4.2.5 Davaa

A schematic summary of the geology for the prospect area is shown in Figure 4.16, while examples of data are shown in Figure 4.17. This prospect area occurs at the intersection of three major fault trends. The E-W trend typical of Domain 2 is characterised by a series of faults and/ or thrusts and the elongate axis of the 'early' intrusive bodies. There is a possibility that there are several intrusive units that overlap due to either structural juxtaposition or overlapping intrusive centres (intrusive units 1, 2 and 3 on Figure 4.16).

A major NW - SE trending fault may partially wrap around the NE margin of intrusion 3, and separate it from intrusions 1 and 2. This same NW fault may continue to the SE and separate Domain 2B from 3A.

NE - SW to N - S trending faults occur to the E of the intrusive bodies and continue to the S to separate Domain 3A from 3B. Left lateral strike slip displacement may be present, transporting blocks from domain 3A to the N. Normal displacement may also have taken place along this structure due to the apparent juxtaposition of the sedimentary units in domain 2B with igneous units of domain 2A.

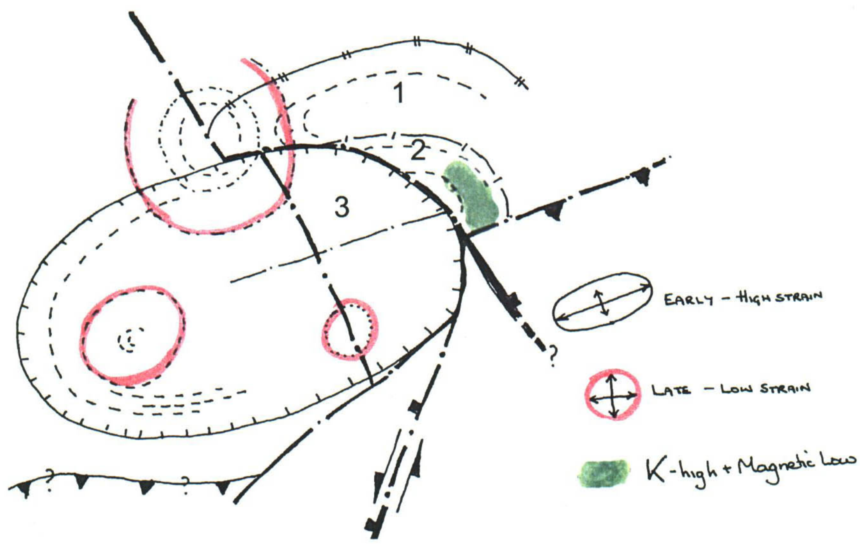

Figure 4.16: Schematic representation of zoned multiple phases of early granitic bodies (1, 2 and 3), possibly overprinted by late minor sub-circular intrusive bodies.

Radiometric data appears to provide a very different distribution to the published mapping. More detailed analysis of the data may enable a more accurate litho-magnetic interpretation to be made. Only minor zones of K enrichment are present, but this could be of interest as they correspond with areas of relative low magnetic intensity and are closely associated with major structural zones.

A-251

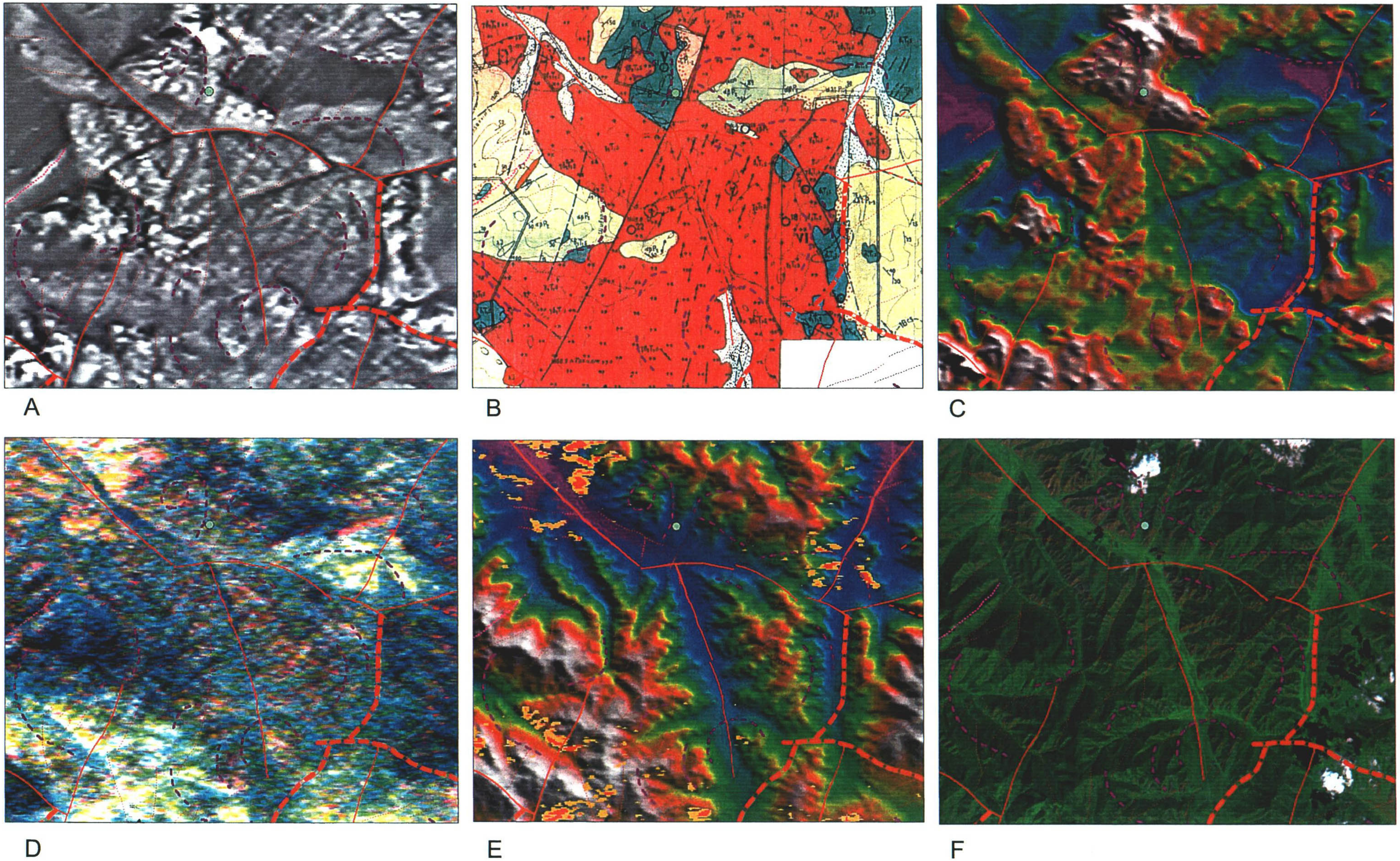

Figure 4.17: Characteristics of the Davaa prospect area.

4.2.6 Zuukhin Gol

A schematic summary of the geology for the prospect area is shown in Figure 4.18, while examples of data are shown in Figure 4.19. This prospect area occurs in the E of domain 2A. NE trending faults become progressively more apparent towards the boundary with domain 2B. The main litho-magnetic components appear to consist of zoned and multiple intrusive igneous bodies. 'Early' intrusive units appear to be large and have an approximate NE elongate elliptical axis, while 'late' intrusive stocks are small and sub-rounded.

To the NW of the area of known mineralisation, the relative magnetic signature appears to be slightly lower. This may indicate that the NE trending faults have a component of normal displacement as this area also depicts a boundary between igneous and sedimentary units on the published data.

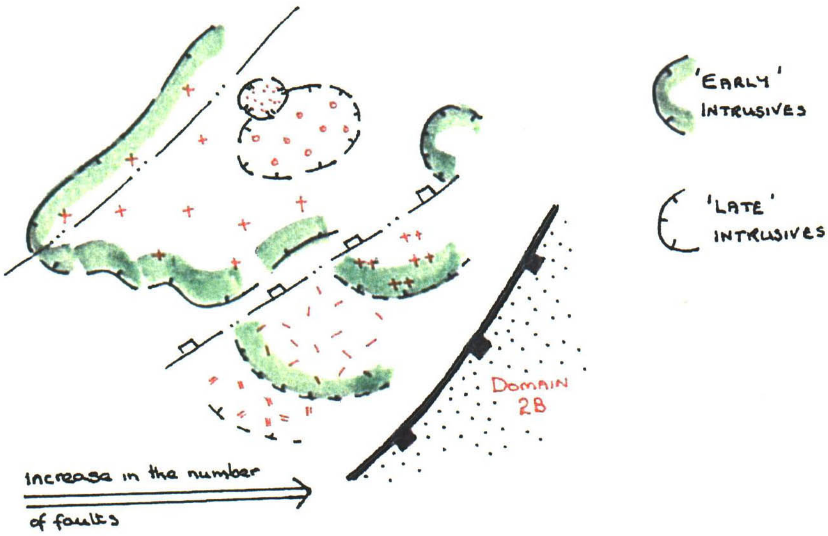

Figure 4.18: Schematic representation of zoned multiple phases of early granitic bodies possibly overprinted by late minor sub-circular intrusive bodies.

Radiometric data appears to provide a similar but more detailed distribution to the published mapping. Detailed analysis of the data may enable a more accurate litho-magnetic interpretation to be made. Only very minor zones of clipped K enrichment are present, and the technique is probably of little use in this area. It should be noted that a slight K increase relative to the immediate surroundings is present at the site of known mineralisation. More accurate lithological mapping and analysis of the radiometric data are required in order to determine subtle variations (true anomalies) in the radiometric data.

A-255

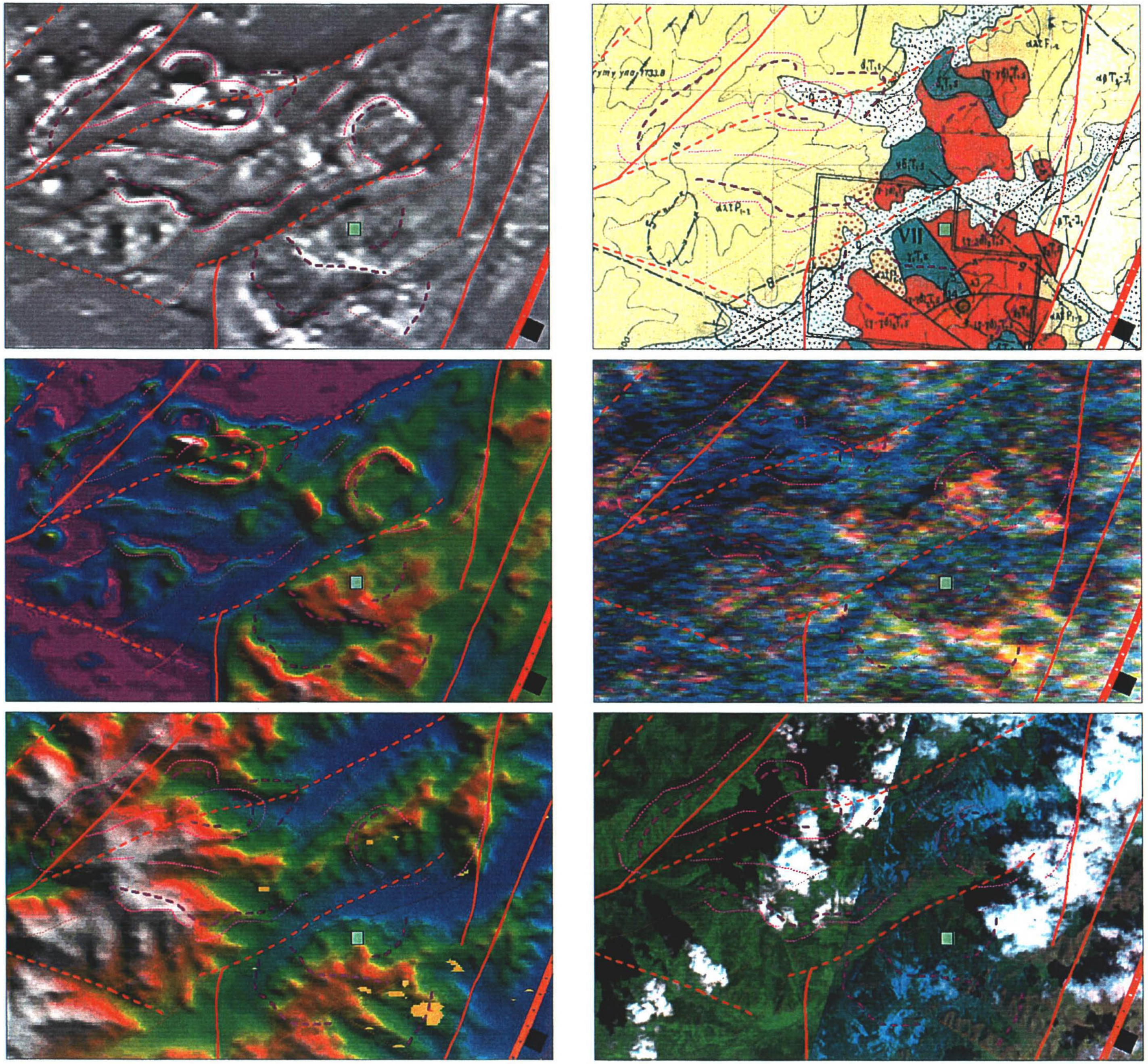

Figure 4.19: Characteristics of the Zuukhin Gol area.

4.2.7 Prospect 3

A schematic summary of the geology for the prospect area is shown in Figure 4.20, while examples of data are shown in Figure 4.21. Information from all the available data suggests that volcano-sedimentary units within a basin setting dominate the area. The main structural control on the area appears to be a major N to NE trending fault, with an inferred normal and/ or strike-slip component, with down throw to the W, that bounds the area to the E.

The dominant magnetic characteristic appears to be a series of curvilinear N – S trending, relative high intensity, short-wavelength units. These magnetic features are interpreted as having a fairly shallow source and are probably related to the Triassic – Jurassic units. The open folds indicate that the basin was probably subject to a relatively 'late' weak compressional event.

In addition to the dominant near surface magnetic response, there is also an apparent broad-wavelength variation in the magnetic intensity across the basin. The magnetic response in this area is predominantly high and may indicate that there is a magnetic body at depth. As the apparent strike of these broad-wavelength units is nominally NW, it is suggested that they may relate to buried or deep extensions of the granitic units of domain 3A. If this is the case then the N – S trending domain bounding fault in the E is likely to have predominantly normal displacement and only minor if any strike-slip displacement.

The 'deep' magnetic bodies throughout the basin appear to be delimited by approximately NW - SE trending faults, with a slight anastomosing character. Although these structures appear to be weakly defined within the data they could be major regional structures. Furthermore they could be associated with similar structures through domain 3A. If this is the case then there is potential for them to have similar mineralising history to the structures at Erdenetiin Ovoo (section 4.2.1). The numerous approximately E – W trending minor faults are potentially related to the NW trending structures and may represent 'late' structures with a possible extensional component.

The area also contains several areas that exhibit a low relative magnetic response. These areas can tentatively be traced into a tight arcuate apparent 'fold' closure not dissimilar to the response observed around the Erdenetiin Ovoo deposit. There is a possible indication of annular structures and magnetite zoning that would indicate igneous bodies. However, the data is inconclusive.

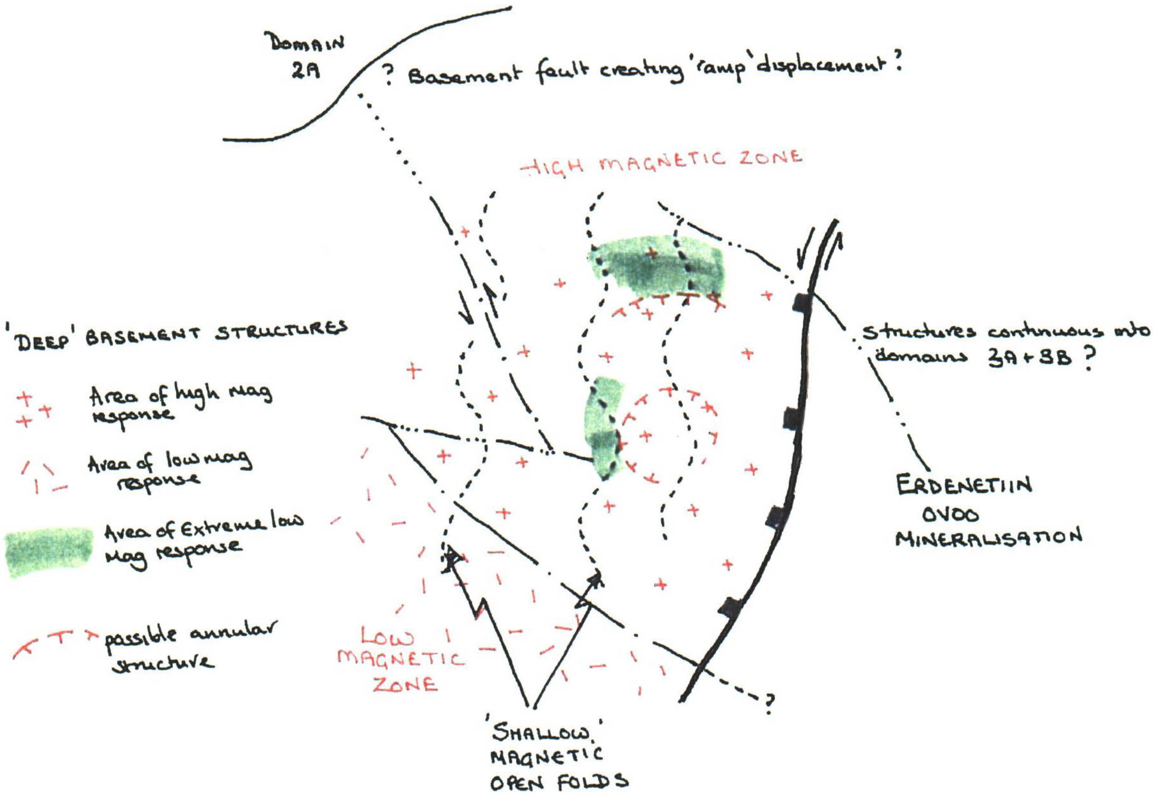

Figure 4.20: Schematic representation of a multiple level magnetic response within a basin environment.

Radiometric data appears to provide a more detailed assessment of the distribution of near surface material than is available from the published mapping. Clipped K values (95% of total count) appear to follow the mapped Quaternary units. More detailed analysis of the data may enable a more accurate litho-magnetic interpretation to be made. However, as the area consists predominantly of Triassic to Jurassic sediments and Quaternary cover, the value of this exercise is doubtful, but may assist in planning a geochemical soil sampling program.

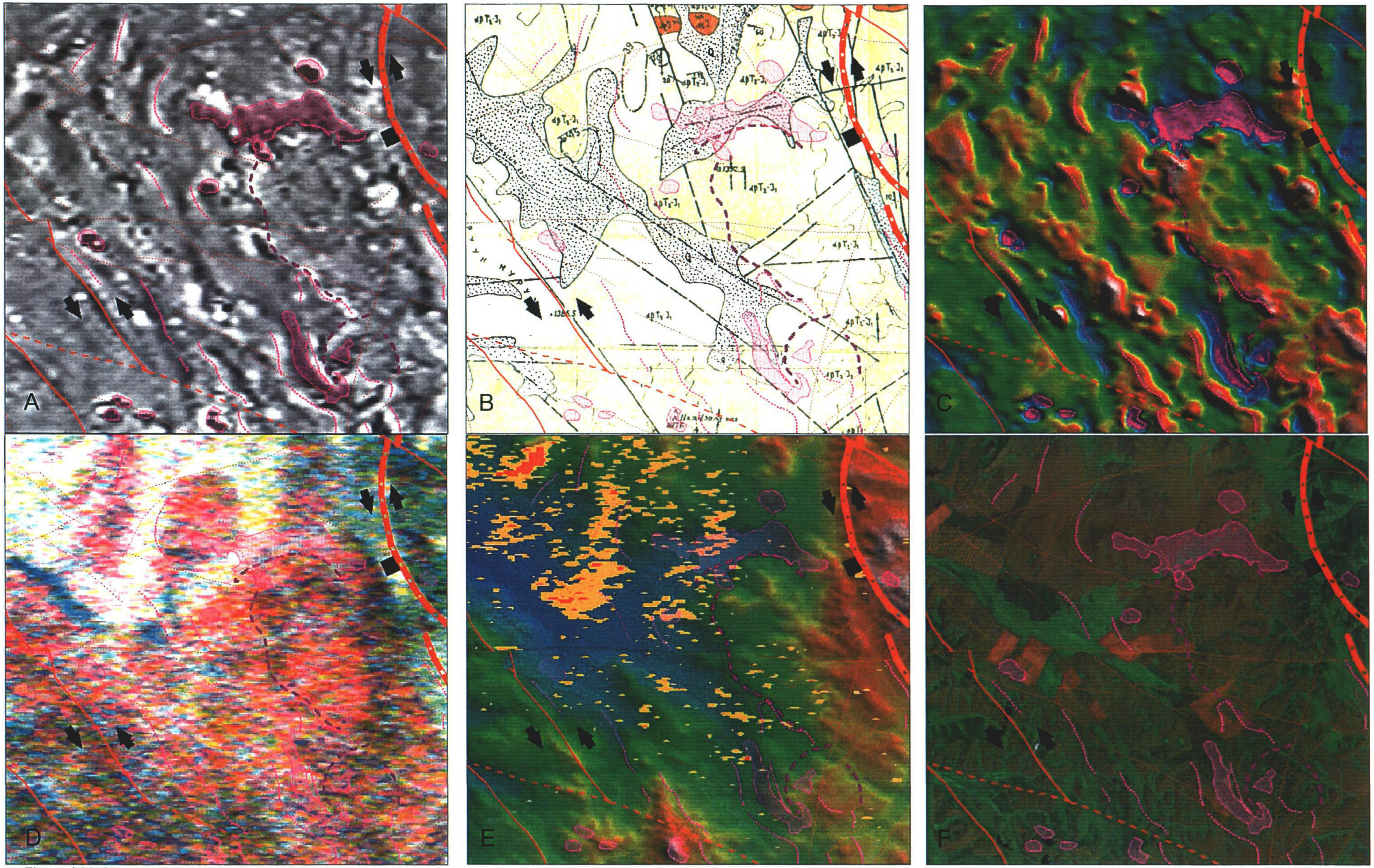

Figure 4.21: Characteristics of the Prospect 3 area.

4.2.8 Prospect 4

A schematic summary of the geology for the prospect area is shown in Figure 4.22, while examples of data are shown in Figure 4.23. The area appears to be an along strike continuation from Prospect 3 (section 4.2.3), to the W of a major NNW trending structural zone. If this is the case then it suggests that the NNW trending fault zone has a predominantly in-situ normal displacement and not a major strike-slip component as proposed in section 4.1.

Although the NNW trending structure has a major affect on the surface expression it may be that the E - W to WNW – ESE trending structures are far more significant in the basement development. The magnetic sub-circular unit around 417000mE 5416000mN may represent either a 'late' intrusive stock or the core of a larger zoned body.

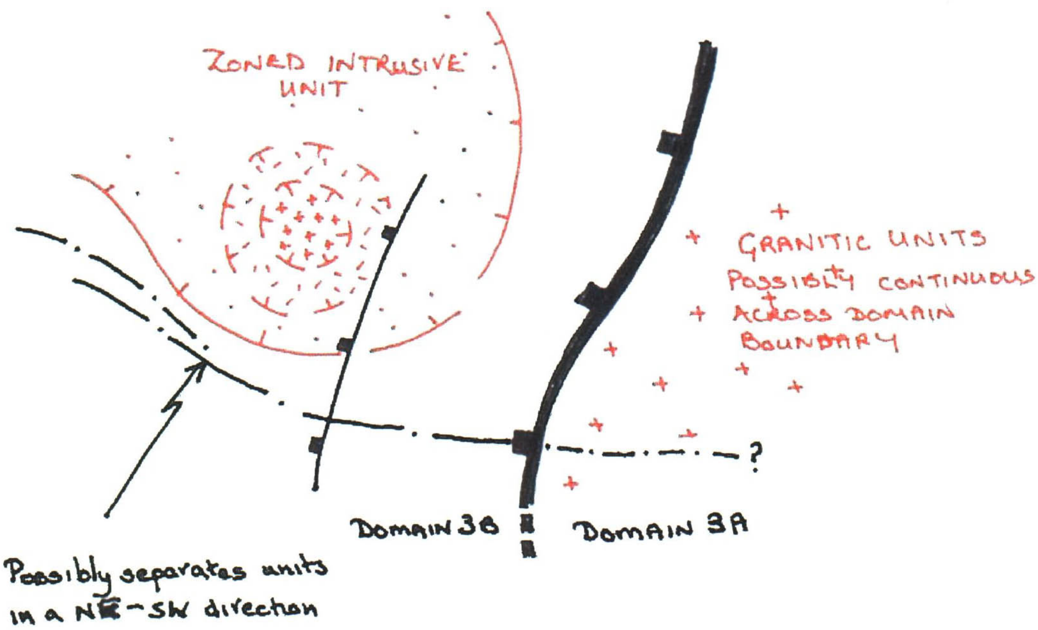

Figure 4.22: Schematic representation of a small intrusive body within a basin environment.

Radiometric data appears to provide a different distribution of near surface material than is available from the published mapping. More detailed analysis of the data may enable an accurate litho-magnetic interpretation to be made. Clipped K values (95% of total count) appear to be associated with the intrusive body and also coincide with the major NE trending fault. Both of these areas are worth field checking to determine the cause of the apparent anomaly. However, as the area consists predominantly of Triassic to Jurassic sediments and Quaternary cover, the high K values may simply represent areas of outcrop.

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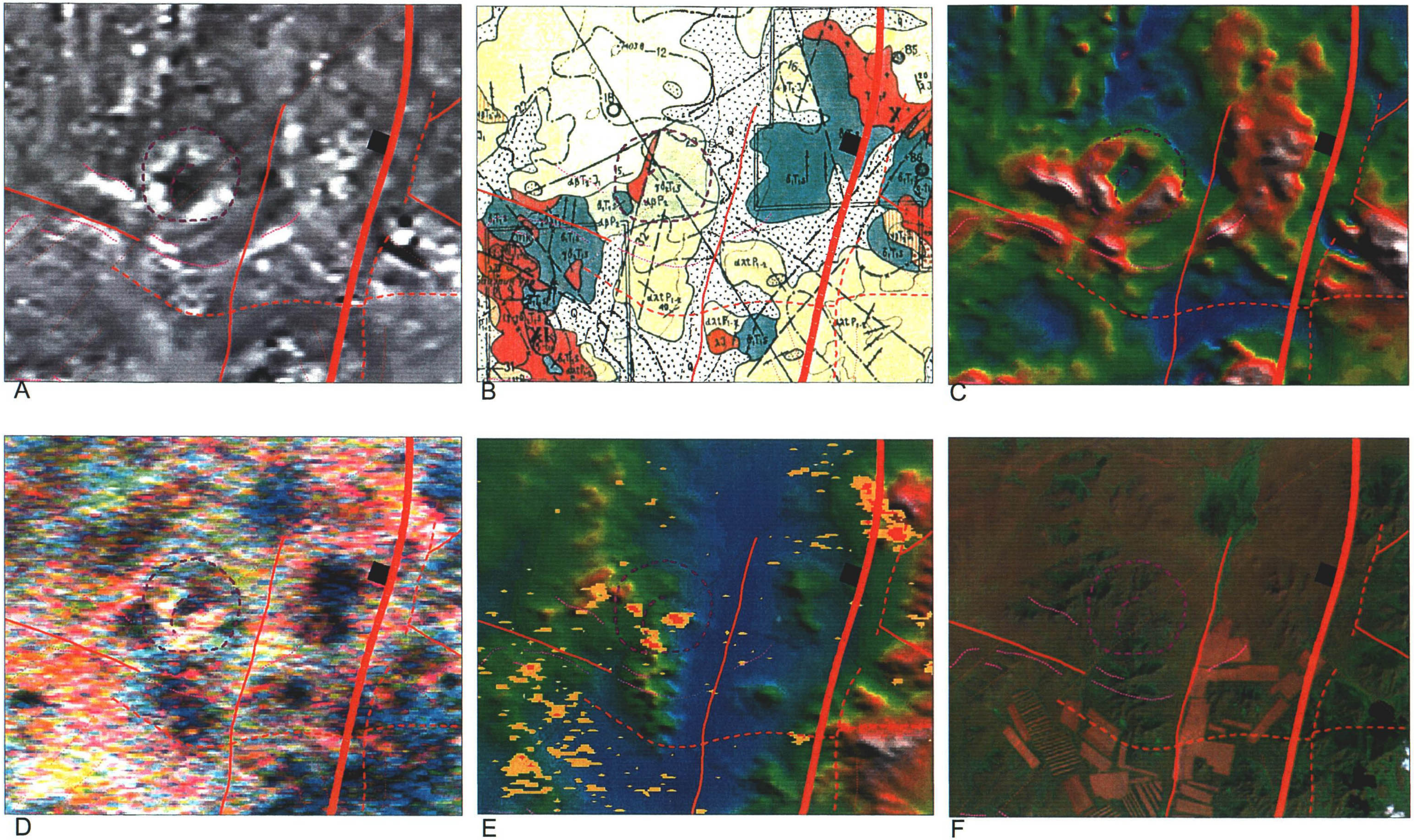

Figure 4.23: Characteristics of the Prospect 4 area.

4.2.9 Prospect 5

A schematic summary of the geology for the prospect area is shown in Figure 4.24, while examples of data are shown in Figure 4.25. The main litho-magnetic units are interpreted to be intrusive bodies with well-defined magnetic zonation.

The area appears to be an along strike continuation from the main Erdenetiin Ovoo prospects (4.2.1). The dominant structural strike is NW – SE and is associated with a series of major structural zones with a probable strike-slip displacement. A domain boundary occurs to the E of the area with a normal displacement and inferred down throw to the E.

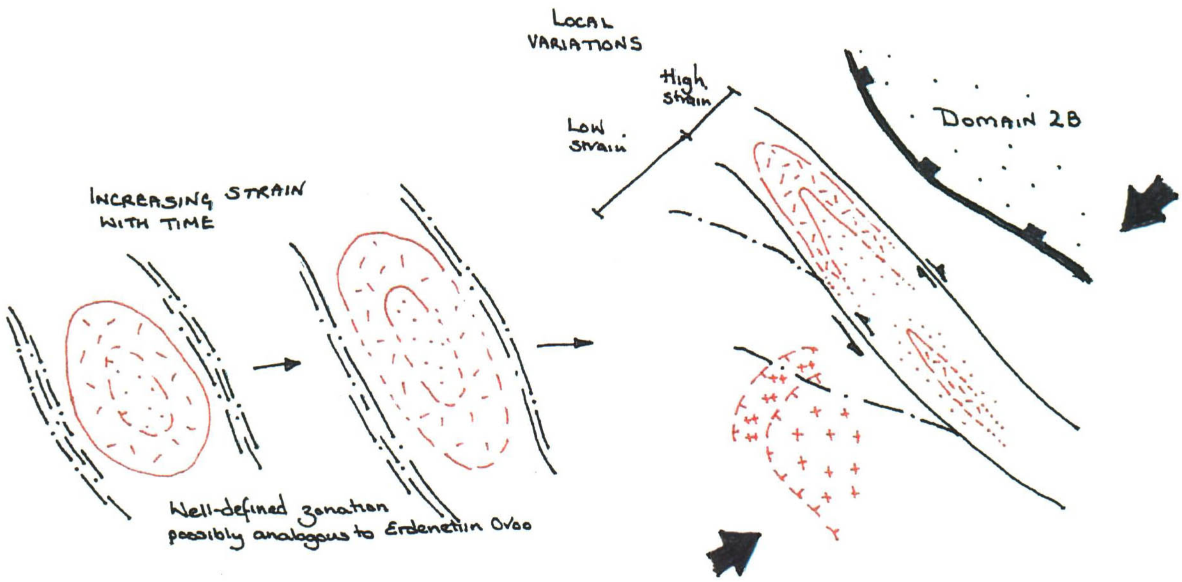

Figure 4.24: Schematic representation of differential strain within domain 3A.

Radiometric data appears to provide a similar but far more detailed distribution to the published mapping. In particular it appears to be good at differentiating different granitic bodies. More detailed analysis of the data may enable a more accurate litho-magnetic interpretation to be made. The large zone of clipped K enrichment coincides well with the core of a large granite body with an associated low magnetic response. However, simply clipping the total K count obscures low values that could be anomalous compared to their immediate surroundings.

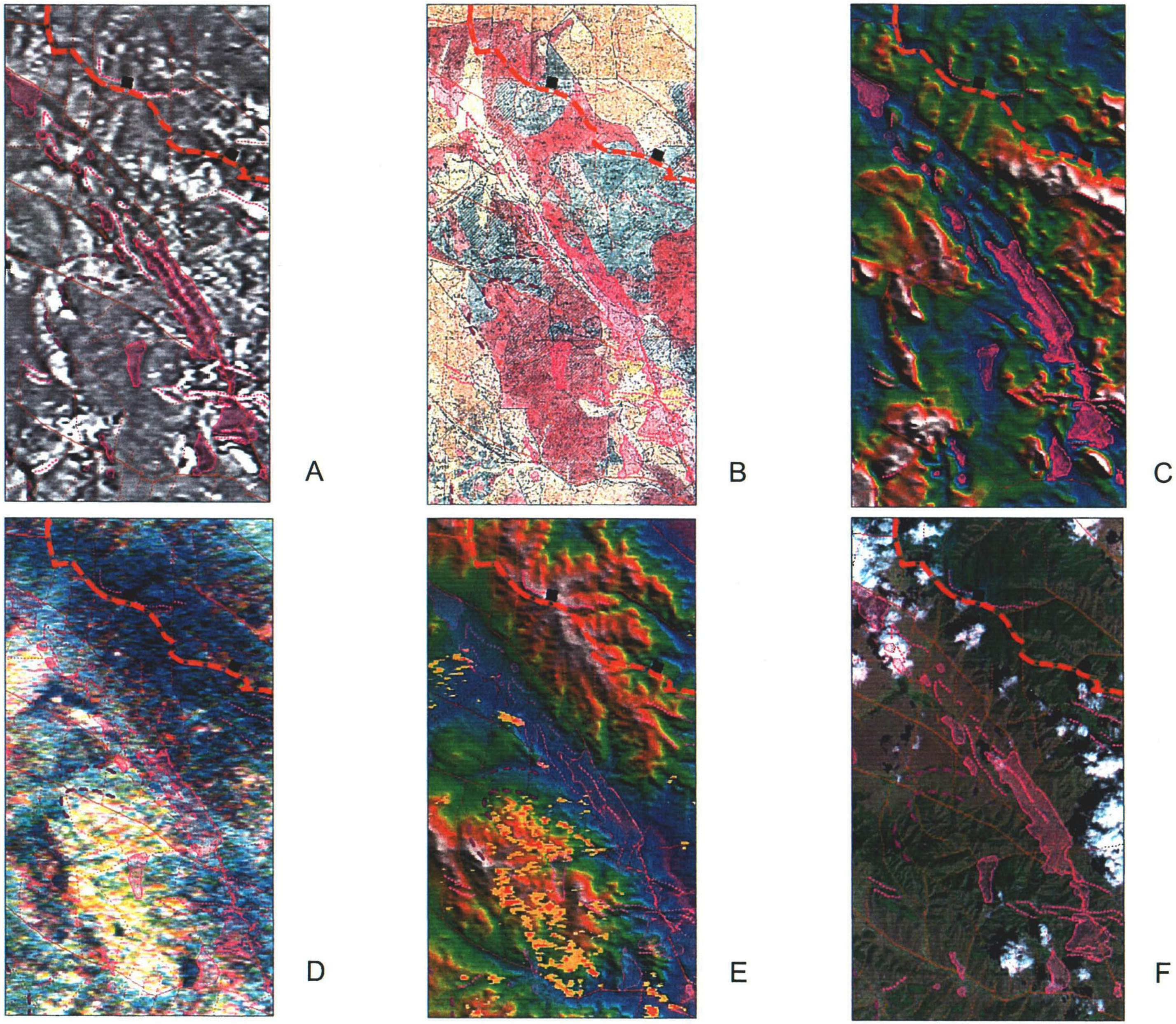

Figure 4.25: Characteristics of the Prospect 5area.

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