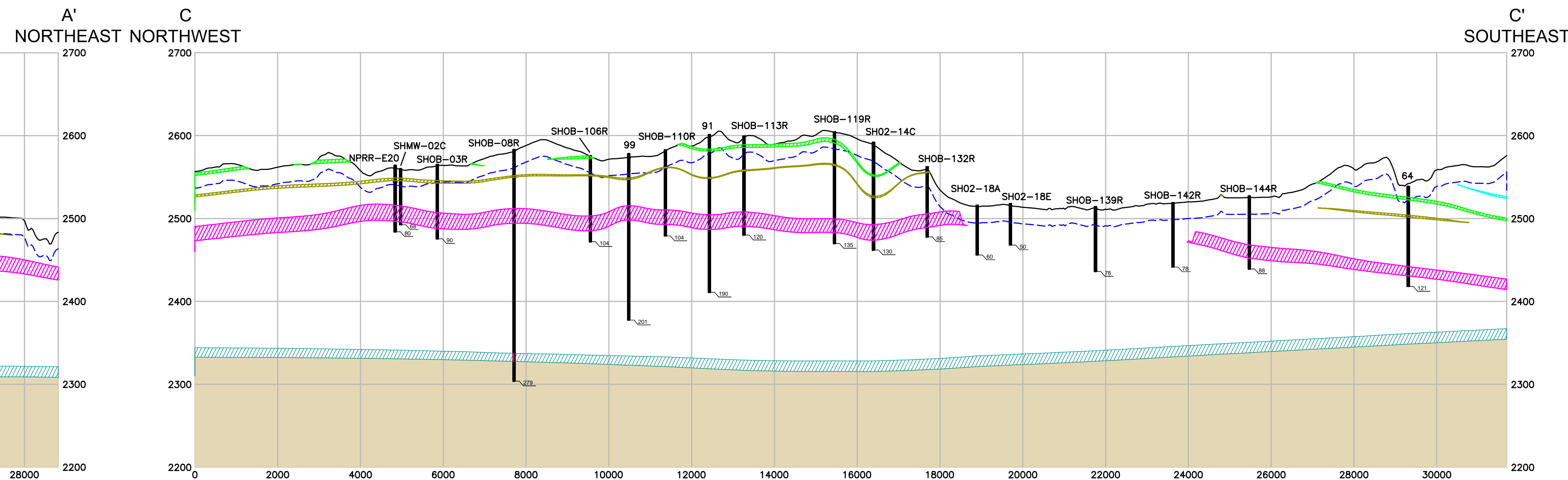
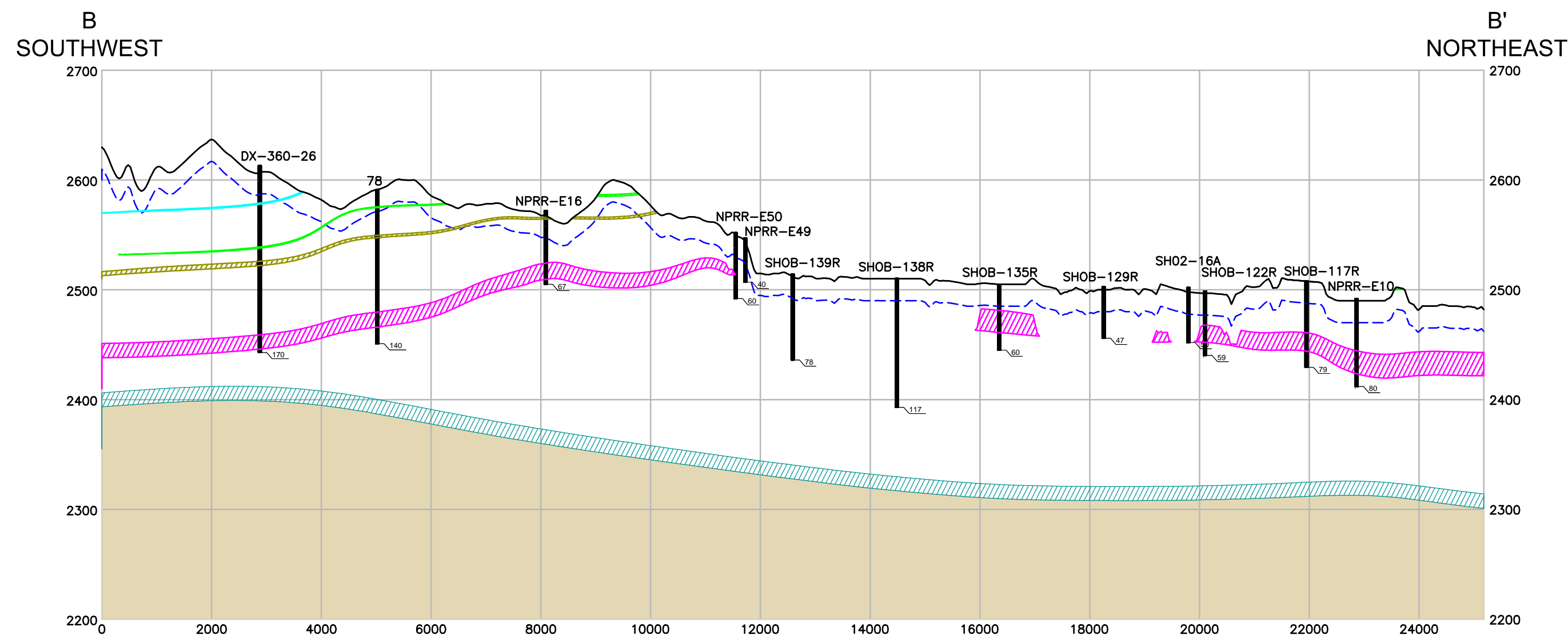


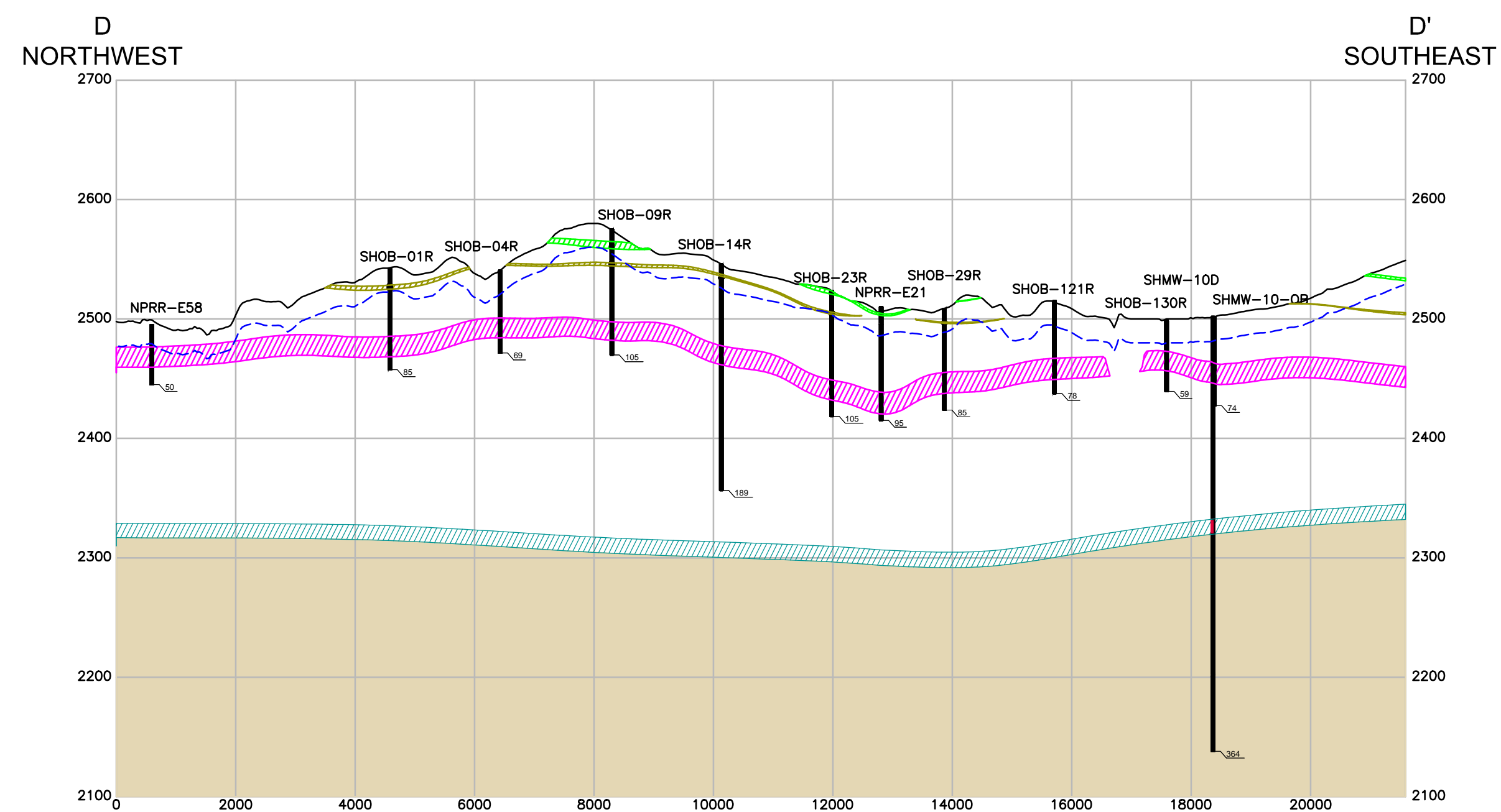
CROSS-SECTION A-A'
SCALE: AS NOTED



CROSS-SECTION C-C'
SCALE: AS NOTED



CROSS-SECTION B-B'
SCALE: AS NOTED

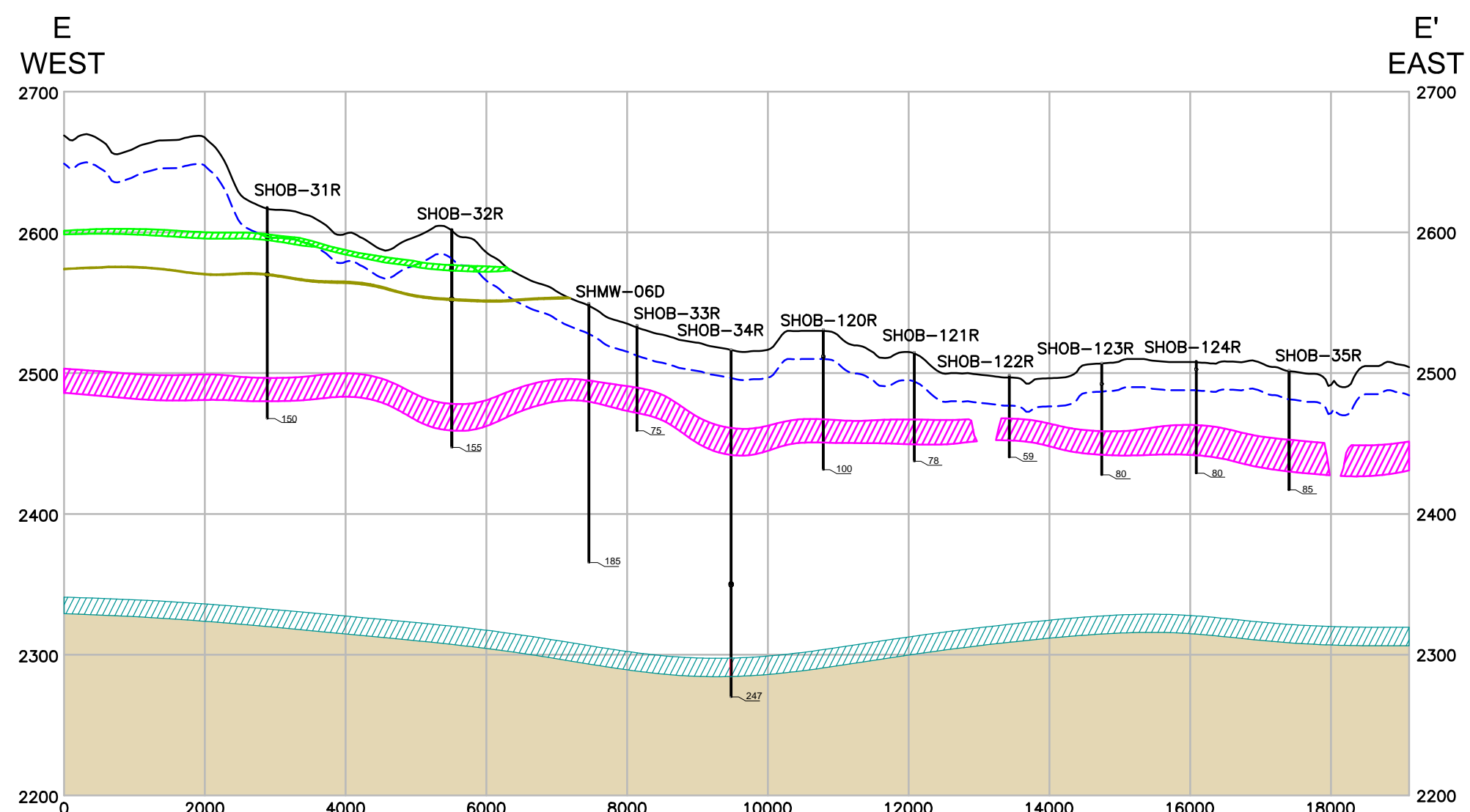


CROSS-SECTION D-D'
SCALE: AS NOTED

- LEGEND (CROSS-SECTIONS)**
- F Coal
 - E Coal
 - E1 Coal
 - D Coal
 - HT Butte Coal
 - Sentinel Butte Formation Undifferentiated
 - Tongue River Formation Undifferentiated
 - Bottom of Oxidized Zone

NOTE
These cross-sections were created by Norwest Corporation for the geologic model developed for the mine plan. Scale and presentation was modified by Golder Associates, Inc.

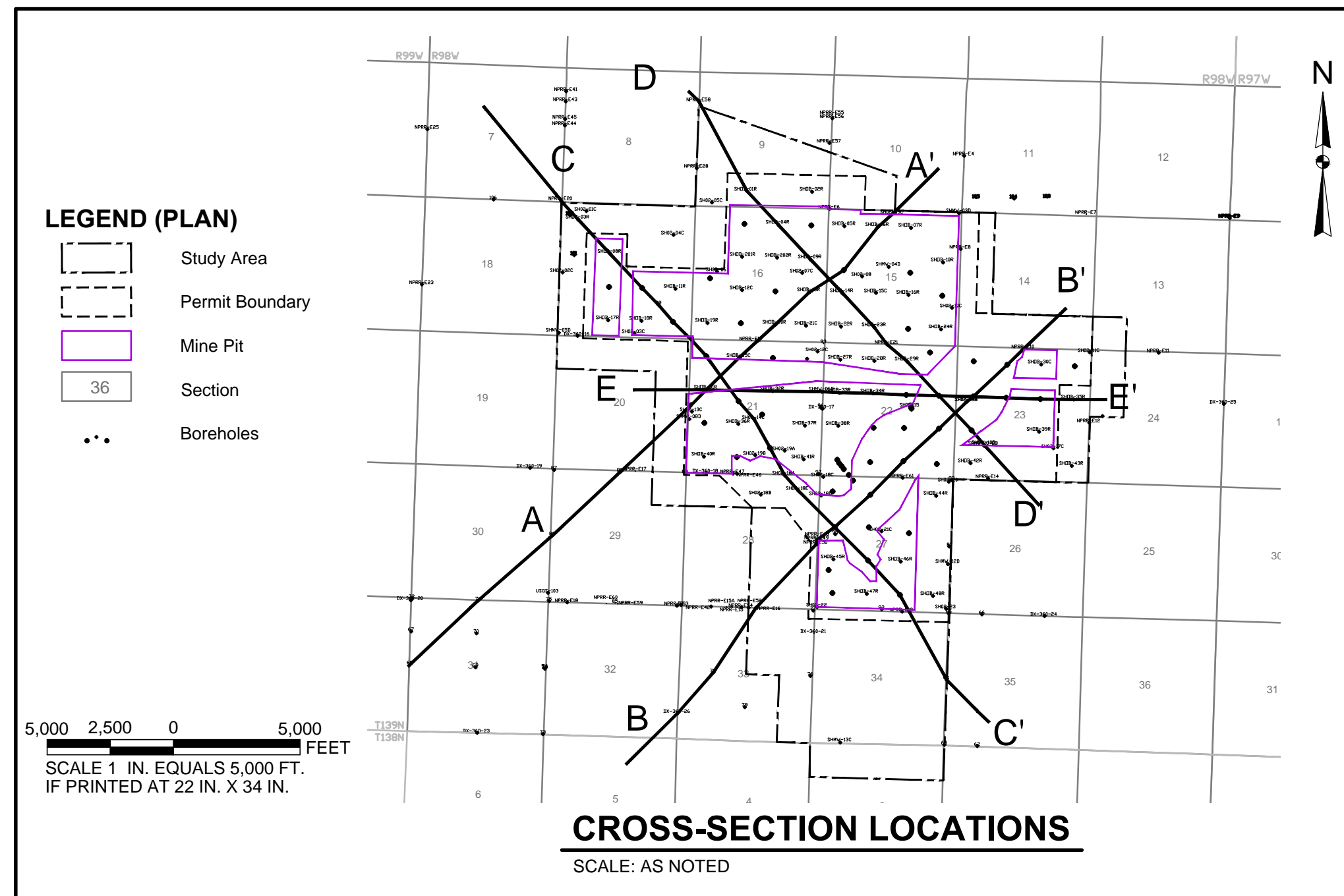
REFERENCE
Cross-section and Coal Layers: Norwest, 5/22/2008, 2/2008.
Study Area: Golder 10/18/2007.
Permit Boundary: IEI, 11/12/2009.
Mine Pit Boundary: Norwest, 1/20/2010.
Township, Range and Section: ND HUB, 6/20/2006.



CROSS-SECTION E-E'
SCALE: AS NOTED

2000 1000 0 2000 FEET
SCALE 1 IN. EQUALS 2000 FT. HORIZONTAL
IF PRINTED AT 24 IN. X 36 IN.

100 50 0 100 FEET
SCALE 1 IN. EQUALS 100 FT. VERTICAL
IF PRINTED AT 24 IN. X 36 IN.
VERTICAL DISTANCE IS FEET ABOVE
MEAN SEA LEVEL



CROSS-SECTION LOCATIONS
SCALE: AS NOTED

Dwg Name: C:\vmp\Asp\pub\416\06322128001.dwg
 Layout Name: 22x36 Landscape Permit A Machines: DEN1-L-ARETHER
 User: jh...
 Date: 11/28/2010 08:52 By: jh...

| | | | |
|---------|---|----------|-------------|
| PROJECT | SOUTH HEART COAL LLC SOUTH HEART LIGNITE MINE SOUTH HEART, NORTH DAKOTA | FILE NO. | 06322128001 |
| TITLE | GEOLOGIC CROSS-SECTIONS | | |
| DESIGN | ALR | DATE | 07/28/2010 |
| CADD | ALR | DATE | 07/28/2010 |
| CHECK | SAH | DATE | 07/28/2010 |
| REVIEW | JW | DATE | 07/28/2010 |

FIG 2.3-4