

# Sugarite Gob Reclamation Project

## Raton, NM 1999 - 2002

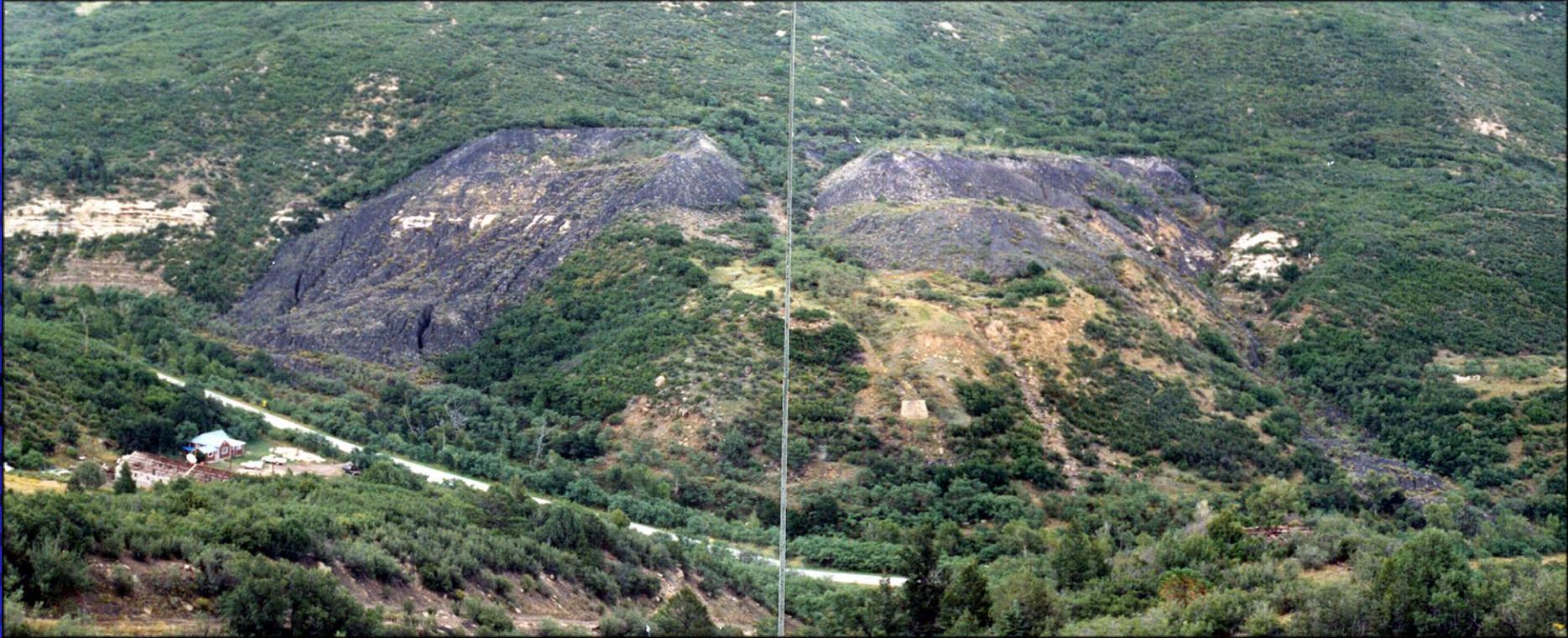
- New Mexico Abandoned Mine Land Bureau
  - John A. Kretzmann, P.E., Project Engineer
  - Randall Armijo, Project Manager
- Construction Contractors
  - St. Cloud Mining Company, T or C, NM
  - C&R Forestry Inc., Albuquerque, NM



Sugarite coal miners, ca. 1918



Town of Sugarite, 1932



**Gob Piles A2N & A2S**  
(prior to reclamation)



Town site ruins and hiking trails

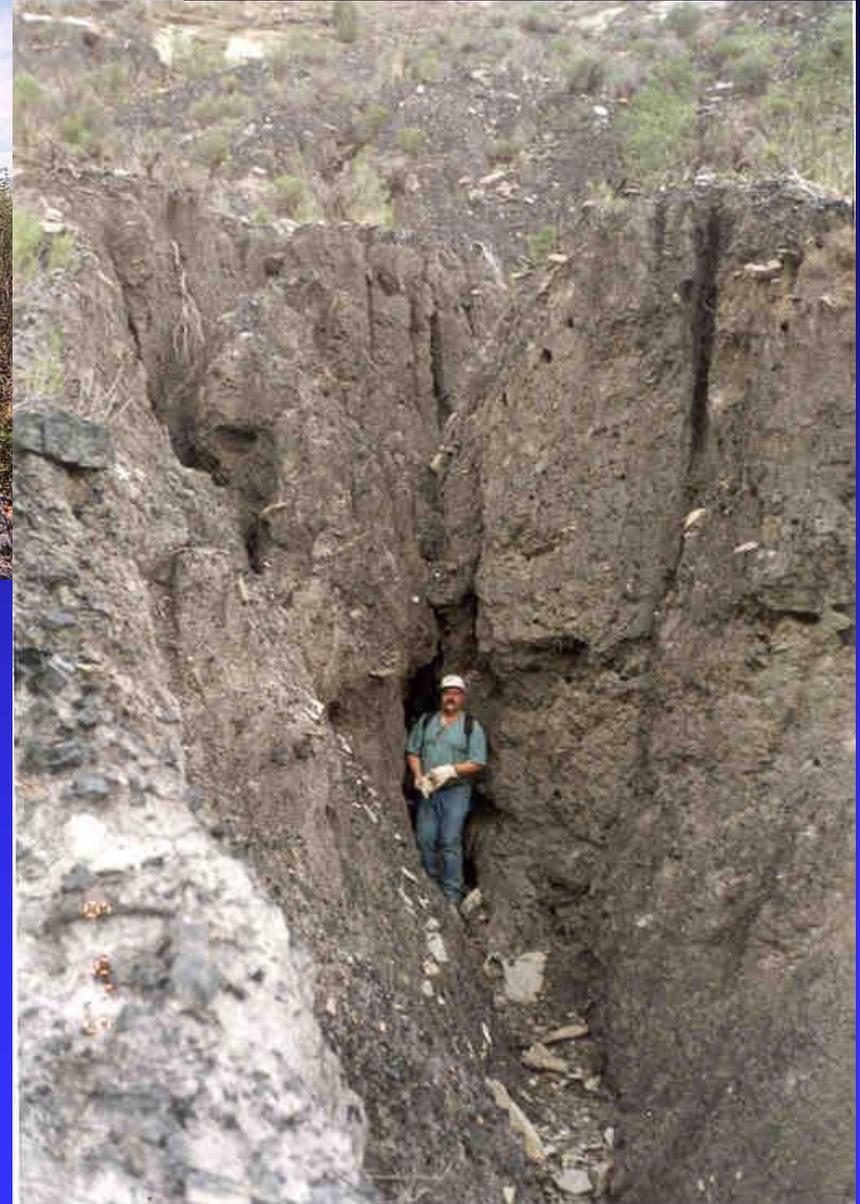
	<u>pH</u>	<u>EC</u> mmhos/ cm	<u>SAR</u>	<u>Sand</u> %	<u>Silt</u> %	<u>Clay</u> %	<u>Texture</u>
Mean	<u>5.8</u>	<u>4.54</u>	<u>24</u>	33	27	<u>40</u>	<u>Clay</u>
Median	<u>5.7</u>	3.25	<u>24</u>	33	26	<u>40</u>	<u>Clay</u>
Max.	7.8	<u>13.2</u>	<u>43</u>	60	38	<u>64</u>	
Min.	<u>4.2</u>	0.4	2.2	11	15	22	

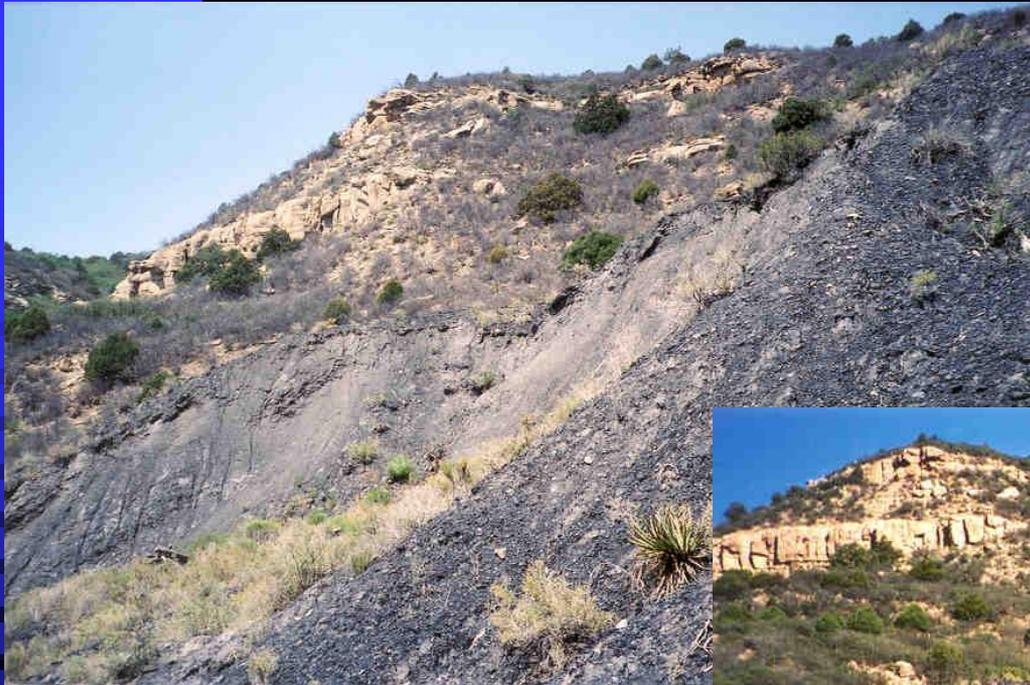
- Summary of 27 Gob Samples – Sugarite Canyon

## Gob Soil Characteristics

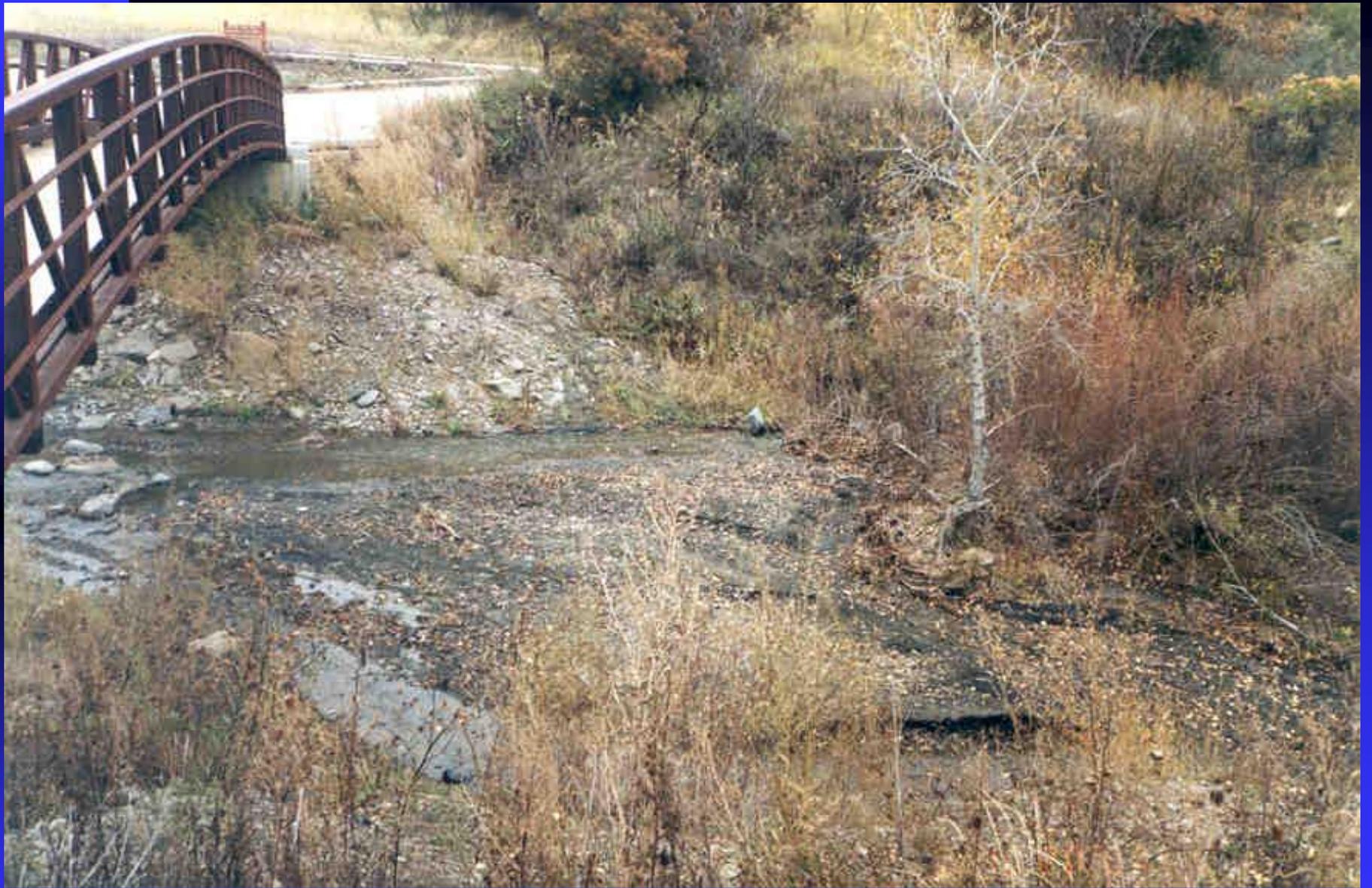


Typical gob  
slope and gully





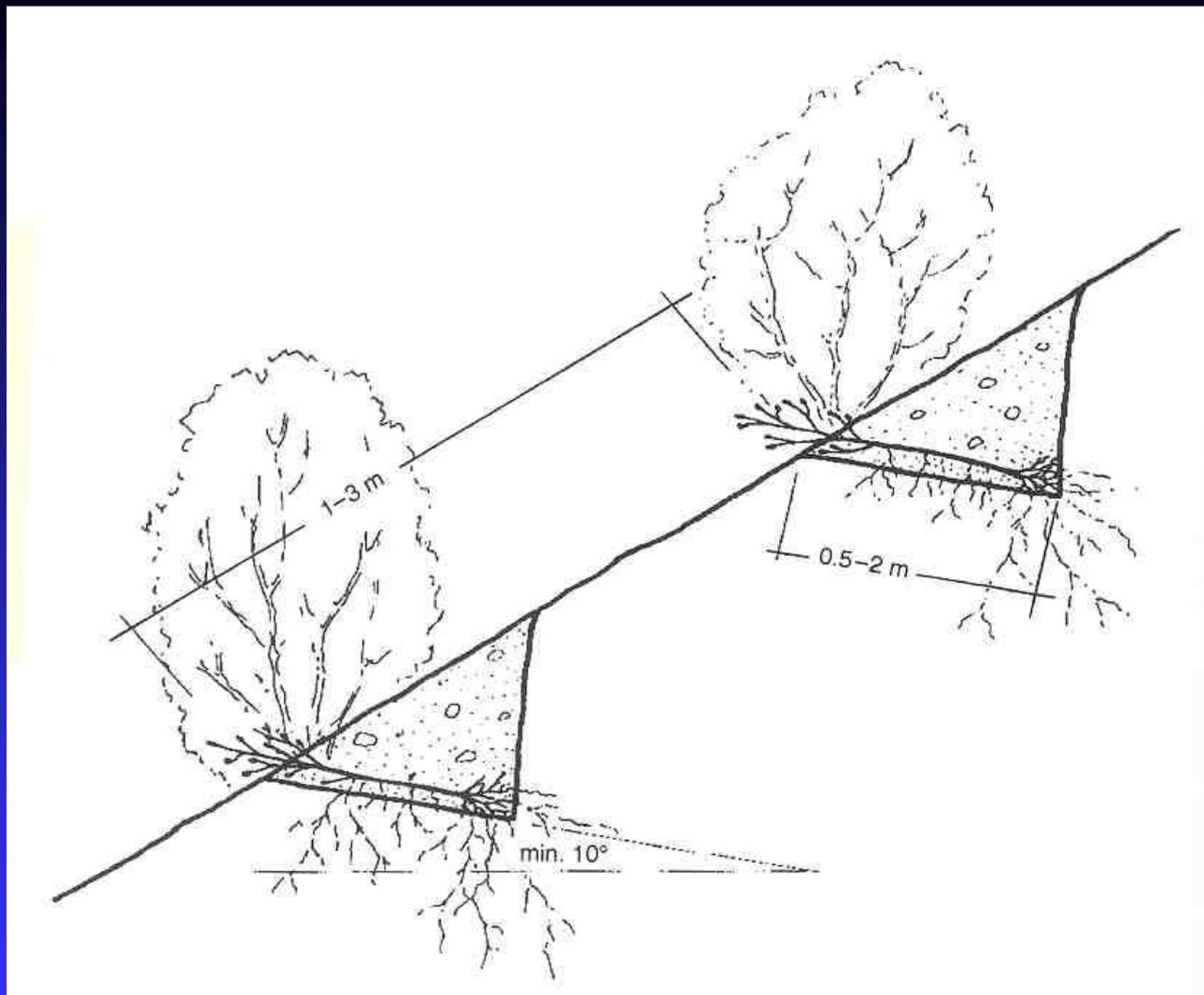
Landslide at Gob Pile A3



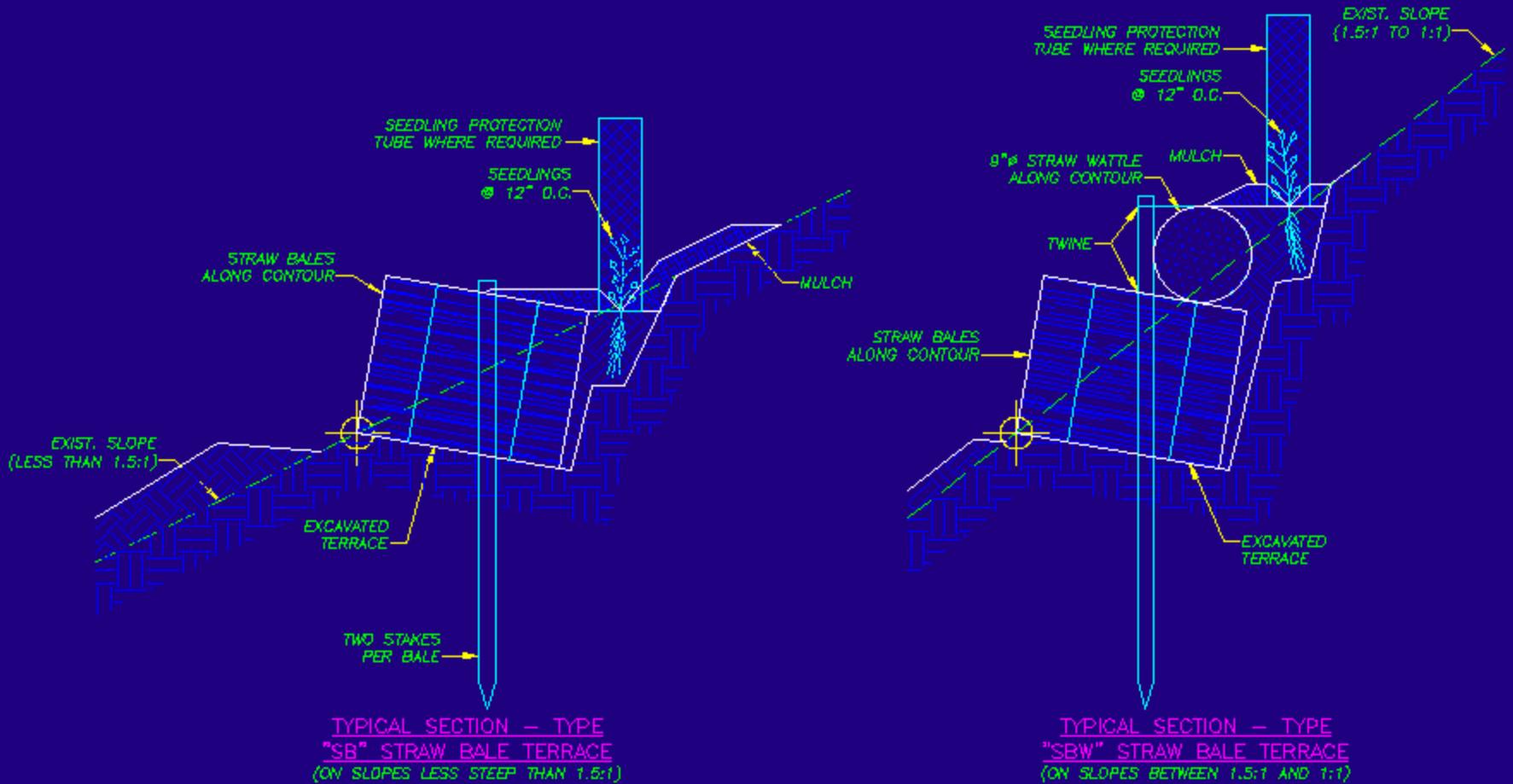
Gob material in creek



Straw bale terrace test installation



Hedge layer construction  
(by Hugo Schiechl)



# Straw bale terrace construction



Straw bale terraces on Gob Pile A2S



Hydroseeding with bonded  
fiber matrix and gypsum



- Coir rolls on slopes between 1:1 and 0.75:1
- Straw bales with straw wattles on slopes between 1.5:1 and 1:1

Terraces on steeper slopes

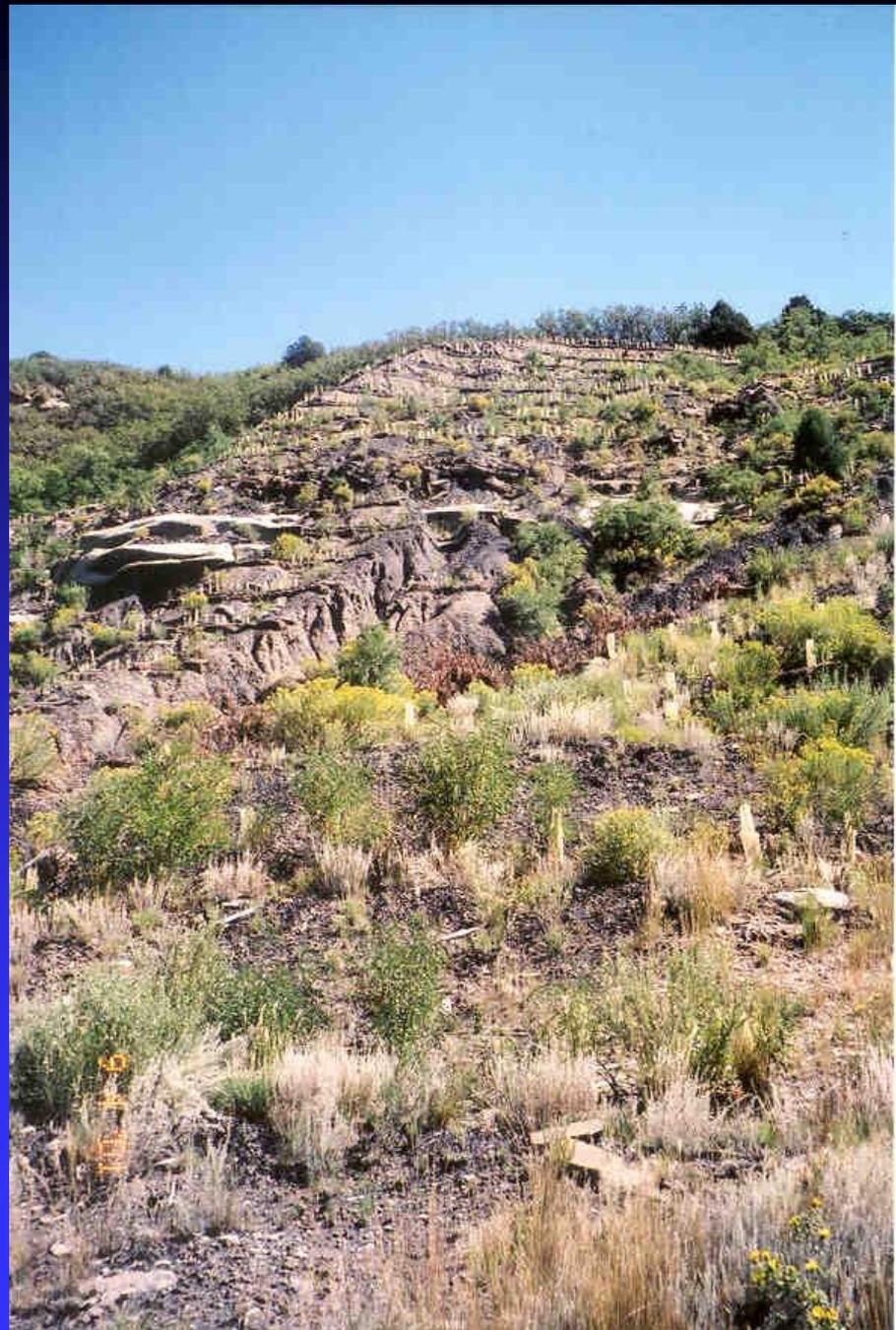


# Planting tublings

- Gob Pile A2S

# Seedlings after one and three seasons of growth

- Gob Pile A2N





Hydroseeded slopes  
at Gob Pile A2N

- At base of Gob Pile A7

## Gabion drop structures



- At top of Gob Pile A1



# Branch packing of gullies



■ Gob Pile A2N



# Sediment logs

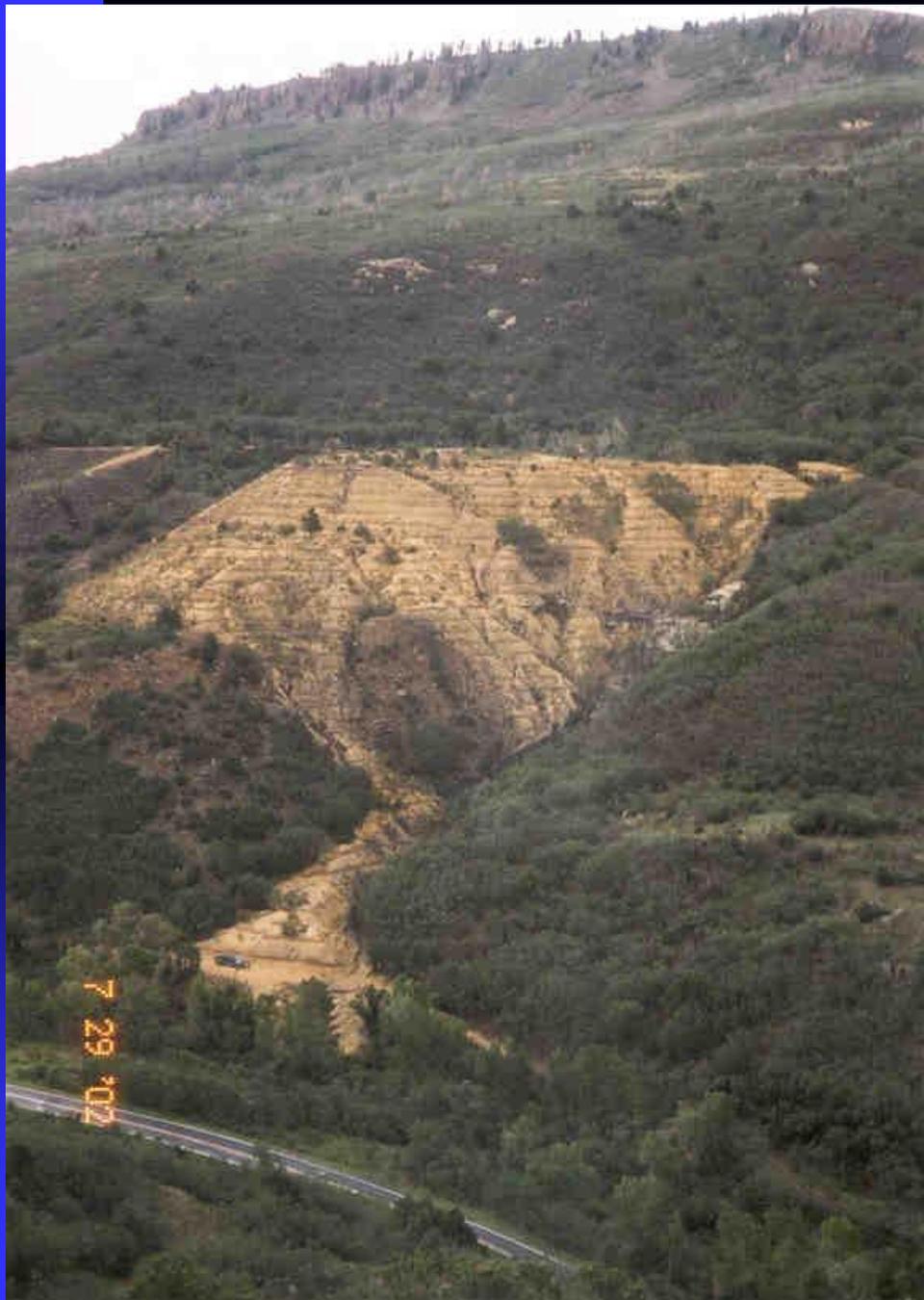


■ June 1999

■ July 2002

Reclamation  
results at Gob  
Pile A2N





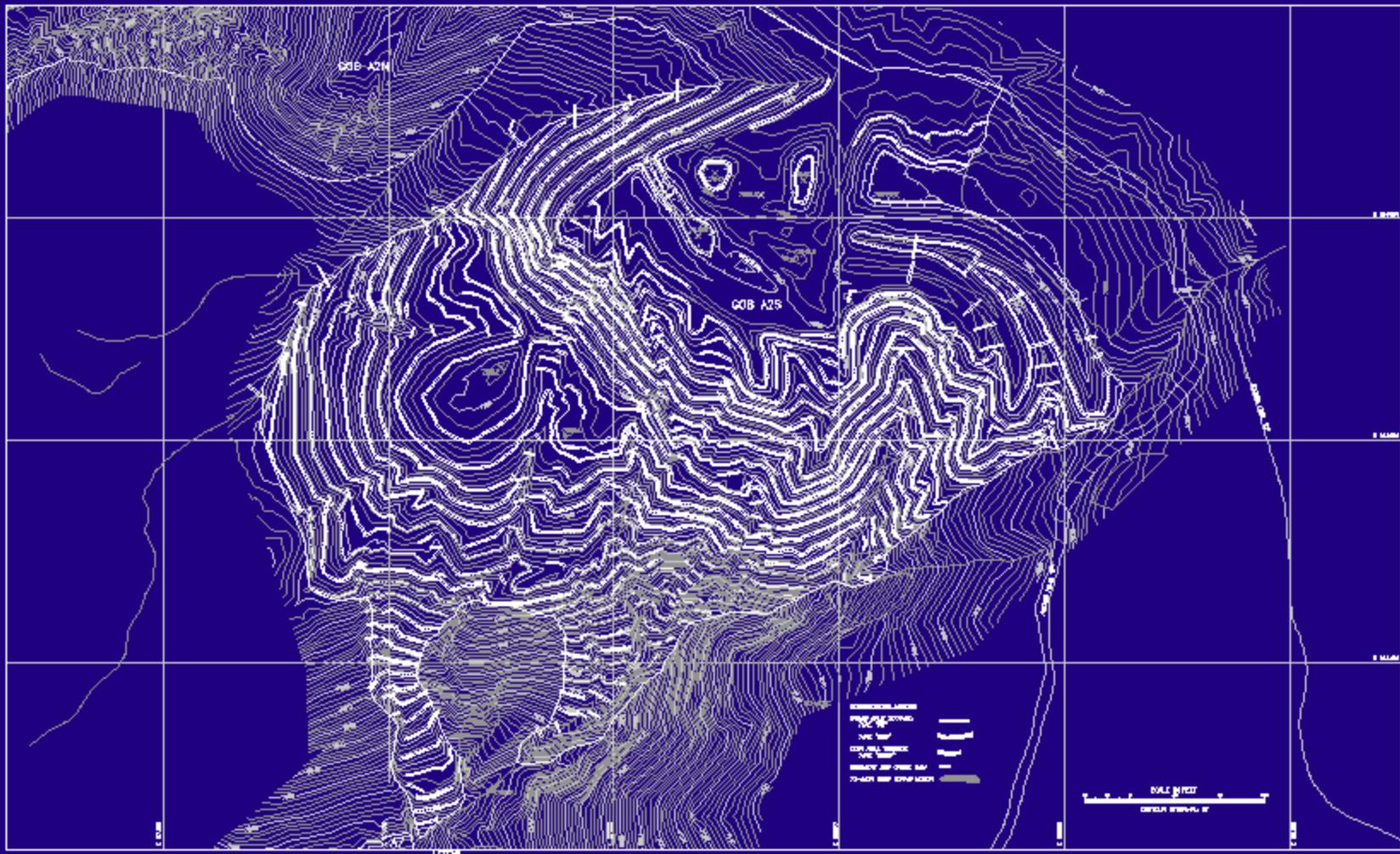
# Hydroseeded slopes at Gob Piles A2S & A7

■ July 2002



# Aerial photo of Gob Piles A2N & A2S

■ April 2002



Plan - Straw bale terrace layout at Gob Pile A2S

# Aerial photo of park and gob piles

■ April 2002





Gob Pile A2N

■ July 2002