



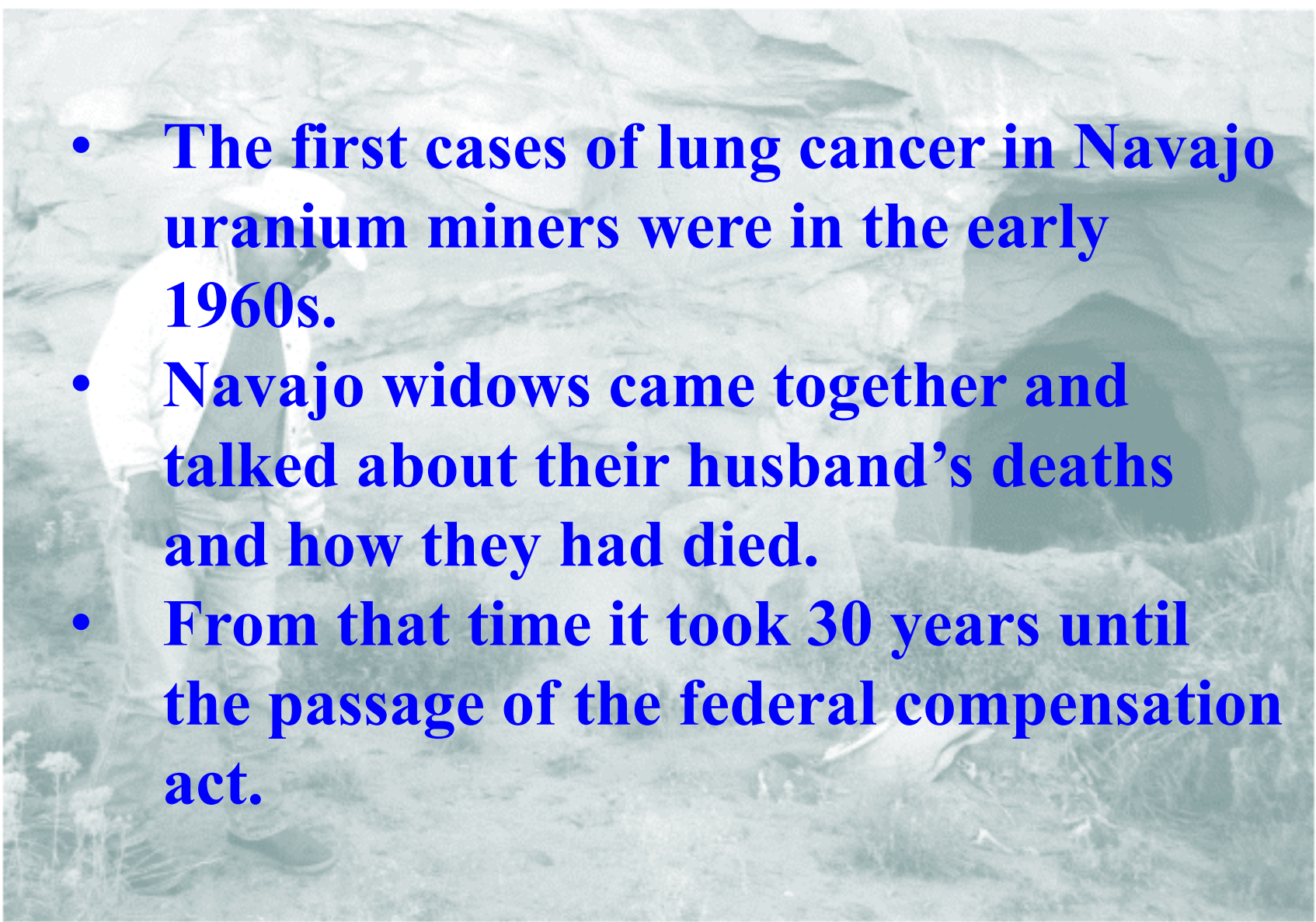
Uranium mining compensation

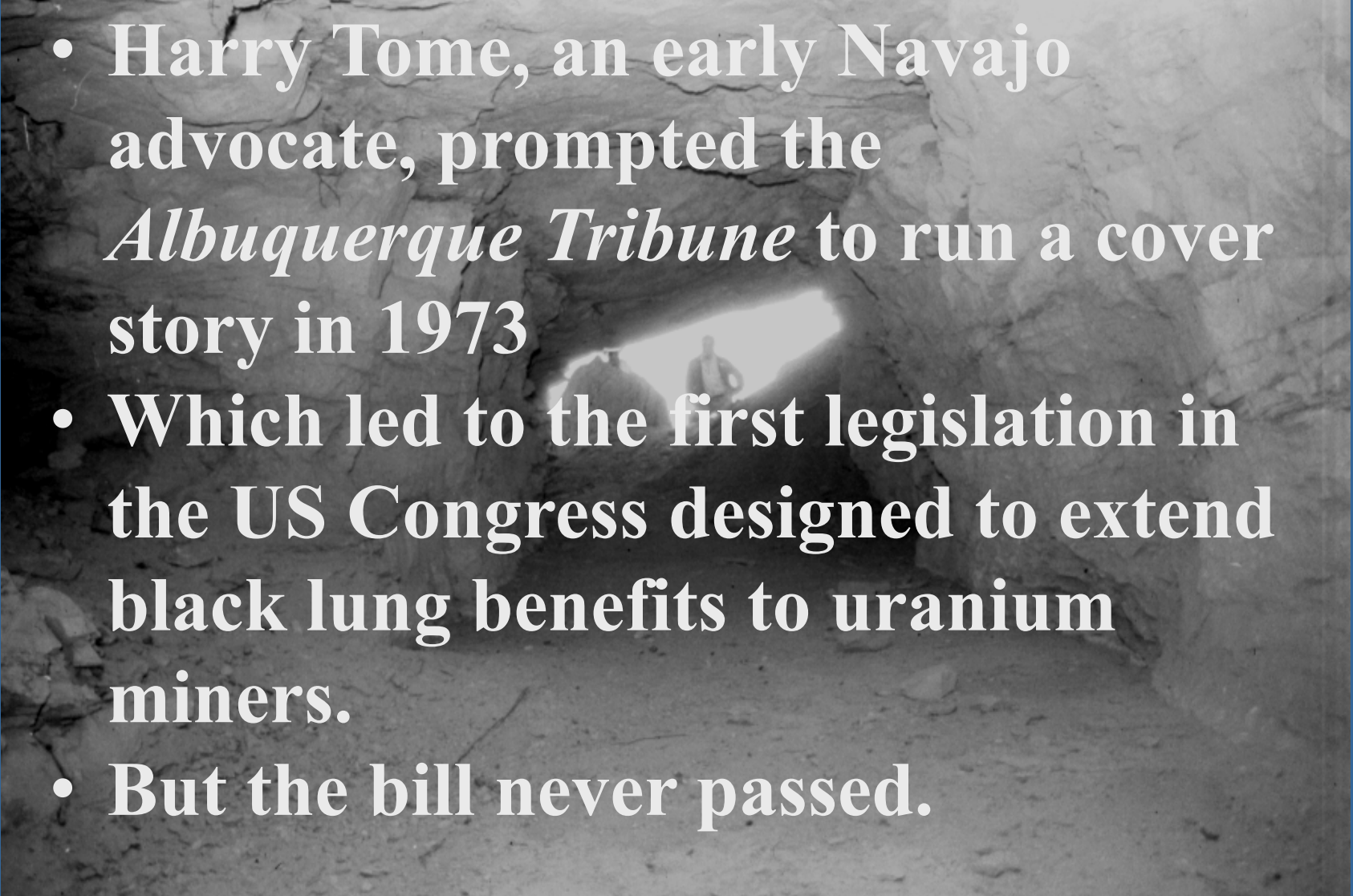
Doug Brugge, PhD

Professor

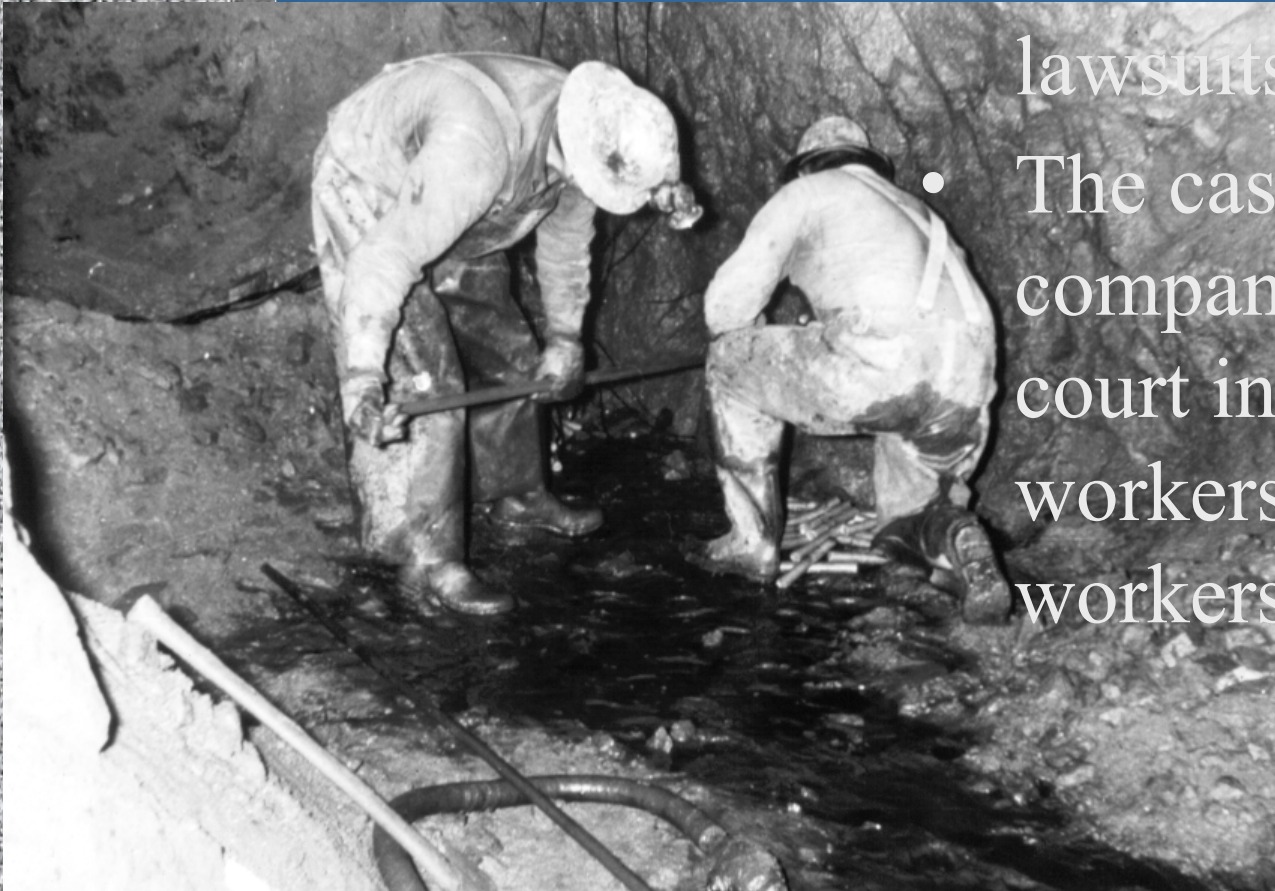
Tufts University School of Medicine

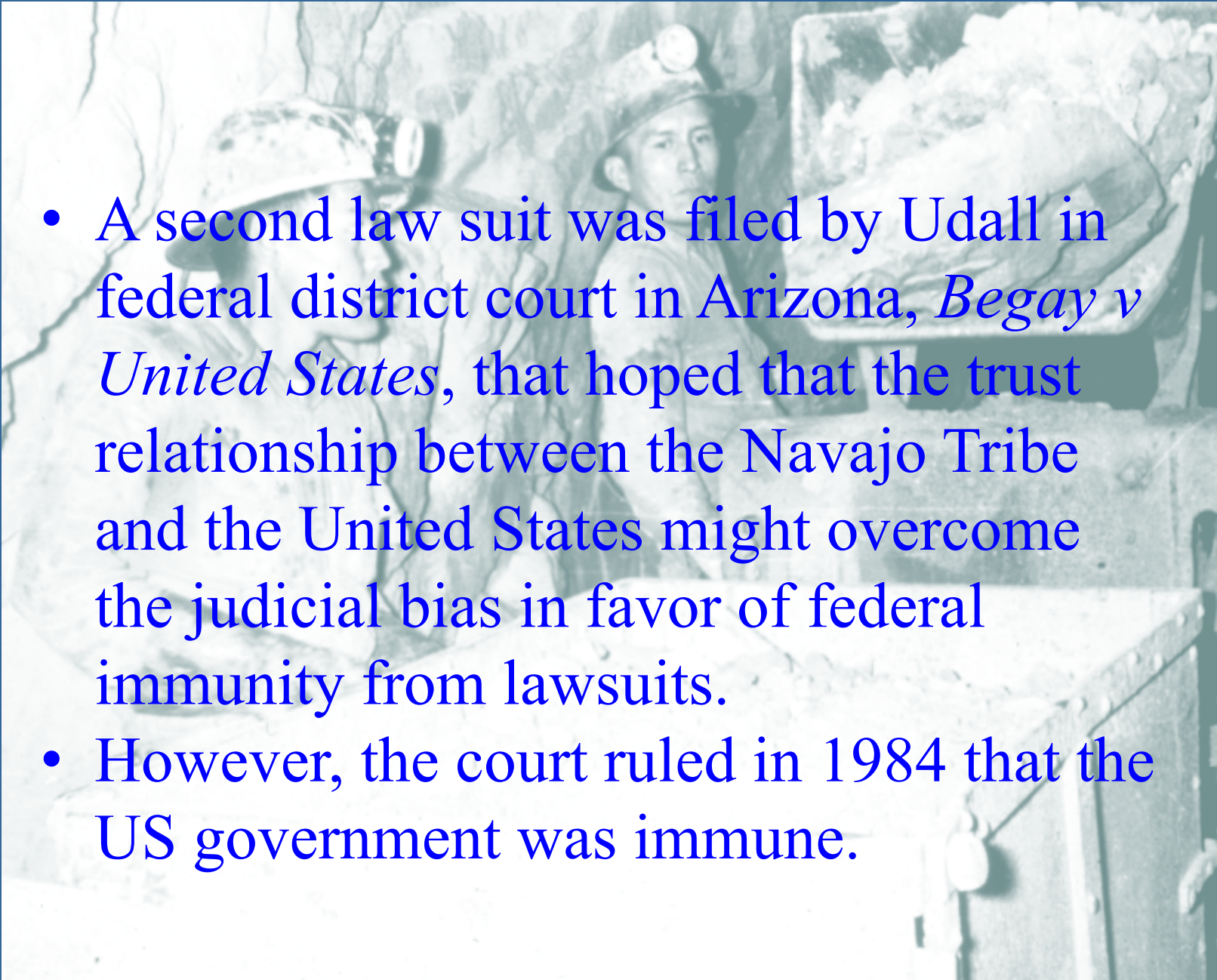


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- **The first cases of lung cancer in Navajo uranium miners were in the early 1960s.**
 - **Navajo widows came together and talked about their husband's deaths and how they had died.**
 - **From that time it took 30 years until the passage of the federal compensation act.**

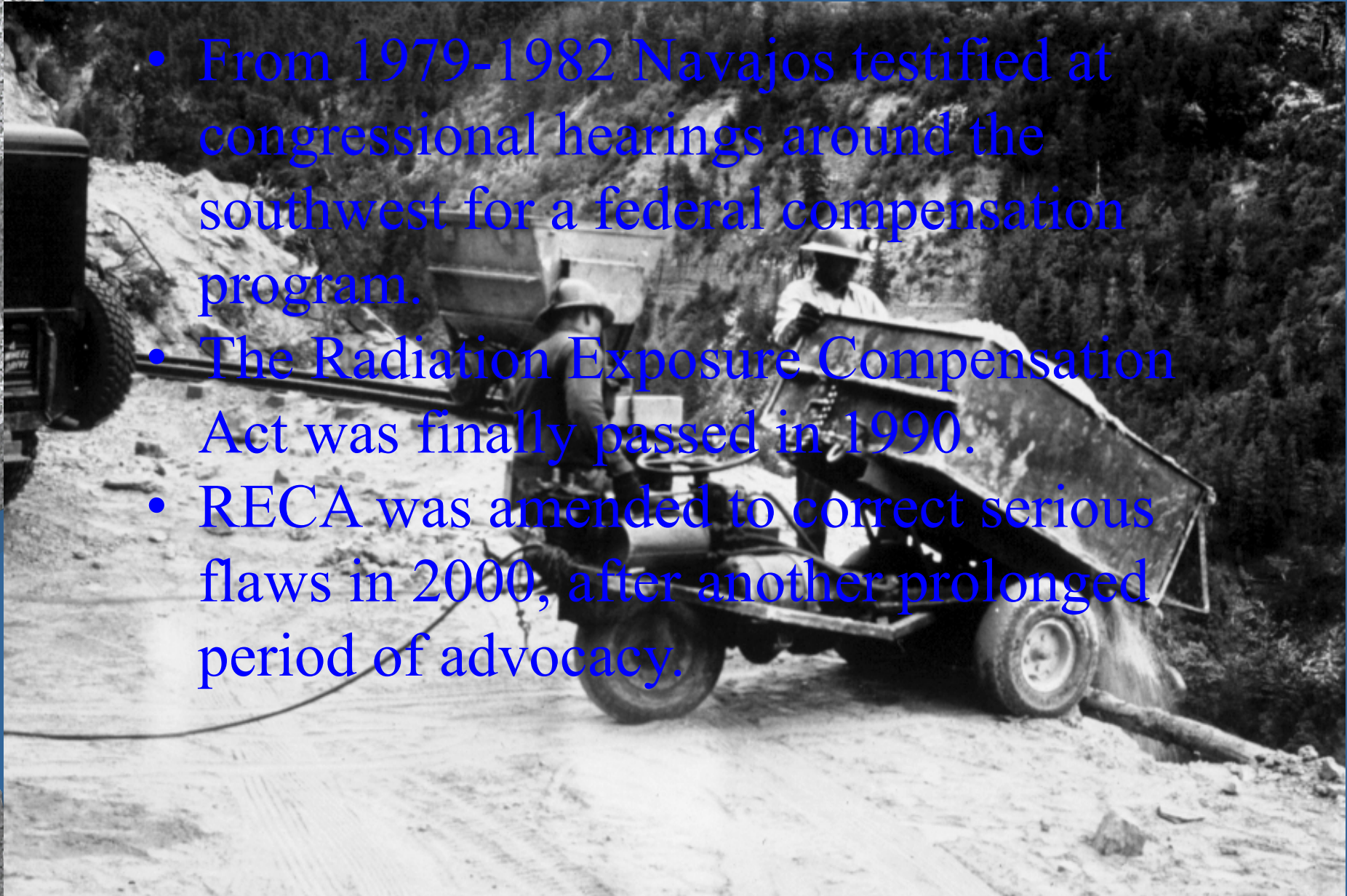
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- Harry Tome, an early Navajo advocate, prompted the *Albuquerque Tribune* to run a cover story in 1973
 - Which led to the first legislation in the US Congress designed to extend black lung benefits to uranium miners.
 - But the bill never passed.

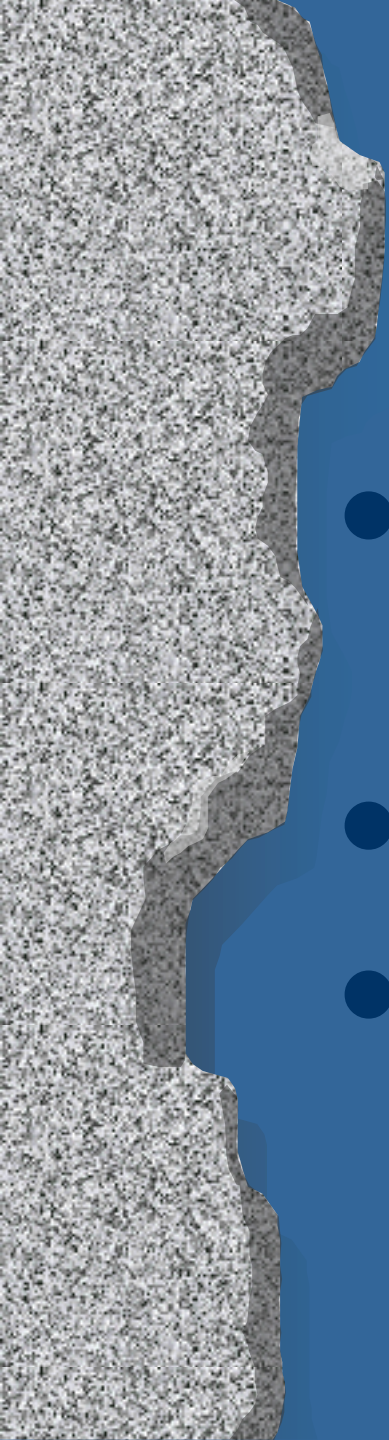
- In 1978, Tome began working with Stuart Udall, secretary of the interior under President John F. Kennedy.
- Ultimately, Udall filed 2 lawsuits in 1979.
- The case against the mining companies was thrown out of court in 1980 on the basis that workers were covered by workers' compensation.



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- A second law suit was filed by Udall in federal district court in Arizona, *Begay v United States*, that hoped that the trust relationship between the Navajo Tribe and the United States might overcome the judicial bias in favor of federal immunity from lawsuits.
 - However, the court ruled in 1984 that the US government was immune.

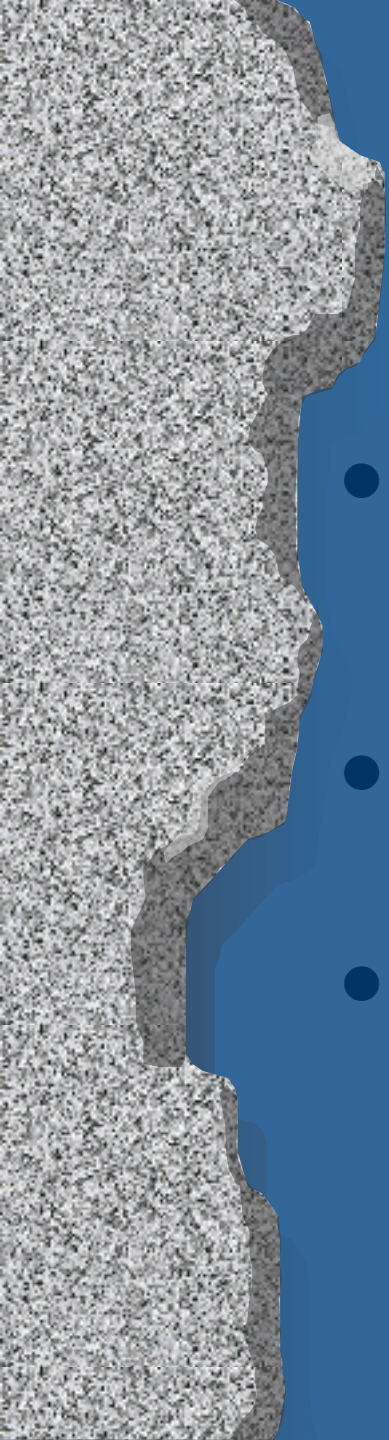
- From 1979-1982 Navajos testified at congressional hearings around the southwest for a federal compensation program.
- The Radiation Exposure Compensation Act was finally passed in 1990.
- RECA was amended to correct serious flaws in 2000, after another prolonged period of advocacy.





Radiation Exposure Compensation Act of 1990

- Downwinders from above ground nuclear tests
- On-site workers at test sites
- **Uranium miners**



Radiation Exposure Compensation Act of 1990 – Uranium Miners

- Must have diagnosed lung disease.
 - lung cancer, pulmonary fibrosis, cor pulmonale, and moderate to severe silicosis or pneumoconiosis.
- 200 WLM for non-smokers.
 - Based on historical monitoring at mines.
- 500 WLM for smokers and 300 WLM for former smokers.
 - Based on medical records > 1 “pack year”.

RECA Problems: Exposure Error

- Error in exposure data not considered
- Holaday in 1969 wrote of the exposure records, “They do not represent the exposure of the miners...”
- Okay for broad epidemiological categories, but not for determining individual dose.

RECA Problems: Smoking

- Native American smoking for ceremonial purposes defined as smoker just like chain smokers.
- Analysis of risk based on mostly smokers, thus non-smokers should have lower doubling of risk.

RECA Problems:

- BEIR IV (1988), set the doubling of risk at 40 WLMs.
- Silicosis qualification based on radon exposure.



Floyd Frank of Oakspring, Arizona tells of his experiences during the Cold War as a uranium miner in the Navajo Nation. "Uranium is really dangerous ... Why did they not tell us this?" Photo by Doug Brugge.

2000 Amendments to RECA

- Expansion of the respiratory diseases eligible.
- Expansion of the geographic area covered by the law.
- Expansion of compensation eligibility to above ground miners and mill workers.
- Elimination of the distinction between smokers and non-smokers.

2000 Amendments to RECA - 2

- Allowing for certified physician/patient documentation and appropriate tests for use in verifying a claim.
- Incorporating respect for Native American law, tradition and custom for survivor eligibility.
- Lowers the threshold for eligibility for miners and mill workers to 40 WLM.

2000 Amendments to RECA - 3

- Mill workers are eligible for compensation for renal cancer, chronic renal disease, and kidney tubal tissue injury.
- Adds a grant program for community-based groups for cancer screening, medical referral, and public health education.

How does this apply to Africa?

Cumulative Uranium Production to 2013

[t U] Total to 2013 (OECD 2014, WNA 2014)

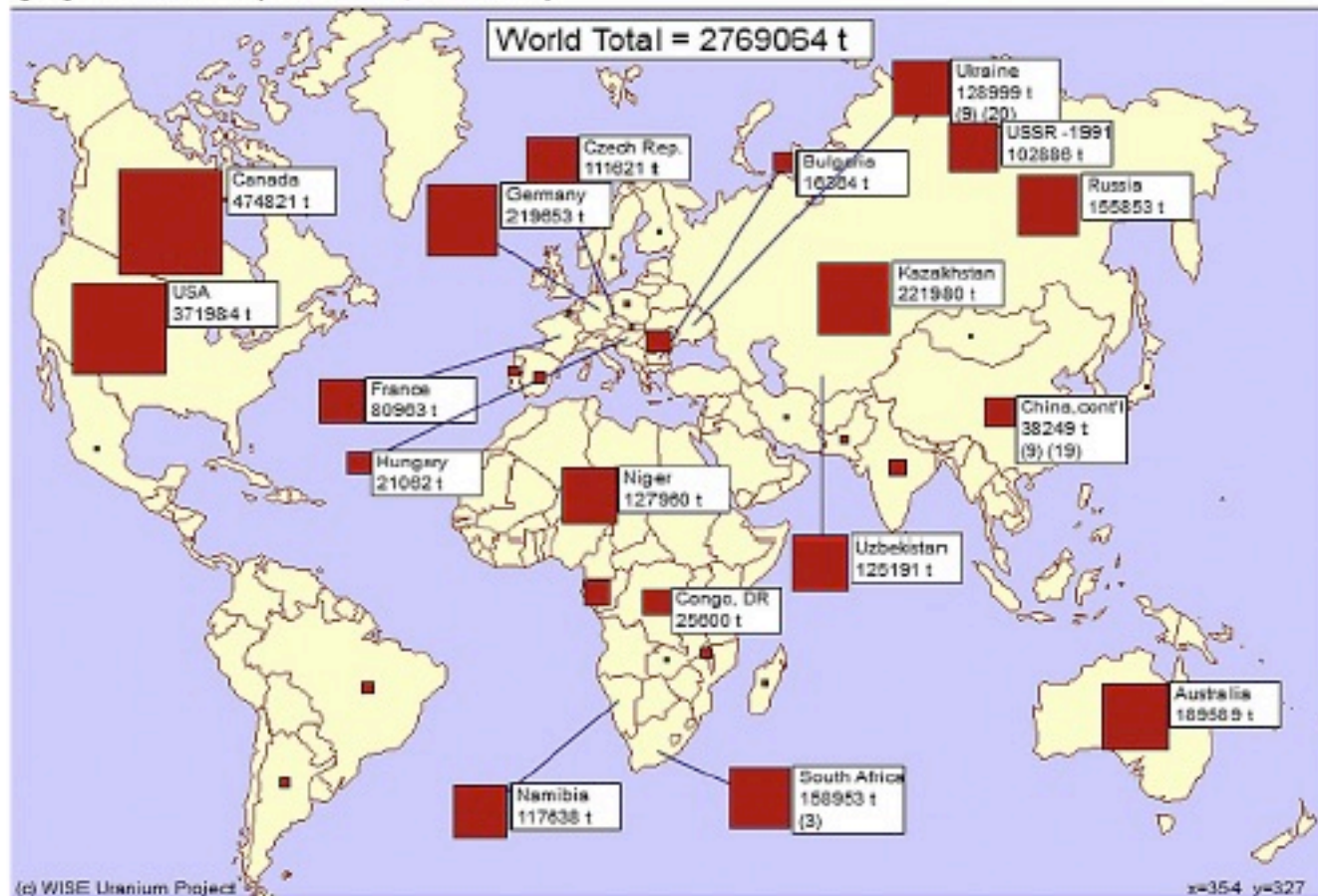


Fig. 2. World map of cumulative uranium production per country up until 2013 [t U] (<http://www.wise-uranium.org/umaps.html>, accessed: 6.4.2015).

Thoughts

- In the US it took a loooooong time.
- Lawsuits failed, but maybe because of peculiarities with US law.
- Organizing and advocacy combined with legal representation seemed to be key.
- Going after “deep pockets” (US Gov) worked.
- Maybe focus on suing EU companies or governments for African compensation?



