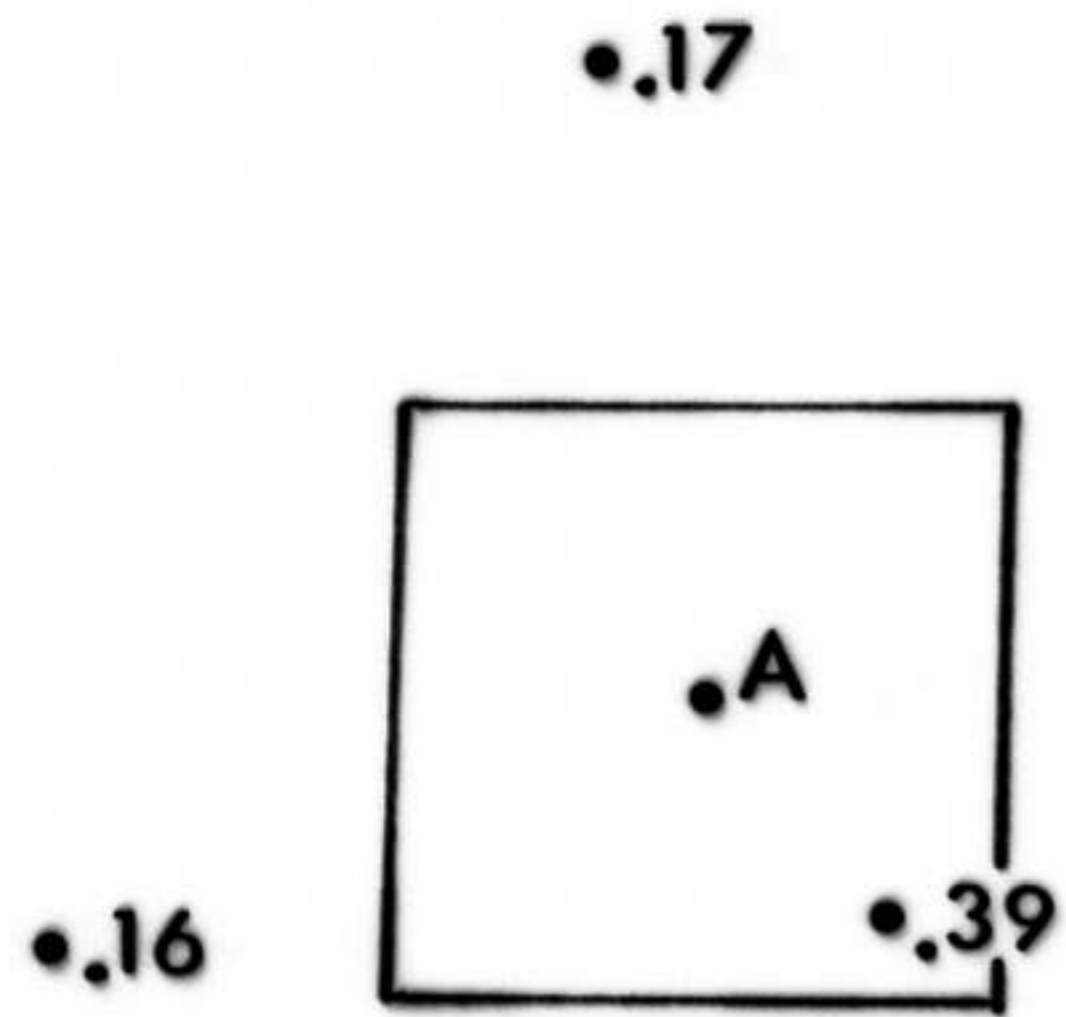
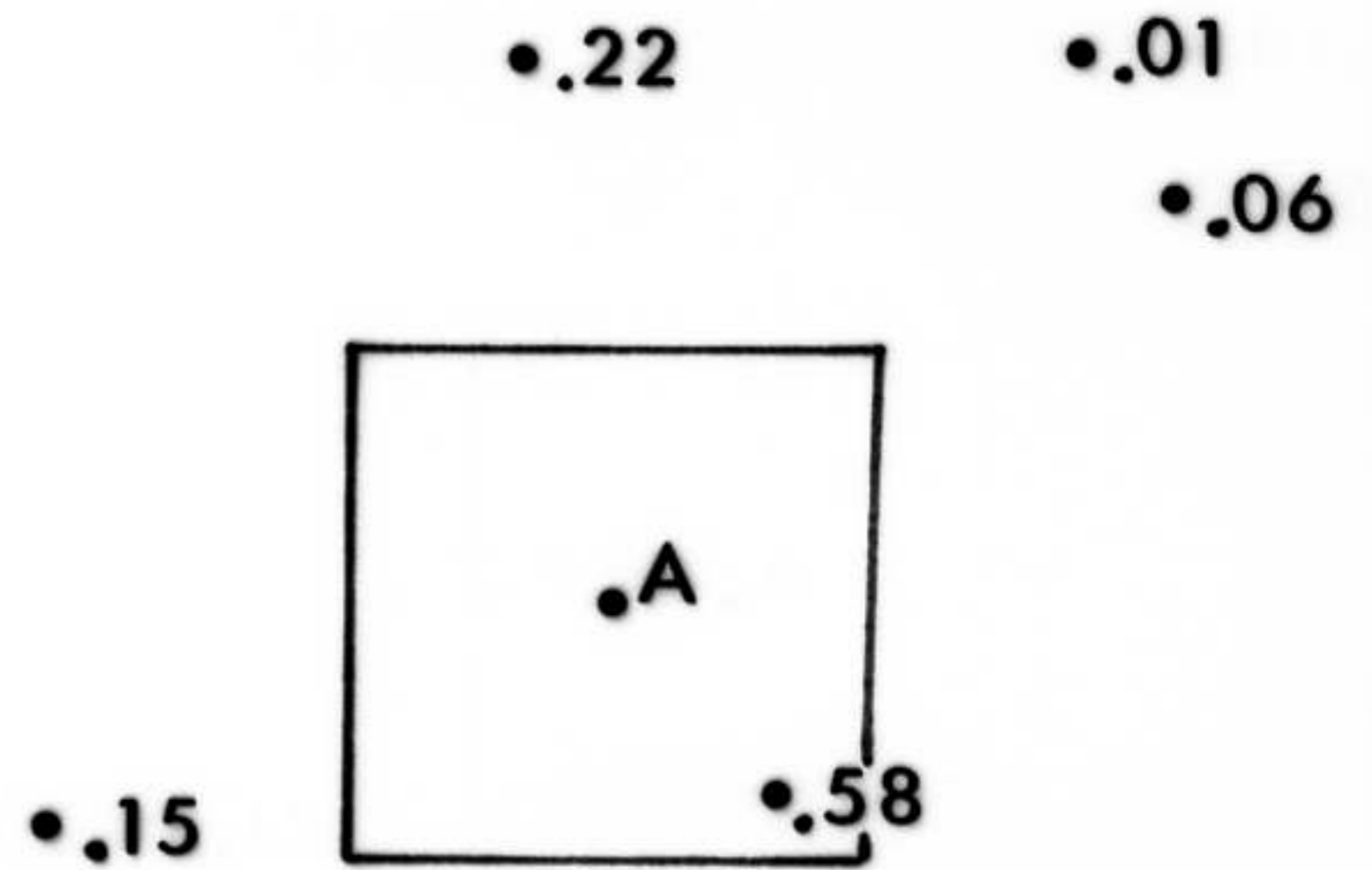


KRIGING



$1/d$



BLUE

WEIGHTING FUNCTION

• .17

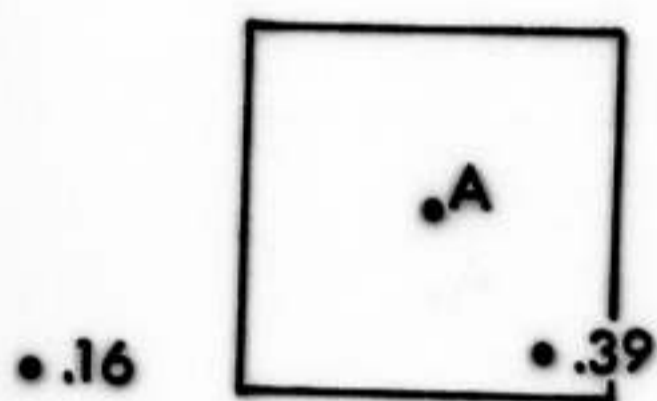
• .13

• .12

• .07

• .14

• .08



$1/d$

$1/d^2$

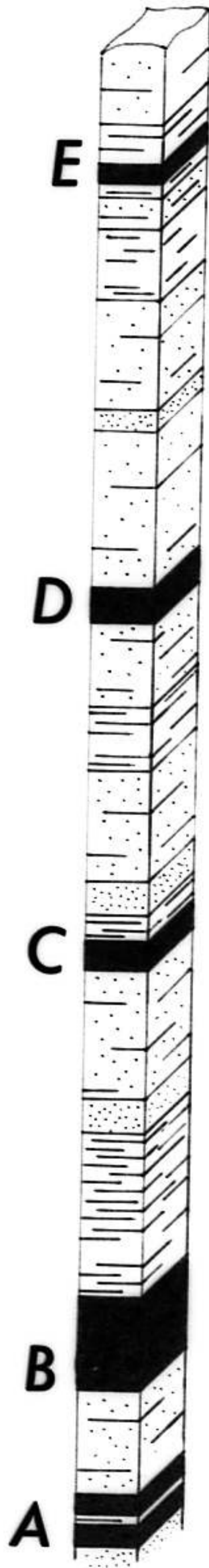
• .08



$1/d^3$



$1/d^6$



ELEVATION

KRIGE VARIANCE

TOPO
TOPE
BOTE

E.VAR

TOPD
BOTD

D.VAR

TOPC
BOTC

C.VAR

TOPB

B.VAR

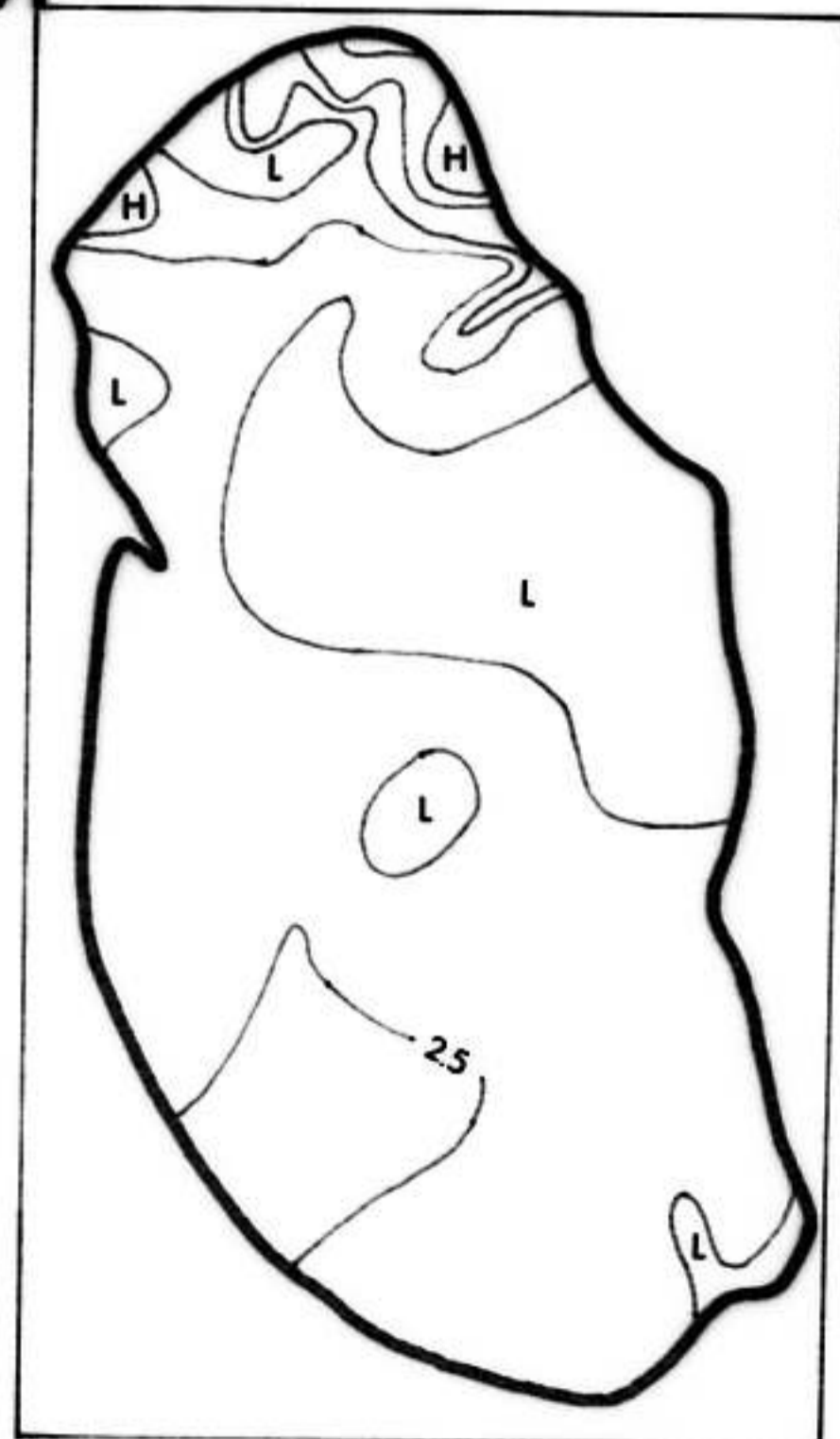
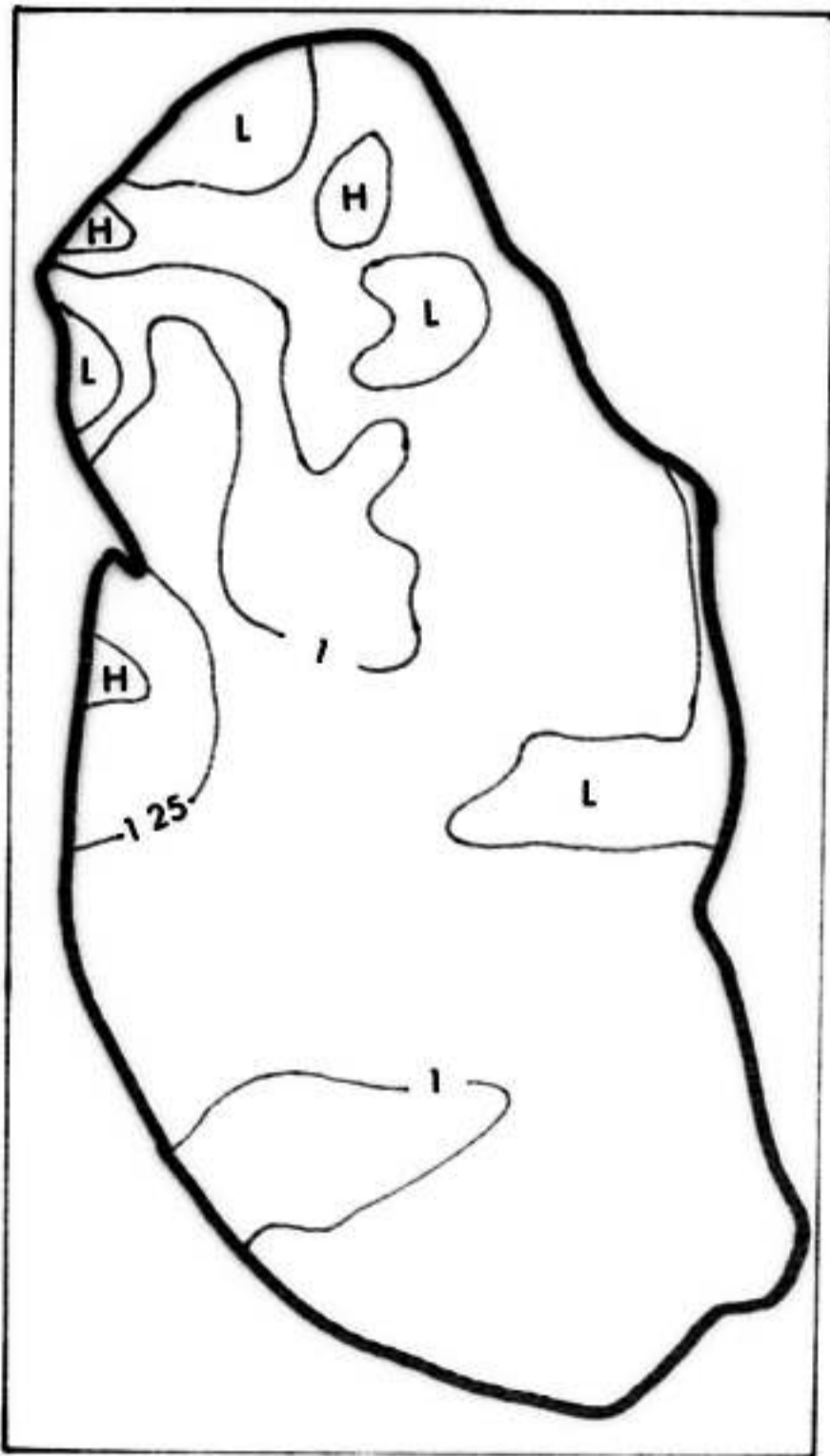
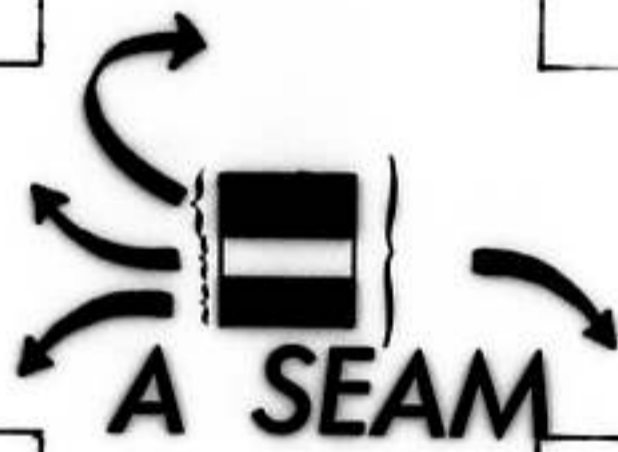
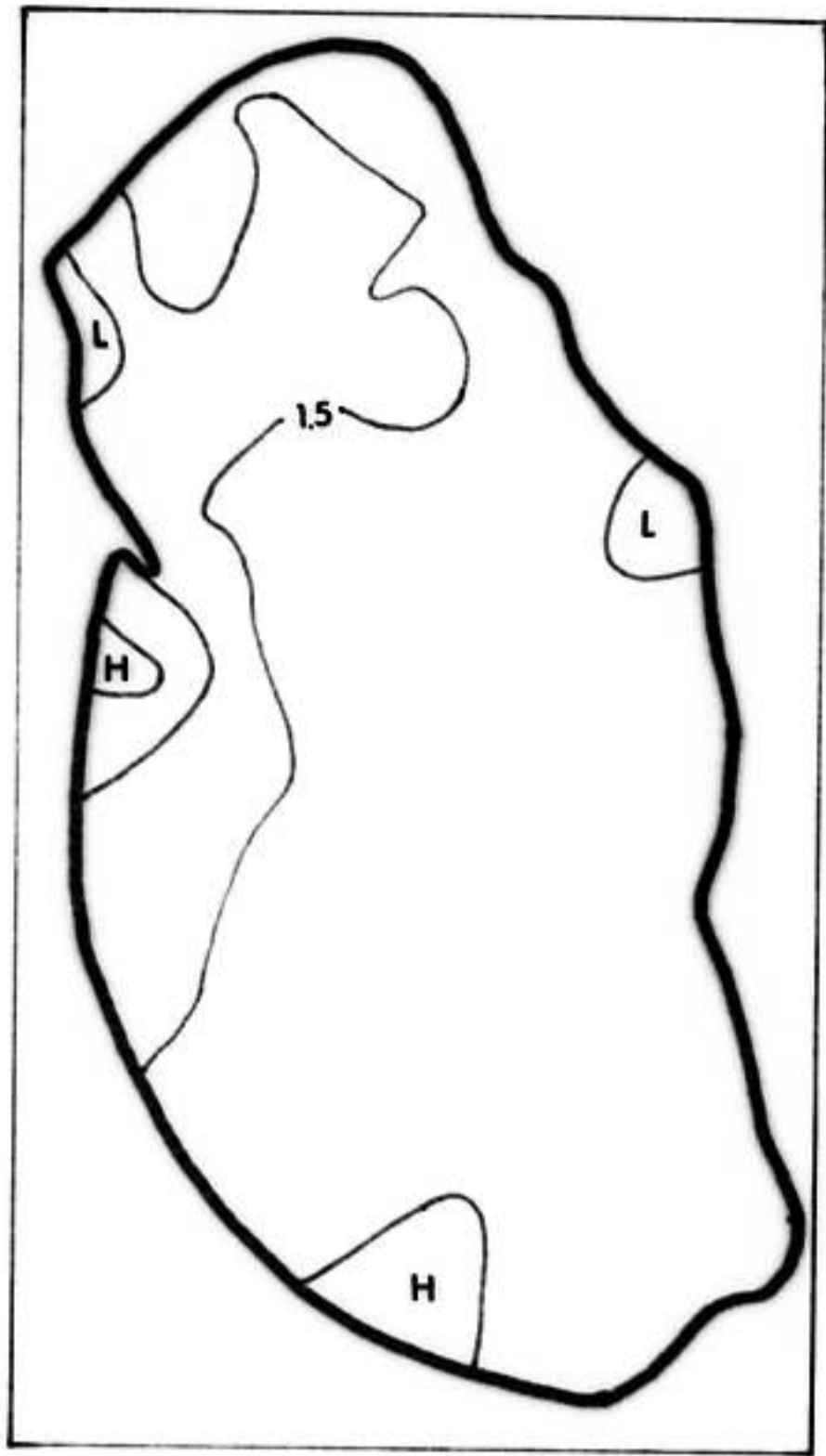
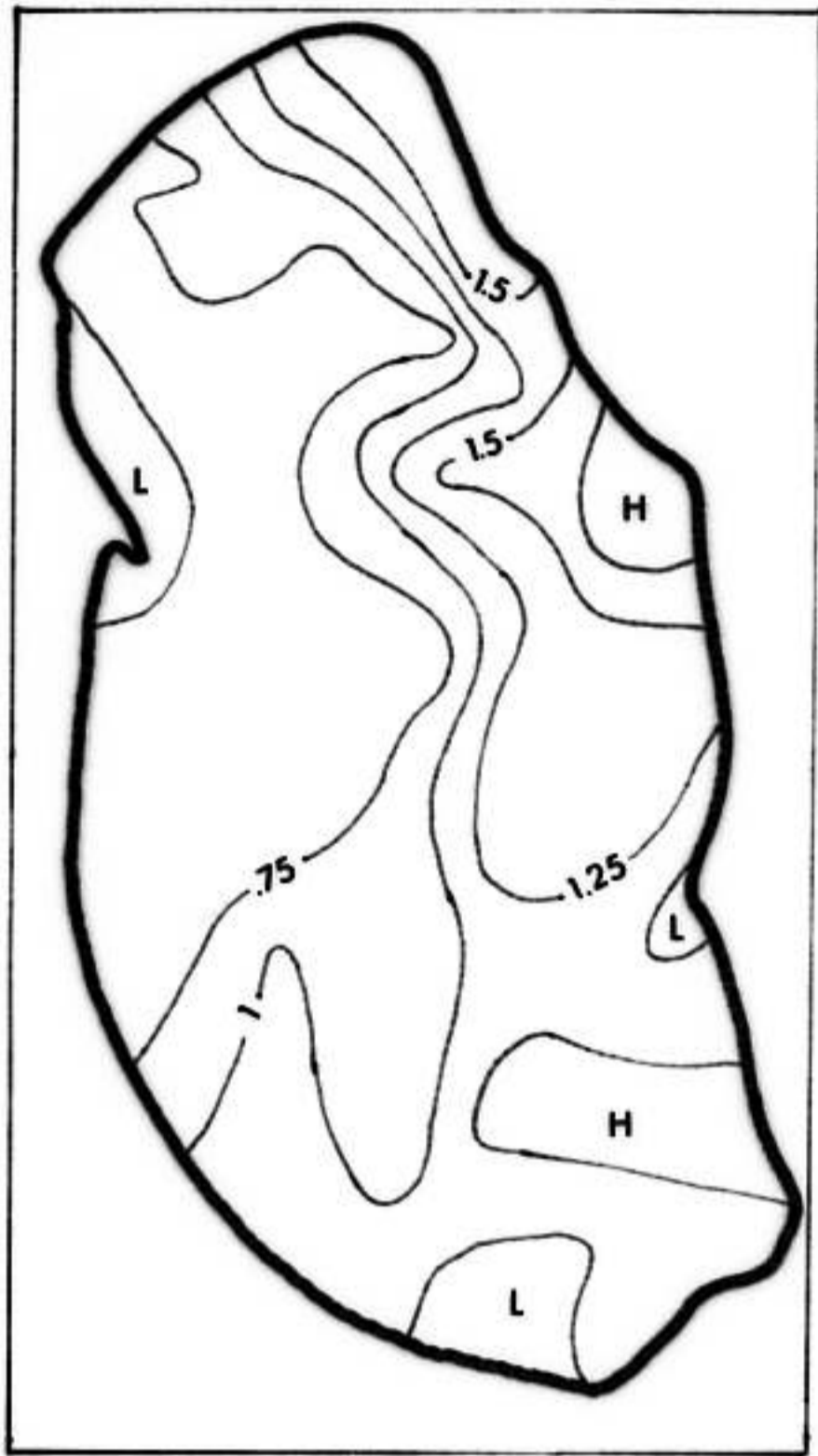
BOTB

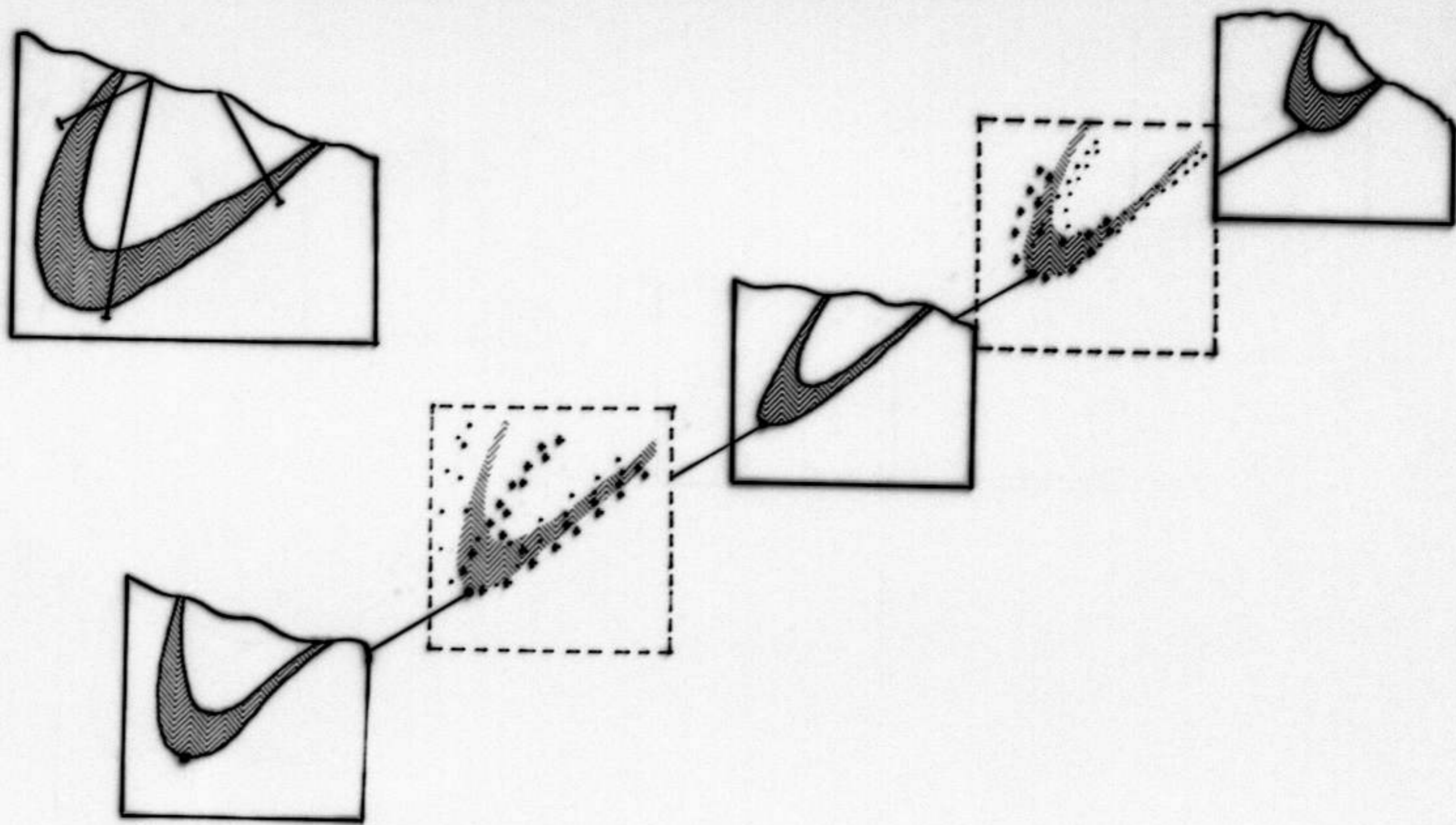
TOPA
TOPAP
BOTAP
BOTA

A.VAR

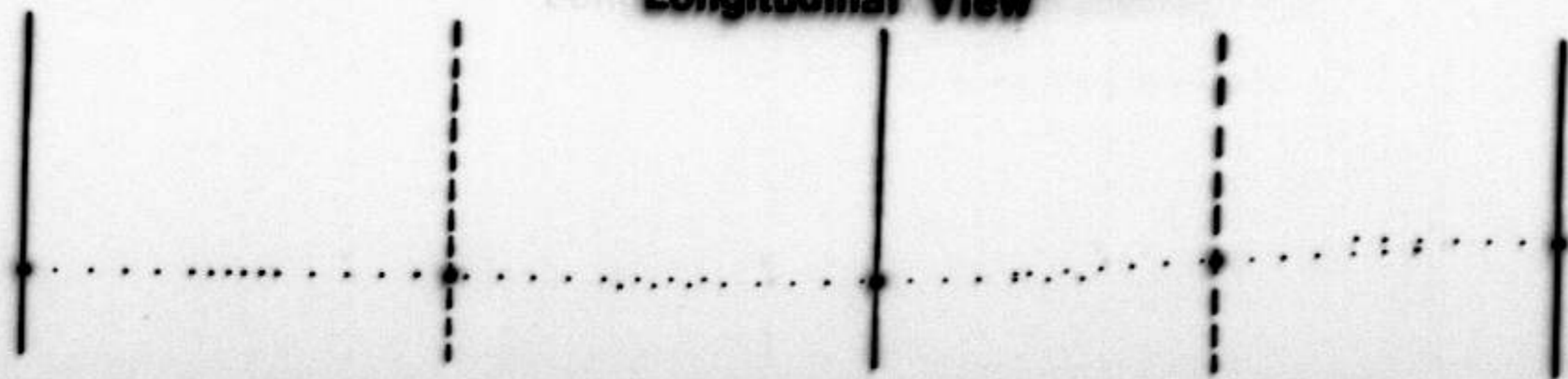
AP.VAR

MODEL GRIDS





Longitudinal View



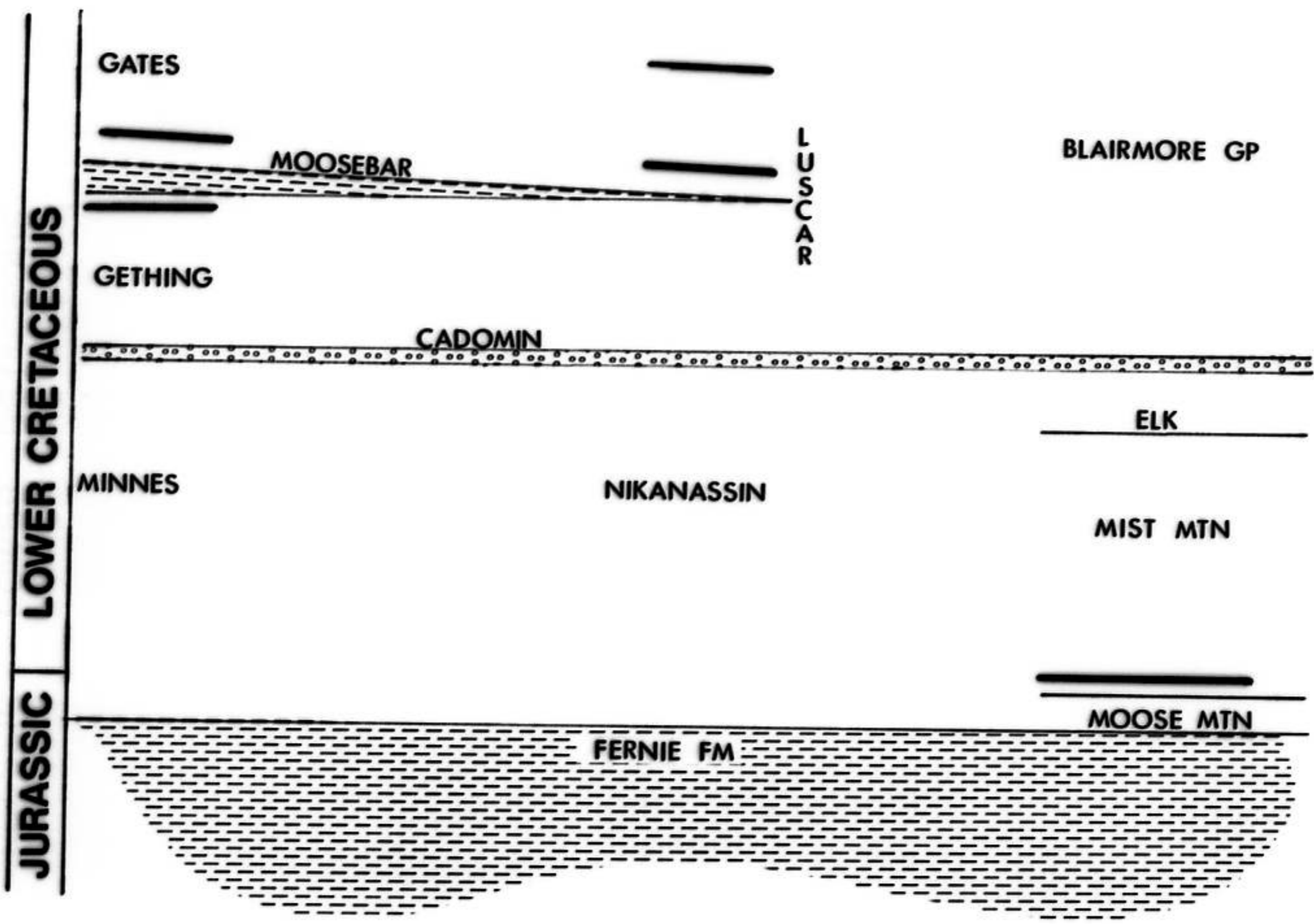
N

S

BULLMOOSE

MOUNTAIN PARK

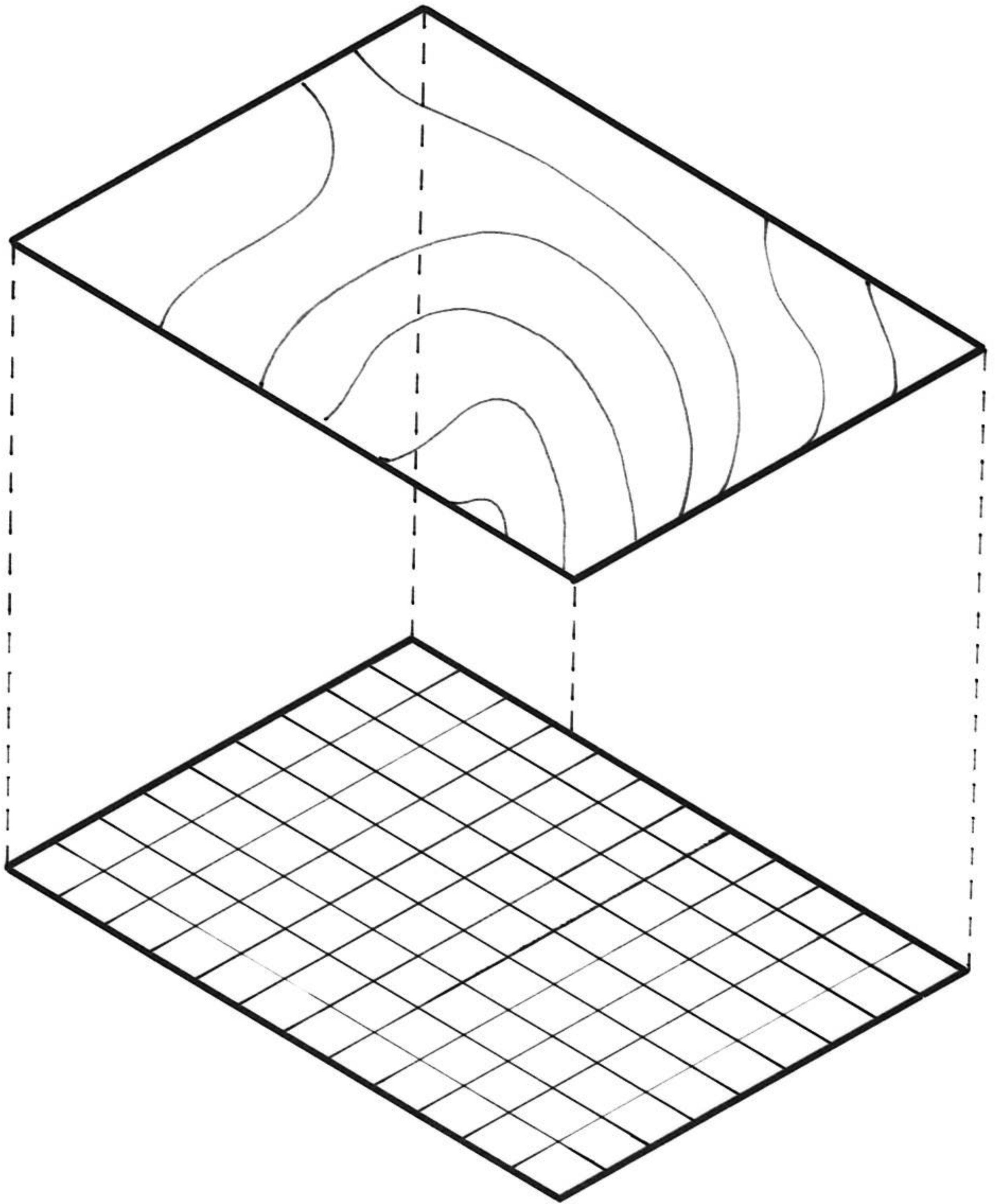
COAL MTN.

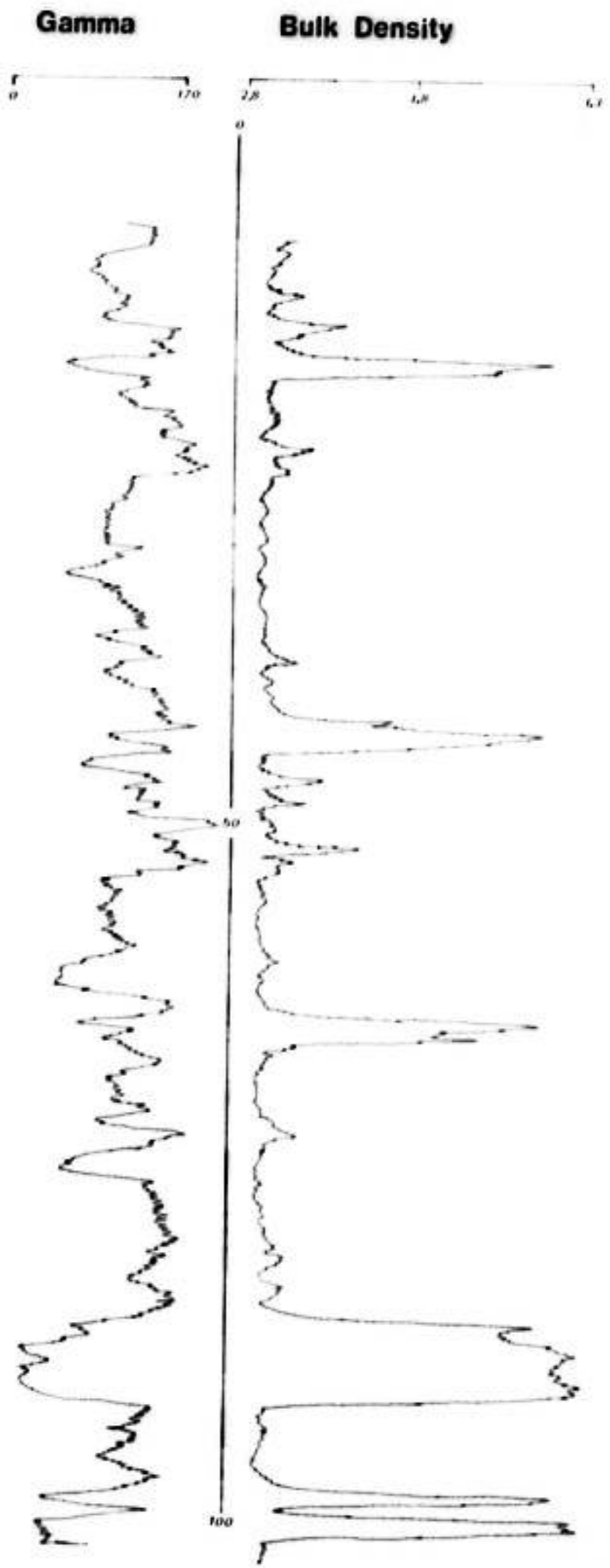
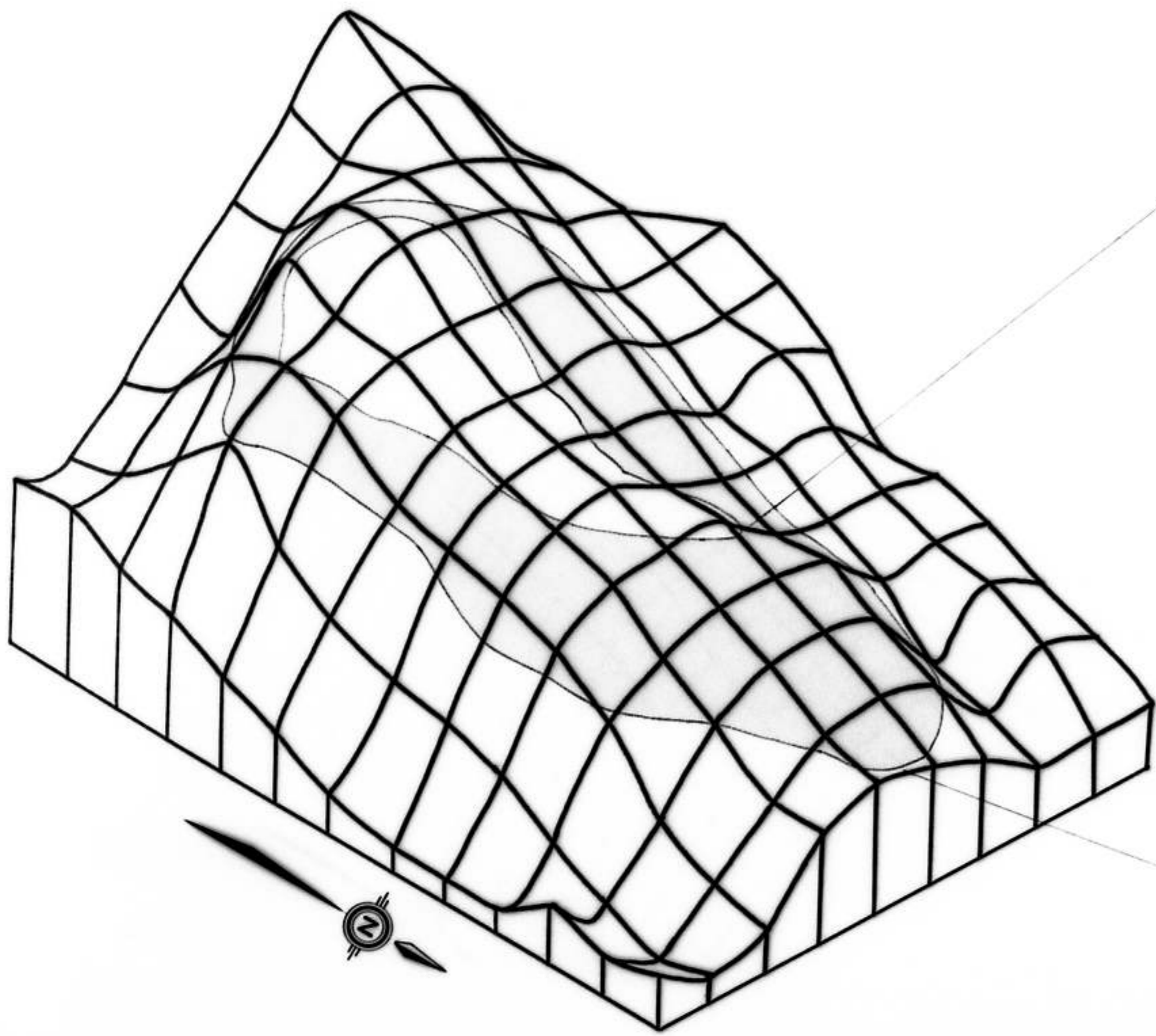


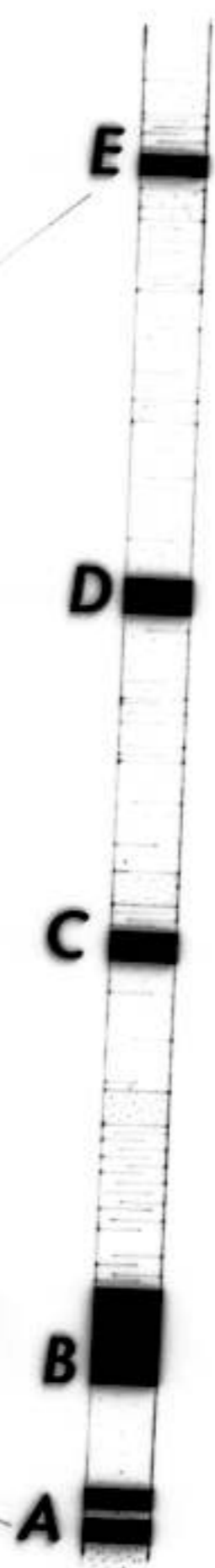
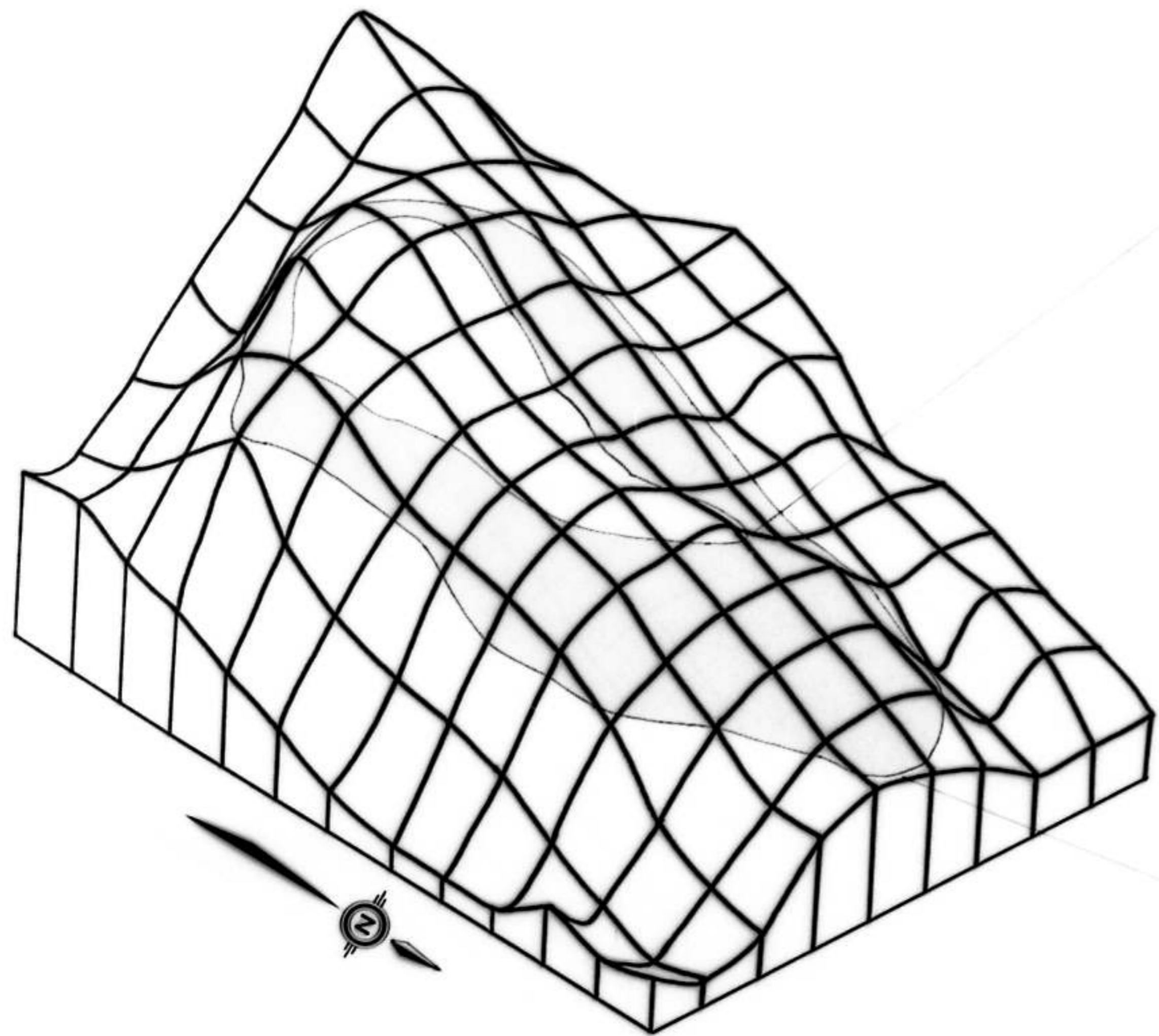
BLAIRMORE GP

LOWER CRETACEOUS
JURASSIC

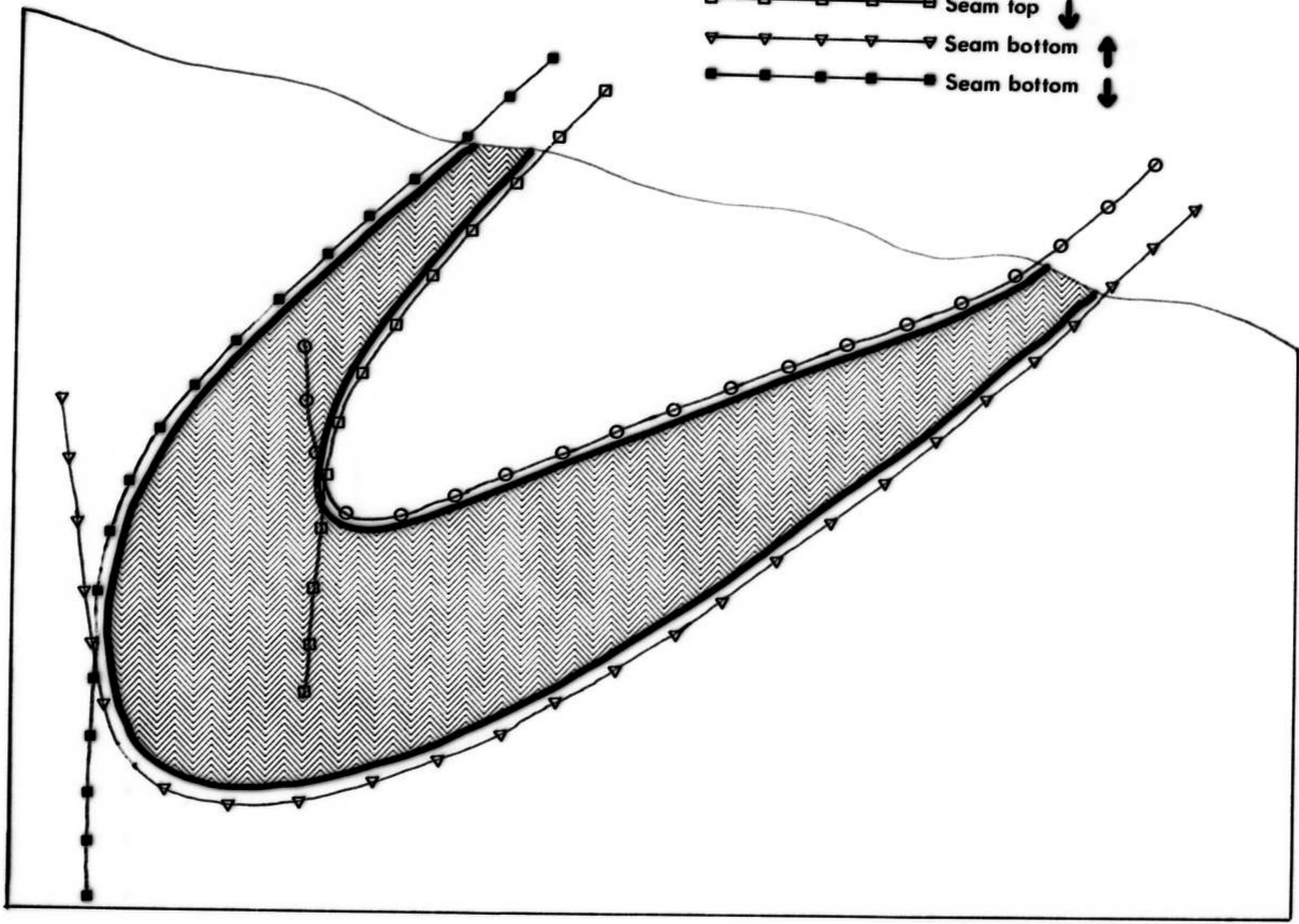
LUSCAR







- Seam top ↑
- Seam top ↓
- ▽—▽—▽—▽—▽ Seam bottom ↑
- Seam bottom ↓



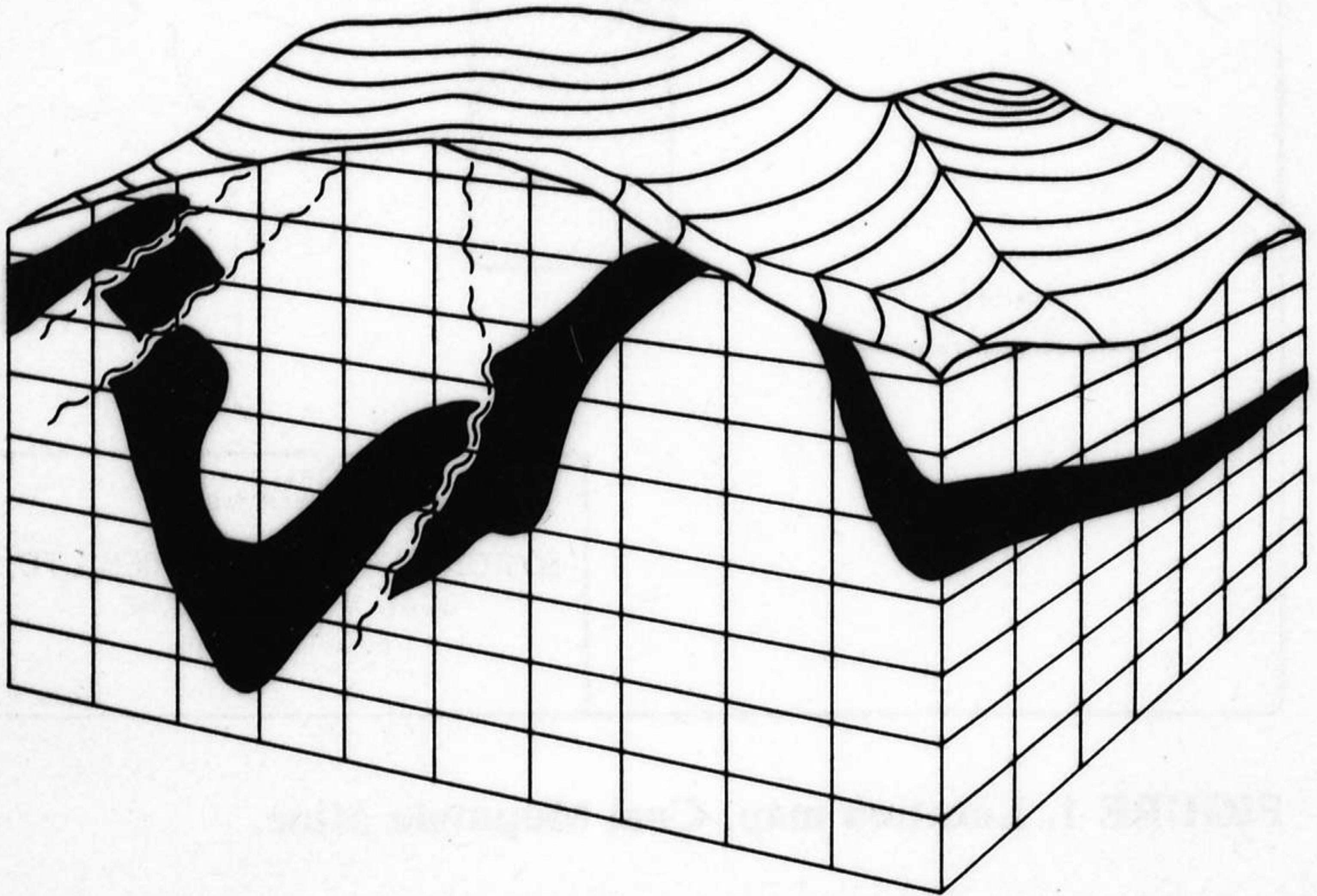
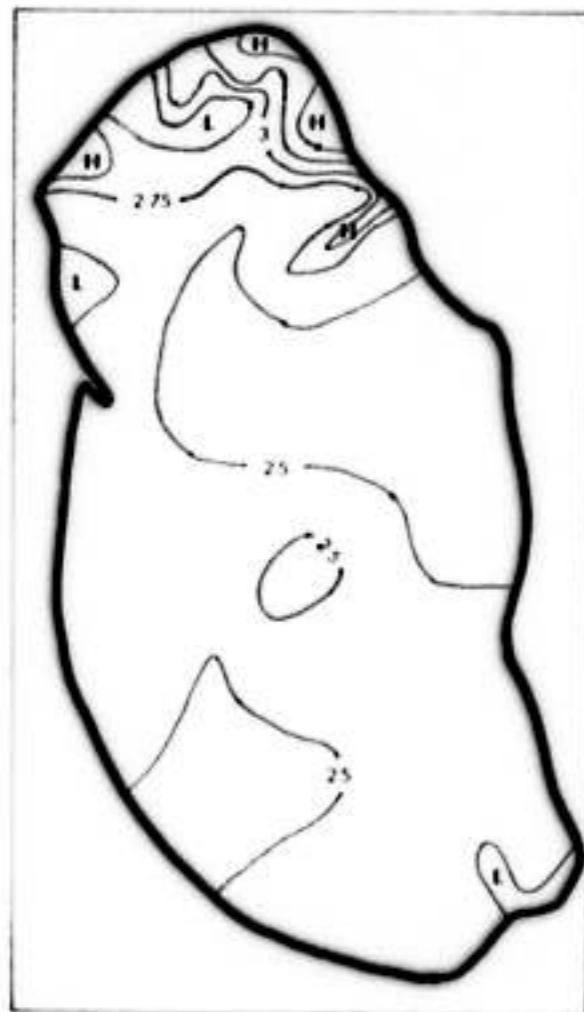
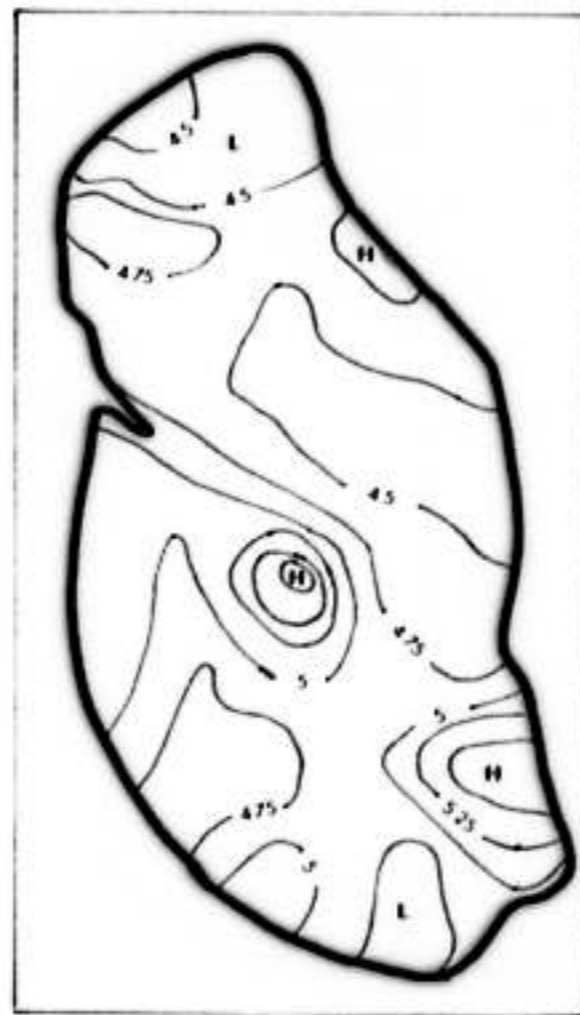


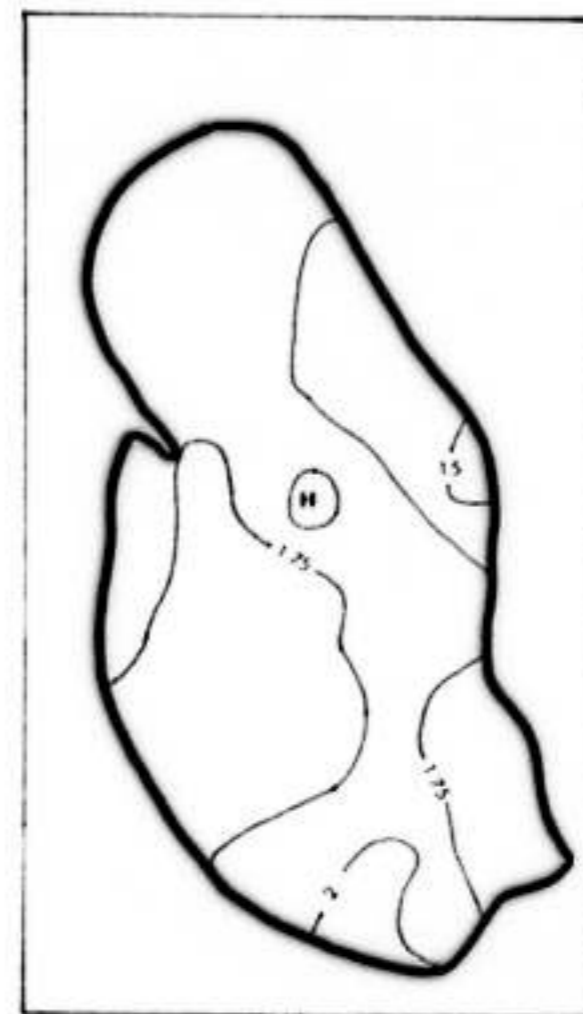
FIGURE 8. Developing a three-dimensional block model.



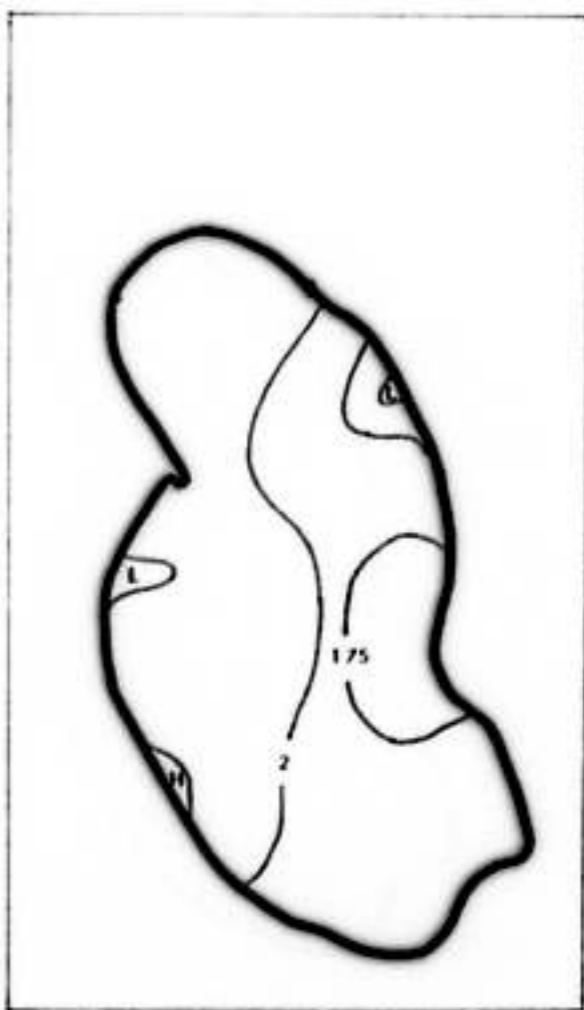
A



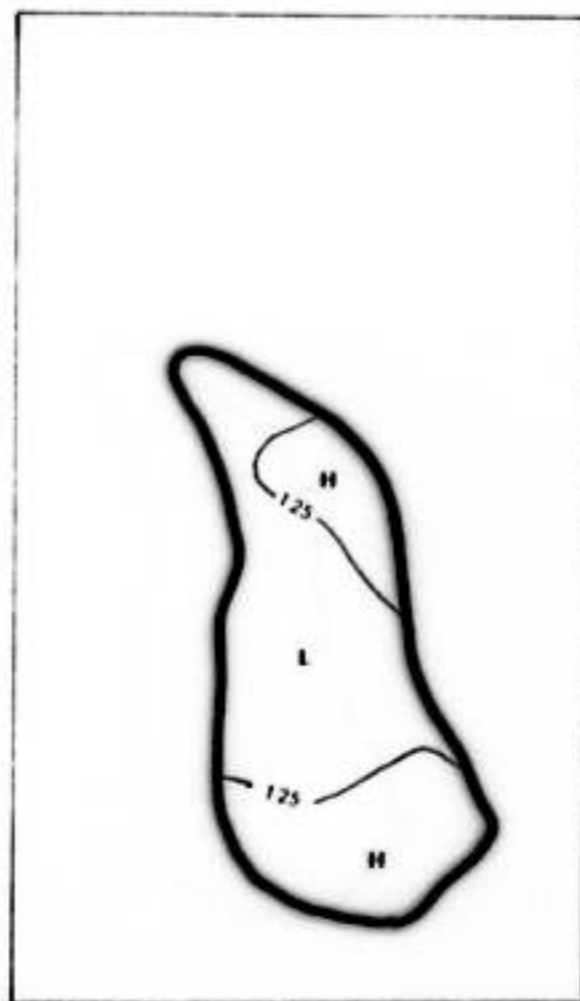
B



C



D



E



**BULLMOOSE
SEAM THICKNESS**



CONTOUR INTERVAL 25m

SEARCH RADIUS 400m

SINGLE POINT KRIGING

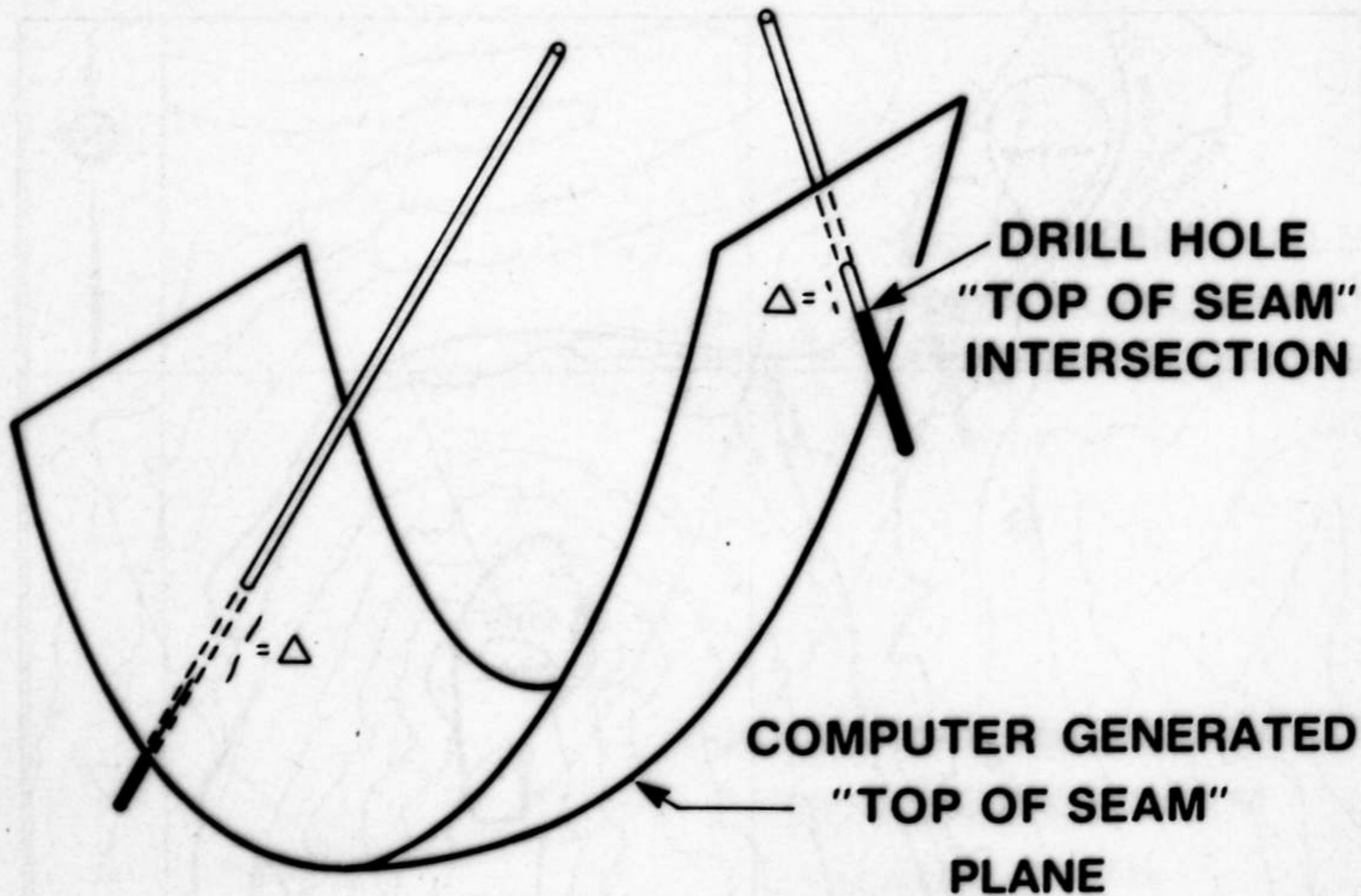
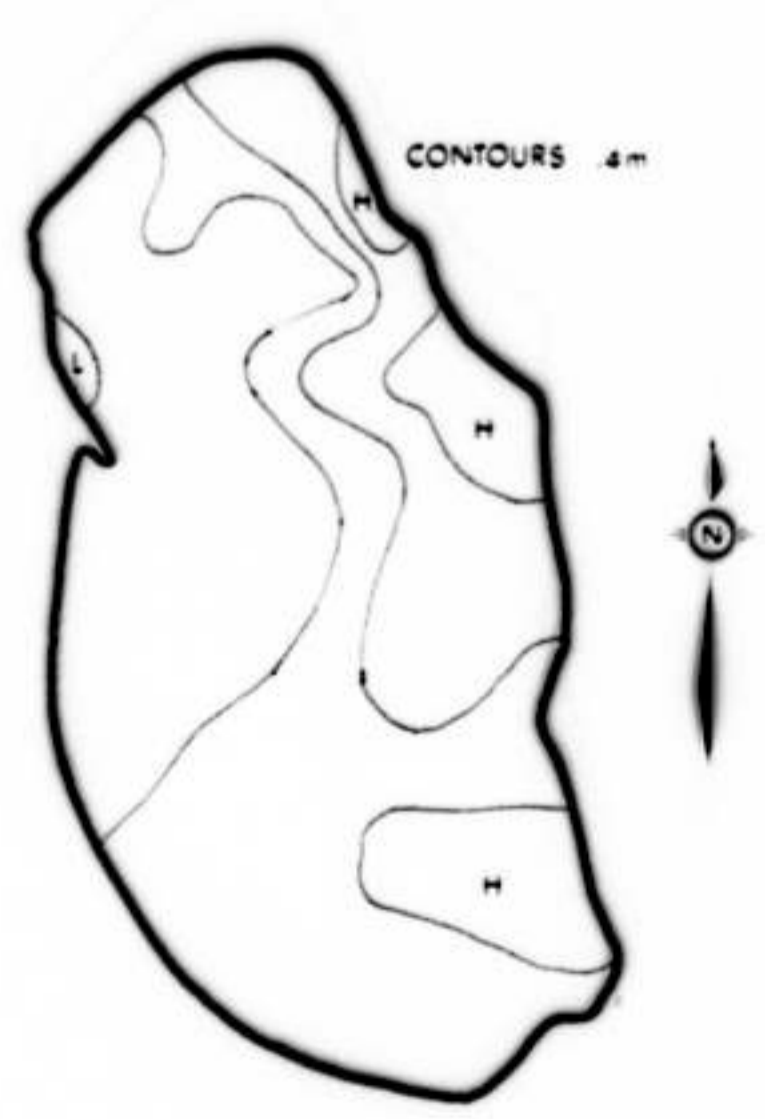
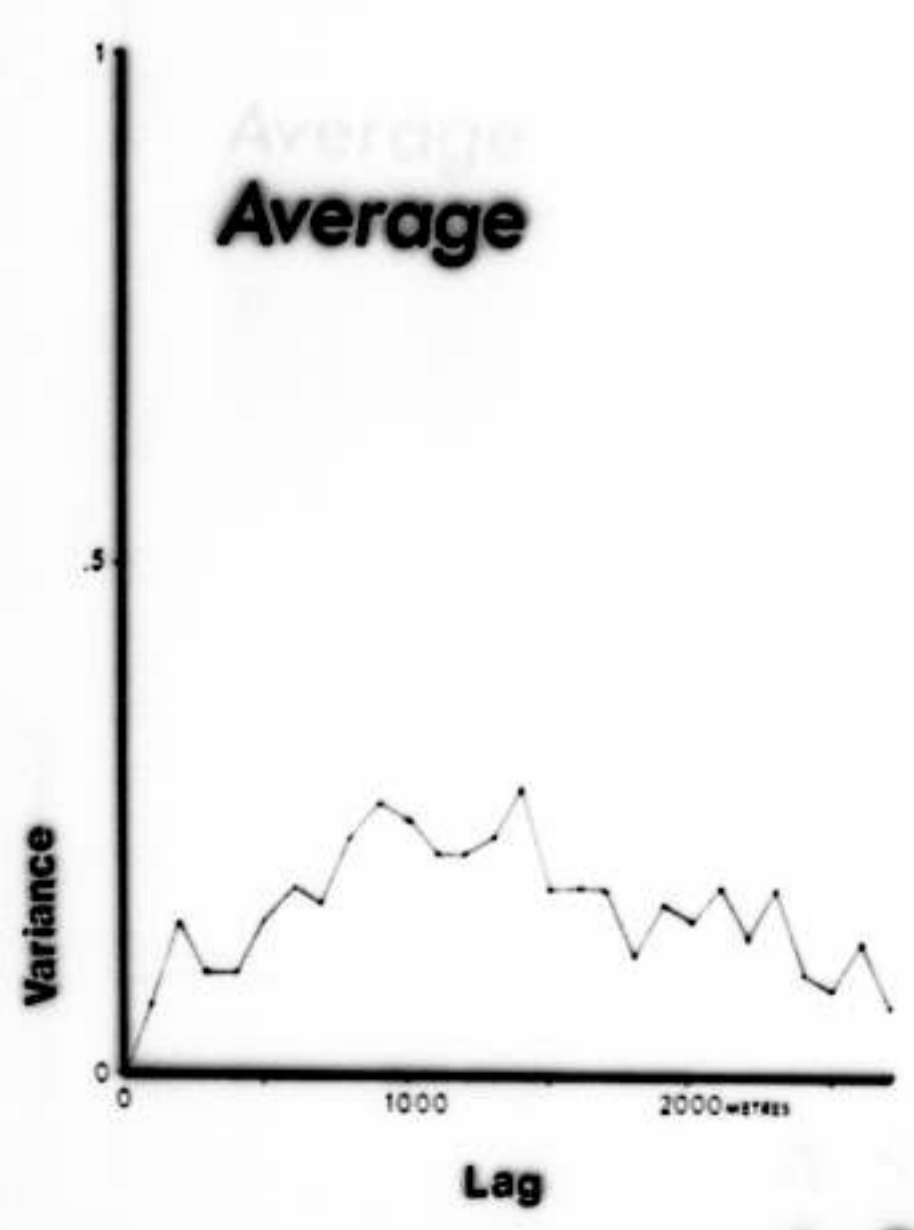
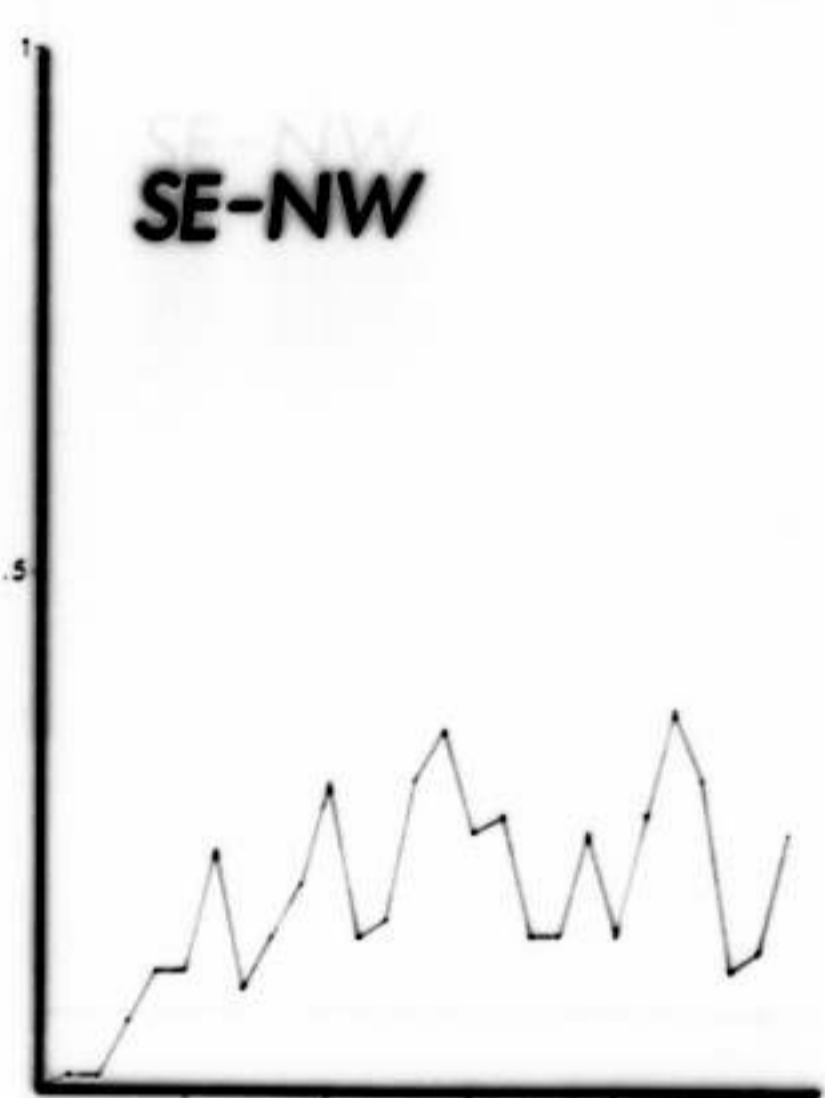
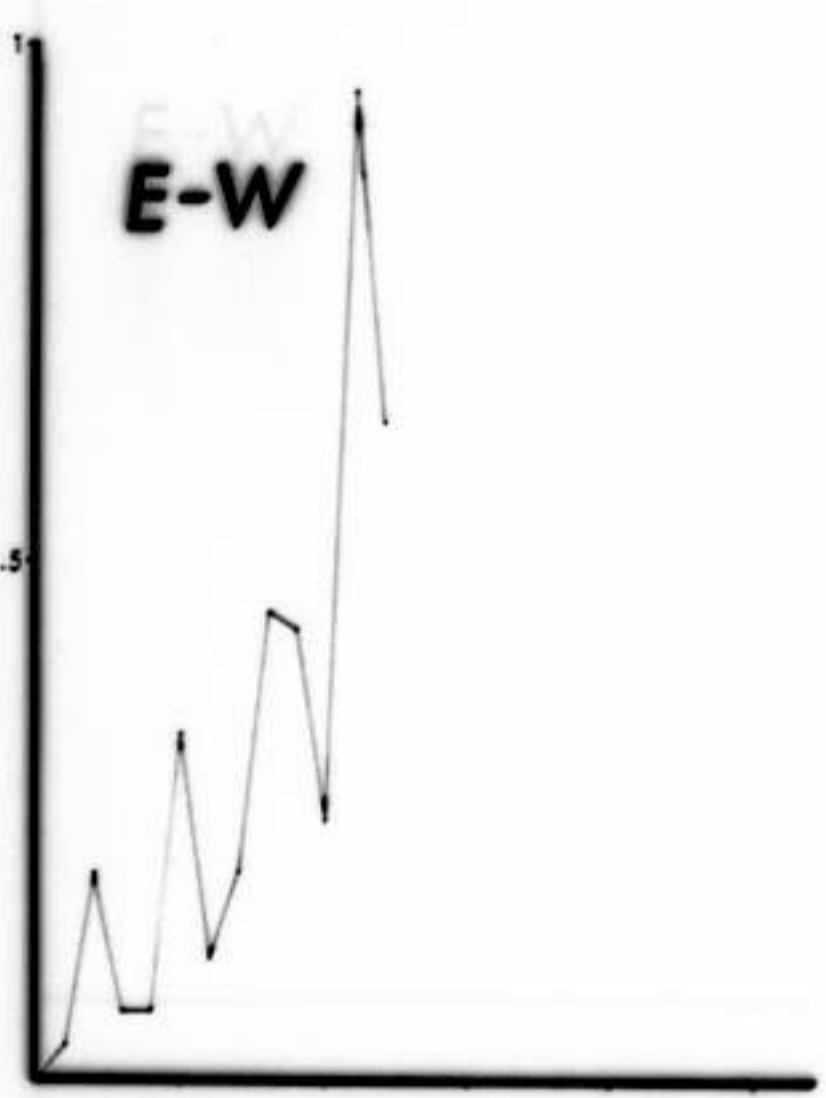
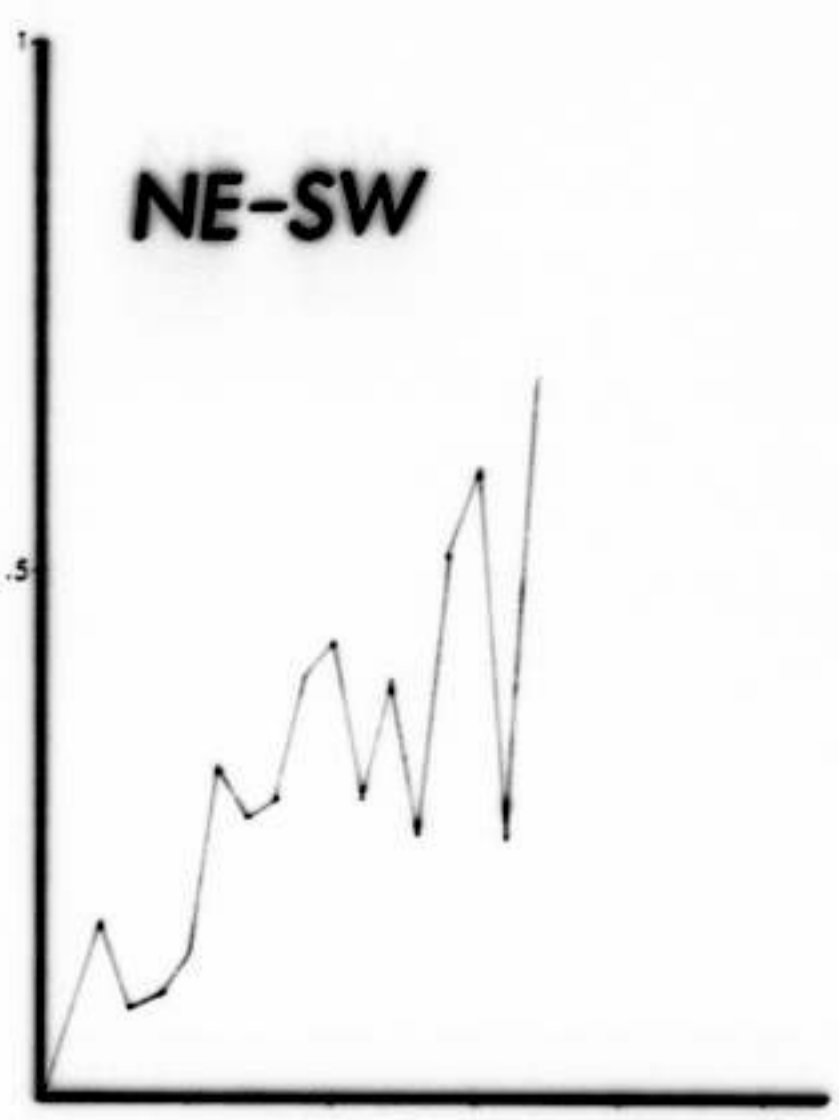
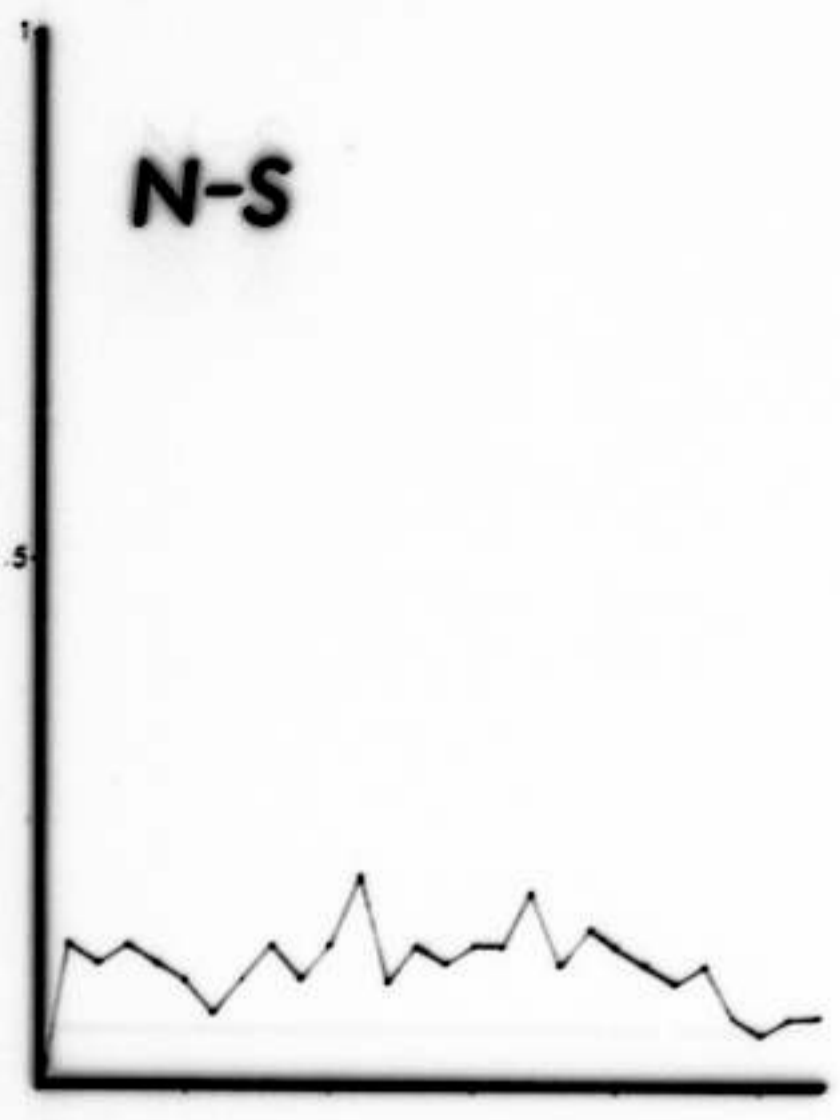


FIGURE 5. Data merge.



A SEAM PARTING

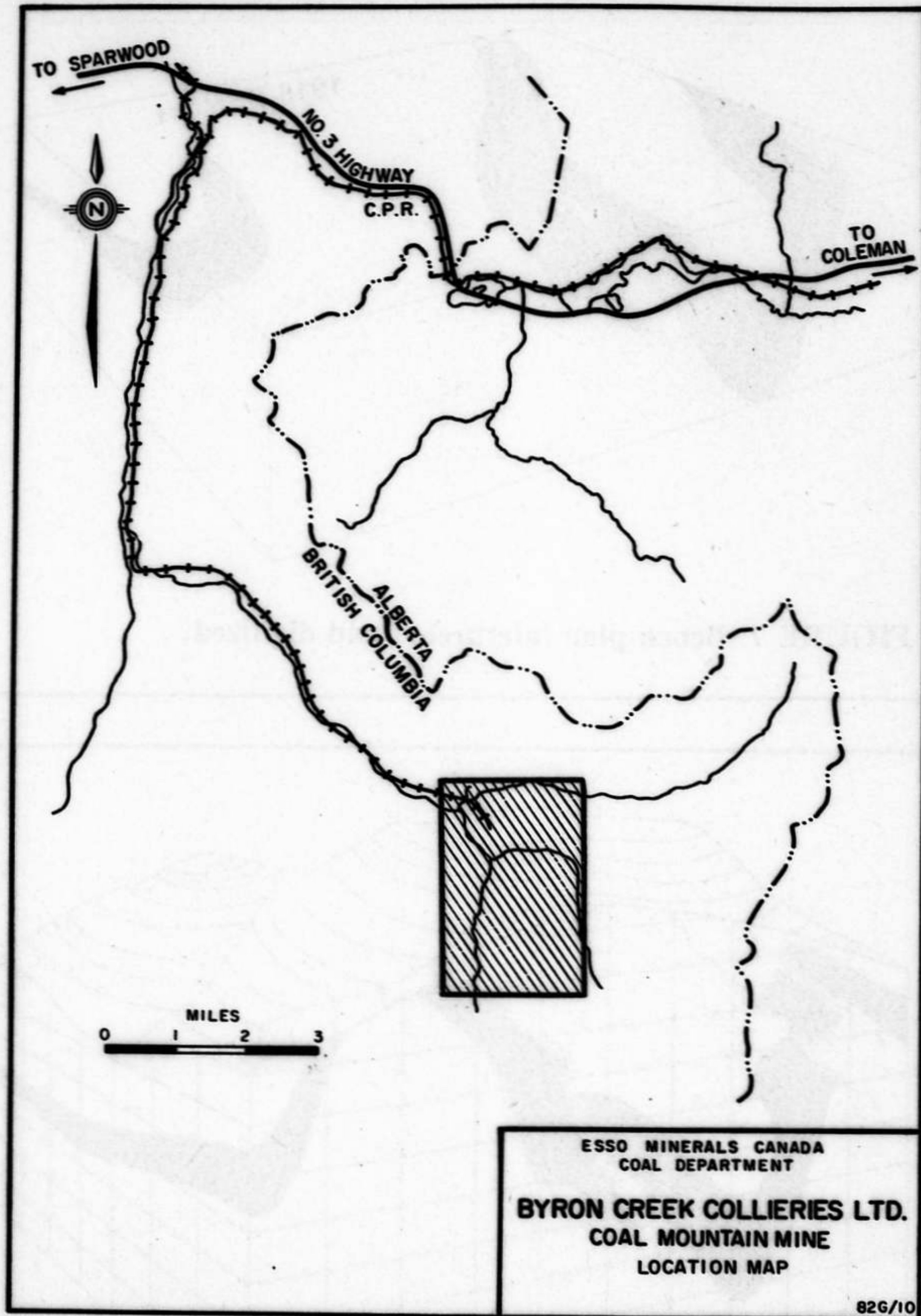


FIGURE 1. Location map, Coal Mountain Mine.

GRID MANIPULATION

SEAM ISOPACH GRID

SEAMTOP-SEAMBOT

OVERBURDEN RATIO GRID

TOPO-SEAMTOP/SEAMTOP-SEAMBOT

SEAM VOLUME

$\sum ((SEAMTOP-SEAMBOT) * 10000)$

TONNAGE

$\sum ((SEAMTOP-SEAMBOT) * 10000 * S.G.)$

CONSTRAINTS

QUALITY

< 5% ASH

< .5% SULFUR

POSITIONAL

< 15m Seam to Topo

> 500m elevation

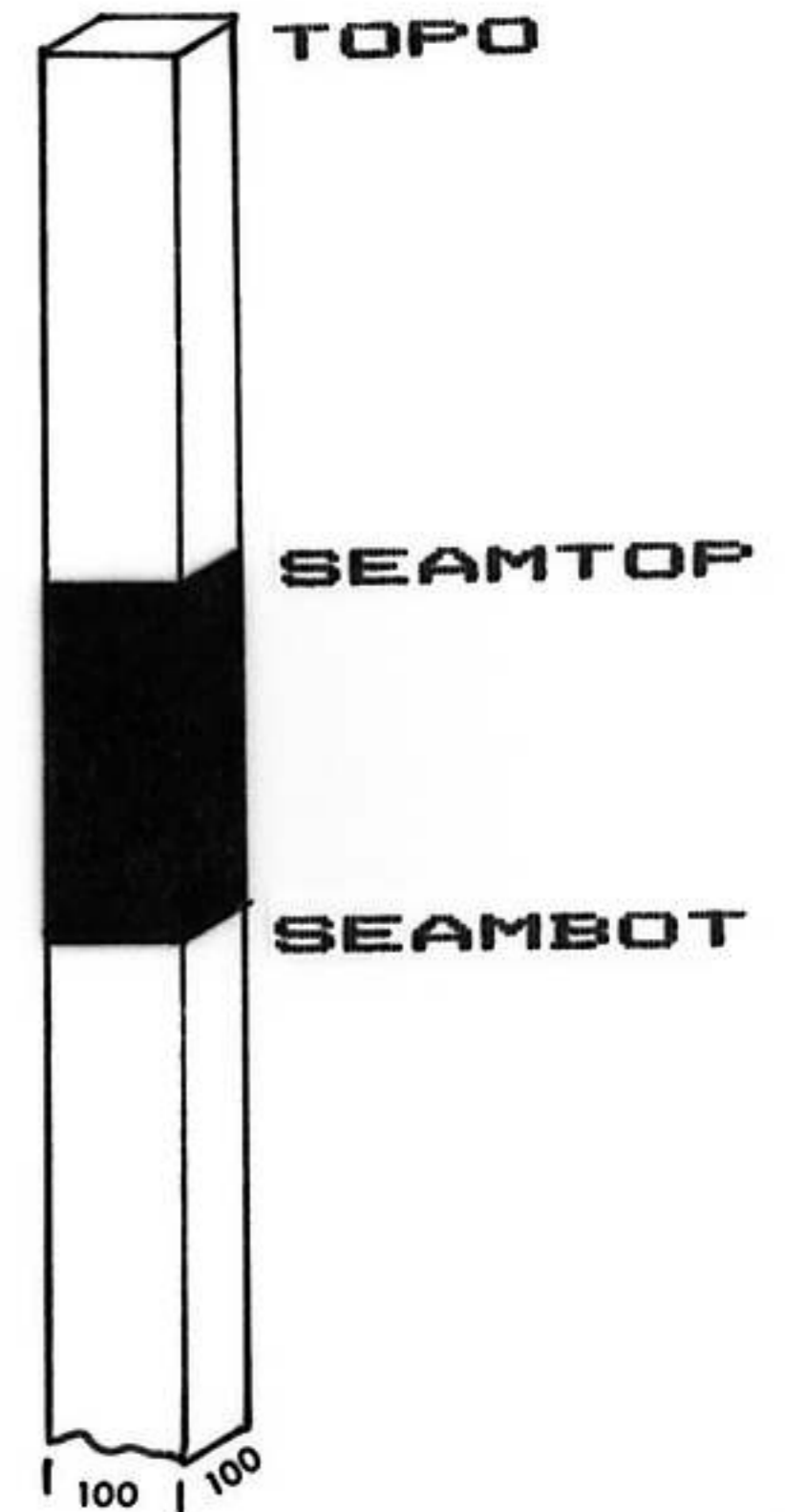
100m < ? > 110m

CONFIDENCE

Proven < 10% variation

Probable 10%-20% variation

Indicated 40%-20% variation



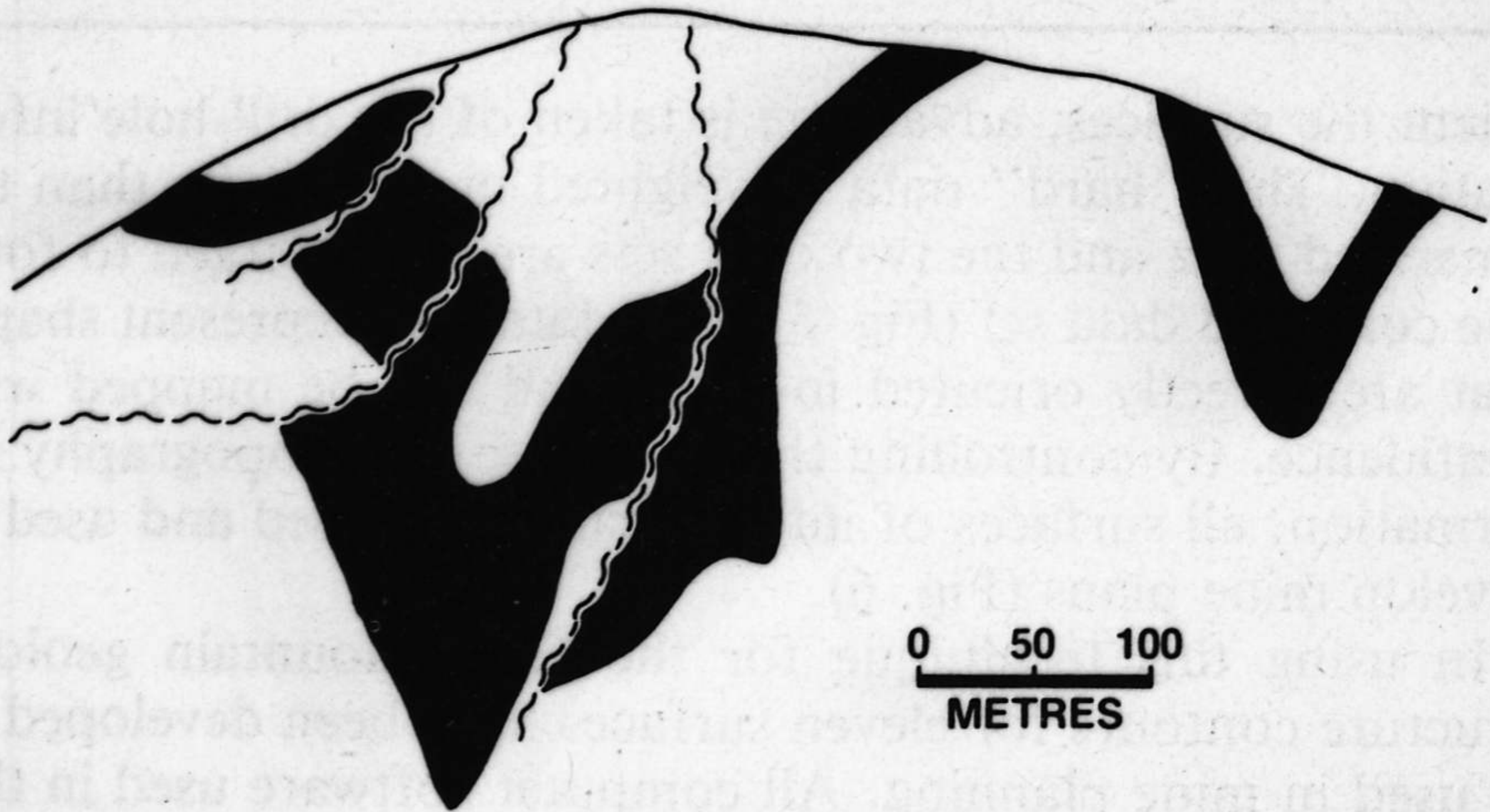
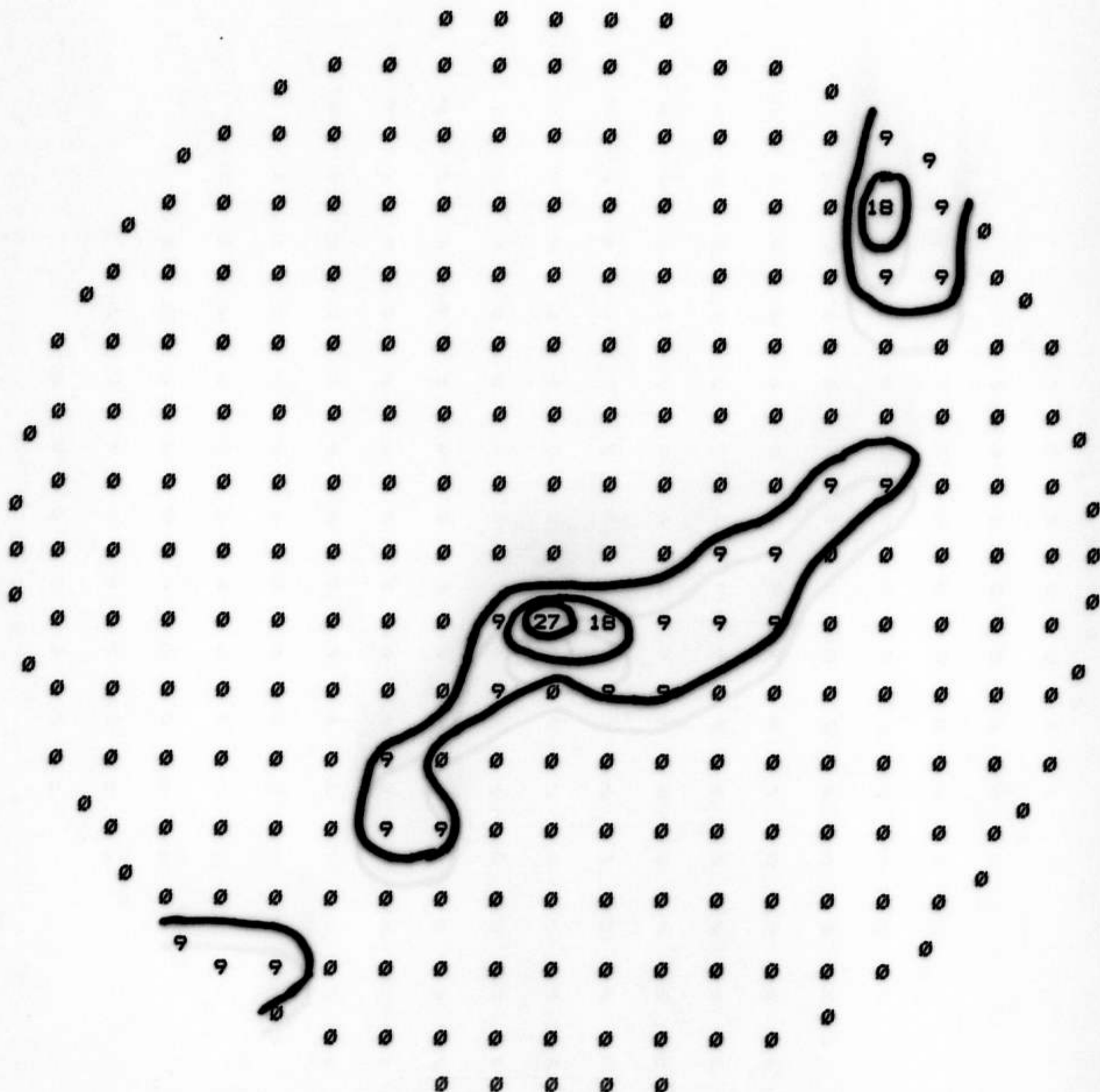


FIGURE 2. Typical section.

DUMMY DATA
 FEBRUARY 21 1983
 11 POINTS

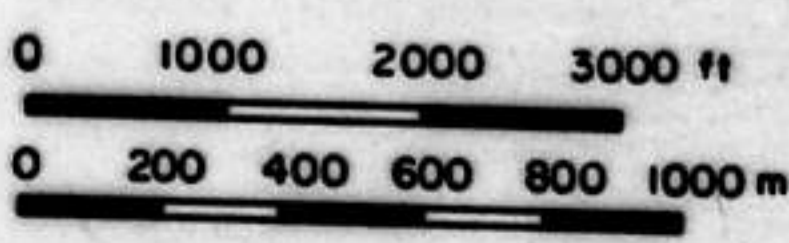
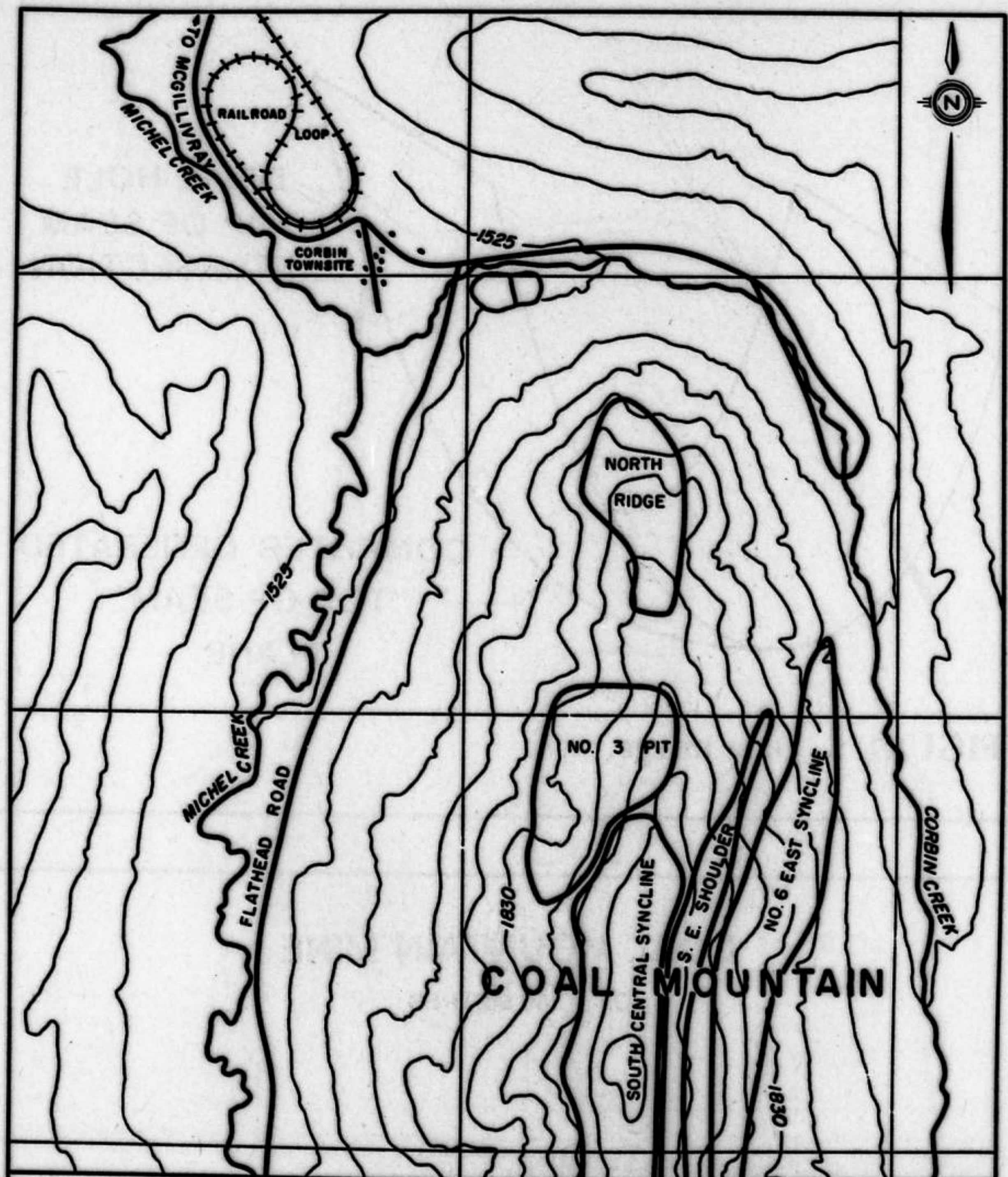
DENSITY OF POINTS IN 1 PERCENT OF AREA OF HEMISPHERE
 IN TERMS OF THE DENSITY OF A UNIFORM POPULATION
 EQUAL-AREA PROJECTION FRACTIONS TRUNCATED



*****EIGEN*****

DUMMY DATA
 FEBRUARY 21 1983
 11 SAMPLES IN SET

EIGENVAL. /N	TREND	PLUNGE
.6337	108.2	70.8
.3550	224.4	8.7
.0113	317.1	16.8



ESSO MINERALS CANADA-COAL DEPARTMENT

**BYRON CREEK COLLIERIES
STRUCTURAL RESERVE BLOCKS**

APRIL 1982

82 G - 10

FIGURE 3. Structural reserve blocks.