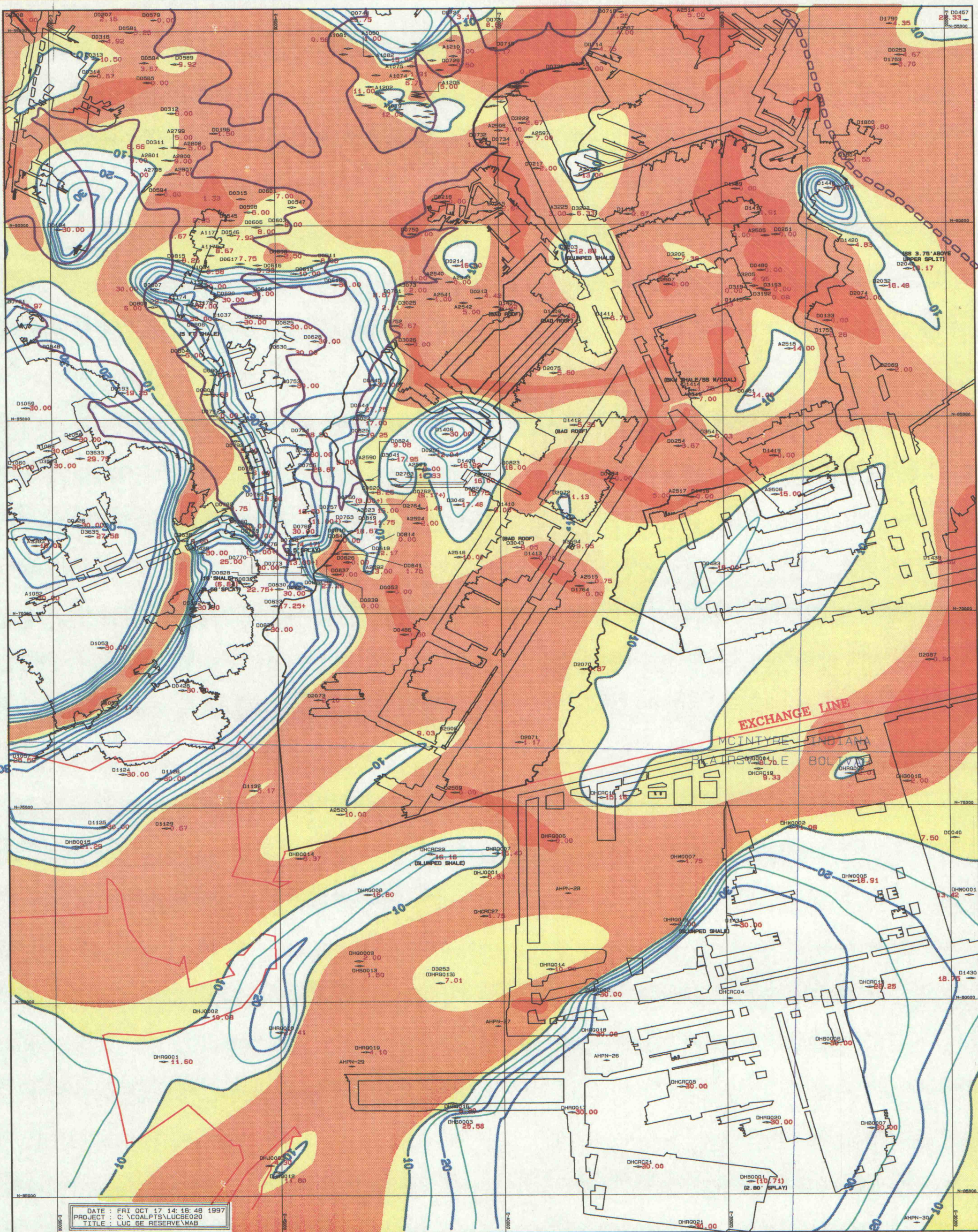


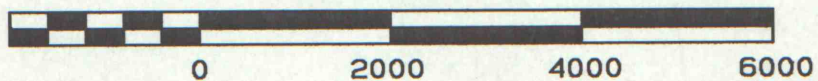


HELVETIA COAL CO. LUCERNE NO.6E UPPER FREEPORT SEAM SHALES THICKNESS

WITHIN FIRST THIRTY FT ABOVE COAL
CONTOUR INTERVAL = 5 FT

- SANDSTONE WITHIN 10 FT OF COAL
- SANDSTONE WITHIN 5 FT OF COAL
- SANDSTONE DIRECTLY OVERLYING COAL

GRAPHIC SCALE 1"=2000'



- PERMIT BOUNDARY
- TRANSITION ZONE (SPLIT LINE)
- UPPER FREEPORT CROPLINE

IMAPS# 09418