Oklahoma – 8th in the Nation for wind
Cherokee Nation, 2nd largest Indian Tribe
Approx. 260,000 members; 150,000 in area

Jurisdiction area = over 90,000 acres
Chillico land = 4,275 acres

Cherokee Nation Enterprises, a wholly-owned corporation of the Cherokee Nation.
• Employs 1,100

4 - Class II Gaming Casinos
6 - Retail Outlets
1 - 18-Hole Golf Course (Perry Maxwell design)
Objective:
To conduct a feasibility study to determine possibilities of a wind farm.

Location – Kay County, North-central Oklahoma
Land consists of two tracts of fee & trust land = 4,275 acres
No trees to impede the wind.

Approach:
Conduct environmental assessment
Conduct a cultural study
Make necessary contacts with utility companies
13-month study of wind using miniSODAR equipment
Analyze data gathered
Prepare business plan with recommendations to CNE Board & Council
Chilocco Property

Tribal Land

DATA SOURCES:
- US Census Bureau (Tiger Files)
- DOQQ's, USGS
- DRG's, USGS
- Cherokee Nation Realty Department
- Cherokee Nation GeoData Center

Date: 12/19/01

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Kay County

Chilocco Property

DATA SOURCES: US Census Bureau (Tiger Files)
DOQQ's, USGS
DRG's, USGS
Cherokee Nation Realty Department
Cherokee Nation GeoData Center
Date: 12/19/01
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CNE Participants:
   CEO – David Stewart
   CNE Board of Directors
   Lynn Ousley – Business Development Director
   Carol Wyatt – Office & Grants Administrator

Cherokee Nation participants:
   Principal Chief - Chad Smith
   Marvin Jones – Community Dev. Director
   EPA Team
      EPA assessment
      Collect and analyze data at site

Consultants:
   DOE & NREL personnel
   Ken Underwood, Meteorologist – AeroVironment
   Additional contract personnel as needed
   Bob Gaddis, Kaw Nation – to compare data
Model 4000 MiniSODAR
high-frequency doppler system

Wind speed accuracy
  2 degrees
Weight – 255 lbs.

- Uses patented 32-element phased array antenna to form 3 orthogonal beams needed to measure a complete three-dimensional wind profile.
- SODAR acoustic signal processor is engineered for reliable, unattended field operation.
- Data analysis software included to process SODAR data.
- Wind profile measurements – 15 to 200 meters in 5 meter increments
- Designed to accurately measure wind shears.
Selected for its portability – can be mounted on trailer
• Can move to any location in 14-county area for additional studies
• Battery or A/C powered
Alternate plan for wind study to power Catoosa facilities:

- Casino & Sprung structure for Bingo
- Hotel
- Golf Course & new clubhouse
- Warehouse
- Green Room
- H.R. Modular
- Construction 4-plex modular
- Executive offices
- Old Clubhouse – H.R., Training, I.T. & Payroll
- Accounting Modular
- Cart Barn
- Smokeshop
Cherokee Hills Resort & Casino
Opening Summer 2004

Hotel
• 150 Rooms
• Office Space
• Restaurants / Retail Stores
• Conference

Casino Expansion
• 80,000 sq. ft.
Bingo – 12,000 sq. ft.

18- hole Golf Course
Perry Maxwell design