

Semester 1, 1999

Cadastral Surveying

Time Allowed: 3 hours + 10 minutes reading time

General Instructions to Candidates

Total Marks = 100

Marks for questions shown in brackets.

QUESTION 1

(25 marks)

Boundary redefinition appears inconsistent at times due to subtle differences in circumstances. Briefly discuss this statement with particular regard to the fundamental consideration in boundary redefinition.

Various authors on redefinition have attempted to list a hierarchy of evidence as a guide. What is this hierarchy and what general qualifications should be put on its use? Are there any items in the hierarchy where particular qualification is required for that item to hold its place.

What do you understand by the term starting point? Give examples of how the reliability of start points can vary.

QUESTION 2

(25 marks)

Within the hierarchy of evidence used in relocating existing land boundaries, measurements are ranked in a very low position.

- Explain why this is so, with reference to any relevant court precedents you are aware of.
- Can this low position be justified with modern surveying equipment and reference marking?
- Describe what moves have taken place to coordinate the cadastre in South Australia and explain what would be necessary for coordinates of boundary corners to attain legal status.

QUESTION 3

(15 marks)

Allotment 23 in DP 3861 was resubdivided by data plan in 1930 as shown in Figure 1. James Street was aligned in 1935. Evidence establishes conclusively that James Street was aligned 0.20m east of its position in DP 3861.

Assuming you have found the alignment PSMs in James Street, indicate and give your reasons for the positions in which you would mark the corners of allotment B, which remains in the ownership of the resubdivider, in each of the following cases:

- a) When allotment A was transferred in 1932.
- b) When allotment A was transferred in 1940.

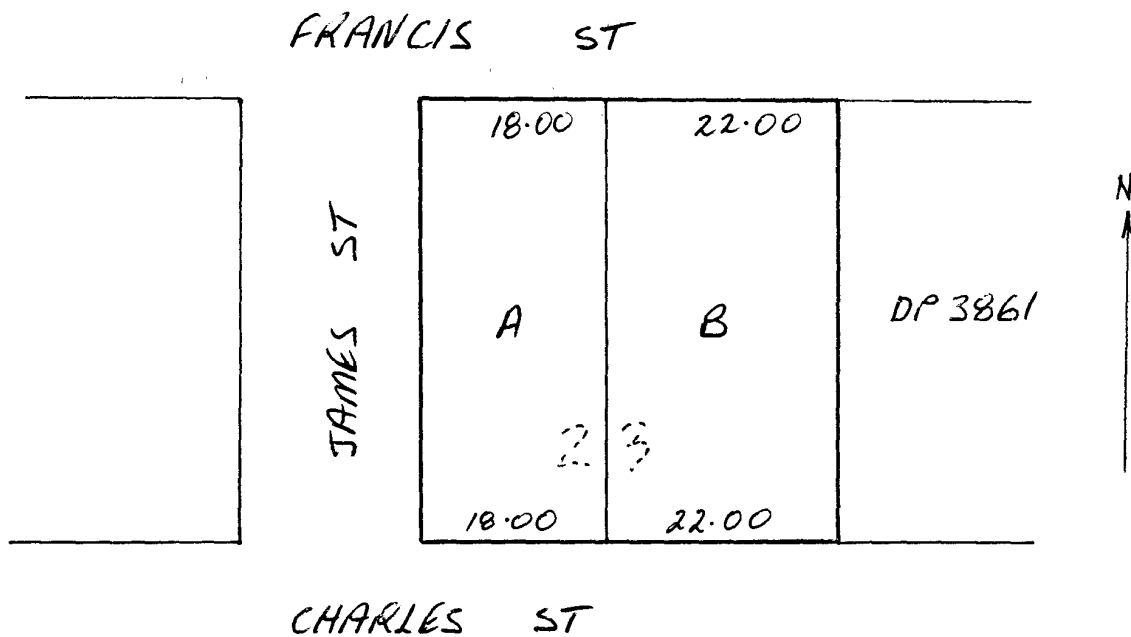


Figure 1

QUESTION 4

(15 marks)

Figure 2 shows the occupation information gathered in a survey made in a large country town. Certificates of Title show widths (from uncertified plans of division) for allotments A-C of 20.00m each, allotment D 10.00m and allotment E 30.00m. The alignment of First and Second Streets is as shown by redefinition on previous surveys. Indicate, giving your reasons, where you would redefine the side boundaries of allotments B, C and D.

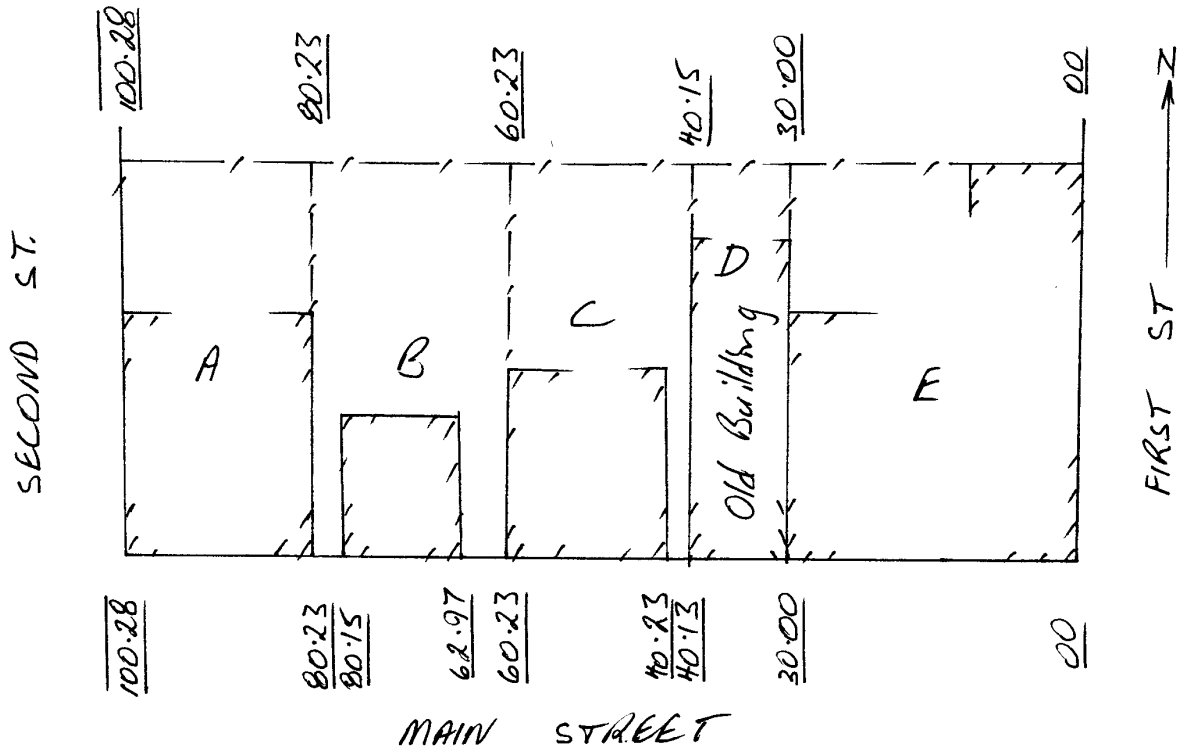


Figure 2

QUESTION 5

(10 marks)

See Figure 3. You are asked to resurvey Sections 5 and 6, which are bounded on the west by a very fast flowing non tidal stream subject to flooding. The original survey showed the bed of the river in the position dashed. This old bed is easily discernible on the ground although silted up. Solid lines show the present bed of the river. Would you include any of areas A, B or C (between the old and new beds) in Sections 5 and 6? State the reasons for your decision and also state what enquiries you would make.

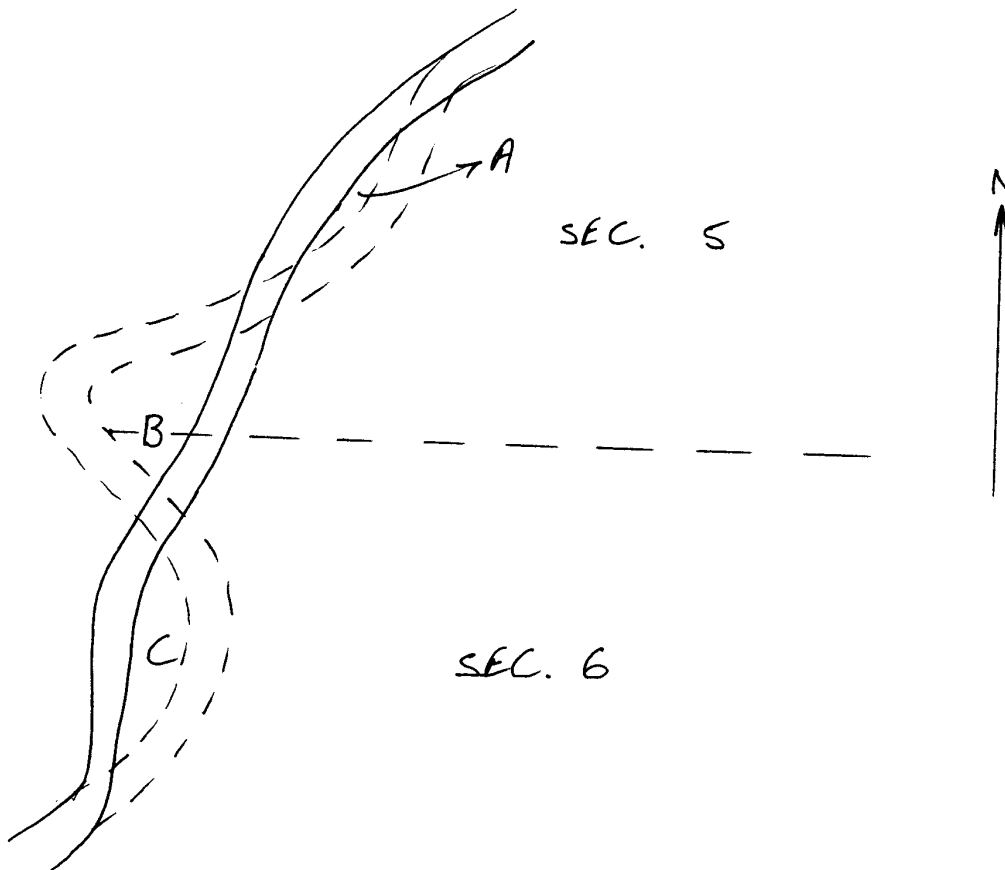


Figure 3

QUESTION 6

(10 marks)

Sketch A in Figure 4 is the survey in 1938 of Sections 900 and 901. In resurvey your field work discloses the information shown in sketch B. Give your reasons for the location you would adopt for the eastern boundary of Section 900.

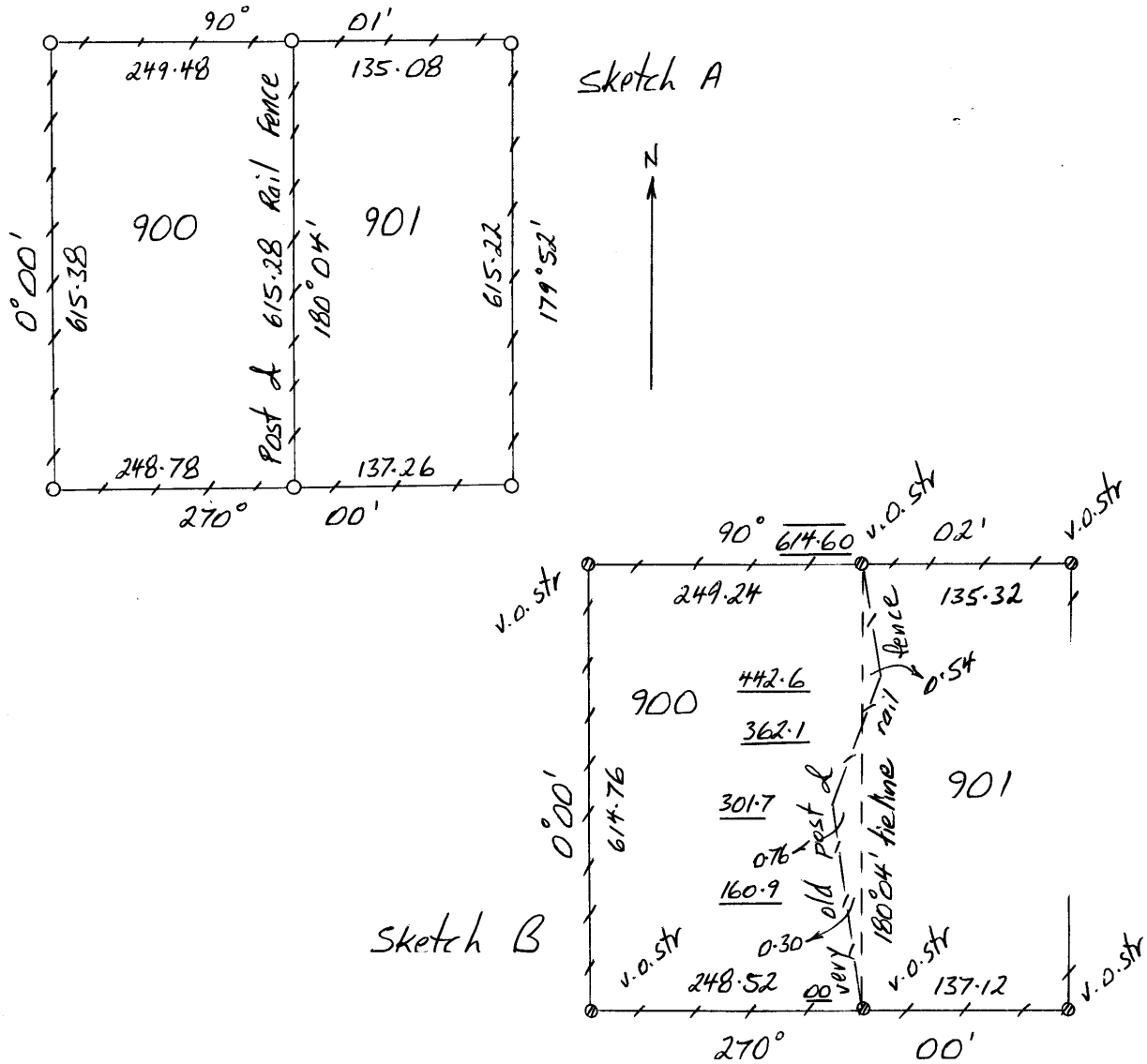


Figure 4