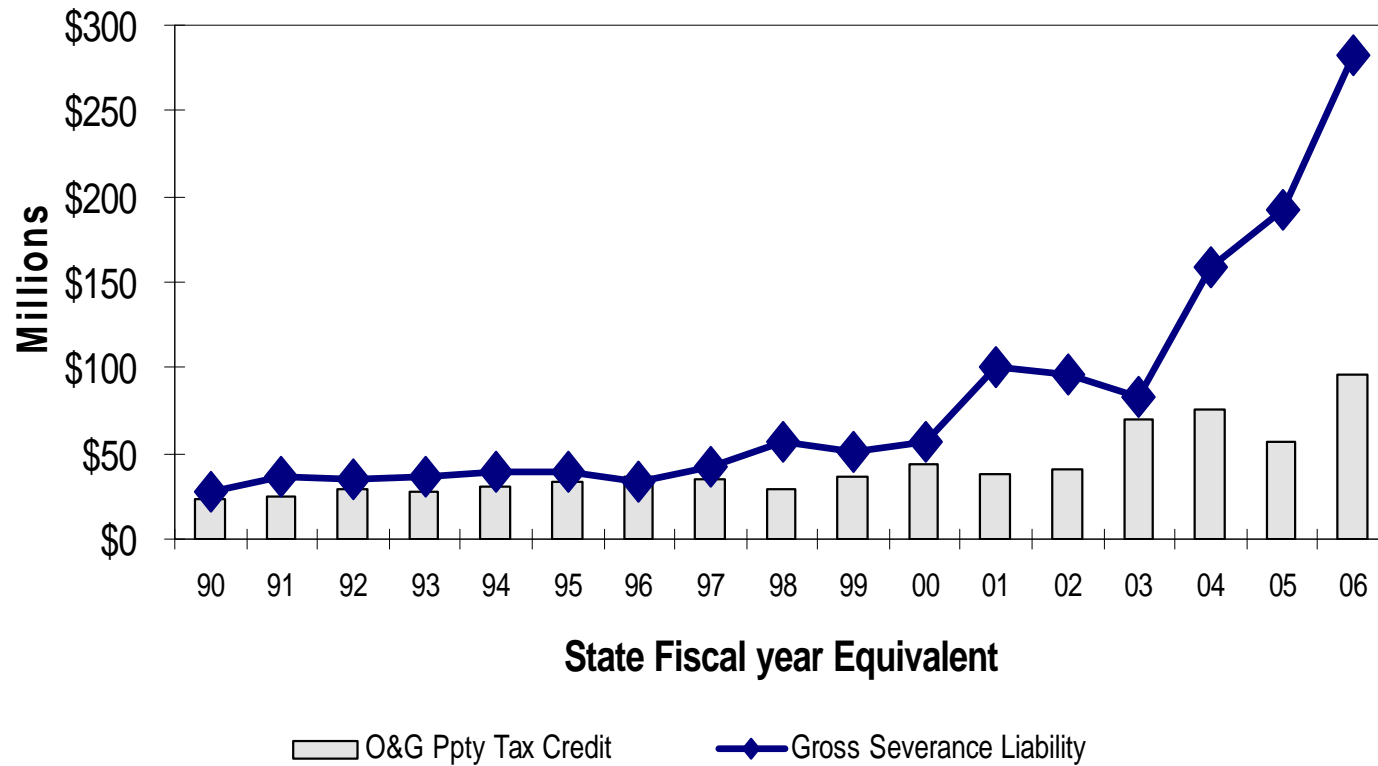
**Severance tax from oil and gas levied on the value of production with small wells exempt. Over 50% of the 20,000 oil and gas wells in the state are exempt as small wells, totaling about 20% of production value.**

**The Tax Rate ranges from 2 to 5%**

**A large credit for property tax payments on the larger wells is then deducted.**

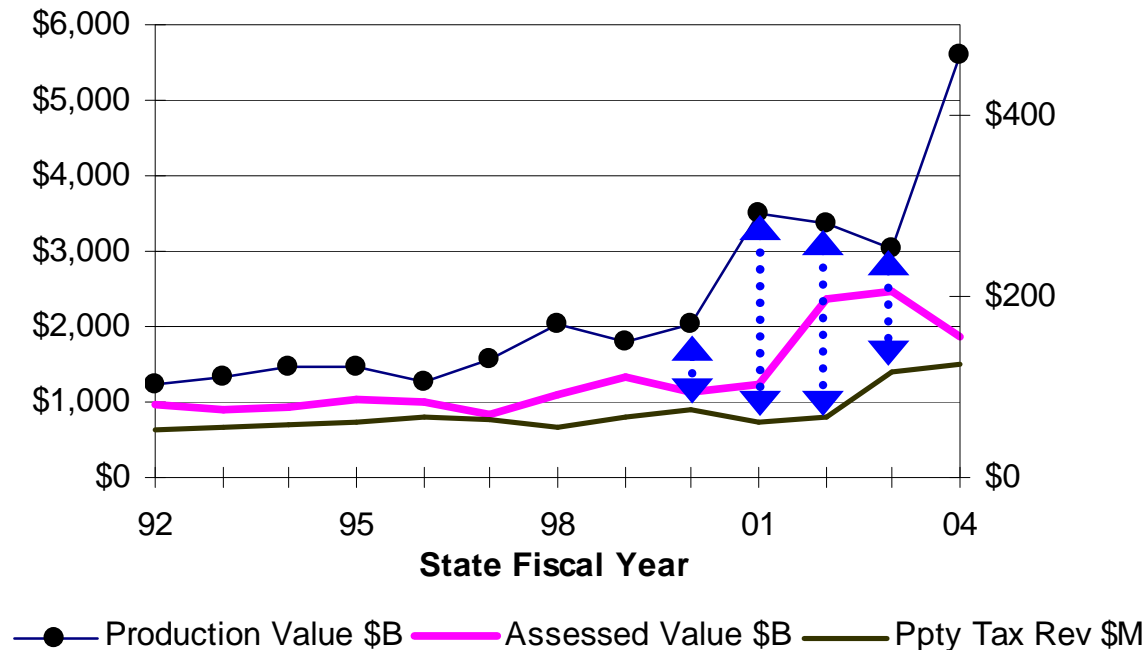
**The production property tax revenue from oil and gas and is very large relative to gross severance tax but cycles two years behind production value.**

**Oil & Gas Property Tax Payments  
Available as Severance Tax Credits**



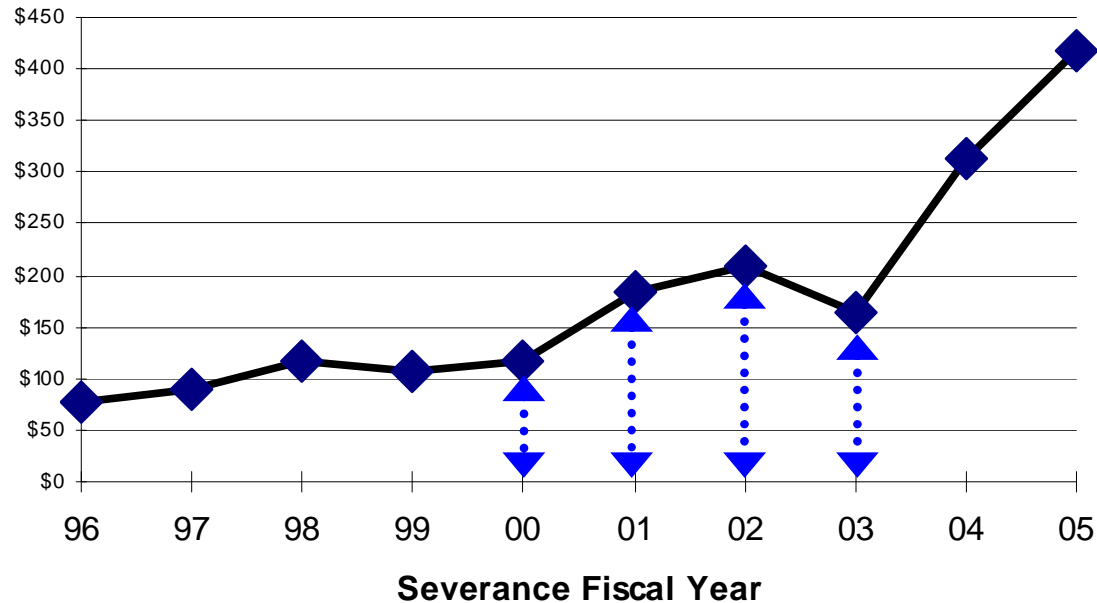
# The Property Tax Payments Change in a Two Year LAG on Change in Production Value. The GAP Between Production Value and Property Tax Payments Therefore Varies Widely.

O&G Production Value, Property Assessed Value and Tax Revenue. The Two Year LAG



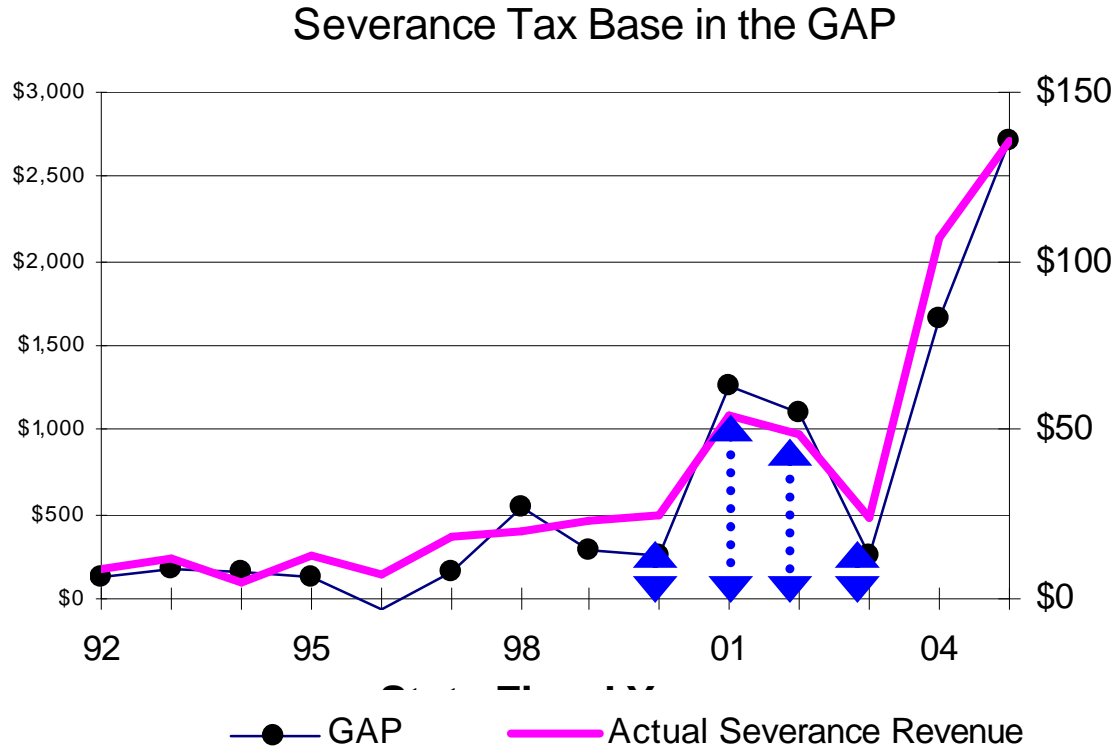
**Since Severance Tax is based on Production Value without a LAG, the GAP between Production Value and Property Tax Payments is the True Severance Tax Base.**

O&G Production Value minus Property Tax Revenue  
the GAP. The True Severance Tax Base



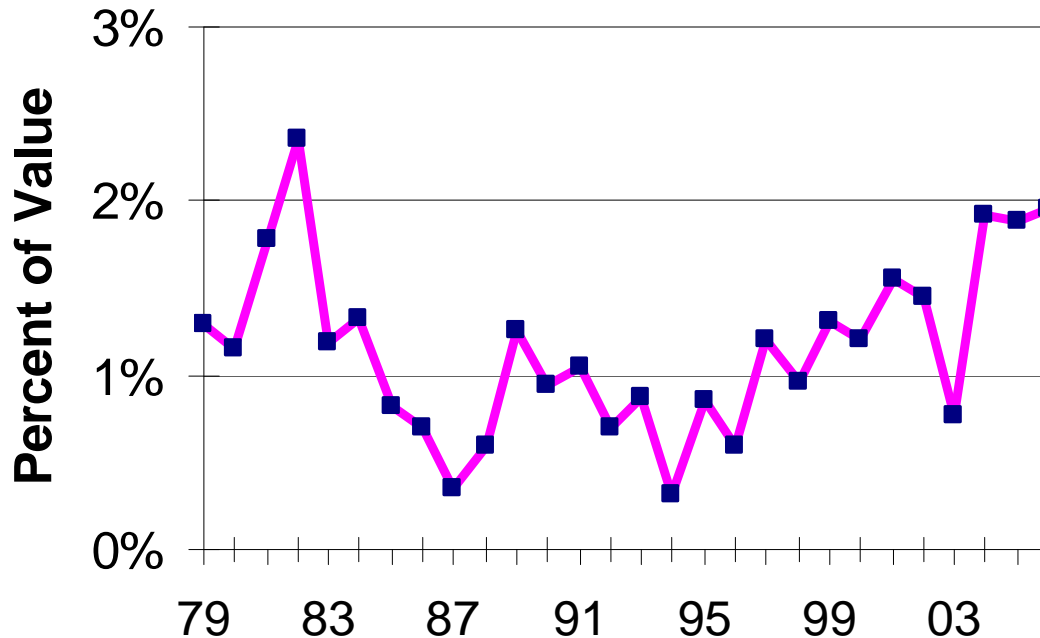


# Net Severance Tax Revenue to the State Tracks this GAP Fairly Well.



**As a result of the GAP and the LAG the net the effective rate of severance tax as a percent of oil and gas production value zig-zags widely around a long run 1% average.**

Net Effective Severance Tax Rate  
on Oil & Gas (Sev Rev / Total Value)



## **So the projection of severance tax requires:**

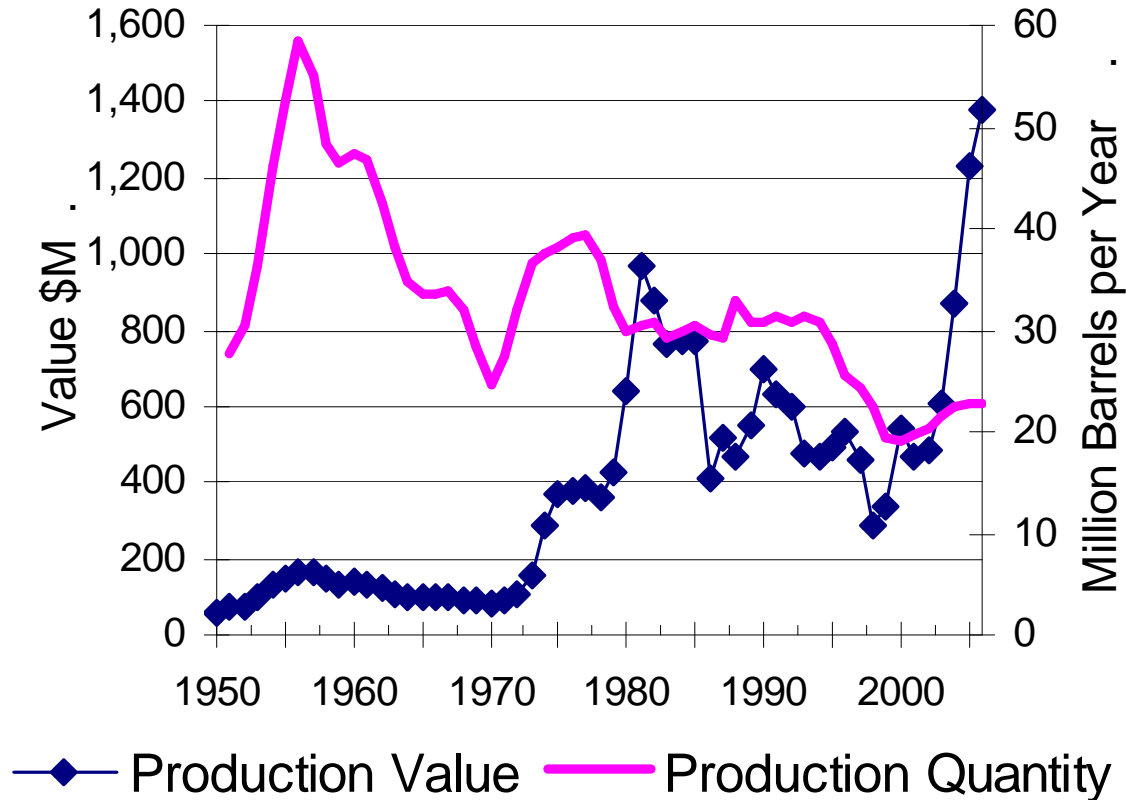
- 1) A projection of the value of oil and gas production, by county which requires, in turn, projection of:
  - The quantity of oil and gas production by county**
  - The sales price of the oil and gas****
- 2) A deduction from the production value tax base for exempt small oil and gas wells in each county.**
- 3) Deduction of the portion of production owned by tribal, state and federal government agencies**
- 4) A projection of the property tax payments by oil and gas producers in each county, which requires, in turn projection of:
  - The mill levy that will be applied by local governments to the oil and gas production value.****

**Following here are a few slides to give perspective on these severance tax base trends**

**Oil production quantity has declined over the years.**

**Value cycles with the world price.**

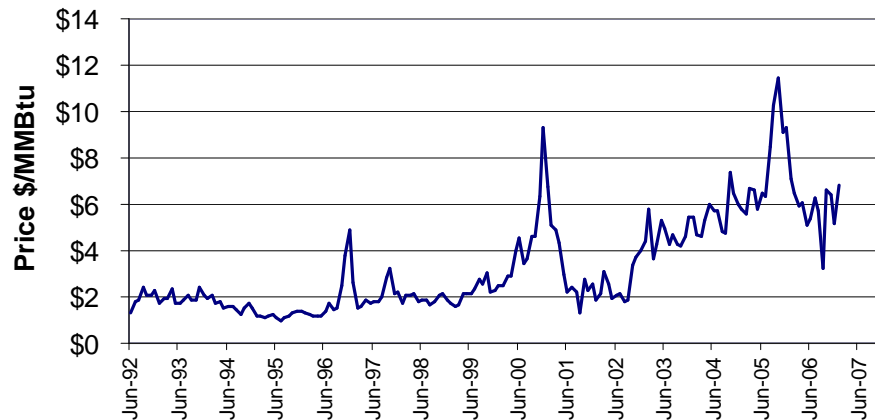
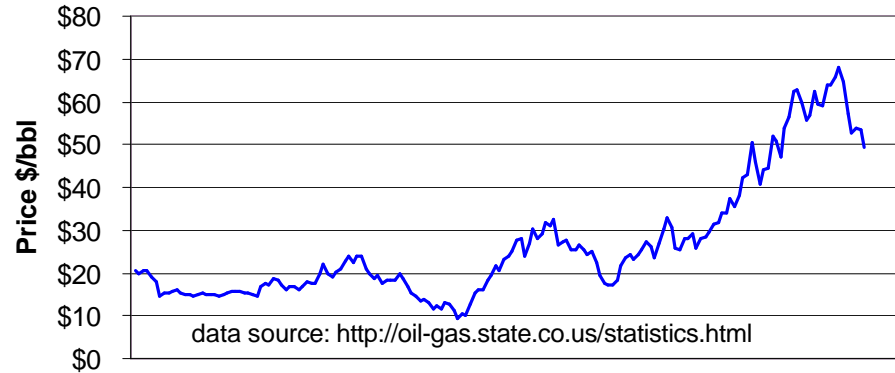
### OIL PRODUCTION IN COLORADO



**Slide 11**

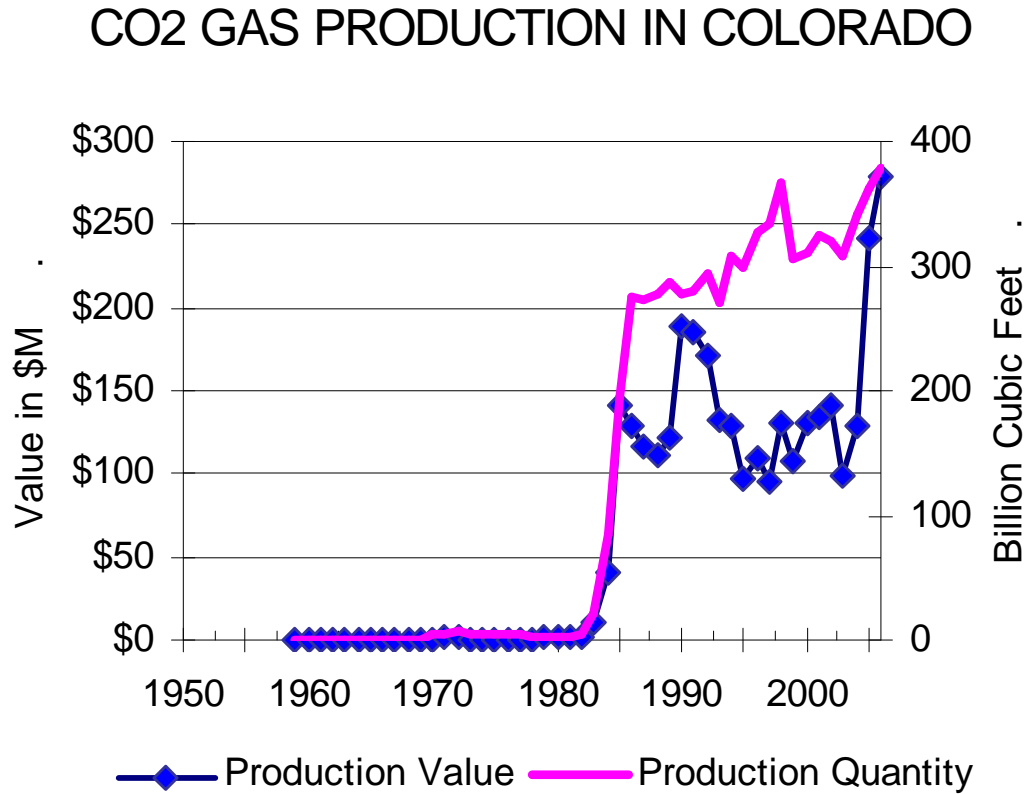
# Oil and Gas prices have swung widely over the last ten years with national market cycles.

## Monthly Colorado Oil Prices

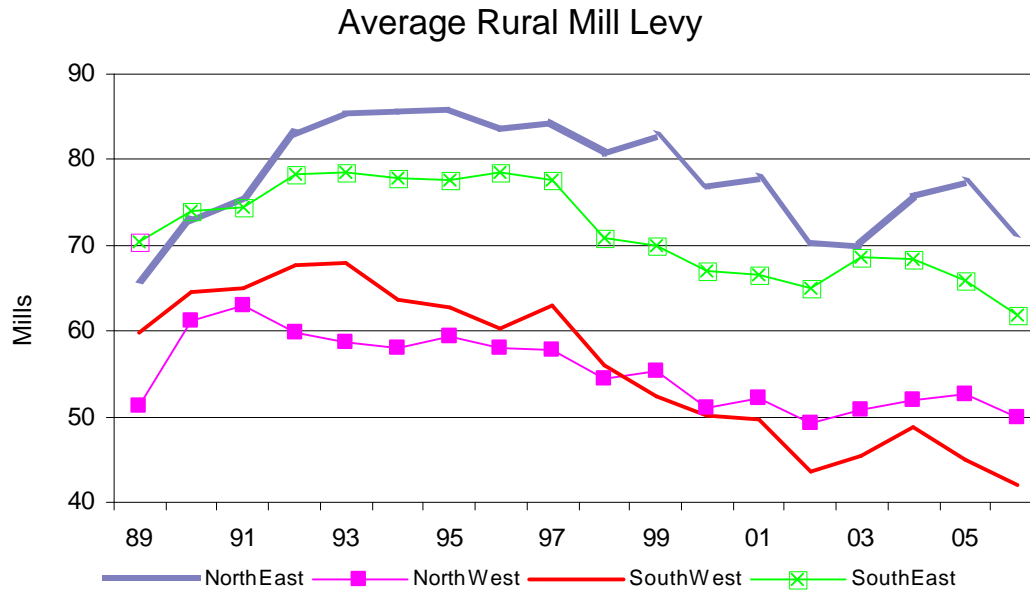


## Monthly Colorado Natural Gas Prices

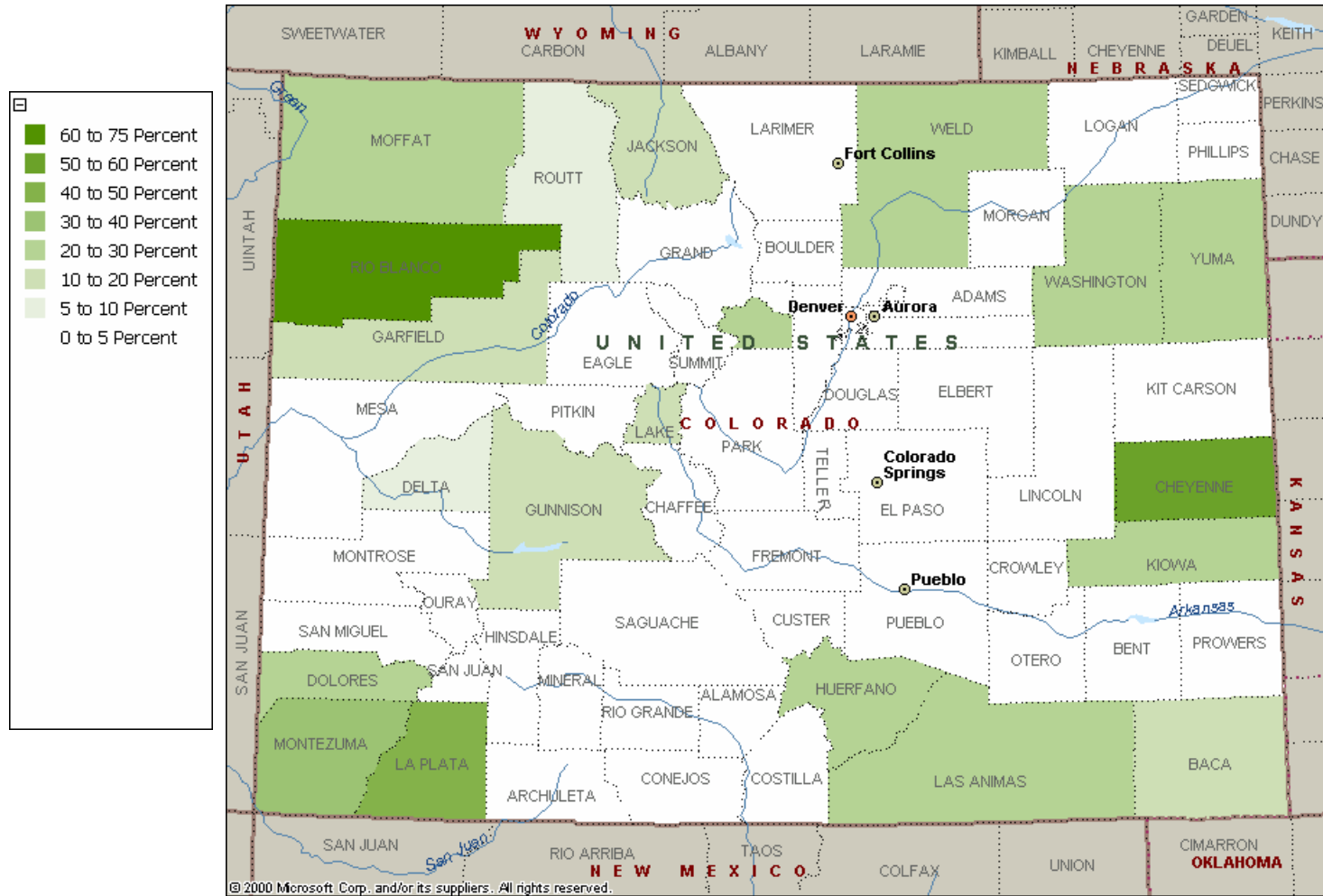
**Carbon Dioxide production quantity has been stable for 10 years.  
Value cycles with the market price.**



# Property tax mill levy rates vary considerably across the state and over time.



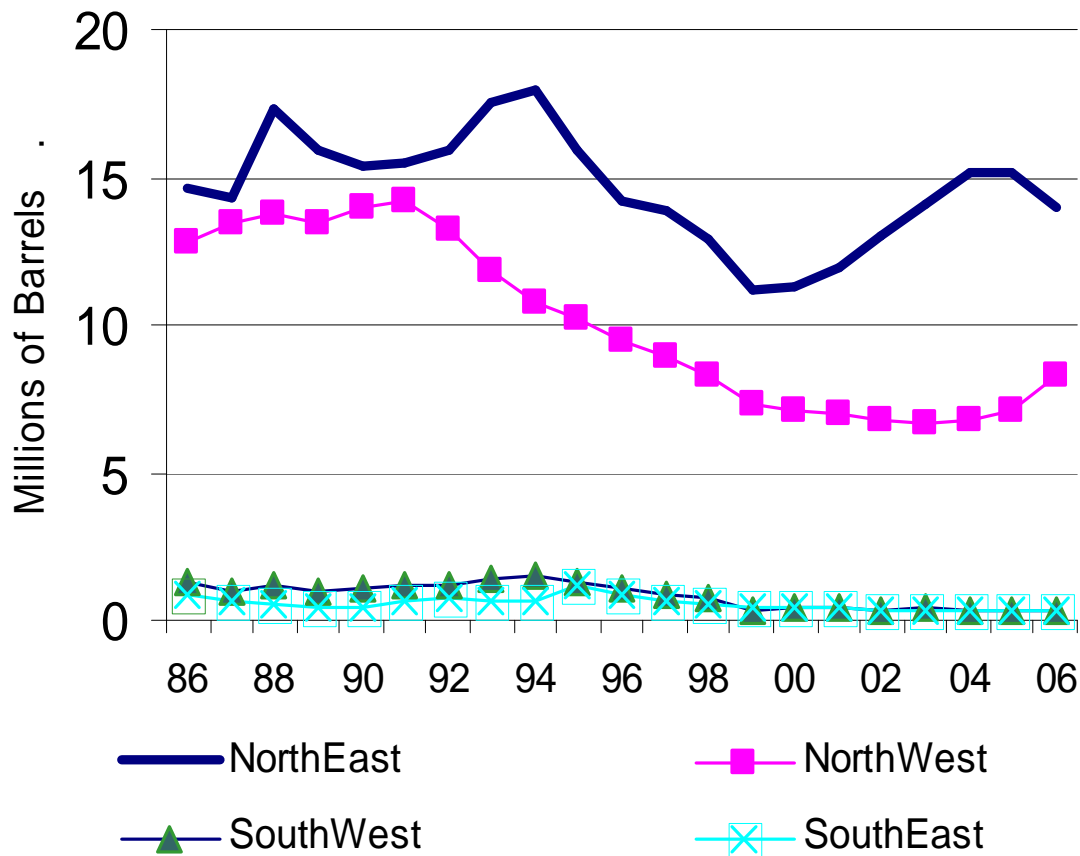
# Oil and Gas Production is a large share of property tax revenue in many counties.





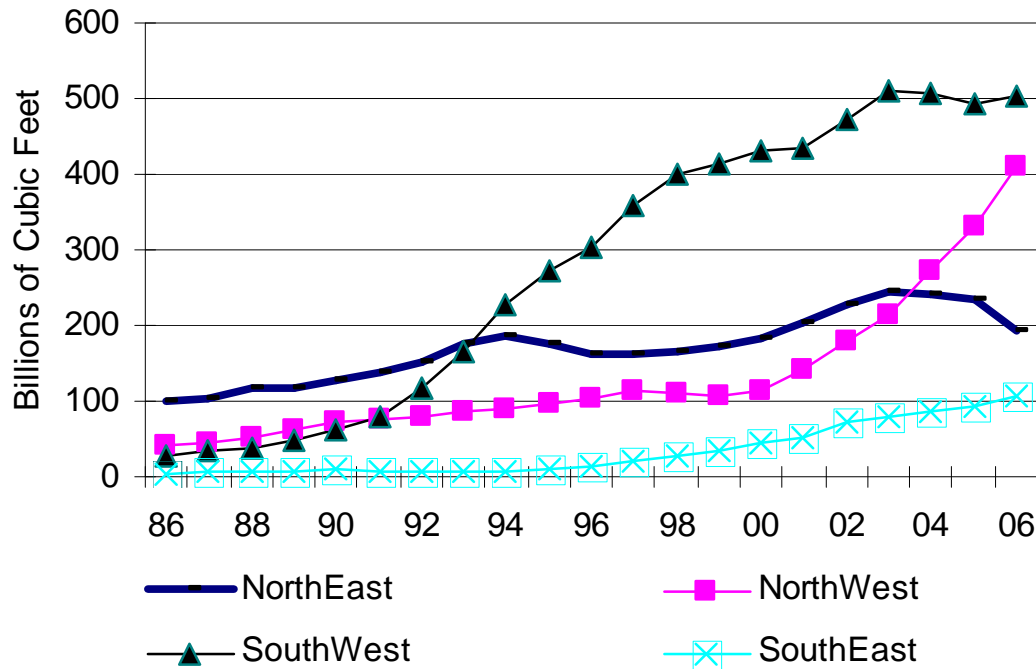
**Most oil production is in the NW and NE quads.**

### OIL PRODUCTION by Region

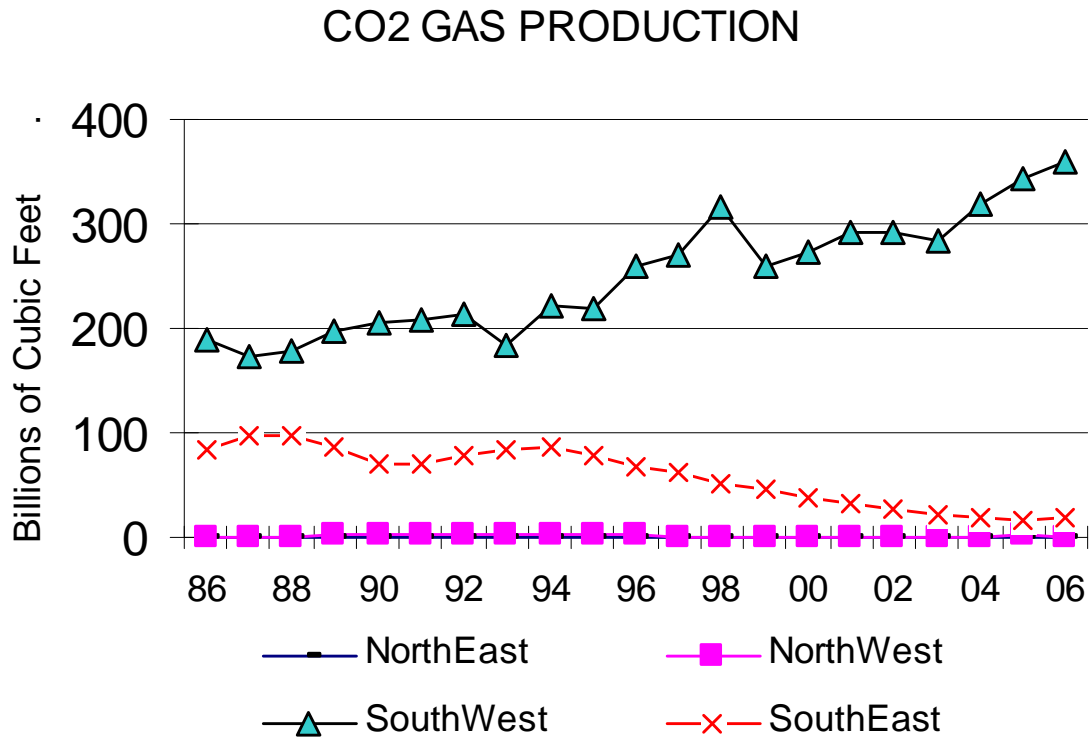


**Gas production is dominated by the booming SW quad, but as those fields top out, the Northwest is coming on strong.**

**GAS PRODUCTION by Region**



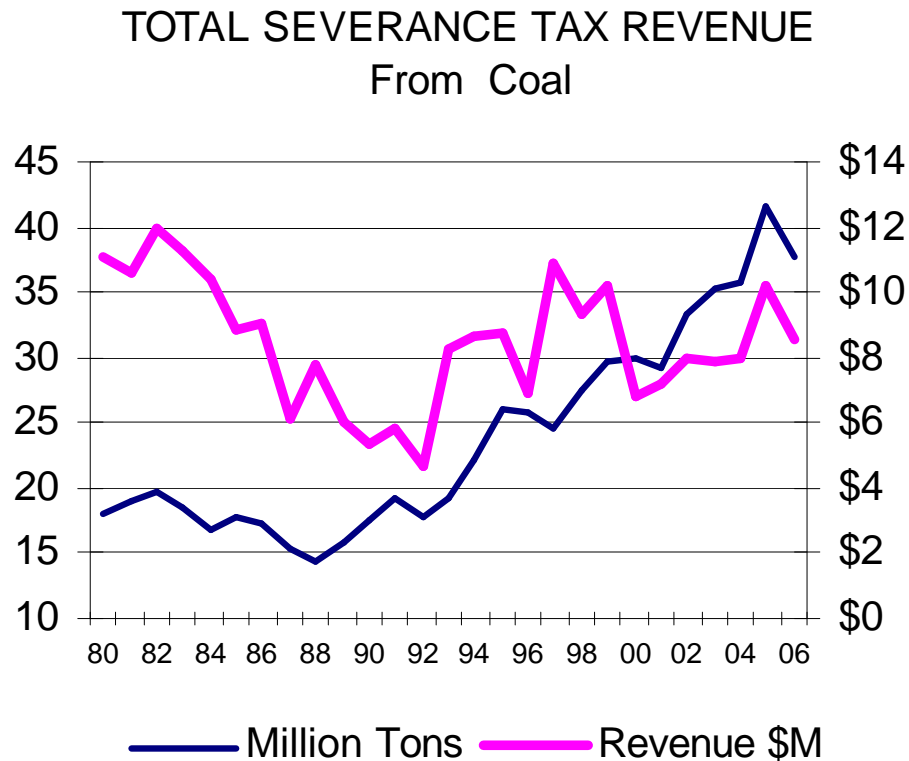
**Almost all CO<sub>2</sub> production is concentrated  
in two fields in Montezuma and Huerfano Counties**



**Projection of severance tax from coal is fairly straight forward:**

- 1) Projection of the quantity of coal production by mine and surface or underground method.**
- 2) Deduct 1.2 million tons from the annual tax base for each mine. There are currently only 8 which retain a severance tax liability at this point.**
- 3) Obtain the tax rate per ton, currently fixed at 54 cents, and multiply it times the net taxable tons.**
- 4) For underground mines, cut the resulting tax liability by half.**

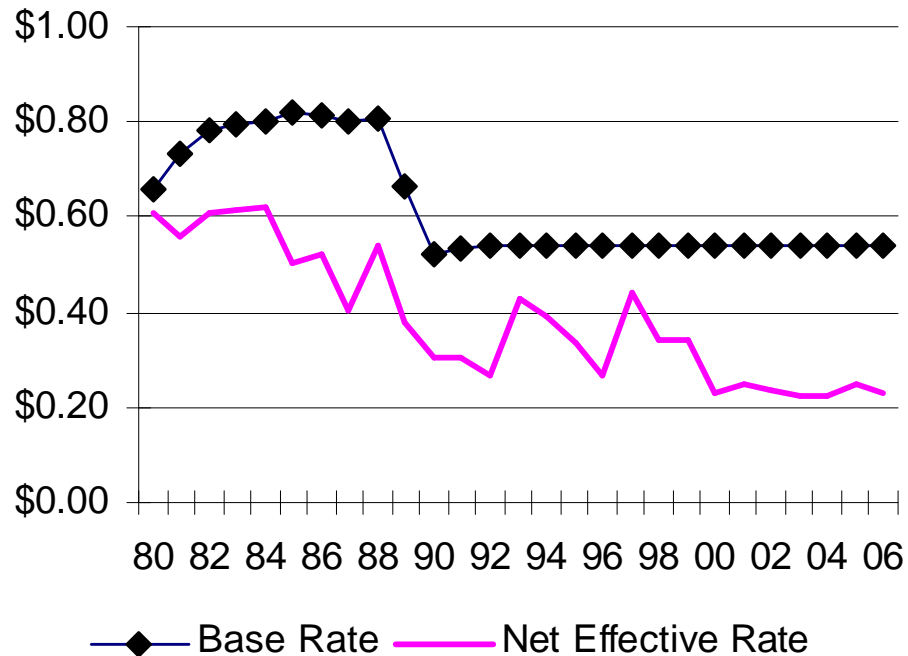
## Coal has been a steady severance tax revenue source.



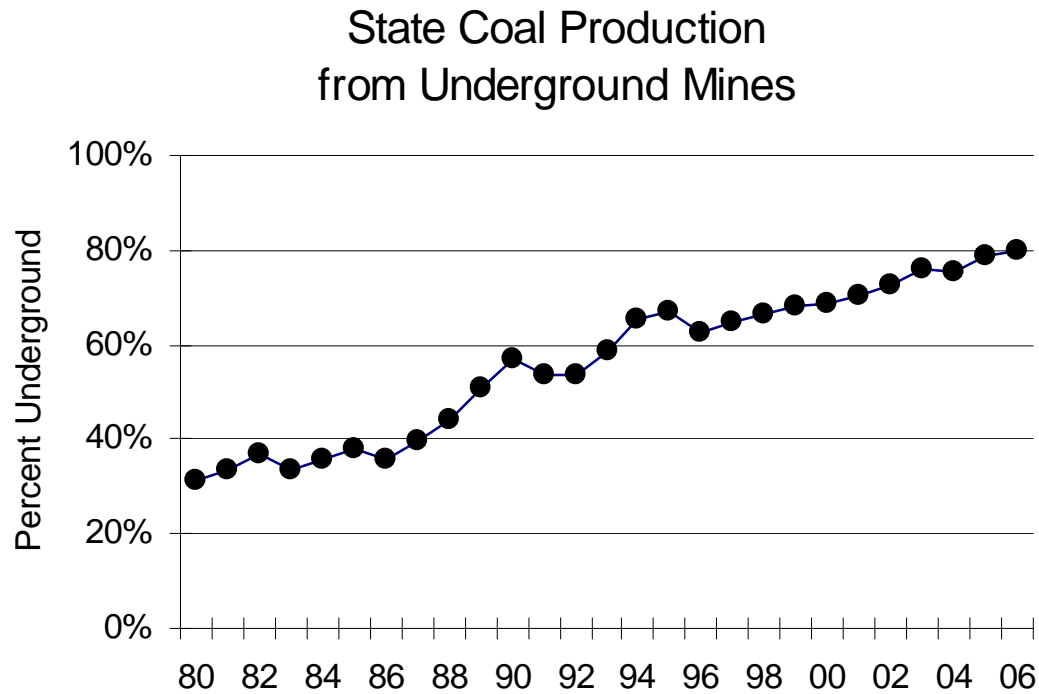
**The coal severance tax is based on tonnage, with 1.2 million tons exempt and a 50% rate cut for underground production.**

**The rate was cut by a third in 1988 and is now frozen by TABOR**

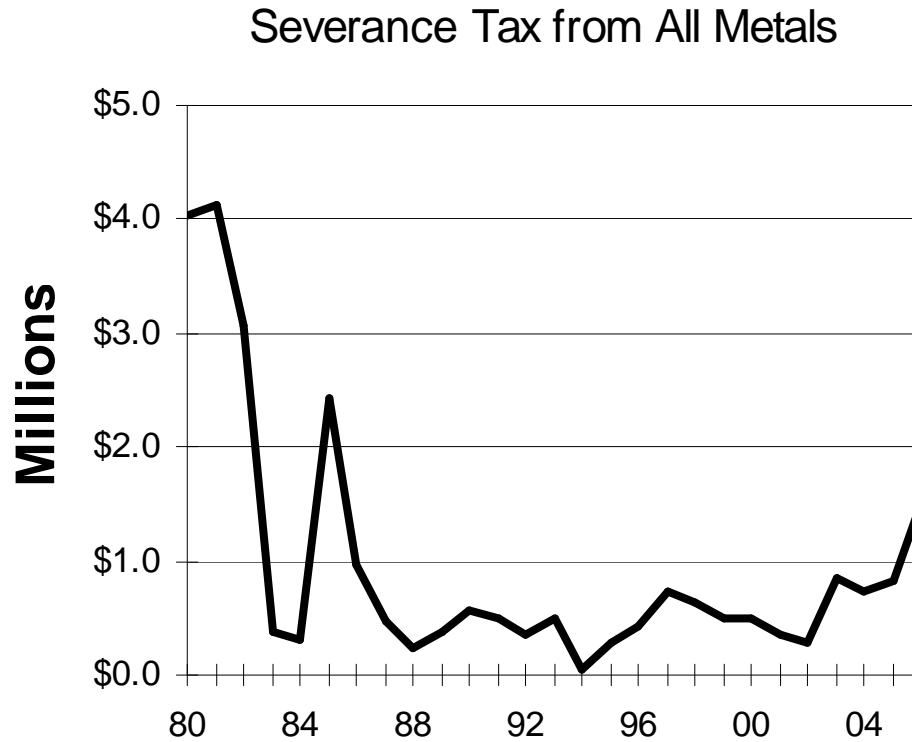
Coal Severance Tax Rate per Ton



**With underground “long wall” becoming the prevailing coal production method, the underground coal credit has become very large.**



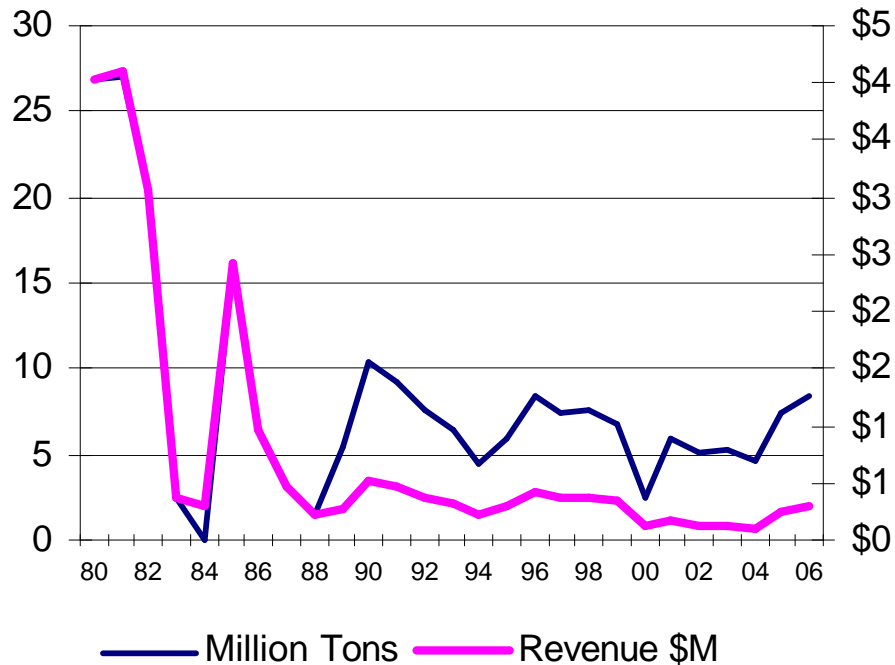
**Metals have been a small and declining source of revenue.**



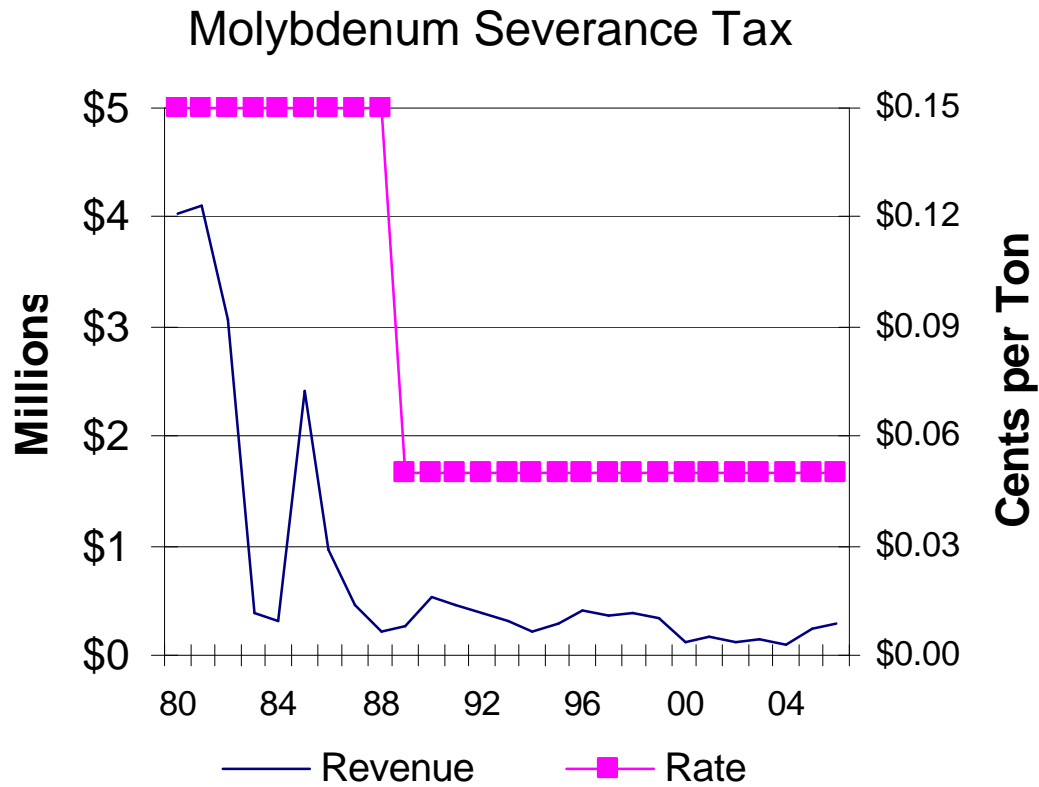


**Of the metals, Molybdenum has been the biggest source of severance tax revenue.**

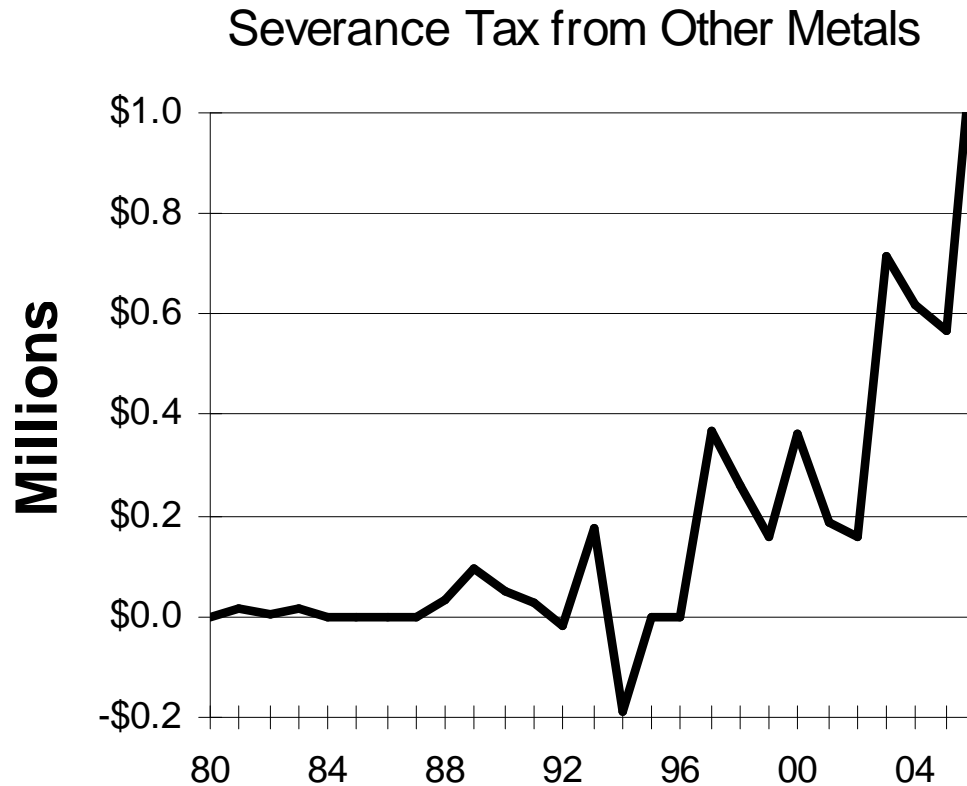
**Total Severance Tax Revenue  
from Molybdenum**



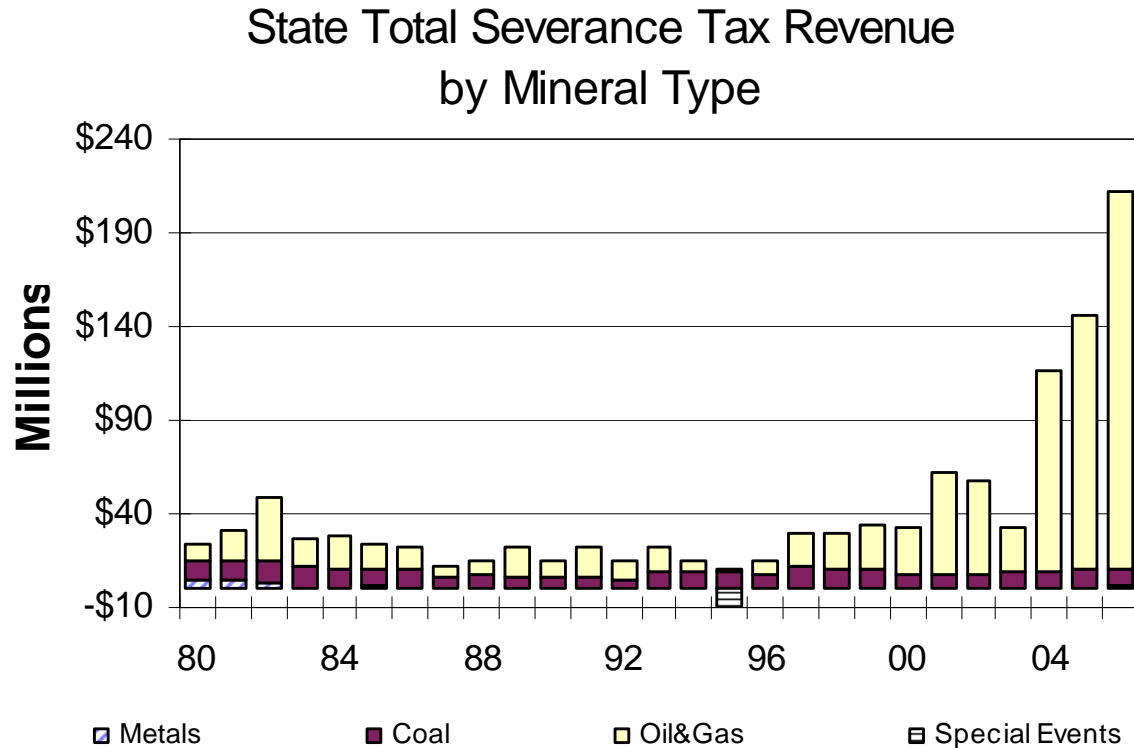
**Molybdenum severance tax is on a cent per ton basis with 2.5 million tons exempt. The rate was cut by 2/3 in 1987 and production in the state has been declining.**



**Other metals have not paid significant severance tax until recently.**



**From all of this we get total severance tax revenue to the state.**



**Projection models have been built by  
the Governors Office of State Planning and Budgeting,  
found at**

**[http://www.state.co.us/gov\\_dir/govnr\\_dir/ospb/econ.html](http://www.state.co.us/gov_dir/govnr_dir/ospb/econ.html)**

**the State Legislative Economists Office,  
found at**

**[http://www.state.co.us/gov\\_dir/leg\\_dir/lcsstaff/Scrollpages/EconForecastScroll06.htm](http://www.state.co.us/gov_dir/leg_dir/lcsstaff/Scrollpages/EconForecastScroll06.htm)**

**and the Department of Local Affairs,  
found at**

**<http://www.dola.colorado.gov/dlg/FA/eiaf/SEVregress.pdf>**