An investigation in the east Durham plateau into the problems of soil survey in relation to agricultural productivity: II Overlays

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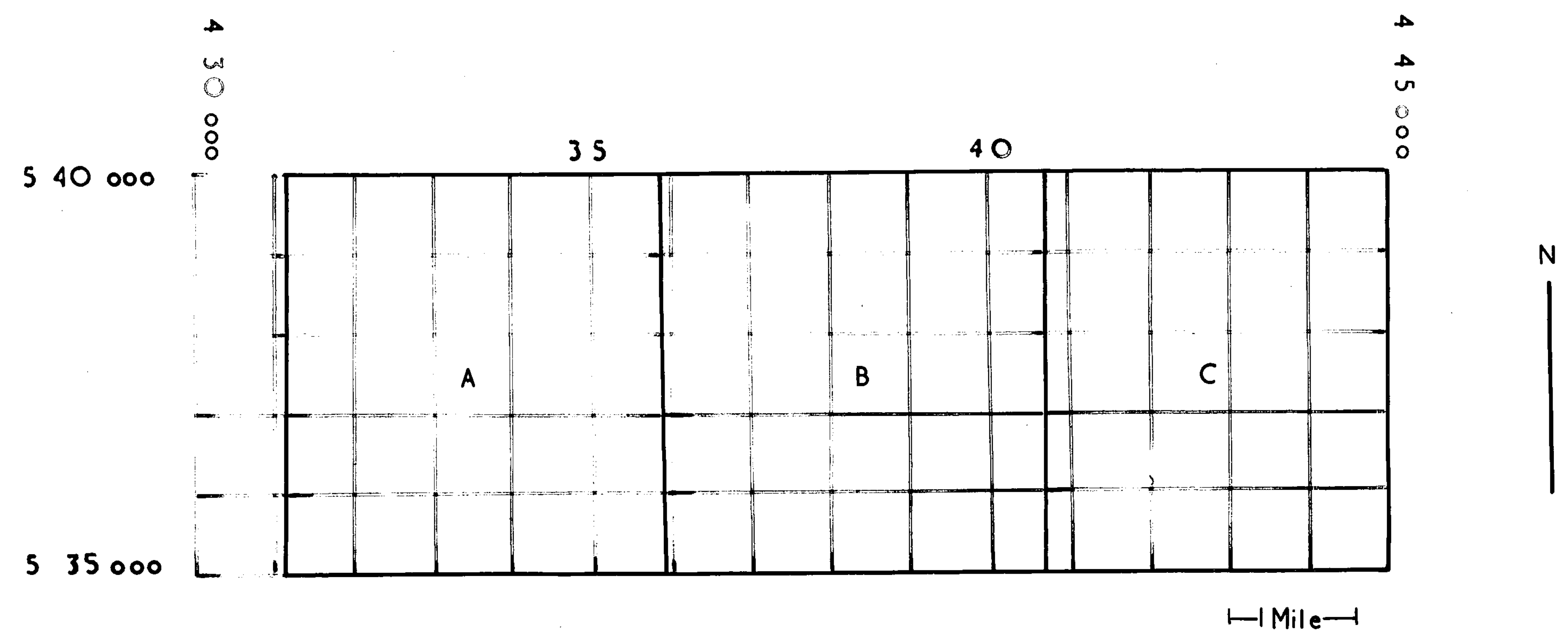
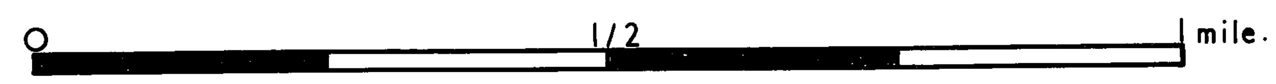
SHEET I. GENERAL KEY.



LOCATION

MAPPING SCALE 1 : 10 560

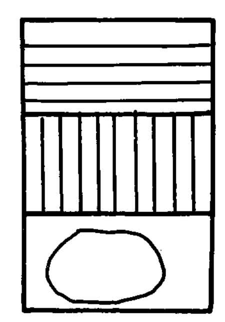


STAGE MAPS.

STAGE.	SYMBOL.	SERIES.
I	Ia Ib Ic	CORNFORTH.
	2	MIDDLEHAM.
	3	KELLOE.
	4	HASWELL.
	5	SHOTTON.
	6	HESLEDEN.
	7	MAINSFORTH.
	8	CASSOP.
	9	PRESTON.
	10	RICKNALL.

STAGE. SYMBOL

II



SETTLEMENT.

WOODLAND.

QUARRY, SLAG.

STAGE.	SYMBOL	
V & VII	——	Limit of 28 or 30cwt:acre barley yields.
	— —	Limit of 30 or 33 cwt acre wheat yields.
	BARLEY+	Area of barley with yields greater than 28 or 30cwt : acre.
	WHEAT+	Wheat yields greater than 30 or 33cwt.

STAGE.	SYMBOL.	
III	B	BARLEY.
	W	WHEAT.
	O	OATS.
	T	ROOTS.
	P	POTATOES.
	C	CABBAGE AND KALE.
	T	TEMPORARY GRASS.
	P	PERMANENT PASTURE.

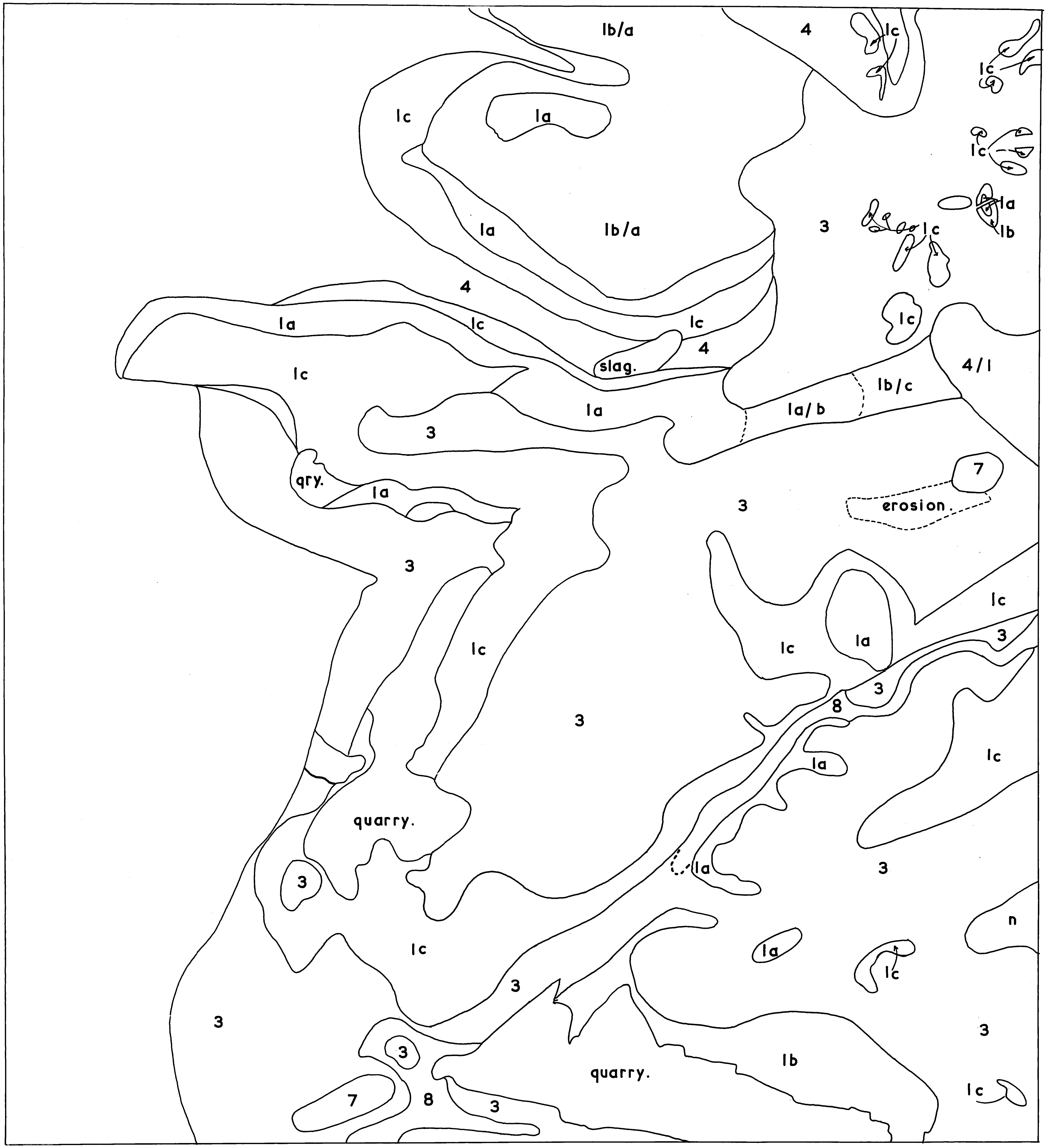
VIII e.g. BARLEY ZONALLY DOMINANT CEREAL.

+ +	BARLEY	OATS	All measured as yields greater + or less − than economic levels.
+ +	WHEAT	POTATOES	

X All boundary lines transitional. Broken lines of less importance or assumed boundaries. Nutrient deficiency in red Xa

IX eg WHEAT Cereal providing best returns and worth emphasis in agricultural system.

2 STAGE 1A

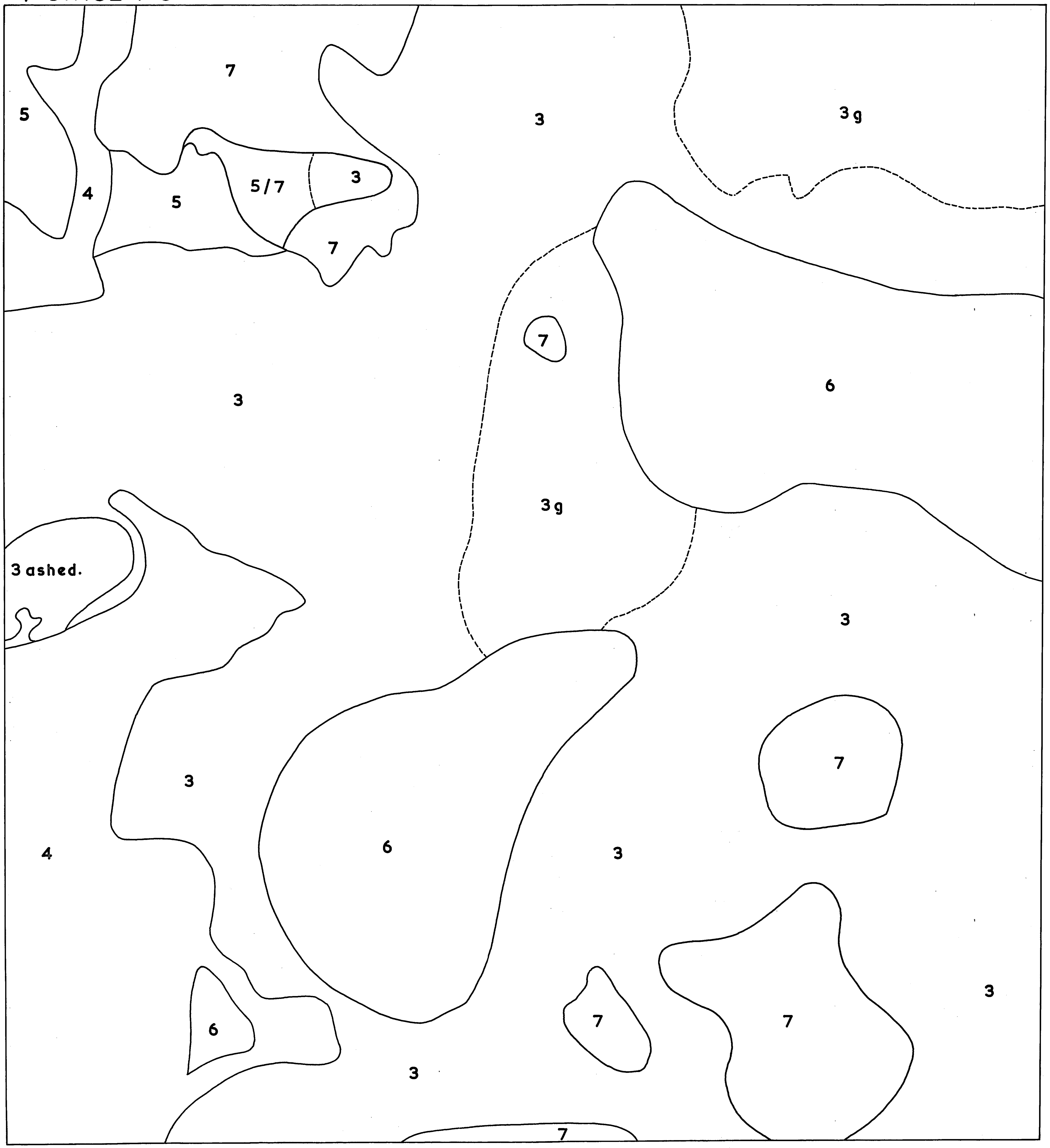


1b/a
4
1c
1c
1c
1a
1c
1a
1b
1a
1b/a
3
1c
4
1a
1c
1c
1c
4
slag.
4/1
1c
1b/c
1a
1a/b
3
7
qry.
1a
3
erosion.
3
1c
1c
1a
1c
3
3
8
3
1a
1c
quarry.
3
1a
3
n
1c
1a
1c
3
3
3
1b
quarry.
7
8
3
1c

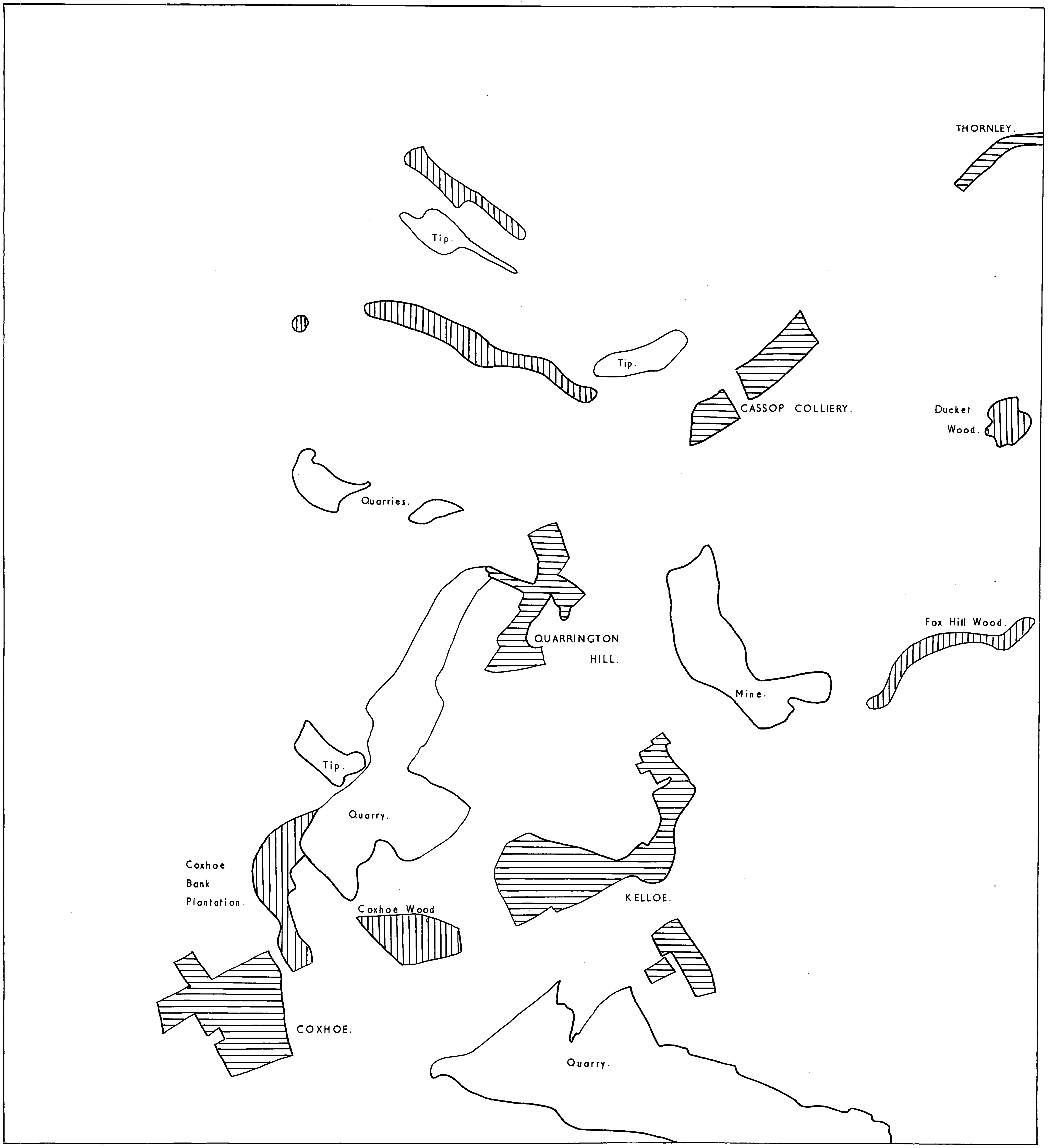
3 STAGE 1 B

3
8
4
4
8
5
1c
8
7
4
8
4/1
3
3
8
8
8
4
3
8
7
1c
1/4
1a
3
8
7
1b
ash.
7
1c
N
N
3
3/1c
4
1c
8
4/7
9

4 STAGE I C



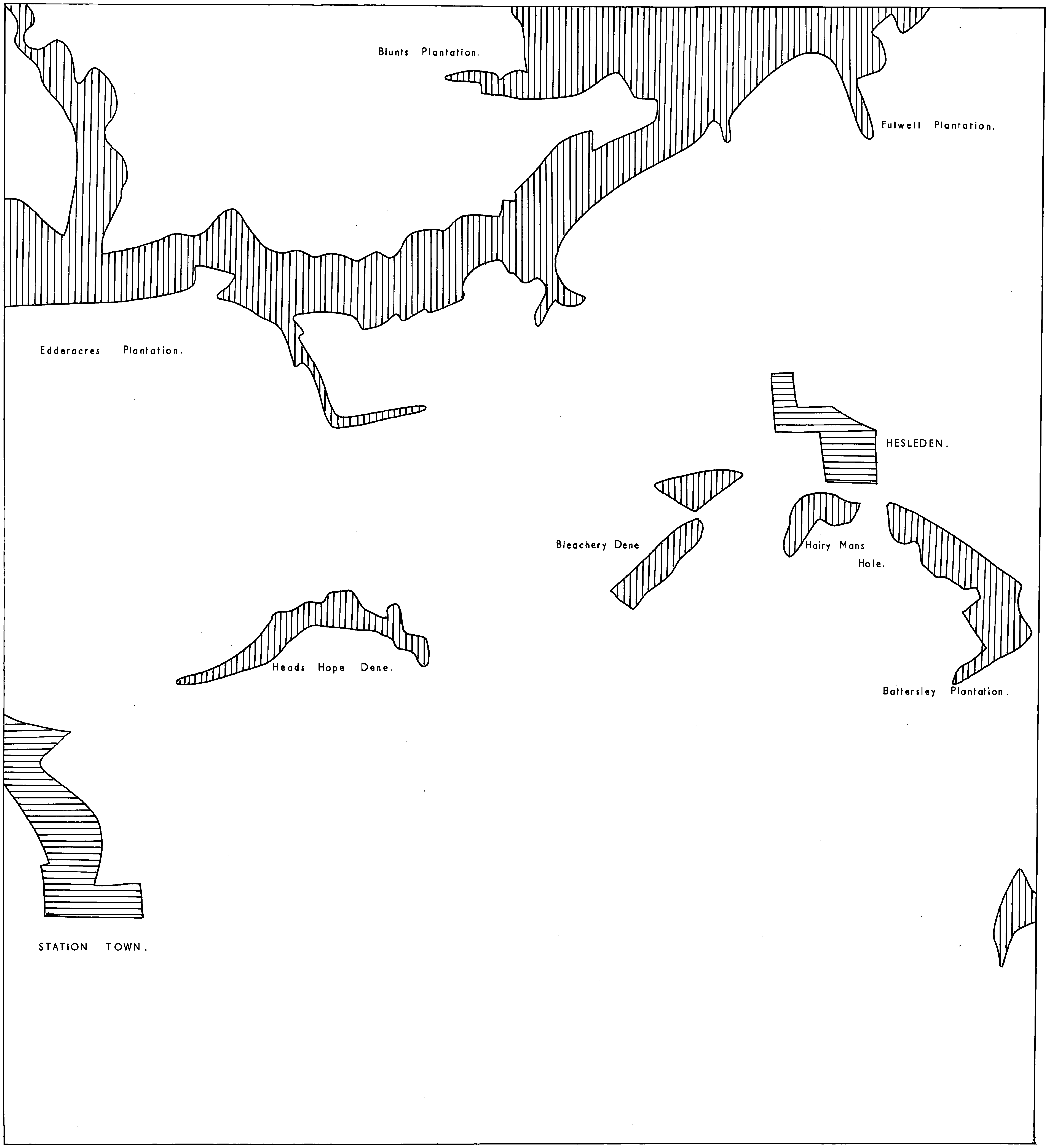
5 STAGE II A


THORNLEY.
Tip.
Tip.
CASSOP COLLIERY.
Ducket
Wood.
Quarries.
QUARRINGTON
HILL.
Mine.
Fox Hill Wood.
Tip.
Quarry.
Coxhoe
Bank
Plantation.
Coxhoe Wood
KELLOE.
COXHOE.
Quarry.

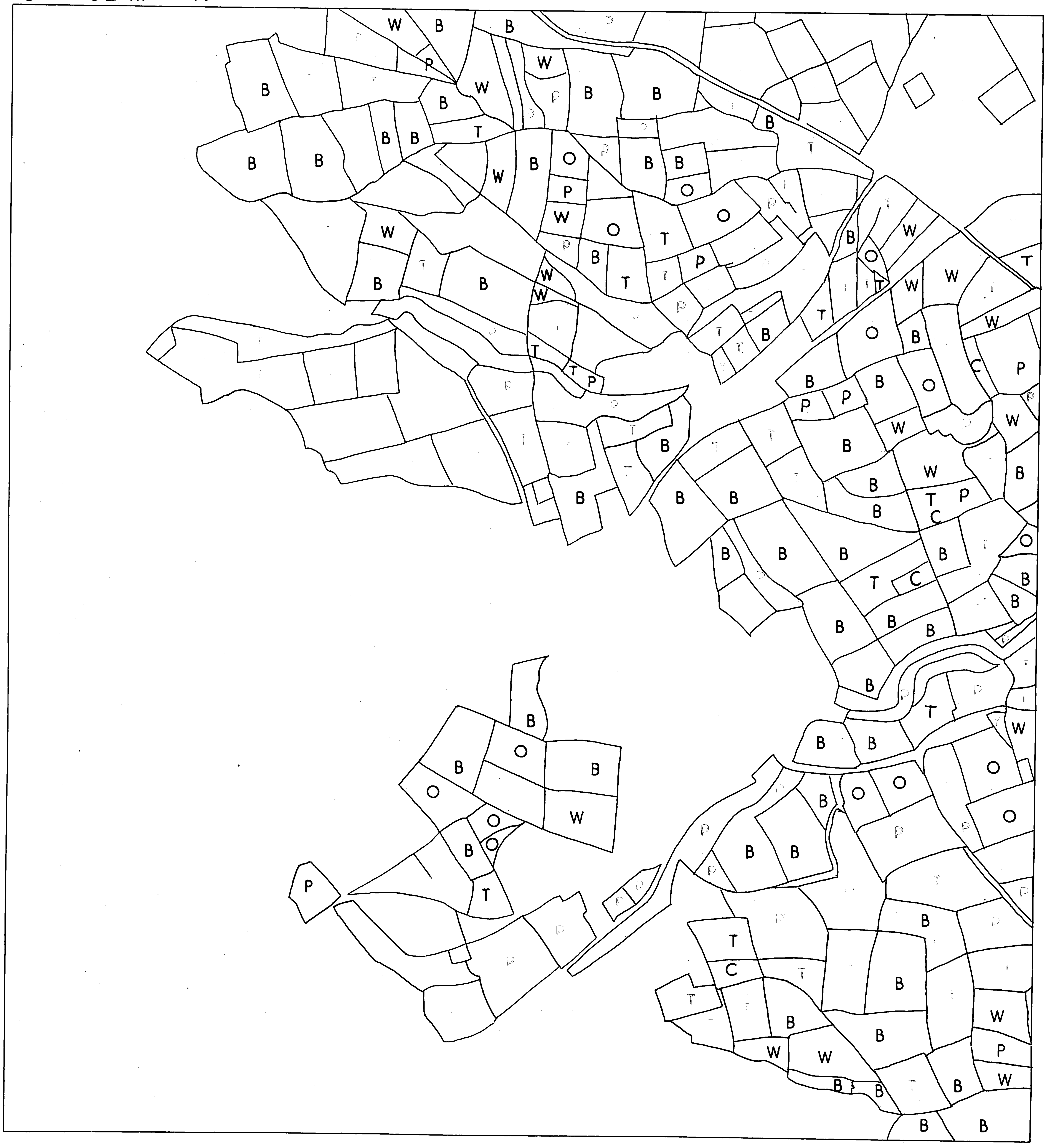
6 STAGE II B

Tip.
THORNLEY.
Tip.
WHEATLEY HILL.
Burn Plantation.
Nannys Plantation.
Edderacres Plantation
Foxhole Wood.
Long Wood.
Target Wood.
Quarries.
WINGATE.
Kelloe Law Pltn.
DEAF HILL.
TRIMDON GRANGE.
TRIMDON COLLIERY.
Tip.
Cleveland Gorse.

7 STAGE II C


Blunts Plantation.
Fulwell Plantation.
Edderacres Plantation.
HESLEDEN.
Bleachery Dene
Hairy Mans Hole.
Heads Hope Dene.
Battersley Plantation.
STATION TOWN.

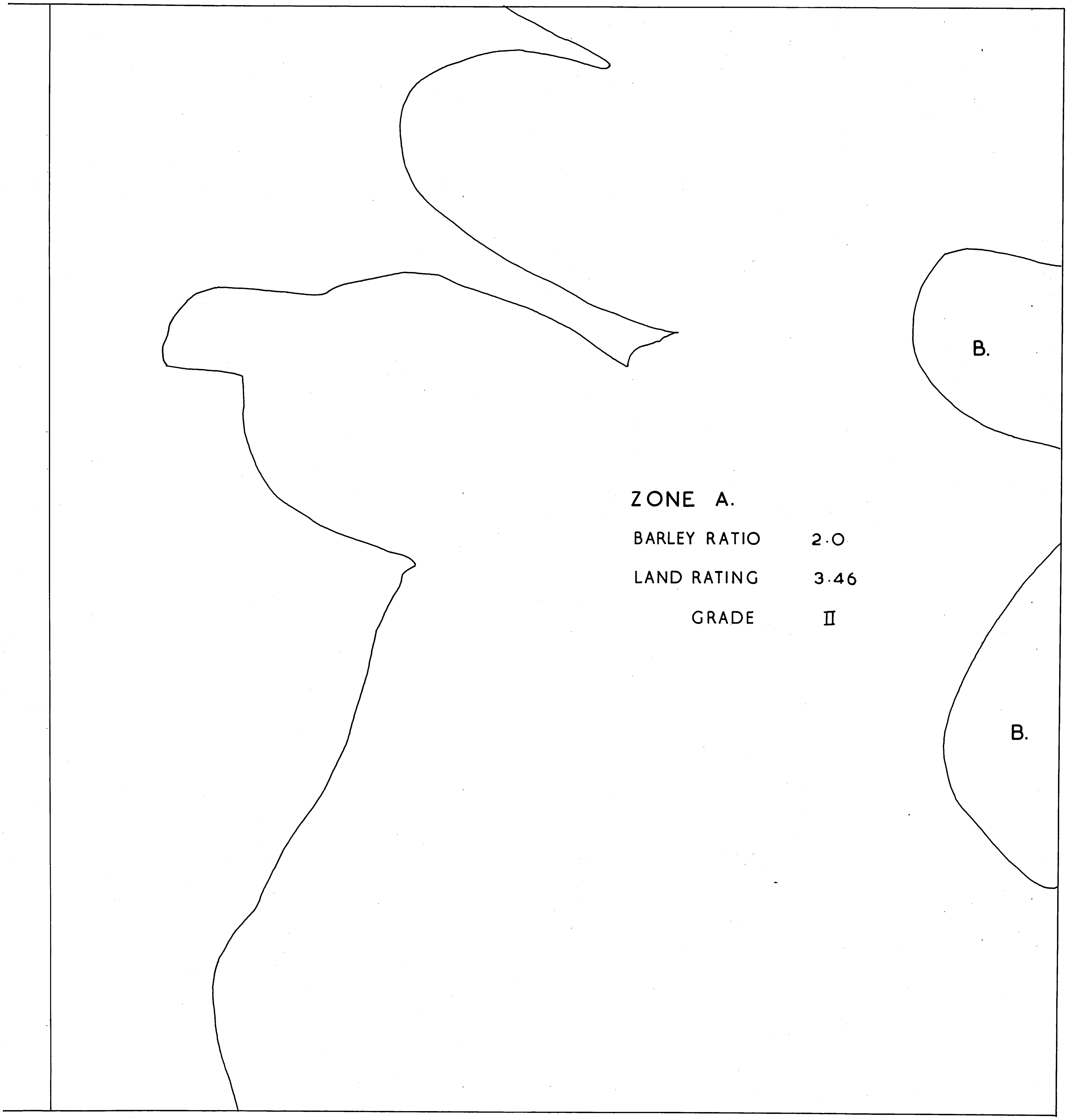
8 STAGE III A

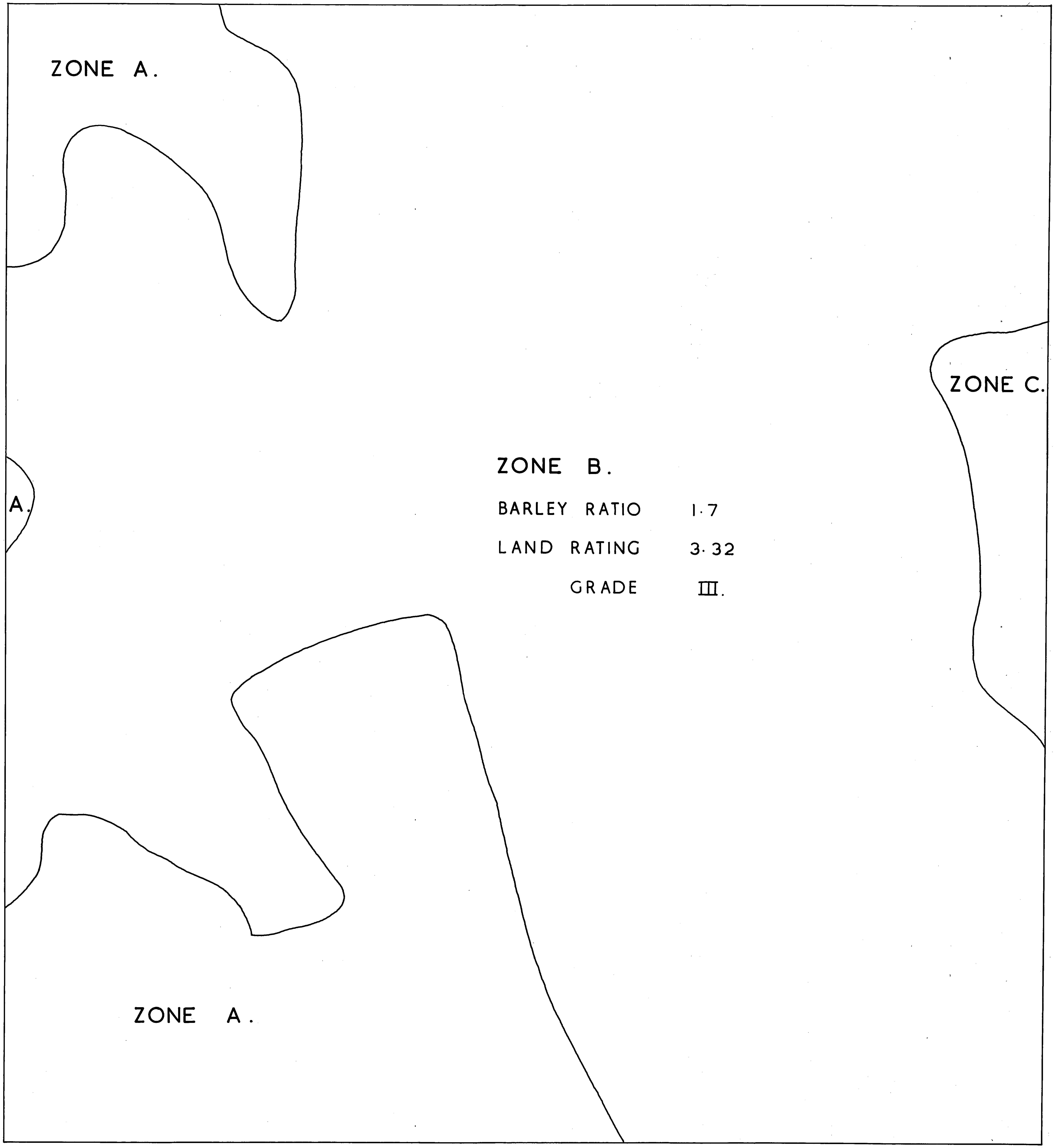


9 STAGE III B

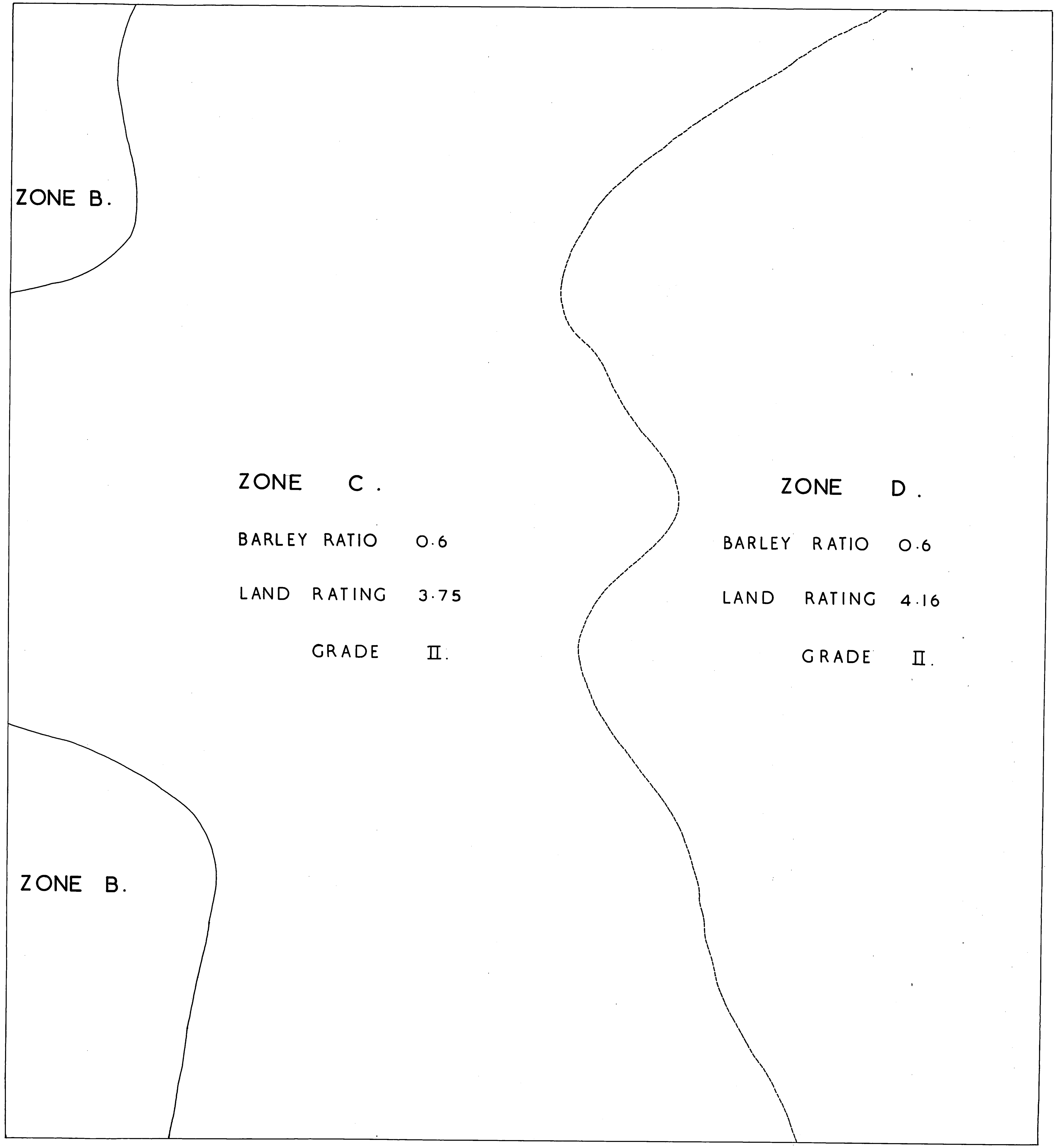
10 STAGE III C

II STAGE IV A &VI A

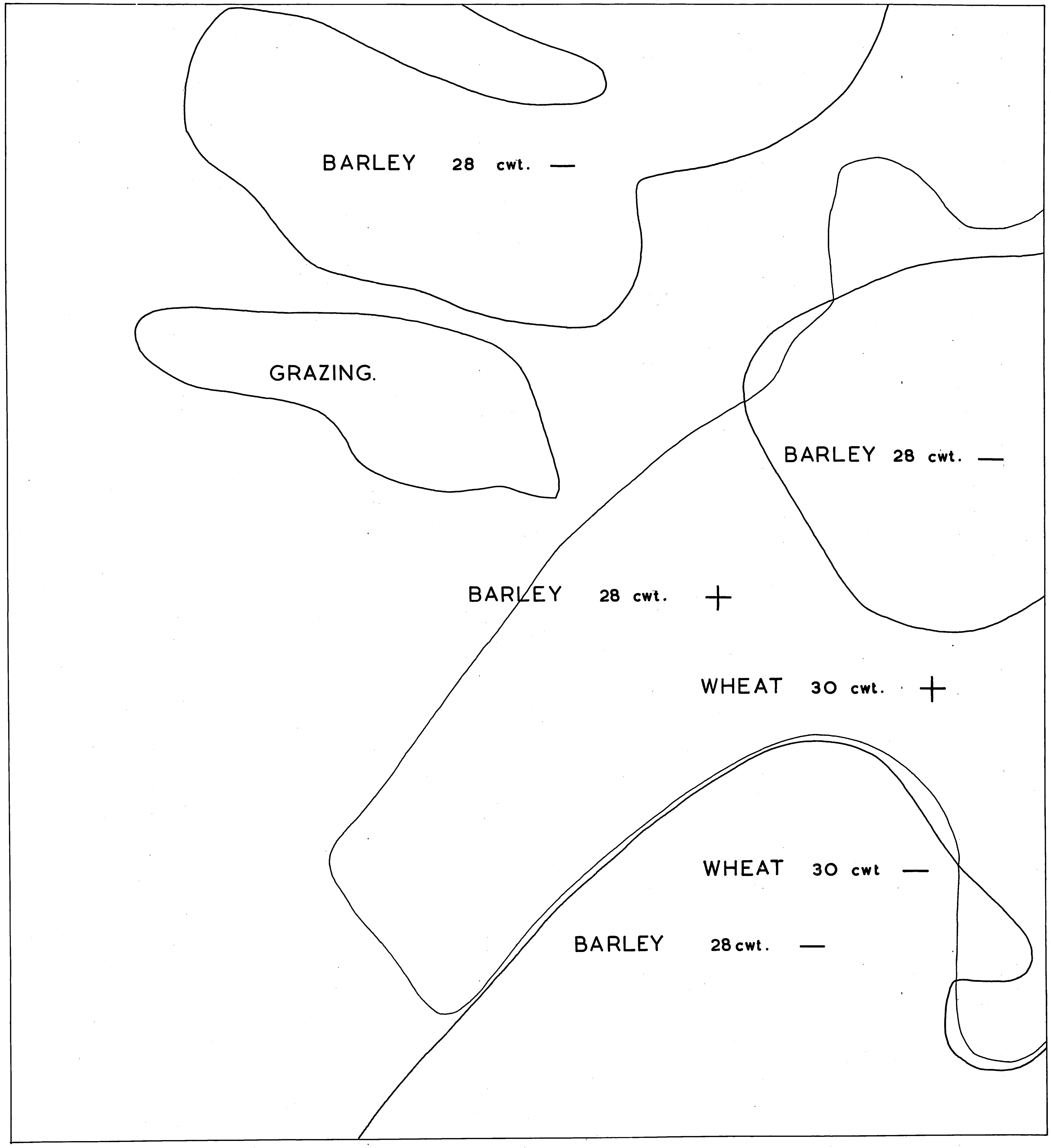



ZONE A.
A.
ZONE C.
ZONE B.
BARLEY RATIO 1·7
LAND RATING 3·32
GRADE III.
ZONE A.

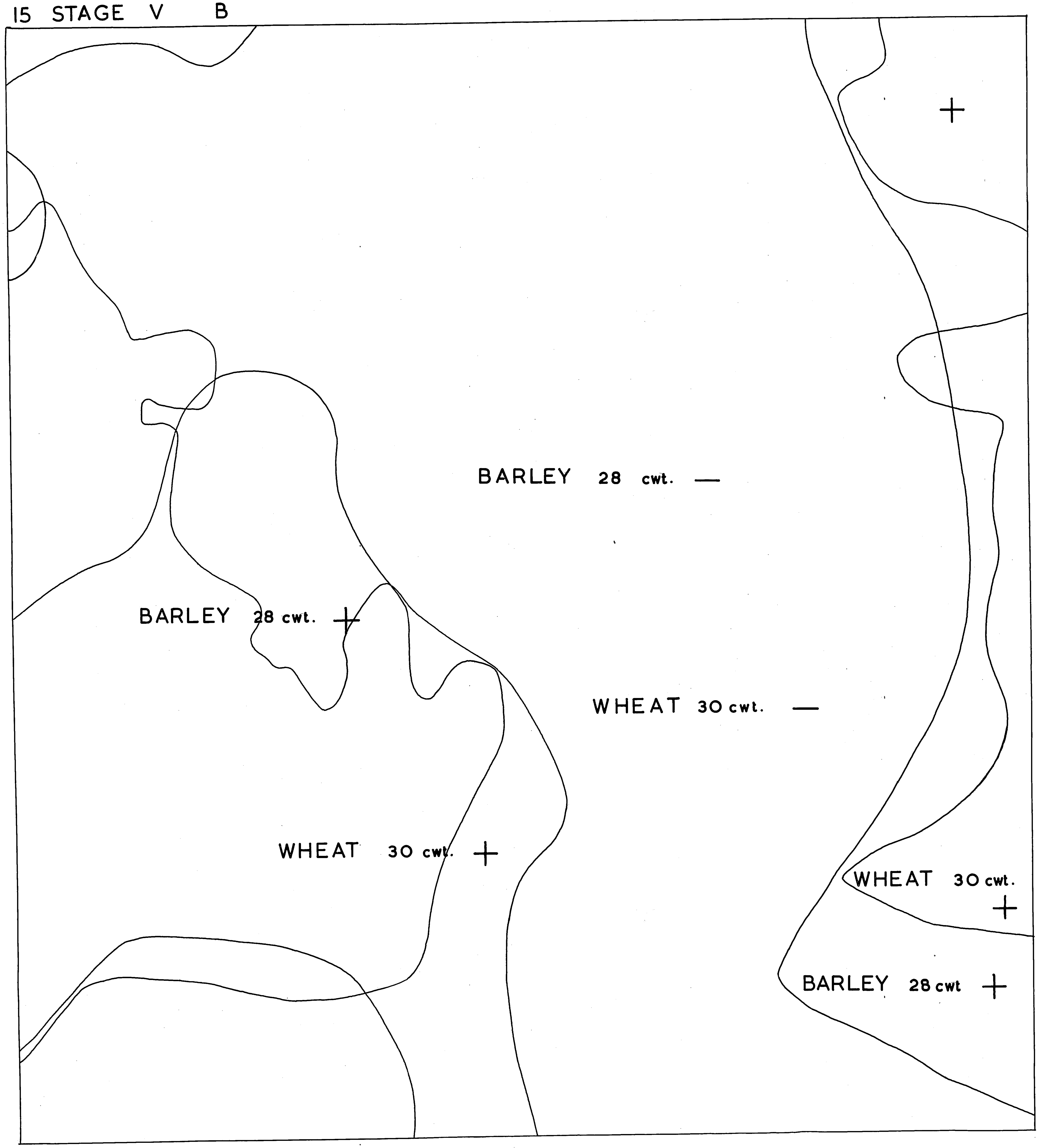
13 STAGE IV C & VI C



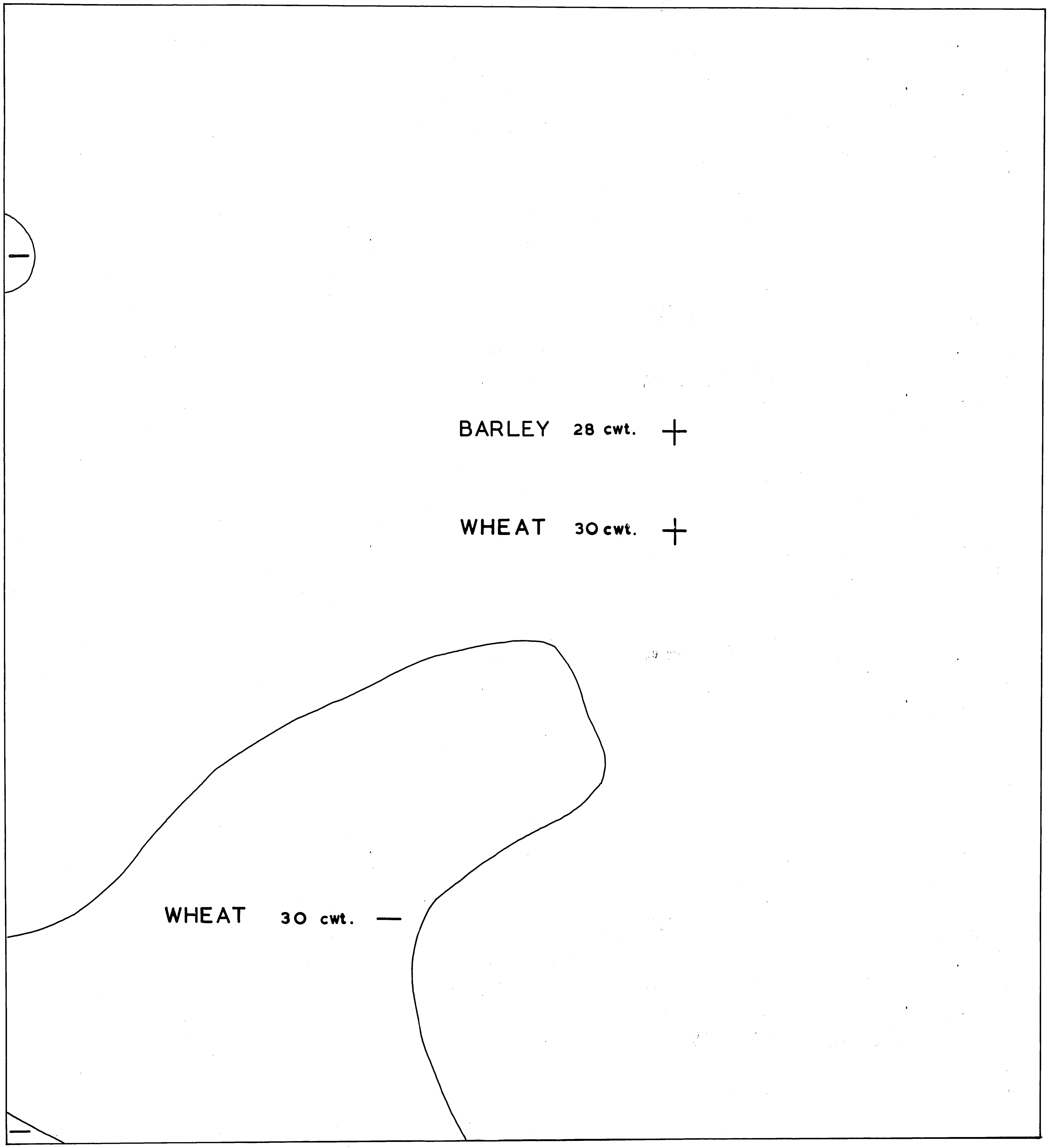
14 STAGE V A


BARLEY 28 cwt. —
GRAZING.
BARLEY 28 cwt. —
BARLEY 28 cwt. +
WHEAT 30 cwt. +
WHEAT 30 cwt —
BARLEY 28 cwt. —

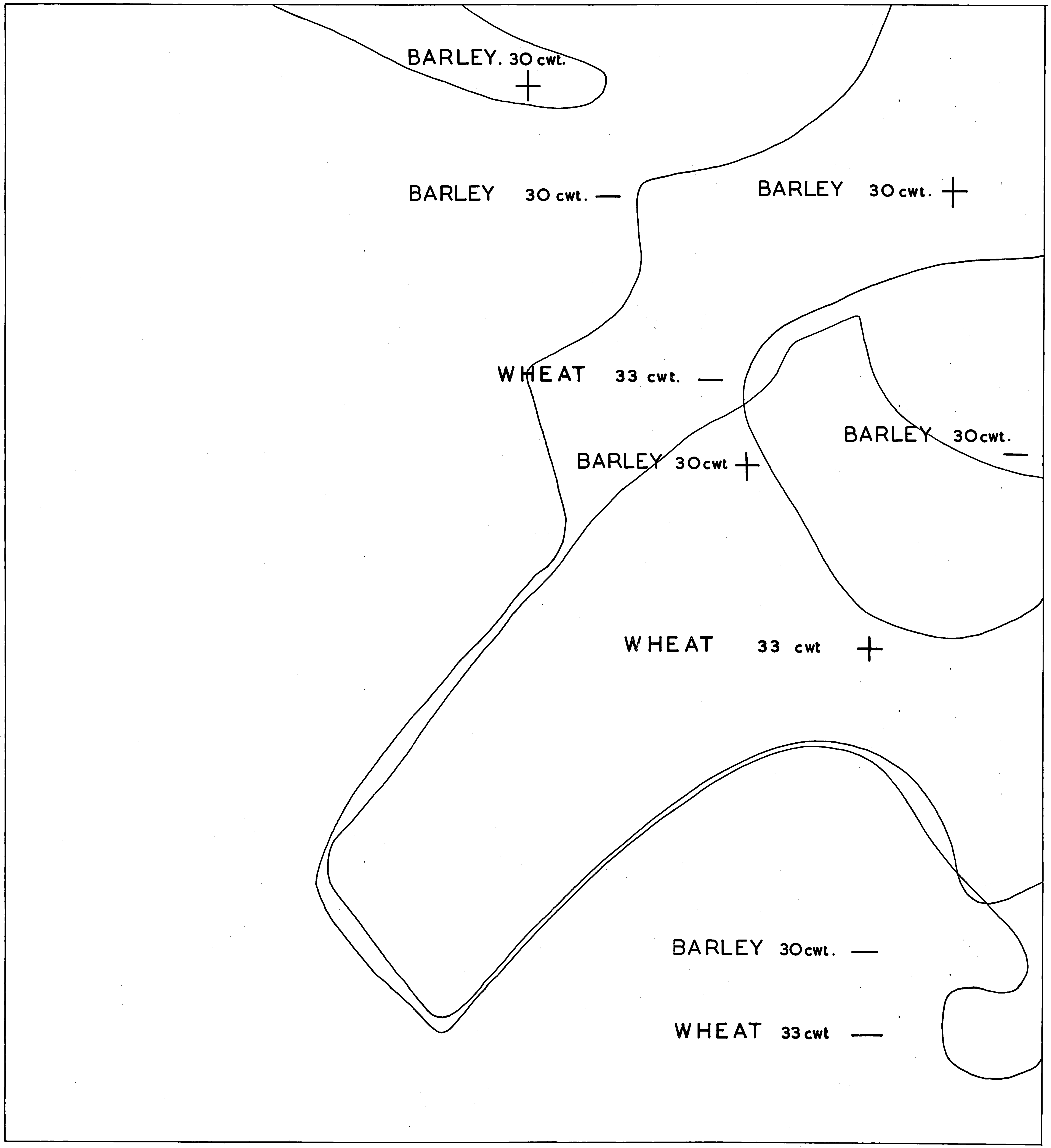
15 STAGE V B


BARLEY 28 cwt. —
BARLEY 28 cwt. +
WHEAT 30 cwt. —
WHEAT 30 cwt. +
WHEAT 30 cwt. +
BARLEY 28 cwt +

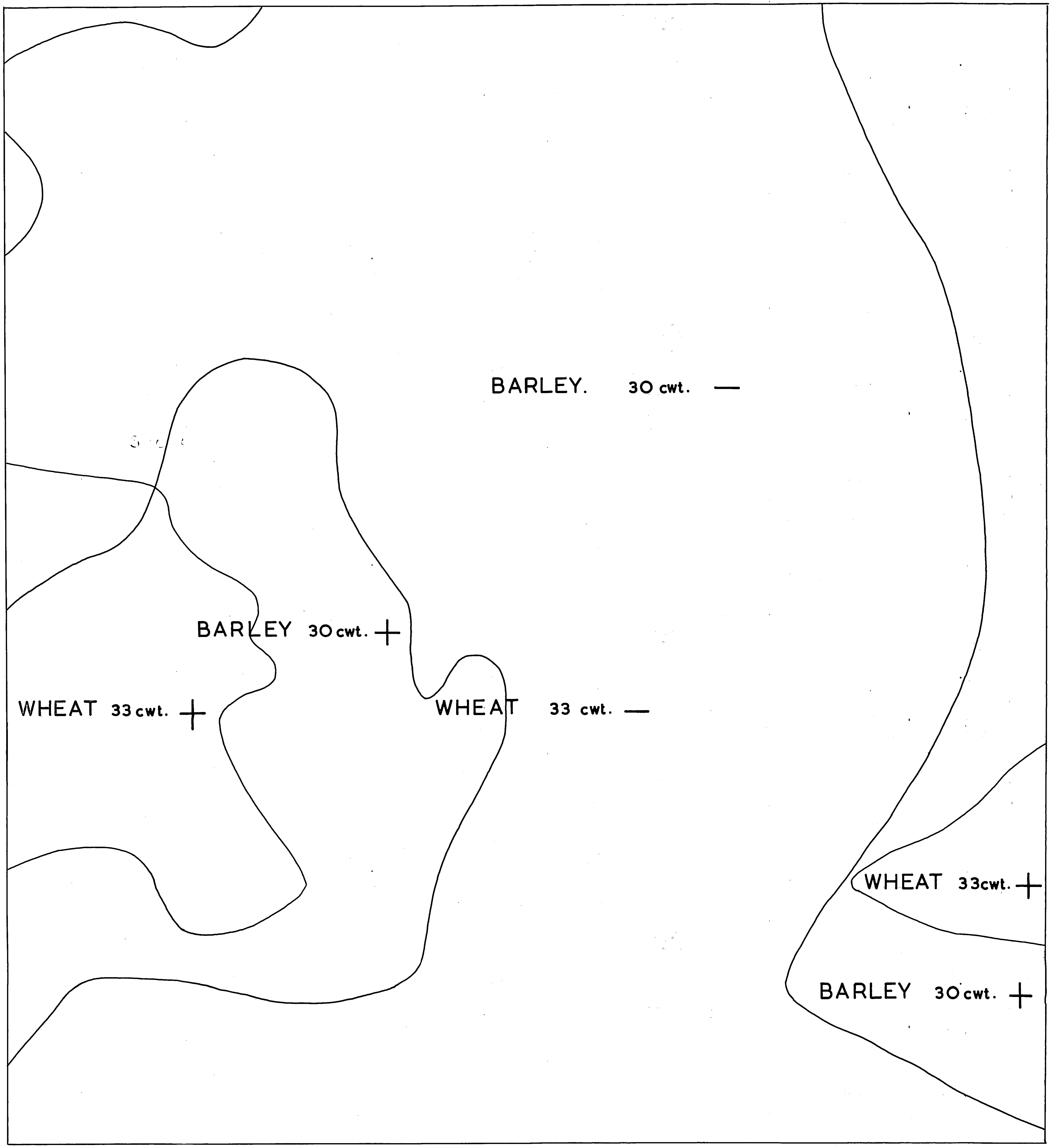
16 STAGE V C



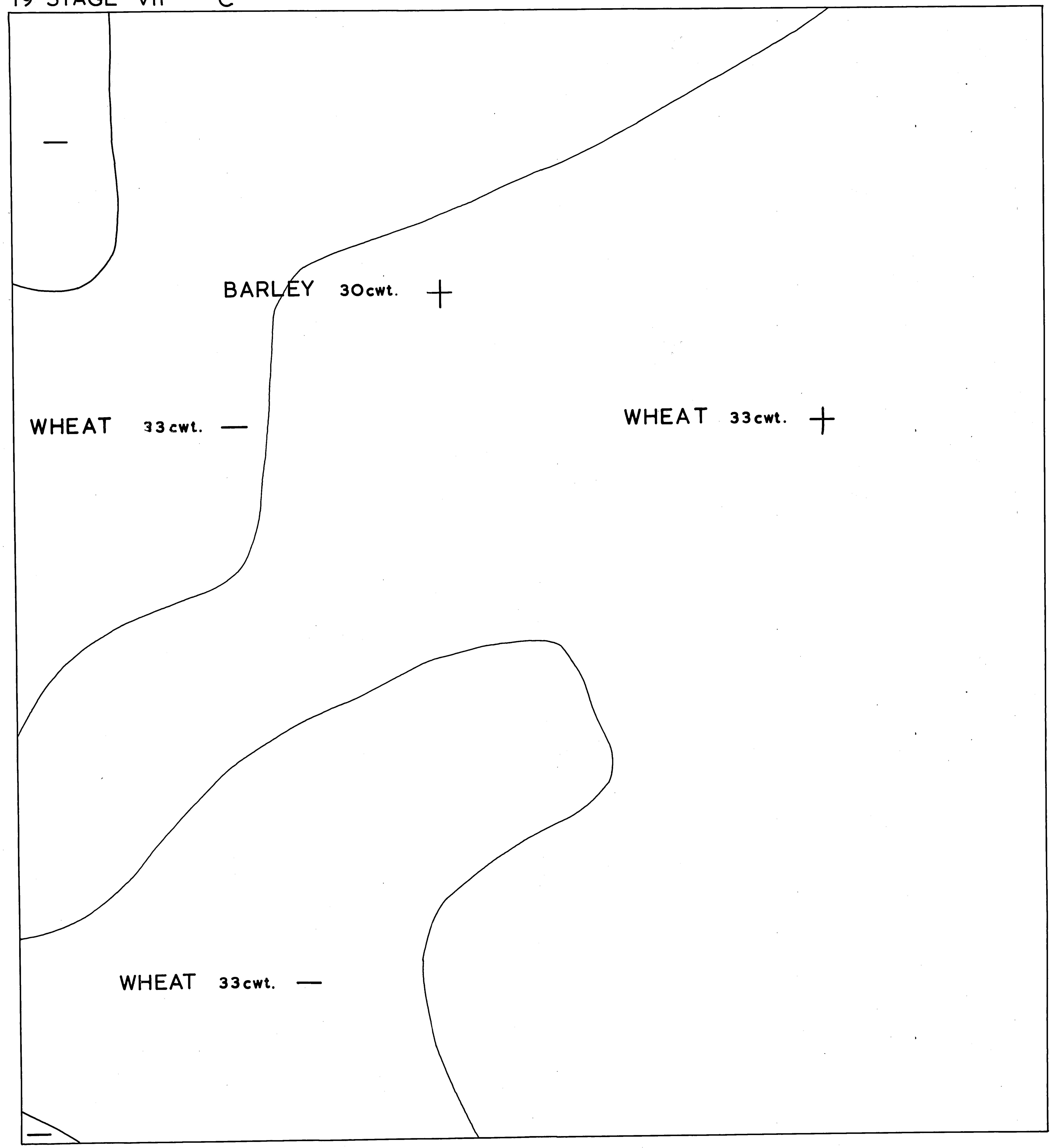
17 STAGE VII A

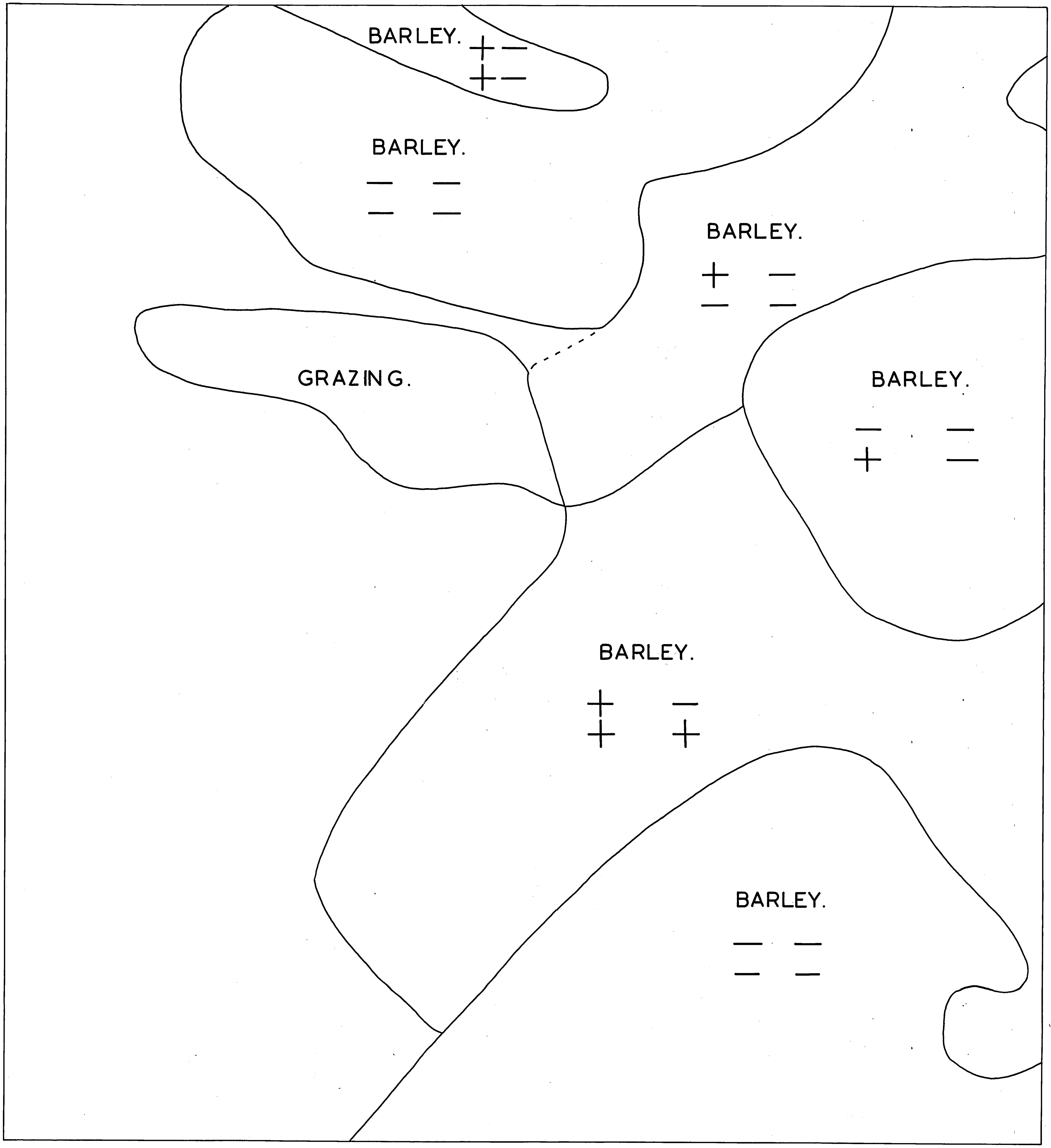


18 STAGE VII B

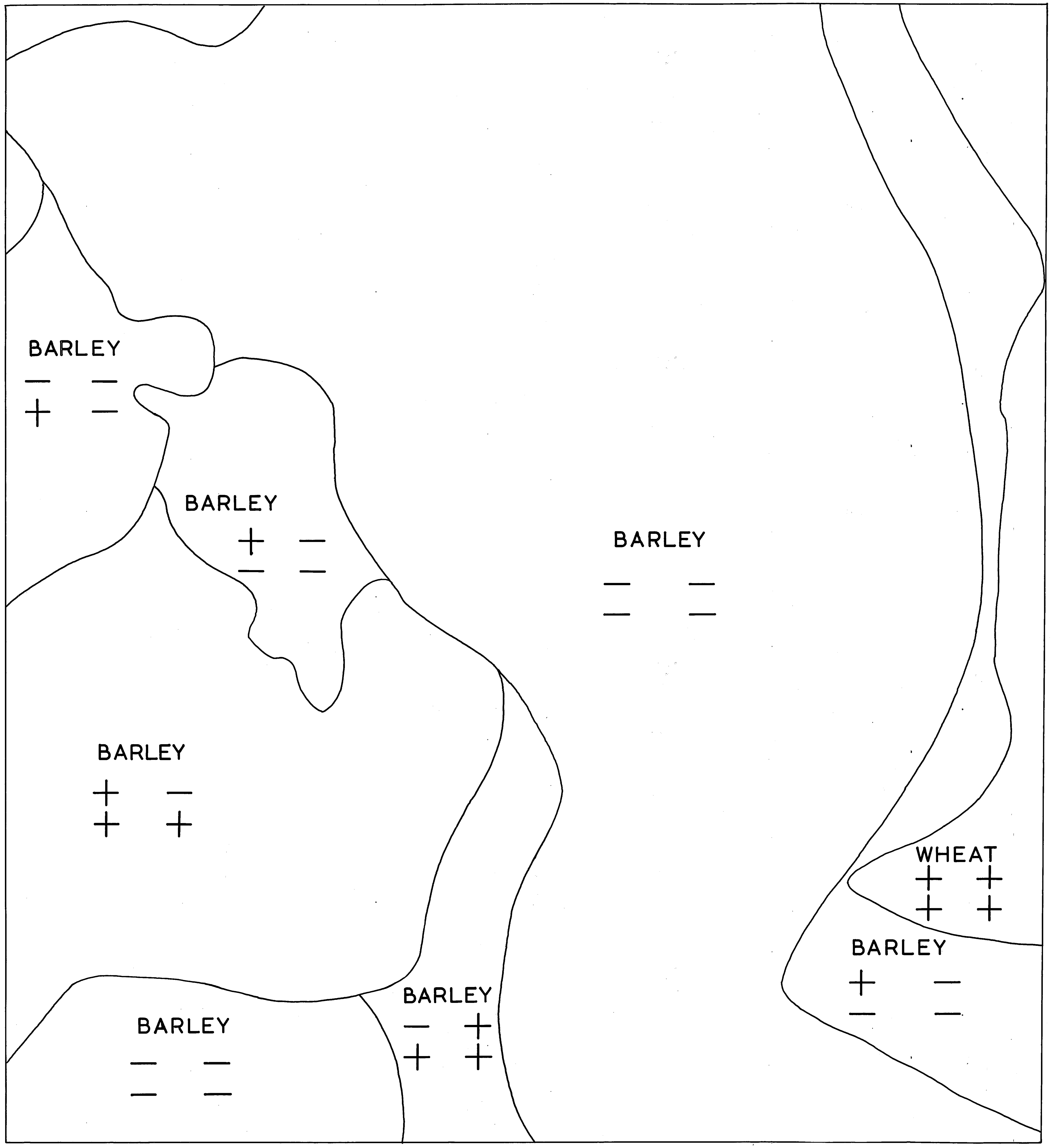


19 STAGE VII C

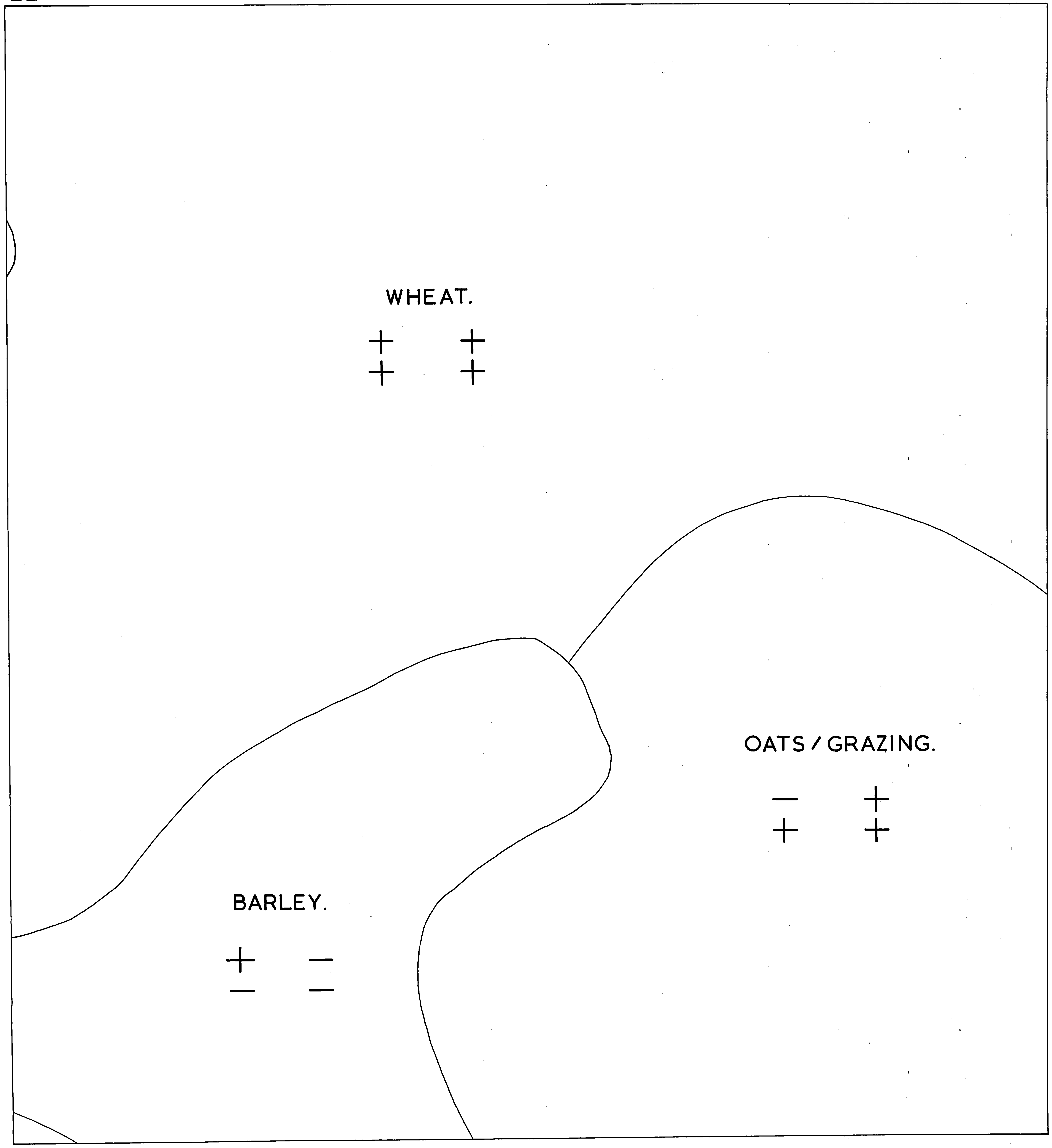



BARLEY.
+ —
+ —
BARLEY.
— —
— —
BARLEY.
+ —
— —
GRAZING.
BARLEY.
— —
+ —
BARLEY.
+ —
+ +
BARLEY.
— —
— —

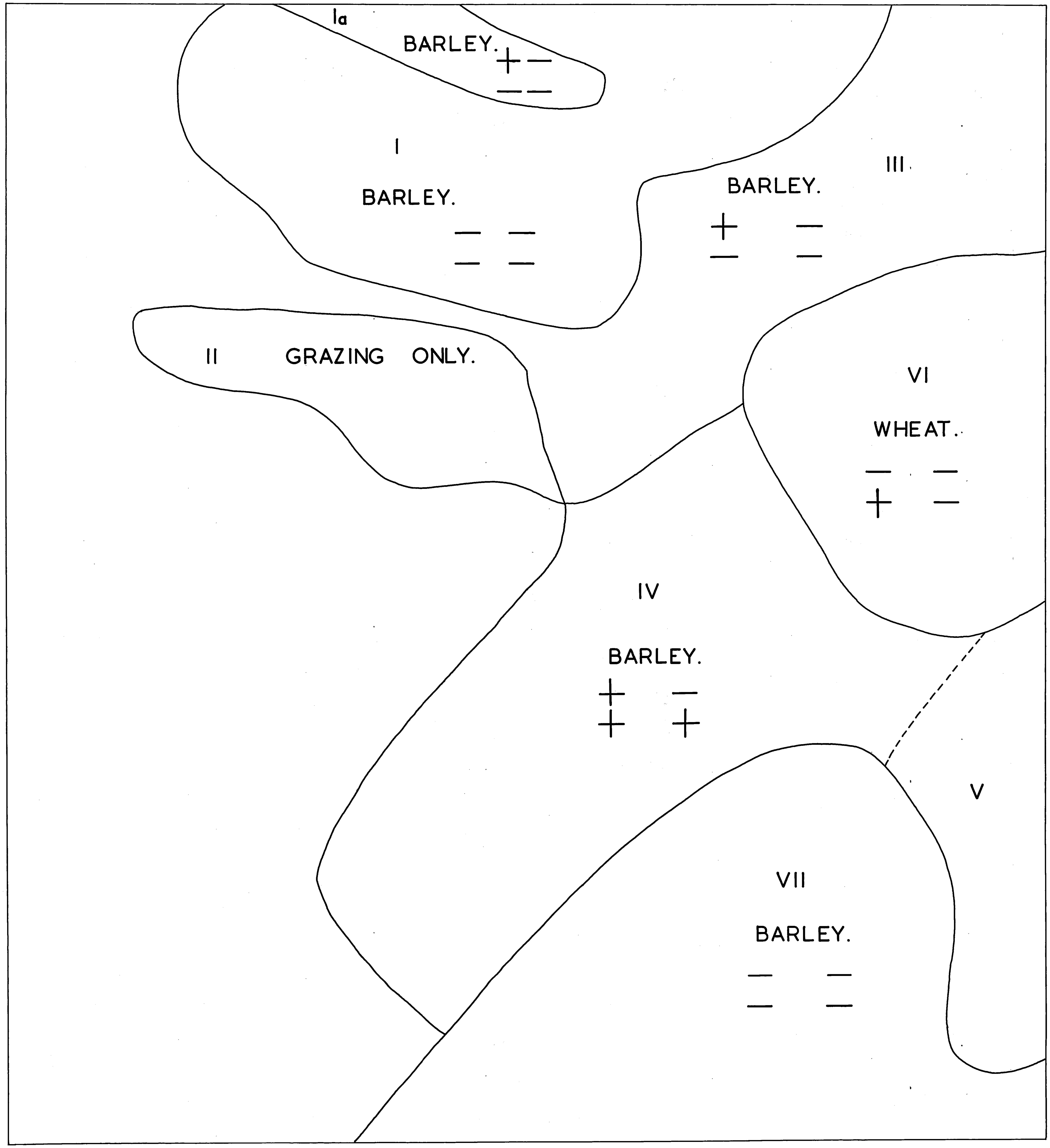
21 STAGE VIII B



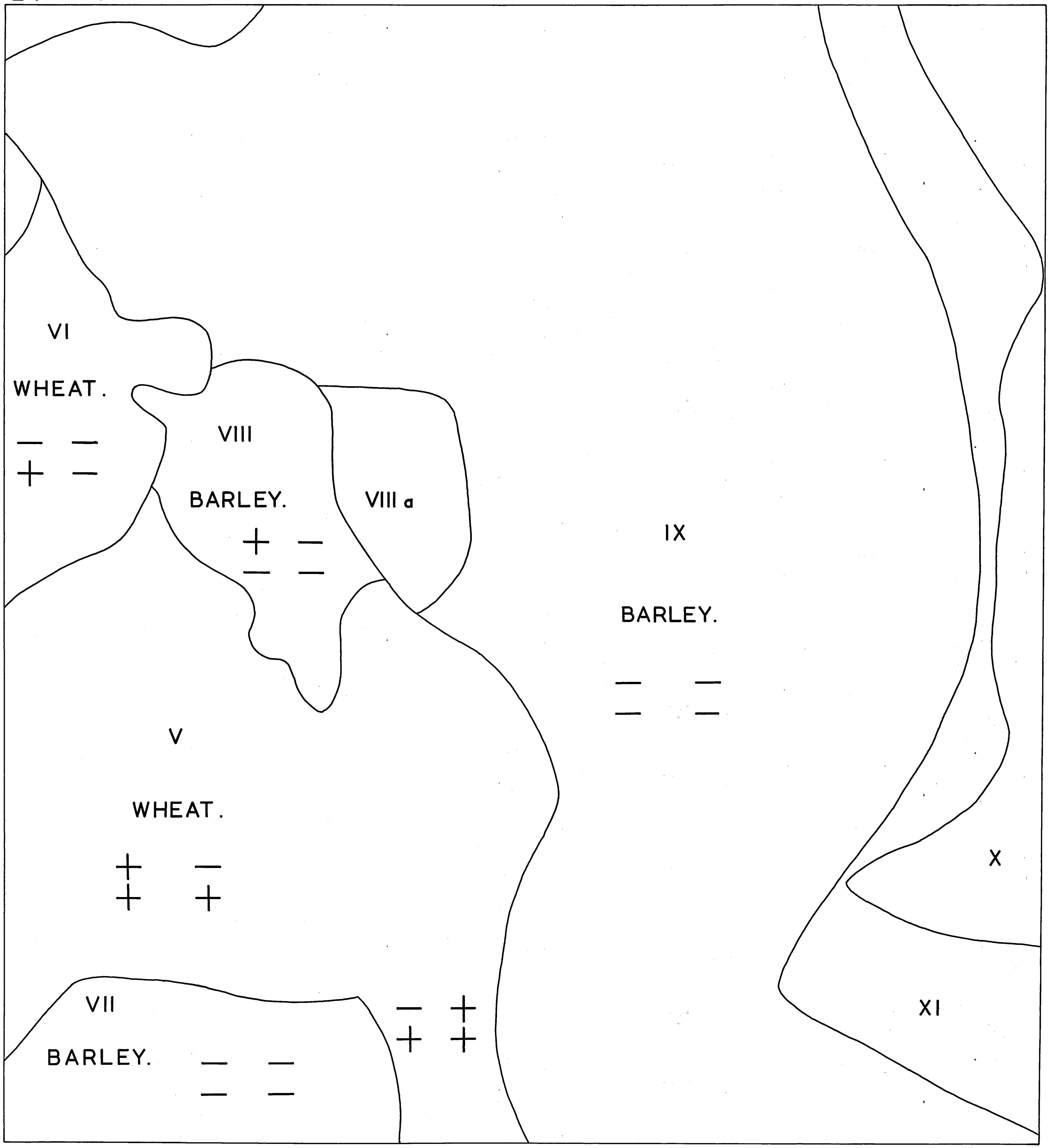
22 STAGE VIII C



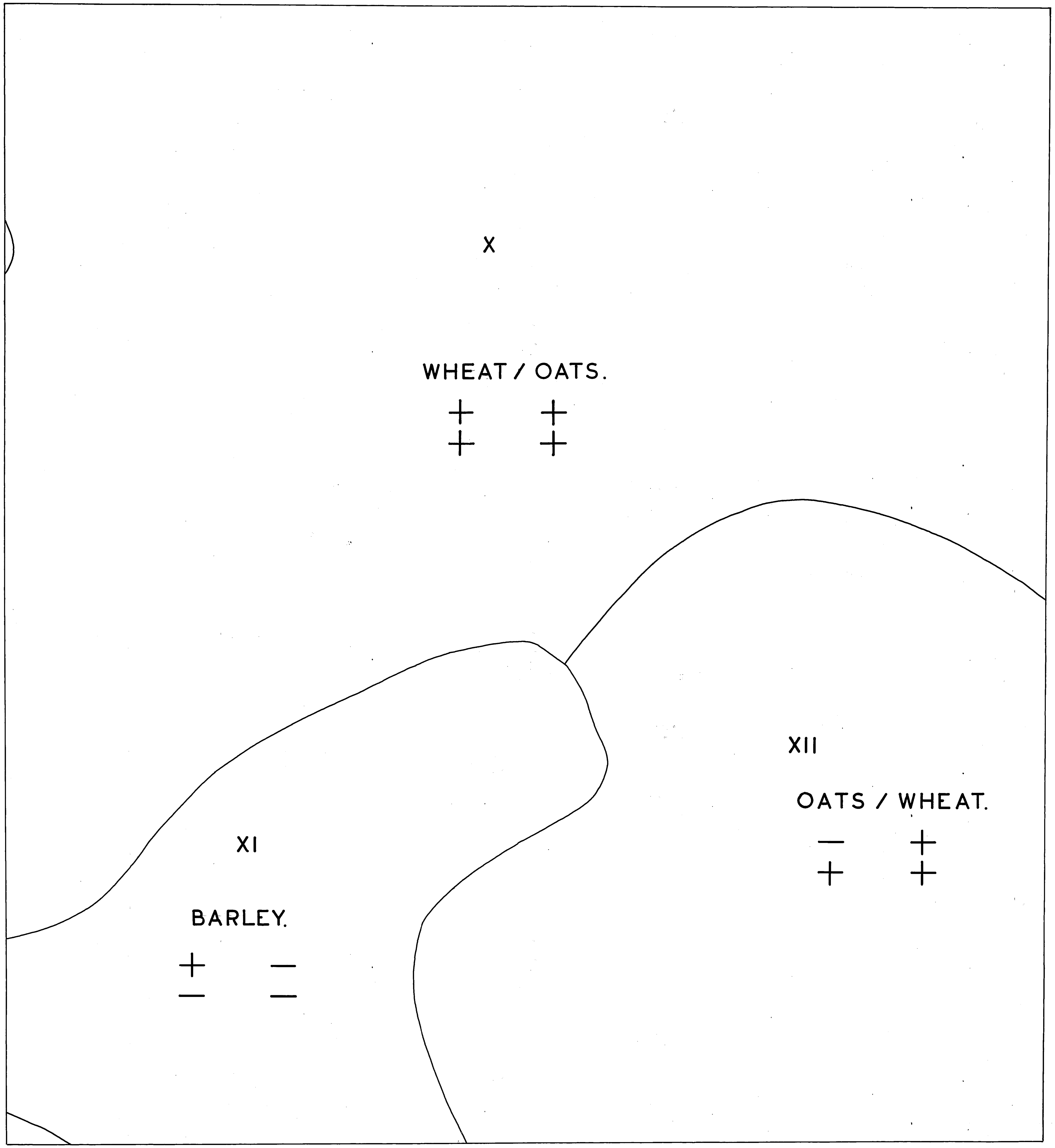
23 STAGE IX A


Ia
BARLEY.
+ —
— —
I
BARLEY.
— —
— —
III
BARLEY.
+ —
— —
II GRAZING ONLY.
VI
WHEAT.
— —
+ —
IV
BARLEY.
+ —
+ +
V
VII
BARLEY.
— —
— —

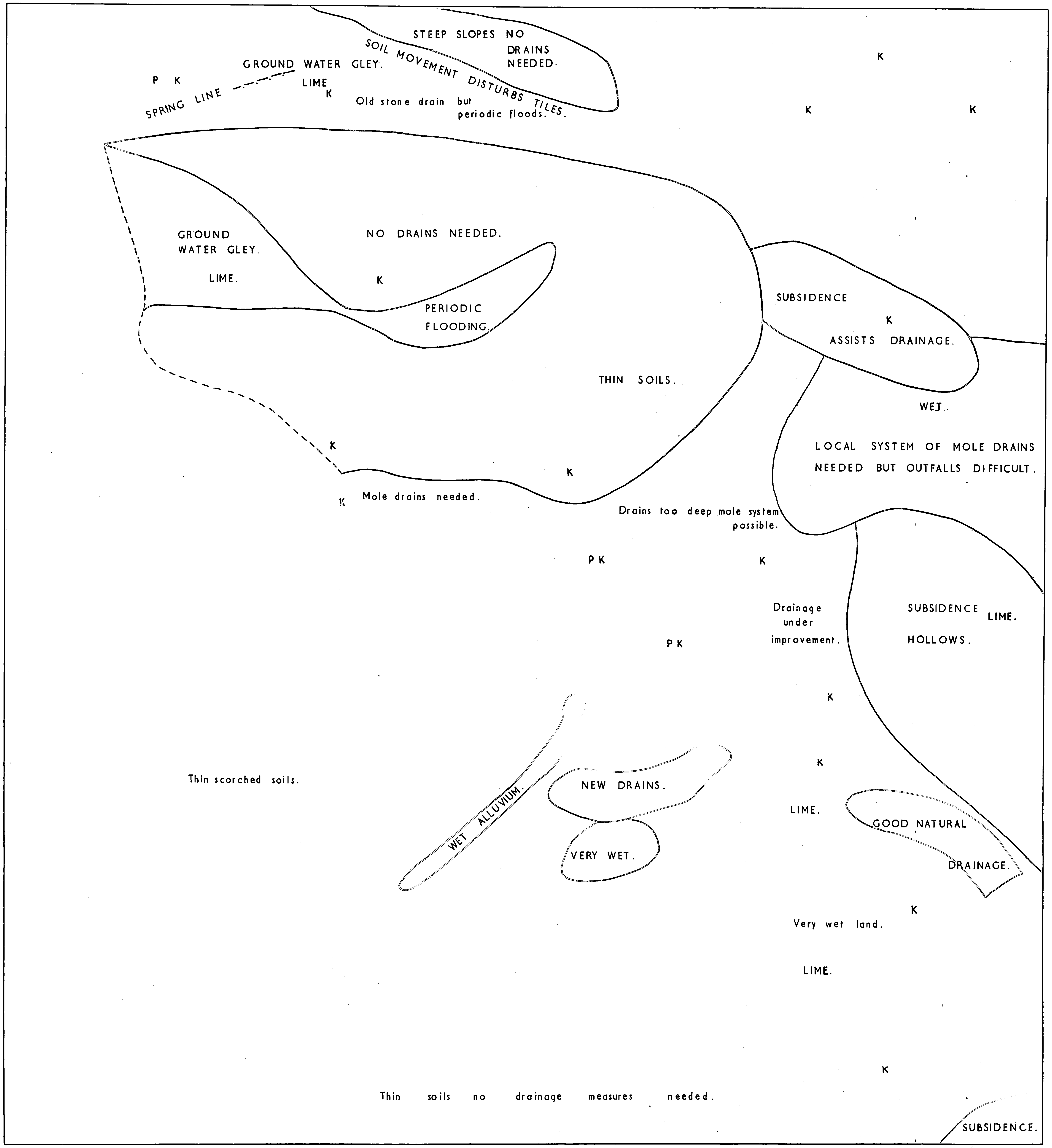
24 STAGE IX B



25 STAGE IX C

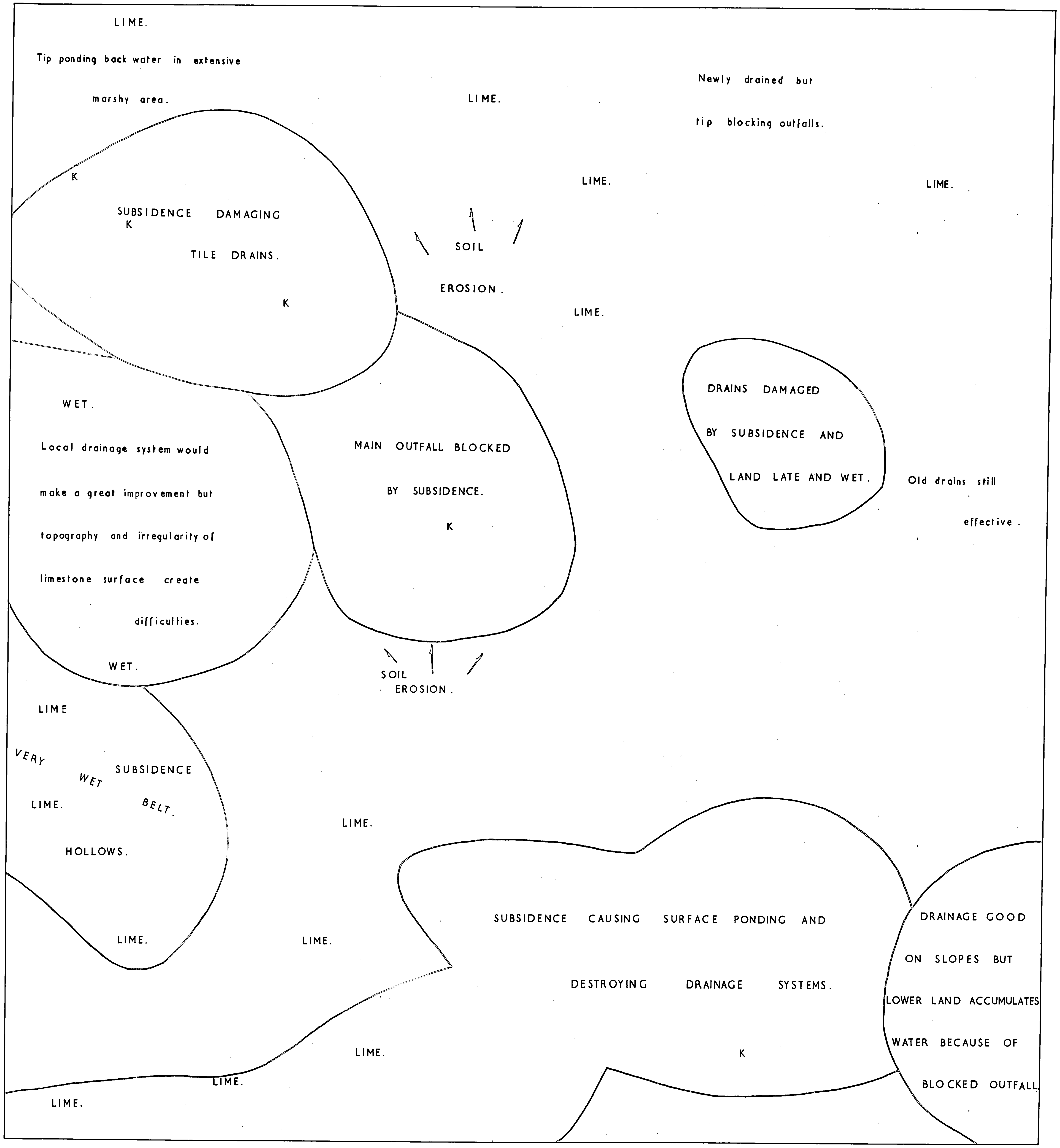


26 STAGE Xa A.

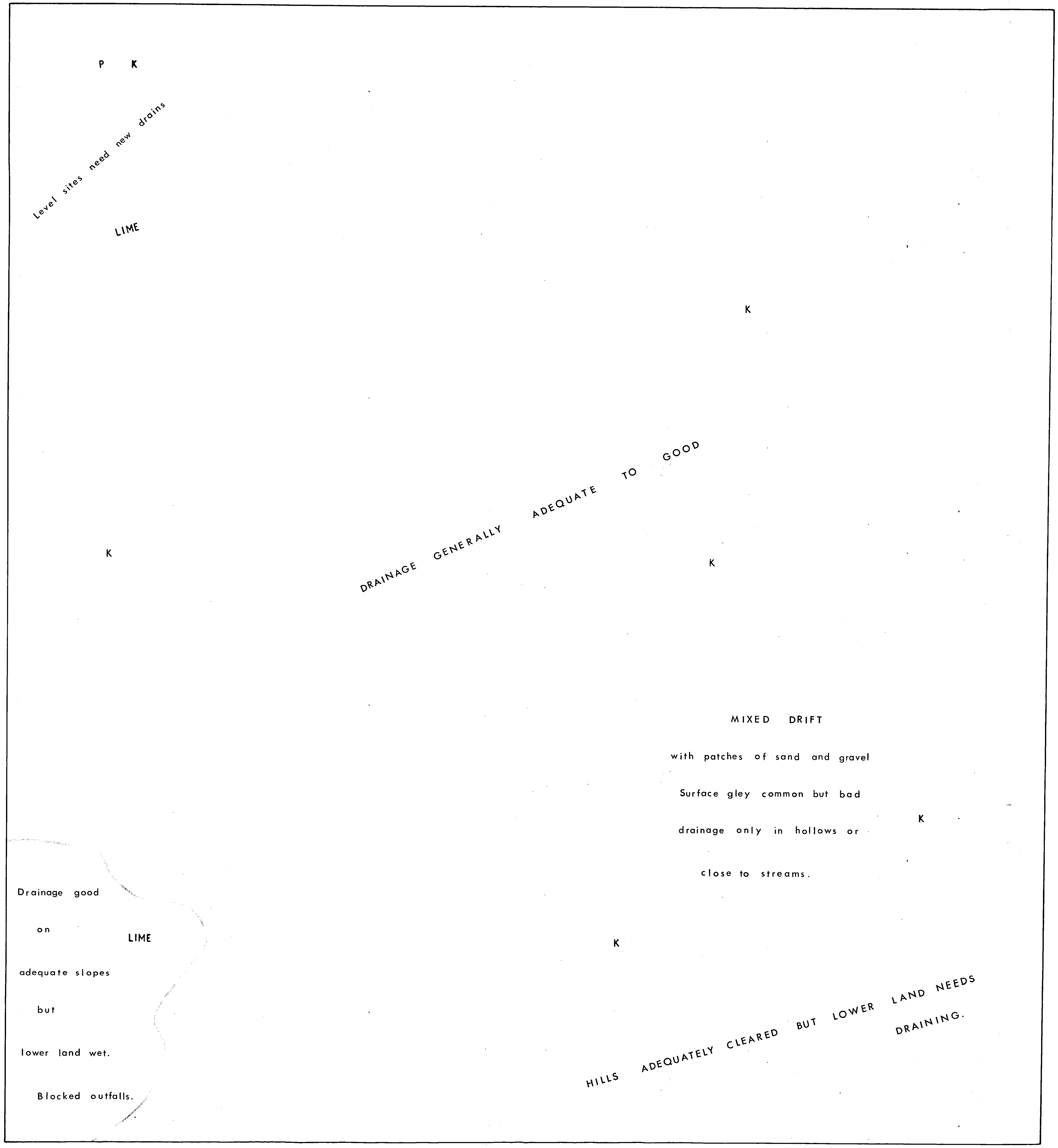


STEEP SLOPES NO DRAINS NEEDED.
SOIL MOVEMENT DISTURBS TILES.
GROUND WATER GLEY.
LIME
K
P K
SPRING LINE
Old stone drain but periodic floods.
K
K
K
GROUND WATER GLEY.
LIME.
NO DRAINS NEEDED.
K
PERIODIC FLOODING.
THIN SOILS.
SUBSIDENCE
K
ASSISTS DRAINAGE.
WET.
LOCAL SYSTEM OF MOLE DRAINS NEEDED BUT OUTFALLS DIFFICULT.
K
K
Mole drains needed.
K
Drains too deep mole system possible.
P K
K
Drainage under improvement.
SUBSIDENCE HOLLOWS.
LIME.
P K
K
K
Thin scorched soils.
WET ALLUVIUM.
NEW DRAINS.
VERY WET.
LIME.
GOOD NATURAL DRAINAGE.
K
Very wet land.
LIME.
K
Thin soils no drainage measures needed.
SUBSIDENCE.

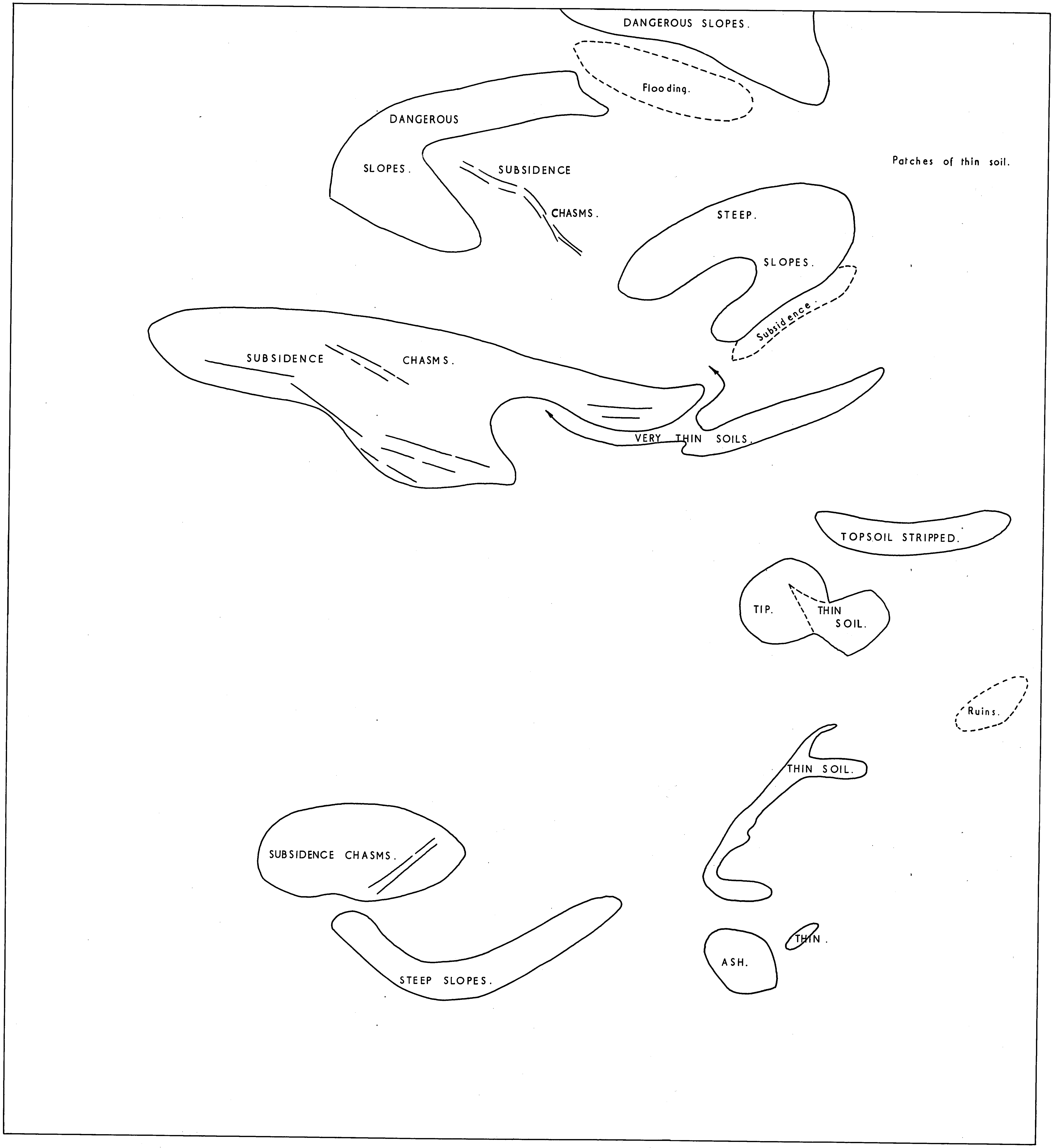
27 STAGE Xa B

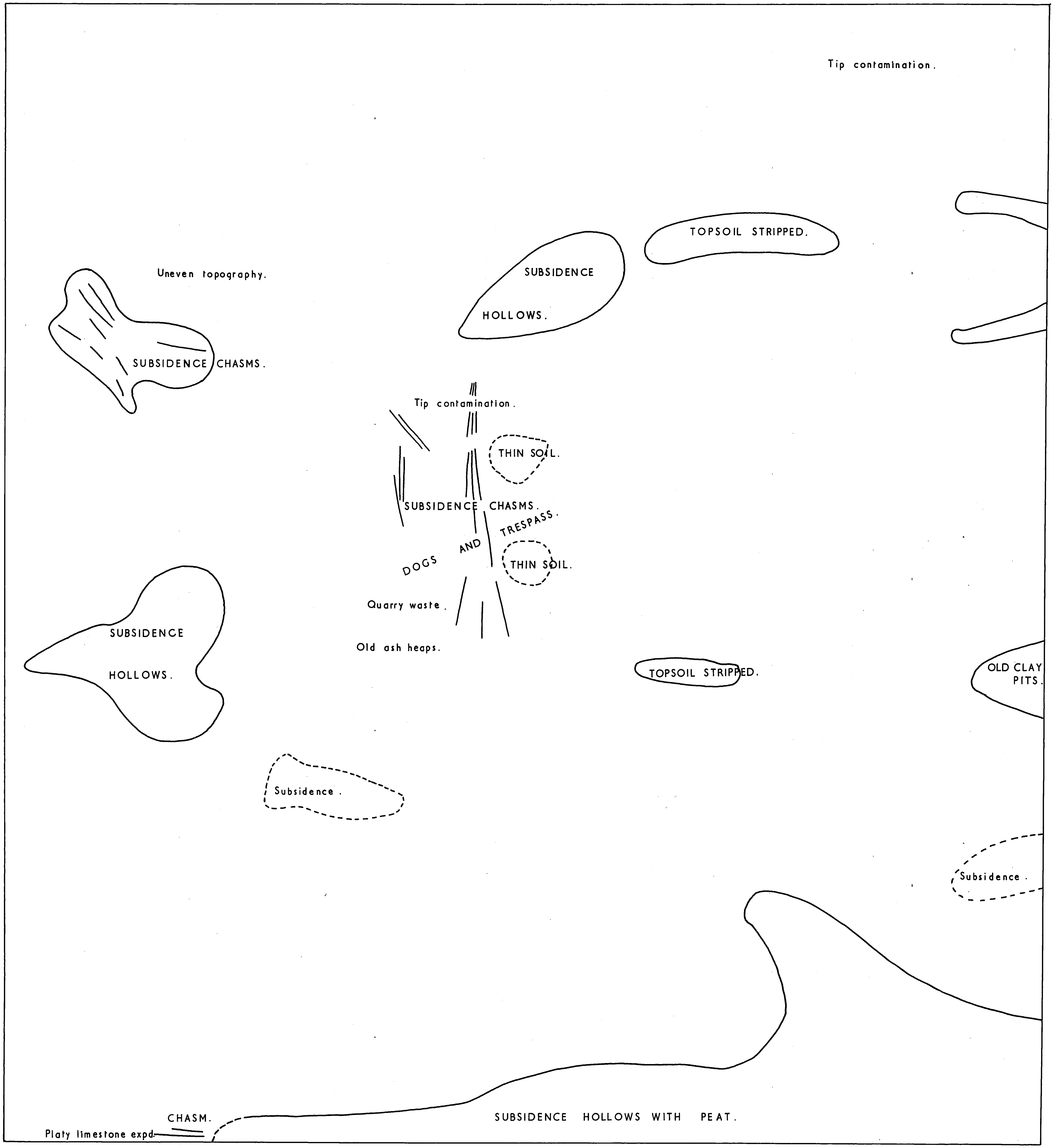

LIME.
Tip ponding back water in extensive marshy area.
LIME.
Newly drained but tip blocking outfalls.
LIME.
LIME.
K
SUBSIDENCE DAMAGING TILE DRAINS.
K
K
SOIL EROSION.
LIME.
DRAINS DAMAGED BY SUBSIDENCE AND LAND LATE AND WET.
WET.
Local drainage system would make a great improvement but topography and irregularity of limestone surface create difficulties.
MAIN OUTFALL BLOCKED BY SUBSIDENCE.
K
Old drains still effective.
WET.
SOIL EROSION.
LIME
VERY WET BELT.
SUBSIDENCE
LIME.
HOLLOWS.
LIME.
SUBSIDENCE CAUSING SURFACE PONDING AND DESTROYING DRAINAGE SYSTEMS.
K
DRAINAGE GOOD ON SLOPES BUT LOWER LAND ACCUMULATES WATER BECAUSE OF BLOCKED OUTFALL
LIME.
LIME.
LIME.
LIME.
LIME.

28 STAGE Xa C


P K
Level sites need new drains
LIME
K
DRAINAGE GENERALLY ADEQUATE TO GOOD
K
K
MIXED DRIFT
with patches of sand and gravel
Surface gley common but bad
drainage only in hollows or
close to streams.
K
Drainage good
on
adequate slopes
but
lower land wet.
Blocked outfalls.
LIME
K
HILLS ADEQUATELY CLEARED BUT LOWER LAND NEEDS DRAINING.

29 STAGE Xb A

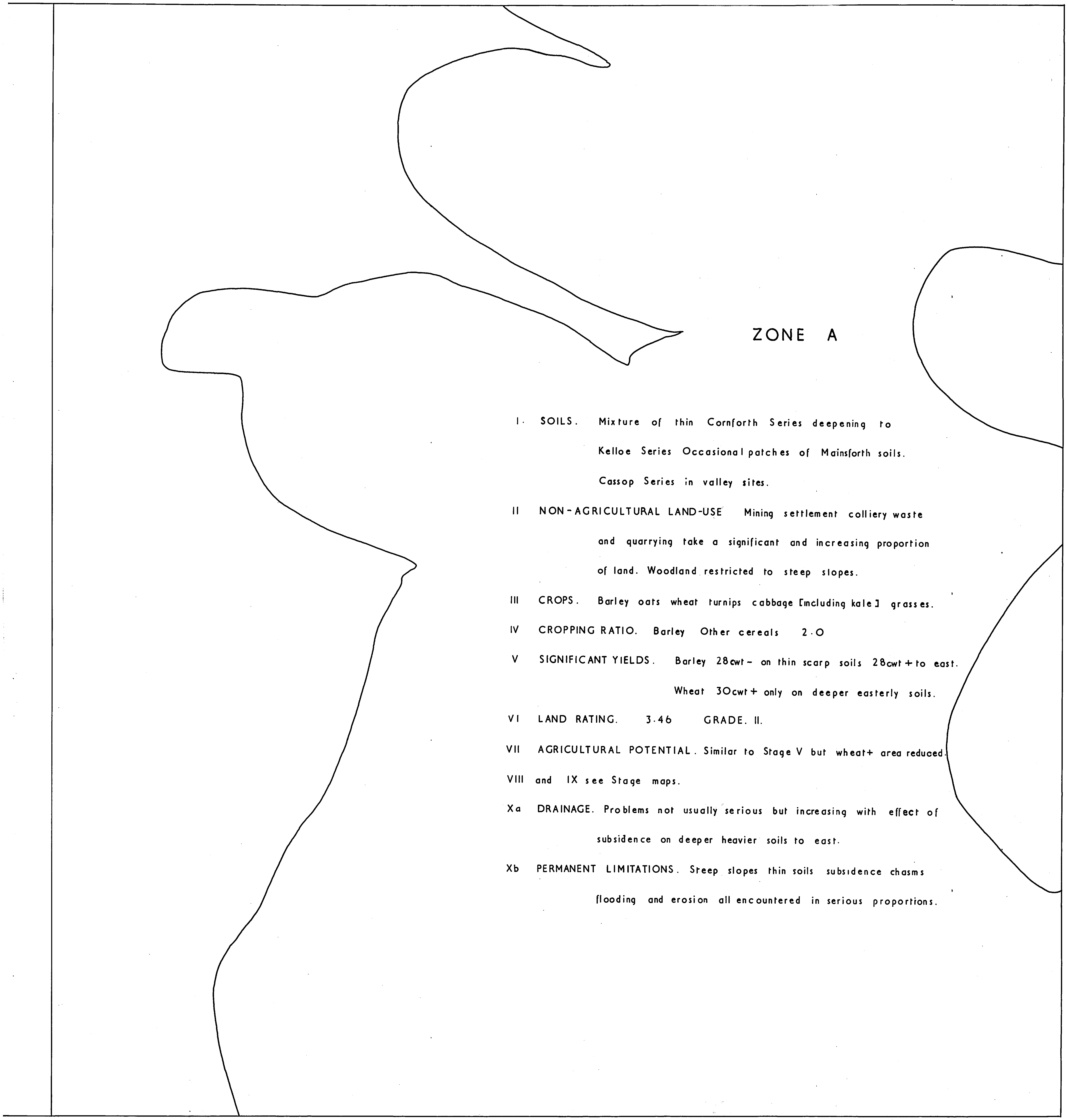

DANGEROUS SLOPES.
Flooding.
DANGEROUS
SLOPES.
SUBSIDENCE
CHASMS.
Patches of thin soil.
STEEP.
SLOPES.
Subsidence.
SUBSIDENCE
CHASMS.
VERY THIN SOILS.
TOPSOIL STRIPPED.
TIP.
THIN
SOIL.
Ruins.
THIN SOIL.
SUBSIDENCE CHASMS.
STEEP SLOPES.
ASH.
THIN.


Tip contamination.
TOPSOIL STRIPPED.
Uneven topography.
SUBSIDENCE
HOLLOWS.
SUBSIDENCE CHASMS.
Tip contamination.
THIN SOIL.
SUBSIDENCE CHASMS.
DOGS AND TRESPASS.
THIN SOIL.
SUBSIDENCE
HOLLOWS.
Quarry waste.
Old ash heaps.
TOPSOIL STRIPPED.
OLD CLAY PITS.
Subsidence.
Subsidence.
CHASM.
Platy limestone expd.
SUBSIDENCE HOLLOWS WITH PEAT.

31 STAGE Xb C


Extension of Peterlee.
Steep slopes.
DEEP DRAINAGE COURSE.
Disused
clay pits.
DEEP DRAINAGE COURSE
Smallholdings.
Subsidence
Steep hummocky topography.
Steep slopes.
SUBSIDENCE
HOLLOWS.
Top soil stripped from hummocks
DEEP DRAINAGE COURSE.

32 STAGE XI A



ZONE A

I. SOILS. Mixture of thin Cornforth Series deepening to Kelloe Series Occasional patches of Mainsforth soils. Cassop Series in valley sites.

II NON-AGRICULTURAL LAND-USE Mining settlement colliery waste and quarrying take a significant and increasing proportion of land. Woodland restricted to steep slopes.

III CROPS. Barley oats wheat turnips cabbage [including kale] grasses.

IV CROPPING RATIO. Barley Other cereals 2.0

V SIGNIFICANT YIELDS. Barley 28cwt – on thin scarp soils 28cwt + to east. Wheat 30cwt + only on deeper easterly soils.

VI LAND RATING. 3.46 GRADE. II.

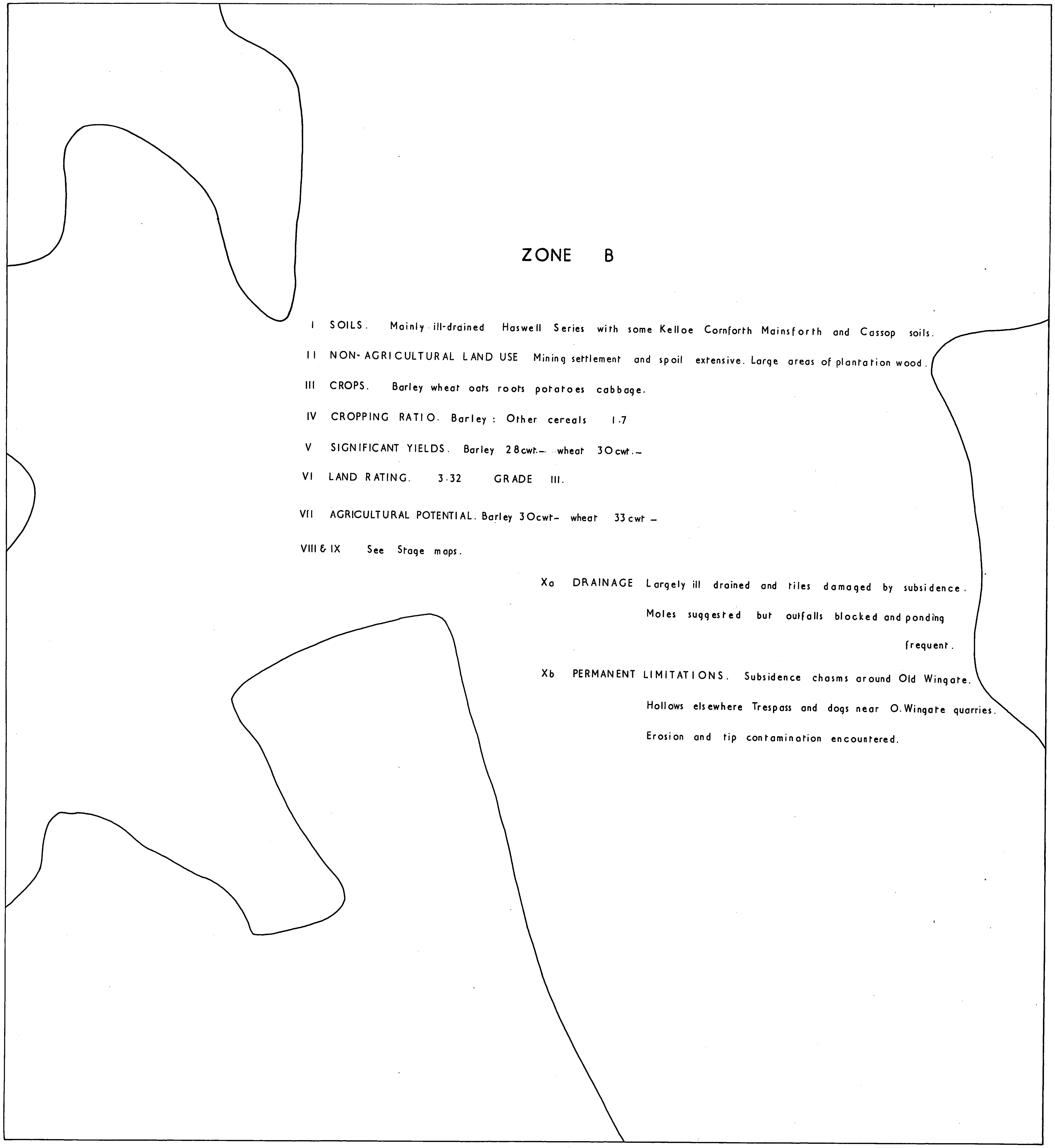
VII AGRICULTURAL POTENTIAL. Similar to Stage V but wheat+ area reduced.

VIII and IX see Stage maps.

Xa DRAINAGE. Problems not usually serious but increasing with effect of subsidence on deeper heavier soils to east.

Xb PERMANENT LIMITATIONS. Sreep slopes thin soils subsidence chasms flooding and erosion all encountered in serious proportions.

33 STAGE XI B



ZONE B

I SOILS. Mainly ill-drained Haswell Series with some Kelloe Cornforth Mainsforth and Cassop soils.

II NON-AGRICULTURAL LAND USE Mining settlement and spoil extensive. Large areas of plantation wood.

III CROPS. Barley wheat oats roots potatoes cabbage.

IV CROPPING RATIO. Barley : Other cereals 1.7

V SIGNIFICANT YIELDS. Barley 28cwt.– wheat 30cwt.–

VI LAND RATING. 3.32 GRADE III.

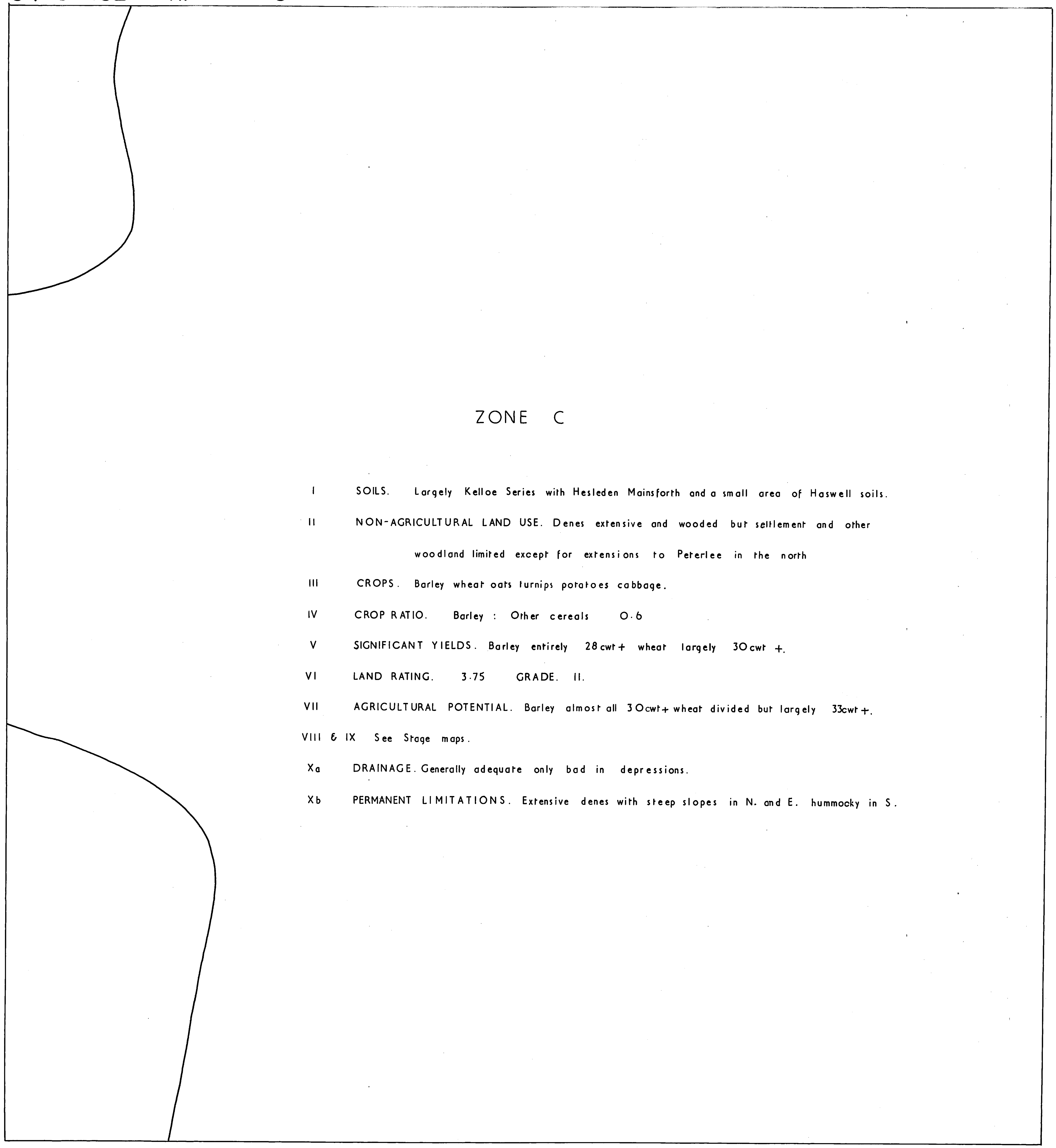
VII AGRICULTURAL POTENTIAL. Barley 30cwt– wheat 33cwt –

VIII & IX See Stage maps.

Xa DRAINAGE Largely ill drained and tiles damaged by subsidence. Moles suggested but outfalls blocked and ponding frequent.

Xb PERMANENT LIMITATIONS. Subsidence chasms around Old Wingate. Hollows elsewhere Trespass and dogs near O. Wingate quarries. Erosion and tip contamination encountered.

34 STAGE XI C



ZONE C

I SOILS. Largely Kelloe Series with Hesleden Mainsforth and a small area of Haswell soils.

II NON-AGRICULTURAL LAND USE. Denes extensive and wooded but settlement and other woodland limited except for extensions to Peterlee in the north

III CROPS. Barley wheat oats turnips potatoes cabbage.

IV CROP RATIO. Barley : Other cereals 0·6

V SIGNIFICANT YIELDS. Barley entirely 28 cwt + wheat largely 30 cwt +.

VI LAND RATING. 3·75 GRADE. II.

VII AGRICULTURAL POTENTIAL. Barley almost all 30 cwt + wheat divided but largely 33 cwt +.

VIII & IX See Stage maps.

Xa DRAINAGE. Generally adequate only bad in depressions.

Xb PERMANENT LIMITATIONS. Extensive denes with steep slopes in N. and E. hummocky in S.