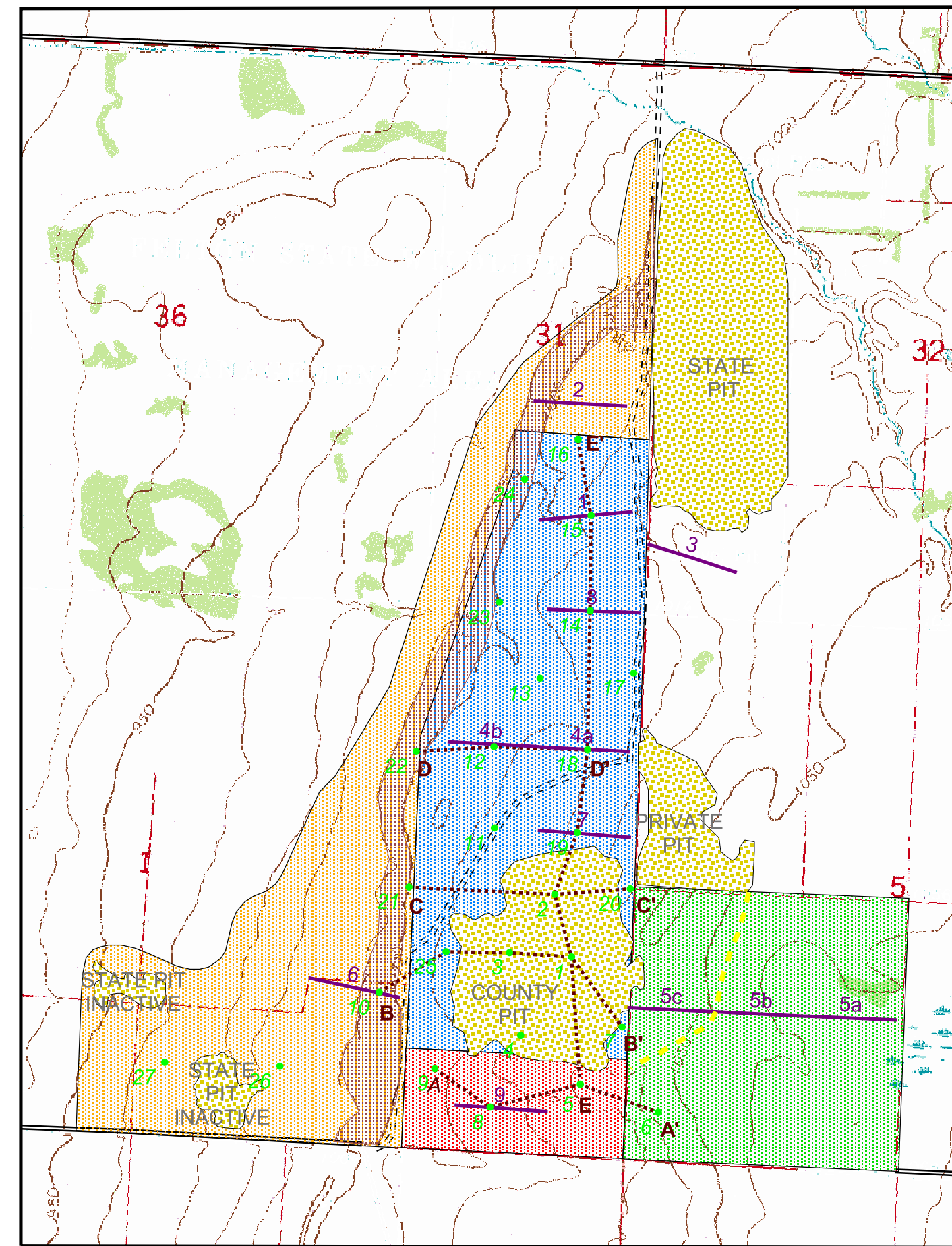
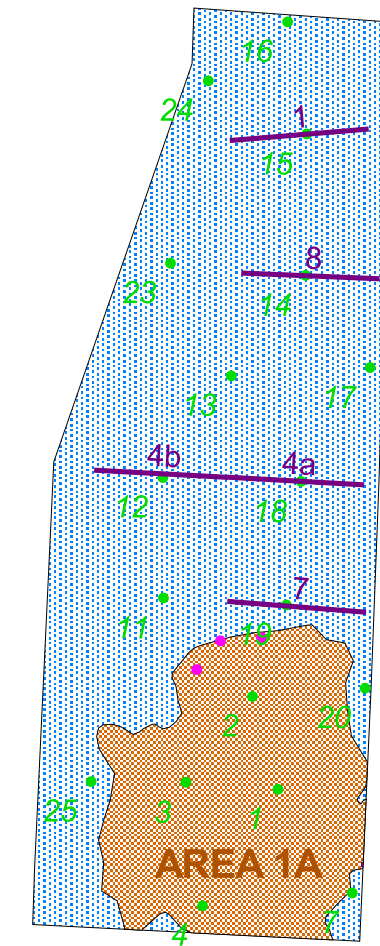


**GEOLOGIC INTERPRETATION OF THE FOUR AREAS
COMPRISING THE STUDY AREA**

**LOCATIONS OF DRILL HOLES,
GEOLOGIC CROSS SECTIONS, AND
GEOPHYSICAL LINES**

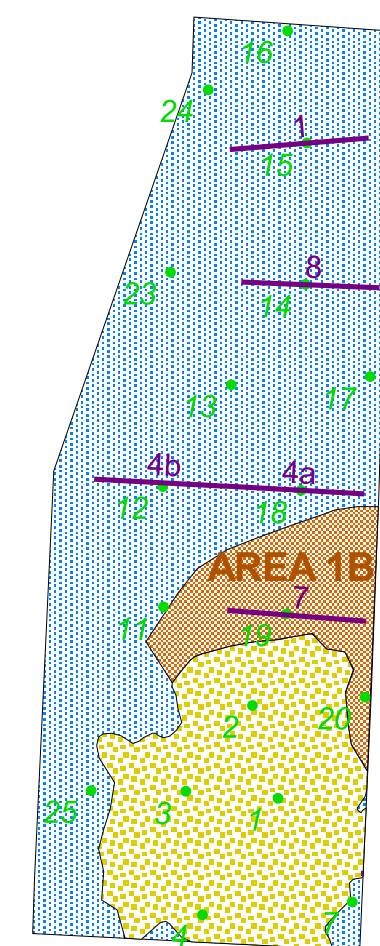


- STUDY AREA**
- Area 1
 - Subareas 1A, 1B, 1C
 - Area 2
 - Area 3
 - Area 4
 - Gravel pit
 - Beach ridge
 - Drill hole ID and location
 - Cross section line
 - Geophysics line and ID
 - Inferred geologic contact



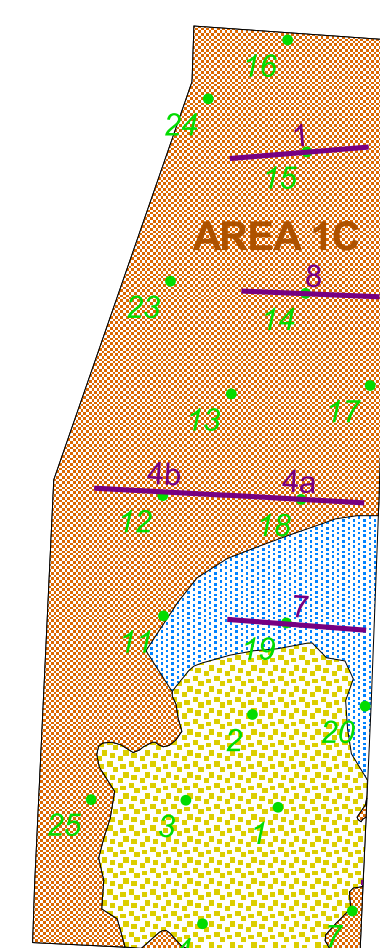
Area 1A: 65 acres

- Represents the Clay County gravel pit as of November of 1999.
- Volume (approximate): Total: 5,900,000 cubic yards*
- *Does not account for sand and gravel in current stockpiles, waste piles, or along the banks of the pit.
- Contains 4 holes - all 4 holes have a gravel thickness >10 feet.
- Depth to water table: 0 to 4 feet below the surface.
- Gravel thickness: 55 to 65 feet.
- Gravel trends: Pinches out to 5 feet just west of pit (Hole 25).
- Overburden: Already stripped in most of the pit area. Overburden was observed (silt and fine sands) at an exposure in the northwest corner of the gravel pit. Along the exposure, overburden pinched out to the east. To the west, overburden thickened to greater than 10 feet.
- Quality: Very good. Passes specs for concrete.
- Gradations: Very good. Contains a > 1 inch fraction averaging 15%. Average composite value fits within MNDOT specs for Class 5 aggregate for comparative purposes.
- Geologic observations: The overburden described in the northwest wall of the pit grades from fine sand (in the east) to silt (in the west). The overburden also appears to thicken to the west.
- Overburden observed



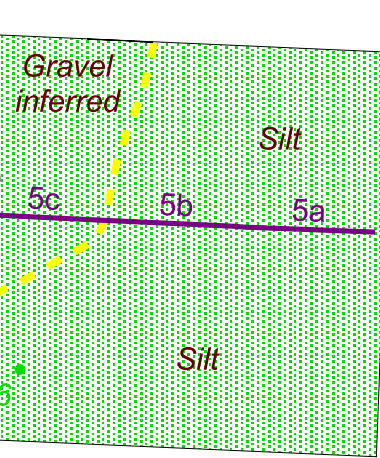
Area 1B: 23 acres

- Represents the area north of the County gravel pit and south of the haul road as of November of 1999.
- Volume (approximate): Above water table: 900,000 cubic yards; Below water table: 2,000,000 cubic yards; Total: 2,900,000 cubic yards
- Contains 3 holes - all 3 holes have a gravel thickness >10 feet.
- Depth to water table: 19 to 43 feet below the surface.
- Gravel thickness: 68 to 93 feet.
- Gravel trends: Geophysics line 7 indicates a continuous deposit.
- Overburden: No overburden greater than 2 feet encountered in this area.
- Quality: The upper portion is very good, the lower portion is good, but contains higher shale in the sand fraction. Meets concrete specs.
- Gradations: Very good. Contains a > 1 inch fraction averaging 11%. Average composite value fits within MNDOT specs for Class 5 aggregate for comparative purposes.
- Geologic observations: The wide range of the depth to water table is a result of the variation of the surficial topography.



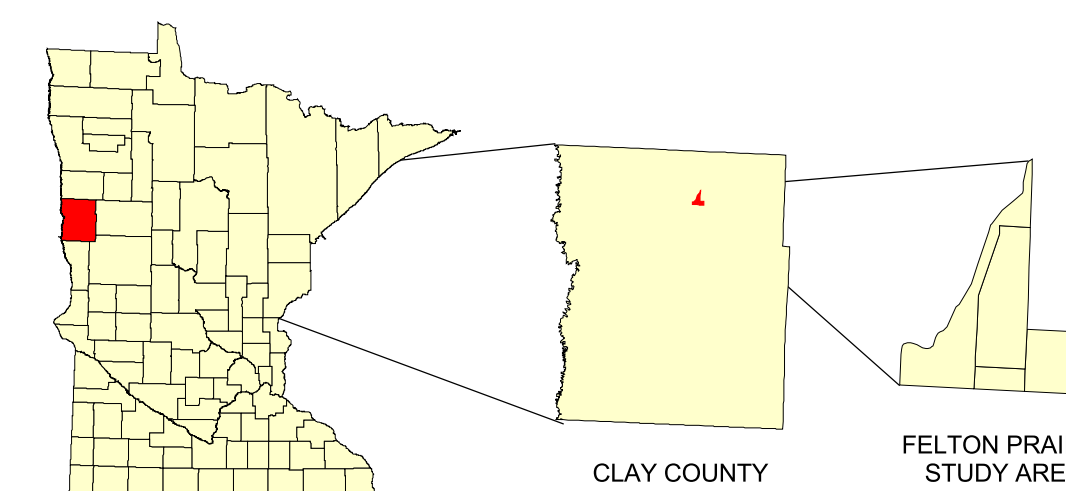
Area 1C: 172 acres

- Represents the area north of the haul road and west of the County gravel pit.
- Volume (approximate): Above water table: 3,400,000 cubic yards; Below water table: 11,900,000 cubic yards; Total: 15,300,000 cubic yards
- Contains 11 holes - 9 holes have gravel thickness >10 feet.
- Depth to water table: 11 to 25 feet below the surface.
- Gravel thickness: 0 to 83 feet.
- Gravel trends: Thins to the west.
- Overburden: Encountered in holes 12, 15, 16, 17, and 23. Ranges from 10 to 20 feet.
- Quality: Upper portion is very good, the lower portion is good, but contains shale in the sand fraction.
- Gradations: Very good. Contains a > 1 inch fraction averaging 12%. Average composite value fits within MNDOT specs for Class 5 aggregate for comparative purposes.
- Geologic observations: The western edge of the deposit is variable in gravel thickness and overburden. The northern portion has approximately 20 feet of overburden.



Area 3: 160 acres

- Represents the area of the Bicentennial Prairie.
- Volume: Not calculated for this area.
- Contains 1 hole and no gravel was encountered.
- Depth to water table: In drill hole 6, the water table was encountered at 4 feet. As seen in cross section A-A', the water table is interpreted as being perched.
- Gravel thickness: 0 to 100+ feet.
- Gravel trends: Geophysical lines 5b and 5c, indicate a thick resource potential on the western half of Area 3.
- Overburden: Most of geophysical line 5c shows little to no overburden where sand and gravel is indicated. On the west side of Area 3, along a 40 foot exposure, no overburden was observed.
- Quality: No data.
- Gradations: No data.
- Geologic observations: Based from the southern exposure of the private pit, the eastern exposure of the County pit, and geophysical line 5c, the thickest part of the entire deposit exists in the northwestern 40 acres of Area 3.



**AGGREGATE RESOURCE EVALUATION
FOR A PORTION OF FELTON PRAIRIE
CLAY COUNTY, MINNESOTA**

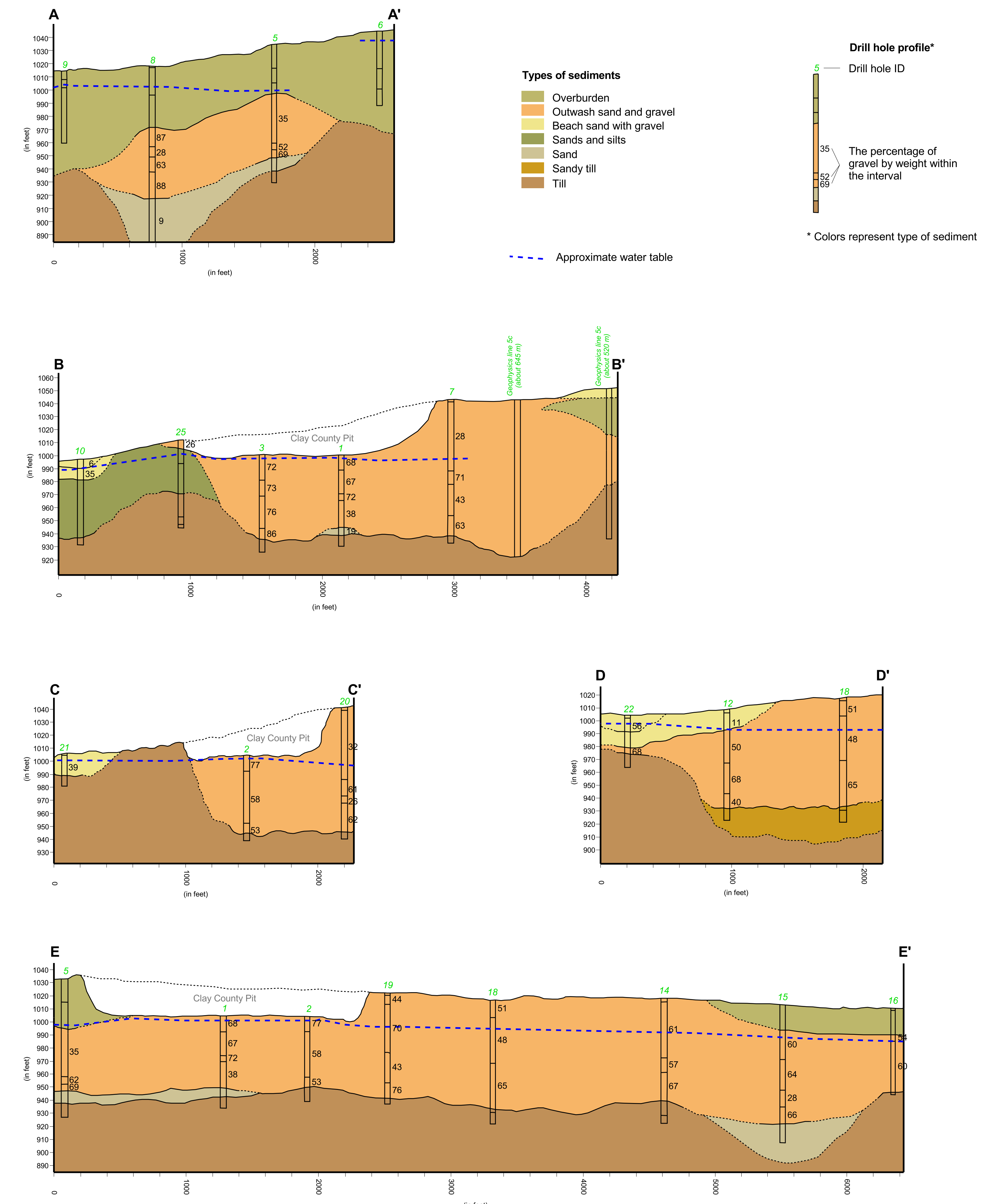
GEOLOGIC INTERPRETATIONS

2000

This plate is the second of a two plate series. This plate features the geologic observations for designated areas within the study area and along five cross sections. These cross sections are geologic interpretations based upon the simplified logs found in Appendix C and the geophysical data. All observations are based on data gathered during the aggregate resource evaluation.

GEOLOGICAL CROSS SECTIONS

Cross sections are based on the geologic logs of the drill core.



Aggregate resource data sources:
Drill hole locations - Minnesota Department of Natural Resources, Bureau of Engineering, March 2000.

Base map data sources:
Backdrop of Drill Hole Locations - Digital raster graphics (DRG) file from U.S. Geological Survey, 1:24,000.
Location of haul road, shown in Geologic Interpretation of the Four Areas Comprising the Study Area - Minnesota Department of Natural Resources, Bureau of Engineering.