

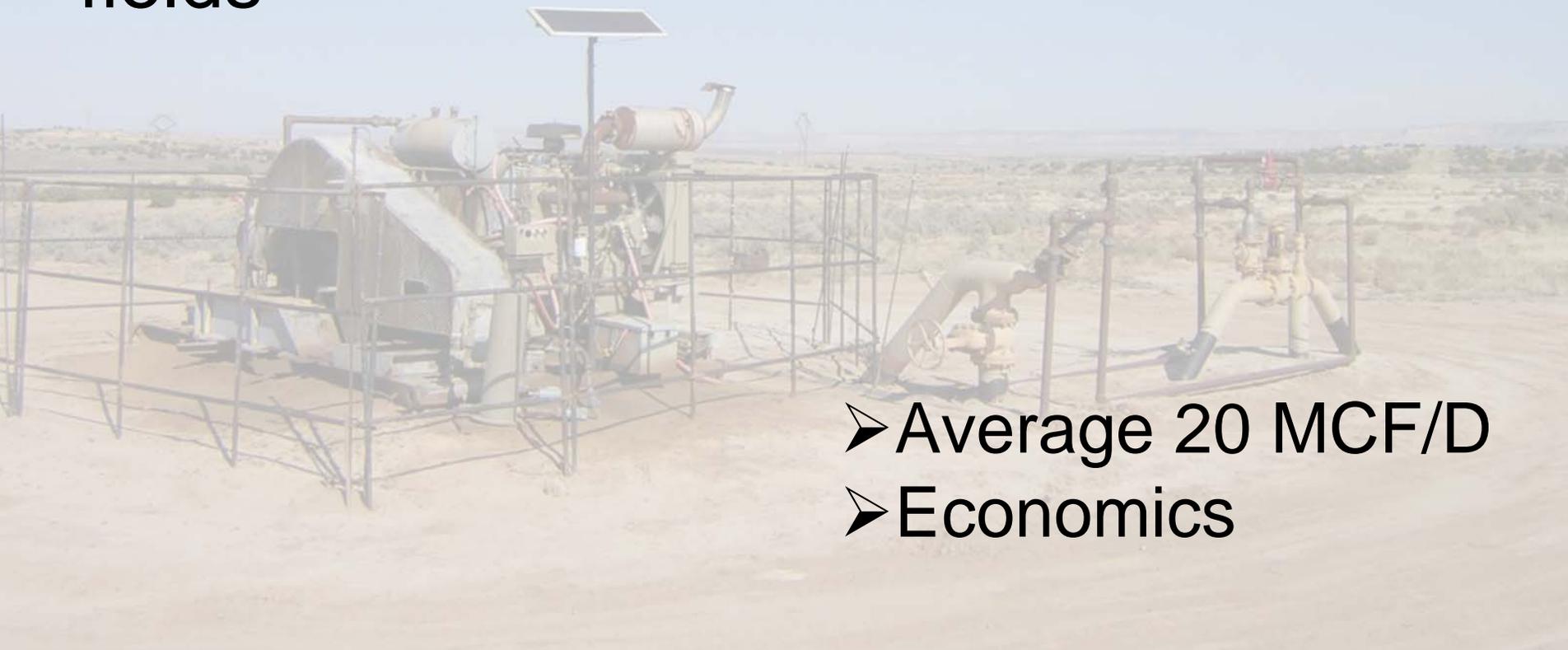
# Central Delivery Point (CDP) Measurement



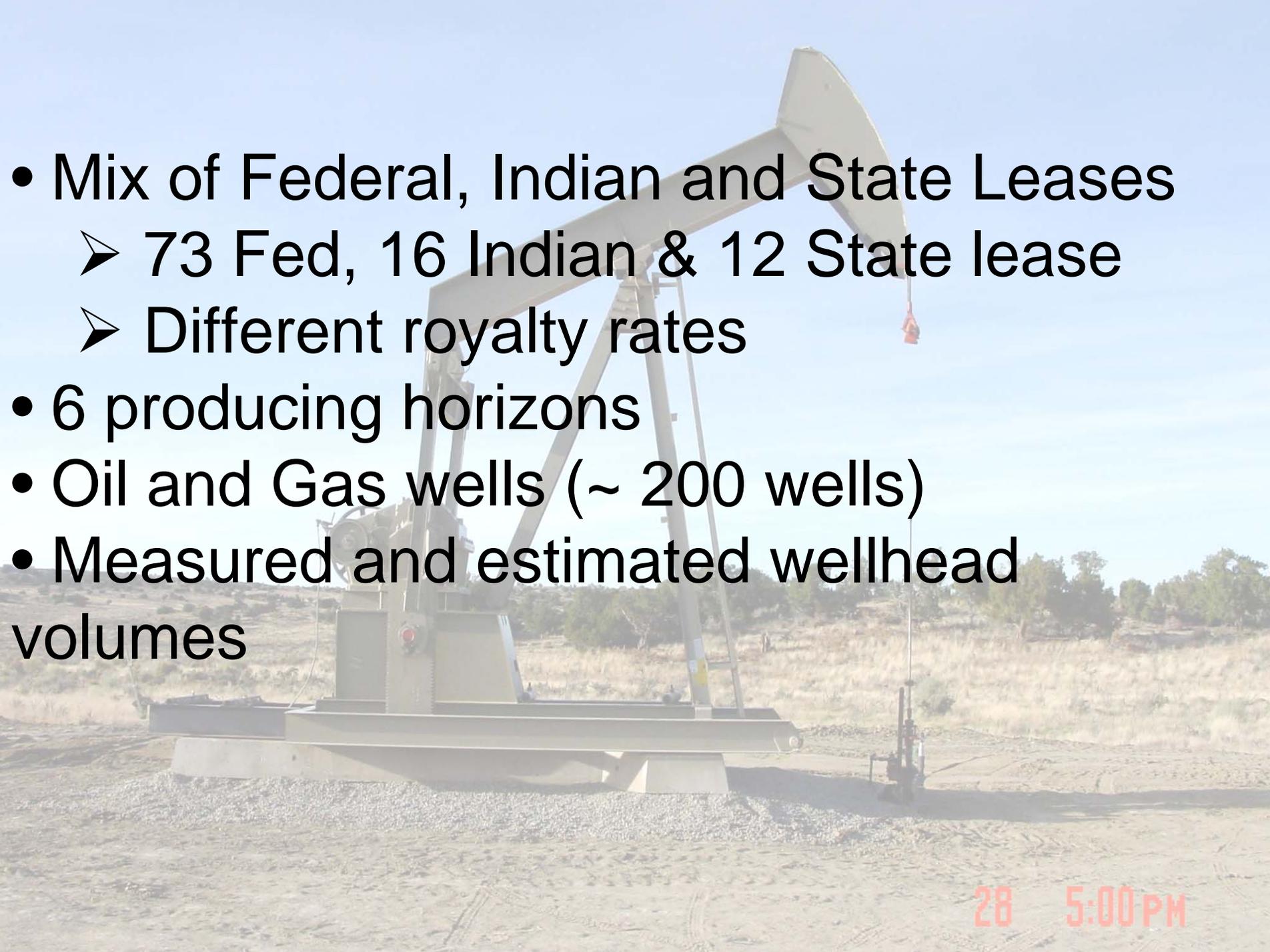
# Central Delivery Point (CDP) Measurement

## Background

- BLM approved
- More common with aging oil and gas fields



- Average 20 MCF/D
- Economics

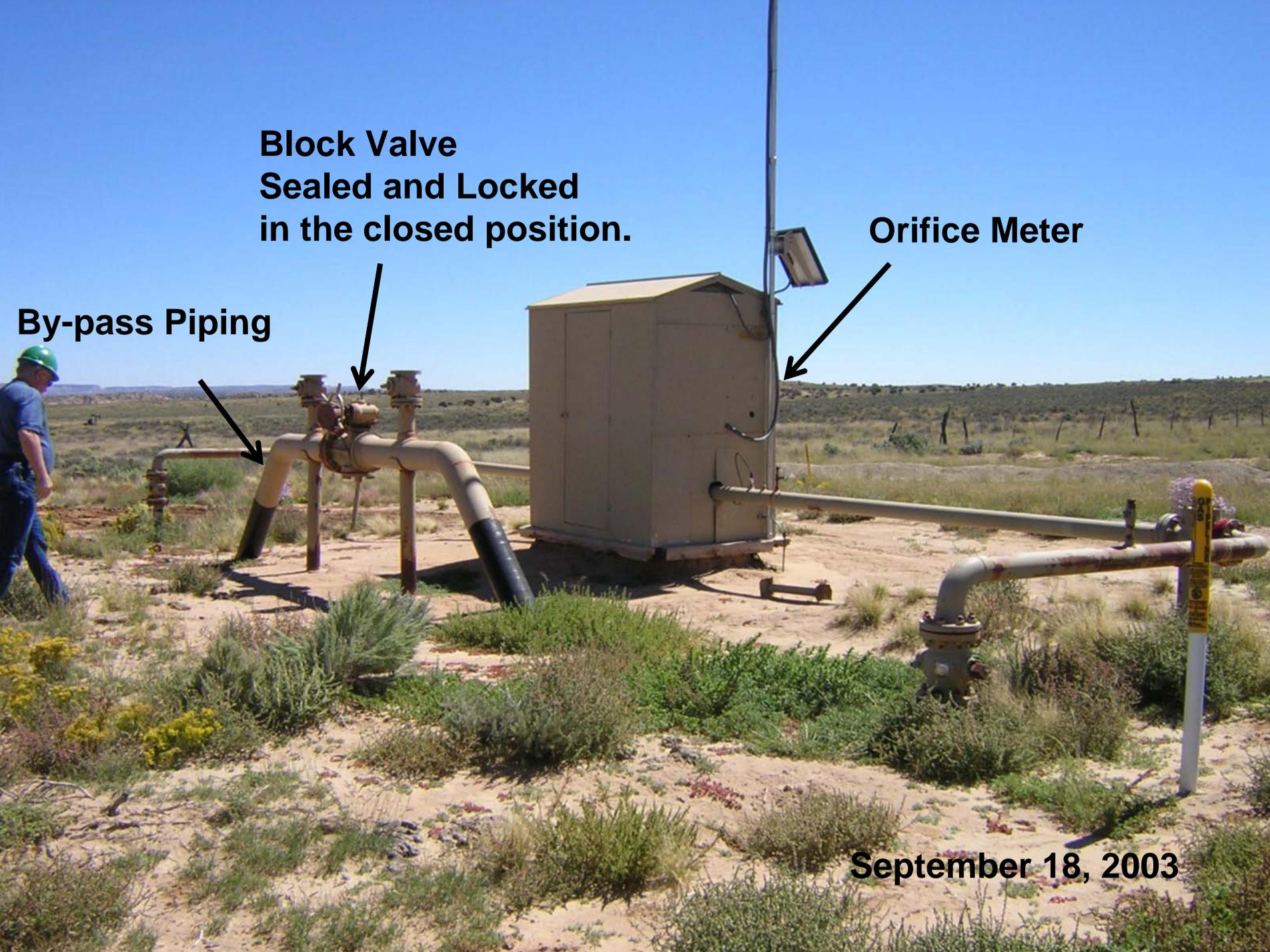
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- Mix of Federal, Indian and State Leases
    - 73 Fed, 16 Indian & 12 State lease
    - Different royalty rates
  - 6 producing horizons
  - Oil and Gas wells (~ 200 wells)
  - Measured and estimated wellhead volumes

# Allegations:

- Mishandling of production and allocation of volumes
  - Large difference between wellhead and allocation volumes
    - ❖ 12 to 41% differences
    - ❖ Erratic flowing conditions
      - Integration issues
  - Royalties should be paid on wellhead

# Allegations Continued:

- Actual measurement versus estimation
- How were the liquids accounted for
- Accounting for gas used for the benefit of the lease
- Accounting for production from a lease not part of the approval
- Bypass piping at CDP



**Block Valve  
Sealed and Locked  
in the closed position.**

**Orifice Meter**

**By-pass Piping**

**September 18, 2003**



September 8, 2003

# Joint BLM and MMS Investigation

## Findings:

- Allocation of volumes was sound
  - Convert to BTU for allocation
  - Then convert back to MCF for reporting
- Well test not always done on time
- Minor problems w/Beneficial volumes
  - Compressor days on

# Findings Continued:

- Well days produced not correct
- Liquids properly accounted for
- Production from a lease not part of the system correctly determined
- Bypass piping at CDP approved and used properly

# Findings Continued:

- Homemade meter runs
  - Did not meet API specifications
  - Required identification and inspection
- Temperature affects on allocated volumes
  - Average 60 degree F at wells
  - CDPs have temperature recorders

# Impacts to the I&E Program:

- BLM's inspection oversight role changes
  - All leases fall under our jurisdiction
    - ❖ Production accountability purposes
  - Must inspect the entire system to ensure proper allocation of production and production accountability
  - Must be identified in the approval process