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### SLIDES: Adaptive Management and Best Management Practices on the Southern Ute Indian Reservation

Bob Zahradnik

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Adaptive Management and Best Management  
Practices on the Southern Ute Indian Reservation

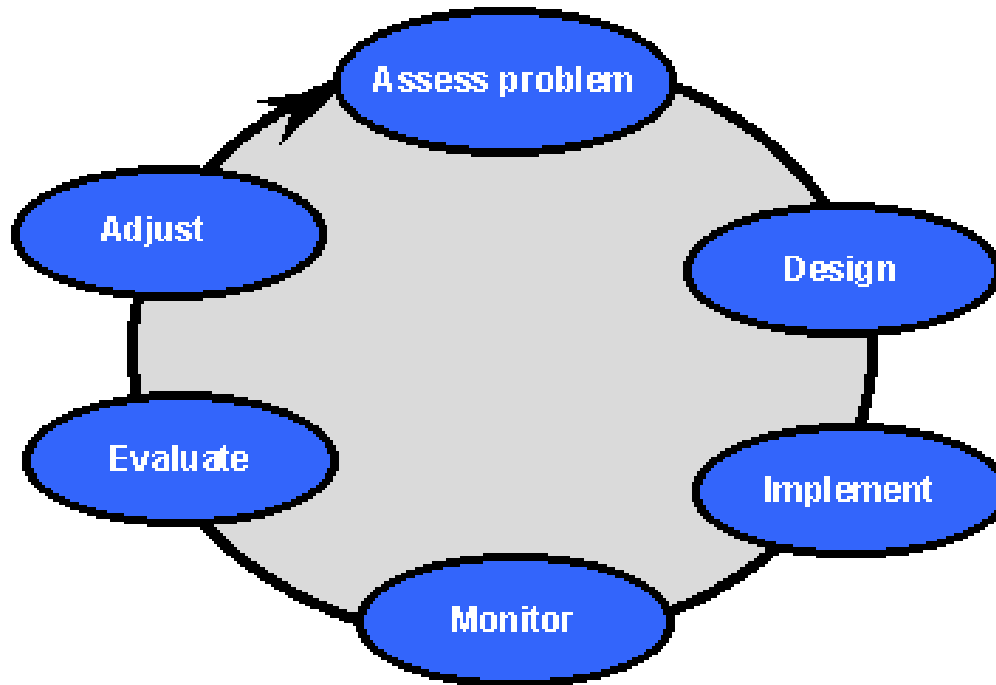
May 12, 2004



## BC Forest Practices Branch – Adaptive Management

- Systematic process for continually improving management policies and practices by learning from the outcomes of operational programs.
- Its most effective form- “active” adaptive management-employs management programs that are designed to experimentally compare selected policies or practices, by evaluating alternative hypotheses about the system being managed.

# BC Forest Service – Adaptive Management



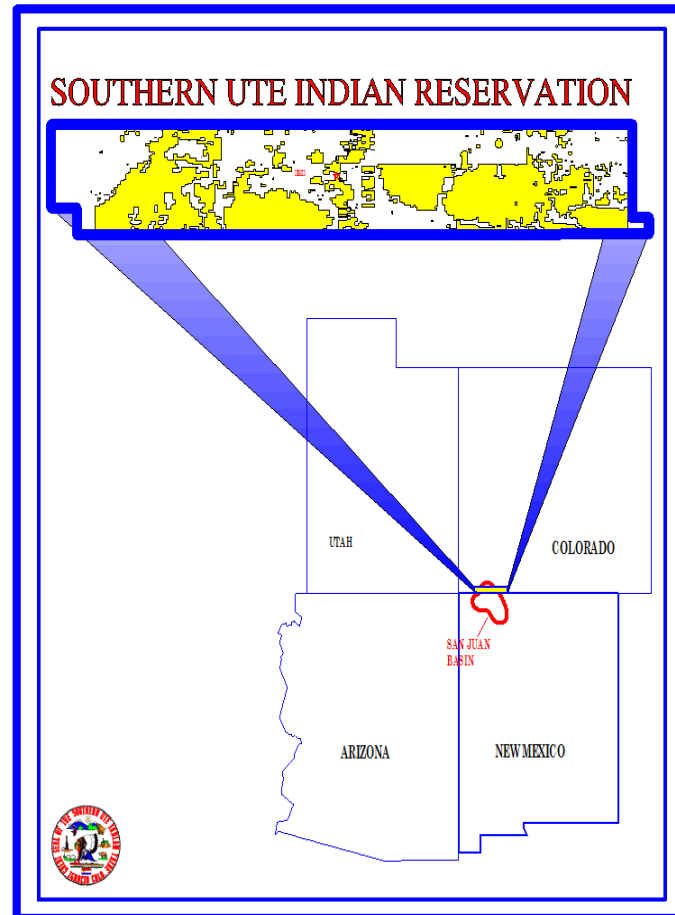
# Insanity

Doing the same thing again and again and expecting a different outcome.

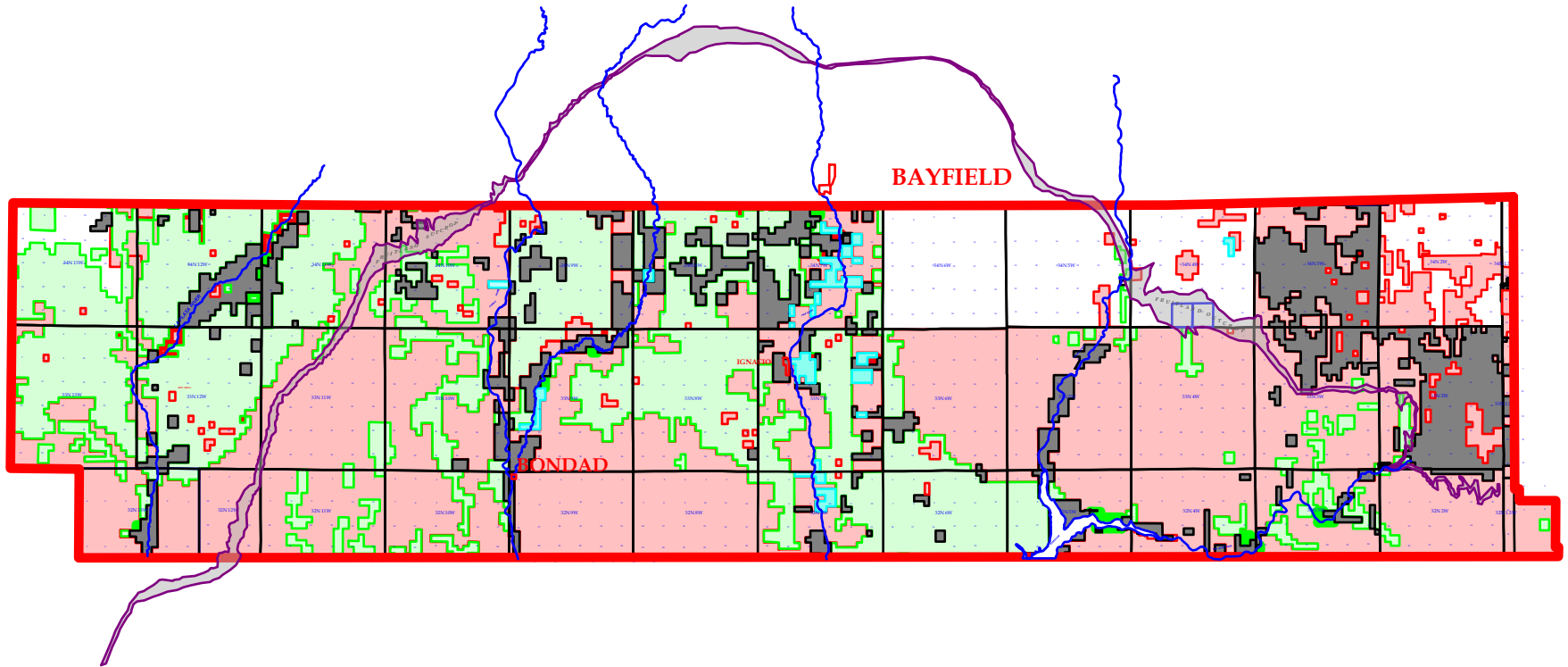
# Southern Ute Indian Tribe History

- 2 Ute Bands - Mouache and Capote
- Ranged widely across Colorado, Utah and New Mexico
- 1860 Reservation – 12 million acres
- Current reservation:
  - 700,000 acres
  - Tribal surface 310,000 acres
  - Tribal minerals 330,000 acrea

# Southern Ute Indian Reservation Location

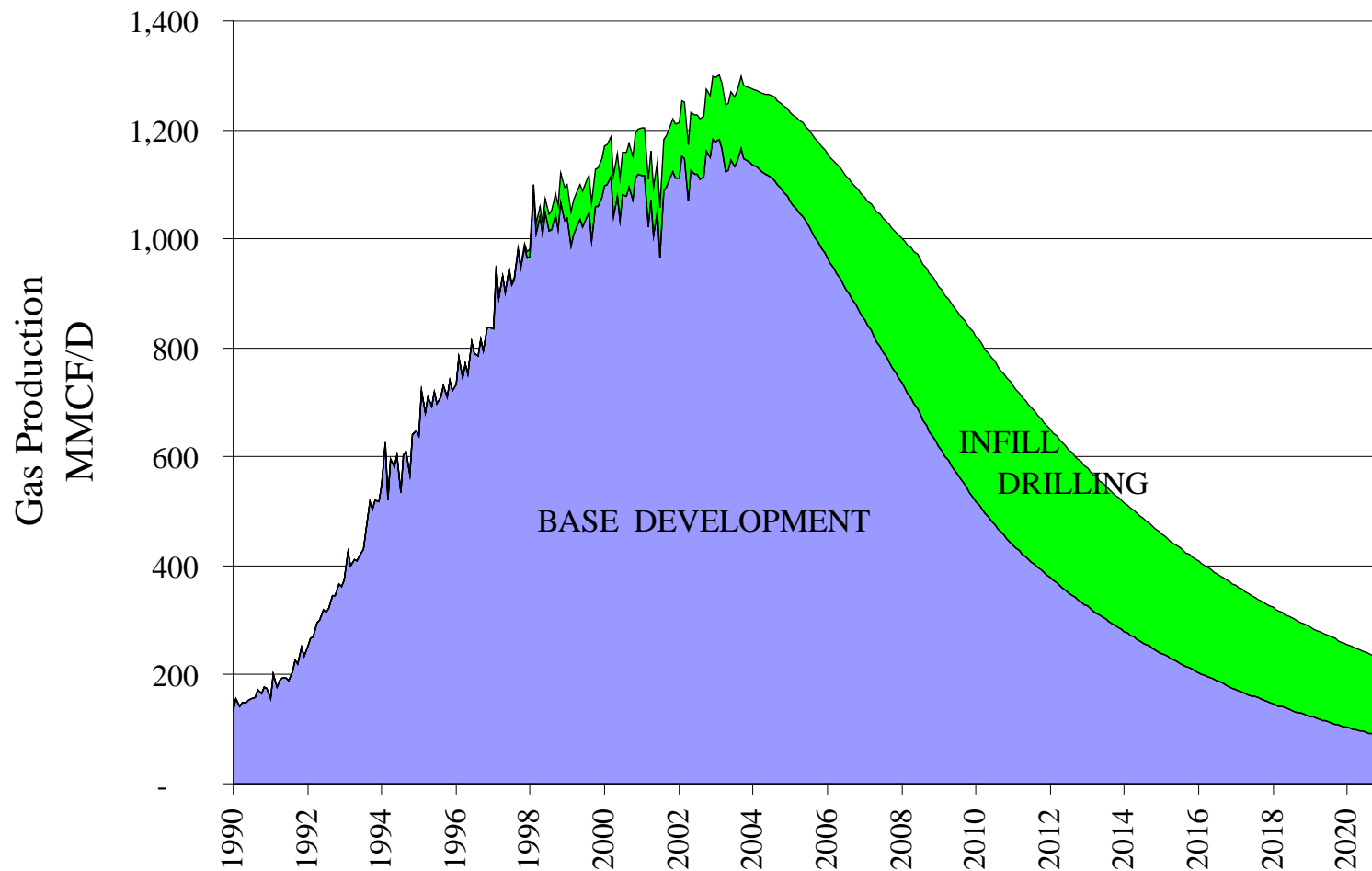


# Southern Ute Indian Reservation Mineral Ownership





# Ignacio Blanco Production



## Southern Ute Conundrum

- Tribe's financial needs do not end.
- Energy reserves and revenues are finite.

## Short Term Solution

- Maximize the Tribe's economic benefit from its nonrenewable resources
- Obtain a greater proportion of the value of the gas at the burner tip.

## Red Willow Production Company

### Hypothesis:

If the Tribe initiates a program of buying back existing leases on the reservation, it can operate those leases at a profit and retain that added part of the value of the gas for the benefit of the membership.

## Red Willow Production Company

### Design Phase:

- In 1991, we developed a business plan to implement an on reservation lease acquisition program.

### Implementation:

- From February 1992, to date, we have been acquiring leases on the reservation.

## Red Willow – Early History ('92-'94)

- Started by Tribal Council in 1992
- Started as a small, very conservative company
  - On Reservation
  - Bought existing wells only
  - Conventional gas only, no coalbed methane
  - Low risk => low rate of return on investment
  - Little activity other than operating, accounting
  - Few employees

## Red Willow – Middle History ('95-'01)

- Grew deliberately with success and opportunity
  - Coalbed methane (CBM) ownership, operations
    - 1995 McKenzie Methane Bankruptcy
    - 1999 CBM ownership lawsuit settlement
    - 1999 Cedar Ridge purchase
    - CBM more important than conventional
    - Operating greater volumes
    - Began drilling new (infill) wells
  - 2000: Stepped off the Reservation
  - Using 3D seismic
  - Had to add staff in all disciplines

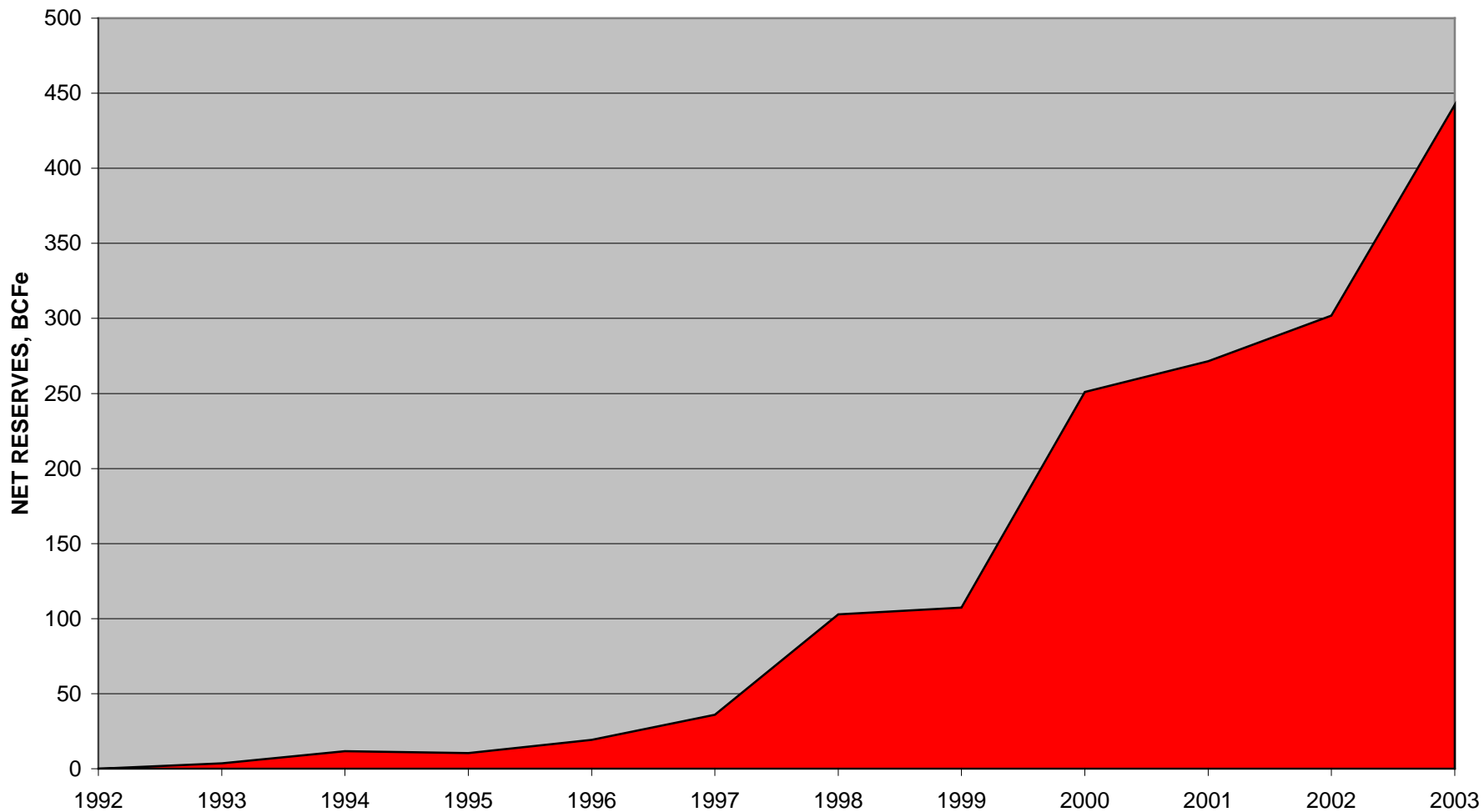
## Red Willow – Recent History ('02-'03)

- A “big” small company
  - Own interest in nearly 1000 wells, operate 450
  - Active Off-Reservation
    - operating in New Mexico, DJ Basin
    - participating in Gulf of Mexico, Canada
  - Operating 175 million cubic feet per day (mmcf/d)
  - Marketing 200 mmcf/d
  - \$100+ million annual EBITDA
  - Must replace 40-50 billion cubic feet (bcf) per year
  - Continuously looking for new opportunities
  - 65 employees in 8 functions



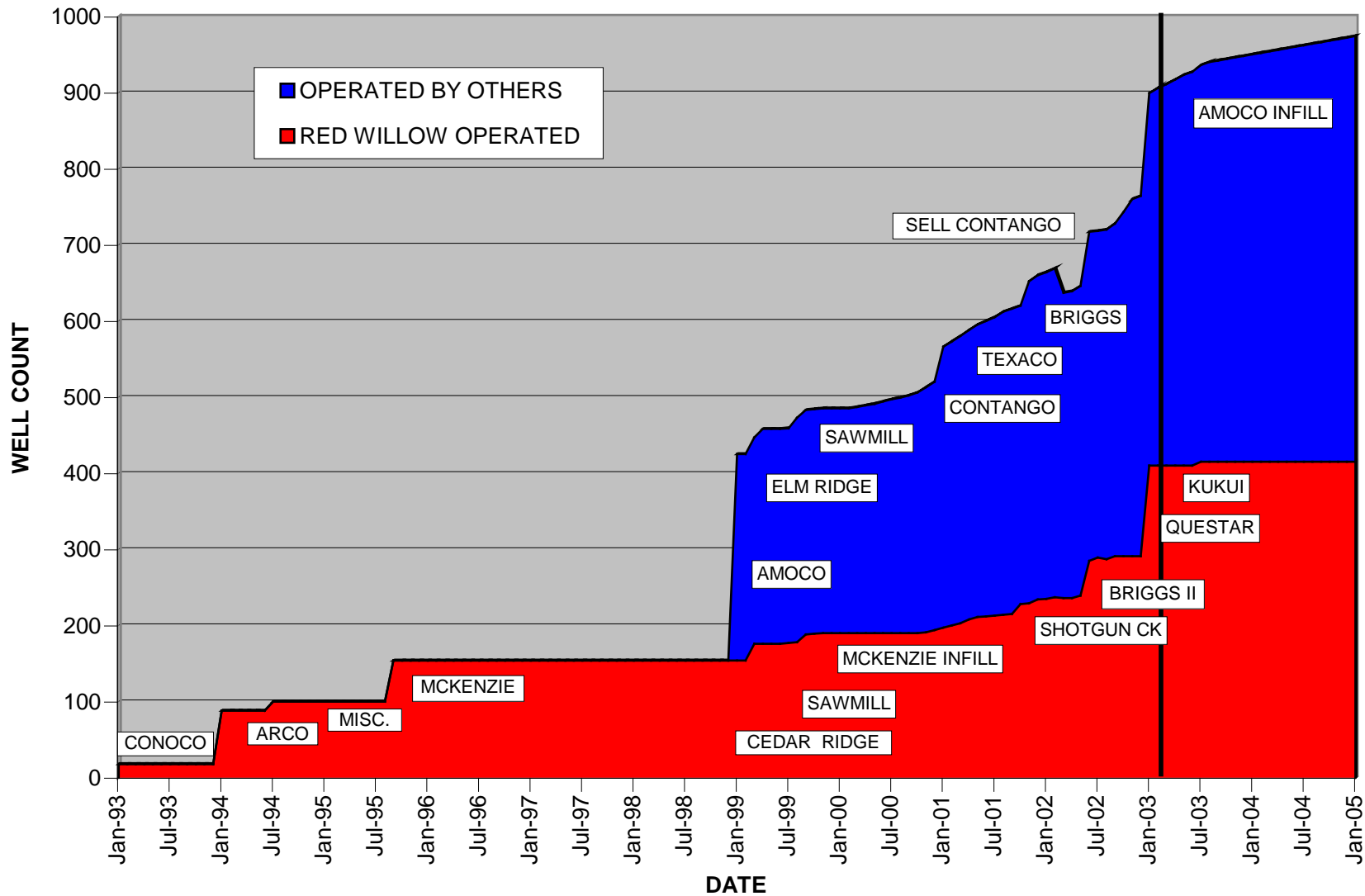
# Red Willow Production Company

NET RESERVE GROWTH - Jan 92 thru Dec 02

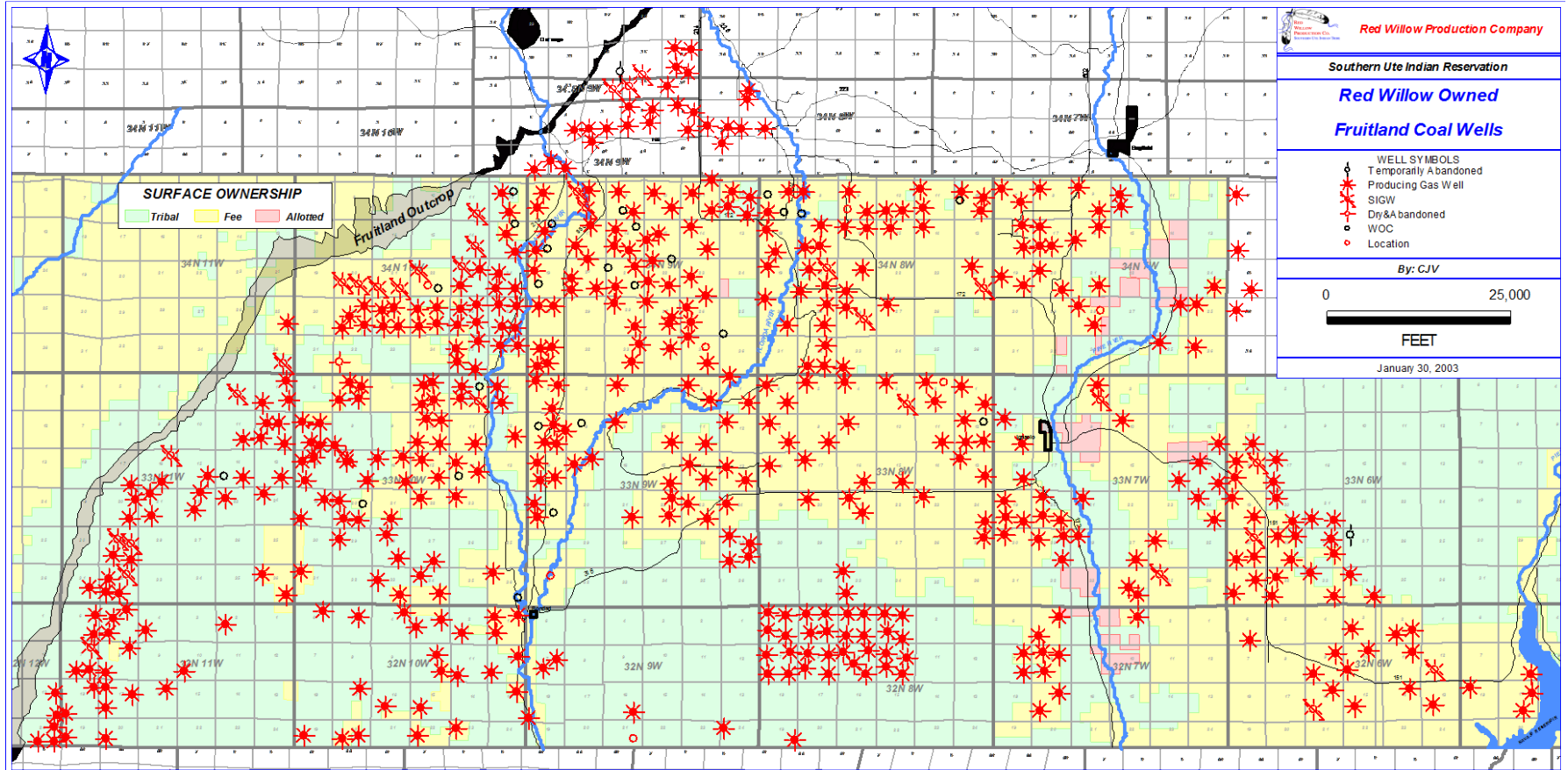


# Southern Ute Indian Tribe

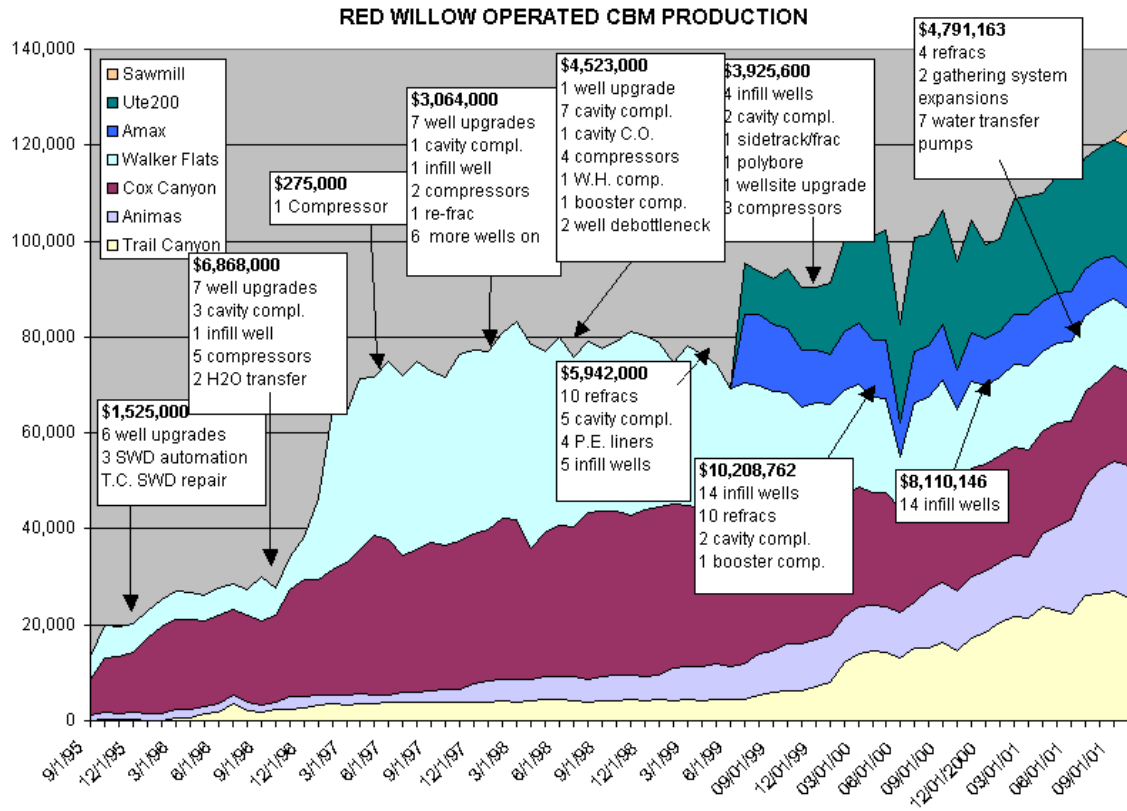
## RED WILLOW GROSS WELL COUNT



## Red Willow Operated and OBO CBM wells



## Red Willow Capital Program



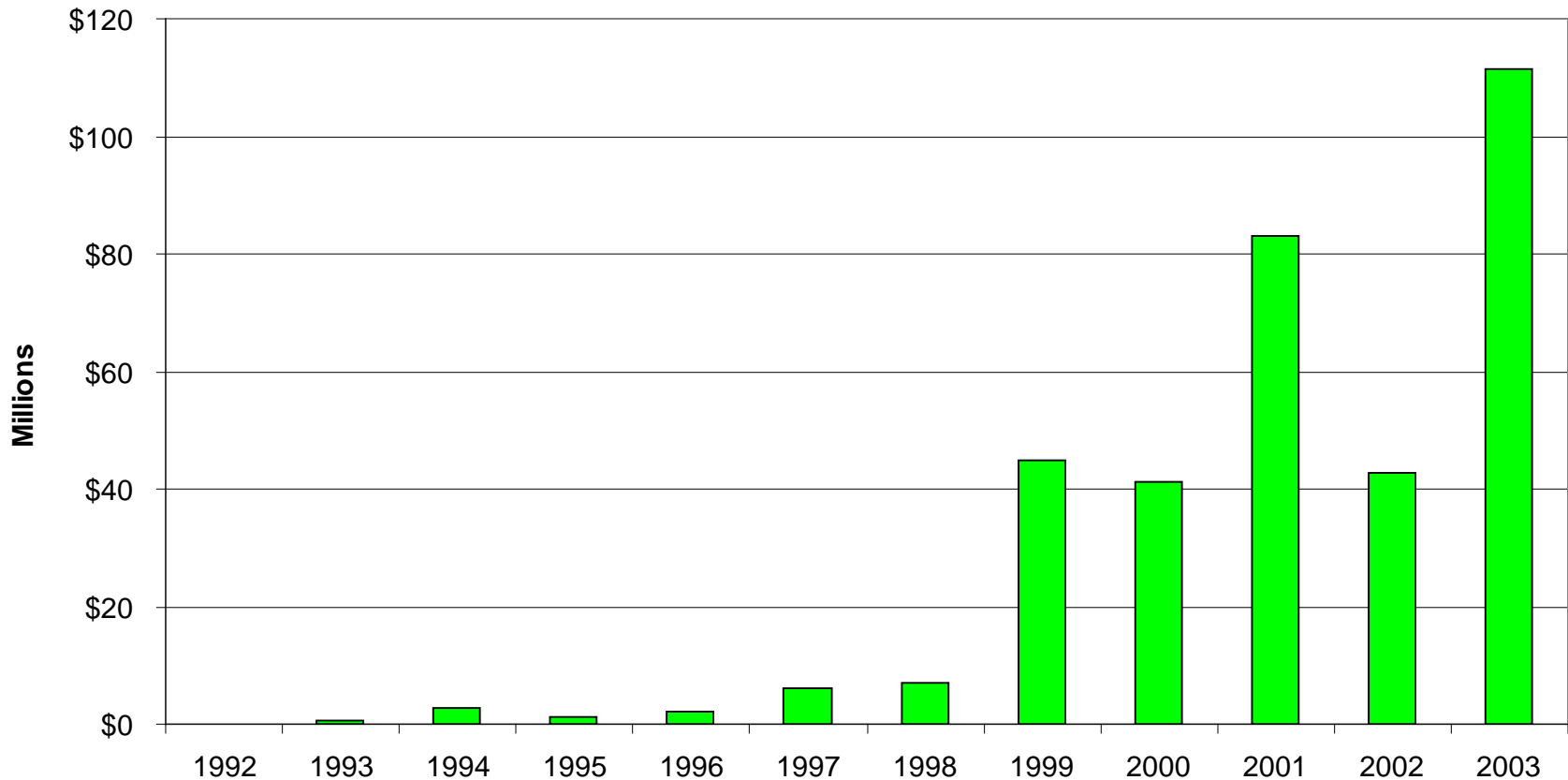
# Red Willow Production Company

Evaluation – never ends

Adjust – see Evaluation

Assess problem – Bring problem definition up to date and start the whole cycle again.

# Red Willow Production Company - EBITDA



## Problem:

- In the early 1991's the Gathering system capacity on the reservation was completely inadequate for the anticipated coalbed methane production.
- El Paso and NWPL controlled gathering on the reservation.
- El Paso and NWPL were slow, unresponsive and risk averse.
- Wells required to be drilled by year end 1992 to qualify for Section 29 tax credit.

## Hypothesis:

The Tribe will benefit from more competition in gas gathering on the reservation.



# Southern Ute Indian Tribe

## Proposed Solution:

- Reach agreement with WestGas to accelerate infrastructure development.

## Implementation:

- Entered into such agreement in 1990

## Monitor:

- Agreement worked well for several years.

## Evaluate:

- We were forced to reevaluate our position when WestGas' parent company decided to sell the company.

## New Problem:

- Our aggressive competitor may be swallowed up by the very companies it was suppose to compete against.

At a minimum control, will pass to another distant corporation.

## Proposed Solution:

- Buy it.

## New Problem:

- We don't have the money.

## Proposed Solution:

- Find a partner with deep pockets.

## Implementation:

- Negotiated partnership agreement.

Successfully negotiated purchase and sale agreement.

## Monitor:

- Seats on the Board.

Monitor responsiveness, speed of development, key economic indicators.

## Evaluate:

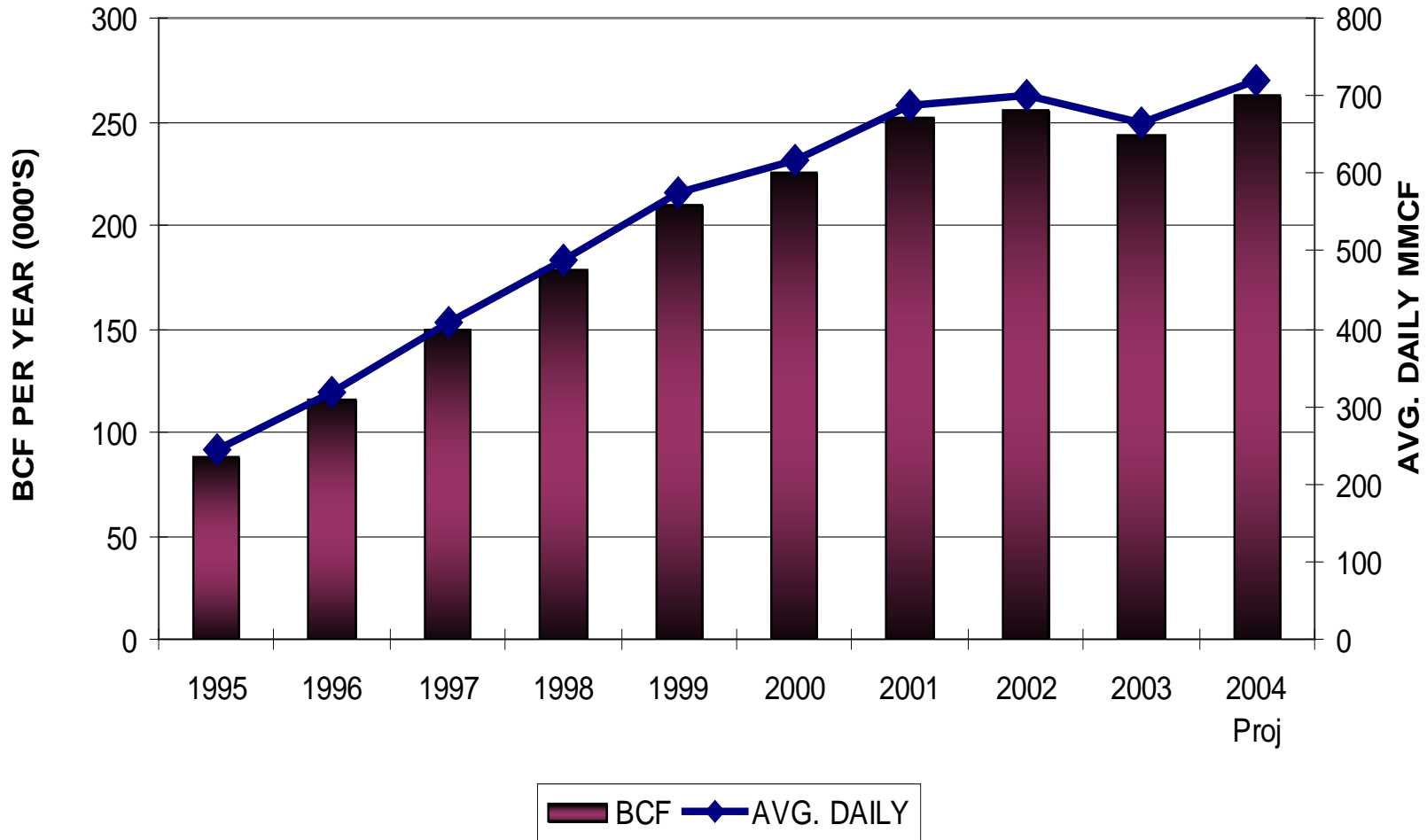
## Adjust:

- Increase ownership at every opportunity.

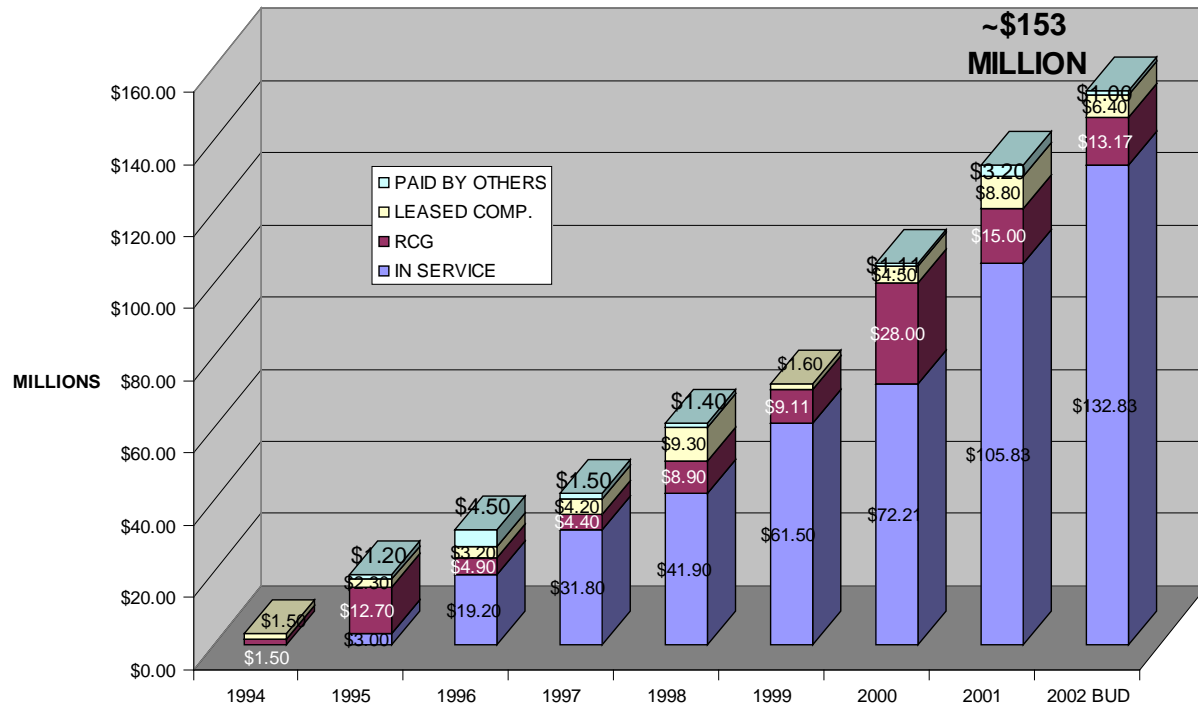
## New Situation:

- Tribe owns 51% of the gathering system which gathers and treats 85% of the Tribe's royalty gas, and 80% of Red Willow's operated gas.

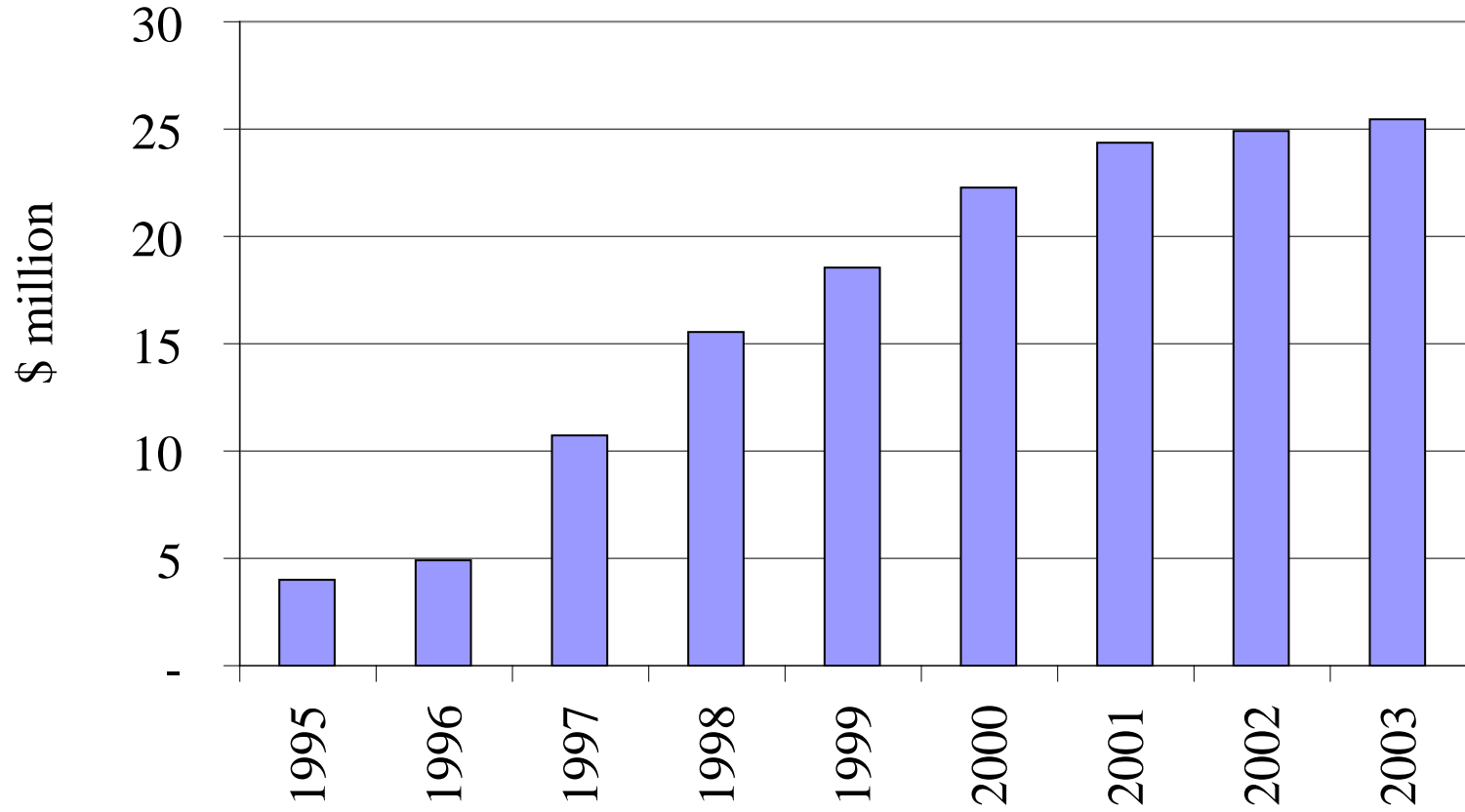
# Red Cedar Gathering Company Annual Throughput



## Red Cedar Capital Expenditures 1994 – 2002 (est.)



## Red Cedar Gathering Company EBITDA (Net 51%)



## Long Term Problem:

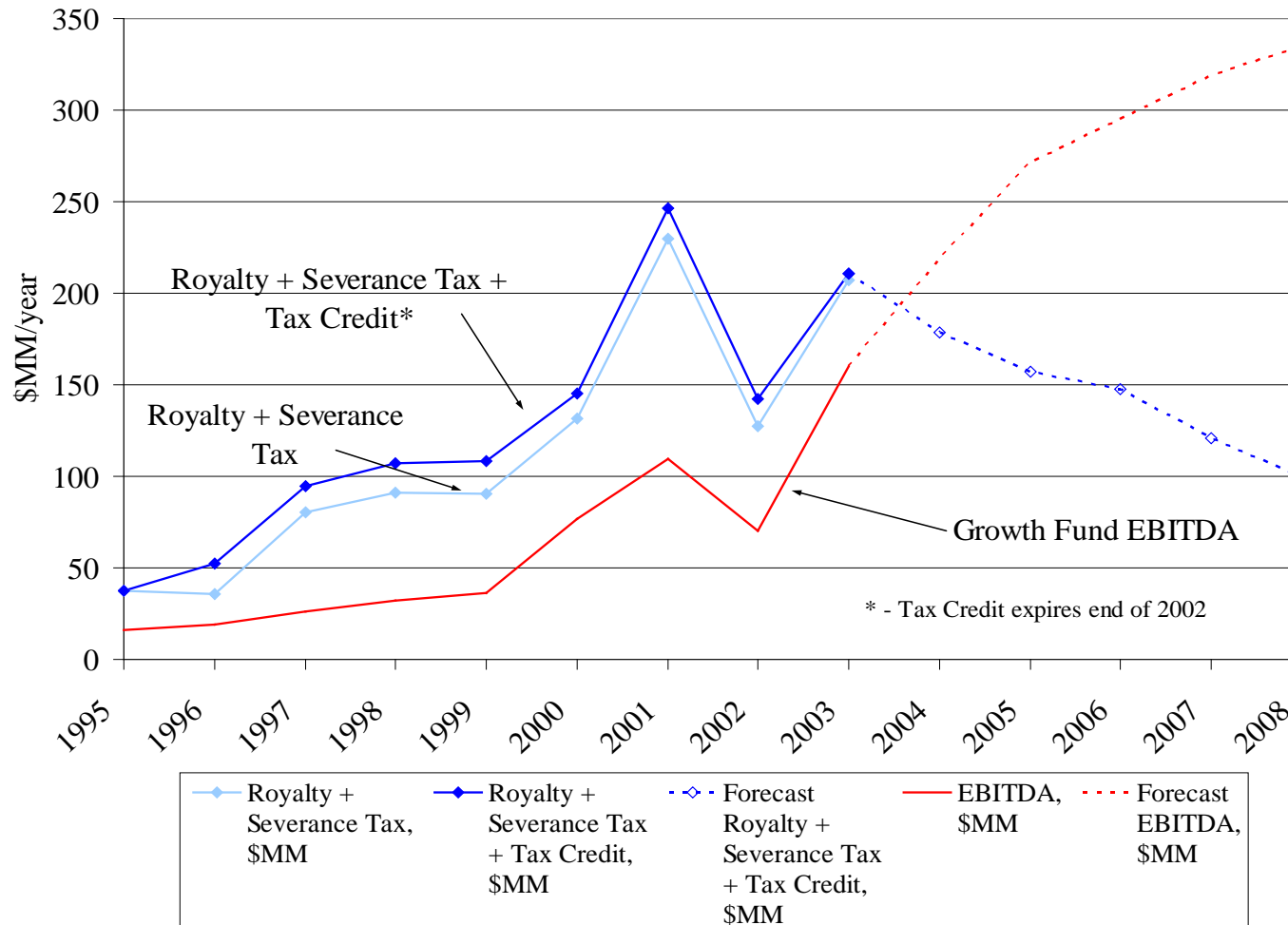
- No matter how large a percentage of the gas's value the Tribe realizes, the gas will eventually run out.

## Proposed Solution:

- Invest off the reservation in diverse industries.

# Growth Fund EBITDA vs. Royalty

**Growth Fund EBITDA vs. Royalty + Severance Tax + Tax Credit**





# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Straw Mulching & Crimping & Erosion Control**



**Coyote Gas Plant Storm Water Pond**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Use of Cover Crop in Reclamation Practices.**



**Good Housekeeping Practices**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Good Housekeeping Practices**



**Good Housekeeping Practices**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Drum Caddy Secondary Containment**



**Disposal Bins for Oily Rags & Filters**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices



**Metal Ring Secondary Containment**



**Signage to Reduce Speed & Dust on Pit Haul Roads**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Rock Retaining Wall for Slope Stabilization**



**Erosion Control Geotextile for Slope Stabilization**

# Southern Ute Indian Tribe

## Southern Ute Growth Fund Best Management Practices (BMPs)



**Rock Armored Road Side Ditch**



**Rock Armored Sediment Control Ditch**