The Other Side of the Coin

An Analysis of the Socio-Economic Impacts of Oil and Gas Development on Small Communities

Small Communities Impacted More

Las Vegas Basin Near Las Vegas

- Much greater effect
- Smaller Population
- Smaller Economy
- Smaller area
- Same size development near ABC, much more diluted effect

O&G Economic Effects

- Strongest in the first 5 – 10 years, as exploration and development begin
- Local diverse economy transitions to narrow, resource-based economy
- Once the transition occurs, effects are permanent. Must plan for the long term.
- As development transitions to production, expect a severe economic contraction
  County must control this process to avoid unintended adverse effects
SMC is not a "poor" County

- Assessed value is $3.5 Billion
- Market value by county's records = $1.5 Billion
- My opinion – this is too low
- My estimate – closer to $3 Billion

"Back of the envelope estimate"

- Size of SMC = 3,031,040 acres
- Multiply by $1,000/acre
- Results in a value of $3.031 Billion

$3 Billion is a Lot of Money

SMC doesn't have wealth problem

It's a yield problem
Oil and Gas development is attractive because it looks like an easy way to increase yield.

Sadly, yield and risk are correlated:
• Higher Yield = Higher Risk
• Lower Yield = Lower Risk

→ Relationship not absolute, but
→ Holds true so often it’s considered an investment maxim

This doesn’t mean we never seek yield, it means that Risk Management is

KEY

[Key icon]
Areas of Potential Risk

- Community Cohesion
- Traditional Values
- Ranching
- The "working poor"
- Social conflict
- Crime: Inc. DWI & drugs
- Housing
- Property values
- Health of population
- Medical facilities
- Roads
- Emergency Response
- Air & water quality
- Natural environment
- Tourism
- Water, water, water

San Miguel County's "hidden risk"

Split Estate will cause an estimated 70% of property owners to lose substantial value in their real estate holdings if property values aren't protected....

- Many San Miguel County residents are "land rich, cash poor" and are under split-estate.
- Families have been land stewards for hundreds of years.
- What happens to their wealth if their land loses value?
- If 2/3 is Split Estate and it loses 50%, then this is an aggregate loss of $1 billion to landowners.
- And... declining property values erode the County's existing wealth – its tax base: "investment principal"
#1 Challenge for SMC

- Insure existing wealth not lost as higher yields of O&G are pursued....
- Otherwise, O&G development will cause a net loss to the county

All this for a net loss??
Wyoming Gas Field, 40-Acre Spacing

To the Oil and Gas industry, we are a

COST OF DOING BUSINESS

We're not their "partners" nor their "beneficiaries."
What Are These Costs?

- Direct Costs:
  - Royalties, fees, surface-owner payments, environmental tests, safety requirements
- Indirect Cost:
  - Inconvenience
  - Anything required by an ordinance that safeguards the health, safety and general well-being of the population and takes longer

Reducing these costs means taking shortcuts

- and -

Taking shortcuts increases **Risk**

*Where Mineral & Surface Rights not Severed...*

The lease between industry and land owners controls the process
If the Lease Controls All, then

The Oil and Gas Ordinance

will function like a

County-wide Lease Agreement

Regulation Won’t Stop O&G
Development

• Development decisions are market-driven
• Resources developed when the economic climate is favorable
• Vermejo Park Ranch O&G developed largely in adherence to Best Management Practices
  - And O&G developer presumably making money

“We know what we do at Vermejo Park is good, but none of it's magic. It just takes good planning and a little extra effort—and that's what a good producer does.”

— Carl Lakes, El Paso VP Project Leader
Safeguards Must Be Required by Law

Asked why his company pursued "green" drilling and fracturing fluid innovations...

"It's because of local regulations. That's typically what drives us to develop and bring to market these environmentally friendly products."

- David Dunlap, BJ Services' C.O.O.

Most Important Consideration

"What's the worst thing that can happen, and can you live with that?"

This question forms the essence of Risk Management

• Can the water supply be depleted?
• Can air quality deteriorate and make people sick?
• Can water become polluted?
• Can individual property owners lose value?
• Can the County and its municipalities suffer a net loss?
• Can the local culture and traditions become marginalized?
An Ordinance is a Risk Management Tool

Do State & Federal Regs Protect the County?

- No. There's no incentive.
- Virtually "free" money to the State
- Costs are borne by host communities
- These costs go unrecognized

O&G Industry Playing Long Game

- Uses current low price to negotiate with host communities/mineral owners for low costs
- But knows prices will increase due to globalization
- When prices go up, who benefits?
- County could bear costs for China, Japan consumers
Economic Activity is not Prosperity

Prosperity is sustainable

Economic activity comes and goes

Two Main Sources of County Income

from O&G development

1. Jobs and increased business activity
2. Tax revenues

Significant revenue potential

Types of Jobs Created

- Jobs directly with industry
- Jobs with industry service companies
- Jobs in local economy as first 2 spend money
Development Phase – Jobs with Industry

- Very few local jobs – low paying
- Skilled specialty – requires training/experience
- Migratory work force – importation of labor

Jobs with Service Companies

- Companies not local
- Established suppliers – economy of scale – difficult for local companies to compete
- Few jobs locally
- Will increase if industry becomes established in SMC and companies open branches

Local Job Growth

- Vast majority in retail and services
- Low paying, minimal benefits
- McDonald’s, Wal-mart, convenience stores
- Good for high-school students who want a part-time job
- Can increase “working poor” who need rent subsidies, food stamps, Medicaid
"However, expectations for employment often far exceed the actual requirements, and meeting particular requirements for skilled labor is often a great challenge for small communities."

- Shell Oil Website (emphasis added)

Ad Valorem Taxes

- Most significant source of direct revenue
- Charged on the about-to-be-extracted gas

Subject to Ad Valorem taxes

Taxes are charged on the content of the vertical part of the well
Taxes Not a Net Gain

- Offset by decline in ad valorem taxes on homes and ranches near gas production
- Steep decline in value on Split-Estate property
- Also offset by direct costs to County
- Must manage these risks

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Wise County, TX: Appraised value of Tim and Christine Ruggiero's property dropped from $257,330 to $75,240 one year after drilling started on their land.

"The Wise County Central Appraisal District Appraisal Review Board... agreed that the drilling company's use of the Ruggieros' land warranted the extraordinary reduction. 'It's the biggest cut I've ever seen,' said Bob Boughton, board chairman..."

- excerpted from the Denton Record-Chronicle, 09/18/2010

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Direct and Indirect Costs to San Miguel County

Must be managed through an ordinance and appropriate public policy
Costs to County

- Typically unacknowledged
- Direct costs – cash expenditures
- Indirect costs – community impacts
- Again, small communities affected more

Failure to recoup costs and mitigate community impact results in a direct subsidy to the Oil and Gas Industry.

Wyoming Study

- Three communities in Sublette County
- Two broke even
- One suffered net loss
- These are cash-on-cash effects, money in vs money out

NEFCO Pennsylvania State University Paper #63, January '09
Direct Costs to County

A function of increased population and industrial activity

Roads and Traffic
Traffic Increase 2000 → 2006

- Road bonds are essential
- Dust control must be mandated

Police and Crime
Increase 2000 → 2005 in Sublette County

+ More children witnessing violent crimes
+ Increases in DWI offenses
EMS & Fire Responders

- Well fires are HazMat incidents
- Well fires are common
- SMC rural fire fighters & EMS are Volunteers
- Could not possibly qualify to fight well fires
- Will need trained, paid personnel
- Well fire on Red Flag Day?
- Nurse in CO experienced multiple organ failure after treating worker w/frack fluids spilled on clothes

Who pays for ambulance runs?

- Sublette County EMS increased 168%, 2000 –2006
- EMS to oilfields was 25% of all requests for medical aid, 2006
- "The development phase of gas recovery has a high risk of injury, especially when placing rigs (Ring 2007)."
  
  **Sublette County Socioeconomic Impact Report, Ecosystem Research Group, 2008**

Increased Population Means:

- Hospitals
- Schools
- County/municipal facilities
- Retail/service centers
- Must expand
- After industry leaves, massive excess capacity
- Excess capacity is a powerful drag on local economy
Every dollar spent by the county or its municipalities for industry-related costs is a direct transfer of wealth to the Oil and Gas Industry.

Indirect Costs

"Non-cash" costs

Crime

Its effects beyond more police; what's the toll on families and community security?

DWIs increase
What Does it Cost to Clean up an Aquifer?

- No one knows; it hasn't been done successfully
- WY 2006 - aquifer contaminated from on-shore blow-out
- Plume threatens domestic water wells
- Still trying to stop it

10,000 gas wells and only ONE pollutes

What happens to the aquifer?

Health Effects

- Ozone in WY exceeded highest level in US several days last year — Mead Grubet, Associated Press, 3/5/11
- Air pollution, indigent claims, life quality

"I'm not an activist, an alarmist, a Democrat, environmentalist or anything like that. I'm just a person who isn't able to manage the health of my family because of all this drilling."

— KELLY GANT, who says her children have had severe asthma attacks and headaches since a gas well was set up near her house in Bartowville, Tex.

Quoted in the New York Times, 3/2/11
Housing/Rent Costs Increase

- High rent drives out local residents; rents +90% in Sublette County since 2000
- Full motels drive out everyone else
- Town in ND – all hotel/motel rooms booked by industry for the next two years
- Short term gain, long term loss
- Water impact on Las Vegas?

Property Values – Split Estate

- S/E Property values collapse
- Can't get insurance
- Can't get mortgage
- Why? These are risk management industries
- Potentially disastrous encumbrance
- How cheap before you take the risk?
- Can't sell, walk away – effect on local lenders

Environmental effects are economic effects
What is land worth if you can’t drink the water, use it to irrigate your fields, or water your livestock?

What’s the cost to the County if “indigent claims” soar due to increasing prevalence of asthma?

What’s the economic impact if water supplies decline precipitously from their current levels?

Community Cohesion

- SMC’s unique culture and traditions
- Influx of O&G industry workers is disruptive even in communities with shared values
- Will likely be extreme in SMC
- Conflict between land-owners who lease their minerals/profit and split-estate land-owners who lose

Impact on Tourism

- Full hotels/motels drive out tourists
- Tourism is net gain to county – like importing money
- Industrialization of County’s resources will discourage visitors, hunters, campers
- County could become less desirable as location for second homes – Pendants taxes?
Dependence on One Industry Means Loss of Economic Stability

- Oil & Gas industry becomes the "only game in town" - crowds out other activity
- Stability gives way to "boom-bust" cycle
- Communities become economic hostages
- Loss of economic self-determination

Arguably the Most Severe Effect

- Called the "Resource Curse"
- Many studies have shown that counties with a broader-based economy out-perform those dependent on a single resource
- Boom-bust effect impacts small communities much more severely

Boom-Bust Cycle is an Economic Roller-Coaster
"Counties that have focused on broader development choices are better off, with higher rates of growth, more diverse economies, better-educated populations, a smaller gap between high and low income households, and more retirement and investment income."

— Report by Janette M. Borth, PhD, IM Borth & Associates
"Unanswered Questions About the Economics of Gas Drilling in the Marcellus Shale"

**Boom-Bust Cycle**

- Caused by the commodities cycle, which determines industry’s activity
- Detrimental to long-term prosperity
- Creates excess capacity which must be maintained even if no longer needed
- "Bust" period resembles a depression, rather than a recession

Rig Count & Natural Gas Prices

Vigorous surges and sharp declines highlight boom-bust cycle
It Bears Repeating....

Absorbing these costs and negative wealth effects is a transfer of wealth from the County to the Industry. San Miguel County's taxpayers will subsidize the Oil and Gas Industry.

Ordinance is the Means to Manage the Risks & Mitigate Costs

- The Ordinance and its vigorous enforcement are the Risk Management tools available to the county and its municipalities
- Protecting "health, well-being, and general welfare" means promoting our enlightened self-interest