# WEST VIRGINIA EROSION AND SEDIMENT CONTROL





#### • 36 Spudder- ½ Acre



- Circle jack and breaking wrench
- Dumpbailer



#### • Using ram on heated bit



#### • Using bit gauge to check bit



## Double Rig – Vertical Well- 2 Acre



### • Triple Rig



# Horizontal Well Pad 3+ Acres



#### Permit Application Requirements

- Erosion and Sediment Control Plan: Over 3 acres disturbed, excluding pipelines and roads, plans must be certified by registered engineer.
- Contains a narrative of events and plan view drawings.
- The narrative must describe a general sequence of events, how and when each construction phase ( clearing and grubbing etc.) will occur and describe stabilization methods to be used and timeframes of usage.
- The plan view drawings show the location of all proposed erosion and sediment control BMP'S on a scale of (1"-100') or greater .

## Sediment controls



#### Site Construction Criteria:

- Clear all woody material, brush, and trees from the site keeping clearing to the minimum necessary for construction.
- Topsoil shall be removed from construction areas and stockpiled for reuse during reclamation.
- Fill material shall be clean mineral soil, free of roots, large rocks, frozen soil etc.
- Fill material will be placed in lifts over the entire length of the fill. Lift thickness shall be as thin as the suitable random excavated material will allow, typically from 6 to 12 inches.
- Each lift shall be compacted to a standard proctor density of at least 95% by compaction equipment .
- At the base of the fill a toe foundation will be constructed, and with each (50) vertical feet of slope a terraced bench shall be constructed.

# **Clearing Limits**



#### **Location Construction**



### Sediment Control



# Sediment Control



# Bench @ 50' Elevation Change



# Slope Water Control



## **Road Construction**



# **Rock Checks Water Control**



# Seeding

- Temporary seed where exposed soil is not to be worked for periods longer than 21 days or as soon as any finish dirt work is completed.
- Soil preparation is key to good grass cover. Seedbed must be loose at the time of seeding, disk or track to loosen soil.
- If seedbed preparation is not feasible add 50% more seed to the recommended mixture.
- Test soil , apply lime to bring soil pH to a suitable range (pH 6.0) for the planned seed species. In absence of a soils test, 3 tons / acre of lime may be applied.
- When reseeding the drilling site, roadway, etc., work with landowners and try to use a seed mixture that would be compatible with adjacent grasslands.

# Hydroseeding



# Sediment Control @ Culvert Outfall



